A
QC
807.5
U6A7
C.2

NOAA Technical Memorandum ERL ARL-71

THE EASTERN TENNESSEE TRAJECTORY EXPERIMENT (ETTEX): DESCRIPTION AND DATA SUMMARY

C. J. Nappo, Jr.
R. P. Hosker
S. R. Hanna

Air Resources Laboratories
Silver Spring, Maryland
September 1978

noaa NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION / Environmental Research Laboratories

QC
807.5
U6A7
no. 71
c.2

NOAA Technical Memorandum ERL ARL-71

THE EASTERN TENNESSEE TRAJECTORY EXPERIMENT (ETTEX): DESCRIPTION AND DATA SUMMARY

C. J. Nappo, Jr.
R. P. Hosker
S. R. Hanna

Atmospheric Turbulence and Diffusion Laboratory
Oak Ridge, Tennessee

Air Resources Laboratories
Silver Spring, Maryland
September 1978

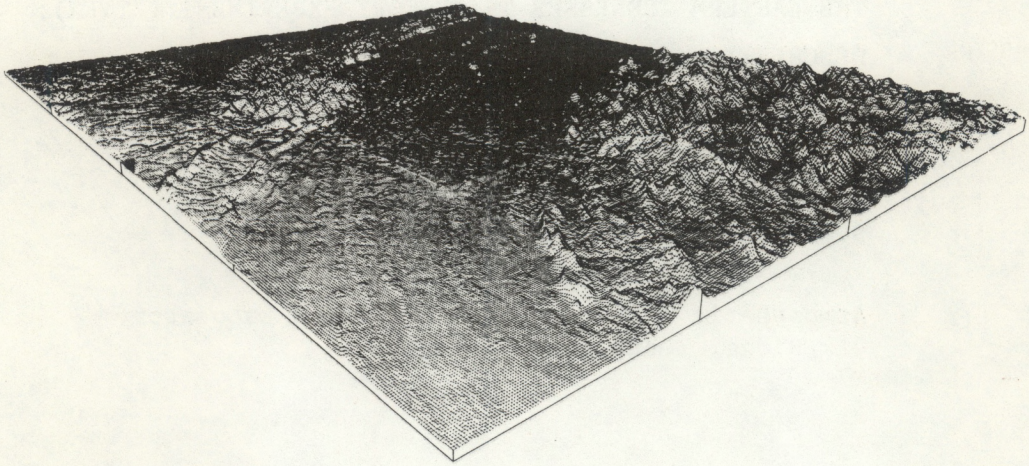
ATMOSPHERIC SCIENCES
LIBRARY
DEC 05 1978
N.O.A.A.
U. S. Dept. of Commerce

UNITED STATES
DEPARTMENT OF COMMERCE
Juanita M. Kreps, Secretary

NATIONAL OCEANIC AND
ATMOSPHERIC ADMINISTRATION
Richard A. Frank, Administrator

Environmental Research
Laboratories
Wilmot N. Hess, Director

78 4779



Frontipiece. *Computer-drawn projection of the east Tennessee River valley, site of the ETTEX program. View is from the vicinity of Chattanooga, TN, looking north-east toward the Bristol-Johnson City-Kingsport, TN. region.*

CONTENTS

ABSTRACT	1
PART I: THE EXPERIMENT	1
1. INTRODUCTION	1
2. THE ETTEX REGION	3
3. THE EXPERIMENTS	3
4. DATA SUMMARY	9
5. ACKNOWLEDGMENTS	9
6. REFERENCES	10
PART II: THE DATA	12
1. INTRODUCTION	12
2. SYNOPTIC SUMMARY	13
3. TRAJECTORY EXPERIMENT SURFACE DATA	21
4. RADIOSONDE DATA	29
5. SINGLE-THEODOLITE PIBAL SOUNDINGS	45
6. DOUBLE-THEODOLITE PIBAL SOUNDINGS	55
7. TRAJECTORY EXPERIMENT PIBAL SOUNDINGS	80
8. TETROON DATA	144
9. TVA METEOROLOGICAL TOWER DATA	196
APPENDIX	333

NOTICE

The Environmental Research Laboratories do not approve, recommend, or endorse any proprietary product or proprietary material mentioned in this publication. No reference shall be made to the Environmental Research Laboratories or to this publication furnished by the Environmental Research Laboratories in any advertising or sales promotion which would indicate or imply that the Environmental Research Laboratories approve, recommend, or endorse any proprietary product or proprietary material mentioned herein, or which has as its purpose an intent to cause directly or indirectly the advertised product to be used or purchased because of this Environmental Research Laboratories publication.

THE EASTERN TENNESSEE TRAJECTORY EXPERIMENT (ETTEX): DESCRIPTION AND DATA SUMMARY

C. J. Nappo, Jr., R. P. Hosker, and S. R. Hanna

Data from the Eastern Tennessee Trajectory Experiment (ETTEX) conducted during July and August, 1974, are presented. These data, taken from several separate experiments, consist of single and double theodolite pilot balloon wind observations, radar-observed trajectories of tetroons released serially or in pairs, time-dependent mesoscale wind field observations, surface and tower meteorological observations, radiosonde observations, and synoptic summaries for the ETTEX region for selected days. Included also is a collection to date of the studies made based on the ETTEX data.

PART I

THE EXPERIMENT

1. INTRODUCTION

Knowledge of atmospheric motions within the planetary boundary layer (PBL) over horizontal scales of 10 to 100 km, especially over complex terrain is quite deficient. This information is essential, however, if atmospheric transport and diffusion processes on these scales are to be understood and their effects accurately parameterized. For example, NOAA's Air Resources Atmospheric Turbulence and Diffusion Laboratory (ATDL) has recently attempted to estimate regional transport and diffusion from nuclear reactors and fossil fuel power plants in the Tennessee River Valley, from lead smelters in Missouri, and from a proposed power park in Louisiana. At present, only rather crude guesses can be made about the probable air motions and diffusion coefficients over such relatively large regions, particularly if the underlying topography is rather complex.

While interest in regional-scale transport and diffusion, especially over complex terrain, continues to grow, the majority of the work recently done is of a theoretical nature supported by limited observational data. These studies, for example those by Mullen, et al. (1977), Kao and Taylor (1977), and Lantz, et al. (1976), consist mostly of adapting existing theoretical models of diffusion over uniform terrain to the complex terrain case. The observational data used in these studies consist mostly of tracer gas and smoke releases with ground sampling and, usually, very sparse meteorological data. Examples of these observational studies are seen in Start, et al. (1974), Roffman, et al. (1976), and Wilson, et al. (1976). While acceptable assumptions can often be made concerning transport and diffusion (or, equivalently, PBL air motions) over uniform terrain, thus reducing the requirement for detailed observations, no such assumptions can be made for the complex terrain case. An observation program becomes essential in this instance.

For adequate verification of transport and diffusion models, one must simultaneously observe the three-dimensional mesoscale wind field and resultant air parcel trajectories. Previous observations of mesoscale wind fields have done one, but not both of these. For example, wind field observations have been made by Bornstein (1968), Ackerman (1973, 1974) and Karl (1976) near urban areas, by Wendell (1970, 1972) over open country, and by Egami, et al. (1974) and Kao, et al. (1974) over fairly rough terrain. These experiments obtained the wind field either from surface stations or from pilot balloon (pibal) ascents; however, air parcel trajectories were not explicitly measured. Over flat terrain it may be possible to construct fairly realistic trajectories from limited measurements of the regional wind field (e.g., Wendell, 1970, 1972), but it has not been demonstrated that this

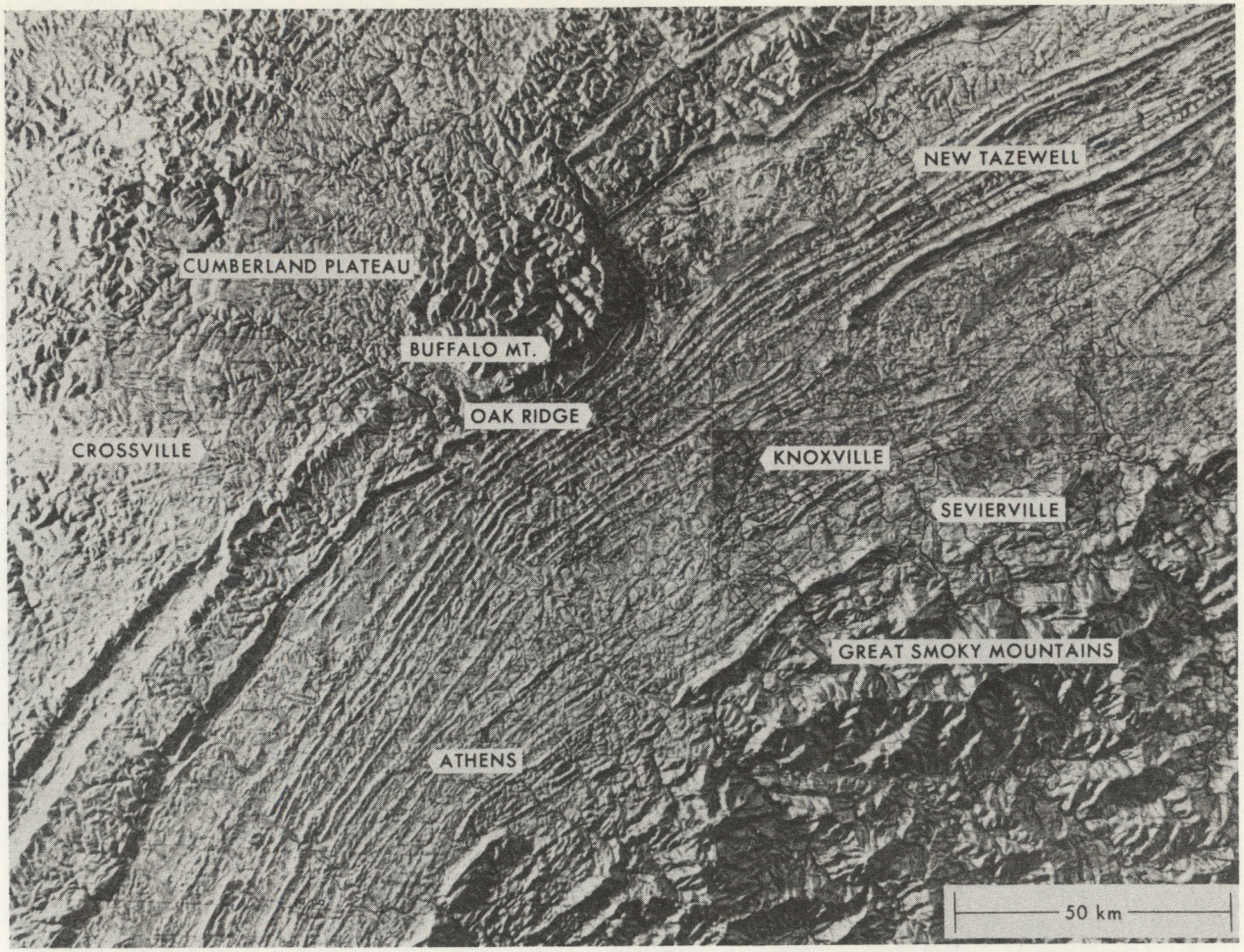


Figure 1. Topography of ETTEX Region.

is feasible over rough terrain. Similarly, observations of the trajectories of "tagged" air parcels have been reported by numerous authors including Angell, et al. (1971, 1973), Hass, et al. (1967), Leahey and Hicklin (1973) and Leahey and Rowe (1974). In almost all cases, the three-dimensional wind field was not determined.

The Eastern Tennessee Trajectory Experiment (ETTEX) represents a first attempt to simultaneously observe the meteorological parameters required to develop techniques for verifying atmospheric transport and diffusion models, as well as studying the dynamics of the PBL, over the fairly rugged terrain of the eastern Tennessee River Valley.

2. THE ETTEX REGION

The ETTEX region is depicted in Figure 1, which as been reproduced from a vertically exaggerated relief map. The valley of the Tennessee River lies generally along a southwest-northeast line which splits the southern Appalachian Range into the Great Smoky Mountains on the southeast and the Cumberland Plateau on the northwest and west. In the Oak Ridge-Knoxville area, which is more or less the center of the ETTEX region, the valley floor has a mean elevation of about 300 m MSL, is about 70 km wide, has relatively steep walls and is corrugated with parallel broken ridges approximately 75 m to 100 m in height. The valley floor descends from the northeast to the southwest. The average height of the Cumberland Mountains immediately north of Oak Ridge is about 1000 m MSL, while that of the Great Smoky Mountains is about 2000 m MSL. Figure 2 shows elevation contours, in meters above sea level, for roughly the same area as shown in Figure 1. Elevations were estimated from topographic maps and represent average values over 10 km square areas.

3. THE EXPERIMENTS

During the period of 15 July - 8 August, 1974, three more or less independent mesoscale experiments were conducted. These were the trajectory, relative diffusion, and convective diffusion experiments.

3.1 The Trajectory Experiment

The trajectory experiment was designed to provide the data necessary to determine the accuracy of air parcel trajectory calculations over complex terrain for different atmospheric stabilities. Such determinations require three-dimensional wind field observations, measured trajectories of "tagged" air parcels, and measurements of the PBL thermal structure.

To provide such data, a network of pibal stations was set up (Figure 3), roughly centered about a radar unit loaned by NOAA's ARL Field Research Laboratory of Idaho Falls, Idaho. Each station's wind profile was envisioned as being, for computational purposes, more or less representative of the winds within a 50 km radius of that station. The station locations were chosen to provide a degree of overlap of these representative regions, while covering fairly completely the area encompassed by the maximum range of the radar (about 100 km). Interpolation to any point within the radar range should thus be feasible. In addition, surface and tower data were obtained from the Tennessee Valley Authority (TVA) sites indicated in Figure 2.

The central pibal station was located in an open field (the so-called "0800" ecology study site) to the southwest of Oak Ridge, about 3.5 km from Oak Ridge National Laboratory (ORNL). The other pibal stations were located at small airports to insure relatively open fetches and ease of access. Each station was equipped with a single optical theodolite, a Thornthwaite low-threshold anemometer for "surface" (i.e., 2m) wind speed, and a standard shelter for temperature and humidity instrumentation (Figure 4). Surface wind direction was obtained from Thornthwaite low-threshold vanes at all stations but Crossville, where the FAA Flight Service Office records surface winds. Observations of the ascent of 30 gm pibals were made at 30 second intervals after launch for a period of 10 minutes. Half-hourly launches were made at each site during the "transition" periods of the day (i.e., sunrise, sunset), with hourly launches at other times.

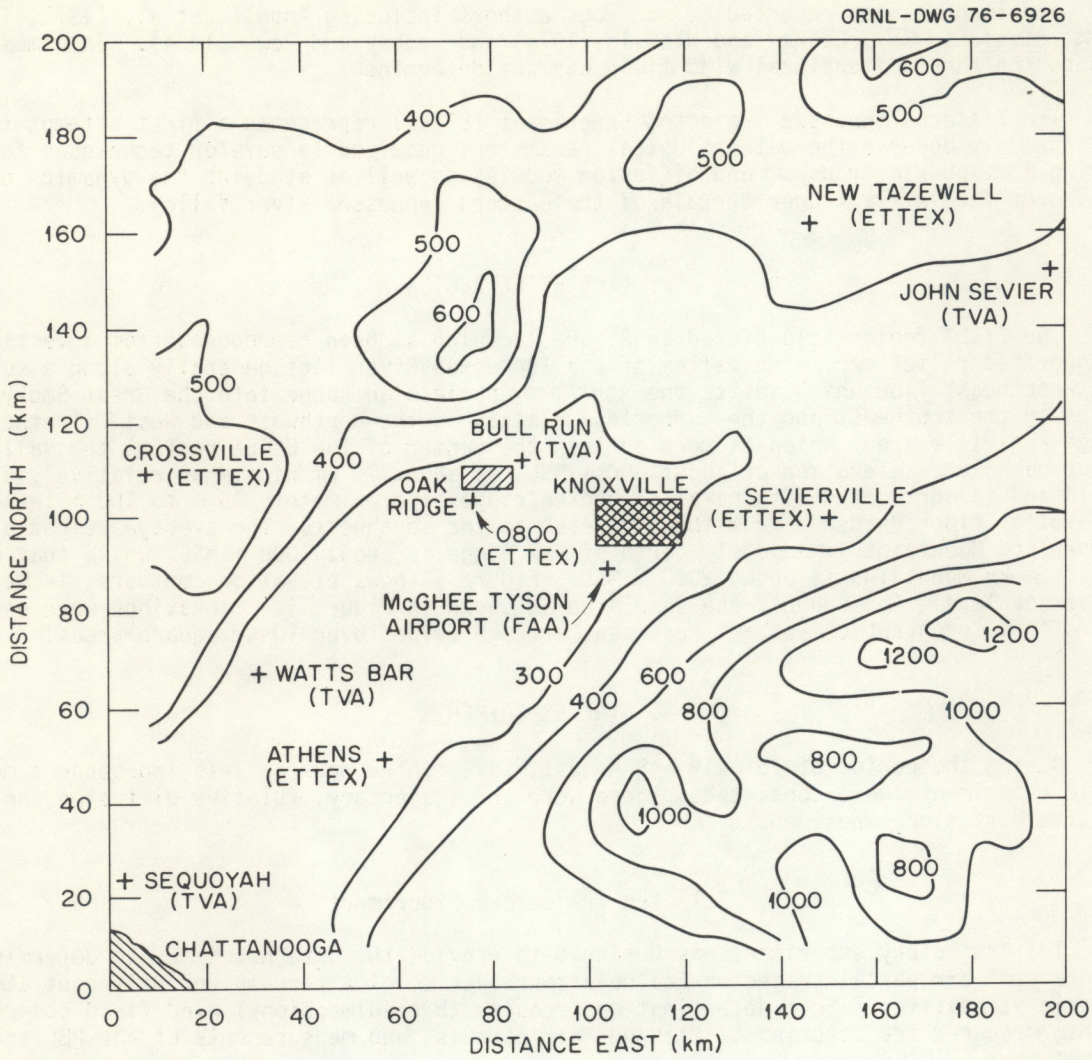
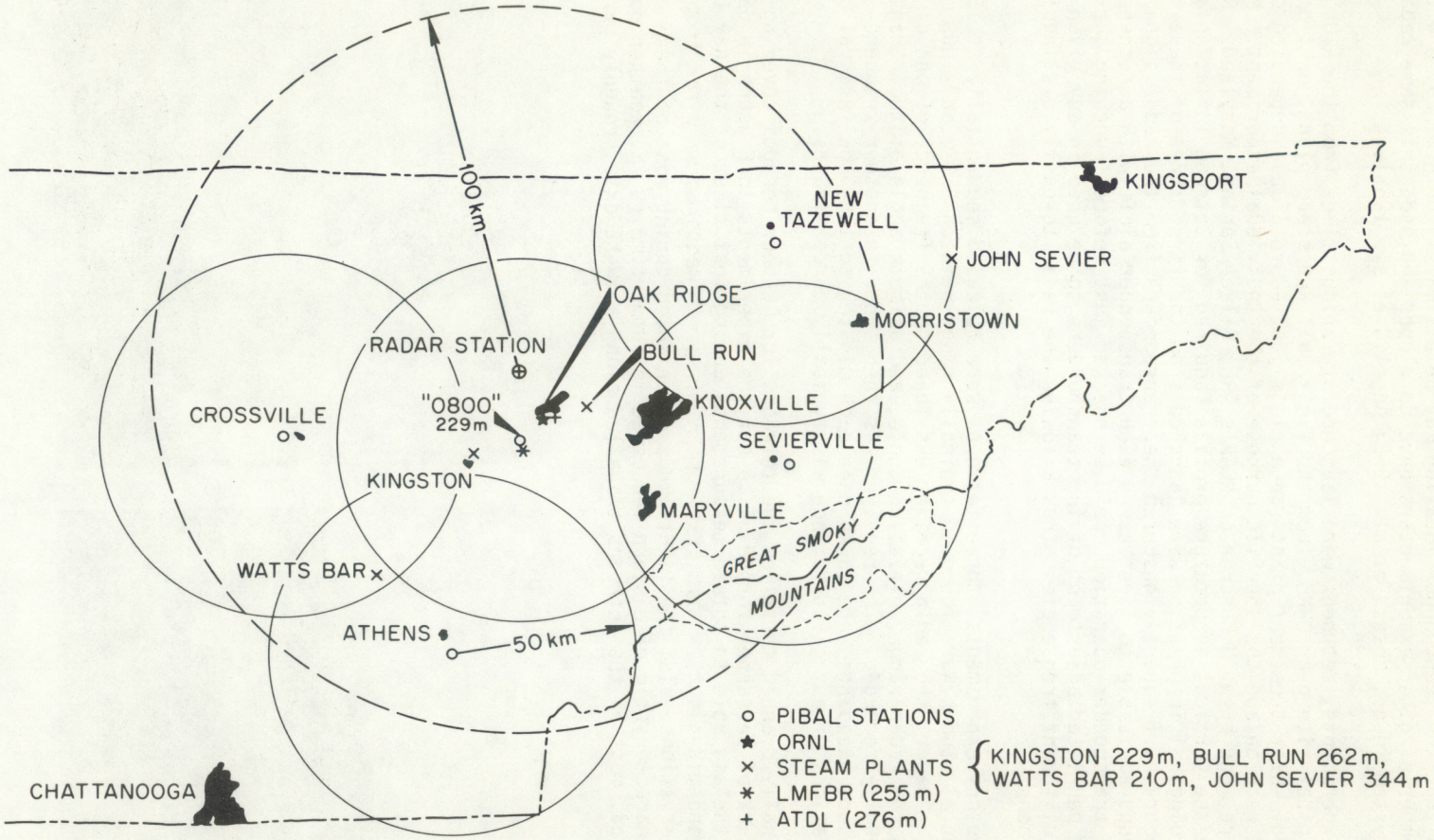


Figure 2. Contour Map of ETTEX Region

The M-33 precision tracking radar (Figure 5) was placed near the summit (1030 m, MSL; about 750 m above the valley floor) of Bullalo Mountain (Figure 1), a peak in the Cumberland range about 15 km northwest of Oak Ridge. A road maintained by the Oliver Springs Mining Company leads to the mountain top.

The tetroons and tracking technique used are similar to those described by Pack (1962). The balloon is a tetrahedron of about 1 m^3 volume, constructed of DuPont Mylar^R (Figure 6). The physical characteristics of this envelope are such that the tetroon volume is virtually constant for superpressurization of less than 70 mb or so. This type of balloon thus floats, in the absence of vertical air motions, along isopycnic surfaces. The inflation and launch procedures required to attain a particular flight altitude have been summarized by Hoecker (1975). A tetroon is tracked by means of a radar-triggered transponder carried beneath the balloon (Figure 6). The radar signal actuates this transponder, which then emits a slightly tuneable 403 MHz signal, indicating that the radar unit's transmitting antenna is pointed more or less toward the transponder. As the broadcast power (and hence the radar beam width) is slowly reduced, the transmitting antenna

ORNL-DWG 74-9297



ETTEX Map, Indicating Locations, Elevations (MSL), and Effective Observing Ranges of Radar Unit and Pibal Stations. Tetroon Launch Sites are also Shown.

Figure 3

must be pointed more and more accurately toward the transponder in order to trigger it. It is by this method that the transponder location may be ultimately determined to within about 20 m. A number of other experimenters have developed and used this same radar-tetroon-transponder system (e.g., Moses, et al. 1968; Angell, et al. 1968).

During our experiments, tetroons were launched at various times from the ATDL offices, from our central pibal site near ORNL, from the TVA's Bull Run steam plant, or from the Oak Ridge municipal water treatment plant (on a ridge just above ATDL), depending on the prevailing wind direction and the specific purpose of the individual experiment. Most of these launches were made by W. H Hoecker of NOAA's ARL, Silver Spring, Maryland. Radiosondes to provide the vertical temperature profile required for tetroon inflation and for subsequent meteorological information were launched from the first three of these sites. Because local topography frequently obscured the transponders from the radar signal before launch, it was found advisable to first carry each transponder aloft with a tethered 100 gm pibal, so that transponder operation could be checked just before launching the tetroons. This also permitted adjustment of the transponders to be used in any given experiment to slightly different frequencies, thus allowing the radar to easily distinguish among several balloons.

In our trajectory experiments, three tetroons were released sequentially at 15 minute intervals. Flight altitudes were found to typically range between 300 m and 1000 m above the ground. At the radar, the radio receiver was tuned to the frequency of one of the transponders, and the radar range, elevation angle, and azimuth angle of that transponder were read and manually recorded. The receiver was then tuned to another frequency, and the process repeated. Readings were taken once each minute, so that the interval between successive observations of any given tetroon was typically three minutes.

We had originally planned to follow the tetroons for 12-hour periods covering both night and day. Lack of personnel forced us to cut the experiments to 6 hours in duration, but we were nevertheless able to obtain measurements during most times of the day (sunrise, mid-day, sunset, and mid-night). Most of the tetroons never wandered very far from the center of our observations grid; the light winds experienced during most of these experiments are quite characteristic of eastern Tennessee in summertime (U. S. Weather Bureau, 1953). As expected, most of the tetroons travelled along a SW-NE axis, roughly parallel

Figure 4. Typical pilot balloon site.

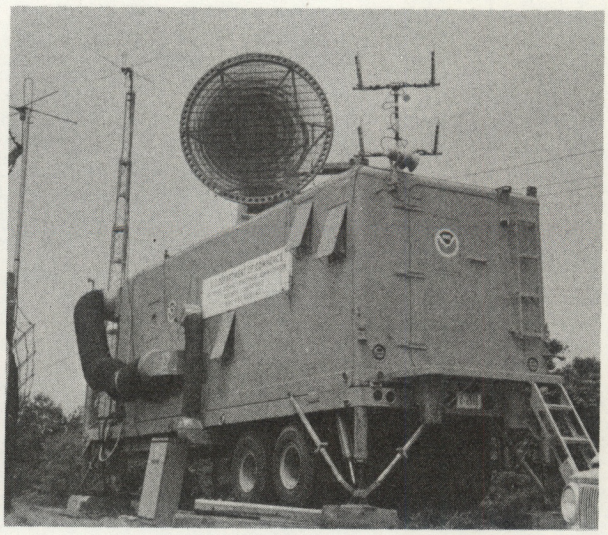


Figure 5. M-33 radar on Buffalo Mountain.

to the local ridge-valley structure described above. A few tetroons were prematurely lost because of transponder malfunctions, topographic interference, and rain. A total of seven trajectory experiments was completed. Interpolated wind fields have been derived and used to estimate air parcel trajectories; these predictions have been compared to the observed tetroon trajectories (Nappo, 1976; included in the Appendix of this report). Analyses of the wind field characteristics have also been carried out (Nappo, 1977; see Appendix).

3.2 Relative Diffusion Experiment

Another aspect of the regional-scale diffusion problem is the need for further study of relative diffusion. Previous observations of relative diffusion (e.g., Kao and Wendell, 1968, and Angell, et al 1971, 1975) were made over relatively uniform terrain and with little supporting meteorological data. During ETTEX, several relative diffusion experiments were conducted using tetroon pairs simultaneously released (Figure 7) and tracked by radar. These flights usually lasted two hours and covered distances up to 40 km from the launch site. The measured relative displacement of each tetroon pair has been compared to theoretical diffusion calculations based on the observed wind and temperature gradients and turbulence in the atmosphere boundary layer (Hanna, 1976; included in the Appendix of this report). These tetroon launches were made from either the ATDL offices or from the Bull Run site. Vertical wind profiles were obtained from either half-hourly double

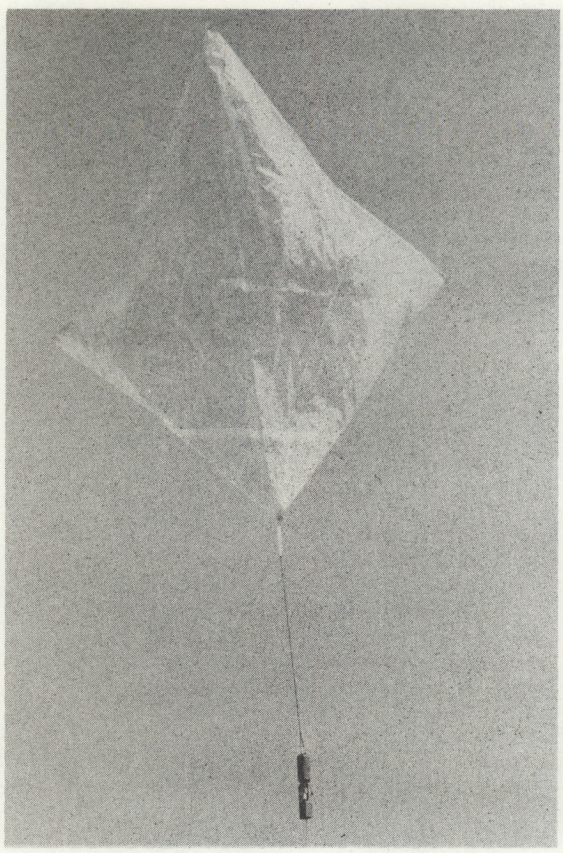


Figure 6. Tetroon & transponder

Figure 7. Tetroons near Bull Run

TABLE 1. SUMMARY OF ETTEX EXPERIMENTS, JULY-AUGUST, 1974

Date (1974)	Approx. Time (EDT)	Experiments Conducted*	Tetroons; Launch Site	Pibal Obs.** Launch Sites	Radiosondes; Launch Site	Aircraft Measurements***
7/15	1000-1600	"Rehearsal"	---	ST; All sites	---	---
7/16	1000-1400	TRJ	1;0800	ST; All Sites	---	---
7/17	1000-1600	TRJ	3;ATDL	ST; All Sites	---	T,E
7/18	1600-2100	TRJ	3;ATDL	ST; All Sites	---	---
7/19	1600-2130	TRJ	3;0800	ST; All Sites	---	---
7/22	100-1510	RD	4;ATDL	DT;0800	---	---
7/25	1200-1700	RD;CD	4;Bull Run	DT; Bull Run	5; Bull Run	T,E,SO_2
7/26	1500-1640	RD	2;ATDL	ST;ATDL(rapid)	1; ATDL	---
7/27	1200-1600	RD	4;Bull Run	DT; Bull Run	4; Bull Run	T,E
7/29	1200-1540	RD	4;ATDL	ST; ATDL(rapid)	2; ATDL	---
7/30	1100-1430	RD	4;ATDL	ST; ATDL (rapid)	1; ATDL	---
7/31	1300-1700	RD;CD	4;ATDL	DT; Bull Run	4; ATDL	T,E,SO_2
8/1	1300-1620	RD;CD	4;ATDL	DT; Bull Run	5; ATDL	T,E,SO_2
8/2	1300-1630	RD;CD	4 Bull Run	DT; Bull Run	4; ATDL	T,E,SO_2
8/5	1130-1600	CD	---	DT; Bull Run	4; 0800	T,E,SO_2
8/6	0400-1000	TRJ	3;0800	ST; All Sites but Crossville	6; 0800	---
8/7	0400-1000	TRJ	3;O.R. Water works	ST; All Sites	7; 0800	---
8/8	0400-0830 (rain)	TRJ	3;Water works 2;ATDL	ST; All Sites	5; 0800	---

*TRJ = Trajectory, CD- Convective Diffusion, RD - Relative Diffusion
**ST or DT = Single or Double Theodolite
***T = Temperature Profile, E = Eddy Dissipation Rate, SO_2 = Plume SO_2 Concentration

theodilite or rapid sequence (launches every 15 minutes; readings every 30 seconds for 10 minutes) single-theodolite pibal observations. Radiosonde ascents were completed during all but one of these experiments. In many cases, data such as eddy dissipation rate and vertical temperature profile were also available from airplane measurements associated with the convective diffusion study described below. A total of nine relative diffusion experiments were completed, most of these between noon and 4 p.m. (EDT).

3.3 Convective Diffusion Experiment

It is believed that, on convective summer afternoons, downdrafts may bring effluent from even tall stacks quickly to the ground, with resulting relatively high surface concentrations. To study this phenomenon, concentrations of SO_2 in the plume were measured by helicopter traverses, together with associated meteorological conditions near the TVA's Bull Run coal-fired steam plant. Vertical temperature gradients and eddy dissipation rates were also measured near the plume from a Cessna 172 airplane equipped with an aspirated thermistor and an MRI Universal Indicated Turbulence Meter borrowed from the TVA. Vertical temperature and humidity profiles were determined by radiosondes and vertical wind profiles were obtained from double-theodolite pibal ascents near the Bull Run site.

A total of five experiments, each lasting from roughly 1 p.m. to 4 or 5 p.m. (EDT), was completed. Results of this experiment will be reported separately at a later time.

4. DATA SUMMARY

As indicated above, seven trajectory experiments, nine relative diffusion experiments, and five convective diffusion experiments were completed. Table 1 summarizes the dates and times, experiment types, and meteorological information available for each run. Part II of this report represents these data in tabular form, together with synoptic weather summaries for the days of the experiment. Data analyses completed thus far are included in the Appendix.

5. ACKNOWLEDGEMENTS

The people who assisted this study are legion, and it is unfortunately impossible to thank everyone by name. However, the experiment would have been impossible without the aid of C. R. Dickson of the ARL Field Research Laboratory in Idaho Falls, who provided the M-33 radar unit and the men to set it up and maintain it. G. White and D. Forsythe of Idaho Falls were in charge of the radar's operation. Dickson also loaned us his mobile radiosonde unit, an enormous collection of routine but essential equipment, and assisted us in procuring a long list of expendable items.

The Coal Creek Mining and Manufacturing Corporation and the Oliver Springs Mining Company (specifically, C. H. Smith and C. Owens) were very cooperative in helping us select and travel to and from the radar site on Buffalo Mountain.

We thank the managers of the following airports for allowing us to use their facilities for our pibal observations: Crossville Municipal (E. Donnelly), McMinn County (J. Scruggs), New Tazewell (W. Coffee), and Sevierville (P. Roberts).

The Tennessee Valley Authority permitted us to use their Bull Run and Kingston Steam plants for portions of the study, and provided meteorological data from their surface and tower sites within the ETTEX region. T. L. Montgomery and J. H. Coleman of the TVA's Air Quality Branch loaned several crucial pieces of equipment.

6. REFERENCES

Ackerman, B. (1973): The airflow program in Metromex, in *Summary Report of Metromex Studies*, 1971-1972, ed. by F. A. Huff, Rept. of Invest. 74, State of Illinois, pp 113-124.

Ackerman, B. (1974): Wind profiles and their variability in the planetary boundary layer, in preprints of *AMS Symposium on Atmospheric Diffusion and Air Pollution, Santa Barbara, Cal., Sept. 9-13*, pp 12-22.

Angell, J. K., D. H. Pack, and C. R. Dickson (1968): A Lagrangian study of helical circulations in the planetary boundary layer. *J. Atmospheric Sci. 25* (5), pp 707-717.

Angell, J. K., P. W. Allen, and E. A. Jessup (1971): Mesoscale relative diffusion estimates from tetroon flights. *J. Appl. Meteorol. 10* (1), pp 43-46.

Angell, J. K., W. H. Hoecker, C. R. Dickson, and D. H. Pack (1973): Urban influence on a strong daytime air flow as determined from tetroon flights. *J. Appl. Meteorol. 12* (6), pp 924-936.

Angell, J. K., C. R. Dickson, and W. H. Hoecker, Jr. (1975): Relative diffusion within the Los Angeles basin as estimated from tetroon triads. *J. Appl. Meteorol. 14*, pp 1490-1498.

Bornstein, R. D. (1968): Observations of the urban heat island effect in New York City. *J. Appl. Meteorol. 7*, pp 575-582.

Egami, R. T., V. Sharma, and R. L. Steele (1974): Diffusion study in the vicinity of Mohave Generating Plant, in preprints of *AMS Symposium on Atmospheric Diffusion and Air Pollution, Santa Barbara, Cal., Sept. 9-13*, pp 209-213.

Hass, W. A., W. H. Hoecker, D. H. Pack, and J. K. Angell (1967): Analysis of low-level constant volume balloon (tetroon) flights over New York City. *Quart. J. Roy. Meteorol. Soc. 93*, pp 483-493.

Hanna, S. R. (1976): Relative diffusion of tetroon pairs during convective conditions. *J. Appl. Meteorol. 15*, pp 588-593.

Heffter, J. L. (1973): *Atmospheric Transport and Dispersion of Pollutants and related Meteorological Studies*, Trajectory Programs, July 1971-June 1972, ed. by R. J. List, NOAA Tech. Memo. ERL-ARL-40, pp 21-46.

Hoecker, W. H. (1975): A universal procedure for deploying constant-volume balloons and for deriving vertical air speeds from them. *J. Appl. Meteorol. 14*, pp 1118-1124.

Kao, S. K. and L. L. Wendell (1968): Some characteristics of relative particle dispersion in the atmospheric boundary layer. *Atmospheric Environ. 2*, pp 397-407.

Kao, S. K., H. N. Lee, and K. I. Smidy (1974): A preliminary analysis of the effect of mountain-valley terrains on turbulence and diffusion, in preprints of *AMS Symposium on Atmospheric Diffusion and Air Pollution, Santa Barbara, Cal., Sept. 9-13*, pp 59-63.

Kao, S. K. and G. H. Taylor (1977): Effect of mountain terrain on diffusion in the planetary boundary layer, in preprints of *AMS Joint Conference on Applications of Air Pollution Meteorology, Salt Lake City, Utah, 29 Nov. - 2 Dec.*, pp 119-125.

Karl, T. R. (1976): Summertime surface wind fields in preprints of *AMS Third Symposium on Atmospheric Turbulence Diffusion and Air Quality, Raleigh, N.C., Oct. 19-22*, pp 107-113.

Lantz, R. B., G. F. Hoffnagle, and S. B. Pahwa (1976): Diffusion model comparisons to measured data in complex terrain, in preprints of *AMS Third Symposium on Atmospheric Turbulence Diffusion and Air Quality, Raleigh, N.C., Oct. 19-22*, pp. 476-483.

Leahey, D. M. and H. S. Hicklin (1973): Tetroon studies of diffusion potential in the airshed surrounding the Crowsnest Pass area, *Atmosphere 11* (3), pp 77-87.

Leahey, D. M. and R. D. Rowe (1974): Observational studies of atmospheric diffusion processes over irregular terrain, paper 74-67, 67th Air Pollution Control Assoc. (APCA) Annual Meeting, Denver, Col., June 9-13.

Moses, H., E. Robinson, M. E. Smith, G. C. Gill, E. M. Wilkins, and C. R. Dickson (1968): Meteorological instruments for use in the atomic energy industry, ch. 6-12 of *Meteorology and Atomic Energy*, ed. by D. H. Slade, TID 24190, pp 298-300.

Mullen, J. B., M. W. Chan, I. H. Tombach (1977): Development and validation of a model for diffusion in complex terrain, in preprints of *AMS Joint Conference on Applications of Air Pollution Meteorology, Salt Lake, 29 Nov. - 2 Dec.*, pp 188-191.

Nappo, C. J. (1976): The simulation of atmospheric transport using observed and estimated winds, in preprints of *AMS Third Symposium on Atmospheric Turbulence Diffusion and Quality, Raleigh, N.C., Oct. 19-22*, pp 100-106.

Nappo, C. J. (1977): Mesoscale flow over complex terrain during the Eastern Tennessee Trajectory Experiment (ETTEX), *J. Appl. Meteorol. 16*, pp 1186-1196.

Pack, D. H. (1962): Air trajectories and turbulence statistics from weather radar using tetroons and radar transponders, *Monthly Weather Rev. 90* (12), pp 491-506.

Roffman, A., T. P. Kapsha, P. E. Kueser, G. L. Bethune, and M. P. Sullivan (1976): A field study on the behaviour of a SO_2 plume from a power plant near complex terrain and under stable atmospheric conditions in preprints of *AMS Third Symposium on Atmospheric Turbulence Diffusion and Air Quality, Raleigh, N.C., Oct. 19-22*, pp 421-429.

Start, G. E., N. R. Ricks, and C. R. Dickson (1974): Effluent dilutions over mountainous terrain. NOAA Tech. Memo. ERL-ARL-51.

U. S. Weather Bureau (1953): *A Meteorological Survey of the Oak Ridge Area: Final Report Covering the Period 1948-52*, USAEC Rpt. ORO-99, Oak Ridge, Tenn.

Wendell, L. L. (1970: A preliminary examination of mesoscale wind fields and transport determined from a network of wind towers, NOAA Tech. Memo. ERL-ARL-25.

Wendell, L. L. (1972): Mesoscale wind fields and transport estimates determined from a network of wind towers, *Monthly Weather Rev. 100* (7), pp 565-578.

Wilson, R. B., G. E. Start, C. R. Dickson, and N. R. Ricks (1976): Diffusion under low windspeed conditions near Oak Ridge, Tennessee in preprints of *AMS Third Symposium on Atmospheric Turbulence Diffusion and Air Quality, Raleigh, N.C., Oct. 19-22*, pp 269-276.

PART II

THE DATA

1. INTRODUCTION

Part II of this report presents the data taken during ETTEX. These data have been grouped into sections according to type. A description of the data and measurement techniques precede each section. Table 2 lists the coordinates and elevations of the stations where data were taken. All measurements are in MKS units.

Table 2. ETTEX Stations

Station	Lat.	Long.	Elev. M(MSL)
Athens (Airport)	35° 23' 45"	84° 33' 45"	257
Crossville (Airport)	35° 57' 03"	85° 05' 04"	573
Sevierville (Airport)	35° 51' 25"	83° 31' 44"	306
New Tazewell (Airport)	36° 24' 36"	83° 33' 20"	359
'0800' (Field)	35° 54' 15"	84° 20' 20"	229
Radar Site (Buffalo Mt.)	36° 06' 40"	84° 20' 54"	1030
Phipps Bend (TVA Nuclear Plant Site)	36° 27' 55"	82° 48' 31"	362
Bull Run (TVA Steam Power Plant)	36° 01' 06"	84° 10' 33"	262
John Sevier (TVA Steam Power Plant)	36° 22' 02"	82° 58' 40"	347
Sequoyah (TVA Nuclear Power Plant)	35° 13' 11"	85° 06' 04"	227
Watts Bar (TVA Steam Power Plant)	35° 35' 45"	84° 47' 38"	253
Clinch River Breeder Reactor Site (TVA Tower)	35° 53' 20"	84° 23' 10"	225
McGhee-Tyson (Knoxville Airport)	36° 48' 44"	83° 59' 33"	229
Hartsville (TVA Steam Power Plant)	36° 21' 10"	86° 05' 00"	164

2. SYNOPTIC SUMMARY

The synoptic meteorological conditions over the ETTEX region during the experimental period (15 July to 8 August 1974) were fairly typical of the normal summer time weather patterns of the region. These conditions are characterized by light and variable winds, high humidity, cumulus cloud formation during most afternoons, occasional thunderstorms, and the passage of weak frontal systems. During the July portion of the experiment, the daily mean temperatures in Oak Ridge averaged 0.8 C° (1.5 F°) below normal, while during the August part, the daily means averaged 2.6 C° (4.6 F°) below normal. Precipitation during the whole period was a bit more than 2.5 cm (1 inch) below normal with an observed rainfall of 7.26 cm (2.86 inches) in Oak Ridge. Climatological data for Oak Ridge for July and August 1974 are presented in Figures 8a and 8b. The National Weather Service 0700 EST daily weather maps for the ETTEX period are reproduced in Figures 9a, b, c and d. The detailed daily summaries given below were prepared from a combination of NWS data, ETTEX results, and local observations.

16 July. An east-west frontal system passed south of the ETTEX region, and was about 10 miles south of Chattanooga by 0800 EDT. The lower 1000 m MSL winds were from the north-east at less than 5 m/s at 1000 EDT. The east-west cold front was about 25 miles south of Chattanooga by 1400 EDT. By this time, the winds were more northerly, lighter, and showing some divergence. Scattered cumulus developed during the day.

17 July. Yesterday's east-west frontal system moved to central Georgia and a ridge of high pressure covered the ETTEX region. Remnants of the nocturnal valley drainage wind were observed at 1000 EDT in the "0800" pibal sounding; however, all the evidence of the drainage wind was gone by 1130 EDT. Scattered cumulus developed during the day.

18 July. Surface high pressure dominated the ETTEX region. Surface visibility ranged from 5 to 9 km in smoke and haze. During mid-day cloud coverage was 20% (cumulus) with a few isolated towering cumulus.

19 July. Surface high pressure over the ETTEX region. Winds aloft were from the south-west. Thunderstorms were reported at McGhee-Tyson airport at 1330 EDT, moving from the north. Thunderstorms occurred until 1800 EDT. Thunderstorms reported at '0800' site at 1640 EDT, and at Athens at 1600 EDT; by 2000 EDT, these storms dissipated or moved out of the area.

22 July. Weak frontal system extended from Nashville to extreme eastern Alabama. Scattered to broken clouds over the ETTEX region.

25 July. A stationary front extended from the Tri-Cities area in extreme northeast Tennessee, passing just north of Oak Ridge and on to Hartsville, Tennessee. Broken cumulus-stratocumulus clouds covered the ETTEX region.

27 July. Upper trough still present with 850 Mb winds of 10-15 knots ENE over the ETTEX region. Broken cumulus-statocumulus with a few towering cumulus over the Great Smoky Mountains. No precipitation reported at observing stations.

29 July. Surface high pressure over ETTEX area had dissipated. Scattered low, middle and high clouds.

30 July. A cold front passed through the ETTEX area about 0000 EDT, with no precipitation over the ETTEX region. Scatter and broken cirrus.

31 July. Very flat north-east pressure gradient with scattered cirrus over ETTEX area.

1 August. Very weak north-east pressure gradient with scattered cumulus and cirrus over ETTEX area.

2 August. Southwest pressure gradient over ETTEX region. Scattered cumulus and strato-cumulus. Oak Ridge reported precipitation at 1700 to 1800 EDT.

5 August. An upper air trough associated with a cold from extended through central Tennessee. Scattered cumulus over ETTEX area.

6 August. High pressure area north of ETTEX region. Clear skies over ETTEX region.

7 August. Southerly surface pressure gradient with winds aloft from the south at 10 M/s. Thunderstorms over northern Georgian moved into ETTEX region about 0800 EDT.

8 August. Southerly flow with low stratus and cumulus and scattered rain over ETTEX region.

LOCAL CLIMATOLOGICAL DATA

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
ENVIRONMENTAL DATA SERVICE

OAK RIDGE, TENNESSEE
WEATHER SERVICE OFFICE
JULY 1974

LATITUDE 36° 01′ N LONGITUDE 84° 14′ W ELEVATION (GROUND) 905 FT. STANDARD TIME USED: EASTERN WBAN #03841

DATE	TEMPERATURE °F MAXIMUM	MINIMUM	AVERAGE	DEPARTURE FROM NORMAL	AVERAGE DEW POINT	DEGREE DAYS BASE 65° HEATING	COOLING	WEATHER TYPES ON DATES OF OCCURRENCE (1 FOG, 2 HEAVY FOG X, 3 THUNDERSTORM, 4 ICE PELLETS, 5 HAIL, 6 GLAZE, 7 DUSTSTORM, 8 SMOKE, HAZE, 9 BLOWING SNOW)	SNOW, ICE PELLETS OR ICE ON GROUND AT 07AM IN.	PRECIPITATION WATER EQUIVALENT IN	SNOW, ICE PELLETS IN.	AVG. STATION PRESSURE IN. ELEV. 914 FEET M.S.L.	WIND RESULTANT DIRECTION	RESULTANT SPEED M.P.H.	AVERAGE SPEED M.P.H.	FASTEST MILE SPEED M.P.H.	FASTEST MILE DIRECTION	SUNSHINE HOURS AND TENTHS	PERCENT OF POSSIBLE	SKY COVER TENTHS SUNRISE TO SUNSET	MIDNIGHT TO MIDNIGHT	DATE
1	2	3	4	5	6	7A	7B	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	87	60	74	-3		0	9	NO ENTRIES - RECORD OF OCCURRENCES INCOMPLETE	0	0	0					13	/			2		1
2	89	60	75	-2		0	10		0	0	0					15	/			1		2
3	90	62	76	-1		0	11		0	0	0					7	/			3		3
4	86	63	75	-2		0	10		0	0	0					13	/			8		4
5	82	66	74	-3		0	9		0	0	0					13	/			9		5
6	86	66	76	-1		0	11		0	0	0					13	/			9		6
7	85	67	76	-1		0	11		0	T	0					10	/			7		7
8	87	66	77	0		0	12		0	0	0					10	/			8		8
9	89	64	77	0		0	12		0	0	0					9	/			10		9
10	89	65	77	0		0	12		0	0	0					11	/			7		10
11	89	66	78	1		0	13		0	0	0					10	/			7		11
12	89	64	77	0		0	12		0	0	0					14	/			1		12
13	89	56	73	-4		0	8		0	0	0					11	/			1		13
14	91	58	75	-2		0	10		0	0	0					11	/			1		14
15	93*	60	77	0		0	12		0	.01	0					22	/			3		15
16	88	64	76	-1		0	11		0	0	0					17	/			4		16
17	92	61	77	0		0	12		0	0	0					11	/			3		17
18	92	66	79	2		0	14		0	0	0					16	/			2		18
19	83	67	75	-2		0	10		0	.64	0					33	/			9		19
20	89	67	78	1		0	13		0	.65	0					21	/			6		20
21	87	62	75	-2		0	10		0	0	0					15	/			4		21
22	86	59	73	-4		0	8		0	0	0					12	/			9		22
23	74	68	71*	-6		0	6		0	T	0					15	/			10		23
24	88	68	78	1		0	13		0	.62	0					12				5		24
25	87	64	76	-1		0	11		0	0	0					11	/			6		25
26	80	70	75	-2		0	10		0	.07	0					11	/			10		26
27	89	69	79*	2		0	14		0	0	0					10	/			3		27
28	88	64	76	-1		0	11		0	0	0					8	/			2		28
29	88	64	76	-1		0	11		0	T	0					14	/			5		29
30	87	57	72	-5		0	7		0	0	0					10	/			8		30
31	87	56*	72	-5		0	7		0	0	0					11	/			2		31
SUM		SUM				TOTAL	TOTAL			TOTAL	TOTAL							TOTAL	%	SUM	SUM	
2706		1969				0	330	NUMBER OF DAYS		1.99	0								FOR	165		
AVG.		AVG.	AVG.	DEP.	AVG.	DEP.	DEP.	PRECIPITATION		DEP.								DATE: 19	POSSIBLE	MONTH	AVG.	AVG.
87.3		63.5	75.4	-1.6		0	-42	≥.01 INCH	5	-3.68											5.3	

NUMBER OF DAYS				SEASON TO DATE TOTAL	TOTAL			
MAXIMUM TEMP.		MINIMUM TEMP.						
≥ 90°	≤ 32°	≤ 32°	≤ 0°	DEP.	DEP.	SNOW, ICE PELLETS ≥ 1.0 INCH	0	
5	0	0	0	0	-246	THUNDERSTORMS	0	
						HEAVY FOG X	0	

GREATEST IN 24 HOURS AND DATES			GREATEST DEPTH ON GROUND OF SNOW, ICE PELLETS OR ICE AND DATE
PRECIPITATION		SNOW, ICE PELLETS	ICE PELLETS
1.29	19-20	0	0

CLEAR 12	PARTLY CLOUDY 9	CLOUDY 10	

HOURLY PRECIPITATION (WATER EQUIVALENT IN INCHES)

DATE	A. M. HOUR ENDING AT 1	2	3	4	5	6	7	8	9	10	11	12	P. M. HOUR ENDING AT 1	2	3	4	5	6	7	8	9	10	11	12	DATE
1																									1
2																									2
3																									3
4																									4
5																									5
6																									6
7																	T								7
8																									8
9																									9
10																									10
11																									11
12																									12
13																									13
14																									14
15																.01									15
16																									16
17																									17
18																									18
19												.05	.50			.09									19
20	.07	.58																T							20
21																									21
22																									22
23							T	T					T	T	T										23
24		.26	.20	.02	.14																				24
25																									25
26											.07														26
27																									27
28																									28
29										T															29
30																									30
31																									31

EXTREME TEMPERATURES FOR THE MONTH. MAY BE THE LAST OF MORE THAN ONE OCCURRENCE.
- BELOW ZERO TEMPERATURE OR NEGATIVE DEPARTURE FROM NORMAL.
* > 70° AT ALASKAN STATIONS.
+ ALSO ON AN EARLIER DATE. OR DATES.
X HEAVY FOG RESTRICTS VISIBILITY TO 1/4 MILE OR LESS.
T IN THE HOURLY PRECIPITATION TABLE AND IN COLUMNS 9. 10. AND 11 INDICATES AN AMOUNT TOO SMALL TO MEASURE

THE SEASON FOR DEGREE DAYS BEGINS WITH JULY FOR HEATING AND JANUARY FOR COOLING.
DATA IN COLUMNS 8. 12. 13. 14. AND 15 ARE BASED ON 8 OBSERVATIONS PER DAY AT 3-HOUR INTERVALS.
WIND DIRECTIONS ARE THOSE FROM WHICH THE WIND BLOWS.
RESULTANT WIND IS THE VECTOR SUM OF WIND DIRECTIONS AND SPEEDS DIVIDED BY THE NUMBER OF OBSERVATIONS.
FIGURES FOR DIRECTIONS ARE TENS OF DEGREES FROM TRUE NORTH: I.E.. 09=EAST. 18=SOUTH. 27=WEST. 36=NORTH. AND 00=CALM. WHEN DIRECTIONS ARE IN TENS OF DEGREES IN COL. 17. ENTRIES IN COL. 16 ARE FASTEST OBSERVED 1-MINUTE SPEEDS. IF THE / APPEARS IN COL. 17. SPEEDS ARE GUSTS.
ANY ERRORS DETECTED WILL BE CORRECTED AND CHANGES IN SUMMARY DATA WILL BE ANNOTATED IN THE ANNUAL SUMMARY.

SUBSCRIPTION PRICE: LOCAL CLIMATOLOGICAL DATA $2.00 PER YEAR INCLUDING ANNUAL ISSUE IF PUBLISHED. FOREIGN MAILING 75¢ EXTRA. SINGLE COPY: 20¢ FOR MONTHLY ISSUE: 15¢ FOR ANNUAL SUMMARY. MAKE CHECKS PAYABLE TO DEPARTMENT OF COMMERCE. NOAA. SEND PAYMENTS AND ORDERS TO NATIONAL CLIMATIC CENTER. FEDERAL BUILDING. ASHEVILLE. NORTH CAROLINA 28801.

I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION. AND IS COMPILED FROM RECORDS ON FILE AT THE NATIONAL CLIMATIC CENTER. ASHEVILLE. NORTH CAROLINA. 28801

William H. Haggard

DIRECTOR. NATIONAL CLIMATIC CENTER

SUMMARY BY HOURS

HOUR LOCAL TIME	AVERAGES: SKY COVER TENTHS	STATION PRESSURE IN.	TEMPERATURE AIR °F	WET BULB °F	DEW PT.	RELATIVE HUMIDITY %	WIND SPEED M.P.H.	RESULTANT WIND DIRECTION	SPEED M.P.H.

USCOMM - NOAA - ASHEVILLE 275
8/16/74

OAK RIDGE, TENNESSEE

NOTICE- JUNE 1974 COOLING DEGREE DAYS SHOULD READ: TOTAL 116, DEP. -165, SEASON TOTAL 240, DEP. -204

Figure 8a

LOCAL CLIMATOLOGICAL DATA

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
ENVIRONMENTAL DATA SERVICE

OAK RIDGE, TENNESSEE
WEATHER SERVICE OFFICE
AUGUST 1974

LATITUDE 36° 01′ N LONGITUDE 84° 14′ W ELEVATION (GROUND) 905 FT. STANDARD TIME USED: EASTERN WBAN #03841

DATE	TEMPERATURE °F MAXIMUM	MINIMUM	AVERAGE	DEPARTURE FROM NORMAL	AVERAGE DEW POINT	DEGREE DAYS BASE 65° HEATING	COOLING	WEATHER TYPES ON DATES OF OCCURRENCE 1 FOG 2 HEAVY FOG X 3 THUNDERSTORM 4 ICE PELLETS 5 HAIL 6 GLAZE 7 DUSTSTORM 8 SMOKE, HAZE 9 BLOWING SNOW	SNOW, ICE PELLETS OR ICE ON GROUND AT 07AM IN.	PRECIPITATION WATER EQUIVALENT IN	SNOW, ICE PELLETS IN.	AVG. STATION PRESSURE IN. ELEV. 914 FEET M.S.L.	WIND RESULTANT DIRECTION	RESULTANT SPEED M.P.H.	AVERAGE SPEED M.P.H.	FASTEST MILE SPEED M.P.H.	DIRECTION	SUNSHINE HOURS AND TENTHS	PERCENT OF POSSIBLE	SKY COVER TENTHS SUNRISE TO SUNSET	MIDNIGHT TO MIDNIGHT	DATE
1	2	3	4	5	6	7A	7B	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22
1	90	57	74	-3		0	9	NO ENTRIES - RECORD OF OCCURRENCES INCOMPLETE	0	0	0					10	/			7		1
2	87	63	75	-2		0	10		0	.20	0					22	/			10		2
3	76	67	72	-5		0	7		0	.12	0					13	/			10		3
4	82	62	72	-5		0	7		0	.14	0					16	/			10		4
5	81	55*	68*	-9		0	3		0	0	0					11	/			10		5
6	83	62	73	-4		0	8		0	0	0					9	/			10		6
7	78	63	71	-6		0	6		0	0	0					6	/			10		7
8	79	68	74	-3		0	9		0	.42	0					8				10		8
9	84	68	76	-1		0	11		0	.02	0					9				10		9
10	87	68	78	1		0	13		0	0	0					7	/			9		10
11	85	67	76	-1		0	11		0	.71	0					28	/			10		11
12	77	65	71	-6		0	6		0	.03	0					11	/			10		12
13	85	64	75	-2		0	10		0	0	0					12	/			8		13
14	88	67	78	1		0	13		0	.01	0					12	/			10		14
15	88	67	78	2		0	13		0	0	0					9	/			7		15
16	82	67	75	-1		0	10		0	.83	0					12	/			8		16
17	88	66	77	1		0	12		0	0	0					15	/			5		17
18	85	64	75	-1		0	10		0	0	0					14	/			6		18
19	85	62	74	-2		0	9		0	0	0					14	/			2		19
20	85	60	73	-3		0	8		0	0	0					15	/			1		20
21	80	61	71	-5		0	6		0	T	0					20	/			10		21
22	82	61	72	-4		0	7		0	.12	0					11	/			10		22
23	86	63	75	0		0	10		0	T	0					12	/			6		23
24	86	64	75	0		0	10		0	0	0					7	/			5		24
25	88	64	76	1		0	11		0	0	0					11	/			4		25
26	90*	65	78	3		0	13		0	0	0					11	/			3		26
27	88	68	78*	3		0	13		0	.12	0					23	/			9		27
28	82	67	75	0		0	10		0	.06	0					9	/			10		28
29	85	69	77	3		0	12		0	1.26	0					29	/			8		29
30	77	68	73	-1		0	8		0	.22	0					17	/			10		30
31	83	67	75	1		0	10		0	.05	0					15	/			8		31
SUM	2602	1999				0	295	NUMBER OF DAYS		4.31	0			FOR THE MONTH:		29	/	TOTAL POSSIBLE	% FOR MONTH	246		
AVG.	83.9	64.5	74.2	-1.9		DEP. 0	DEP. -49	PRECIPITATION >.01 INCH 15		DEP. 0.46						DATE: 29				SUM 7.9	AVG.	

NUMBER OF DAYS MAXIMUM TEMP. ≥ 90°	≤ 32°	MINIMUM TEMP. ≤ 32°	≤ 0	SEASON TO DATE TOTAL	TOTAL
				0	865
2	0	0	0	0	-295

SNOW, ICE PELLETS > 1.0 INCH	0
THUNDERSTORMS	
HEAVY FOG X	
CLEAR 3	PARTLY CLOUDY 7

GREATEST IN 24 HOURS AND DATES PRECIPITATION		SNOW, ICE PELLETS	
1.26	29	0	

GREATEST DEPTH ON GROUND OF SNOW, ICE PELLETS OR ICE AND DATE	
0	

CLOUDY 21

HOURLY PRECIPITATION (WATER EQUIVALENT IN INCHES)

DATE	A. M. HOUR ENDING AT 1	2	3	4	5	6	7	8	9	10	11	12	P. M. HOUR ENDING AT 1	2	3	4	5	6	7	8	9	10	11	12	DATE
1																									1
2																.06	.01			.01	.02			.10	2
3												.04	.05			.02	.01								3
4			T	.01	.02	.02									.09										4
5																									5
6																									6
7																									7
8						.02	.01	.22	.02	.03	.03	.01	.08							T	T				8
9																	.01	.01							9
10																									10
11																		.31	.37	.03					11
12													.03												12
13																									13
14																				.01					14
15																									15
16								.01	T	.40	.36	.06													16
17																									17
18																									18
19																									19
20																									20
21																T			T						21
22							.02	.03	.01	.06	T														22
23																	T								23
24																									24
25																									25
26																									26
27																.02	.04	.06							27
28															.06										28
29																.03	.08	.82	.20	.08	.04	.01			29
30								T	T					T			.03	.19							30
31															.05										31

* EXTREME TEMPERATURES FOR THE MONTH, MAY BE THE LAST OF MORE THAN ONE OCCURRENCE.
\- BELOW ZERO TEMPERATURE OR NEGATIVE DEPARTURE FROM NORMAL.
\+ > 70° AT ALASKAN STATIONS.
\+ ALSO ON AN EARLIER DATE, OR DATES.
X HEAVY FOG RESTRICTS VISIBILITY TO 1/4 MILE OR LESS.
T IN THE HOURLY PRECIPITATION TABLE AND IN COLUMNS 9, 10, AND 11 INDICATES AN AMOUNT TOO SMALL TO MEASURE

THE SEASON FOR DEGREE DAYS BEGINS WITH JULY FOR HEATING AND JANUARY FOR COOLING.
DATA IN COLUMNS 6, 12, 13, 14, AND 15 ARE BASED ON 8 OBSERVATIONS PER DAY AT 3-HOUR INTERVALS.
WIND DIRECTIONS ARE THOSE FROM WHICH THE WIND BLOWS.
RESULTANT WIND IS THE VECTOR SUM OF WIND DIRECTIONS AND SPEEDS DIVIDED BY THE NUMBER OF OBSERVATIONS.
FIGURES FOR DIRECTIONS ARE TENS OF DEGREES FROM TRUE NORTH: I.E., 09=EAST, 18=SOUTH, 27=WEST, 36=NORTH, AND 00=CALM. WHEN DIRECTIONS ARE IN TENS OF DEGREES IN COL. 17, ENTRIES IN COL. 16 ARE FASTEST OBSERVED 1-MINUTE SPEEDS. IF THE / APPEARS IN COL. 17, SPEEDS ARE GUSTS.
ANY ERRORS DETECTED WILL BE CORRECTED AND CHANGES IN SUMMARY DATA WILL BE ANNOTATED IN THE ANNUAL SUMMARY.

SUBSCRIPTION PRICE: LOCAL CLIMATOLOGICAL DATA $2.00 PER YEAR INCLUDING ANNUAL ISSUE IF PUBLISHED. FOREIGN MAILING 75¢ EXTRA. SINGLE COPY: 20¢ FOR MONTHLY ISSUE; 15¢ FOR ANNUAL SUMMARY. MAKE CHECKS PAYABLE TO DEPARTMENT OF COMMERCE, NOAA. SEND PAYMENTS AND ORDERS TO NATIONAL CLIMATIC CENTER, FEDERAL BUILDING, ASHEVILLE, NORTH CAROLINA 28801.

I CERTIFY THAT THIS IS AN OFFICIAL PUBLICATION OF THE NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION, AND IS COMPILED FROM RECORDS ON FILE AT THE NATIONAL CLIMATIC CENTER, ASHEVILLE, NORTH CAROLINA, 28801

William H. Haggard

DIRECTOR, NATIONAL CLIMATIC CENTER

SUMMARY BY HOURS

HOUR LOCAL TIME	AVERAGES SKY COVER TENTHS	STATION PRESSURE IN.	TEMPERATURE AIR °F	WET BULB °F	DEW PT. °F	RELATIVE HUMIDITY %	WIND SPEED M.P.H.	RESULTANT WIND DIRECTION	SPEED M.P.H.

OAK RIDGE, TENNESSEE

USCOMM - NOAA - ASHEVILLE 275

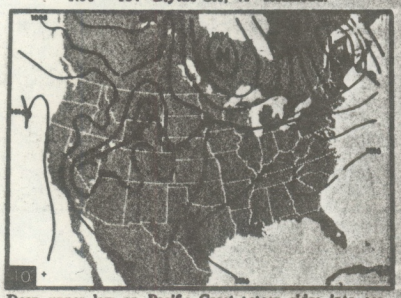
9/19/74

Figure 8b

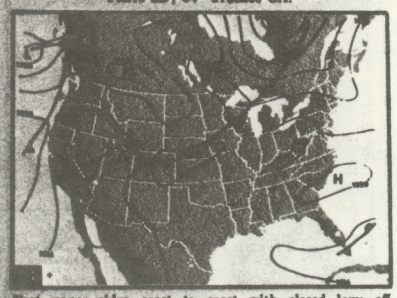
JULY 1974

Trough remains off Pacific Coast—central ridge extends to Hudson Bay— in NW: Omak .60", Astoria .55", Pendleton .45", Boise .22", Reno .27"—St. Louis 1.36"—104° Blythe CA; 41° Redmond.

Upper low across Canada—closed high centered over IA & MO—trough off Atlantic—very little precip.—Fargo .86", Bismarck .58"—New Orleans .90"—110° Pierre SD; 34° Truckee CA.



Deep upper low on Pacific Coast—steep ridge into cen. Canada—trough New Eng.—in NW: Quillayute .70", Cut Bank MT .63", Boise .17"— Pittsburgh 1.06"—103° Hutchinson KS.



Vast upper ridge coast to coast with closed lows off NW & NE coasts—RW in SW: Yuma 1.01", Albuquerque .37"—Waco .69"—Chicago .59", Philipsburg PA .93"—105° KS; 43° ID, WY, NV.

Trough over NW—strong ridge Hudson Bay to Gulf Mexico—frontal RW: Memphis 2.41", Knoxville 1.26"—in NW: Quillayute .22", Astoria .13"—110° Philip SD; 33° Reno.

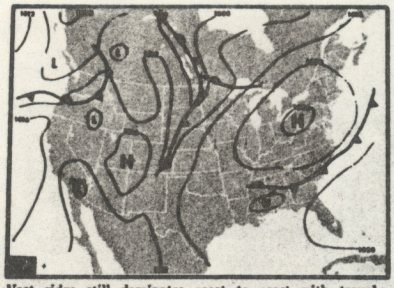
Same pattern with vast ridge extending into west Canada—more RW in SW: Winslow AZ .34", El Paso .12"—Montgomery .85" Cincinnati .74", Caribou ME 1.07"—104° Blythe; 41° Quillayute.

Upper low moves into west Canada—central ridge weakens—deep trough Atlantic Coast— little precip.—Tampa 1.09", San Antonio 1.13"—Denver .25"—107° Blythe; 33° Redmond.

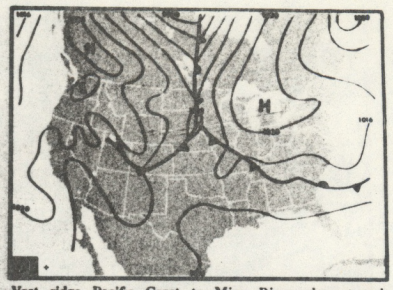
Upper trough Pacific Coast—trough along Atlantic Coast—strong ridge central US—scattered RW—Quillayute 1.09", Astoria .71"—Pierre SD .20"—37° Redmond.

Figure 9a

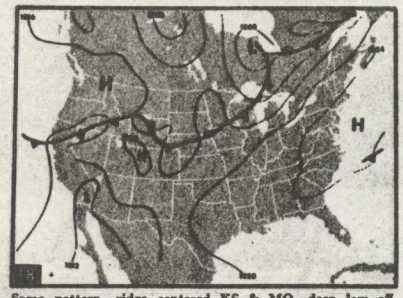
JULY 1974



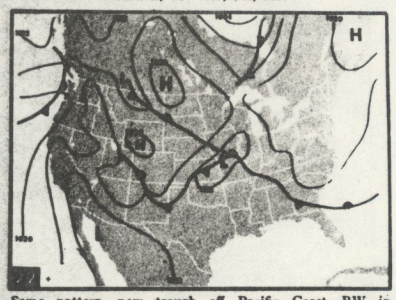
Vast ridge still dominates coast to coast with troughs offshore—R+ in NW: Astoria 1.16", Seattle .52"—Escanaba MI 1.77"—Ft. Myers 1.06"—New Orleans 1.05"—109° CA & AZ; 39° Reno.



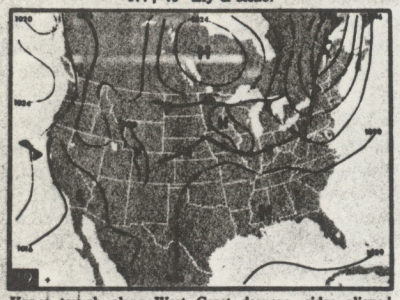
Vast ridge Pacific Coast to Miss. River—deep trough Atlantic Coast—R+ in SE: Jacksonville 1.52", Wilmington NC 1.40"—Duluth 3.40"—Denver 1.24"—110° Omaha; 38° NH, PA, MI.



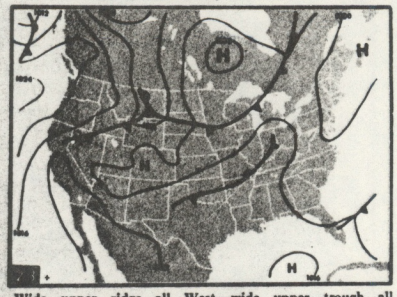
Same pattern—ridge centered KS & MO—deep low off BC—scattered RW—Grand Junction CO 1.40"—Huron SD .25"—Buffalo .57"—Ft. Myers .83"—107° CA & NV; 45° Ely & Reno.



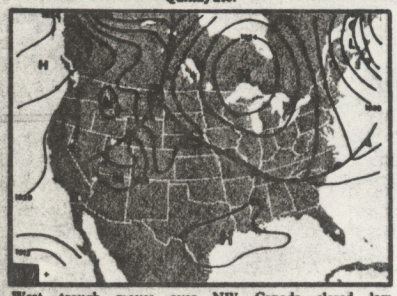
Same pattern—new trough off Pacific Coast—RW in Midwest: Chicago .89", Traverse City .35"—Mobile 1.28"—in NW: Helena .20", Quillayute .15"—111° Ft. Sill & Hobart OK; 39° Truckee.



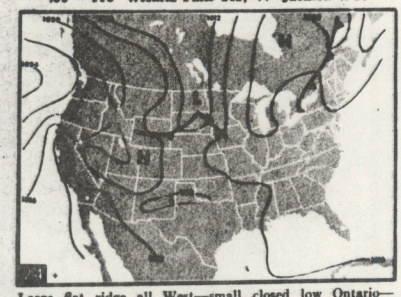
Upper trough along West Coast deepens—ridge aligned along 100°W—TRW in East: Burlington VT .65", Elkins WV 1.53", Cincinnati 1.92"—107° Omaha; 43° Quillayute.



Wide upper ridge all West—wide upper trough all East—frontal RW Appalachians: Philipsburg PA .53", Memphis 1.12", Tallahassee 1.69"—Las Vegas NV .35"—110° Wichita Falls TX; 44° Jackson WY.



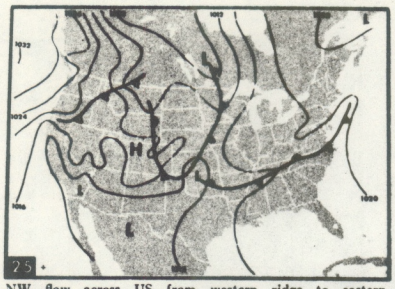
West trough moves over NW Canada—closed low Maine—vast ridge central US—little precip. except SE: Atlanta 1.04", Tallahassee .77"— St. Louis .35"—107° Manhattan KS & Pierre SD; 41° Truckee.



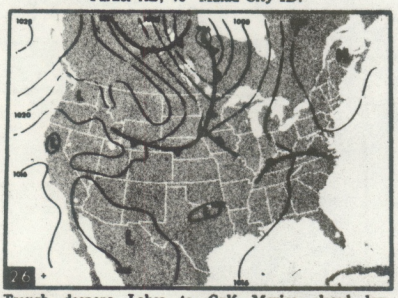
Large flat ridge all West—small closed low Ontario—frontal RW: Phila. .96", Roanoke .89"—Shreveport 2.70"—Dodge City KS .39"—Wausau WI .44"—112° Buckeye AZ; 41° Jackson WY.

Figure 9b

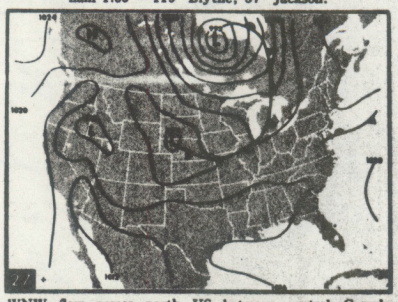
JULY 1974



NW flow across US from western ridge to eastern trough—TRW in South: Savannah 2.19", Tallahassee 1.73", Little Rock 3.35"—Wausau WI .51"—115° Parker AZ; 40° Malad City ID.

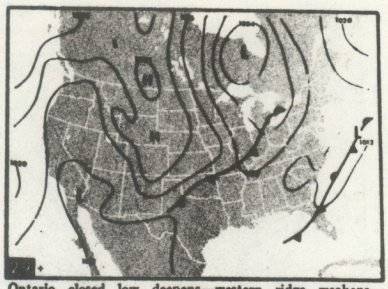


Trough deepens Lakes to Gulf Mexico—closed low MAN/SAS in Canada—more RW+ in SE: Norfolk 3.81", Chattanooga 2.78", Jacksonville 1.16", Birmingham 1.03"—115° Blythe; 37° Jackson.



WNW flow across north US between central Canada low and SW ridge—weak trough SE states—Atlantic coast RW: Syracuse .64", Hatteras .86", Orlando .60"—North Platte NB 1.44"—115° Blythe; 37° Jackson.

Closed low near James Bay—vast ridge over southern US—cyclonic circulation—RW in NE: Syracuse 1.14", Pittsburgh .76"—in SE: Charleston SC .75", Tampa .82"—114° Needles CA; 41° Truckee.



Ontario closed low deepens—western ridge weakens—RW in NW: Albany 1.94", Scranton 1.19", Wash DC .90"—Ft. Myers 1.27"—Denver .23"—San Diego .01"—109° Needles; 44° Evanston.

Closed low remains over Ontario—western ridge on SW coast—in NE: Burlington .43"— in South: Mobile 1.31", Abilene TX 1.28"—Valentine NB .36"—110° Buckeye AZ; 42° Bismarck ND.

Closed low on ONT/QUE border—trough over SW weakens—little precip.—Burlington VT .19", Miami 1.51", Sioux City .95", Albuquerque .58", Phoenix .33"—111° Blythe; 42° Laramie WY.

The map time is 0700 EST. Isobar figures are in millibars. All maps are traced from the Daily Weather Maps—Weekly Series, prepared by the National Weather Service, NOAA.

Symbols:

R—, R, R+	—Rain: light, moderate, heavy.
S—, S, S+	—Snow: light, moderate, heavy.
RW—, RW, RW+	—Rain showers: light, moderate, heavy.
SW—, SW, SW+	—Snow showers: light, moderate, heavy.
NR	—New all-time Record.
NJR, NAR	—New July, New August, Record.

Figure 9c

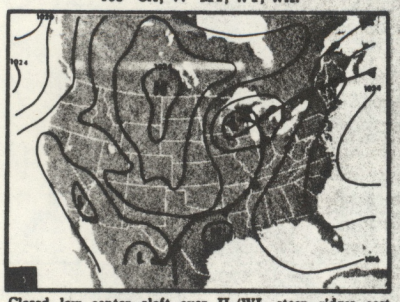
AUGUST 1974

Strong western ridge, wide eastern trough—frontal RW Midwest: Chicago .34", Fargo 1.44", Sioux City .81"—Roswell NM 1.00"—Charleston SC 1.43"—Houston 1.56"—110° Blythe; 40° Laramie.

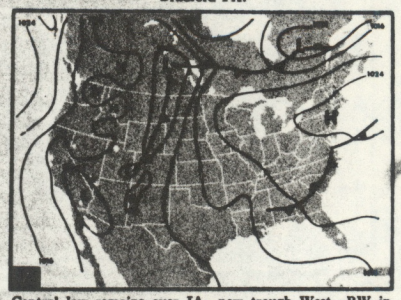
Trough moves east, Labrador to Lakes—wide ridge West—R+ Plains: Amarillo 1.57", Dodge City 1.00"—in AZ: Phoenix 1.13"—Norfolk VA 2.28"—106° Buckeye; 42° WY, CO.

Large ridge west, trough Baffin Land southwest—large RW area: Duluth 1.13", Springfield IL .97", Louisville 1.15", Roanoke 1.44", Tallahassee 3.05", Tucson .61"—108° CA; 44° MT, WY, WA.

Small closed low IA—weak ridge West—more R+ in SE: Wilmington NC 3.43", Norfolk 1.72"—New Orleans 1.80"—Junction TX: 1.82"—110° Palm Springs; 41° Bradford PA.



Closed low center aloft over IL/WI—steep ridges east & west—R area all East: Boston .69", Charlotte 1.36", Chattanooga 1.51", S.S. Marie 5.92"—106° Yuma; 37° Laramie.



Central low remains over IA—new trough West—RW in SE: Salisbury MD 3.23", Atlanta 1.27", Birmingham 1.62"—San Antonio 2.94"—Kirksville MO 1.99"—113° Thermal CA; 43° Baker OR.

Upper low over L. Michigan—cyclonic flow—R+ East: Syracuse 1.44", Wash. DC 1.34", Wilmington NC 1.89", Ft. Myers 1.63"—Midland TX .87"—107° Gila Bend; 38° North Platte.

Upper trough Rockies/Plateau—ridge central US—scattered RW—Charleston SC 1.91"—Montgomery 1.09"—San Antonio 3.68"—Dodge City 3.18"—Lewistown 1.18"—109° Imperial CA; 32° Evanston WY.

Figure 9d

3. TRAJECTORY EXPERIMENT SURFACE DATA

During the trajectory experiment, temperatures and relative humidity at shelter height, and the 2 m wind speed were measured at each ETTEX pibal sounding station. Hourly averaged temperatures and humidities were determined from hygrothermograph records; the averaging period was centered on the hour. The wind speeds were measured with Thornthwaite low-threshold cup anemometers, and are 20-minute averages centered on the hours. Stations are identified as follows: SV = Sevierville, AT = Athens, OR = '0800' site, CR = Crossville, and TZ = New Tazewell. Asterisks indicate missing data.

SURFACE DATA July 16, 1974

TIME (EDT)	TEMPERATURE (°C)					RELATIVE HUMIDITY (%)					WIND SPEED (M/S)				
	SV	AT	OR	CR	TZ	SV	AT	OR	CR	TZ	SV	AT	OR	CR	TZ
1000	24.4	27.2	26.7	23.8	23.3	75	70	64	80	78	2.6	1.9	1.3	1.6	2.0
1100	26.4	27.2	27.8	25.0	25.0	65	69	58	77	71	1.5	1.9	1.4	2.1	2.2
1200	28.3	28.3	29.4	26.4	25.3	55	63	52	70	64	2.0	2.0	1.9	1.8	3.9
1300	29.7	30.0	30.6	27.8	26.7	48	59	48	64	57	1.8	2.3	1.1	1.8	2.9
1400	30.8	31.1	31.4	29.2	27.8	44	56	45	57	58	1.8	2.6	1.6	2.2	2.5

SURFACE DATA July 17, 1974

TIME (EDT)	TEMPERATURE (°C)					RELATIVE HUMIDITY (%)					WIND SPEED (M/S)				
	SV	AT	OR	CR	TZ	SV	AT	OR	CR	TZ	SV	AT	OR	CR	TZ
1000	24.4	22.2	24.4	26.7	23.9	66	68	56	64	66	0.9	1.2	1.0	1.4	1.1
1100	27.2	23.9	26.1	25.6	26.1	58	69	54	65	63	1.1	1.0	0.9	1.0	1.5
1200	29.4	26.1	28.9	27.8	27.8	52	66	50	59	61	1.3	1.2	0.7	1.2	1.7
1300	32.2	27.5	30.0	29.4	30.0	45	61	48	54	54	0.5	0.7	1.2	1.7	1.5
1400	33.3	28.3	31.1	29.4	30.3	39	59	48	52	51	2.0	2.3	1.0	1.1	1.9
1500	32.7	28.9	31.7	30.0	31.7	40	57	44	50	48	1.5	1.7	0.9	0.8	1.7
1600	33.3	29.4	32.8	30.3	32.5	38	54	40	50	41	1.0	1.4	1.0	1.4	**

SURFACE DATA July 18, 1974

TIME (EDT)	TEMPERATURE (°C)					RELATIVE HUMIDITY (%)					WIND SPEED (M/S)				
	SV	AT	OR	CR	TZ	SV	AT	OR	CR	TZ	SV	AT	OR	CR	TZ
1600	34.4	30.0	33.3	33.3	32.8	35	44	38	39	34	3.0	2.1	1.6	1.9	3.4
1700	32.8	30.6	32.8	32.2	32.8	37	44	42	45	37	3.1	1.9	1.5	1.6	3.2
1800	30.6	30.0	33.3	31.7	32.2	51	44	41	48	41	2.4	2.0	1.1	1.1	2.9
1900	29.4	28.9	32.4	30.6	31.1	53	48	43	51	48	1.4	1.7	0.3	1.2	1.0
2000	28.9	27.2	29.4	28.9	29.4	55	54	64	57	58	1.3	0.6	0.4	0.4	0.9
2100	26.1	25.0	26.1	27.2	26.7	73	57	77	68	69	0.6	0.8	0.3	0.6	0.7
2200	23.8	**	**	**	24.4	78	**	**	**	80	0.3	**	**	**	0.2

SURFACE DATA July 19, 1974

TIME (EDT)	TEMPERATURE (°C)					RELATIVE HUMIDITY (%)					WIND SPEED (M/S)				
	SV	AT	OR	CR	TZ	SV	AT	OR	CR	TZ	SV	AT	OR	CR	TZ
1600	24.4	23.3	27.2	31.7	22.2	86	91	80	52	98	1.1	0.7	2.3	1.6	2.5
1700	23.3	23.3	24.7	30.0	23.9	80	93	93	51	87	2.2	1.3	**	1.4	2.0
1800	23.3	25.0	25.6	22.5	23.3	85	76	93	92	86	0.7	1.0	0.8	2.6	2.5
1900	23.9	25.0	26.1	22.8	23.3	86	83	82	85	87	1.3	0.6	0.7	1.4	2.2
2000	23.3	23.3	25.0	22.8	23.3	87	91	89	84	87	0.7	0.6	0.6	1.3	0.6
2100	22.8	22.2	23.9	22.2	21.1	87	94	97	84	98	1.2	0.5	0.3	0.6	**
2200	22.2	**	**	**	**	86	**	**	**	**	0.2	**	**	**	**

SURFACE DATA August 6, 1974

TIME (EDT)	TEMPERATURE (°C)					RELATIVE HUMIDITY (%)					WIND SPEED (M/S)				
	SV	AT	OR	CR	TZ	SV	AT	OR	CR	TZ	SV	AT	OR	CR	TZ
0400	19.4	**	17.2	15.6	15.6	86	**	98	96	95	0.4	**	0.4	2.1	0.3
0500	18.9	**	17.8	15.3	16.1	87	**	98	97	98	0.2	1.1	0.5	2.1	0.6
0600	19.4	18.3	17.5	14.4	15.6	86	90	99	99	98	0.4	0.8	0.3	2.1	0.2
0700	19.4	17.8	16.7	14.4	15.6	86	95	100	100	98	0.3	1.0	0.5	1.5	0.2
0800	20.0	17.8	17.5	15.8	16.1	85	95	98	96	99	0.5	1.5	0.4	3.1	0.2
0900	20.3	18.9	19.4	18.9	17.2	80	88	82	80	94	1.0	1.4	1.0	2.6	0.2
1000	21.7	20.7	22.2	22.2	19.4	72	81	67	62	78	0.8	1.6	1.8	2.6	0.4

SURFACE DATA August 7, 1974

TIME (EDT)	TEMPERATURE (°C)					RELATIVE HUMIDITY (%)					WIND SPEED (M/S)				
	SV	AT	OR	CR	TZ	SV	AT	OR	CR	TZ	SV	AT	OR	CR	TZ
0400	18.9	18.6	18.9	20.0	18.9	89	**	100	95	89	0.6	0.9	**	1.2	0.3
0500	18.9	18.6	18.5	20.0	18.6	91	99	100	96	96	0.3	0.8	0.4	1.1	0.4
0600	18.6	19.2	18.3	20.0	18.3	90	97	100	97	97	0.6	1.0	0.1	1.5	0.4
0700	18.8	21.3	18.3	20.0	18.0	90	75	100	98	98	0.1	0.5	0.1	1.9	0.3
0800	19.4	20.3	19.4	20.0	18.9	81	86	100	98	99	0.5	0.6	0.2	1.0	0.3
0900	23.9	20.6	21.1	21.7	20.3	61	87	100	91	88	1.1	1.2	0.3	1.5	0.9
1000	25.0	21.0	22.5	22.5	22.8	62	86	86	78	75	1.3	1.2	0.6	3.1	1.9

SURFACE DATA August 8, 1974

TIME (EDT)	TEMPERATURE (°C)					RELATIVE HUMIDITY (%)					WIND SPEED (M/S)				
	SV	AT	OR	CR	TZ	SV	AT	OR	CR	TZ	SV	AT	OR	CR	TZ
0400	21.7	20.3	20.0	20.3	20.3	89	98	90	80	97	0.4	0.3	0.2	2.5	0.2
0500	21.7	20.4	20.0	20.1	19.7	98	99	93	85	93	**	0.2	0.1	1.9	0.4
0600	21.4	20.6	20.0	20.0	19.4	100	97	97	90	96	0.2	0.5	0.1	1.9	0.8
0700	21.4	20.0	20.0	20.0	19.2	100	99	100	97	98	**	0.4	0.2	1.6	0.4
0800	21.7	20.2	20.6	**	19.4	100	100	100	**	98	**	0.3	**	**	0.5

4. RADIOSONDE DATA

The radiosonde data were taken with a mobile radiosonde unit loaned by the ARL Field Research Laboratory, Idaho Falls, Idaho. Unfortunately, the unit did not become operational until about half way through the ETTEX period and even then it was not always completely reliable. Asterisks indicate missing data.

RADIO SONDE OAK RIDGE 7/25/74

1100 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	990	25.5	21.8	85.2	80
107	978	23.9	17.6	79.2	68
639	920	19.0	16.2	85.2	84
983	884	19.2	15.7	83.6	80
1575	825	15.1	9.3	76.0	68
1956	798	12.6	8.3	78.8	75
2654	725	6.6	2.9	78.4	77
2791	713	6.2	-1.2	62.6	59
3037	692	7.3	-14.8	5.0	19
3907	622	3.4	****	****	**
4498	578	-0.2	****	****	**
5065	538	-6.1	****	****	**
5300	522	-7.7	****	****	**
5452	512	-4.7	****	****	**
5779	491	-7.1	****	****	**

1500 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	988	31.9	22.0	78.2	56
146	972	27.0	19.1	76.7	62
516	932	22.4	17.4	81.1	73
1331	848	16.4	10.0	74.9	66
1804	802	13.6	6.2	68.5	61
2092	775	11.1	5.6	75.0	69
2623	727	7.8	1.2	68.1	63
2760	715	6.7	-2.5	53.0	52
2841	708	6.3	-3.6	49.3	49
2911	702	6.3	-0.6	65.4	61
3148	682	5.8	-16.0	5.0	19
3577	647	3.9	****	****	**
3896	622	3.6	****	****	**
4921	547	-5.5	****	****	**
5421	517	-4.6	****	****	**
6029	439	-13.6	****	****	**

1700 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	987	30.6	21.4	75.0	58
128	973	26.9	16.5	67.3	53
563	926	23.2	16.3	77.1	65
947	886	19.3	12.8	76.3	66
1283	852	17.7	6.2	53.5	47
2569	731	7.1	2.5	75.0	72
2705	719	7.1	1.0	69.3	65
2996	694	5.4	-8.4	24.1	36
3126	683	4.8	-16.9	5.0	19
3356	664	4.4	****	****	**
3717	635	0.7	****	****	**
4264	593	-0.5	****	****	**
4537	573	-3.9	****	****	**
4903	547	-3.9	****	****	**
6607	440	-8.0	****	****	**

RADIO SONDE OAK RIDGE 7/26/74

1430 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	987	25.7	19.8	81.0	70
180	967	23.1	17.6	80.5	71
640	917	18.1	15.2	84.7	83
897	890	18.5	13.2	78.6	71
1171	862	17.9	10.5	71.4	62
1628	817	14.4	9.4	77.5	72
2041	778	12.7	6.0	71.1	64
2494	737	9.8	2.7	66.3	61
3080	686	5.0	1.1	76.5	76
3575	646	2.8	-3.5	65.8	63
3816	627	1.7	-6.6	52.7	54
3868	623	1.5	-15.4	10.0	27
3959	616	1.5	-16.5	5.0	25
4224	596	-0.3	-19.9	6.1	21
4537	573	-2.5	-12.2	39.0	47
4747	558	-4.1	-12.9	43.5	50
4875	549	-4.5	-23.5	5.0	21
5271	522	-7.2	-24.3	5.0	24
5681	495	-11.3	-27.8	5.0	24
6028	473	-14.4	-30.0	42.8	25
6174	464	-14.9	-30.5	50.7	25
6322	455	-12.8	-28.7	58.2	25
6458	447	-14.0	-29.7	61.4	25

RADIO SONDE OAK RIDGE 7/27/74

1130 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	989	29.9	21.5	76.8	61
136	974	23.8	17.5	79.0	68
594	924	19.7	15.9	83.5	79
1181	863	17.3	10.6	74.6	65
2047	779	10.8	3.8	68.0	62
2699	720	690	2.3	78.0	77
3143	682	5.3	-0.5	69.4	66
3535	650	2.5	-4.0	64.0	62
3903	621	0.7	-5.7	62.7	62
4073	608	-0.1	-9.3	46.5	50
4205	598	-0.8	-17.8	8.4	26
4436	581	-0.9	-21.0	5.0	20
4986	542	-4.5	****	****	**
5992	476	-13.1	****	****	**

1300 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	989	28.8	22.0	80.6	67
209	966	26.6	18.0	73.6	59
648	919	22.1	16.6	80.2	71
1211	861	17.9	11.7	75.9	67
1412	841	16.9	9.6	70.9	62
1732	810	15.3	7.4	67.9	59
2429	746	9.5	4.3	74.4	70
2857	708	7.4	2.5	74.1	71
3225	677	6.2	-1.9	58.0	56
3660	642	4.5	-4.2	53.0	53
3995	616	1.7	-15.7	8.6	26
4207	600	2.2	-18.4	5.0	20
4730	562	-3.0	****	****	**
5554	506	-7.3	****	****	**
6140	469	-12.6	****	****	**
6271	461	-12.3	****	****	**

1500 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	988	31.2	20.2	69.0	52
118	975	27.9	14.9	58.7	45
329	952	23.6	13.5	66.1	53
856	896	20.3	13.3	74.9	64
1279	853	17.3	11.4	76.9	68
1720	810	14.5	6.1	64.3	57
2510	737	8.1	2.6	72.2	68
2806	711	6.2	-0.5	65.3	62
3039	691	4.5	-0.3	73.3	71
3903	621	-0.3	-6.0	65.3	65
4033	611	0.7	-19.7	5.0	20
4314	590	-0.3	****	****	**
4812	554	-5.4	****	****	**
5473	509	-7.9	****	****	**
6037	473	-13.2	****	****	**
6432	449	-16.3	****	****	**

1600 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	988	31.0	18.0	62.6	46
182	968	27.4	11.8	44.0	38
630	920	23.4	11.8	60.2	48
937	888	20.3	11.5	68.5	57
1766	806	14.3	4.9	60.0	53
2370	705	9.9	2.3	65.8	59
2789	713	7.2	-0.0	64.8	60
3236	675	2.9	-2.4	69.5	68
3959	617	-1.4	-7.3	63.6	64
4103	606	-0.8	-20.9	5.0	20
4182	600	0.2	****	****	**
4960	544	-4.1	****	****	**
5807	488	-10.0	****	****	**
6375	453	-15.5	****	****	**

RADIO SONDE OAK RIDGE 7/30/74

1030 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	987	24.8	15.9	72.3	58
314	952	20.0	8.9	59.3	49
636	917	17.6	5.2	48.2	44
1171	861	12.7	3.7	60.3	54
1308	847	12.0	1.0	50.5	47
1377	840	12.0	-13.0	5.0	16
1548	823	11.4	****	****	**
2191	762	12.5	****	****	**
3110	682	7.0	****	****	**
3871	621	0.8	****	****	**
4904	545	-6.5	****	****	**
5196	525	-8.0	-25.0	5.0	24
5390	512	-8.9	-25.7	41.0	24
6079	468	-14.3	-22.9	31.6	48
6161	463	-14.4	-22.8	32.0	49
6226	459	-15.0	-27.3	11.6	34
6443	446	-16.5	-30.0	8.8	30

RADIO SONDE OAK RIDGE 7/31/74

1200 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	989	26.5	14.3	60.5	47
107	977	23.3	9.7	49.0	42
314	954	21.0	9.9	60.0	49
968	884	15.8	8.7	71.3	63
1612	819	12.3	-13.5	5.0	15
2074	775	11.7	****	****	**
3154	680	6.1	****	****	**
4035	610	1.0	****	****	**
4533	573	-4.0	****	****	**
5188	527	-8.1	****	****	**
5610	499	-10.4	-27.5	5.0	23
6330	454	-15.9	****	****	**

1430 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	990	30.1	13.8	45.0	37
126	976	25.3	9.1	38.6	36
630	921	19.7	6.8	48.8	43
1354	846	13.4	6.0	68.7	61
1668	815	11.1	4.5	70.3	64
1895	793	9.2	-0.7	53.5	50
2033	780	10.7	-14.9	5.0	15
2491	738	8.4	****	****	**
2764	714	8.6	****	****	**
3967	616	1.5	****	****	**
4752	558	-6.0	****	****	**
5899	481	-13.0	****	****	**
6520	443	-17.5	****	****	**

1600 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	990	29.7	14.3	48.3	39
180	970	23.1	6.0	32.6	33
770	906	18.7	5.5	46.0	42
1352	846	12.6	3.0	57.3	52
1764	805	9.8	1.2	59.8	55
1965	786	7.8	-6.0	27.0	37
2124	771	8.5	-14.4	5.0	18
2297	755	8.9	****	****	**
2951	697	5.5	****	****	**
3718	634	1.3	****	****	**

RADIO SONDE OAK RIDGE 8/01/74

1130 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	989	27.9	18.0	70.6	55
162	971	23.6	13.5	65.4	53
528	931	21.8	10.3	58.1	48
1054	876	18.0	6.8	55.7	48
1271	854	17.2	9.1	69.3	59
1719	810	11.9	4.2	66.4	59
1854	797	10.6	6.9	79.7	78
2013	782	11.3	-12.1	5.0	18
2451	742	11.2	****	****	**
3328	667	4.9	****	****	**
5047	538	-5.3	****	****	**
5634	499	-8.8	****	****	**

1300 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	989	27.2	15.2	63.0	48
112	971	26.0	10.5	44.4	38
1125	869	17.3	9.0	72.2	58

1500 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	988	30.0	14.9	51.8	40
182	968	27.2	11.7	44.4	38
319	953	25.5	11.6	50.2	42
646	918	21.5	10.1	58.5	48
1198	861	16.8	9.0	69.8	60
1429	838	15.5	9.0	73.6	65
1915	791	10.8	7.5	81.4	80
2064	777	10.1	-5.4	22.6	33
2118	772	10.3	-13.0	5.0	18
3091	686	5.6	****	****	**

1600 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	987	10.1	13.4	47.5	36
136	972	26.2	6.8	27.2	29
282	956	28.4	9.6	31.7	31
564	926	26.2	9.1	36.3	34
1064	874	15.4	3.8	50.2	46
1430	837	13.6	3.1	55.3	49
1746	806	10.8	1.1	55.1	51
1903	791	10.1	0.4	55.0	51
2051	777	9.5	-4.8	26.5	36
2169	766	9.7	-13.4	5.0	18
2400	745	9.5	****	****	**
3767	630	1.0	****	****	**
4510	574	-2.5	****	****	**

RADIC SONDE OAK RIDGE 8/01/74

1700 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	986	30.4	16.4	57.2	43
200	964	25.0	5.8	25.9	29
855	894	19.9	6.3	45.7	41
1417	837	13.6	4.8	62.3	55

RADIO SONDE OAK RIDGE 8/02/74

1130 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	987	25.7	20.1	81.3	71
116	974	23.4	16.2	76.4	64
481	934	19.6	14.6	80.6	73
898	890	19.4	13.3	77.5	68
1630	817	14.6	9.6	77.9	72
3218	675	4.4	-0.8	71.9	69
4086	606	-2.6	-6.1	74.2	77
4938	544	-6.0	-8.9	75.8	80
5425	511	-9.9	-16.4	52.0	59
5938	478	-12.1	-17.7	55.2	63
6115	467	-13.9	-20.2	47.9	59
6330	454	-15.0	-20.3	53.6	64

1300 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	987	28.7	22.7	81.8	70
117	974	25.0	18.0	77.5	65
578	924	20.7	16.3	82.5	76
911	889	18.1	15.0	84.6	82
1137	866	18.5	12.3	76.4	67
1822	799	13.3	8.1	76.7	71
2187	765	10.8	4.7	71.3	66
2442	742	9.1	5.5	79.5	78
3329	666	3.4	-3.2	63.9	62
4010	612	-1.5	-8.7	56.8	58
4234	595	-1.7	-6.6	68.4	69
4450	579	-3.7	-16.2	20.0	37
4756	557	-5.7	-10.6	62.6	65
5414	512	-8.5	-13.5	62.0	67
6204	462	-13.8	-19.1	55.6	64
6977	417	-17.9	-24.1	37.6	58
7324	398	-21.0	-28.2	29.6	52

1430 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	986	30.3	24.7	72.0	72
322	951	26.0	17.4	73.5	59
652	916	23.3	16.6	77.9	66
1208	859	17.6	14.6	84.3	83
1815	800	14.5	9.3	77.5	71
1964	786	13.7	7.0	71.4	64
2170	767	11.7	6.2	75.1	69
2492	738	9.2	1.2	61.9	57
3226	675	4.6	-3.4	57.9	56
3608	644	2.4	-3.3	67.7	66
4408	583	-1.4	-7.7	61.4	62
4813	554	-4.2	-10.2	60.7	63
5161	530	-6.2	-13.7	48.6	55

1600 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	985	30.1	20.1	71.8	55
137	970	29.4	16.5	61.5	46
332	949	26.4	16.4	68.6	54
653	915	24.1	15.8	73.3	60
1335	846	19.0	13.9	79.9	72
1951	787	13.2	9.6	81.7	79
2558	732	9.7	5.8	79.6	77
3169	680	7.5	0.7	66.6	62
4334	589	0.1	-6.3	62.1	62
4708	562	-2.7	-10.7	49.9	54
5397	515	-6.2	-12.3	58.8	62
5880	484	-9.4	-16.8	46.0	55
6107	470	-9.6	-22.8	22.7	33
6256	461	-10.6	-27.2	5.0	24
6666	437	-13.3	****	****	**

RADIO SONDE OAK RIDGE 8/05/74

1130 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	994	24.5	15.5	70.9	57
141	978	21.8	10.9	62.0	50
311	959	20.4	10.5	65.1	53
594	928	17.9	10.0	70.6	60
733	913	17.0	6.2	57.9	49
1211	863	14.0	4.0	57.4	51
1509	833	12.2	-3.5	23.0	33
1754	809	13.4	-11.1	5.0	17
2125	774	11.5	-5.9	17.3	29
2611	730	8.7	-8.8	14.0	28
2818	712	8.7	-14.3	5.0	18
3501	655	3.6	****	****	**
4343	590	0.3	****	****	**
5326	521	-7.0	****	****	**
5692	497	-9.8	****	****	**
6203	465	-12.2	****	****	**
6605	441	-15.7	****	****	**
6830	428	-16.8	****	****	**

1300 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	994	26.0	17.1	73.0	58
196	972	22.2	9.7	55.1	45
698	917	17.2	8.6	66.5	57
1000	885	14.6	5.7	62.5	55
1144	870	12.8	7.3	75.3	69
1418	842	11.5	-2.7	29.5	37
1617	817	13.4	-2.5	25.0	33
2166	770	9.4	-6.0	22.5	33
2417	747	8.1	-7.1	21.5	33
2618	729	8.9	-14.1	5.0	18
3719	637	1.8	****	****	**
3950	619	0.3	****	****	**
4173	602	0.8	****	****	**
5197	529	-6.1	****	****	**
5557	505	-10.5	****	****	**
6204	464	-14.2	****	****	**
6622	439	-17.0	****	****	**

1430 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	993	26.7	13.1	54.2	43
414	947	21.1	8.4	52.9	44
957	889	15.7	7.8	67.8	59
1465	837	11.0	6.0	75.9	71
1770	807	11.2	-1.9	36.3	40
2064	779	10.1	-5.8	20.6	32
2522	737	7.0	-12.2	8.0	24
2657	725	7.0	-15.0	5.0	19
3206	678	5.4	****	****	**
3775	632	1.5	****	****	**
4099	607	0.9	****	****	**
5261	524	-7.7	****	****	**
5841	486	-12.7	****	****	**
6695	434	-18.0	****	****	**

1600 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	992	27.5	17.9	66.6	56
143	976	23.8	10.5	49.4	43
609	925	20.2	9.7	62.8	51
1462	837	13.3	7.1	73.6	66
1779	806	11.7	-3.2	26.4	35
2084	777	9.8	-13.4	5.0	18
2645	726	7.8	****	****	**
3087	688	6.7	****	****	**
3340	667	4.3	****	****	**
3866	625	2.1	****	****	**
4395	585	-2.6	****	****	**
4726	561	-3.4	****	****	**
5717	494	-11.0	****	****	**

RADIO SONDE OAK RIDGE 8/06/74

0530 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	992	17.6	17.3	88.6	98
96	981	19.7	15.1	81.3	75
445	942	18.8	14.1	80.9	74
734	911	19.2	13.4	78.4	69
1356	847	14.2	11.9	84.3	86
2048	780	9.5	6.2	81.3	80
2263	760	9.7	-2.3	40.5	43
2495	739	7.9	-14.3	5.0	19
2951	699	4.9	****	****	**
3164	681	4.7	****	****	**

0430 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	993	18.3	17.7	88.3	96
96	982	20.1	15.7	81.6	76
319	957	19.7	15.1	81.3	75
640	922	19.7	13.6	78.1	68
1080	876	17.5	11.7	77.0	69
1228	861	15.8	12.3	82.5	80
1317	852	15.2	12.5	83.6	84
1996	786	10.0	8.3	85.0	89
2222	765	10.2	-2.8	36.9	40
2464	743	9.7	-13.5	5.0	18
3801	631	2.4	****	****	**
4420	584	-2.2	****	****	**
5024	541	-5.5	****	****	**
6045	474	-13.5	****	****	**

0600 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
C	992	17.0	12.7	88.0	76
140	976	2C.5	15.7	80.6	74
428	944	19.6	14.2	80.4	71
576	928	2C.5	14.4	77.8	68
1140	869	15.9	14.1	85.6	89
1902	794	10.5	8.8	85.4	89
2201	766	9.6	6.6	82.3	82
2256	761	9.9	4.3	72.7	68
2522	737	9.2	-10.3	5.0	24
3278	672	3.6	****	****	**
3723	636	1.7	****	****	**
4191	600	C.4	****	****	**
4600	570	-2.8	****	****	**

0700 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	992	16.9	16.6	88.9	98
95	981	19.0	14.5	81.1	75
426	944	18.6	13.9	80.5	74
611	924	19.3	13.2	77.1	68
1284	854	14.2	12.4	86.3	89
1596	823	12.3	10.7	86.0	90
2065	778	8.5	6.6	84.7	88
2238	762	9.4	7.2	83.6	86
2593	730	6.5	3.6	81.6	82
2661	724	6.7	-3.3	50.6	49
2729	718	6.7	-15.3	5.0	19
3305	669	2.7	****	****	**
3512	652	0.7	****	****	**
4019	612	C.C	****	****	**
4298	591	-1.4	****	****	**

RADIO SONDE OAK RIDGE 8/06/74

0830 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	992	19.5	17.1	86.0	86
96	981	19.9	15.1	81.2	74
301	958	19.2	13.2	77.6	68
400	947	19.2	13.2	77.2	68
575	928	20.1	13.3	76.3	65
1032	880	17.5	13.2	81.5	76
1449	838	14.4	9.6	78.5	73
1673	816	12.2	8.5	80.6	78
1892	795	10.7	7.0	80.2	78
2083	777	11.3	0.4	49.0	47
2345	753	10.1	4.1	71.4	66
2614	729	8.1	1.5	67.8	63
2808	712	7.3	-2.9	48.8	48
3526	652	2.0	-6.8	49.9	52
3829	628	1.3	-19.1	5.0	20
4329	590	-0.3	****	****	**

RADIO SONDE OAK RIDGE 8/07/74

0430 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	995	17.3	17.0	88.8	98
139	979	20.9	18.5	86.1	86
256	966	21.6	17.6	83.7	78
1069	879	16.3	13.2	84.0	82
1216	864	16.3	12.6	82.6	79
1762	810	11.6	9.0	83.7	84
2416	749	10.1	5.3	76.0	72
2942	703	7.0	0.9	69.7	65
3384	666	3.8	-3.3	63.0	60
3757	636	1.0	-5.5	63.3	62

0530 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	995	17.1	16.6	88.5	97
131	980	20.6	17.0	84.6	80
629	925	18.2	14.7	83.6	80
874	899	18.2	13.7	81.1	75
1740	812	12.7	9.3	82.2	80
2349	755	10.4	4.9	74.7	69
3046	694	6.0	-0.1	69.1	65
3358	668	3.2	-4.0	61.4	59
4075	611	-2.0	-6.9	69.4	69

0600 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	995	17.6	17.3	88.8	98
157	977	20.9	18.1	85.7	84
1001	886	17.6	12.9	80.0	74
1235	862	15.8	11.4	80.2	75
1710	815	12.6	9.4	82.7	81
1803	806	13.6	9.6	80.5	77
2490	742	9.0	3.4	72.2	68
3262	676	3.9	-0.3	75.7	74
3618	647	2.6	-4.2	62.5	61
3858	628	-0.9	-7.2	61.3	62

0700 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	995	17.3	17.1	89.0	99
122	981	20.1	17.0	84.9	82
246	967	21.0	17.4	84.3	80
1002	886	18.4	13.2	79.3	72
1569	829	13.4	10.4	83.1	82
2038	784	11.8	7.9	79.8	77
2487	743	9.4	3.1	70.2	65
3133	687	5.2	1.3	77.0	76
3534	654	2.5	-2.6	71.2	69

RADIO SONDE OAK RIDGE 8/07/74

0800 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	996	18.7	18.0	88.6	96
175	976	20.4	17.8	85.7	85
667	922	19.3	15.4	82.9	78
1058	881	16.6	12.7	81.6	78
1403	846	14.4	12.4	85.5	88
2141	775	11.3	7.6	80.7	78
2448	747	9.4	4.0	73.9	69
2810	715	6.7	2.9	78.6	77
3674	643	0.7	-0.5	83.7	91

0900 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	996	20.3	20.0	89.0	98
193	974	21.0	17.6	84.5	81
483	942	20.8	16.6	82.6	77
697	919	19.9	14.2	78.8	70
1346	852	15.2	12.8	85.0	86
1650	822	13.9	10.9	83.1	82
2081	781	11.6	7.9	81.1	78
2386	753	10.0	4.8	75.0	70
2531	740	9.5	3.9	72.5	68
3263	677	3.9	-0.7	73.6	72
3681	643	1.0	-2.2	78.0	79

1000 ELT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	996	21.6	19.7	87.0	89
220	971	20.0	16.3	83.3	79
382	953	20.5	16.5	83.1	78
593	930	19.4	14.4	80.5	73
677	921	20.0	13.9	77.7	68
972	890	17.7	12.6	79.5	72
1186	868	15.6	12.4	83.3	81
1475	839	15.0	12.0	83.8	82
2133	776	11.0	7.5	81.1	79
2585	735	8.2	4.2	78.3	76
3116	689	4.5	1.0	78.3	78
3332	671	3.4	-1.6	72.0	70
3689	642	0.7	-1.8	80.6	83

RADIO SONDE OAK RIDGE 8/08/74

0400 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	996	19.9	19.9	89.6	100
373	954	20.8	17.0	83.9	79
971	890	16.6	13.9	84.8	84
1107	876	16.6	14.5	85.2	87
2262	764	10.1	8.3	85.3	89
2539	739	8.4	6.9	85.2	90
3716	640	1.6	1.0	85.5	96

0500 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	995	19.9	19.8	89.3	99
193	973	20.4	16.8	84.5	80
520	937	20.6	17.6	85.1	83
953	891	16.1	13.9	85.4	87
1304	855	14.7	13.1	86.3	90
1793	807	12.5	11.4	86.9	93
2362	754	9.8	9.1	86.6	95
3144	686	5.9	5.1	86.0	95
3472	659	3.4	2.9	85.8	96

0600 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	996	19.8	19.5	89.3	98
328	959	20.5	17.1	84.2	81
836	904	16.4	14.4	86.1	88
1310	855	14.5	13.0	86.9	91
2656	728	7.5	7.0	86.6	96
3723	639	1.9	1.5	86.0	97
4203	602	-0.7	-1.3	84.9	96

0700 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	996	19.9	19.9	89.5	100
122	982	20.5	17.4	85.0	82
328	959	20.5	17.5	85.5	83
649	924	18.4	16.2	86.1	87
1009	886	16.4	14.6	86.5	89
2035	785	12.1	11.0	86.8	93
2607	733	8.6	7.8	86.6	95
3420	664	3.8	2.6	85.1	92
3846	630	1.6	1.1	84.6	96
4120	609	0.2	-1.0	84.0	92

RADIO SONDE OAK RIDGE 8/08/74

0800 EDT

HEIGHT M(AGL)	PRESSURE (MB)	TEMP DEG C	DEW POINT DEG C	SPECIFIC HUMIDITY	RELATIVE HUMIDITY
0	996	18.6	18.6	86.5	100
139	980	18.6	16.5	86.5	88
1118	874	15.0	14.3	87.8	96
2514	740	7.8	6.9	86.1	94
3464	659	3.1	0.8	81.8	85
3676	642	1.9	-1.0	79.5	81

5. SINGLE-THEODOLITE PIBAL SOUNDINGS

During some of the relative diffusion experiments an estimate of the mean PBL transport wind was needed. This was obtained through rapid-sequence single-theodolite pibal soundings. These soundings were made at 15 minute intervals using thirty gram pilot balloons. Readings were made every 30 seconds. These soundings were made at the ATDL site in Oak Ridge. The 2 m wind speed was not measured and the indicated 2 m wind direction was estimated from the first reading of the balloon position after release. In accordance with the National Weather Service guidelines for pilot balloon observations, the assumed ascension rate of 180 m per minute was taken to be 20% greater for the first minute, 10% greater for the second and third minutes, and 5% greater for the fourth and fifth minutes. In the following "HGT" is the height in meters above the ground surface; "SPD" is the wind speed in m/s; "DIR" is the wind direction in degrees from north, "TIME" is in minutes and "ELV" and "AZ" are the observed elevation and azimuth angles respectively. Asterisks indicate missing data.

S S PIBAL 7/26/74

1500 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	257.0	0.0		
108	2.1	257.1	0.5	59.5	257.1
216	2.5	247.0	1.0	57.2	251.6
315	2.8	236.3	1.5	54.8	245.8
414	2.6	222.1	2.0	54.5	239.7
513	2.5	211.1	2.5	54.8	234.1
612	2.8	203.7	3.0	54.5	228.5
706	4.2	250.1	3.5	51.8	233.3
*****	****	*****	****	*****	*****
895	8.3	183.1	4.5	43.2	209.7
990	5.1	200.2	5.0	41.9	208.4
1080	4.2	208.4	5.5	41.3	208.4
1170	4.7	209.4	6.0	40.5	208.5
1260	4.4	207.4	6.5	40.0	208.4
1350	5.8	199.9	7.0	39.9	207.8
1440	3.0	204.0	7.5	40.2	207.6
1530	3.6	205.9	8.0	40.2	207.5
1620	3.4	215.1	8.5	40.3	207.9
1710	2.9	221.7	9.0	40.6	208.5
1800	2.9	247.1	9.5	41.1	210.0
1890	3.3	253.1	10.0	41.5	211.8

1515 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	261.0	0.0		
108	2.2	260.6	0.5	58.5	260.6
215	2.8	251.2	1.0	55.5	255.4
315	2.4	211.0	1.5	56.9	241.4
414	2.6	210.7	2.0	56.5	233.2
513	3.7	200.5	2.5	54.1	224.0
612	5.4	200.3	3.0	49.5	216.9
705	5.4	199.0	3.5	44.9	212.1
801	6.0	202.7	4.0	42.1	210.2
895	5.2	212.2	4.5	40.7	210.5
990	4.7	220.6	5.0	40.0	211.7
1080	4.4	202.7	5.5	39.5	210.8
1170	4.7	201.5	6.0	38.9	209.9
1260	4.3	211.1	6.5	38.6	210.0
1350	4.2	212.7	7.0	38.4	210.2
1440	4.0	237.0	7.5	38.5	211.9
1530	2.9	201.0	8.0	38.9	211.4
1620	2.5	235.6	8.5	39.5	212.3
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1530 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	248.0	0.0		
108	2.6	247.7	0.5	54.2	247.7
216	3.9	237.5	1.0	48.2	241.6
315	3.5	229.5	1.5	46.6	237.3
414	2.9	221.0	2.0	47.2	233.6
513	3.1	207.0	2.5	47.6	228.5
612	5.1	203.6	3.0	45.0	222.4
706	6.5	204.0	3.5	41.5	218.0
801	6.9	201.4	4.0	38.7	214.6
895	6.3	201.3	4.5	37.1	212.5
990	6.5	202.6	5.0	35.7	211.1
1080	5.3	204.4	5.5	35.1	210.4
1170	4.5	214.1	6.0	35.0	210.7
1260	4.8	218.3	6.5	34.8	211.3
1350	5.1	216.5	7.0	34.5	211.7
1440	4.9	213.1	7.5	34.3	211.8
1530	4.5	221.9	8.0	34.3	212.4
1620	4.3	231.0	8.5	34.4	213.4
1710	3.6	229.7	9.0	34.7	214.1
1800	2.8	245.6	9.5	35.3	215.1
1890	3.1	258.3	10.0	35.9	216.5

1545 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	264.0	0.0		
108	3.2	264.0	0.5	48.6	254.0
216	3.5	252.9	1.0	48.0	258.3
315	2.6	242.5	1.5	49.4	253.8
414	2.5	232.7	2.0	50.6	249.3
513	3.0	221.9	2.5	50.6	243.7
612	3.8	198.3	3.0	50.3	234.5
706	6.4	202.1	3.5	46.2	225.8
801	5.7	196.2	4.0	44.0	220.0
895	5.3	197.8	4.5	42.5	216.5
990	4.7	206.1	5.0	41.6	215.2
1080	3.6	199.4	5.5	41.5	213.8
1170	3.4	208.6	6.0	41.5	213.4
1260	4.1	212.2	6.5	41.1	213.3
1350	4.0	214.6	7.0	40.8	213.4
1440	3.4	229.9	7.5	40.9	214.4
1530	2.9	237.4	8.0	41.3	215.5
1620	3.0	247.5	8.5	41.7	217.0
1710	2.8	261.5	9.0	42.3	218.8
1800	3.0	258.2	9.5	42.7	220.5
1890	3.7	256.2	10.0	42.8	222.3

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	280.0	0.0		
108	2.0	279.5	0.5	60.7	279.5
215	1.8	268.3	1.0	62.4	274.3
315	2.4	279.9	1.5	59.6	276.5
414	2.4	229.7	2.0	59.8	263.7
513	4.9	218.2	2.5	55.0	246.8
612	5.3	206.0	3.0	51.3	234.6
705	5.4	203.3	3.5	48.1	227.0
801	5.5	201.6	4.0	45.5	221.8
895	5.3	203.9	4.5	43.6	218.8
990	5.4	202.9	5.0	42.1	216.5
1080	3.8	202.7	5.5	41.8	215.2
1170	3.3	204.5	6.0	41.9	214.4
1260	3.8	215.6	6.5	41.6	214.5
1350	4.1	217.0	7.0	41.2	214.7
1440	3.7	226.7	7.5	41.1	215.5
1530	3.3	237.5	8.0	41.3	216.7
1620	3.5	254.5	8.5	41.6	218.7
1710	3.5	253.3	9.0	41.8	220.5
1800	3.5	256.8	9.5	42.0	222.3
1890	3.8	258.0	10.0	42.1	224.1

1615 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	282.0	0.0		
108	2.3	281.9	0.5	57.6	281.9
216	2.5	279.6	1.0	56.6	280.7
315	1.9	259.4	1.5	58.1	274.7
414	3.1	220.8	2.0	57.6	257.9
513	5.0	209.1	2.5	53.6	240.6
612	6.1	204.8	3.0	48.7	229.1
706	5.0	198.9	3.5	46.4	222.6
801	5.8	200.3	4.0	43.8	218.1
895	5.9	203.8	4.5	41.6	215.6
990	5.4	211.3	5.0	40.2	215.0
1080	3.9	206.2	5.5	40.0	214.2
1170	3.6	210.3	6.0	40.0	213.9
1260	3.6	216.7	6.5	40.0	214.1
1350	4.3	215.4	7.0	39.6	214.2
1440	4.1	225.6	7.5	39.4	215.0
1530	4.0	239.1	8.0	39.4	216.5
1620	4.0	255.1	8.5	39.6	218.7
1710	4.0	252.9	9.0	39.7	220.6
1800	4.1	250.0	9.5	39.7	222.2
1890	3.3	253.6	10.0	40.0	223.5

S S PIBAL 7/26/74

1630 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	275.0	0.0		
108	2.2	275.4	0.5	58.6	275.4
216	3.2	258.3	1.0	53.6	265.3
315	2.8	264.7	1.5	52.3	265.1
414	2.7	217.4	2.0	53.7	253.7
513	5.0	207.5	2.5	50.6	238.9
612	6.3	206.6	3.0	46.0	229.0
706	6.3	205.3	3.5	42.6	223.3
801	5.9	201.6	4.0	40.6	219.3
895	6.4	206.3	4.5	38.6	217.1
990	6.4	210.3	5.0	37.0	216.1
1080	5.6	209.0	5.5	36.1	215.3
1170	4.3	215.3	6.0	36.0	215.3
1260	3.9	213.8	6.5	36.1	215.2
1350	4.1	215.2	7.0	36.1	215.2
1440	4.6	223.8	7.5	35.9	215.8
1530	4.0	249.0	8.0	36.2	217.6
1620	4.6	245.9	8.5	36.2	219.3
1710	5.1	250.1	9.0	36.1	221.2
1800	5.2	254.6	9.5	36.0	223.2
1890	4.8	255.4	10.0	36.0	224.9

1645 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	271.0	0.0		
108	2.2	270.6	0.5	58.6	270.6
216	3.2	264.7	1.0	53.3	267.1
315	3.4	257.6	1.5	50.1	263.4
414	4.0	229.1	2.0	48.4	252.9
513	5.6	210.6	2.5	45.5	240.0
612	7.5	198.8	3.0	41.6	227.6
706	6.2	210.6	3.5	39.1	224.0
801	6.7	206.8	4.0	37.0	220.8
895	6.1	201.5	4.5	35.9	218.0
990	6.3	208.9	5.0	34.8	216.8
1080	6.1	213.3	5.5	33.9	216.4
1170	4.9	217.6	6.0	33.7	216.5
1260	3.8	239.7	6.5	34.1	217.9
1350	4.2	210.0	7.0	34.2	217.4
1440	4.3	233.9	7.5	34.3	218.4
1530	4.6	245.4	8.0	34.4	220.0
1620	4.7	251.4	8.5	34.5	221.8
1710	5.0	251.4	9.0	34.5	223.5
1800	6.0	268.5	9.5	34.5	226.3
1890	4.4	230.5	10.0	34.5	226.5

S S PIBAL 7/29/74

1200 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	220.0	0.0		
108	1.7	219.9	0.5	64.3	219.9
216	2.9	239.4	1.0	57.4	232.2
315	4.7	246.6	1.5	48.6	239.5
414	6.2	250.7	2.0	41.9	244.0
513	6.9	254.7	2.5	37.6	247.3
612	8.6	267.1	3.0	33.8	252.8
706	9.7	273.7	3.5	30.7	257.8
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1215 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	218.0	0.0		
108	1.4	218.2	0.5	69.4	218.2
216	2.6	213.7	1.0	61.0	215.2
315	4.7	233.4	1.5	50.6	225.1
414	5.3	246.4	2.0	45.2	233.2
513	6.6	261.0	2.5	40.9	242.1
612	7.7	263.9	3.0	37.0	248.2
706	8.6	262.4	3.5	33.6	251.6
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1230 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	211.0	0.0		
108	0.4	210.7	0.5	83.4	210.7
216	2.6	198.5	1.0	67.5	200.2
315	2.5	207.3	1.5	62.6	203.4
414	3.4	223.2	2.0	57.7	211.0
513	3.0	246.1	2.5	56.5	219.8
612	4.8	242.7	3.0	52.1	226.6
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1235 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	266.0	0.0		
108	1.3	266.1	0.5	70.0	266.1
216	1.6	253.8	1.0	68.0	259.3
315	2.8	260.7	1.5	61.3	260.0
414	3.2	251.6	2.0	57.1	257.0
513	3.8	262.7	2.5	53.4	258.7
612	6.8	255.3	3.0	46.3	257.5
706	8.6	261.7	3.5	39.8	258.8
801	9.0	268.8	4.0	35.7	261.2
895	7.6	267.1	4.5	33.7	262.2
990	7.6	281.0	5.0	32.4	264.9
1080	8.5	288.7	5.5	31.0	268.2
1170	10.6	286.9	6.0	29.1	271.0
1260	10.6	287.0	6.5	27.6	273.1
1350	10.2	287.4	7.0	26.5	274.7
1440	9.2	286.6	7.5	25.8	275.8
1530	8.9	290.5	8.0	25.3	277.0
1620	11.6	294.6	8.5	24.4	278.7
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1245 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	217.0	0.0		
108	2.1	216.9	0.5	60.1	216.9
216	4.3	222.2	1.0	48.5	220.5
315	5.7	236.4	1.5	41.3	228.0
414	4.9	223.2	2.0	39.3	226.6
513	2.1	265.1	2.5	42.7	230.6
612	5.2	260.3	3.0	41.3	237.0
706	6.9	249.2	3.5	38.1	239.8
801	8.5	263.6	4.0	35.1	245.0
895	8.0	272.5	4.5	33.4	249.7
990	8.5	275.6	5.0	31.9	253.7
1080	8.7	277.4	5.5	30.5	257.0
1170	9.6	284.2	6.0	29.2	260.6
1260	11.3	283.2	6.5	27.6	263.7
1350	12.7	285.2	7.0	26.0	266.6
1440	11.9	288.8	7.5	24.9	269.1
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1300 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	244.0	0.0		
108	3.2	244.3	0.5	48.1	244.3
216	4.8	232.2	1.0	42.2	237.1
315	3.5	245.3	1.5	42.7	239.6
414	4.1	229.4	2.0	41.8	236.9
513	4.7	247.2	2.5	40.4	239.3
612	4.8	253.9	3.0	39.5	242.1
706	6.1	273.6	3.5	38.0	248.2
801	6.0	281.7	4.0	37.1	253.6
895	7.3	282.8	4.5	35.5	258.5
990	8.4	282.1	5.0	33.6	262.4
1080	9.8	281.4	5.5	31.4	265.5
1170	11.7	280.6	6.0	29.0	268.0
1260	13.1	282.0	6.5	26.8	270.2
1350	11.7	287.4	7.0	25.5	272.3
1440	11.1	292.5	7.5	24.6	274.4
1530	10.3	294.8	8.0	24.0	276.2
1620	10.7	293.9	8.5	23.4	277.7
1710	10.0	296.8	9.0	23.0	279.1
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

S S PIBAL 7/29/74

1315 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	243.0	0.0		
108	2.8	243.1	0.5	52.5	243.1
216	2.9	235.6	1.0	52.0	239.3
315	3.6	236.0	1.5	48.8	238.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1330 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	242.0	0.0		
108	3.3	242.1	0.5	47.5	242.1
216	1.4	224.4	1.0	57.0	236.8
315	2.5	219.4	1.5	56.0	230.8
414	3.3	221.8	2.0	53.0	227.9
513	4.0	244.3	2.5	50.2	232.4
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1335 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	269.0	0.0		
108	3.3	269.1	0.5	47.9	269.1
216	4.0	230.3	1.0	46.4	247.6
315	4.4	224.0	1.5	43.6	238.4
414	4.0	215.4	2.0	43.1	232.4
513	4.0	228.2	2.5	42.4	231.5
612	6.3	235.9	3.0	39.2	232.6
706	6.5	242.7	3.5	36.8	234.7
801	6.6	263.0	4.0	35.5	239.5
895	7.2	270.7	4.5	34.3	244.4
990	7.5	269.6	5.0	33.1	248.0
1080	7.6	276.4	5.5	32.1	251.6
1170	9.1	273.7	6.0	30.6	254.6
1260	10.3	278.0	6.5	29.1	257.7
1350	12.3	282.4	7.0	27.4	261.1
1440	12.4	283.0	7.5	26.0	263.8
1530	12.2	285.0	8.0	24.9	266.1
1620	12.0	285.6	8.5	24.0	268.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1341 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	245.0	0.0		
108	3.5	244.6	0.5	46.0	244.6
216	4.9	238.1	1.0	40.7	240.8
315	4.3	227.5	1.5	39.8	236.3
414	5.6	221.4	2.0	37.3	231.7
513	7.3	222.3	2.5	34.0	229.0
612	9.2	236.5	3.0	30.6	231.0
706	6.0	244.7	3.5	30.3	233.0
801	4.7	252.3	4.0	30.8	235.0
895	6.3	284.6	4.5	31.3	240.6
990	7.2	278.5	5.0	31.0	245.2
1080	7.5	288.5	5.5	30.7	250.1
1170	8.3	285.7	6.0	30.0	254.2
1260	10.7	279.6	6.5	28.5	257.6
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1349 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	258.0	0.0		
108	2.5	257.8	0.5	55.0	257.8
216	2.4	225.3	1.0	56.5	241.6
315	3.0	209.2	1.5	52.5	227.8
414	5.3	209.9	2.0	46.2	220.7
513	5.6	217.7	2.5	42.2	219.8
612	4.8	222.3	3.0	40.8	220.3
706	4.9	250.3	3.5	40.1	225.3
801	6.5	257.3	4.0	38.4	231.2
895	7.9	259.8	4.5	36.2	236.5
990	7.9	261.7	5.0	34.5	240.5
1080	8.1	266.6	5.5	33.0	244.2
1170	8.9	273.1	6.0	31.6	248.1
1260	10.3	278.3	6.5	30.1	252.2
1350	10.1	284.3	7.0	29.0	256.0
1440	11.2	286.5	7.5	27.8	259.6
1530	12.4	286.1	8.0	26.5	262.7
1620	13.5	287.1	8.5	25.2	265.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	249.0	0.0		
108	4.5	248.7	0.5	38.8	248.7
216	2.5	182.9	1.0	50.4	226.2
315	4.9	195.2	1.5	45.2	212.3
414	5.3	207.8	2.0	41.3	210.8
513	6.2	202.3	2.5	38.1	208.4
612	5.7	209.9	3.0	36.6	208.7
706	3.3	220.9	3.5	37.5	210.0
801	4.5	234.9	4.0	37.5	213.1
895	5.3	235.4	4.5	36.9	216.0
990	6.8	251.8	5.0	36.0	221.0
1080	8.5	269.6	5.5	35.0	228.1
1170	9.2	277.8	6.0	34.0	235.1
1260	10.3	285.2	6.5	32.9	242.1
1350	11.2	288.0	7.0	31.6	248.4
1440	11.3	288.5	7.5	30.3	253.5
1530	12.7	289.2	8.0	28.8	258.1
1620	13.4	287.5	8.5	27.3	261.7
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

S S PIBAL 7/29/74

1415 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	274.0	0.0		
108	0.2	274.3	0.5	87.0	274.3
216	1.2	241.8	1.0	79.0	245.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1419 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	192.0	0.0		
108	4.0	192.3	0.5	42.0	192.3
216	3.4	172.5	1.0	44.6	183.2
315	2.9	207.5	1.5	46.4	190.0
414	1.7	211.8	2.0	50.0	193.1
513	3.5	233.5	2.5	49.8	202.2
612	4.5	228.5	3.0	47.6	208.4
706	5.5	215.8	3.5	44.3	210.1
801	4.6	223.9	4.0	43.0	212.3
895	4.8	260.6	4.5	43.0	218.7
990	6.2	275.5	5.0	42.7	227.0
1080	5.4	260.9	5.5	41.1	232.0
1170	13.6	293.7	6.0	38.4	246.1
1260	12.2	287.7	6.5	35.5	254.0
1350	11.9	288.4	7.0	33.1	259.6
1440	12.5	284.8	7.5	30.8	263.4
1530	12.9	287.8	8.0	28.9	266.7
1620	12.5	292.5	8.5	27.5	269.7
1710	12.6	294.2	9.0	26.3	272.3
1800	12.5	295.2	9.5	25.3	274.5
1890	11.0	299.0	10.0	24.7	276.4

1430 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	211.0	0.0		
108	1.3	211.0	0.5	70.5	211.0
216	2.0	202.1	1.0	65.7	205.6
315	3.5	210.8	1.5	57.1	208.3
414	4.4	218.0	2.0	51.1	212.1
513	4.3	224.3	2.5	48.0	215.5
612	4.9	237.2	3.0	45.5	220.7
706	5.2	257.9	3.5	44.0	228.1
801	5.8	269.8	4.0	42.7	235.7
895	7.0	270.5	4.5	40.5	242.3
990	8.6	280.5	5.0	38.1	249.6
1080	10.4	281.2	5.5	35.1	255.7
1170	11.7	279.1	6.0	32.1	260.0
1260	11.9	282.1	6.5	29.8	263.5
1350	12.3	283.9	7.0	27.9	266.4
1440	12.5	288.5	7.5	26.4	269.2
1530	12.1	292.2	8.0	25.3	271.7
1620	11.0	297.1	8.5	24.6	274.0
1710	11.7	299.0	9.0	23.9	276.2
1800	10.3	301.2	9.5	23.5	278.0
1890	10.4	299.8	10.0	23.1	279.5

1450 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	228.0	0.0		
108	3.7	227.5	0.5	44.0	227.5
216	8.1	226.8	1.0	31.4	227.0
315	8.8	222.1	1.5	27.0	224.9
414	10.3	222.5	2.0	24.1	224.1
513	7.1	230.0	2.5	24.3	225.2
612	4.0	224.1	3.0	26.0	225.1
706	3.2	230.7	3.5	27.6	225.5
801	4.4	231.2	4.0	28.4	226.0
895	5.8	242.3	4.5	28.5	227.7
990	6.4	263.1	5.0	28.7	231.2
1080	6.5	277.0	5.5	29.0	235.3
1170	7.5	270.5	6.0	28.7	238.8
1260	3.0	323.3	6.5	30.4	241.2
1350	5.5	337.6	7.0	32.3	245.6
1440	11.8	295.9	7.5	31.2	252.2
1530	12.7	301.9	8.0	30.1	258.5
1620	14.0	292.5	8.5	28.4	263.0
1710	14.9	290.5	9.0	26.7	265.5
*****	****	*****	****	*****	*****
1890	14.8	292.7	10.0	24.2	271.8

1500 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	271.0	0.0		
108	1.9	271.0	0.5	62.0	271.0
216	1.9	237.5	1.0	63.1	254.3
315	2.4	213.8	1.5	61.7	238.6
414	1.8	220.6	2.0	61.7	234.2
513	2.1	214.1	2.5	61.1	229.8
612	3.2	210.1	3.0	58.6	224.9
706	4.4	218.3	3.5	54.5	223.2
801	3.8	281.9	4.0	54.5	233.0
895	6.2	286.3	4.5	52.0	245.4
990	8.0	283.9	5.0	47.7	255.0
1080	9.6	278.4	5.5	42.7	260.6
1170	11.9	277.8	6.0	37.7	264.6
1260	12.3	276.4	6.5	33.9	266.9
1350	12.9	277.4	7.0	30.9	268.7
1440	10.9	279.8	7.5	29.2	270.1
1530	10.3	284.2	8.0	28.0	271.6
1620	10.0	288.7	8.5	27.1	273.2
1710	9.6	297.7	9.0	26.5	275.2
1800	10.8	313.2	9.5	26.0	278.3
1890	10.7	295.9	10.0	25.3	279.7

1515 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	236.0	0.0		
108	5.5	236.0	0.5	33.2	236.0
216	8.4	229.4	1.0	27.4	232.0
315	5.3	228.4	1.5	28.7	231.0
414	7.9	231.3	2.0	27.0	231.1
513	5.1	225.4	2.5	28.0	230.2
612	7.2	215.9	3.0	27.5	227.6
706	8.5	213.4	3.5	26.4	225.1
801	4.3	217.9	4.0	27.3	224.5
895	4.0	255.0	4.5	28.4	226.6
990	7.6	265.8	5.0	28.3	231.1
1080	10.8	277.6	5.5	27.5	237.6
1170	11.9	264.7	6.0	26.0	241.5
1260	9.5	279.2	6.5	25.6	245.3
1350	8.6	294.5	7.0	25.7	249.3
1440	13.8	289.7	7.5	24.7	254.2
1530	17.1	283.4	8.0	23.1	258.2
1620	16.8	283.0	8.5	21.8	261.2
1710	16.8	282.2	9.0	20.7	263.5
1800	14.0	285.0	9.5	20.1	265.3
1890	14.4	280.3	10.0	19.5	266.5

S S PIBAL 7/29/74

1530 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	191.0	0.0		
108	1.0	190.9	0.5	74.5	190.9
216	2.1	199.6	1.0	66.6	196.8
315	4.8	216.0	1.5	53.3	208.5
414	5.6	234.1	2.0	46.4	219.2
513	6.9	235.5	2.5	40.7	224.8
612	9.0	234.7	3.0	35.3	227.9
706	8.2	228.8	3.5	32.5	228.1
801	7.4	239.5	4.0	31.1	230.0
895	8.8	247.6	4.5	29.5	232.9
990	9.3	248.3	5.0	28.1	235.2
1080	9.6	260.2	5.5	27.0	238.5
1170	9.1	250.8	6.0	26.1	239.9
1260	14.2	253.9	6.5	24.2	242.0
1350	10.5	273.9	7.0	23.7	245.1
1440	10.8	285.4	7.5	23.4	248.7
1530	11.5	287.0	8.0	23.0	252.1
1620	12.8	285.6	8.5	22.4	255.2
1710	13.6	284.4	9.0	21.7	257.9
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

S S PIBAL 7/30/74

1030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	354.0	0.0		
108	0.5	354.2	0.5	82.8	354.2
216	1.8	14.2	1.0	73.0	10.2
315	2.4	1.3	1.5	66.5	5.6
414	4.1	351.3	2.0	58.2	358.9
513	3.7	350.6	2.5	54.4	355.4
612	3.7	348.5	3.0	52.1	354.6
706	3.4	348.9	3.5	50.7	353.6
801	3.1	348.5	4.0	50.1	352.9
895	2.6	355.7	4.5	50.1	353.2
990	2.3	349.7	5.0	50.4	352.9
1080	1.5	10.3	5.5	51.4	353.8
1170	0.7	324.8	6.0	53.0	353.1
1260	1.3	298.0	6.5	54.3	351.0
1350	2.9	306.8	7.0	54.3	347.4
1440	3.6	323.8	7.5	53.4	345.1
1530	4.6	319.9	8.0	52.0	342.3
1620	7.0	332.2	8.5	49.1	340.8
1710	9.4	330.0	9.0	45.5	339.0
1800	10.6	320.0	9.5	42.2	336.0
1890	12.5	312.3	10.0	39.0	332.3

1045 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	5.0	0.0		
108	3.1	4.7	0.5	49.5	4.7
216	3.8	4.7	1.0	46.2	4.7
315	2.6	359.2	1.5	47.8	3.2
414	2.5	352.4	2.0	49.1	1.0
513	3.0	341.8	2.5	49.1	357.2
612	2.9	317.2	3.0	50.0	351.0
706	3.0	343.9	3.5	46.8	349.4
801	4.6	346.5	4.0	45.0	348.9
895	4.7	343.5	4.5	43.6	348.1
990	3.7	345.2	5.0	43.3	347.8
1080	3.2	345.4	5.5	43.3	347.6
1170	3.1	342.2	6.0	43.4	347.2
1260	2.1	347.2	6.5	44.1	347.2
1350	1.1	322.9	7.0	45.4	346.6
1440	2.1	300.6	7.5	46.3	344.7
1530	3.3	303.1	8.0	46.5	342.1
1620	4.1	310.4	8.5	46.1	339.7
1710	4.8	323.0	9.0	45.2	338.3
1800	6.4	332.4	9.5	43.6	337.7
1890	9.5	336.1	10.0	41.0	337.5

1100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	334.0	0.0		
108	1.8	334.2	0.5	63.4	334.2
216	1.5	324.6	1.0	65.7	329.9
315	1.2	354.9	1.5	67.5	336.5
414	1.9	347.6	2.0	65.7	339.9
513	3.3	345.4	2.5	60.9	341.8
612	3.1	341.8	3.0	58.3	341.8
706	2.7	339.5	3.5	57.0	341.4
801	2.5	337.0	4.0	56.4	340.8
895	2.3	333.0	4.5	56.1	339.9
990	2.0	333.4	5.0	56.2	339.3
1080	1.6	304.0	5.5	57.0	337.1
1170	2.0	300.2	6.0	57.3	334.3
1260	3.4	313.8	6.5	56.1	331.9
1350	4.2	317.2	7.0	54.3	330.0
1440	4.9	330.0	7.5	52.2	330.0
1530	6.8	337.7	8.0	49.2	331.2
1620	9.2	332.3	8.5	45.4	331.4
1710	10.3	324.6	9.0	41.9	330.3
1800	11.5	313.8	9.5	38.8	327.8
1890	11.1	313.8	10.0	36.4	326.0

1114 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	16.0	0.0		
108	3.1	15.6	0.5	49.7	15.6
216	3.7	11.2	1.0	46.8	13.2
315	3.6	357.4	1.5	45.5	7.7
414	3.9	347.7	2.0	44.4	2.2
513	3.3	354.3	2.5	44.5	0.7
612	1.6	0.7	3.0	47.0	0.7
706	2.7	330.3	3.5	47.7	357.0
801	3.3	318.1	4.0	47.9	352.0
895	3.9	326.0	4.5	47.2	348.5
990	3.6	322.4	5.0	46.9	345.6
1080	3.0	318.7	5.5	47.0	343.3
1170	3.0	319.8	6.0	47.0	341.4
1260	3.2	307.3	6.5	47.1	338.8
1350	4.3	308.9	7.0	46.4	335.9
1440	5.0	312.5	7.5	45.3	333.5
1530	4.9	320.5	8.0	44.3	332.3
1620	6.1	328.4	8.5	42.8	331.9
1710	7.0	336.5	9.0	41.1	332.4
1800	8.6	343.6	9.5	39.1	333.7
1890	9.8	339.6	10.0	37.0	334.4

1130 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	9.0	0.0		
108	1.9	9.0	0.5	62.0	9.0
216	1.0	293.3	1.0	71.8	344.9
315	1.5	330.9	1.5	69.7	339.4
414	2.9	339.4	2.0	63.7	339.4
513	2.8	329.7	2.5	60.7	336.6
612	3.0	340.8	3.0	58.3	337.6
706	3.1	344.8	3.5	56.3	339.0
801	3.5	337.3	4.0	54.3	338.7
895	2.7	338.7	4.5	53.8	338.7
990	3.0	332.1	5.0	53.0	337.9
1080	3.8	321.1	5.5	51.6	335.7
1170	4.1	320.4	6.0	50.2	333.8
1260	3.9	317.7	6.5	49.2	332.1
1350	3.7	314.7	7.0	48.5	330.5
1440	4.7	321.9	7.5	47.2	329.6
1530	6.0	334.6	8.0	45.3	330.2
1620	6.9	346.2	8.5	43.4	332.1
1710	7.4	349.7	9.0	41.6	334.1
1800	8.9	340.6	9.5	39.4	334.9
1890	10.6	337.2	10.0	37.0	335.2

1145 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	314.0	0.0		
108	4.4	314.0	0.5	39.0	314.0
216	4.1	303.1	1.0	40.2	308.8
315	2.2	313.1	1.5	44.3	309.7
414	0.9	295.1	2.0	49.9	308.6
513	1.2	329.5	2.5	53.2	310.6
612	0.9	333.1	3.0	56.2	312.1
706	2.1	335.3	3.5	56.4	315.2
801	2.3	343.6	4.0	56.4	318.8
895	2.2	340.4	4.5	56.5	321.1
990	3.0	329.3	5.0	55.4	322.2
1080	4.1	330.7	5.5	53.3	323.5
1170	4.4	339.1	6.0	51.4	325.7
1260	5.7	347.2	6.5	49.0	329.0
1350	7.2	344.9	7.0	46.0	331.6
1440	8.0	336.7	7.5	43.0	332.4
1530	8.9	326.9	8.0	40.2	331.6
1620	9.9	320.9	8.5	37.6	330.1
1710	11.4	320.0	9.0	35.0	328.7
1800	11.4	312.2	9.5	33.0	326.7
1890	10.6	306.0	10.0	31.6	324.6

S S PIBAL 7/30/74

1200 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	3.0	0.0		
108	0.9	2.5	0.5	76.0	2.5
216	2.1	355.1	1.0	67.2	357.3
315	1.1	329.8	1.5	69.0	350.1
414	1.5	355.2	2.0	68.1	351.5
513	2.6	335.0	2.5	64.6	346.2
612	2.3	330.4	3.0	63.2	342.8
706	2.4	335.9	3.5	61.7	341.5
801	2.9	338.3	4.0	59.7	340.9
895	3.7	320.7	4.5	57.4	337.1
990	4.6	325.2	5.0	54.4	334.8
1080	5.0	334.2	5.5	51.5	334.7
1170	5.4	346.8	6.0	49.0	336.6
1260	5.4	352.6	6.5	47.0	338.8
1350	6.0	352.4	7.0	45.0	340.6
1440	6.5	343.0	7.5	43.0	340.9
1530	8.5	320.1	8.0	40.6	338.0
1620	9.8	327.3	8.5	38.0	336.5
1710	10.5	313.6	9.0	35.8	333.5
1800	10.1	303.5	9.5	34.3	330.2
1890	9.7	308.6	10.0	33.0	328.1

1215 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	26.0	0.0		
108	2.5	26.4	0.5	55.2	26.4
216	3.0	3.0	1.0	53.3	13.7
315	2.7	356.7	1.5	52.9	8.1
414	2.7	349.5	2.0	52.6	3.4
513	3.0	317.0	2.5	53.2	353.7
612	4.1	330.3	3.0	50.8	348.1
706	4.3	332.3	3.5	48.6	344.9
801	4.7	333.5	4.0	46.4	342.8
895	5.0	336.0	4.5	44.5	341.7
990	4.9	336.6	5.0	43.1	341.0
1080	4.9	340.1	5.5	41.9	340.9
1170	5.1	336.4	6.0	40.8	340.4
1260	5.1	332.4	6.5	39.9	339.6
1350	5.4	331.3	7.0	39.0	338.8
1440	5.7	333.4	7.5	38.1	338.3
1530	5.5	333.4	8.0	37.4	337.9
1620	5.7	335.3	8.5	36.7	337.7
1710	6.6	331.7	9.0	35.8	337.2
1800	8.1	325.3	9.5	34.6	336.1
1890	10.8	319.6	10.0	32.9	334.3

1230 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	310.0	0.0		
108	3.6	309.6	0.5	44.7	309.6
216	3.9	331.8	1.0	44.2	321.1
315	2.9	34.4	1.5	50.4	339.7
414	2.9	359.6	2.0	50.4	344.6
513	2.2	12.9	2.5	52.0	349.0
612	1.4	313.0	3.0	54.6	345.8
706	1.3	1.6	3.5	56.2	347.1
801	1.2	11.4	4.0	57.7	348.8
895	2.0	339.4	4.5	57.7	347.8
990	3.4	327.8	5.0	56.2	344.8
1080	3.4	321.6	5.5	55.0	341.8
1170	3.6	330.5	6.0	53.6	340.4
1260	4.7	332.5	6.5	51.5	339.3
1350	6.3	341.2	7.0	48.6	339.6
1440	7.0	336.2	7.5	45.8	339.1
1530	9.2	332.4	8.0	42.4	338.0
1620	10.9	331.2	8.5	39.0	336.9
1710	11.1	324.2	9.0	36.3	335.1
1800	9.2	315.0	9.5	34.8	333.0
1890	9.2	316.2	10.0	33.5	331.4

1245 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	315.0	0.0		
108	2.6	315.4	0.5	53.7	315.4
216	3.4	318.7	1.0	50.0	317.3
315	3.0	308.8	1.5	49.3	314.5
414	3.5	293.3	2.0	48.1	308.6
513	2.0	302.7	2.5	50.0	307.8
612	2.4	358.8	3.0	52.0	314.4
706	2.9	21.8	3.5	53.8	323.2
801	3.2	48.2	4.0	56.3	333.6
895	3.0	36.3	4.5	57.0	341.6
990	2.4	26.0	5.0	57.3	346.2
1080	3.0	12.5	5.5	56.4	349.4
1170	2.5	14.3	6.0	56.1	351.7
1260	1.6	339.6	6.5	56.5	351.0
1350	1.7	310.1	7.0	57.1	348.8
1440	3.5	318.4	7.5	56.3	345.8
1530	3.7	308.4	8.0	55.5	342.1
1620	3.7	313.2	8.5	54.6	339.4
1710	3.1	305.4	9.0	54.3	337.0
1800	3.4	321.1	9.5	53.6	335.8
1890	4.8	336.8	10.0	52.1	335.9

1302 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	341.0	0.0		
108	0.9	340.5	0.5	76.5	340.5
216	2.7	334.9	1.0	64.0	336.3
315	2.0	336.5	1.5	62.1	336.4
414	1.6	323.1	2.0	62.8	333.5
513	1.2	308.1	2.5	64.3	329.8
612	0.7	284.6	3.0	66.8	326.5
706	0.5	275.6	3.5	68.9	323.9
801	0.1	235.8	4.0	71.2	323.4
895	0.7	327.4	4.5	71.8	323.7
990	1.9	339.0	5.0	70.5	326.2
1080	2.1	341.7	5.5	69.2	328.5
1170	2.2	349.6	6.0	68.0	331.4
1260	3.1	349.3	6.5	66.0	334.3
1350	3.8	346.7	7.0	63.5	336.4
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1315 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	9.0	0.0		
108	3.0	9.4	0.5	50.3	9.4
216	3.4	4.5	1.0	48.5	6.8
315	2.6	353.7	1.5	49.6	3.0
414	2.3	12.9	2.0	51.0	5.0
513	3.5	354.4	2.5	49.5	2.5
612	4.2	329.2	3.0	48.2	355.3
706	3.4	322.0	3.5	48.1	350.3
801	2.3	317.8	4.0	49.1	347.2
895	3.5	340.3	4.5	48.3	346.3
990	4.6	327.8	5.0	46.8	343.6
1080	4.0	311.5	5.5	46.3	340.1
1170	3.3	278.9	6.0	47.2	335.5
1260	2.4	281.7	6.5	48.2	332.6
1350	4.3	278.4	7.0	48.2	327.6
1440	3.8	265.6	7.5	48.7	323.0
1530	1.9	296.5	8.0	49.3	321.9
1620	2.8	315.1	8.5	49.2	321.5
1710	2.7	301.4	9.0	49.2	320.4
1800	3.9	314.9	9.5	48.5	320.0
1890	4.7	329.8	10.0	47.5	320.8

S S PIBAL 7/30/74

1330 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	3.0	0.0		
108	2.0	2.5	0.5	61.5	2.5
216	3.3	20.2	1.0	54.3	13.6
315	1.6	33.6	1.5	57.3	18.4
414	2.6	30.9	2.0	56.0	21.9
513	3.5	24.1	2.5	53.2	22.5
612	2.4	19.3	3.0	53.3	22.0
706	0.4	246.9	3.5	57.6	21.0
801	1.9	308.5	4.0	59.7	14.5
895	2.3	312.9	4.5	60.6	7.6
990	2.1	331.1	5.0	60.7	3.8
1080	2.2	311.8	5.5	61.0	358.8
1170	2.4	323.1	6.0	60.6	355.1
1260	2.2	329.0	6.5	60.3	352.8
1350	3.6	327.0	7.0	58.8	349.5
1440	3.8	334.6	7.5	57.2	347.7
1530	4.0	329.3	8.0	55.7	345.6
1620	4.3	336.5	8.5	54.1	344.6
1710	5.4	330.5	9.0	52.1	342.9
1800	6.6	332.8	9.5	49.7	341.6
1890	10.2	328.9	10.0	46.0	339.5

1345 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	306.0	0.0		
108	2.0	305.5	0.5	61.1	305.5
216	1.7	309.4	1.0	63.1	307.3
315	2.4	332.4	1.5	60.8	317.1
414	2.9	303.1	2.0	57.8	312.5
513	3.3	318.3	2.5	55.0	314.1
612	3.5	322.9	3.0	52.9	316.1
706	3.4	305.4	3.5	51.5	314.2
801	2.8	327.3	4.0	51.2	315.9
895	2.1	336.8	4.5	51.9	317.7
990	1.9	325.5	5.0	52.5	318.3
1080	3.5	344.2	5.5	51.6	321.4
1170	4.3	339.3	6.0	50.1	323.7
1260	3.2	8.0	6.5	50.2	327.4
1350	3.6	356.3	7.0	49.7	330.0
1440	3.4	343.7	7.5	49.2	331.1
1530	4.1	345.5	8.0	48.3	332.4
1620	4.3	341.7	8.5	47.4	333.2
1710	4.1	331.8	9.0	46.7	333.1
1800	4.2	331.7	9.5	46.0	333.0
1890	4.2	335.9	10.0	45.4	333.2

1400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	350.0	0.0		
108	1.7	349.6	0.5	64.2	349.6
216	3.0	5.9	1.0	57.1	359.9
315	3.5	331.6	1.5	53.0	347.8
414	1.6	334.1	2.0	55.5	345.5
513	2.1	4.9	2.5	56.1	349.0
612	2.9	10.1	3.0	55.1	353.2
706	2.1	328.2	3.5	55.6	350.1
801	2.5	321.0	4.0	55.5	346.3
895	2.5	321.7	4.5	55.3	343.4
990	2.6	314.3	5.0	55.1	340.2
1080	3.0	299.2	5.5	54.8	335.7
1170	2.4	294.1	6.0	55.1	332.4
1260	3.6	301.8	6.5	54.1	328.9
1350	3.6	314.6	7.0	53.0	327.4
1440	3.9	320.5	7.5	51.8	326.7
1530	4.9	319.7	8.0	50.1	325.9
1620	4.5	322.7	8.5	48.9	325.6
1710	4.0	324.3	9.0	48.1	325.5
1800	5.8	330.4	9.5	46.5	326.0
1890	6.1	342.7	10.0	45.1	327.6

1415 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	350.0	0.0		
108	1.8	349.4	0.5	63.2	349.4
216	2.6	337.8	1.0	58.7	342.6
315	2.2	336.4	1.5	57.8	340.5
414	2.2	334.5	2.0	57.4	339.0
513	2.9	327.2	2.5	55.7	336.1
612	2.4	322.6	3.0	55.5	333.8
706	3.0	310.1	3.5	54.5	329.7
801	4.7	303.1	4.0	51.7	324.0
895	3.7	307.2	4.5	50.4	321.5
990	4.5	302.5	5.0	48.7	318.6
1080	5.6	313.0	5.5	46.2	317.7
1170	4.1	311.1	6.0	45.3	317.0
1260	4.5	327.5	6.5	44.3	318.1
1350	2.2	305.5	7.0	44.9	317.5
1440	3.9	298.3	7.5	44.5	316.0
1530	5.2	303.4	8.0	43.4	314.8
1620	4.5	329.1	8.5	42.8	315.9
1710	4.3	321.6	9.0	42.3	316.3
1800	5.0	335.6	9.5	41.7	317.7
1890	5.5	339.3	10.0	41.0	319.3

6. DOUBLE-THEODOLITE PIBAL SOUNDINGS

The convective diffusion experiment required greater accuracy in determining the wind profile than could be achieved using the single theodolite technique. For this reason, double-theodolite soundings were used. These soundings were made near TVA's Bull Run steam plant. The theodolites were located in a N-S line with a separation of 423 m. Differences in elevation between theodolites were negligibly small. In the following, HGT is the height in meters above the ground surface; SPD is the speed in m/s; DIR is wind direction in degress from north; TIME is time after release in minutes; ELVN and ELVS are the measured balloon elevations in degrees at the north and south stations respectively, and AZN and AZS are the measured azimuths. Asterisks indicate missing data.

DOUBLE THEODOLITE BULL RUN 7/25 1200

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MP
0.	0.0	0.0	0.0					
210.	1.5	80.4	1.0	67.3	103.2	26.7	12.2	3.51
305.	2.1	38.8	1.5	65.4	86.0	33.0	18.3	3.15
360.	2.8	49.0	2.0	58.4	80.7	34.4	26.0	1.83
440.	3.1	42.8	2.5	54.8	76.3	36.2	31.8	2.67
507.	4.4	46.4	3.0	49.1	74.2	35.4	38.4	2.22
686.	4.1	40.4	4.0	45.4	70.3	35.9	44.8	2.99
771.	4.5	44.5	4.5	43.8	69.8	35.5	47.6	2.84

DOUBLE THEODOLITE BULL RUN 7/25 1230

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MP
0.	0.0	0.0	0.0					
114.	2.3	51.7	0.5	60.2	74.4	13.8	8.4	3.79
222.	3.4	32.6	1.0	53.7	62.9	22.4	16.7	3.61
327.	2.2	36.6	1.5	55.3	61.9	29.1	21.1	3.50
421.	3.1	52.2	2.0	53.0	65.6	33.2	27.9	3.12
545.	3.6	63.7	2.5	52.6	70.8	37.5	35.6	4.15
628.	3.6	66.4	3.0	50.1	74.5	39.1	42.2	2.76
704.	4.1	52.3	3.5	47.8	74.6	38.3	46.6	2.54
793.	3.2	70.8	4.0	47.4	77.0	39.6	50.9	2.97
886.	2.9	78.4	4.5	47.6	79.5	41.0	54.8	3.08
979.	2.8	92.2	5.0	48.2	82.6	42.6	58.8	3.13
1064.	2.5	88.9	5.5	48.5	84.8	43.7	62.0	2.83
1153.	2.2	74.8	6.0	49.0	85.6	44.6	63.9	2.97
1238.	2.4	76.7	6.5	49.1	86.5	45.2	65.9	2.81
1313.	2.2	79.6	7.0	49.2	87.4	45.6	67.7	2.50
1408.	3.1	70.0	7.5	49.0	87.8	45.7	69.4	3.17
1484.	3.1	73.8	8.0	48.5	88.4	45.5	71.1	2.55
1570.	3.6	67.0	8.5	47.9	88.5	45.1	72.4	2.85
1652.	3.7	58.6	9.0	47.3	88.0	44.6	73.0	2.75
1738.	4.2	55.9	9.5	46.5	87.3	44.0	73.4	2.87
1811.	4.4	54.9	10.0	45.6	86.6	43.0	73.7	2.40

DOUBLE THEODOLITE BALL RUN 7/25 1300

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
C.	0.0	0.0	0.0					
156.	2.8	43.5	1.0	43.3	66.2	16.3	17.6	2.60
238.	2.5	52.3	1.5	44.8	68.9	22.6	24.1	2.75
353.	4.5	26.8	2.0	41.9	62.0	28.2	29.0	3.82
490.	2.5	88.4	2.5	49.4	69.6	34.4	35.1	4.58
637.	3.2	55.6	3.0	51.3	71.2	38.7	40.0	4.90
735.	3.3	59.9	3.5	50.5	73.0	40.2	44.5	3.26
841.	3.7	49.6	4.0	49.7	72.9	40.9	47.6	3.52
938.	3.5	52.5	4.5	49.0	73.2	41.3	50.3	3.25
1041.	3.0	57.7	5.0	49.1	73.9	42.2	52.6	3.43
1130.	2.1	64.0	5.5	49.6	74.7	43.3	54.3	2.98
1228.	2.6	62.6	6.0	49.8	75.5	44.0	56.2	3.23
1320.	3.1	61.5	6.5	49.5	76.2	44.2	58.1	3.07
1414.	3.5	61.9	7.0	49.1	76.9	44.1	60.0	3.15
1490.	3.2	68.3	7.5	48.5	77.9	44.0	61.9	2.52
1588.	4.6	58.4	8.0	47.6	78.2	43.4	63.5	3.29
1660.	3.5	64.7	8.5	46.9	78.8	43.1	64.9	2.39
1763.	4.3	62.8	9.0	46.4	79.3	42.9	66.3	3.41
1855.	3.8	64.7	9.5	46.1	79.8	42.7	67.5	3.08
1948.	3.7	67.6	10.0	45.8	80.4	42.7	68.7	3.11

DOUBLE THEODOLITE BALL RUN 7/25 1330

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
C.	0.0	0.0	0.0					
99.	1.0	100.7	0.5	72.4	123.5	13.7	3.7	3.30
367.	3.3	37.9	1.5	60.4	68.1	33.3	21.6	4.46
462.	3.7	24.3	2.0	55.9	60.9	34.8	25.9	3.17
538.	3.6	18.6	2.5	52.5	56.0	34.8	28.1	2.54
626.	3.2	30.0	3.0	51.1	55.4	36.0	30.8	2.95
700.	2.6	37.3	3.5	50.2	56.0	37.0	33.2	2.45
789.	2.8	39.8	4.0	50.0	56.8	38.1	35.6	2.99
881.	2.5	40.1	4.5	50.1	57.4	39.3	37.5	3.05
978.	2.5	34.7	5.0	50.4	57.4	40.4	38.8	3.23

DOUBLE THEODOLITE BULL RUN 7/25 1400

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
128.	1.5	56.9	0.5	70.6	79.6	16.4	5.9	4.27
234.	2.7	43.4	1.0	61.9	71.0	26.1	14.3	3.54
369.	3.8	33.0	1.5	57.9	63.7	32.1	22.0	4.48
453.	3.7	27.7	2.0	53.3	59.5	33.4	26.5	2.81
538.	3.2	25.3	2.5	51.3	57.0	34.5	29.2	2.82
604.	3.5	23.9	3.0	48.6	55.0	34.3	31.3	2.22
687.	3.6	25.6	3.5	47.1	53.9	34.7	33.2	2.77
780.	3.0	26.1	4.0	47.1	53.3	35.8	34.5	3.07
872.	2.7	27.5	4.5	47.4	53.0	36.9	35.6	3.08
957.	2.3	29.0	5.0	47.8	52.9	37.9	36.5	2.82
1059.	2.6	20.3	5.5	48.3	52.1	39.0	36.9	3.42
1146.	2.4	23.6	6.0	48.5	51.7	39.7	37.4	2.89
1236.	2.8	31.6	6.5	48.4	51.9	40.2	38.4	3.02

DOUBLE THEODOLITE BULL RUN 7/25 1430

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
126.	3.5	46.2	0.5	51.2	68.9	14.5	11.9	4.18
222.	4.0	27.8	1.0	46.5	59.1	20.5	19.4	3.22
334.	2.7	6.4	1.5	49.9	51.2	26.4	20.6	3.74
465.	2.9	14.3	2.0	52.0	48.0	31.6	22.5	4.36
604.	2.8	17.1	2.5	53.5	46.5	35.8	24.3	4.63
746.	2.6	6.2	3.0	55.4	44.0	38.9	24.7	4.74
857.	2.5	13.8	3.5	55.5	43.1	40.8	25.6	3.69
947.	2.2	15.3	4.0	55.3	42.6	41.9	26.4	3.01
1041.	2.6	357.9	4.5	55.0	40.4	42.7	26.0	3.13
1159.	3.5	24.1	5.0	54.5	41.2	43.1	27.8	3.94
1259.	3.3	34.8	5.5	53.8	42.9	43.5	30.0	3.33
1375.	4.5	35.5	6.0	52.7	44.8	43.4	32.6	3.85
1481.	5.2	32.4	6.5	51.1	46.1	42.7	34.8	3.55
1589.	4.9	39.4	7.0	50.0	47.8	42.4	37.1	3.61
1700.	4.8	47.7	7.5	49.2	49.9	42.4	39.6	3.67
1811.	5.4	51.6	8.0	48.4	52.2	42.1	42.3	3.70
1850.	4.0	81.4	8.5	47.6	55.3	42.0	45.3	1.30
2049.	8.5	54.8	9.0	47.0	58.1	41.8	48.8	6.66

DOUBLE THEODOLITE BULL RUN 7/25 1500

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
148.	3.9	89.9	0.5	50.2	112.7	21.6	16.0	4.94
259.	3.0	62.6	1.0	52.6	100.8	30.4	27.3	3.71
353.	3.2	37.3	1.5	52.1	87.9	33.6	33.1	3.13
462.	3.6	46.6	2.0	50.9	82.8	36.5	39.1	3.63
569.	2.3	32.0	2.5	52.5	78.6	39.3	40.7	3.55
681.	3.0	34.2	3.0	52.6	75.0	41.0	42.6	3.73
764.	2.9	31.8	3.5	51.9	72.2	41.3	43.8	2.79
847.	2.9	21.1	4.0	51.5	68.8	41.4	43.8	2.74
925.	2.2	11.6	4.5	51.8	66.0	42.1	43.2	2.62
1012.	2.3	18.9	5.0	52.0	64.0	42.8	43.1	2.89
1113.	2.9	19.0	5.5	52.1	61.9	43.2	43.0	3.37
1211.	3.0	37.0	6.0	51.8	61.7	43.5	44.2	3.26
1291.	3.7	39.9	6.5	50.6	61.8	43.0	45.7	2.68
1360.	4.0	34.0	7.0	49.1	61.3	42.1	46.6	2.28
1436.	4.1	39.7	7.5	47.9	61.4	41.5	47.8	2.55
1526.	4.6	44.0	8.0	46.8	61.9	41.0	49.3	3.00
1589.	3.7	60.7	8.5	46.0	63.4	40.6	51.3	2.08
1703.	5.7	57.1	9.0	45.2	65.0	40.2	53.7	3.80
1795.	5.4	63.8	9.5	44.3	66.8	39.8	56.1	3.08
1897.	6.2	67.9	10.0	43.4	68.9	39.3	58.8	3.38

DOUBLE THEODOLITE BULL RUN 7/25 1530

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
113.	3.1	48.2	0.5	52.0	70.9	13.2	10.9	3.77
247.	2.5	54.8	1.0	56.5	73.9	25.8	19.0	4.47
383.	3.0	54.1	1.5	56.8	74.9	34.1	26.9	4.52
509.	3.6	46.4	2.0	55.0	73.2	38.0	33.5	4.19
643.	3.3	49.5	2.5	54.8	73.0	41.3	38.5	4.49
775.	3.4	57.0	3.0	54.6	74.2	43.6	43.3	4.39
892.	3.1	57.1	3.5	54.2	75.0	45.0	47.0	3.91
1018.	3.3	51.5	4.0	54.1	74.9	45.9	49.7	4.21

DOUBLE THEODOLITE BULL RUN 7/25 1540

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
248.	3.4	59.1	1.0	51.4	81.8	26.1	23.9	4.13
352.	3.6	75.9	1.5	49.6	87.7	32.7	35.3	3.49
451.	4.1	68.4	2.0	47.0	88.7	35.7	44.9	3.28
572.	3.8	65.5	2.5	47.1	88.6	38.6	51.3	4.03
706.	3.4	64.6	3.0	48.2	88.4	41.3	55.7	4.46
844.	3.4	60.5	3.5	49.1	87.7	43.3	58.8	4.62
961.	3.2	49.2	4.0	49.5	85.9	44.0	60.1	3.90
1059.	3.9	29.9	4.5	49.1	82.0	43.5	59.3	3.26
1151.	3.9	29.4	5.0	48.5	78.6	43.0	58.6	3.07
1237.	3.8	32.4	5.5	47.8	76.5	42.4	58.3	2.85
1317.	3.9	24.4	6.0	47.1	73.9	41.9	57.4	2.68
1328.	1.4	349.0	6.5	46.7	72.2	41.7	56.2	0.35
1389.	2.9	47.9	7.0	46.1	72.1	41.4	57.0	2.04
1587.	8.2	52.6	7.5	45.4	72.6	40.9	59.5	6.60
1749.	7.6	55.5	8.0	44.5	73.3	40.3	61.6	5.40
1770.	2.8	64.4	8.5	43.5	73.9	39.7	62.6	0.72
1855.	4.7	67.3	9.0	42.9	75.0	39.3	64.3	2.80
1927.	4.7	73.0	9.5	42.2	76.3	38.9	66.1	2.40
2051.	6.4	65.9	10.0	41.6	77.3	38.6	67.8	4.16

DOUBLE THEODOLITE BULL RUN 7/25 1600

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
226.	3.3	93.8	1.0	49.7	116.6	30.1	27.7	3.76
353.	3.1	77.6	1.5	51.5	111.4	39.6	40.1	4.24
505.	2.9	72.2	2.0	54.3	107.6	46.2	48.8	5.06
652.	2.7	48.5	2.5	57.0	101.4	49.0	52.0	4.91
779.	3.1	51.0	3.0	56.8	96.7	50.2	55.1	4.23
889.	3.0	38.1	3.5	56.9	91.7	50.1	55.8	3.66
985.	3.5	43.4	4.0	55.6	88.0	49.4	57.1	3.21
1065.	2.9	37.5	4.5	54.9	85.0	48.7	57.4	2.65
1166.	3.5	36.6	5.0	54.2	82.0	48.2	57.6	3.38
1266.	4.2	39.4	5.5	52.9	79.5	47.2	58.1	3.33
1343.	2.8	53.0	6.0	52.2	79.2	47.0	59.3	2.57
1442.	3.3	54.1	6.5	51.7	79.0	46.9	60.6	3.29
1546.	4.2	61.4	7.0	50.9	79.5	46.4	62.6	3.47
1650.	4.7	64.9	7.5	49.8	80.3	45.8	64.8	3.45
1773.	5.3	58.6	8.0	48.9	80.4	45.2	66.3	4.12
1882.	5.3	55.5	8.5	47.9	80.2	44.4	67.3	3.61
1989.	5.8	55.2	9.0	46.8	80.0	43.5	68.2	3.59
2092.	5.7	58.5	9.5	45.8	80.1	42.7	69.2	3.43
2219.	6.7	58.5	10.0	44.8	80.2	42.0	70.2	4.22

DOUBLE THEODOLITE BULL RUN 7/25 1630

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
252.	1.8	41.6	1.0	67.4	64.3	27.6	11.5	4.20
343.	2.1	35.4	1.5	64.6	62.0	32.3	16.5	3.02
439.	2.2	44.2	2.0	62.4	63.4	37.0	21.7	3.21
564.	3.6	42.6	2.5	59.5	64.0	40.1	28.2	4.15
713.	3.2	53.1	3.0	59.3	66.6	43.9	33.9	4.99
833.	2.8	50.7	3.5	58.7	67.7	45.9	37.8	3.98
951.	2.1	61.6	4.0	59.3	69.5	48.0	41.0	3.94
1064.	3.2	42.6	4.5	58.2	68.9	48.3	43.5	3.76
1166.	4.0	38.2	5.0	56.3	67.7	47.6	45.5	3.40
1248.	3.0	46.9	5.5	55.2	67.9	47.4	47.4	2.74
1358.	3.9	49.5	6.0	54.2	68.4	47.1	49.7	3.65
1453.	4.0	56.1	6.5	53.0	69.5	46.7	52.2	3.17
1559.	4.4	58.3	7.0	52.0	70.7	46.3	54.7	3.56
1670.	5.0	52.7	7.5	50.8	71.2	45.6	56.6	3.69
1750.	4.1	42.3	8.0	49.7	70.7	44.9	57.2	2.67
1834.	4.9	53.6	8.5	48.4	71.2	44.0	58.7	2.79
1928.	5.2	55.5	9.0	47.3	71.8	43.2	60.2	3.12
2000.	4.4	52.0	9.5	46.4	72.0	42.4	61.1	2.40
2105.	5.5	46.7	10.0	45.5	71.8	41.8	61.7	3.51

DOUBLE THEODOLITE BULL RUN 7/25 1700

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
269.	1.8	46.0	1.0	69.4	68.7	28.5	12.1	4.49
376.	1.9	29.2	1.5	67.4	62.8	35.0	16.2	3.56
517.	3.3	28.9	2.0	64.4	58.6	39.5	21.6	4.70
638.	2.8	41.6	2.5	62.5	60.0	43.0	26.5	4.02
753.	2.6	58.9	3.0	62.0	64.0	45.5	31.7	3.84
875.	4.0	56.1	3.5	59.9	67.3	46.2	38.0	4.05
965.	4.3	60.2	4.0	56.9	70.3	46.0	43.8	3.02
1027.	4.0	46.9	4.5	54.0	70.2	44.5	46.8	2.05
1120.	4.2	46.0	5.0	52.1	70.0	44.0	49.2	3.10
1214.	4.2	49.7	5.5	50.7	70.3	43.5	51.5	3.14
1292.	3.4	48.7	6.0	49.7	70.4	43.2	53.0	2.60
1409.	4.2	47.7	6.5	49.1	70.4	43.2	54.5	3.89
1499.	3.5	52.8	7.0	48.6	70.8	43.1	55.9	3.03
1611.	4.3	41.1	7.5	48.0	70.2	43.0	56.5	3.70
1732.	4.9	47.5	8.0	47.5	70.2	42.6	57.6	4.05
1837.	4.2	47.5	8.5	47.1	70.2	42.4	58.4	3.48
1966.	5.3	46.3	9.0	46.5	70.1	42.2	59.2	4.32
2103.	5.6	47.4	9.5	46.0	70.1	42.0	60.0	4.55
2337.	8.4	48.3	10.0	45.8	70.2	42.0	61.1	7.80

DOUBLE THEODOLITE BULL RUN 7/27 1300

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
763.	0.6	211.2	3.5	80.4	233.9	65.5	344.2	3.63
945.	2.0	228.3	4.5	75.4	242.4	68.6	325.5	3.03
1035.	2.2	243.9	5.0	73.8	247.5	68.0	317.7	2.99
1106.	2.8	250.3	5.5	70.4	252.9	67.4	310.7	2.38
1183.	3.6	240.1	6.0	67.3	255.1	65.2	302.4	2.56
1222.	3.3	235.9	6.5	63.8	255.7	63.2	296.1	1.29
1278.	4.3	228.0	7.0	60.1	254.8	60.9	288.8	1.89
1340.	4.6	225.3	7.5	57.1	253.7	58.3	282.6	2.06
1549.	4.4	225.0	8.5	54.4	252.3	55.3	274.5	3.49

DOUBLE THEODOLITE BULL RUN 7/27 1330

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
129.	1.3	81.9	0.5	73.5	104.7	17.0	5.2	4.30
313.	1.0	169.8	1.5	76.0	161.3	42.7	3.9	3.06
618.	1.3	265.5	3.0	81.6	248.4	56.7	347.5	3.39
694.	2.3	286.4	3.5	78.5	274.1	56.7	342.0	2.54
755.	1.7	278.2	4.0	76.4	281.0	56.1	338.2	2.02
853.	2.5	300.7	4.5	73.8	292.6	56.6	336.3	3.28
885.	2.6	256.0	5.0	69.5	289.4	55.9	330.1	1.06
933.	3.3	246.2	5.5	65.3	284.7	55.3	322.7	1.60
983.	3.3	237.2	6.0	62.4	280.0	54.2	315.6	1.66
1028.	3.7	227.0	6.5	59.0	274.7	53.7	308.0	1.51
1156.	4.8	239.0	7.0	57.1	272.2	52.8	301.1	4.25
1293.	3.9	239.1	7.5	56.9	270.8	52.4	296.7	4.56
1380.	3.6	238.0	8.0	55.3	269.7	52.1	293.3	2.90
1453.	2.2	219.8	8.5	55.2	268.0	52.3	290.6	2.45
1570.	3.5	235.5	9.0	54.5	267.1	52.5	287.9	3.90
1641.	2.8	227.0	9.5	53.8	265.9	52.2	285.5	2.37
1774.	4.4	237.1	10.0	53.1	265.3	51.8	283.1	4.43

DOUBLE THEODOLITE BULL RUN 7/27 1400

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
239.	2.0	234.7	1.0	64.1	257.4	29.4	343.8	3.98
329.	1.5	241.9	1.5	63.6	259.4	37.6	337.7	3.01
426.	2.8	236.7	2.0	60.0	259.4	43.2	327.1	3.25
559.	2.8	247.1	2.5	60.2	262.0	47.2	319.0	4.42
714.	2.2	285.1	3.0	62.9	269.2	50.5	317.7	5.18
886.	1.6	314.7	3.5	66.5	275.5	54.4	319.2	5.73
990.	0.9	294.2	4.0	67.4	278.0	56.6	319.1	3.45
1064.	1.7	249.6	4.5	66.5	277.4	57.2	316.0	2.47
1145.	1.9	240.9	5.0	65.6	275.9	57.8	312.3	2.69
1216.	2.0	229.7	5.5	64.7	273.5	58.2	308.2	2.39
1291.	1.9	231.3	6.0	64.2	271.8	58.4	304.8	2.49
1441.	3.0	249.9	6.5	63.9	271.9	58.6	301.6	5.02
1478.	2.7	243.1	7.0	61.4	271.3	58.1	298.7	1.21
1549.	3.1	242.7	7.5	60.1	270.7	57.0	295.8	2.36
1573.	2.0	216.6	8.0	58.9	268.8	56.7	293.0	0.81
1711.	4.2	235.0	8.5	58.1	267.5	56.1	289.3	4.59

DOUBLE THEODOLITE BULL RUN 7/27 1430

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
329.	1.3	306.8	1.0	75.8	329.5	34.5	355.3	5.49
492.	1.9	304.1	1.5	74.6	328.4	42.0	352.5	5.43
648.	2.0	302.3	2.0	73.7	327.4	46.5	349.9	5.18
815.	1.4	293.2	2.5	74.4	325.4	51.2	347.8	5.56
910.	0.6	190.7	3.0	76.1	321.2	55.3	346.6	3.19
1037.	0.7	227.6	3.5	77.4	316.5	58.7	344.7	4.23
1066.	1.9	180.6	4.0	78.3	303.0	61.7	341.2	0.97

DOUBLE THEODOLITE BULL RUN 7/27 1500

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
122.	1.3	213.4	0.5	72.8	236.1	16.2	355.4	4.07
363.	1.2	306.0	1.5	78.2	298.9	36.6	351.5	4.01
428.	0.8	291.9	2.0	76.3	302.7	41.4	349.7	2.17
539.	1.6	217.5	2.5	76.3	284.3	48.4	344.3	3.69
655.	2.0	215.7	3.0	74.7	270.3	54.7	337.0	3.87
795.	3.6	218.9	3.5	70.5	259.7	60.0	323.7	4.66
947.	3.5	218.3	4.0	68.7	254.6	62.0	311.3	5.06
1041.	2.2	177.7	4.5	68.5	247.3	65.1	303.7	3.14

DOUBLE THEODOLITE BULL RUN 7/27 1530

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
92.	1.1	351.2	0.5	70.1	13.9	11.4	1.0	3.05
161.	0.6	327.0	1.0	72.8	5.8	19.2	0.6	2.32
448.	1.4	253.3	2.0	78.3	306.5	41.6	350.9	4.79
547.	1.8	211.4	2.5	76.9	282.4	50.6	345.1	3.29
744.	3.7	225.8	3.0	73.6	266.4	57.5	331.5	6.56
1021.	1.8	194.1	4.0	74.0	250.6	66.2	318.2	4.62
1105.	2.3	200.3	4.5	72.1	245.7	68.2	309.2	2.81
1179.	2.6	214.4	5.0	69.3	244.2	68.8	300.0	2.47
1248.	3.3	211.1	5.5	66.8	242.3	67.6	289.7	2.29
1324.	3.1	203.8	6.0	64.9	240.0	66.8	281.1	2.52
1378.	3.6	199.3	6.5	61.8	237.4	65.9	272.5	1.80
1438.	4.4	198.8	7.0	59.2	235.0	63.6	264.2	2.03
1507.	4.0	193.4	7.5	57.3	232.7	61.9	257.7	2.27
1681.	6.1	204.9	8.0	55.5	231.9	60.2	252.2	5.83
1874.	6.7	211.9	8.5	54.1	232.3	58.4	249.2	6.43
2408.	6.4	229.8	10.0	51.6	238.3	54.2	250.3	5.92

DOUBLE THEODOLITE BULL RUN 7/27 1600

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
124.	3.5	211.1	0.5	50.8	233.8	18.1	347.0	4.15
204.	2.1	223.4	1.0	51.0	238.5	29.0	337.0	2.67
267.	2.9	210.2	1.5	47.1	236.6	36.5	323.4	2.08
329.	2.7	206.9	2.0	45.3	234.9	42.0	310.4	2.07
398.	3.0	203.2	2.5	44.0	233.0	46.0	296.8	2.30
486.	3.6	211.3	3.0	43.2	233.2	47.5	284.1	2.94
610.	3.2	217.7	3.5	45.5	234.3	48.9	276.6	4.13
907.	0.5	224.5	4.5	55.3	234.9	58.3	275.0	4.95
1076.	2.3	231.6	5.0	57.2	236.7	59.9	272.7	5.64
1166.	1.3	243.2	5.5	57.9	238.1	60.6	272.3	2.99
1170.	0.7	154.0	6.0	57.8	236.7	60.6	270.4	0.15
1231.	2.3	170.6	6.5	57.5	233.3	61.0	264.4	2.04
1343.	3.0	183.9	7.0	57.1	230.7	61.4	258.2	3.70
1427.	3.1	183.9	7.5	56.2	226.5	61.0	252.8	2.82
1575.	4.5	195.8	8.0	55.3	227.3	60.2	247.9	4.93
1757.	5.9	203.9	8.5	53.8	227.2	59.1	244.4	6.08
1814.	3.6	203.2	9.0	52.5	227.1	57.5	242.7	1.90

DOUBLE THEODOLITE BULL RUN 7/31 1330

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
252.	5.3	246.3	1.0	39.4	269.0	24.9	322.8	4.20
414.	4.5	239.2	1.5	43.2	266.9	34.0	311.6	5.40
584.	3.4	217.5	2.0	47.9	262.1	41.6	303.0	5.67
723.	2.4	196.6	2.5	51.0	257.4	47.4	296.7	4.63
866.	2.0	130.8	3.0	56.5	251.7	54.5	293.3	4.77
954.	1.2	68.6	3.5	60.5	250.4	58.6	294.7	2.92
1027.	0.7	117.6	4.0	62.8	248.2	61.1	293.7	2.45
1094.	0.8	199.7	4.5	63.4	247.2	62.3	291.5	2.24
1146.	1.5	180.6	5.0	63.1	244.2	63.3	286.9	1.73
1186.	2.7	182.3	5.5	61.6	239.8	63.3	279.0	1.32
1231.	2.1	179.3	6.0	60.6	236.7	63.6	273.1	1.51
1261.	1.6	194.4	6.5	59.7	235.5	63.1	269.5	1.00
1332.	1.3	206.7	7.0	59.9	235.2	63.2	267.3	2.37
1427.	1.9	181.5	7.5	60.0	233.2	63.9	263.0	3.14
1512.	1.6	177.6	8.0	60.3	231.5	64.4	259.5	2.84
1559.	1.0	234.3	8.5	60.3	232.3	64.2	259.4	1.58
1690.	2.1	200.1	9.0	60.8	231.7	64.4	256.7	4.37
1869.	4.8	181.1	9.5	60.0	228.2	64.3	249.2	5.95

DOUBLE THEODOLITE BULL RUN 7/31 1400

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
172.	3.1	241.9	0.5	62.0	264.6	21.7	347.5	5.72
336.	1.6	213.0	1.0	68.2	255.0	39.2	341.4	5.49
504.	2.2	165.3	1.5	71.3	234.2	54.8	336.5	5.59
843.	3.9	172.6	2.5	66.0	211.7	74.8	295.3	5.65
1248.	3.2	173.2	3.5	66.2	206.5	77.4	251.0	6.74
1361.	1.3	199.4	4.0	66.9	207.5	76.8	247.4	3.78
1515.	2.8	190.6	4.5	66.4	208.2	75.4	240.2	5.13
1668.	2.7	166.4	5.0	66.0	206.2	74.9	231.7	5.09
1871.	3.0	167.3	5.5	65.8	204.5	74.6	224.8	6.78
1907.	3.0	154.9	6.0	64.5	202.0	72.8	218.1	1.19
2197.	6.0	169.7	7.5	56.7	198.5	63.2	205.6	3.22
2398.	8.0	159.9	8.0	55.0	196.3	61.0	201.5	6.72
2446.	4.0	128.9	8.5	54.1	193.6	60.1	197.7	1.60

DOUBLE THEODOLITE BULL RUN 7/31 1430

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
164.	1.0	90.0	1.0	70.1	112.6	21.9	7.9	2.74
274.	1.7	79.0	1.5	68.3	107.8	34.0	15.0	3.65
353.	0.7	145.7	2.0	70.7	117.0	43.0	16.5	2.65
476.	1.7	160.1	2.5	72.7	134.6	54.6	18.5	4.09
606.	2.0	196.9	3.0	74.7	156.0	65.2	14.0	4.34
757.	1.9	186.5	3.5	74.6	168.6	73.7	10.3	5.05

DOUBLE THEODOLITE BULL RUN 7/31 1500

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
75.	4.3	210.3	0.5	31.3	233.0	11.4	343.6	2.51
159.	3.8	199.5	1.0	34.5	227.9	25.6	325.6	2.78
242.	2.3	210.2	1.5	38.6	229.0	36.5	313.4	2.77
347.	3.1	227.1	2.0	41.7	233.8	42.4	300.3	3.51
501.	3.3	234.8	2.5	46.1	238.5	47.4	291.6	5.11
687.	2.5	251.5	3.0	51.7	243.1	52.0	289.1	6.22
886.	1.5	197.5	3.5	56.6	241.4	57.9	284.6	6.61
1012.	2.2	144.2	4.0	59.0	235.6	62.6	278.2	4.20

DOUBLE THEODOLITE BULL RUN 7/31 1530

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
301.	1.6	225.9	1.5	65.4	248.6	36.0	340.1	3.34
466.	2.3	208.6	2.0	66.7	243.1	49.6	330.3	5.50
576.	4.0	175.5	2.5	62.8	227.1	60.8	313.6	3.68
684.	4.3	178.1	3.0	58.9	219.4	66.6	289.0	3.60
803.	3.8	168.5	3.5	57.1	213.6	69.6	266.5	3.96
964.	2.4	130.0	4.0	60.2	207.2	73.8	252.4	5.36
1132.	3.1	189.5	4.5	60.5	207.9	72.4	242.5	5.60
1300.	4.3	182.2	5.0	59.5	207.4	70.0	232.5	5.61
1365.	3.1	174.2	5.5	57.8	206.3	66.0	226.7	2.15
1424.	2.6	172.6	6.0	56.8	205.4	66.3	222.8	1.96
1536.	3.5	167.5	6.5	56.0	203.9	65.0	218.1	3.74
1636.	2.8	155.9	7.0	55.8	202.1	64.4	214.1	3.33
1723.	3.4	155.5	7.5	55.1	200.2	63.2	210.1	2.90
1757.	3.4	176.2	8.0	53.6	200.1	60.9	208.9	1.15
1866.	4.8	176.4	8.5	52.3	200.0	59.0	207.6	3.63
1971.	2.8	164.6	9.5	50.8	198.7	56.9	204.9	1.75
2034.	2.0	193.0	10.0	50.7	199.3	56.5	205.4	2.09

DOUBLE THEODOLITE BULL RUN 7/31 1600

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
321.	1.7	233.2	1.0	73.3	255.9	36.8	346.3	5.35
561.	1.2	244.3	2.0	73.3	260.6	51.7	336.6	4.00
668.	0.9	235.6	2.5	74.0	260.3	55.7	333.2	3.56
918.	3.6	248.1	3.0	72.1	264.0	60.7	322.0	8.32
1156.	2.6	252.1	3.5	72.2	266.2	63.6	316.0	7.94
1385.	1.8	255.9	4.0	73.1	267.7	65.9	312.9	7.62
1585.	1.4	211.1	4.5	74.0	264.8	68.3	308.9	6.69
1779.	1.6	204.8	5.0	74.6	261.5	70.1	304.4	6.46
1935.	1.8	250.5	5.5	74.4	262.6	70.3	302.0	5.18
2021.	1.6	211.2	6.0	74.0	260.4	70.5	298.2	2.88
2139.	2.5	204.9	6.5	73.2	256.9	70.9	292.4	3.94
2271.	3.5	177.4	7.0	72.7	250.1	71.9	284.0	4.40
2307.	2.9	164.4	7.5	72.0	244.4	72.3	277.0	1.20
2399.	4.6	157.6	8.0	71.2	236.0	73.0	265.8	3.06
2470.	4.6	158.0	8.5	70.0	229.0	72.9	254.9	2.37
2634.	6.2	164.1	9.0	68.5	222.4	72.1	242.8	5.47
2775.	7.8	159.3	9.5	66.2	215.5	70.4	230.4	4.70
2848.	6.8	151.6	10.0	64.1	210.1	68.6	221.4	2.42

DOUBLE THEODOLITE BULL RUN 7/31 1630

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
126.	1.1	95.7	1.0	63.9	118.5	17.2	8.1	2.10
195.	1.0	66.8	1.5	65.5	109.5	25.6	12.2	2.30
276.	1.3	68.4	2.0	65.9	104.1	33.2	17.4	2.70
375.	0.7	75.1	2.5	68.4	103.2	42.2	20.3	3.29
494.	2.0	191.7	3.0	75.0	127.6	53.0	17.9	3.96
608.	2.8	204.8	3.5	76.4	161.0	64.6	9.7	3.82
1591.	3.8	212.3	7.5	59.7	226.5	64.4	251.1	4.09
1721.	5.5	203.8	8.0	57.5	226.5	62.1	246.7	4.34
1829.	2.1	196.3	8.5	57.6	226.1	62.1	244.9	3.58
1969.	1.6	162.6	9.0	58.6	224.6	63.3	242.4	4.68
2055.	1.6	151.4	9.5	59.2	222.9	63.7	239.8	2.88
2210.	2.9	175.2	10.0	59.4	221.3	63.9	236.6	5.14

DOUBLE THEODOLITE BULL RUN 7/31 1700

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
322.	2.6	193.2	1.5	55.0	215.9	48.6	329.2	3.57
438.	3.4	209.1	2.0	53.5	220.7	56.8	307.6	3.87
551.	3.8	215.9	2.5	51.8	225.2	58.1	289.1	3.78
609.	2.9	203.1	3.0	49.7	225.3	57.3	277.5	1.93
678.	3.6	197.8	3.5	47.5	224.5	55.8	265.9	2.29
923.	6.5	223.9	4.0	47.8	229.6	56.0	260.1	8.17
856.	2.1	106.4	4.5	47.2	225.3	54.5	255.6	-2.23
928.	3.2	212.0	5.0	46.4	226.3	52.7	252.7	2.40
1025.	3.1	213.2	5.5	46.4	227.2	52.1	250.7	3.24
1142.	3.3	200.1	6.0	46.7	226.8	52.1	247.6	3.88
1248.	3.0	212.1	6.5	47.0	227.4	51.9	246.4	3.54
1350.	2.4	244.0	7.0	48.0	229.5	52.1	247.8	3.41
1478.	2.5	244.6	7.5	49.1	231.5	52.9	249.1	4.25
1586.	1.5	295.0	8.0	51.0	233.5	54.4	251.3	3.60
2011.	1.9	114.8	9.5	57.8	226.2	61.6	243.0	4.73
2098.	2.4	180.0	10.0	57.5	225.0	61.5	240.6	2.92

DOUBLE THEODOLITE BULL RUN 8/1 1300

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
214.	1.9	199.1	1.0	62.1	221.8	31.7	347.5	3.57
282.	1.3	212.8	1.5	62.1	225.2	40.0	341.5	2.27
426.	1.1	249.1	2.0	67.2	232.8	51.7	336.6	4.78
622.	1.5	236.6	3.0	68.2	241.6	58.3	323.5	3.27
704.	1.5	193.8	3.5	67.3	237.8	62.4	316.5	2.73
814.	2.7	260.1	4.0	66.1	247.1	61.9	310.5	3.67
890.	2.1	271.5	4.5	66.0	253.5	60.4	308.5	2.52

DOUBLE THEODOLITE BULL RUN 8/1 1330

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
114.	2.5	352.7	0.5	57.0	15.4	12.8	2.3	3.80
437.	1.0	325.4	1.5	73.5	3.4	38.2	0.8	5.39

DOUBLE THEODOLITE BULL RUN 8/1 1400

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
2056.	1.5	76.8	7.5	72.0	99.6	69.6	65.5	4.57
2081.	1.0	50.4	8.0	71.6	98.5	69.0	65.8	0.85
2171.	3.5	348.2	8.5	72.1	90.3	68.2	60.0	3.00
2253.	3.1	299.7	9.5	74.6	77.0	69.4	47.4	1.36
2441.	2.4	324.4	10.0	75.9	70.5	69.7	43.3	6.26

DOUBLE THEODOLITE BULL RUN 8/1 1430

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
118.	3.6	78.6	0.5	48.3	101.4	15.5	14.7	3.93
222.	2.8	116.9	1.0	51.6	118.0	30.0	25.2	3.46
282.	3.0	113.5	1.5	47.2	124.1	37.9	39.2	2.00
333.	3.0	102.1	2.0	43.8	124.3	41.1	53.2	1.70
396.	3.5	94.0	2.5	41.1	122.6	42.3	65.9	2.09
520.	1.6	69.2	3.0	46.5	119.9	47.4	68.4	4.14
660.	2.3	104.7	3.5	49.6	120.8	52.1	75.0	4.69
833.	1.2	134.4	4.0	54.6	122.8	58.1	78.9	5.76
1009.	0.7	151.0	4.5	59.2	124.3	62.7	81.2	5.85
1175.	1.1	103.4	5.0	61.7	124.4	65.0	83.8	5.55
1340.	0.6	72.7	5.5	64.1	123.6	67.1	84.2	5.48
1533.	1.1	61.5	6.0	66.3	121.8	68.5	84.2	6.46
1726.	1.2	102.9	6.5	67.7	122.0	69.8	86.5	6.41
1968.	1.4	54.6	7.0	69.2	119.7	71.2	85.9	8.08

DOUBLE THEODOLITE BULL RUN 8/1 1530

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
212.	2.5	116.3	1.0	55.1	141.1	33.0	17.1	3.53
312.	3.5	118.8	1.5	51.3	141.3	48.0	35.7	3.36
419.	2.2	102.7	2.0	53.3	138.1	55.3	49.1	3.54
500.	2.2	77.4	2.5	53.9	131.8	55.9	58.2	2.71
581.	2.4	81.9	3.0	53.5	127.5	56.0	66.1	2.71
620.	2.1	104.7	3.5	51.6	127.5	55.5	73.7	1.30
673.	2.4	101.5	4.0	50.2	127.1	54.6	80.6	1.75
735.	2.3	111.7	4.5	49.4	127.9	54.6	87.0	2.09
799.	2.1	104.0	5.0	49.2	127.8	54.3	91.1	2.14
881.	1.9	107.7	5.5	49.6	128.0	54.9	94.6	2.72
967.	1.2	134.9	6.0	51.1	129.3	56.6	97.6	2.87
1056.	1.0	148.7	6.5	52.8	130.7	58.5	100.2	2.97
1136.	0.7	152.7	7.0	54.3	131.7	60.1	102.0	2.65
1211.	1.1	151.5	7.5	55.3	133.2	61.2	104.8	2.51
1290.	0.9	160.5	8.0	56.4	134.6	62.5	107.2	2.63
1353.	0.1	38.9	8.5	57.7	134.5	63.5	107.1	2.10
1424.	0.6	350.7	9.0	59.3	133.4	64.7	105.4	2.39
1501.	0.6	335.8	9.5	61.0	132.5	66.0	103.8	2.56
1564.	1.4	4.0	10.0	62.3	129.8	66.5	100.3	2.09

DOUBLE THEODOLITE BULL RUN 8/1 1600

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
236.	2.5	70.8	1.0	58.4	93.6	27.6	19.8	3.94
351.	2.4	69.6	1.5	58.6	93.2	36.2	28.2	3.83
457.	1.2	27.6	2.0	62.0	87.4	41.7	29.8	3.53
523.	1.8	26.6	2.5	61.3	80.8	42.7	31.7	2.21
608.	1.6	29.4	3.0	61.5	76.9	44.9	33.3	2.81
701.	0.9	44.7	3.5	63.2	76.2	47.8	34.7	3.13
845.	1.9	76.6	4.0	64.5	79.3	51.6	39.3	4.77
927.	1.0	116.1	4.5	65.6	82.8	54.5	42.0	2.76
976.	0.9	154.9	5.0	66.7	86.3	56.7	43.7	1.61
984.	0.4	167.2	5.5	67.1	87.8	57.2	44.3	0.28
1029.	1.8	78.6	6.0	65.6	89.3	57.1	48.3	1.48
1085.	1.8	86.9	6.5	64.5	91.3	57.5	52.3	1.87
1146.	1.1	211.5	7.0	66.7	93.5	60.2	52.2	2.05
1186.	0.7	148.3	7.5	67.3	95.7	61.3	53.8	1.34
1227.	0.3	160.2	8.0	68.0	96.8	62.3	54.5	1.37
1280.	0.8	90.2	8.5	67.9	97.5	62.9	56.3	1.75
1353.	1.5	102.5	9.0	67.6	99.6	63.5	60.0	2.45
1383.	0.9	212.5	9.5	68.6	101.5	65.0	60.2	0.99
1419.	0.7	251.1	10.0	69.8	101.8	66.2	59.1	1.21

DOUBLE THEODOLITE BULL RUN 8/2 1300

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
107.	1.3	85.2	0.5	70.0	108.0	14.4	5.2	3.56
227.	1.6	92.7	1.0	68.4	112.1	30.5	11.7	4.02
341.	2.4	53.8	1.5	65.8	95.9	38.1	20.5	3.78
431.	4.5	9.6	2.0	61.2	66.3	36.2	23.3	3.01
503.	4.4	4.8	2.5	55.2	53.0	35.1	24.1	2.39
572.	4.6	5.0	3.0	50.1	46.0	33.9	24.7	2.32
647.	5.2	9.6	3.5	45.9	42.7	32.6	25.9	2.49
719.	5.8	7.2	4.0	42.1	40.0	31.3	26.5	2.41
806.	6.8	9.8	4.5	39.0	38.5	30.1	27.4	2.88
888.	6.8	11.6	5.0	36.6	37.8	29.1	28.3	2.75
908.	3.3	24.4	5.5	34.9	38.5	28.4	29.4	0.66

DOUBLE THEODOLITE BULL RUN 8/2 1330

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
126.	3.0	63.5	0.5	53.2	86.2	16.6	11.9	4.20
438.	2.4	61.1	2.0	56.0	84.5	37.7	34.0	3.47
527.	2.6	34.5	2.5	55.1	79.0	39.5	36.9	2.96
664.	4.2	23.7	3.0	54.9	71.1	40.4	38.5	4.57
730.	4.6	4.3	3.5	51.5	61.6	39.0	36.7	2.22
827.	6.1	4.1	4.0	48.4	53.8	37.3	35.0	3.23

DOUBLE THEODOLITE BULL RUN 8/2 1400

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
130.	3.4	76.1	0.5	52.4	98.9	16.7	14.0	4.32
198.	4.6	73.7	1.0	40.4	97.5	22.8	31.2	2.28
274.	5.3	65.2	1.5	35.6	93.7	25.3	44.8	2.53
364.	4.8	63.5	2.0	34.7	91.7	27.7	52.9	2.99
483.	5.1	73.0	2.5	35.7	92.6	30.6	60.4	3.96
595.	3.6	78.8	3.0	37.5	93.8	33.5	65.0	3.76
703.	3.5	58.2	3.5	38.7	92.3	35.0	66.7	3.58
783.	3.9	39.3	4.0	38.7	88.9	34.8	66.2	2.66
865.	3.9	18.8	4.5	39.3	84.4	35.0	63.9	2.74
926.	4.2	354.6	5.0	39.8	78.5	34.9	59.8	2.04
983.	6.0	12.0	5.5	38.3	72.9	33.3	56.8	1.90
1041.	7.1	21.4	6.0	36.1	68.9	31.3	55.2	1.95
1092.	6.7	26.9	6.5	34.1	66.6	29.6	54.6	1.68
1130.	6.3	34.0	7.0	32.2	65.6	28.1	54.8	1.26
1177.	6.4	45.0	7.5	30.7	65.8	27.0	55.9	1.56
1244.	6.3	50.2	8.0	30.0	66.4	26.4	57.2	2.24
1326.	7.2	49.4	8.5	29.3	66.9	26.0	58.4	2.74
1380.	4.6	49.7	9.0	28.9	67.2	25.8	59.1	1.80
1466.	6.4	48.8	9.5	28.6	67.5	25.7	59.9	2.85
1553.	6.0	52.9	10.0	28.5	68.0	25.7	60.8	2.91

DOUBLE THEODOLITE BULL RUN 8/2 1500

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
130.	3.3	26.1	0.5	53.8	48.8	14.3	8.6	4.33
372.	4.6	33.5	1.5	45.9	54.3	27.1	25.2	4.03
497.	5.2	58.4	2.0	44.7	62.2	31.0	34.5	4.17
606.	5.0	56.1	2.5	43.3	65.9	32.8	41.0	3.64
711.	5.1	46.4	3.0	41.9	66.5	33.4	44.9	3.51
824.	4.8	45.7	3.5	41.4	66.8	34.1	47.7	3.75
930.	3.4	26.2	4.0	42.0	65.1	35.2	47.8	3.53
1040.	4.3	28.4	4.5	42.3	63.6	35.4	48.1	3.68
1157.	3.8	30.7	5.0	42.5	62.7	36.4	48.5	3.89
1269.	4.9	28.1	5.5	42.3	61.5	36.3	48.7	3.74
1372.	7.4	32.8	6.0	40.4	60.7	35.1	49.5	3.44
1445.	6.6	41.7	6.5	38.7	61.1	33.9	50.9	2.44

DOUBLE THEODOLITE BULL RUN 8/2 1530

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
104.	4.4	1.4	0.5	39.2	24.1	10.4	5.7	3.48
223.	3.6	14.1	1.0	44.0	29.6	18.5	10.7	3.96
343.	3.2	26.2	1.5	46.9	35.2	24.8	15.4	4.00
468.	4.3	21.6	2.0	46.3	37.8	28.6	19.7	4.14
648.	3.3	44.9	2.5	50.6	43.0	34.8	24.4	6.00

DOUBLE THEODOLITE BULL RUN 8/2 1600

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
257.	4.4	41.0	1.5	34.2	63.7	19.4	30.7	2.86
343.	5.0	42.4	2.0	33.3	64.1	21.7	36.6	2.87
416.	5.1	41.8	2.5	31.7	64.2	22.5	40.9	2.41
505.	4.9	35.1	3.0	31.8	63.1	23.8	43.1	2.99
641.	5.4	43.5	3.5	33.5	63.6	26.2	46.0	4.54
748.	6.1	41.5	4.0	33.1	63.7	26.8	48.3	3.57
859.	5.8	39.4	4.5	33.2	63.5	27.3	49.8	3.68
931.	5.6	33.4	5.0	32.3	62.7	26.9	50.4	2.41

DOUBLE THEODOLITE BULL RUN 8/5 1200

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
107.	3.1	213.5	0.5	50.4	236.2	15.1	348.4	3.57
199.	3.3	206.7	1.0	47.0	232.7	29.6	333.9	3.08
301.	3.0	210.0	1.5	47.9	232.7	41.0	318.9	3.39
402.	2.9	203.3	2.0	48.3	231.1	48.8	304.1	3.38
495.	3.1	226.9	2.5	48.1	234.8	50.0	293.4	3.09
596.	1.9	228.7	3.0	50.2	236.6	52.4	288.6	3.38
699.	2.0	225.4	3.5	51.5	237.6	54.1	284.1	3.41
783.	1.9	201.7	4.0	52.2	236.6	55.5	278.8	2.83
874.	2.1	191.9	4.5	52.7	234.6	56.9	272.9	3.01
964.	2.1	176.4	5.0	53.4	231.6	58.5	267.0	2.99
1042.	1.6	156.0	5.5	54.4	229.0	60.4	262.4	2.61
1114.	1.3	100.6	6.0	56.6	226.2	63.1	259.8	2.39
1203.	0.9	119.6	6.5	58.5	224.2	65.3	257.3	2.97
1298.	1.2	174.0	7.0	59.5	223.0	66.1	254.1	3.17
1387.	2.3	178.7	7.5	59.2	221.3	65.9	248.9	2.97
1515.	3.5	165.5	8.0	58.8	217.8	65.9	240.9	4.27
1655.	3.9	142.8	9.0	57.5	208.1	65.6	223.4	2.99
1836.	3.6	155.3	9.5	56.9	205.5	65.6	218.1	4.69
1950.	3.0	141.5	10.0	56.9	202.8	65.6	213.4	3.83

DOUBLE THEODOLITE BULL RUN 8/5 1230

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
322.	0.6	114.2	1.0	84.2	137.0	38.2	3.3	5.37
1547.	2.0	172.6	7.0	65.0	193.1	76.6	208.8	3.40
1738.	3.7	144.2	8.0	61.9	187.2	72.2	192.8	3.18
1921.	4.7	153.5	8.5	60.7	185.6	70.3	189.4	6.10

DOUBLE THEODOLITE BULL RUN 8/5 1300

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
61.	3.5	257.4	0.5	29.6	280.1	7.8	346.8	2.04
115.	3.0	255.4	1.0	31.6	279.2	12.7	337.1	1.81
203.	3.6	243.1	1.5	34.7	274.4	20.0	326.0	2.90
272.	3.2	243.9	2.0	35.0	272.5	24.1	317.9	2.33
368.	2.8	220.8	2.5	38.3	267.5	30.1	310.3	3.19
430.	1.4	156.7	3.0	42.5	262.4	35.3	307.2	2.07
503.	0.9	212.1	3.5	45.5	261.0	39.4	304.8	2.45
564.	0.6	278.9	4.0	48.1	262.4	41.5	304.7	2.01
622.	0.5	299.4	4.5	50.5	263.8	43.6	305.1	1.93
669.	1.5	290.0	5.0	50.9	267.3	43.8	305.6	1.56
739.	1.6	258.9	5.5	51.5	268.4	44.9	304.1	2.34
793.	1.0	216.3	6.0	52.2	267.0	46.4	301.9	1.80
888.	1.9	212.9	6.5	53.4	264.5	48.6	298.0	3.20
981.	2.3	202.8	7.0	53.9	261.1	50.6	293.2	3.07
1038.	1.8	183.7	7.5	54.3	257.8	52.0	289.3	1.92
1111.	2.7	205.5	8.0	53.8	255.1	52.4	284.5	2.41
1161.	2.1	203.3	8.5	53.2	253.1	52.5	280.9	1.67
1225.	2.8	200.8	9.0	52.5	250.6	52.4	276.4	2.13
1285.	2.7	190.8	9.5	51.9	247.9	52.7	272.1	2.02
1353.	2.6	183.9	10.0	51.8	245.2	53.1	268.0	2.26

DOUBLE THEODOLITE BULL RUN 8/5 1330

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
155.	3.2	282.0	1.0	40.1	304.7	15.0	343.5	2.59
246.	2.3	238.0	1.5	45.8	293.4	22.7	336.5	3.02
327.	2.5	254.0	2.0	46.4	289.5	27.4	330.3	2.69
423.	2.8	256.6	2.5	47.3	287.4	31.5	324.7	3.20
492.	2.1	220.7	3.0	48.2	281.8	35.2	319.4	2.30
584.	2.5	222.7	3.5	49.4	276.9	39.0	313.6	3.06
674.	2.1	221.1	4.0	50.7	273.4	42.0	308.9	3.00
782.	2.5	222.1	4.5	51.7	270.2	45.0	303.9	3.60
900.	2.9	207.9	5.0	52.8	265.7	47.9	297.9	3.94
1123.	1.9	193.7	6.0	55.8	259.3	53.3	289.9	3.71
1206.	3.2	173.3	6.5	56.1	253.4	55.3	283.2	2.76
1271.	3.7	157.9	7.0	56.3	246.3	57.2	275.3	2.18

DOUBLE THEODOLITE BULL RUN 8/5 1400

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
305.	1.2	306.0	1.5	71.5	328.7	30.0	354.0	3.39
390.	1.9	224.8	2.0	72.4	301.6	37.1	347.6	2.85
469.	2.6	220.4	2.5	69.8	280.3	42.6	338.8	2.62
533.	2.6	201.1	3.0	67.2	264.2	48.2	330.1	2.14
565.	3.1	184.4	3.5	63.5	248.9	52.5	319.5	1.06
619.	3.0	201.5	4.0	59.6	243.2	55.0	307.3	1.79
766.	2.9	197.5	5.0	55.7	236.0	58.2	285.4	2.46
858.	2.6	193.6	5.5	55.2	233.6	59.5	277.1	3.08
950.	3.1	180.7	6.0	54.6	229.7	60.3	267.3	3.07
1045.	3.6	173.1	6.5	53.8	225.3	60.7	257.0	3.16
1135.	4.8	166.9	7.0	52.2	220.0	59.9	245.1	3.00
1246.	5.2	162.7	7.5	50.9	215.1	59.0	234.5	3.70
1383.	6.3	163.0	8.0	49.6	210.7	57.3	225.1	4.55
1457.	5.1	158.0	8.5	48.1	207.4	55.3	218.8	2.47
1758.	6.2	165.6	9.5	46.5	203.3	52.8	210.6	5.02
1870.	3.5	161.5	10.0	46.5	202.2	52.7	208.7	3.72

DOUBLE THEODOLITE BULL RUN 8/5 1430

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
206.	0.9	274.1	1.0	75.6	296.8	23.7	353.8	3.43
422.	2.0	293.2	2.0	68.6	309.9	36.6	346.2	3.60
651.	1.8	263.9	3.0	68.0	301.0	45.8	337.5	3.82
781.	2.3	247.8	3.5	67.6	294.9	49.4	331.7	4.31
862.	2.3	226.7	4.0	66.5	287.6	51.9	325.7	2.70
946.	3.0	229.6	4.5	64.6	281.1	53.2	318.4	2.82
1026.	3.1	202.6	5.0	63.7	272.6	55.4	310.6	2.64
1097.	3.0	196.1	5.5	62.9	265.4	57.0	303.1	2.39
1169.	3.7	187.1	6.0	61.6	257.3	58.7	293.9	2.39
1278.	4.1	175.0	6.5	61.3	248.9	61.0	283.8	3.62
1429.	6.2	163.2	7.0	60.7	237.3	63.8	268.4	5.05

DOUBLE THEODOLITE BULL RUN 8/5 1500

HGT	SPD	DIR	TIME	ELVN	AZN	ELVS	AZS	RISE(MPS)
0.	0.0	0.0	0.0					
125.	3.1	220.7	0.5	54.4	243.4	17.0	347.6	4.18
201.	2.6	198.0	1.0	51.0	233.2	29.2	337.4	2.53
224.	1.1	166.4	1.5	49.5	226.2	34.6	334.2	0.76
286.	1.4	208.6	2.0	51.7	227.1	41.0	326.8	2.04
367.	2.6	238.6	2.5	51.3	235.5	45.1	315.1	2.73
429.	2.1	197.2	3.0	50.3	232.8	49.7	304.7	2.07
474.	2.7	184.0	3.5	48.3	228.2	52.2	291.7	1.47
623.	3.6	220.4	4.5	44.7	233.1	49.2	273.6	2.50
719.	3.6	202.6	5.0	44.6	232.0	49.2	265.9	3.19
759.	3.4	215.2	5.5	42.8	232.7	46.4	261.9	1.35
843.	4.5	213.7	6.0	41.2	233.2	45.1	257.8	2.78
915.	4.2	202.4	6.5	40.1	232.3	44.0	253.6	2.41
1072.	5.8	199.2	7.0	39.8	230.9	44.9	248.7	5.23
1171.	2.8	161.2	7.5	41.0	228.3	46.5	244.8	3.31
1459.	4.3	180.0	8.5	42.9	224.3	47.8	237.3	4.79
1505.	3.2	130.5	9.0	43.1	221.1	48.5	233.2	1.54

7. TRAJECTORY EXPERIMENT PIBAL SOUNDINGS

In this section observations of the mesoscale wind field made during the trajectory experiment are presented. These observations were made using the single theodolite technique. During the trajectory experiments, soundings of 10 minutes duration were made simultaneously at each ETTEX station. Readings were made at 30 second intervals. Observations for 6 August were not made at the Crossville site. "HGT" is the height in meters above the ground surface; "SPD" is the speed in m/s; "DIR" is the wind direction in degrees from north; "TIME" is measured in minutes, and "ELV" and "AZ" are the measured elevations and azimuths in degrees. Asterisks indicate missing data.

SEVIERVILLE 7/16

1005 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.6	40.0	0.0		
108	5.1	65.8	0.5	35.3	55.8
216	3.3	57.3	1.0	40.8	52.5
315	1.6	77.8	1.5	46.8	54.9
414	5.4	58.7	2.0	42.1	62.7
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.0	80.0	0.0		
108	1.9	88.4	0.5	62.4	88.4
216	2.4	65.6	1.0	59.7	75.6
315	3.7	61.1	1.5	53.1	68.8
414	4.4	66.5	2.0	48.4	68.0
513	4.4	72.9	2.5	45.8	69.3
612	4.4	63.6	3.0	44.1	68.1
706	3.7	55.2	3.5	43.7	66.2
801	3.8	66.2	4.0	43.2	66.2
895	3.7	58.4	4.5	42.9	65.3
990	4.5	50.6	5.0	42.1	63.5
1080	2.8	66.3	5.5	42.5	63.7
1170	3.3	62.4	6.0	42.5	63.6
1260	2.8	43.7	6.5	42.9	62.4
1350	3.0	30.3	7.0	43.3	60.5
1440	2.6	30.6	7.5	43.8	59.0
1530	2.8	35.7	8.0	44.1	57.8
1620	3.6	45.1	8.5	43.9	57.0
1710	4.4	51.4	9.0	43.3	56.6
1800	1.9	43.4	9.5	43.9	56.2
1890	2.2	50.3	10.0	44.3	56.0

1100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.4	40.0	0.0		
108	2.0	45.8	0.5	60.9	45.8
216	2.4	60.8	1.0	58.7	54.0
315	2.4	87.7	1.5	58.3	65.7
414	3.3	70.2	2.0	54.8	67.2
513	5.3	69.7	2.5	48.6	68.1
612	5.0	70.1	3.0	45.5	58.6
706	4.4	60.2	3.5	44.0	67.1
801	3.7	61.7	4.0	43.6	66.4
895	3.5	75.5	4.5	43.5	67.4
990	4.5	80.1	5.0	42.6	69.0
1080	4.5	67.2	5.5	41.7	68.8
1170	4.0	76.5	6.0	41.3	69.5
1260	2.9	66.2	6.5	41.6	69.3
1350	3.2	61.4	7.0	41.7	68.8
1440	3.0	59.9	7.5	41.9	68.3
1530	3.2	55.8	8.0	42.0	67.6
1620	3.8	54.9	8.5	41.8	66.8
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1130 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.7	360.0	0.0		
108	2.5	26.7	0.5	55.4	26.7
216	3.0	22.5	1.0	52.8	24.4
315	2.4	53.5	1.5	53.9	33.2
414	0.5	60.7	2.0	58.4	36.1
513	2.9	69.1	2.5	57.2	44.3
612	3.9	72.1	3.0	54.4	51.5
706	3.5	79.2	3.5	52.9	55.8
801	3.1	84.7	4.0	52.4	60.8
895	3.2	71.8	4.5	51.5	62.3
990	2.5	63.2	5.0	51.1	62.4
1080	2.6	65.7	5.5	50.9	62.7
1170	2.7	67.4	6.0	50.7	63.1
1260	2.6	65.5	6.5	50.4	63.3
1350	3.6	53.6	7.0	49.6	62.4
1440	4.0	45.4	7.5	48.7	60.8
1530	4.9	39.2	8.0	47.5	58.6
1620	4.5	44.7	8.5	46.6	57.4
1710	4.8	52.7	9.0	45.6	57.0
1800	3.2	60.7	9.5	45.5	57.2
1890	1.9	47.5	10.0	46.0	56.9

1200 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.0	360.0	0.0		
108	2.6	11.8	0.5	54.6	11.8
216	5.1	15.7	1.0	43.1	14.4
315	5.0	33.0	1.5	40.0	21.7
414	4.5	26.6	2.0	39.1	23.0
513	4.6	31.4	2.5	38.4	24.8
612	4.9	41.6	3.0	37.8	27.9
706	5.7	73.1	3.5	37.6	35.5
801	3.8	46.4	4.0	37.9	36.7
895	3.3	55.4	4.5	38.6	38.3
990	3.7	59.5	5.0	38.9	40.2
1080	2.6	43.5	5.5	39.6	40.4
1170	4.9	47.4	6.0	38.9	41.1
1260	4.8	57.7	6.5	38.4	42.6
1350	4.3	57.3	7.0	38.2	43.7
1440	4.3	55.1	7.5	38.0	44.5
1530	3.1	63.7	8.0	38.4	45.4
1620	3.2	60.5	8.5	38.7	46.1
1710	3.7	46.1	9.0	38.7	46.1
1800	3.8	50.1	9.5	38.7	46.3
1890	4.2	63.4	10.0	38.6	47.2

1230 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.5	70.0	0.0		
108	3.9	19.8	0.5	42.5	19.8
216	3.2	20.2	1.0	45.2	20.0
315	3.7	28.5	1.5	44.1	22.9
414	4.8	37.5	2.0	41.6	27.4
513	4.6	44.4	2.5	40.5	31.3
612	6.2	44.4	3.0	38.0	34.4
706	5.9	55.7	3.5	36.6	38.3
801	6.3	51.6	4.0	35.2	40.5
895	5.4	41.3	4.5	34.6	40.6
990	4.9	38.6	5.0	34.4	40.4
1080	4.8	42.6	5.5	34.2	40.6
1170	4.7	48.0	6.0	34.1	41.2
1260	4.7	47.8	6.5	34.0	41.7
1350	5.0	41.7	7.0	33.8	41.7
1440	4.2	48.4	7.5	33.9	42.1
1530	4.1	59.0	8.0	34.1	43.0
1620	3.0	70.2	8.5	34.7	44.0
1710	2.9	58.0	9.0	35.2	44.5
1800	3.9	42.3	9.5	35.3	44.4
1890	3.3	47.1	10.0	35.6	44.5

SEVIERVILLE 7/16

1300 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.8	20.0	0.0		
108	3.0	21.1	0.5	50.2	21.1
216	4.9	27.7	1.0	42.3	25.2
315	3.1	28.0	1.5	43.6	26.0
414	4.3	29.5	2.0	42.0	27.0
513	4.5	49.1	2.5	41.1	32.0
612	4.2	55.8	3.0	41.0	36.1
706	4.7	56.5	3.5	40.1	39.5
801	3.9	56.8	4.0	40.1	41.6
895	3.6	49.3	4.5	40.2	42.4
990	4.0	37.5	5.0	40.0	41.9
1080	3.7	41.9	5.5	39.9	41.9
1170	3.3	60.6	6.0	40.2	43.2
1260	3.2	60.5	6.5	40.5	44.3
1350	1.8	79.6	7.0	41.6	45.5
1440	3.0	47.3	7.5	41.8	45.6
1530	3.2	40.2	8.0	41.9	45.3
1620	3.1	43.4	8.5	42.0	45.2
1710	2.9	53.8	9.0	42.2	45.6
1800	3.8	51.2	9.5	42.1	45.9
1890	3.6	57.5	10.0	42.0	46.5

1330 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.8	20.0	0.0		
108	1.5	1.4	0.5	68.0	1.4
216	2.4	3.9	1.0	61.8	3.0
315	2.7	3.0	1.5	58.2	3.0
414	2.4	42.4	2.0	58.4	13.3
513	2.0	54.8	2.5	59.4	21.0
612	2.5	51.2	3.0	56.8	26.9
706	2.6	46.1	3.5	57.8	30.2
801	3.7	44.1	4.0	55.3	33.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	60.0	0.0		
108	4.8	63.1	0.5	37.0	63.1
216	5.5	48.3	1.0	35.3	55.2
315	3.7	33.8	1.5	37.6	49.6
414	1.9	18.8	2.0	42.1	46.0
513	2.1	21.6	2.5	44.8	43.1
612	3.4	35.1	3.0	44.8	41.8
706	4.4	38.9	3.5	43.4	41.3
801	4.6	47.1	4.0	42.2	42.2
895	4.7	45.1	4.5	41.2	42.6
990	4.1	47.2	5.0	40.8	43.1
1080	4.1	47.2	5.5	40.4	43.5
1170	4.0	48.1	6.0	40.1	43.9
1260	5.6	47.6	6.5	39.0	44.3
1350	1.0	39.0	7.0	40.4	44.2
1440	2.8	52.3	7.5	40.8	44.6
1530	3.1	54.1	8.0	41.0	45.1
1620	3.4	61.8	8.5	41.1	46.0
1710	3.3	72.4	9.0	41.3	47.3
1800	3.1	78.9	9.5	41.6	48.7
1890	3.6	86.5	10.0	41.8	50.5

SEVIERVILLE 7/17

1010 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.9	60.0	0.0		
108	0.5	83.7	0.5	81.6	83.7
216	1.4	55.6	1.0	75.4	63.3
315	1.7	55.8	1.5	71.4	59.8
414	2.1	88.0	2.0	68.4	70.2
513	0.7	19.7	2.5	70.9	65.1
612	3.1	312.0	3.0	74.9	33.9
706	4.0	262.0	3.5	80.1	347.7
801	3.7	255.5	4.0	78.5	304.6
895	4.2	249.7	4.5	74.0	231.0
990	3.0	245.5	5.0	71.4	272.1
1080	2.5	237.8	5.5	69.8	256.0
1170	3.5	234.9	6.0	67.3	259.7
1260	4.2	235.4	6.5	64.3	254.8
1350	4.4	232.1	7.0	61.6	250.8
1440	3.8	232.0	7.5	59.8	248.3
1530	3.1	239.3	8.0	58.7	247.4
1620	3.1	248.5	8.5	57.7	247.5
1710	4.2	245.7	9.0	56.1	247.3
1800	4.1	238.9	9.5	54.8	246.5
1890	3.5	224.0	10.0	54.1	244.8

1030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.6	180.0	0.0		
108	0.3	198.7	0.5	84.5	198.7
216	0.8	92.9	1.0	83.5	117.0
315	0.9	110.3	1.5	80.6	113.5
414	0.6	119.5	2.0	80.5	115.0
513	2.1	317.9	2.5	87.0	48.0
612	1.9	308.6	3.0	84.5	335.5
706	1.3	286.6	3.5	82.8	316.5
801	1.5	257.9	4.0	81.6	298.0
895	3.9	220.1	4.5	78.4	259.1
990	2.2	184.2	5.0	78.0	241.7
1080	6.2	227.4	5.5	70.0	235.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1101 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	270.0	0.0		
108	0.4	64.1	0.5	83.1	64.1
216	1.6	117.4	1.0	75.0	107.0
315	1.3	116.1	1.5	73.2	110.6
414	0.5	124.0	2.0	75.3	112.3
513	1.0	321.0	2.5	80.7	102.6
612	0.4	315.6	3.0	83.0	98.1
706	0.7	212.1	3.5	84.4	114.1
801	1.8	221.4	4.0	84.7	158.7
895	2.3	245.2	4.5	83.3	200.3
990	2.5	248.1	5.0	80.5	220.0
1080	2.7	242.0	5.5	77.4	227.1
1170	2.6	241.1	6.0	74.8	230.5
1260	3.0	236.4	6.5	72.1	231.8
1350	3.6	230.4	7.0	69.1	231.5
1440	3.7	224.7	7.5	66.5	230.3
1530	4.2	226.7	8.0	63.8	229.7
1620	4.5	222.5	8.5	61.3	228.6
1710	4.3	219.2	9.0	59.3	227.4
1800	4.2	207.9	9.5	57.8	225.3
1890	4.0	188.1	10.0	56.9	221.9

1130 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	112.0	0.0		
108	1.5	126.9	0.5	67.0	127.0
216	0.3	122.9	1.0	76.0	126.4
315	0.7	75.1	1.5	77.5	112.1
414	0.6	101.5	2.0	78.0	109.9
513	0.9	334.6	2.5	82.1	94.2
612	0.4	14.9	3.0	83.1	85.7
706	0.7	214.6	3.5	84.9	100.5
801	1.6	252.3	4.0	87.8	146.5
895	1.9	238.5	4.5	86.0	209.0
990	1.8	220.0	5.0	83.3	214.1
1080	2.4	230.6	5.5	80.2	220.4
1170	2.8	226.2	6.0	77.0	222.2
1260	3.2	227.2	6.5	73.8	223.5
1350	3.7	226.5	7.0	70.5	224.2
1440	3.8	228.4	7.5	67.7	225.0
1530	4.1	225.6	8.0	65.0	225.1
1620	4.4	217.3	8.5	62.5	223.9
1710	4.0	196.0	9.0	60.9	220.5
1800	4.9	262.8	9.5	59.4	225.8
1890	5.5	185.0	10.0	57.7	220.6

1200 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.3	200.0	0.0		
108	0.5	50.4	0.5	82.0	50.4
216	0.5	37.4	1.0	81.8	43.7
315	0.2	336.4	1.5	83.9	34.9
414	0.1	69.8	2.0	84.9	38.4
513	0.9	57.8	2.5	83.1	46.4
612	0.9	355.7	3.0	82.3	31.2
706	0.9	44.5	3.5	81.1	34.6
801	0.8	136.3	4.0	82.3	46.5
895	0.2	267.8	4.5	83.4	44.2
990	1.1	233.6	5.0	85.9	39.8
1080	1.7	245.5	5.5	88.2	0.9
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1300 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.5	360.0	0.0		
108	2.1	5.5	0.5	60.0	5.5
216	2.3	337.2	1.0	59.2	350.5
315	3.0	341.5	1.5	55.3	346.8
414	2.2	346.3	2.0	55.6	346.7
513	2.2	347.2	2.5	55.8	346.8
612	2.5	356.3	3.0	55.3	348.5
706	3.1	12.8	3.5	54.2	352.8
801	1.5	16.9	4.0	55.5	354.7
895	0.9	341.9	4.5	57.2	354.1
990	0.6	334.7	5.0	59.0	353.5
1080	0.3	285.2	5.5	61.0	352.6
1170	1.8	260.1	6.0	62.9	347.4
1260	2.4	262.1	6.5	64.2	340.5
1350	2.5	251.6	7.0	65.5	333.4
1440	2.9	238.7	7.5	66.9	325.3
1530	3.0	229.7	8.0	68.2	317.0
1620	3.5	218.6	8.5	69.5	307.1
1710	4.3	197.5	9.0	71.4	294.9
1800	4.8	184.9	9.5	73.2	280.6
1890	4.6	173.8	10.0	74.5	255.9

SEVIERVILLE 7/17

1400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.9	60.0	0.0		
108	2.4	72.0	0.5	56.5	72.0
216	1.9	65.6	1.0	59.4	59.2
315	1.7	50.1	1.5	60.7	53.8
414	1.2	27.9	2.0	63.4	37.9
513	0.6	345.4	2.5	67.4	53.2
612	1.6	338.1	3.0	69.4	41.9
706	1.5	355.5	3.5	69.5	34.6
801	1.1	346.6	4.0	70.3	29.8
895	1.5	303.0	4.5	71.9	21.1
990	1.6	323.5	5.0	72.0	13.7
1080	1.3	298.6	5.5	72.8	7.0
1170	1.4	256.8	6.0	74.6	350.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1500 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.5	160.0	0.0		
108	2.8	21.8	0.5	52.0	21.8
215	2.7	23.0	1.0	52.6	22.4
315	1.4	38.9	1.5	56.7	25.8
414	1.9	16.7	2.0	57.4	23.8
513	1.6	40.6	2.5	58.7	26.4
612	1.1	284.0	3.0	63.4	20.3
705	1.4	293.1	3.5	66.2	12.3
801	2.6	299.0	4.0	66.9	359.9
895	2.2	312.3	4.5	66.5	352.7
990	2.6	320.6	5.0	65.2	347.5
1080	2.8	319.3	5.5	63.7	343.2
1170	3.7	314.4	6.0	61.6	338.4
1260	3.3	321.9	6.5	60.0	336.2
1350	2.3	328.0	7.0	59.5	335.5
1440	1.3	315.6	7.5	60.0	334.6
1530	1.3	314.6	8.0	60.4	333.7
1620	1.1	325.4	8.5	60.9	333.4
1710	1.0	292.9	9.0	61.6	332.2
1800	1.6	311.3	9.5	61.7	331.2
1890	1.0	252.7	10.0	62.7	329.5

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	360.0	0.0		
108	1.6	351.1	0.5	66.5	351.1
216	2.1	312.3	1.0	64.5	328.9
315	2.1	317.9	1.5	62.5	324.8
414	0.3	30.7	2.0	67.9	327.8
513	1.1	268.0	2.5	69.9	318.7
612	1.9	308.0	3.0	68.2	316.2
706	2.1	322.9	3.5	66.4	317.6
801	2.0	322.5	4.0	65.3	318.4
895	2.6	283.0	4.5	64.1	312.4
990	2.5	279.6	5.0	63.2	307.7
1080	1.4	301.4	5.5	63.3	307.2
1170	1.0	314.8	6.0	63.9	307.6
1260	0.5	241.3	6.5	65.3	306.2
1350	1.0	213.0	7.0	66.8	303.3
1440	0.9	160.9	7.5	68.8	301.7
1530	1.3	230.7	8.0	69.5	298.1
1620	1.9	227.4	8.5	69.9	293.0
1710	1.9	209.7	9.0	70.6	287.6
1800	1.9	194.9	9.5	71.5	282.1
1890	3.1	192.8	10.0	72.1	273.4

SEVIERVILLE 7/16

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	3.0	280.0	0.0		
108	1.4	291.2	0.5	69.1	291.2
216	1.5	298.7	1.0	68.4	295.1
315	1.9	250.4	1.5	67.1	277.3
414	2.1	328.2	2.0	66.6	293.0
513	2.0	297.3	2.5	65.0	294.1
612	4.6	257.2	3.0	59.2	230.4
706	4.8	274.0	3.5	54.3	278.5
801	4.5	267.1	4.0	51.4	276.2
895	4.0	257.6	4.5	49.9	273.3
990	4.2	255.8	5.0	48.5	270.8
1080	4.5	248.9	5.5	47.1	267.9
1170	5.1	251.0	6.0	45.5	255.7
1260	5.5	250.4	6.5	43.9	253.8
1350	5.8	250.0	7.0	42.4	252.2
1440	5.8	255.5	7.5	41.1	261.5
1530	5.8	258.3	8.0	40.0	251.2
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	3.1	240.0	0.0		
108	5.1	239.0	0.5	35.0	239.0
216	5.3	230.4	1.0	34.6	234.6
315	3.0	241.4	1.5	38.1	236.1
414	3.1	252.2	2.0	40.1	239.1
513	2.9	243.0	2.5	41.5	239.7
612	4.8	244.2	3.0	40.2	240.6
706	4.8	237.0	3.5	39.1	240.0
801	3.3	248.8	4.0	39.6	240.9
895	3.2	230.9	4.5	40.1	240.0
990	4.9	298.2	5.0	40.8	246.2
1080	3.8	264.2	5.5	40.7	247.8
1170	3.0	264.6	6.0	41.1	248.9
1260	3.5	260.0	6.5	41.1	249.7
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.4	90.0	0.0		
108	3.1	215.7	0.5	49.0	215.7
216	5.6	166.9	1.0	42.0	184.0
315	5.6	232.9	1.5	40.3	203.8
414	3.2	239.4	2.0	42.5	210.8
513	4.9	248.4	2.5	41.7	219.8
612	6.0	264.7	3.0	40.6	230.0
706	5.9	264.2	3.5	39.2	236.6
801	5.8	271.7	4.0	38.3	242.3
895	5.8	275.6	4.5	37.6	247.0
990	5.4	284.1	5.0	37.4	251.3
1080	5.3	281.7	5.5	37.0	254.5
1170	5.4	273.5	6.0	36.4	256.4
1260	5.3	278.9	6.5	36.0	258.4
1350	5.5	282.0	7.0	35.6	260.4
1440	5.3	283.8	7.5	35.3	262.2
1530	6.3	283.8	8.0	34.7	264.0
1620	6.0	277.4	8.5	34.2	265.0
1710	5.6	283.3	9.0	33.9	266.2
1800	6.2	285.7	9.5	33.5	267.5
1890	6.4	287.6	10.0	33.1	268.8

1900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.4	140.0	0.0		
108	3.3	182.0	0.5	47.3	182.0
216	4.2	212.7	1.0	44.8	199.2
315	4.5	241.9	1.5	43.6	215.4
414	5.0	251.2	2.0	42.0	226.3
513	5.4	250.3	2.5	40.0	232.5
612	5.7	253.9	3.0	38.4	237.1
706	5.9	259.5	3.5	37.0	241.2
801	6.0	262.1	4.0	35.9	244.5
895	5.9	265.0	4.5	35.1	247.3
990	5.9	267.4	5.0	34.5	249.7
1080	5.3	276.6	5.5	34.3	252.3
1170	5.6	283.8	6.0	34.1	255.2
1260	7.3	276.1	6.5	33.1	257.5
1350	5.0	294.1	7.0	33.3	259.0
1440	6.8	289.8	7.5	32.8	252.6
1530	7.1	292.5	8.0	32.3	255.1
1620	7.0	287.5	8.5	31.6	257.0
1710	6.7	294.7	9.0	31.3	258.9
1800	6.8	296.2	9.5	31.0	270.7
*****	****	*****	****	*****	*****

2000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.5	140.0	0.0		
*****	****	*****	****	*****	*****
216	4.6	214.2	1.0	38.3	214.2
315	6.1	229.5	1.5	34.9	220.3
414	5.9	237.8	2.0	33.6	225.2
513	6.0	244.1	2.5	32.8	229.4
612	5.6	248.5	3.0	32.6	232.7
706	6.2	250.1	3.5	31.9	235.5
801	5.3	253.6	4.0	31.9	237.7
895	4.9	262.6	4.5	32.2	240.2
990	5.5	265.0	5.0	32.2	242.7
1080	5.3	269.6	5.5	32.2	245.1
1170	5.3	278.2	6.0	32.3	247.8
1260	6.0	283.2	6.5	32.2	250.8
1350	6.7	285.3	7.0	31.9	253.8
1440	6.9	288.8	7.5	31.6	256.7
1530	6.6	296.2	8.0	31.5	259.6
1620	6.4	295.2	8.5	31.4	262.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

2030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	180.0	0.0		
108	2.6	196.4	0.5	54.1	196.4
216	6.2	216.5	1.0	39.5	210.6
315	6.3	228.7	1.5	35.2	218.2
414	7.2	235.1	2.0	32.2	223.7
513	7.1	238.1	2.5	30.7	227.2
612	7.7	238.6	3.0	29.3	229.6
706	5.1	243.6	3.5	29.7	231.3
801	5.2	260.1	4.0	30.2	234.4
895	5.3	254.1	4.5	30.4	235.4
990	6.0	259.5	5.0	30.3	238.8
1080	5.3	267.9	5.5	30.5	241.2
1170	4.8	274.4	6.0	30.9	243.5
1260	5.6	287.0	6.5	31.2	246.7
1350	5.9	290.7	7.0	31.4	249.9
1440	5.9	295.1	7.5	31.6	253.0
1530	6.7	301.9	8.0	31.7	256.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

SEVIERVILLE 7/18

2100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.6	102.0	0.0		
108	2.6	184.2	0.5	54.4	134.2
216	5.9	212.3	1.0	41.2	203.8
315	5.9	227.9	1.5	37.3	213.8
414	6.5	229.8	2.0	34.5	218.9
513	7.1	235.5	2.5	32.4	223.2
612	5.6	242.6	3.0	32.3	226.5
706	5.5	248.9	3.5	32.2	229.7
801	5.3	254.5	4.0	32.3	232.7
895	5.4	255.3	4.5	32.3	235.2
990	4.7	262.7	5.0	32.7	237.6
1080	4.4	274.7	5.5	33.2	240.4
1170	4.7	284.4	6.0	33.7	243.6
1260	4.6	288.5	6.5	34.2	245.6
1350	5.1	296.0	7.0	34.6	250.0
1440	5.1	296.9	7.5	34.9	253.1
1530	5.2	302.2	8.0	35.2	256.2
1620	5.4	308.3	8.5	35.5	259.4
1710	4.9	313.0	9.0	35.9	262.3
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

2130 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	140.0	0.0		
108	1.8	188.3	0.5	63.2	188.3
216	6.1	212.9	1.0	42.9	207.3
315	5.9	229.1	1.5	38.1	216.7
414	7.0	230.2	2.0	34.3	221.3
513	8.1	238.1	2.5	31.3	226.1
612	6.7	247.0	3.0	30.6	230.1
705	6.6	253.0	3.5	30.1	233.7
801	5.6	256.3	4.0	30.2	236.4
895	5.7	255.7	4.5	30.2	238.5
990	5.0	270.2	5.0	30.7	241.2
1080	5.3	273.3	5.5	30.9	243.9
1170	5.8	280.9	6.0	31.0	247.0
1260	5.1	283.2	6.5	31.3	249.5
1350	5.0	286.9	7.0	31.6	251.9
1440	5.5	297.1	7.5	31.9	254.8
1530	4.8	297.6	8.0	32.3	257.1
1620	6.1	291.6	8.5	32.2	259.4
1710	4.8	310.9	9.0	32.7	261.8
1800	5.1	308.2	9.5	33.0	264.1
1890	5.9	309.5	10.0	33.1	266.6

2200 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	72.0	0.0		
108	2.7	199.0	0.5	53.6	199.0
216	4.7	222.1	1.0	45.0	213.8
315	7.6	223.2	1.5	35.5	218.6
414	8.0	231.4	2.0	31.4	223.1
513	8.9	239.1	2.5	28.7	227.6
612	8.7	252.2	3.0	27.4	232.9
706	8.1	253.6	3.5	26.6	236.4
801	7.2	257.8	4.0	26.4	239.2
895	6.9	257.8	4.5	26.3	241.3
990	6.6	258.6	5.0	26.3	243.0
1080	5.6	268.1	5.5	26.6	244.9
1170	6.3	272.9	6.0	26.7	247.1
1260	5.6	276.5	6.5	27.0	249.0
1350	5.6	281.9	7.0	27.3	251.0
1440	5.2	293.7	7.5	27.8	253.2
1530	4.8	301.6	8.0	28.4	255.4
1620	4.6	303.6	8.5	29.0	257.4
1710	4.3	312.3	9.0	29.7	259.4
1800	4.3	311.1	9.5	30.3	261.3
*****	****	*****	****	*****	*****

SEVIERVILLE 7/19

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.1	180.0	0.0		
108	1.3	198.9	0.5	70.7	198.9
216	3.5	172.8	1.0	57.2	179.7
315	4.5	168.7	1.5	49.1	174.3
414	2.9	144.7	2.0	49.7	157.3
513	2.1	146.7	2.5	51.3	154.2
612	2.1	153.6	3.0	52.3	152.8
706	2.0	148.6	3.5	53.0	151.2
801	1.8	143.6	4.0	53.9	159.6
895	2.6	163.7	4.5	53.5	150.1
990	1.5	196.0	5.0	54.8	152.2
1080	1.0	290.3	5.5	57.8	154.2
1170	2.6	301.9	6.0	61.9	159.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.2	180.0	0.0		
108	4.9	190.0	0.5	36.5	190.0
216	7.4	177.6	1.0	30.6	182.5
315	6.2	180.7	1.5	29.8	181.9
414	5.8	185.7	2.0	29.8	182.8
513	5.9	191.4	2.5	29.7	184.5
612	5.2	213.0	3.0	30.5	188.6
706	5.5	250.4	3.5	32.1	196.0
801	6.0	265.6	4.0	33.7	204.1
895	6.6	283.9	4.5	35.6	213.0
990	3.4	293.6	5.0	37.9	217.6
1080	5.7	313.8	5.5	40.5	225.3
1170	9.6	317.5	6.0	42.3	238.2
1260	9.4	323.8	6.5	43.3	250.3
1350	9.9	328.4	7.0	43.4	262.0
1440	9.9	328.2	7.5	42.5	272.0
1530	11.4	337.5	8.0	41.3	282.3
1620	11.5	343.6	8.5	40.0	291.3
1710	12.2	348.5	9.0	38.5	299.5
1800	11.0	350.4	9.5	37.2	305.7
1890	11.7	343.0	10.0	35.4	310.3

1800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.7	200.0	0.0		
108	3.0	202.0	0.5	50.5	202.0
216	5.4	202.6	1.0	40.6	202.4
315	6.8	211.1	1.5	34.7	206.3
414	8.7	217.6	2.0	30.2	210.4
513	7.7	204.7	2.5	28.6	209.0
612	7.2	211.7	3.0	27.9	209.5
706	8.5	236.7	3.5	27.0	214.3
801	6.0	286.8	4.0	28.9	221.1
895	7.1	284.6	4.5	29.9	228.1
990	7.0	293.8	5.0	30.9	234.7
1080	8.0	305.1	5.5	31.7	242.1
1170	9.9	306.7	6.0	31.7	250.2
1260	10.3	312.3	6.5	31.5	257.8
1350	9.1	322.7	7.0	31.7	264.3
1440	8.2	317.4	7.5	31.6	269.1
1530	7.0	327.5	8.0	31.9	273.3
1620	5.9	347.0	8.5	32.8	277.2
1710	7.3	359.0	9.0	33.8	282.1
1800	8.9	3.1	9.5	34.6	287.9
1890	9.0	358.8	10.0	34.9	293.3

1900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.3	200.0	0.0		
108	3.8	220.3	0.5	43.8	220.3
216	7.0	235.2	1.0	33.9	230.0
315	9.2	235.4	1.5	27.8	232.5
414	9.0	247.0	2.0	25.7	237.0
513	7.9	251.5	2.5	25.2	240.1
612	8.3	265.4	3.0	24.9	244.7
706	10.1	271.4	3.5	23.9	249.6
801	10.5	273.0	4.0	23.0	253.4
895	11.0	276.6	4.5	22.2	256.8
990	9.3	281.3	5.0	22.0	259.5
1080	8.4	288.3	5.5	22.0	252.1
1170	9.0	291.5	6.0	21.9	254.7
1260	7.8	292.5	6.5	22.0	256.7
1350	6.1	307.5	7.0	22.5	258.8
1440	5.2	327.4	7.5	23.3	271.1
1530	7.5	347.3	8.0	24.2	274.8
1620	8.5	343.4	8.5	24.8	278.7
1710	10.2	342.6	9.0	25.1	283.0
1800	11.0	339.4	9.5	25.1	287.1
1890	12.0	335.7	10.0	24.8	290.9

1930 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.5	360.0	0.0		
108	1.2	274.0	0.5	71.0	274.0
216	1.9	283.1	1.0	66.6	279.5
315	3.6	257.6	1.5	57.7	267.7
414	7.0	243.8	2.0	45.9	255.4
513	7.2	255.7	2.5	39.7	255.5
612	8.4	259.6	3.0	35.1	256.7
706	8.5	268.6	3.5	32.2	259.4
801	9.8	278.3	4.0	29.7	263.3
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

2000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.7	200.0	0.0		
108	2.1	253.3	0.5	59.8	253.3
216	3.9	254.8	1.0	50.2	254.3
315	4.9	238.0	1.5	44.3	247.0
414	7.3	244.5	2.0	37.4	246.0
513	9.0	257.4	2.5	32.4	249.8
612	10.0	261.6	3.0	29.0	253.0
706	10.4	274.1	3.5	26.8	257.6
801	9.5	280.4	4.0	25.7	261.4
895	9.4	287.5	4.5	25.0	265.1
990	8.7	288.1	5.0	24.6	267.8
1080	7.1	291.7	5.5	24.6	269.9
1170	5.8	301.6	6.0	25.0	272.0
1260	6.1	316.9	6.5	25.5	274.8
1350	6.9	319.6	7.0	25.8	277.8
1440	9.6	317.6	7.5	25.5	281.3
1530	10.5	321.7	8.0	25.1	284.9
1620	10.9	324.8	8.5	24.7	288.3
1710	11.3	328.4	9.0	24.3	291.6
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

SEVIERVILLE 7/19

2030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.5	200.0	0.0		
108	0.5	282.0	0.5	82.0	282.0
216	2.0	276.4	1.0	70.5	277.5
315	3.9	233.7	1.5	60.2	250.8
414	7.8	229.4	2.0	45.5	238.7
513	8.1	233.4	2.5	38.3	236.7
612	7.2	248.0	3.0	35.4	239.5
706	9.0	256.8	3.5	32.2	243.6
801	9.3	270.7	4.0	30.2	248.9
895	10.0	286.8	4.5	28.9	255.4
990	10.0	289.8	5.0	27.8	260.6
1080	9.1	289.8	5.5	27.0	264.2
1170	7.7	297.1	6.0	26.8	267.3
1260	6.8	298.0	6.5	26.8	269.7
1350	5.5	307.4	7.0	27.2	271.9
1440	5.5	318.4	7.5	27.7	274.4
1530	7.2	322.9	8.0	27.9	277.6
1620	8.7	325.1	8.5	27.8	281.2
1710	10.4	322.8	9.0	27.3	284.8
1800	11.0	327.4	9.5	26.8	288.4
1890	11.4	330.1	10.0	26.3	291.8

2100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.2	150.0	0.0		
108	1.1	342.2	0.5	72.3	342.2
216	2.1	300.1	1.0	67.0	314.7
315	3.0	240.3	1.5	65.4	278.1
414	6.1	242.1	2.0	53.0	257.9
513	5.5	247.8	2.5	47.2	254.4
612	7.8	257.4	3.0	40.8	255.4
706	8.9	262.0	3.5	35.9	257.2
801	8.8	270.0	4.0	33.0	259.9
895	8.9	286.1	4.5	31.2	264.5
990	9.8	295.6	5.0	29.7	269.5
1080	9.6	306.3	5.5	28.7	274.5
1170	9.0	305.3	6.0	27.9	278.1
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

2200 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.2	10.0	0.0		
108	2.7	6.0	0.5	53.0	6.0
216	3.1	345.9	1.0	51.3	355.2
315	2.7	300.5	1.5	53.8	338.3
414	2.1	272.8	2.0	57.6	325.8
513	3.1	252.4	2.5	59.4	308.5
612	5.0	258.9	3.0	55.7	292.5
706	7.1	269.5	3.5	48.8	284.8
801	7.1	283.2	4.0	43.9	284.4
895	7.8	294.0	4.5	40.1	286.5
990	8.1	300.6	5.0	37.3	289.1
1080	7.9	307.5	5.5	35.3	291.9
1170	8.3	317.2	6.0	33.7	295.4
1260	8.8	322.7	6.5	32.3	298.9
1350	8.4	321.4	7.0	31.2	301.4
1440	9.1	322.9	7.5	30.1	303.7
1530	7.3	321.2	8.0	29.6	305.1
1620	6.8	325.2	8.5	29.3	306.5
1710	7.4	325.0	9.0	28.9	307.8
1800	6.5	333.8	9.5	28.8	309.3
*****	****	*****	****	*****	*****

SEVIERVILLE 8/6/74

0411 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	90.0	0.0		
108	2.4	59.3	0.5	56.1	59.3
216	3.4	61.3	1.0	51.3	60.5
315	3.0	82.9	1.5	50.5	68.2
414	3.0	68.6	2.0	49.9	68.3
513	3.7	95.5	2.5	48.7	74.8
612	4.1	101.8	3.0	47.4	80.5
706	2.3	111.7	3.5	48.6	83.8
801	1.6	216.6	4.0	53.6	87.3
895	3.9	226.3	4.5	60.4	95.9
990	4.5	220.9	5.0	65.8	110.3
1080	5.8	207.7	5.5	67.1	132.5
1170	7.1	207.9	6.0	64.8	154.6
1260	7.1	204.1	6.5	60.7	167.8
1350	8.2	202.5	7.0	55.7	176.6
1440	7.7	202.7	7.5	51.8	181.7
1530	8.3	207.0	8.0	48.3	186.2
1620	8.5	208.6	8.5	45.3	189.7
1710	8.6	206.4	9.0	42.7	192.0
1800	7.7	212.2	9.5	41.0	194.2
1890	7.9	220.3	10.0	39.6	196.8

0504 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.2	90.0	0.0		
108	1.3	84.3	0.5	69.9	84.3
216	2.9	52.3	1.0	60.5	62.2
315	1.9	70.4	1.5	60.5	64.8
414	2.5	89.5	2.0	59.0	72.1
513	2.3	119.5	2.5	59.8	81.7
612	3.4	109.2	3.0	57.4	88.6
706	1.3	138.9	3.5	59.4	92.8
801	0.6	222.2	4.0	63.1	94.8
895	1.6	244.0	4.5	67.8	98.7
990	2.5	230.5	5.0	72.1	108.9
1080	4.1	214.6	5.5	74.0	131.2
1170	4.8	208.7	6.0	72.5	153.7
1260	5.5	211.2	6.5	69.2	170.7
1350	5.5	213.2	7.0	65.7	181.1
1440	6.0	213.3	7.5	61.9	188.3
1530	5.1	211.4	8.0	58.4	192.7
1620	5.8	219.7	8.5	55.2	197.4
1710	5.4	221.9	9.0	52.7	200.9
1800	5.6	226.5	9.5	50.5	204.2
*****	****	*****	****	*****	*****

0606 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	180.0	0.0		
108	0.6	180.9	0.5	81.1	180.9
216	2.5	47.2	1.0	73.4	58.2
315	3.2	32.3	1.5	63.6	42.7
414	1.2	24.9	2.0	65.1	39.3
513	1.7	86.9	2.5	65.9	48.7
612	2.2	65.2	3.0	64.5	52.3
706	0.2	7.4	3.5	67.3	51.6
801	1.3	314.3	4.0	69.9	44.0
895	1.8	263.3	4.5	74.2	36.2
990	3.0	236.7	5.0	80.1	25.8
1080	3.4	246.2	5.5	83.9	350.5
1170	2.4	259.4	6.0	83.4	317.9
1260	2.1	250.3	6.5	82.3	297.6
1350	1.7	235.9	7.0	81.6	284.7
1440	1.6	241.2	7.5	80.7	276.8
*****	****	*****	****	*****	*****

0633 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.5	155.0	0.0		
108	0.8	155.3	0.5	77.3	155.4
216	3.0	60.1	1.0	67.4	75.8
315	3.3	48.2	1.5	59.9	61.4
414	1.2	35.3	2.0	62.4	57.1
513	1.5	116.1	2.5	64.7	66.2
612	1.3	62.5	3.0	65.4	65.7
706	0.8	306.3	3.5	69.1	61.5
801	1.3	265.8	4.0	73.7	57.5
895	2.4	252.0	4.5	79.6	51.1
990	2.2	261.3	5.0	83.5	34.2
1080	1.9	259.5	5.5	85.6	4.9
1170	1.2	237.7	6.0	86.7	339.2
1260	0.8	230.4	6.5	87.1	319.8
1350	1.0	216.1	7.0	87.3	292.9
1440	2.6	210.2	7.5	85.8	247.0
1530	2.8	202.9	8.0	83.4	227.5
1620	3.4	221.0	8.5	80.2	225.1
1710	3.6	215.7	9.0	77.3	222.5
1800	4.1	227.8	9.5	74.2	223.8
1890	4.2	224.8	10.0	71.4	224.0

0700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	130.0	0.0		
108	0.5	123.1	0.5	81.8	123.2
216	3.2	56.4	1.0	64.5	64.4
315	1.9	59.0	1.5	63.1	62.5
414	1.7	137.7	2.0	66.5	78.6
513	0.8	85.6	2.5	68.4	79.4
612	1.2	246.5	3.0	74.6	82.1
706	1.6	238.8	3.5	79.8	90.4
801	1.4	250.6	4.0	83.6	99.2
895	1.3	244.4	4.5	86.0	119.2
990	2.2	251.0	5.0	87.0	187.1
1080	2.0	231.5	5.5	84.5	211.0
1170	1.7	229.3	6.0	82.5	217.0
1260	1.9	230.2	6.5	80.5	220.6
1350	2.3	245.4	7.0	78.5	226.6
1440	2.5	255.8	7.5	76.6	232.8
*****	****	*****	****	*****	*****

0732 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.5	90.0	0.0		
108	1.6	72.9	0.5	65.7	72.9
216	3.4	54.9	1.0	55.6	60.8
315	2.4	78.4	1.5	55.5	66.5
414	2.3	99.0	2.0	56.2	74.2
513	1.0	114.1	2.5	59.6	77.9
612	0.6	296.3	3.0	64.9	75.6
706	1.7	255.6	3.5	71.6	75.6
801	2.0	255.6	4.0	77.7	75.6
895	1.6	246.5	4.5	81.9	79.0
990	1.9	250.1	5.0	85.9	86.2
1080	2.0	255.5	5.5	89.1	125.2
1170	1.5	261.9	6.0	88.3	242.1
1260	2.3	251.9	6.5	85.3	248.6
1350	2.4	267.0	7.0	82.7	256.1
1440	3.2	262.5	7.5	79.4	258.4
1530	3.4	256.2	8.0	76.4	257.8
1620	3.4	248.5	8.5	73.8	255.8
1710	3.6	243.8	9.0	71.4	253.6
1800	3.7	241.7	9.5	69.2	251.7
1890	3.9	233.5	10.0	67.2	249.1

SEVIERVILLE 8/6/74

0803 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.5	30.0	0.0		
108	1.0	33.1	0.5	75.0	33.1
216	1.4	115.2	1.0	75.9	83.4
315	1.6	124.2	1.5	73.1	102.5
414	2.6	113.9	2.0	67.2	107.7
513	1.7	98.7	2.5	66.4	105.7
612	1.0	151.3	3.0	68.1	110.7
706	1.8	280.9	3.5	74.7	113.4
801	1.9	259.3	4.0	79.5	126.1
895	2.5	256.6	4.5	82.7	156.0
990	2.3	258.9	5.0	83.1	190.0
1080	1.5	281.3	5.5	83.3	210.6
1170	1.3	300.0	6.0	83.5	227.9
1260	1.1	283.5	6.5	83.0	238.2
1350	0.9	249.9	7.0	82.3	240.0
1440	1.4	261.3	7.5	81.2	244.0
1530	1.9	251.7	8.0	79.6	245.5
1620	2.8	253.8	8.5	77.3	247.5
1710	2.9	244.4	9.0	75.2	246.9
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0830 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.5	40.0	0.0		
108	0.4	37.8	0.5	83.1	37.8
216	1.3	97.7	1.0	77.9	83.6
315	1.2	81.7	1.5	75.5	82.8
414	2.8	94.0	2.0	68.3	88.5
513	1.5	98.0	2.5	67.7	90.6
612	0.3	136.3	3.0	70.5	92.3
706	1.4	273.5	3.5	76.0	92.0
801	1.8	262.3	4.0	81.3	96.3
895	2.5	255.8	4.5	86.2	121.8
990	1.7	260.3	5.0	87.7	179.5
1080	1.5	275.5	5.5	87.0	231.1
1170	1.3	270.8	6.0	85.6	247.1
1260	0.9	250.6	6.5	84.7	247.9
1350	1.2	248.3	7.0	83.5	248.0
1440	2.3	246.7	7.5	81.2	247.6
1530	2.5	245.6	8.0	79.0	247.1
1620	2.9	238.6	8.5	76.7	245.2
1710	2.7	234.1	9.0	74.9	243.3
1800	3.5	234.6	9.5	72.6	241.7
1890	3.4	231.9	10.0	70.6	240.2

0902 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	64.0	0.0		
108	1.5	63.8	0.5	67.9	63.8
216	2.2	59.6	1.0	62.8	61.3
315	2.3	98.2	1.5	61.4	75.4
414	2.7	116.7	2.0	60.0	88.4
513	1.9	138.3	2.5	61.5	97.3
612	0.2	125.4	3.0	65.1	97.9
706	1.1	292.2	3.5	70.4	96.0
801	1.3	283.8	4.0	75.2	94.5
895	1.5	268.7	4.5	79.5	96.1
990	0.9	300.0	5.0	81.9	91.5
1080	0.1	277.6	5.5	82.8	91.3
1170	0.4	170.0	6.0	83.2	96.5
1260	1.3	177.9	6.5	83.2	111.3
1350	1.2	177.0	7.0	82.9	122.5
1440	1.5	208.5	7.5	83.0	137.0
1530	1.6	211.0	8.0	82.7	150.9
1620	2.1	224.3	8.5	82.2	166.5
1710	3.1	229.5	9.0	80.8	183.9
1800	2.6	218.4	9.5	79.2	191.2
1890	3.4	219.1	10.0	77.0	197.5

0933 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.5	118.0	0.0		
108	2.7	117.7	0.5	52.8	117.8
216	4.1	105.3	1.0	46.6	110.3
315	4.0	108.9	1.5	44.2	109.8
414	3.1	120.4	2.0	44.8	112.2
513	2.5	158.5	2.5	47.4	118.8
612	1.9	166.8	3.0	50.6	122.6
706	0.1	225.5	3.5	54.6	122.9
801	0.9	251.3	4.0	58.8	125.5
895	0.7	241.4	4.5	62.0	127.8
990	1.2	239.6	5.0	64.9	132.0
1080	0.5	234.2	5.5	66.9	133.9
1170	1.0	125.4	6.0	67.3	133.4
1260	1.7	116.9	6.5	66.9	131.9
1350	2.1	147.3	7.0	66.1	133.5
1440	3.1	157.1	7.5	64.6	136.6
1530	3.1	149.2	8.0	63.1	138.0
1620	2.1	147.1	8.5	62.6	138.7
1710	1.7	174.7	9.0	62.7	140.7
1800	2.1	195.2	9.5	62.8	143.6
1890	3.0	210.8	10.0	63.0	148.5

1000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.8	141.0	0.0		
108	0.6	140.8	0.5	79.9	140.9
216	1.8	112.6	1.0	71.4	119.9
315	3.5	122.7	1.5	60.4	121.6
414	2.9	133.2	2.0	57.4	125.4
513	1.8	122.4	2.5	58.2	124.9
612	1.1	96.4	3.0	60.5	122.4
706	0.6	16.2	3.5	64.2	119.4
801	0.1	60.1	4.0	66.8	118.9
895	0.5	56.5	4.5	68.6	116.6
990	0.1	212.1	5.0	70.5	117.2
1080	1.2	97.5	5.5	70.4	115.4
1170	1.5	90.0	6.0	70.0	112.8
1260	1.7	140.0	6.5	69.5	115.6
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

SEVIERVILLE 8/7/74

0405 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.6	134.0	0.0		
108	2.3	133.5	0.5	57.4	133.6
216	3.9	128.3	1.0	49.1	130.3
315	3.4	118.0	1.5	47.7	126.0
414	1.1	161.3	2.0	52.8	129.5
513	1.2	244.5	2.5	59.6	135.6
612	1.0	173.3	3.0	62.1	138.7
706	1.1	118.9	3.5	63.3	136.9
801	2.6	114.7	4.0	61.9	133.0
895	2.9	115.9	4.5	60.2	130.1
990	2.4	106.5	5.0	59.7	127.3
1080	1.5	72.0	5.5	60.7	123.7
1170	0.7	342.9	6.0	63.2	122.5
1260	0.8	309.3	6.5	65.8	122.2
1350	1.1	302.1	7.0	68.4	122.2
1440	1.2	307.7	7.5	70.9	121.8
1530	0.8	311.1	8.0	72.8	121.3
1620	0.9	302.9	8.5	74.6	121.2
1710	1.1	266.6	9.0	76.2	123.7
1800	1.1	235.3	9.5	77.2	128.0
1890	0.7	229.1	10.0	77.9	131.1

0500 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	246.0	0.0		
108	1.3	245.5	0.5	70.1	245.5
215	3.1	127.3	1.0	68.9	151.8
315	4.2	116.0	1.5	57.8	130.3
414	3.6	120.3	2.0	53.6	126.8
513	3.6	118.2	2.5	51.3	124.6
612	3.0	162.7	3.0	51.6	131.2
705	2.2	136.2	3.5	52.1	131.8
801	2.1	120.1	4.0	52.6	130.6
895	2.9	122.6	4.5	52.0	129.6
990	2.8	117.3	5.0	51.7	128.3
1080	1.7	112.0	5.5	52.4	127.3
1170	1.4	70.9	6.0	53.8	124.9
1260	0.9	349.3	6.5	56.4	123.6
1350	0.8	324.0	7.0	58.9	123.0
1440	1.6	317.8	7.5	61.9	122.1
1530	1.5	327.9	8.0	64.5	120.6
1620	0.7	322.3	8.5	66.3	120.0
1710	0.7	313.3	9.0	68.0	119.6
1800	1.0	258.8	9.5	69.6	121.2
1890	0.9	243.8	10.0	70.9	123.3

0600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.6	218.0	0.0		
108	1.4	218.3	0.5	68.1	218.3
216	1.9	175.6	1.0	66.3	193.7
315	3.6	124.5	1.5	62.2	156.8
414	2.7	131.0	2.0	59.7	148.4
513	2.7	143.6	2.5	57.8	147.2
612	3.4	130.2	3.0	55.5	143.2
706	2.2	148.4	3.5	55.5	143.9
801	2.0	125.8	4.0	55.8	141.9
895	2.6	118.5	4.5	55.4	139.0
990	3.6	137.6	5.0	53.8	138.8
1080	2.9	143.4	5.5	53.1	139.3
1170	1.1	139.2	6.0	54.2	139.3
1260	0.5	273.4	6.5	56.5	140.0
1350	0.3	319.9	7.0	58.6	140.0
1440	0.1	75.0	7.5	60.2	139.9
1530	0.3	95.9	8.0	61.5	139.5
1620	0.2	167.7	8.5	62.7	139.7
1710	0.6	189.3	9.0	63.6	140.7
1800	1.2	120.1	9.5	63.9	139.9
1890	1.4	107.7	10.0	64.1	138.5

0630 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	66.0	0.0		
108	0.8	66.1	0.5	77.9	56.1
216	1.2	113.5	1.0	76.2	94.8
315	3.0	124.0	1.5	66.2	113.3
414	2.2	147.4	2.0	64.4	124.3
513	1.9	138.1	2.5	63.6	127.4
612	2.5	144.6	3.0	61.9	131.3
706	2.5	113.3	3.5	60.0	128.0
801	2.5	120.4	4.0	59.4	126.8
895	3.0	141.2	4.5	57.9	129.1
990	2.1	138.1	5.0	57.8	130.0
1080	1.2	119.0	5.5	58.6	129.4
1170	0.8	105.6	6.0	59.8	128.6
1260	0.4	81.1	6.5	61.3	127.8
1350	0.7	76.5	7.0	62.5	126.5
1440	0.9	99.1	7.5	63.2	125.5
1530	0.8	105.9	8.0	63.9	124.9
1620	0.8	147.0	8.5	64.5	125.6
1710	1.5	110.6	9.0	64.5	124.8
1800	1.3	111.8	9.5	64.6	124.2
1890	1.5	144.3	10.0	64.6	125.2

0700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.1	168.0	0.0		
108	1.3	167.9	0.5	70.3	168.0
215	1.8	153.3	1.0	67.0	159.5
315	3.3	138.4	1.5	59.1	148.5
414	2.7	153.7	2.0	56.9	150.1
513	2.9	158.6	2.5	55.2	152.2
612	2.4	155.7	3.0	55.0	152.8
705	2.1	127.6	3.5	55.4	149.6
801	2.3	138.9	4.0	55.3	148.3
895	2.0	131.9	4.5	55.6	146.7
990	1.8	159.2	5.0	56.1	147.7
1080	0.9	155.7	5.5	57.4	148.0
1170	0.6	163.4	6.0	58.8	148.4
1260	0.8	129.0	6.5	59.9	147.8
1350	1.0	137.8	7.0	60.6	147.4
1440	1.0	152.4	7.5	61.2	147.6
1530	1.1	178.6	8.0	61.8	148.8
1620	1.4	142.5	8.5	62.0	148.5
1710	1.1	151.2	9.0	62.4	148.6
1800	2.2	162.0	9.5	62.0	149.5
1890	2.5	163.2	10.0	61.4	150.5

0730 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.6	75.0	0.0		
108	1.3	74.7	0.5	70.6	74.7
216	3.1	100.9	1.0	59.4	93.4
315	3.1	137.1	1.5	56.8	111.8
414	3.0	144.8	2.0	55.5	121.6
513	2.9	158.4	2.5	55.0	130.1
612	3.4	156.6	3.0	53.5	135.9
706	3.6	156.2	3.5	51.8	139.8
801	3.3	130.4	4.0	50.8	138.4
895	3.5	117.0	4.5	50.0	135.5
990	3.4	113.1	5.0	49.5	132.9
1080	3.0	116.1	5.5	49.2	131.3
1170	2.6	135.1	6.0	49.2	131.6
1260	2.3	137.7	6.5	49.4	132.0
1350	2.2	137.2	7.0	49.7	132.3
1440	2.1	136.0	7.5	50.0	132.5
1530	2.7	142.0	8.0	49.9	133.1
1620	3.1	149.4	8.5	49.6	134.2
1710	2.8	96.5	9.0	49.8	132.2
1800	4.7	206.5	9.5	50.4	137.4
1890	2.5	177.7	10.0	50.7	139.2

SEVIERVILLE 8/7/74

0800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.5	88.0	0.0		
108	1.7	88.2	0.5	65.3	88.2
216	2.8	87.7	1.0	58.3	87.9
315	3.3	107.1	1.5	53.9	96.1
414	1.9	146.0	2.0	56.8	105.6
513	2.2	153.8	2.5	58.2	114.4
612	2.5	152.2	3.0	58.2	121.3
706	1.6	139.5	3.5	59.0	123.3
801	2.5	92.5	4.0	58.5	118.8
895	2.6	95.8	4.5	57.8	115.7
990	2.6	93.4	5.0	57.2	113.0
1080	2.4	104.1	5.5	56.7	112.1
1170	2.1	104.6	6.0	56.6	111.5
1260	1.8	102.2	6.5	56.8	110.9
1350	2.4	120.7	7.0	56.4	111.7
1440	2.2	127.9	7.5	56.3	112.8
1530	1.4	138.0	8.0	56.9	113.8
1620	1.1	138.9	8.5	57.6	114.6
1710	1.4	132.5	9.0	58.0	115.3
1800	1.6	150.3	9.5	58.4	116.7
1890	2.4	157.2	10.0	58.4	119.0

0830 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.5	312.0	0.0		
108	0.2	312.4	0.5	87.1	312.4
216	2.1	81.4	1.0	74.7	77.3
315	3.2	106.7	1.5	64.5	95.6
414	2.6	145.5	2.0	63.2	112.2
513	2.1	189.5	2.5	65.7	127.8
612	2.5	173.9	3.0	64.7	138.7
705	2.6	174.1	3.5	63.2	146.1
801	1.4	143.1	4.0	63.6	145.8
895	1.8	103.5	4.5	63.9	141.1
990	2.4	101.8	5.0	63.4	135.9
1080	2.4	106.7	5.5	62.6	132.3
1170	2.7	108.9	6.0	61.5	129.4
1260	2.3	96.9	6.5	61.1	126.3
1350	1.9	109.2	7.0	60.9	125.0
1440	2.7	119.7	7.5	60.0	124.5
1530	1.9	126.0	8.0	59.9	124.6
1620	1.6	134.1	8.5	60.0	125.1
1710	1.2	130.4	9.0	60.4	125.3
1800	1.8	125.2	9.5	60.3	125.3
1890	1.8	147.3	10.0	60.3	126.4

0900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.1	63.0	0.0		
108	1.8	63.0	0.5	62.9	63.0
216	2.3	81.4	1.0	60.5	73.2
315	3.1	101.0	1.5	56.6	85.1
414	2.2	115.0	2.0	57.3	92.1
513	1.5	138.6	2.5	59.8	98.4
612	1.5	154.4	3.0	62.0	104.9
706	1.5	150.7	3.5	63.1	110.1
801	1.4	102.6	4.0	63.4	109.3
895	2.0	75.1	4.5	63.2	105.0
990	2.5	74.3	5.0	62.4	100.8
1080	2.6	91.4	5.5	61.2	99.6
1170	3.3	88.4	6.0	59.4	98.0
1260	2.9	102.4	6.5	58.3	98.5
1350	2.4	110.1	7.0	57.8	99.5
1440	1.9	132.0	7.5	58.0	101.5
1530	2.8	131.3	8.0	57.5	104.0
1620	2.9	133.9	8.5	57.0	106.4
1710	2.5	134.2	9.0	56.8	108.2
1800	2.4	135.8	9.5	56.7	109.8
1890	3.1	153.1	10.0	56.5	112.7

0930 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.9	103.0	0.0		
108	2.1	103.0	0.5	59.2	103.1
216	2.3	79.8	1.0	59.1	91.2
315	2.6	66.4	1.5	57.2	81.9
414	2.3	79.1	2.0	56.6	81.2
513	1.8	121.0	2.5	58.4	87.4
612	1.9	146.3	3.0	60.3	95.6
706	1.6	130.0	3.5	61.2	99.5
801	1.5	100.4	4.0	61.6	99.6
895	2.7	71.2	4.5	60.6	95.3
990	2.5	86.7	5.0	59.7	94.2
1080	2.7	81.7	5.5	58.7	92.7
1170	2.6	99.3	6.0	57.9	93.4
1260	2.6	98.5	6.5	57.2	93.9
1350	2.8	109.9	7.0	56.5	95.4
1440	3.2	116.6	7.5	55.7	97.4
1530	2.9	121.0	8.0	55.2	99.3
1620	3.3	127.2	8.5	54.6	101.6
1710	3.4	140.3	9.0	54.2	104.6
1800	2.8	146.2	9.5	54.2	107.1
1890	2.8	135.7	10.0	54.0	108.8

1000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.3	90.0	0.0		
*****	****	*****	****	*****	*****
216	2.3	95.1	1.0	57.3	95.2
315	2.4	82.3	1.5	56.3	90.8
414	3.5	59.9	2.0	53.7	80.7
513	3.5	65.4	2.5	51.6	76.8
612	2.8	99.3	3.0	51.6	80.6
705	2.0	131.1	3.5	53.4	85.6
801	1.7	98.9	4.0	54.3	86.8
895	3.2	73.5	4.5	53.2	84.9
990	3.3	81.0	5.0	52.2	84.4
1080	2.8	81.4	5.5	51.7	84.1
1170	2.7	89.8	6.0	51.4	84.6
1260	2.7	98.4	6.5	51.2	85.7
1350	2.8	117.0	7.0	51.2	88.0
1440	3.1	122.9	7.5	51.1	90.6
1530	2.8	140.5	8.0	51.5	93.6
1620	3.4	144.0	8.5	51.6	97.1
1710	3.2	156.6	9.0	52.0	100.7
1800	3.2	164.5	9.5	52.5	104.3
1890	2.9	157.8	10.0	52.8	107.1

SEVIERVILLE 8/8/74

0400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	6.0	0.0		
108	1.5	5.6	0.5	67.0	5.6
216	0.8	4.1	1.0	72.2	5.1
315	1.1	125.0	1.5	79.2	34.2
414	1.1	138.6	2.0	81.6	56.6
513	3.0	191.3	2.5	81.8	148.5
612	4.0	209.7	3.0	74.5	137.2
706	5.1	212.0	3.5	66.0	198.9
801	6.4	200.5	4.0	57.7	199.5
895	8.2	203.5	4.5	50.0	200.8
990	10.0	204.3	5.0	43.3	201.8
1080	11.4	202.2	5.5	37.8	201.9
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.2	104.0	0.0		
108	1.7	104.1	0.5	65.1	104.2
216	3.7	105.9	1.0	53.2	105.4
315	3.3	91.2	1.5	50.5	100.0
414	1.2	142.2	2.0	55.2	104.9
513	1.8	220.8	2.5	62.4	115.6
612	4.5	219.5	3.0	66.2	144.9
706	7.8	212.3	3.5	59.3	175.9
801	7.2	210.8	4.0	52.7	187.6
895	7.2	206.5	4.5	47.6	192.5
990	7.2	206.9	5.0	43.9	195.5
1080	6.8	212.6	5.5	41.4	198.3
1170	11.7	204.6	6.0	36.6	199.7
1260	8.0	206.5	6.5	34.8	200.6
1350	15.7	206.4	7.0	30.6	201.8
1440	13.7	214.3	7.5	28.2	203.7
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0630 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	124.0	0.0		
108	1.8	123.8	0.5	63.6	123.9
216	2.8	94.5	1.0	58.2	105.9
315	3.0	55.8	1.5	57.2	86.2
414	1.0	92.1	2.0	60.5	87.0
513	2.1	237.3	2.5	70.4	96.7
612	5.9	222.7	3.0	75.1	157.6
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	215.0	0.0		
108	0.1	230.7	0.5	88.4	230.7
216	2.1	87.9	1.0	74.3	39.7
315	1.9	60.5	1.5	70.1	75.6
414	0.8	195.8	2.0	75.9	37.1
513	2.5	212.0	2.5	80.5	129.2
612	4.6	222.0	3.0	75.5	139.2
706	6.1	228.6	3.5	65.6	210.3
801	7.1	222.6	4.0	56.5	215.2
895	8.4	218.9	4.5	48.9	216.4
990	10.5	211.9	5.0	42.1	215.1
1080	10.8	211.1	5.5	37.3	214.2
1170	12.4	210.3	6.0	33.2	213.4
1260	12.0	214.6	6.5	30.4	213.6
1350	12.1	223.3	7.0	28.3	215.0
1440	13.0	220.4	7.5	26.5	216.8
1530	14.4	228.4	8.0	24.8	218.3
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0730 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	214.0	0.0		
108	0.7	213.8	0.5	78.9	213.8
216	0.6	145.4	1.0	81.3	182.0
315	1.5	73.7	1.5	81.7	116.8
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	172.0	0.0		
108	1.2	171.7	0.5	71.1	171.8
216	1.4	136.2	1.0	70.5	152.6
315	1.2	204.4	1.5	72.1	168.2
414	1.9	270.8	2.0	75.8	199.5
513	2.2	259.0	2.5	73.8	221.7
612	3.3	230.8	3.0	68.1	225.3
706	6.0	170.7	3.5	61.7	202.5
801	7.1	246.9	4.0	55.4	218.1
895	6.6	211.6	4.5	50.1	216.4
990	9.1	213.8	5.0	44.1	215.7
1080	10.4	215.7	5.5	39.0	215.7
1170	11.5	215.2	6.0	34.9	215.6
1260	11.9	220.2	6.5	31.8	216.4
1350	12.5	223.5	7.0	29.3	217.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

SEVIERVILLE 8/8/74

0830 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	90.0	0.0		
108	0.3	90.2	0.5	84.6	90.3
216	1.4	98.5	1.0	76.2	97.0
315	0.7	263.1	1.5	83.8	104.9
414	0.8	257.9	2.0	87.6	140.8
513	1.8	229.1	2.5	83.7	211.2
612	2.6	220.9	3.0	77.7	216.8
706	4.1	215.8	3.5	70.1	216.3
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

(0800)SITE 7/16/74

1042 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.3	110.0	0.0		
108	2.9	75.0	0.5	51.0	75.0
216	2.5	78.5	1.0	53.3	76.6
315	1.4	69.6	1.5	57.4	75.2
414	2.2	67.8	2.0	57.3	73.4
513	4.9	62.5	2.5	51.2	69.5
612	6.2	63.3	3.0	45.7	67.6
706	5.3	66.6	3.5	43.0	67.4
801	4.8	68.0	4.0	41.6	67.5
895	4.9	70.3	4.5	40.5	67.9
990	4.4	59.8	5.0	40.0	67.0
1080	3.5	38.1	5.5	40.3	64.7
1170	3.9	29.4	6.0	40.5	61.9
1260	4.0	38.9	6.5	40.4	60.1
1350	4.2	37.9	7.0	40.2	58.4
1440	5.6	30.1	7.5	39.5	55.8
1530	5.9	37.2	8.0	38.6	54.1
1620	6.0	48.2	8.5	37.7	53.6
1710	5.5	46.7	9.0	37.1	53.1
1800	5.4	51.6	9.5	36.6	53.0
1890	4.4	49.1	10.0	36.5	52.8

1130 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.4	90.0	0.0		
108	3.0	75.9	0.5	50.0	75.9
216	3.3	70.3	1.0	48.9	73.0
315	3.2	51.3	1.5	48.5	65.8
414	2.9	41.8	2.0	48.9	60.1
513	3.7	41.3	2.5	47.6	55.7
612	4.8	43.7	3.0	45.1	52.9
706	6.1	47.2	3.5	41.7	51.6
801	5.9	56.5	4.0	39.6	52.5
895	5.4	56.7	4.5	38.4	53.1
990	4.7	54.9	5.0	37.9	53.3
1080	3.9	50.9	5.5	37.9	53.1
1170	3.8	41.0	6.0	38.0	52.2
1260	3.8	35.0	6.5	38.1	51.0
1350	4.3	44.2	7.0	37.9	50.5
1440	5.2	51.7	7.5	37.3	50.6
1530	5.7	51.8	8.0	36.6	50.7
1620	4.6	49.1	8.5	36.4	50.6
1710	4.4	59.4	9.0	36.3	51.1
1800	3.2	56.1	9.5	36.6	51.3
1890	2.9	39.5	10.0	37.0	50.9

1200 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.8	100.0	0.0		
108	4.8	86.3	0.5	36.9	86.3
216	6.7	77.7	1.0	32.2	81.3
315	5.9	68.7	1.5	31.3	77.0
414	4.8	47.8	2.0	32.6	70.8
513	3.9	42.6	2.5	34.3	66.6
612	4.5	38.4	3.0	35.0	62.4
706	4.6	29.9	3.5	35.4	58.1
801	5.0	29.0	4.0	35.4	54.4
895	4.6	52.5	4.5	35.3	54.2
990	5.5	58.5	5.0	34.7	54.7
1080	4.7	54.7	5.5	34.5	54.7
1170	4.6	49.7	6.0	34.4	54.3
1260	4.3	41.2	6.5	34.5	53.4
1350	3.6	31.6	7.0	34.9	52.2
1440	4.5	26.7	7.5	35.0	50.6
1530	5.5	27.2	8.0	34.7	48.9
1620	6.3	34.8	8.5	34.1	47.8
1710	6.0	47.8	9.0	33.6	47.8
1800	6.3	50.7	9.5	33.1	48.0
1890	6.1	49.6	10.0	32.7	48.1

1230 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	100.0	0.0		
108	2.7	79.7	0.5	52.8	79.7
216	2.9	86.2	1.0	51.9	83.1
315	3.4	69.4	1.5	49.6	78.0
414	4.9	65.6	2.0	45.0	73.6
513	5.4	64.0	2.5	41.7	70.9
612	5.7	62.5	3.0	39.4	69.0
706	4.4	62.3	3.5	38.9	68.0
801	4.2	59.2	4.0	38.7	66.9
895	4.3	52.8	4.5	38.5	65.3
990	4.7	49.0	5.0	38.1	63.5
1080	4.6	48.2	5.5	37.7	62.0
1170	4.3	40.5	6.0	37.6	60.2
1260	4.8	26.6	6.5	37.5	57.4
1350	4.9	28.4	7.0	37.3	55.1
1440	4.8	37.7	7.5	37.0	53.8
1530	4.5	52.2	8.0	36.8	53.7
1620	4.3	60.4	8.5	36.7	54.1
1710	4.6	57.4	9.0	36.5	54.3
1800	4.1	54.3	9.5	36.5	54.3
1890	3.2	64.9	10.0	36.8	54.7

1300 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.1	110.0	0.0		
108	5.3	82.4	0.5	34.2	82.4
216	7.2	83.6	1.0	30.0	83.1
315	5.8	72.3	1.5	30.0	79.7
414	4.8	76.8	2.0	31.0	79.1
513	4.7	65.5	2.5	31.8	76.8
612	5.3	56.8	3.0	32.0	73.6
706	5.7	55.3	3.5	31.7	70.9
801	6.9	59.8	4.0	30.7	69.2
895	4.3	43.5	4.5	31.4	67.0
990	5.5	45.8	5.0	31.4	64.9
1080	5.4	48.0	5.5	31.3	63.4
1170	5.6	47.1	6.0	31.1	62.0
1260	5.5	42.7	6.5	31.0	60.5
1350	5.3	32.5	7.0	31.1	58.6
1440	5.3	28.9	7.5	31.2	56.7
1530	5.2	37.0	8.0	31.2	55.5
1620	3.6	55.5	8.5	31.6	55.5
1710	3.5	63.4	9.0	32.0	55.8
1800	4.1	62.8	9.5	32.2	56.1
1890	3.6	58.8	10.0	32.5	56.2

1331 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.2	110.0	0.0		
108	4.8	85.8	0.5	36.9	85.8
216	3.0	81.9	1.0	42.7	84.3
315	2.3	68.6	1.5	46.4	80.8
414	2.5	73.8	2.0	47.8	79.4
513	2.1	58.9	2.5	49.7	76.5
612	2.1	55.4	3.0	51.1	73.9
706	2.3	39.0	3.5	52.0	69.8
801	4.0	50.3	4.0	50.3	66.4
895	4.4	48.8	4.5	48.5	63.5
990	4.8	45.0	5.0	46.8	60.7
1080	4.5	41.4	5.5	45.6	58.3
1170	4.8	48.2	6.0	44.3	57.1
1260	4.8	50.5	6.5	43.2	56.4
1350	3.7	49.8	7.0	42.9	55.9
1440	2.7	44.6	7.5	43.2	55.3
1530	2.6	59.4	8.0	43.5	55.5
1620	2.8	61.6	8.5	43.7	55.8
1710	2.3	60.8	9.0	44.1	56.0
1800	2.1	41.3	9.5	44.6	55.5
1890	2.4	18.9	10.0	45.1	54.2

1409 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.6	162.0	0.0		
108	4.4	83.2	0.5	39.3	83.2
216	4.7	65.2	1.0	38.6	73.9
315	4.8	70.4	1.5	37.2	72.7
414	3.0	60.2	2.0	39.5	70.5
513	2.5	25.8	2.5	42.6	65.1
612	5.5	50.1	3.0	40.4	61.7
706	3.9	48.0	3.5	40.3	59.8
801	2.1	5.9	4.0	42.6	56.5
895	4.0	6.4	4.5	43.2	50.9
990	3.6	21.8	5.0	43.3	48.0
1080	3.4	21.1	5.5	43.4	45.7
1170	4.1	36.4	6.0	42.8	44.8
1260	4.1	51.6	6.5	42.3	45.4
1350	3.5	41.1	7.0	42.2	45.1
1440	3.5	45.1	7.5	42.1	45.1
1530	3.4	30.1	8.0	42.1	44.2
1620	2.6	30.2	8.5	42.5	43.6
1710	2.0	17.9	9.0	43.2	42.6
1800	1.4	10.8	9.5	44.1	42.1
1890	1.1	30.6	10.0	45.0	41.9

(0800)SITE 7/17/74

1000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	44.0	0.0		
108	0.9	44.1	0.5	75.5	44.1
216	1.6	53.7	1.0	71.0	50.1
315	2.8	86.7	1.5	64.3	59.7
414	2.0	126.5	2.0	65.2	85.0
513	3.6	169.8	2.5	66.1	112.9
612	5.4	202.4	3.0	65.4	148.2
706	5.5	205.2	3.5	60.8	158.7
801	5.9	215.5	4.0	56.4	132.7
895	5.5	222.5	4.5	53.3	191.8
990	5.4	227.7	5.0	50.9	198.6
1080	5.6	226.5	5.5	48.5	203.3
1170	5.3	238.0	6.0	47.0	208.1
1260	3.9	229.3	6.5	46.4	210.1
1350	3.1	240.4	7.0	46.5	212.2
1440	3.2	239.1	7.5	46.5	214.0
1530	3.4	247.5	8.0	46.5	216.2
1620	2.9	247.7	8.5	46.7	217.9
1710	2.5	242.2	9.0	47.0	219.0
1800	3.2	224.3	9.5	46.8	219.3
1890	3.0	197.3	10.0	46.8	218.2

1030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	90.0	0.0		
108	1.7	72.6	0.5	64.8	72.6
216	2.2	99.7	1.0	62.2	88.0
315	2.5	117.0	1.5	59.8	99.5
414	3.0	117.5	2.0	56.9	105.4
513	4.2	162.3	2.5	55.4	122.6
612	5.5	197.4	3.0	55.1	144.3
706	5.5	204.5	3.5	53.2	160.0
801	5.0	206.9	4.0	51.4	169.8
895	5.0	216.3	4.5	50.0	178.2
990	5.1	224.2	5.0	48.9	185.4
1080	4.7	223.3	5.5	47.8	190.5
1170	3.9	226.9	6.0	47.4	194.2
1260	3.8	232.1	6.5	47.2	197.6
1350	3.4	238.7	7.0	47.3	200.7
1440	3.3	233.7	7.5	47.3	203.0
1530	2.4	224.5	8.0	47.6	204.1
1620	3.2	218.3	8.5	47.4	205.0
1710	3.9	209.1	9.0	46.8	205.3
1800	4.1	192.6	9.5	46.2	204.4
1890	3.2	187.2	10.0	46.1	203.5

1100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.9	360.0	0.0		
108	1.2	48.9	0.5	71.0	48.9
216	2.2	65.3	1.0	64.7	59.4
315	1.2	80.1	1.5	66.4	64.9
414	0.9	167.0	2.0	72.0	76.1
513	2.9	154.6	2.5	71.2	105.6
612	4.0	192.3	3.0	70.5	138.8
706	6.0	203.0	3.5	64.6	167.5
801	5.4	199.4	4.0	59.0	177.8
895	5.0	199.8	4.5	55.2	182.9
990	5.3	218.1	5.0	52.6	189.8
1080	5.6	223.1	5.5	50.1	195.7
1170	5.3	219.0	6.0	48.1	199.1
1260	3.5	231.6	6.5	47.9	201.9
1350	4.8	224.6	7.0	46.7	204.4
1440	3.7	232.6	7.5	46.4	206.6
1530	3.2	223.8	8.0	46.3	207.7
1620	3.2	209.3	8.5	46.1	207.8
1710	3.9	206.4	9.0	45.6	207.7
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1130 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.9	360.0	0.0		
108	2.0	14.5	0.5	61.1	14.5
216	0.1	16.2	1.0	73.7	14.6
315	0.2	109.2	1.5	78.7	20.4
414	0.4	52.3	2.0	79.8	25.8
513	1.3	163.8	2.5	84.2	56.5
*****	****	*****	****	*****	*****
706	5.2	203.9	3.5	69.0	198.0
801	4.1	212.4	4.0	63.9	202.5
895	4.4	219.9	4.5	59.8	206.9
990	5.9	227.1	5.0	55.1	212.0
1080	5.4	231.0	5.5	51.9	215.6
1170	5.1	228.8	6.0	49.0	217.6
1260	4.0	224.1	6.5	48.5	218.3
1350	3.7	227.2	7.0	47.8	219.1
1440	3.2	228.7	7.5	47.5	219.8
1530	1.5	216.7	8.0	48.3	219.7
1620	3.1	210.1	8.5	48.1	219.1
1710	5.4	207.0	9.0	46.7	217.9
1800	4.6	193.3	9.5	46.0	216.0
1890	4.9	183.8	10.0	45.4	213.6

1200 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.6	340.0	0.0		
108	0.8	282.5	0.5	76.8	282.5
216	0.3	143.1	1.0	84.7	267.9
315	0.5	99.8	1.5	89.0	232.0
414	1.9	101.5	2.0	82.5	106.0
513	1.6	145.8	2.5	79.4	124.5
612	2.7	205.1	3.0	77.5	160.9
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1210 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.8	360.0	0.0		
108	0.3	103.5	0.5	85.6	103.6
216	0.1	86.0	1.0	86.9	98.4
315	0.2	355.1	1.5	87.9	74.7
414	1.9	188.3	2.0	82.7	176.8
513	2.4	214.1	2.5	77.1	198.2
612	2.7	228.6	3.0	72.7	210.4
706	2.5	229.2	3.5	69.7	215.6
801	3.1	232.1	4.0	66.3	219.9
895	4.2	232.0	4.5	62.0	223.1
990	4.4	244.7	5.0	58.8	227.7
1080	3.6	223.1	5.5	56.8	227.0
1170	2.5	240.6	6.0	56.3	228.3
1260	2.9	228.3	6.5	55.5	228.3
1350	2.9	222.8	7.0	54.8	227.8
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

(0800)SITE 7/17/74

1300 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.2	277.0	0.0		
108	1.2	276.5	0.5	71.5	276.5
216	3.1	233.5	1.0	60.4	245.1
315	1.6	199.3	1.5	63.1	232.7
414	1.6	182.9	2.0	64.8	221.7
513	2.3	194.6	2.5	63.4	214.8
612	3.3	206.6	3.0	59.8	212.5
706	3.4	194.3	3.5	57.3	208.5
801	3.4	186.1	4.0	55.5	204.4
895	3.2	219.4	4.5	54.3	206.6
990	3.5	224.0	5.0	53.1	209.0
1080	3.9	218.6	5.5	51.5	210.3
1170	5.3	231.6	6.0	49.2	213.6
1260	5.2	252.4	6.5	48.0	218.5
1350	4.8	246.8	7.0	46.9	221.6
1440	3.4	236.5	7.5	46.6	222.7
1530	1.7	251.3	8.0	47.4	223.7
1620	0.5	190.4	8.5	48.8	223.4
1710	1.5	200.5	9.0	49.5	222.7
1800	2.7	193.2	9.5	49.6	221.2
1890	3.2	189.3	10.0	49.5	219.4

1400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	144.0	0.0		
108	2.0	143.9	0.5	61.0	144.0
216	1.1	186.7	1.0	68.0	159.0
*****	****	*****	****	*****	*****
414	1.5	258.7	2.0	74.8	208.8
513	1.5	248.9	2.5	73.8	219.8
612	1.4	215.1	3.0	72.8	218.8
706	2.4	259.4	3.5	70.6	229.7
801	1.7	208.6	4.0	69.6	226.1
*****	****	*****	****	*****	*****
990	2.7	214.0	5.0	65.1	221.8
1080	2.2	209.8	5.5	64.1	220.3
1170	1.6	193.6	6.0	64.1	218.1
1260	2.0	198.1	6.5	63.6	216.2
1350	2.4	207.5	7.0	62.7	215.3
1440	3.2	216.1	7.5	61.2	215.4
1530	3.4	206.7	8.0	59.7	214.4
1620	4.6	197.9	8.5	57.6	212.2
1710	4.8	197.3	9.0	55.7	210.4
1800	4.6	200.0	9.5	54.1	209.3
1890	5.3	199.2	10.0	52.3	208.2

1500 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.9	342.0	0.0		
108	1.0	341.5	0.5	75.1	341.5
216	0.9	319.1	1.0	75.6	330.5
315	1.3	338.9	1.5	73.6	333.9
414	2.0	309.2	2.0	70.1	324.2
513	2.8	301.5	2.5	66.0	316.2
612	2.0	300.5	3.0	64.6	312.9
706	2.2	309.6	3.5	63.4	312.3
801	2.2	299.5	4.0	62.4	310.3
895	1.2	132.5	4.5	66.8	310.1
990	1.2	211.4	5.0	69.0	304.7
1080	3.7	217.8	5.5	69.6	288.7
1170	1.5	338.1	6.0	69.7	293.3
1260	2.3	226.5	6.5	69.8	285.6
1350	3.2	229.5	7.0	68.8	276.8
1440	2.7	220.6	7.5	68.3	270.0
1530	3.9	216.2	8.0	67.0	261.6
1620	4.5	224.9	8.5	64.8	255.5
1710	5.2	219.6	9.0	62.4	249.6
1800	3.6	220.8	9.5	61.2	246.6
1890	2.0	173.8	10.0	61.9	243.3

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	360.0	0.0		
108	2.4	249.3	0.5	55.9	249.3
216	2.5	264.5	1.0	55.8	257.0
315	2.0	270.0	1.5	57.0	260.7
414	1.4	266.6	2.0	59.3	261.7
513	1.0	293.3	2.5	62.1	265.0
612	1.0	313.0	3.0	64.4	269.5
706	0.7	74.0	3.5	68.9	270.7
801	1.2	251.9	4.0	69.0	268.5
895	1.4	256.1	4.5	68.7	267.0
990	1.2	247.8	5.0	66.8	265.2
1080	1.2	231.3	5.5	69.0	262.4
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

(0800)SITE 7/18/74

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.6	230.0	0.0		
108	3.1	225.2	0.5	49.6	225.2
216	6.7	225.6	1.0	36.5	225.5
315	5.5	219.4	1.5	34.7	223.3
414	4.8	225.0	2.0	34.6	223.7
513	3.0	236.0	2.5	36.7	225.3
612	5.3	216.3	3.0	35.9	224.0
706	7.7	267.6	3.5	34.6	232.9
801	6.6	248.5	4.0	33.4	235.4
895	4.7	266.3	4.5	33.8	238.5
990	7.6	270.9	5.0	32.8	243.1
1080	7.3	273.0	5.5	32.0	246.7
1170	6.6	271.6	6.0	31.5	249.2
1260	7.0	277.2	6.5	31.0	251.9
1350	7.4	275.5	7.0	30.4	254.1
1440	8.1	278.6	7.5	29.7	256.4
1530	6.7	274.3	8.0	29.4	257.7
1620	5.9	274.1	8.5	29.3	258.7
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.5	225.0	0.0		
108	3.5	242.7	0.5	45.5	242.7
216	4.5	259.3	1.0	42.2	252.0
315	4.8	262.9	1.5	39.6	256.1
414	5.6	261.7	2.0	37.1	257.8
513	5.5	262.1	2.5	35.8	258.8
612	5.2	262.1	3.0	35.2	259.4
706	4.7	266.5	3.5	35.0	260.4
801	5.1	277.2	4.0	34.7	262.6
895	5.4	279.8	4.5	34.3	264.7
990	4.7	276.1	5.0	34.3	265.8
1080	5.8	270.4	5.5	33.6	266.3
1170	4.8	276.1	6.0	33.5	267.1
1260	5.2	282.1	6.5	33.3	268.3
1350	3.9	280.6	7.0	33.6	269.0
1440	4.5	273.8	7.5	33.6	269.3
1530	5.4	288.3	8.0	33.4	270.6
1620	4.8	289.7	8.5	33.4	271.7
1710	5.8	288.6	9.0	33.1	272.8
*****	****	*****	****	*****	*****

1812 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.1	210.0	0.0		
108	2.4	206.7	0.5	56.3	206.7
216	4.4	217.2	1.0	46.7	213.5
315	3.4	216.2	1.5	46.0	214.4
414	3.7	223.3	2.0	44.9	216.8
513	2.7	236.4	2.5	46.1	220.0
612	3.6	245.5	3.0	45.9	224.5
706	3.4	230.7	3.5	45.5	225.4
801	2.6	252.5	4.0	46.3	228.1
895	3.0	262.1	4.5	46.8	231.5
990	3.1	275.6	5.0	47.4	235.6
1080	3.1	282.7	5.5	47.9	239.6
1170	3.6	279.1	6.0	47.8	243.3
1260	4.1	288.2	6.5	47.6	247.6
1350	4.3	288.9	7.0	47.2	251.5
1440	5.1	287.3	7.5	46.3	255.2
1530	6.2	292.0	8.0	45.0	259.4
1620	6.5	292.7	8.5	43.7	263.0
1710	6.8	289.8	9.0	42.3	265.8
1800	5.5	287.1	9.5	41.5	267.5
1890	4.7	276.7	10.0	41.0	268.1

1900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	226.0	0.0		
108	0.6	226.0	0.5	81.0	226.0
216	3.0	222.3	1.0	63.5	222.9
315	3.3	223.1	1.5	56.8	223.0
414	4.9	221.1	2.0	49.6	222.2
513	4.6	227.5	2.5	46.3	223.7
612	4.7	231.4	3.0	44.2	225.4
706	4.3	236.7	3.5	43.1	227.3
801	5.0	249.9	4.0	41.8	231.0
895	2.8	273.2	4.5	43.0	234.4
990	4.6	258.7	5.0	42.3	237.4
1080	3.1	276.3	5.5	42.9	240.3
1170	3.8	264.2	6.0	42.7	242.4
1260	3.7	267.6	6.5	42.6	244.4
1350	3.9	266.6	7.0	42.4	246.1
1440	4.1	266.1	7.5	42.1	247.6
1530	4.1	267.3	8.0	41.8	249.0
1620	4.3	270.9	8.5	41.5	250.5
1710	5.1	279.8	9.0	41.0	252.7
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

2000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	246.0	0.0		
108	1.3	245.9	0.5	70.0	245.9
216	2.9	256.9	1.0	59.8	253.5
315	2.3	266.8	1.5	58.4	258.2
414	3.6	261.0	2.0	53.8	259.2
513	5.2	256.6	2.5	48.1	258.3
612	5.7	258.7	3.0	44.1	258.4
706	5.5	250.7	3.5	41.6	256.8
801	5.2	254.4	4.0	40.1	256.4
895	4.8	256.4	4.5	39.3	256.4
990	4.6	258.2	5.0	38.8	256.6
1080	3.8	262.6	5.5	38.8	257.1
1170	3.9	263.3	6.0	38.7	257.6
1260	3.6	266.4	6.5	38.8	258.2
1350	3.8	272.9	7.0	38.8	259.2
1440	4.3	272.0	7.5	38.6	260.1
1530	3.9	276.6	8.0	38.6	261.1
1620	4.1	272.8	8.5	38.5	261.8
1710	4.0	281.9	9.0	38.5	262.9
1800	3.2	297.0	9.5	38.9	264.3
1890	4.7	296.1	10.0	38.8	266.1

2030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	215.0	0.0		
108	1.1	215.4	0.5	73.2	215.4
216	3.5	245.8	1.0	58.4	238.7
315	4.6	243.8	1.5	49.3	241.3
414	6.1	242.5	2.0	42.4	241.8
513	6.3	237.1	2.5	38.6	240.4
612	6.8	237.1	3.0	35.9	239.6
706	6.3	239.6	3.5	34.3	239.6
801	6.8	240.8	4.0	32.9	239.8
895	6.0	246.1	4.5	32.3	240.6
990	5.9	252.3	5.0	31.9	241.9
1080	5.2	255.5	5.5	31.8	243.1
1170	4.5	258.5	6.0	32.0	244.2
1260	3.8	275.3	6.5	32.6	245.9
1350	3.4	272.8	7.0	33.2	247.2
1440	3.2	272.4	7.5	33.8	248.3
1530	2.9	289.6	8.0	34.6	249.8
1620	2.7	300.2	8.5	35.5	251.4
1710	2.9	308.5	9.0	36.4	253.2
1800	2.9	307.2	9.5	37.2	254.9
1890	3.7	290.2	10.0	37.5	256.4

2100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	180.0	0.0		
108	0.9	153.8	0.5	76.2	153.9
216	3.0	225.0	1.0	65.0	210.6
315	5.7	233.8	1.5	49.9	225.2
414	6.9	238.9	2.0	41.5	231.2
513	7.7	237.2	2.5	36.3	233.2
612	6.7	246.3	3.0	34.4	236.1
706	6.1	251.5	3.5	33.4	238.7
801	5.5	261.7	4.0	33.2	241.7
895	5.4	261.5	4.5	33.0	244.0
990	4.6	258.4	5.0	33.2	245.3
1080	3.6	268.2	5.5	33.8	246.8
1170	3.3	264.2	6.0	34.4	247.8
1260	3.3	262.3	6.5	34.9	248.6
1350	3.0	267.6	7.0	35.5	249.5
1440	3.2	281.9	7.5	36.1	251.0
1530	4.2	273.3	8.0	36.2	252.3
1620	3.8	273.9	8.5	36.4	253.4
1710	4.7	275.5	9.0	36.3	254.7
1800	4.9	280.9	9.5	36.2	256.2
1890	5.6	273.5	10.0	35.8	257.3

(0800)SITE 7/19/74

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.3	145.0	0.0		
108	6.0	144.5	0.5	30.9	144.6
216	6.2	138.4	1.0	30.6	141.5
315	2.8	114.7	1.5	35.5	135.6
414	2.9	91.2	2.0	39.2	129.5
513	4.3	87.1	2.5	40.1	121.3
612	5.5	90.5	3.0	39.0	114.9
706	5.5	89.8	3.5	37.9	110.5
801	5.3	91.4	4.0	37.1	107.7
895	2.7	99.0	4.5	38.2	107.1
990	1.2	37.2	5.0	40.7	105.4
1080	3.3	317.4	5.5	45.3	102.6
1170	5.0	320.6	6.0	50.8	97.0
1260	5.5	299.7	6.5	57.4	92.5
1350	6.9	306.0	7.0	64.5	82.3
1440	8.4	302.3	7.5	71.6	62.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1745 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.7	230.0	0.0		
108	2.3	214.5	0.5	57.5	214.5
216	3.6	197.5	1.0	51.0	204.1
315	3.6	186.2	1.5	48.4	197.3
414	4.0	166.3	2.0	47.0	188.2
513	4.3	184.6	2.5	44.9	187.3
612	2.3	170.1	3.0	46.5	185.3
706	0.8	212.5	3.5	49.5	186.4
801	2.6	217.0	4.0	50.0	189.8
895	3.8	254.9	4.5	50.9	198.0
990	5.0	268.3	5.0	51.4	208.2
1080	3.9	309.4	5.5	54.3	216.6
1170	4.6	323.2	6.0	57.4	226.8
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.8	230.0	0.0		
108	0.9	280.2	0.5	76.7	280.2
216	1.4	193.3	1.0	76.9	223.8
315	2.3	171.2	1.5	71.2	193.1
414	3.9	161.5	2.0	62.5	176.7
513	4.9	177.6	2.5	54.7	177.1
612	4.1	175.8	3.0	51.5	176.8
706	1.1	149.7	3.5	53.9	175.2
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.7	230.0	0.0		
108	2.0	271.5	0.5	61.2	271.5
216	3.1	272.0	1.0	54.7	271.8
315	2.5	240.5	1.5	55.0	261.6
414	4.0	218.0	2.0	52.4	246.5
513	5.3	221.2	2.5	47.6	238.1
612	5.8	238.5	3.0	43.6	238.2
706	4.9	247.9	3.5	41.9	240.0
801	4.9	257.4	4.0	40.8	242.7
895	5.6	289.8	4.5	40.5	249.4
990	6.4	275.9	5.0	39.0	253.4
1080	7.2	280.7	5.5	37.3	257.4
1170	8.4	283.8	6.0	35.4	261.3
1260	8.6	303.3	6.5	34.3	266.7
1350	8.8	307.2	7.0	33.3	271.5
1440	8.1	309.4	7.5	32.6	275.3
1530	6.9	317.1	8.0	32.4	278.6
1620	5.9	338.5	8.5	32.9	282.1
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

2000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.6	270.0	0.0		
108	2.8	264.9	0.5	52.4	264.9
216	3.3	248.8	1.0	50.0	256.1
315	1.9	236.5	1.5	53.1	251.4
414	8.7	229.9	2.0	40.2	240.1
513	6.9	244.8	2.5	36.4	241.5
612	6.6	236.5	3.0	34.4	240.4
706	6.9	237.2	3.5	32.7	239.8
801	7.6	259.3	4.0	31.3	243.1
895	8.3	278.5	4.5	30.4	248.5
990	7.2	280.1	5.0	30.0	252.3
1080	8.2	289.8	5.5	29.4	256.8
1170	8.7	290.8	6.0	28.7	260.7
1260	8.4	312.2	6.5	28.7	265.6
1350	6.8	312.5	7.0	28.9	269.1
1440	5.8	329.6	7.5	29.6	272.5
1530	5.6	336.3	8.0	30.2	276.4
1620	7.9	331.1	8.5	30.3	280.4
1710	9.0	324.0	9.0	29.9	284.0
1800	10.4	323.2	9.5	29.2	287.5
1890	11.0	322.5	10.0	28.4	290.6

2030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	230.0	0.0		
108	3.1	238.9	0.5	49.3	238.9
216	4.0	239.3	1.0	45.6	239.1
315	5.5	239.8	1.5	40.0	239.4
414	7.5	237.8	2.0	34.6	238.8
513	8.1	234.0	2.5	31.3	237.4
612	9.2	243.1	3.0	28.7	238.8
706	9.2	252.5	3.5	27.0	241.5
801	8.7	261.9	4.0	26.1	244.7
895	9.7	273.9	4.5	25.3	249.0
990	11.4	277.0	5.0	24.2	253.2
1080	10.2	282.9	5.5	23.6	256.7
1170	9.5	283.4	6.0	23.2	259.4
1260	7.3	287.1	6.5	23.3	261.4
1350	5.1	300.1	7.0	23.9	263.2
1440	6.0	308.6	7.5	24.4	265.5
1530	7.4	308.2	8.0	24.6	268.1
1620	8.6	310.0	8.5	24.6	270.9
1710	9.3	312.1	9.0	24.5	273.7
1800	10.8	313.9	9.5	24.2	276.7
1890	11.6	319.9	10.0	23.9	279.9

(0800)SITE 7/19/74

2100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	270.0	0.0		
108	1.3	289.1	0.5	70.5	289.1
216	2.1	271.0	1.0	65.3	277.9
315	3.7	259.4	1.5	56.8	268.2
414	6.2	249.4	2.0	47.0	259.3
513	7.5	238.4	2.5	40.4	251.6
612	7.6	235.8	3.0	36.6	247.3
706	8.6	254.9	3.5	33.2	249.1
801	8.2	277.1	4.0	31.6	254.2
895	9.7	279.3	4.5	29.7	258.7
990	10.9	284.1	5.0	27.9	253.0
1080	12.1	282.3	5.5	26.0	256.1
1170	11.6	286.2	6.0	24.7	258.8
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

(0800)SITE 8/6/74

0405 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	40.0	0.0		
108	5.4	48.8	0.5	33.8	48.8
216	7.1	58.9	1.0	30.0	54.6
315	7.2	76.8	1.5	28.5	62.7
414	8.5	84.7	2.0	26.7	69.4
513	7.1	91.0	2.5	26.6	73.8
612	5.9	99.5	3.0	27.3	77.5
706	4.1	133.0	3.5	29.3	82.1
801	3.6	154.0	4.0	31.7	86.7
895	3.5	183.6	4.5	34.8	91.3
990	4.4	193.4	5.0	38.0	97.2
1080	5.6	205.4	5.5	41.4	104.7
1170	6.4	209.4	6.0	44.5	113.7
1260	5.3	213.1	6.5	47.0	121.3
1350	5.8	210.4	7.0	48.6	129.7
1440	6.4	203.7	7.5	48.9	138.1
1530	6.2	203.4	8.0	48.7	145.3
1620	6.0	203.3	8.5	48.2	151.4
1710	6.8	202.9	9.0	47.2	157.2
1800	7.3	211.3	9.5	46.3	163.1
1890	5.6	222.3	10.0	46.2	167.7

0505 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	40.0	0.0		
108	2.7	55.9	0.5	53.6	55.9
216	6.6	51.7	1.0	38.0	52.9
315	9.0	47.2	1.5	30.0	50.1
414	8.4	59.9	2.0	27.5	53.2
513	8.9	74.9	2.5	26.1	58.6
612	7.1	93.0	3.0	26.5	64.2
706	5.6	98.8	3.5	27.3	68.2
801	3.8	122.2	4.0	29.1	71.9
895	3.5	154.8	4.5	31.6	76.0
990	4.0	180.8	5.0	34.7	80.6
1080	4.7	199.2	5.5	38.3	85.8
1170	4.6	206.0	6.0	41.9	91.0
1260	4.7	211.6	6.5	45.5	96.6
1350	5.3	217.0	7.0	49.2	103.4
1440	5.5	220.1	7.5	52.6	111.1
1530	5.1	227.7	8.0	56.0	120.2
1620	7.2	217.2	8.5	57.6	132.2
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	49.0	0.0		
108	3.1	55.3	0.5	49.2	55.3
216	6.6	50.7	1.0	36.6	52.2
315	9.5	48.9	1.5	28.7	50.6
414	9.7	57.1	2.0	25.6	52.8
513	7.8	73.7	2.5	25.3	57.2
612	4.9	100.4	3.0	27.1	62.0
706	2.9	121.1	3.5	29.6	65.5
801	2.1	157.6	4.0	32.8	68.4
895	2.5	189.2	4.5	36.6	71.5
990	2.9	196.0	5.0	40.5	75.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0630 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	54.0	0.0		
108	2.6	54.0	0.5	53.9	54.0
216	6.7	54.4	1.0	37.8	54.3
315	9.7	54.1	1.5	29.0	54.2
414	7.8	64.8	2.0	27.4	57.3
513	5.1	74.3	2.5	28.5	60.0
612	3.0	101.5	3.0	31.1	63.4
706	1.2	132.6	3.5	34.5	65.3
801	1.1	189.0	4.0	38.4	66.8
895	2.4	211.1	4.5	43.2	69.3
990	2.6	230.1	5.0	48.4	71.0
1080	2.0	201.0	5.5	52.1	74.2
1170	3.0	238.9	6.0	57.2	76.0
1260	2.2	227.9	6.5	61.1	78.6
1350	3.3	227.1	7.0	65.6	83.5
1440	4.0	219.4	7.5	69.7	92.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.5	56.0	0.0		
108	2.4	64.0	0.5	56.3	64.0
216	7.3	60.2	1.0	36.7	61.2
315	9.8	57.2	1.5	28.4	59.2
414	9.3	67.8	2.0	25.7	62.0
513	9.2	81.0	2.5	24.5	66.6
612	3.6	85.3	3.0	26.5	68.2
706	2.8	85.8	3.5	28.4	69.3
801	0.6	142.6	4.0	31.4	70.1
895	1.4	181.0	4.5	34.6	71.8
990	1.7	207.3	5.0	38.1	73.4
1080	1.9	238.3	5.5	41.8	74.1
1170	2.2	228.4	6.0	45.5	75.5
1260	1.8	223.9	6.5	48.8	77.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0730 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	43.0	0.0		
108	3.9	54.3	0.5	43.0	54.3
216	8.1	51.0	1.0	31.1	52.1
315	9.0	73.2	1.5	27.0	61.2
414	6.9	89.6	2.0	27.2	68.2
513	6.5	92.7	2.5	27.5	72.9
612	4.5	87.0	3.0	28.7	74.6
706	2.4	96.4	3.5	30.8	75.9
801	1.0	95.5	4.0	33.4	76.4
895	1.1	190.0	4.5	36.7	77.9
990	0.3	170.9	5.0	39.5	78.3
1080	0.8	238.1	5.5	42.5	78.7
1170	1.1	219.8	6.0	45.4	79.7
1260	1.1	224.0	6.5	48.2	80.7
1350	1.4	222.2	7.0	51.0	82.1
1440	2.6	227.7	7.5	54.4	84.5
1530	3.8	220.2	8.0	58.1	89.3
1620	4.2	216.0	8.5	61.4	95.8
1710	4.7	215.2	9.0	64.3	104.4
1800	4.5	216.3	9.5	66.5	113.6
1890	5.0	219.3	10.0	68.2	124.5

(0800)SITE 8/6/74

0800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	48.0	0.0		
108	3.3	60.0	0.5	47.5	60.0
216	7.3	57.9	1.0	34.1	58.6
315	7.4	64.9	1.5	30.2	61.2
414	7.3	84.0	2.0	29.0	67.7
513	6.1	97.3	2.5	29.4	73.4
612	4.1	111.3	3.0	31.2	77.7
706	2.9	106.2	3.5	33.0	79.9
801	1.1	211.3	4.0	36.9	81.2
895	0.6	112.3	4.5	39.6	81.7
990	0.4	0.0	5.0	42.4	81.1
1080	0.8	247.4	5.5	45.5	81.4
1170	0.8	223.9	6.0	48.3	82.2
1260	1.1	222.8	6.5	51.1	83.4
1350	1.4	231.7	7.0	54.0	84.7
1440	2.2	225.6	7.5	57.1	87.2
1530	3.5	223.7	8.0	60.7	92.0
1620	4.1	208.6	8.5	63.4	99.7
1710	4.5	211.1	9.0	65.7	109.1
1800	4.4	212.2	9.5	67.3	119.0
1890	4.5	216.1	10.0	68.4	129.3

0833 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	53.0	0.0		
108	2.7	66.1	0.5	52.7	66.1
216	5.9	59.6	1.0	36.7	61.5
315	8.2	56.5	1.5	30.5	59.2
414	7.4	71.1	2.0	28.8	62.7
513	7.4	88.6	2.5	28.2	68.5
612	4.9	108.9	3.0	29.7	73.6
706	3.2	120.7	3.5	31.8	77.1
801	2.2	136.9	4.0	34.3	79.9
895	1.1	125.3	4.5	36.8	81.0
990	0.9	99.4	5.0	39.0	81.4
1080	0.1	122.1	5.5	41.4	81.5
1170	0.7	210.2	6.0	44.0	82.3
1260	0.9	189.3	6.5	46.3	83.5
1350	1.1	207.8	7.0	48.7	84.8
1440	1.7	226.8	7.5	51.5	86.4
1530	2.2	220.8	8.0	54.3	88.9
1620	3.5	221.1	8.5	57.5	93.2
1710	4.9	216.2	9.0	60.7	100.6
1800	4.8	210.2	9.5	62.9	109.1
1890	4.8	204.8	10.0	64.1	118.0

0900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	67.0	0.0		
108	1.6	53.2	0.5	66.7	53.2
216	6.2	52.9	1.0	42.9	53.0
315	7.1	56.9	1.5	35.2	54.9
414	6.9	69.4	2.0	32.5	59.5
513	6.4	89.1	2.5	32.0	66.1
612	4.0	107.6	3.0	33.8	71.1
706	3.3	150.2	3.5	37.0	77.0
801	2.8	157.8	4.0	40.0	82.0
895	1.6	130.1	4.5	42.2	84.1
990	1.2	95.9	5.0	44.1	84.5
1080	0.3	149.9	5.5	46.5	84.9
1170	0.8	176.9	6.0	48.8	86.3
1260	0.8	177.6	6.5	50.9	87.7
1350	1.3	143.0	7.0	52.2	89.5
1440	2.9	229.1	7.5	55.7	92.8
1530	3.0	217.2	8.0	58.6	97.4
1620	4.1	211.6	8.5	61.2	104.6
1710	4.2	212.4	9.0	63.3	112.7
1800	4.8	203.4	9.5	64.2	122.2
1890	4.6	198.0	10.0	64.2	130.6

0933 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.3	49.0	0.0		
108	3.2	65.8	0.5	48.8	65.8
216	4.3	71.3	1.0	44.1	69.0
315	4.0	66.9	1.5	42.7	68.3
414	5.5	72.9	2.0	39.3	69.8
513	4.4	92.3	2.5	39.2	74.4
612	3.6	144.9	3.0	42.3	83.1
706	3.5	162.9	3.5	45.3	91.7
801	3.3	175.5	4.0	48.2	99.5
895	1.6	142.9	4.5	50.0	102.0
990	1.3	93.9	5.0	51.4	101.6
1080	0.8	105.0	5.5	53.0	101.7
1170	0.8	194.0	6.0	55.2	103.4
1260	1.3	177.6	6.5	56.8	106.0
1350	1.5	166.7	7.0	57.9	108.6
1440	1.7	187.4	7.5	59.2	112.0
1530	2.4	204.2	8.0	60.7	116.8
1620	3.7	210.9	8.5	62.1	124.2
1710	4.5	209.6	9.0	62.8	133.0
1800	4.8	205.3	9.5	62.6	141.5
1890	5.0	200.5	10.0	61.7	148.7

1000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.8	87.0	0.0		
108	3.0	87.2	0.5	50.0	87.2
216	3.0	60.0	1.0	50.8	73.6
315	3.0	54.3	1.5	50.1	67.1
414	3.4	67.1	2.0	48.6	67.1
513	2.5	90.8	2.5	49.7	71.1
612	1.9	166.6	3.0	54.7	78.8
706	2.4	185.8	3.5	59.4	88.3
801	2.3	186.4	4.0	62.7	97.6
895	1.7	166.4	4.5	64.1	104.0
990	1.4	92.6	5.0	64.3	103.0
1080	1.4	91.7	5.5	64.4	102.1
1170	0.3	156.5	6.0	65.9	103.0
1260	1.3	193.5	6.5	67.4	107.4
1350	1.5	172.5	7.0	68.0	111.8
1440	1.7	175.2	7.5	68.4	116.4
1530	2.2	200.2	8.0	69.2	123.0
1620	3.7	207.1	8.5	69.6	133.5
1710	4.7	208.7	9.0	69.1	145.6
1800	4.8	202.1	9.5	67.6	154.9
1890	5.4	201.6	10.0	65.5	162.8

(0800)SITE 8/7/74

0400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	86.0	0.0		
108	0.8	86.0	0.5	77.0	86.0
216	1.9	89.1	1.0	69.4	38.2
315	2.6	185.3	1.5	71.4	135.9
414	5.0	204.7	2.0	62.7	177.2
513	7.1	194.5	2.5	50.6	185.8
612	7.7	183.5	3.0	43.2	185.0
706	8.1	175.8	3.5	38.4	132.5
801	7.9	182.5	4.0	35.4	132.5
895	6.6	173.1	4.5	34.1	131.1
990	5.1	173.3	5.0	33.9	130.3
1080	4.9	179.2	5.5	33.7	130.2
1170	6.4	187.8	6.0	32.9	181.0
1260	7.5	188.2	6.5	31.8	131.8
1350	8.5	192.6	7.0	30.6	133.0
1440	7.8	191.6	7.5	29.8	133.8
1530	7.2	194.0	8.0	29.3	134.6
1620	6.6	189.1	8.5	29.0	134.9
1710	5.5	175.5	9.0	29.0	134.4
1800	5.6	168.8	9.5	29.0	133.6
1890	6.5	171.2	10.0	28.8	132.9

0500 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	75.0	0.0		
108	1.0	75.0	0.5	74.0	75.0
216	0.6	72.3	1.0	77.0	74.0
315	2.1	203.9	1.5	81.0	154.0
414	3.9	180.2	2.0	68.5	172.5
513	4.4	166.9	2.5	60.0	170.0
612	5.0	166.4	3.0	53.9	168.8
706	4.5	184.7	3.5	50.7	172.5
801	5.4	182.0	4.0	47.3	174.6
895	5.3	174.5	4.5	44.9	174.6
990	5.9	183.1	5.0	42.7	176.0
1080	7.2	185.5	5.5	40.0	177.6
1170	7.5	189.0	6.0	37.8	179.3
1260	7.7	191.9	6.5	36.0	180.9
1350	7.8	190.2	7.0	34.5	182.0
1440	7.4	187.9	7.5	33.4	182.6
1530	7.7	194.1	8.0	32.4	183.7
1620	7.8	189.4	8.5	31.5	184.2
1710	6.7	185.6	9.0	31.0	184.3
1800	6.7	175.1	9.5	30.6	183.7
1890	6.6	167.2	10.0	30.3	182.7

0601 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.1	184.0	0.0		
108	0.3	184.0	0.5	86.0	184.0
216	2.5	59.8	1.0	72.0	65.0
315	0.4	176.0	1.5	78.0	74.0
414	3.5	197.4	2.0	78.0	158.0
513	3.2	182.1	2.5	70.7	170.6
612	5.3	167.3	3.0	61.1	169.1
706	5.8	168.4	3.5	54.0	168.9
801	6.0	162.3	4.0	49.1	167.2
895	4.5	158.5	4.5	47.3	165.8
990	2.9	165.7	5.0	47.3	165.8
1080	6.0	171.9	5.5	44.7	156.8
1170	6.2	185.6	6.0	42.7	159.5
1260	5.6	185.9	6.5	41.4	171.4
1350	5.9	191.5	7.0	40.2	173.6
1440	7.0	198.1	7.5	38.8	176.4
1530	5.8	194.5	8.0	38.0	178.0
1620	5.2	190.2	8.5	37.5	178.9
1710	5.0	184.8	9.0	37.1	179.3
1800	6.6	184.2	9.5	36.2	179.7
1890	7.0	179.6	10.0	35.3	179.7

0630 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.2	202.0	0.0		
108	0.6	201.7	0.5	80.5	201.7
216	1.0	123.7	1.0	79.8	150.8
315	0.6	156.1	1.5	79.8	152.5
414	2.3	212.1	2.0	75.3	185.3
513	3.7	196.2	2.5	66.9	190.8
612	5.7	171.4	3.0	57.9	132.3
706	6.4	159.2	3.5	51.3	174.7
801	7.5	164.0	4.0	45.5	171.7
895	6.5	168.1	4.5	42.4	171.0
990	5.5	158.4	5.0	40.9	159.2
1080	4.1	172.2	5.5	40.5	159.5
1170	5.9	180.0	6.0	39.1	170.8
1260	6.5	183.4	6.5	37.7	172.3
1350	6.7	195.3	7.0	36.6	174.8
1440	6.2	191.1	7.5	35.8	176.3
1530	6.5	189.9	8.0	35.0	177.5
1620	6.5	192.2	8.5	34.3	178.7
1710	6.0	185.7	9.0	33.8	179.2
1800	5.2	180.9	9.5	33.6	179.3
1890	6.0	172.8	10.0	33.2	178.9

0700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.1	66.0	0.0		
108	0.6	66.0	0.5	80.0	66.0
216	1.8	113.7	1.0	72.2	102.0
315	1.1	186.8	1.5	75.9	126.1
414	3.2	175.8	2.0	69.0	153.5
513	4.5	153.2	2.5	60.3	153.4
612	5.5	147.2	3.0	53.2	151.2
706	7.4	164.1	3.5	46.3	155.4
801	7.6	166.1	4.0	41.7	158.1
895	6.2	168.0	4.5	39.6	159.8
990	5.7	180.5	5.0	38.5	162.6
1080	6.0	178.6	5.5	37.3	164.6
1170	6.5	176.1	6.0	36.0	166.0
1260	6.9	185.6	6.5	34.9	168.2
1350	6.9	187.9	7.0	34.0	170.2
1440	6.3	184.2	7.5	33.4	171.4
1530	6.6	189.5	8.0	32.8	172.9
1620	5.8	186.2	8.5	32.5	173.8
1710	6.6	186.3	9.0	32.0	174.7
1800	5.6	185.0	9.5	31.8	175.3
1890	6.0	178.6	10.0	31.5	175.5

0730 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	54.0	0.0		
108	1.1	54.1	0.5	72.4	54.1
216	1.5	103.3	1.0	71.8	81.9
315	0.4	52.2	1.5	75.3	77.4
414	1.6	170.6	2.0	77.3	108.5
513	4.2	147.4	2.5	68.0	131.0
612	6.5	152.2	3.0	57.2	141.3
706	6.2	169.5	3.5	51.3	150.3
801	6.3	179.1	4.0	47.4	157.4
895	6.9	179.1	4.5	43.9	162.1
990	7.0	181.8	5.0	41.2	165.7
1080	7.0	189.8	5.5	39.2	169.4
1170	6.1	190.1	6.0	38.0	171.9
1260	5.6	194.1	6.5	37.3	174.1
1350	6.7	193.7	7.0	36.2	176.2
1440	6.6	193.9	7.5	35.3	177.9
1530	6.5	189.3	8.0	34.5	178.9
1620	5.3	183.4	8.5	34.2	179.2
1710	5.2	195.0	9.0	34.0	180.1
1800	5.5	188.3	9.5	33.7	180.6
1890	6.0	188.6	10.0	33.3	181.1

(0800)SITE 8/7/74

0800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.2	20.0	0.0		
108	0.5	20.0	0.5	81.5	20.0
216	1.9	112.1	1.0	74.5	96.5
315	1.0	118.9	1.5	74.1	104.2
414	1.2	125.8	2.0	73.4	110.3
513	3.2	126.5	2.5	67.1	117.4
612	5.7	145.1	3.0	58.4	129.6
706	7.7	152.6	3.5	49.9	138.3
801	7.0	166.5	4.0	45.5	145.6
895	6.2	186.3	4.5	43.7	153.1
990	7.5	181.6	5.0	41.0	158.5
1080	7.9	176.5	5.5	38.3	161.6
1170	7.8	187.4	6.0	36.5	165.3
1260	7.0	189.8	6.5	35.4	168.1
1350	6.3	195.8	7.0	34.8	170.7
1440	7.5	207.2	7.5	34.1	174.3
1530	7.4	199.2	8.0	33.3	176.6
1620	7.0	200.0	8.5	32.7	178.5
1710	7.9	198.2	9.0	31.9	180.1
1800	7.4	197.6	9.5	31.3	181.4
1890	8.2	198.6	10.0	30.6	182.7

0830 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	55.0	0.0		
108	1.9	54.5	0.5	62.0	54.5
216	2.4	70.6	1.0	59.2	63.5
315	2.0	72.6	1.5	59.1	66.4
414	2.0	68.8	2.0	59.0	67.0
513	3.0	120.1	2.5	58.7	80.5
612	4.5	138.3	3.0	56.8	97.1
706	5.6	154.3	3.5	52.9	115.3
801	4.8	154.6	4.0	50.9	123.3
895	5.4	174.6	4.5	49.6	132.8
990	5.8	181.8	5.0	48.2	141.3
1080	5.4	194.6	5.5	47.5	148.8
1170	5.0	197.3	6.0	46.9	154.7
1260	5.6	207.5	6.5	46.3	161.1
1350	5.1	197.1	7.0	45.4	165.0
1440	5.3	199.2	7.5	44.5	168.5
1530	5.2	199.7	8.0	43.7	171.4
1620	5.9	197.1	8.5	42.6	173.9
1710	5.9	189.3	9.0	41.5	175.3
1800	5.5	189.4	9.5	40.7	176.4
1890	5.4	184.7	10.0	40.0	177.0

0858 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	54.0	0.0		
108	1.2	53.5	0.5	71.7	53.5
216	3.3	76.6	1.0	58.2	70.6
315	2.1	69.9	1.5	58.1	70.4
414	1.6	84.0	2.0	59.5	73.1
513	3.6	135.8	2.5	58.9	91.4
612	5.5	153.8	3.0	56.0	112.2
706	5.9	162.2	3.5	52.4	126.7
801	4.9	155.8	4.0	49.8	132.8
895	6.3	178.4	4.5	47.5	142.3
990	6.6	187.5	5.0	45.6	150.6
1080	5.9	189.0	5.5	44.1	156.3
1170	6.0	193.6	6.0	42.8	161.3
1260	6.2	199.7	6.5	41.7	166.0
1350	5.5	200.0	7.0	41.0	169.4
1440	5.4	202.3	7.5	40.4	172.4
1530	4.8	196.0	8.0	40.0	174.2
1620	5.1	196.6	8.5	39.5	175.9
1710	4.8	193.5	9.0	39.1	177.1
1800	5.2	190.3	9.5	38.6	178.0
*****	****	*****	****	*****	*****

0930 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	70.0	0.0		
108	1.6	70.0	0.5	66.5	70.0
216	3.6	72.4	1.0	54.5	71.7
315	3.9	64.2	1.5	49.5	58.5
414	2.8	93.8	2.0	50.0	74.5
513	3.6	121.2	2.5	50.1	85.1
612	6.3	147.6	3.0	48.5	103.0
706	5.9	155.1	3.5	46.7	115.2
801	5.2	167.1	4.0	46.1	124.3
895	5.3	176.8	4.5	45.6	132.6
990	5.2	178.9	5.0	45.0	139.1
1080	6.0	185.5	5.5	44.5	145.9
1170	6.4	199.4	6.0	43.7	154.0
1260	6.0	201.5	6.5	43.0	159.6
1350	5.6	199.6	7.0	42.3	163.8
1440	5.0	197.8	7.5	41.8	166.8
1530	5.4	196.1	8.0	41.1	169.4
1620	5.3	195.5	8.5	40.5	171.5
1710	4.8	193.2	9.0	40.1	173.0
1800	4.2	190.1	9.5	39.9	174.0
1890	5.0	183.2	10.0	39.4	174.6

1000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.6	46.0	0.0		
108	1.4	46.0	0.5	68.8	46.0
216	1.9	79.3	1.0	66.4	65.2
315	3.3	66.7	1.5	58.4	66.0
414	2.0	60.1	2.0	58.4	64.6
513	3.2	125.7	2.5	58.7	80.1
612	4.5	153.2	3.0	58.6	100.2
706	5.8	159.9	3.5	55.5	118.3
801	5.2	171.9	4.0	53.6	130.5
895	4.8	184.3	4.5	52.6	140.2
990	5.7	194.5	5.0	51.2	150.2
1080	5.0	188.2	5.5	49.6	156.0
1170	5.8	197.3	6.0	47.9	162.3
1260	6.4	201.6	6.5	46.1	168.1
1350	5.7	196.5	7.0	44.7	171.5
1440	5.3	194.8	7.5	43.6	173.9
1530	4.4	190.0	8.0	43.0	175.2
1620	4.4	188.8	8.5	42.5	176.2
1710	4.0	188.7	9.0	42.2	177.0
1800	4.5	176.9	9.5	41.7	177.0
1890	4.9	179.9	10.0	41.1	177.2

(0800)SITE 8/8/74

0400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.1	335.0	0.0		
108	0.0	335.0	0.5	90.0	335.0
216	1.8	195.0	1.0	76.0	195.0
315	4.0	190.8	1.5	61.3	192.1
414	6.7	174.5	2.0	48.2	182.6
513	10.2	186.4	2.5	37.2	184.3
612	11.3	188.2	3.0	31.1	185.6
706	12.5	179.3	3.5	27.0	183.9
801	13.6	192.3	4.0	24.1	185.8
895	13.7	198.2	4.5	22.2	188.1
990	14.4	221.4	5.0	21.1	193.4
1080	12.9	186.5	5.5	20.1	192.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0500 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.1	117.0	0.0		
108	0.6	117.3	0.5	80.8	117.4
216	0.9	216.7	1.0	82.4	180.0
315	3.9	176.2	1.5	65.0	177.0
414	7.2	198.8	2.0	49.2	190.0
513	9.1	196.2	2.5	39.2	192.7
612	10.2	202.5	3.0	33.3	195.9
706	9.5	209.7	3.5	30.3	199.1
801	10.1	209.6	4.0	28.0	201.2
895	12.2	208.9	4.5	25.6	202.7
990	16.5	190.7	5.0	22.8	200.2
1080	14.4	206.7	5.5	21.2	201.2
1170	15.6	205.4	6.0	19.8	201.8
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.1	192.0	0.0		
108	0.6	192.0	0.5	80.0	192.0
216	3.5	200.0	1.0	59.9	198.8
315	8.9	194.8	1.5	38.8	196.1
414	12.1	195.9	2.0	28.7	196.0
513	12.0	194.4	2.5	24.7	195.5
612	11.6	192.1	3.0	22.7	194.7
706	10.7	197.5	3.5	21.6	195.2
801	10.8	199.7	4.0	20.8	195.9
895	10.5	202.1	4.5	20.3	196.7
990	10.6	205.4	5.0	19.9	197.7
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0630 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.1	168.0	0.0		
108	0.5	167.4	0.5	82.0	167.5
216	3.1	230.5	1.0	65.2	222.7
315	5.2	214.3	1.5	51.1	217.6
414	8.6	195.5	2.0	39.5	206.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
704	10.3	199.7	3.5	26.3	202.1
798	11.2	200.0	4.0	24.4	201.7
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.2	225.0	0.0		
108	0.4	225.1	0.5	83.4	225.1
216	2.5	257.2	1.0	68.4	252.7
315	4.8	227.9	1.5	54.5	237.1
414	7.2	199.2	2.0	44.9	218.6
513	9.6	194.7	2.5	36.4	208.7
612	9.2	193.5	3.0	32.4	204.4
706	8.2	202.4	3.5	30.3	204.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0730 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.2	206.0	0.0		
108	0.4	206.0	0.5	84.0	206.0
216	2.1	227.7	1.0	71.0	224.5
315	4.0	210.1	1.5	58.4	215.6
414	6.2	201.3	2.0	47.7	208.6
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	170.0	0.0		
108	1.2	169.8	0.5	72.1	159.9
216	3.0	188.0	1.0	60.1	133.0
315	3.5	196.0	1.5	54.0	189.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

ATHENS 7/16/74

1000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.9	3.0	0.0		
108	1.2	2.5	0.5	71.7	2.5
216	1.3	6.9	1.0	71.1	4.8
315	2.5	58.1	1.5	66.9	31.9
414	3.1	35.3	2.0	61.2	33.3
513	3.6	68.6	2.5	57.9	44.5
612	3.4	9.9	3.0	56.1	36.3
706	3.6	87.2	3.5	55.4	46.3
801	4.3	328.7	4.0	56.5	32.6
895	3.4	352.0	4.5	55.7	25.4
990	4.7	353.3	5.0	53.5	20.4
1080	5.0	348.0	5.5	51.4	15.1
1170	5.7	335.1	6.0	49.5	8.8
1260	6.0	341.4	6.5	47.3	4.7
1350	5.3	344.4	7.0	45.8	2.3
1440	5.7	337.5	7.5	44.4	359.5
1530	5.5	327.4	8.0	43.5	356.4
1620	5.4	327.0	8.5	42.7	353.8
1710	4.9	32.3	9.0	42.4	355.6
1800	9.2	292.0	9.5	41.9	349.5
1890	4.1	328.3	10.0	41.7	348.3

1100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.9	52.0	0.0		
108	3.5	52.3	0.5	45.7	52.3
216	3.2	44.6	1.0	46.9	48.6
315	2.3	45.8	1.5	49.2	47.9
414	3.1	26.8	2.0	49.0	42.6
513	2.5	8.0	2.5	50.4	36.8
612	4.6	30.7	3.0	47.4	35.3
706	5.4	35.7	3.5	44.3	35.4
801	4.3	34.7	4.0	43.2	35.3
895	3.5	24.3	4.5	43.1	34.1
990	3.8	354.2	5.0	43.4	30.1
1080	4.5	357.2	5.5	42.9	26.5
1170	4.3	1.1	6.0	42.4	24.0
1260	4.0	2.7	6.5	42.1	22.2
1350	4.3	355.3	7.0	41.8	20.0
1440	4.3	349.5	7.5	41.6	17.7
1530	4.0	339.0	8.0	41.7	15.2
1620	5.0	329.1	8.5	41.6	11.8
1710	5.0	322.4	9.0	41.6	8.4
1800	4.6	320.3	9.5	41.7	5.5
1890	4.4	314.6	10.0	41.9	2.7

1130 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.8	55.0	0.0		
108	2.5	54.8	0.5	55.5	54.8
216	4.2	70.7	1.0	47.5	54.8
315	3.2	45.4	1.5	47.3	58.5
414	1.1	20.6	2.0	52.5	54.8
513	2.7	23.1	2.5	52.9	48.6
612	4.0	41.4	3.0	50.3	46.9
706	4.0	45.3	3.5	48.3	46.6
801	4.0	43.4	4.0	46.9	46.1
895	4.1	29.6	4.5	45.9	43.8
990	4.0	16.0	5.0	45.4	40.5
1080	4.6	15.7	5.5	44.4	37.5
1170	5.1	16.5	6.0	43.2	35.0
1260	4.1	21.5	6.5	42.7	33.8
1350	3.5	9.6	7.0	42.7	32.1
1440	4.0	5.0	7.5	42.5	30.1
1530	3.9	355.4	8.0	42.5	27.8
1620	4.2	332.1	8.5	42.9	24.4
1710	4.5	327.3	9.0	43.2	20.8
1800	5.0	331.8	9.5	43.1	17.4
1890	5.8	324.7	10.0	42.9	13.5

1200 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.9	77.0	0.0		
108	3.3	76.7	0.5	47.3	75.7
216	2.8	58.1	1.0	49.9	58.2
315	2.9	56.0	1.5	49.8	54.3
414	2.2	38.7	2.0	51.7	59.3
513	2.5	39.0	2.5	52.1	55.5
612	3.1	52.3	3.0	51.2	54.9
706	3.4	39.6	3.5	50.1	52.3
801	3.7	42.8	4.0	48.8	50.8
*****	****	*****	****	*****	*****
990	4.6	37.3	5.0	45.5	47.0
1080	4.8	29.7	5.5	44.2	44.8
1170	4.2	22.8	6.0	43.6	42.6
1260	4.4	20.4	6.5	43.0	40.5
1350	4.1	15.7	7.0	42.7	38.5
1440	3.4	11.7	7.5	42.8	36.8
1530	3.8	9.8	8.0	42.7	35.0
1620	4.0	4.0	8.5	42.6	33.0
1710	4.2	343.4	9.0	42.8	30.0
1800	6.5	332.4	9.5	42.6	25.2
1890	5.2	344.3	10.0	42.3	22.4

1230 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.2	62.0	0.0		
108	2.8	62.4	0.5	52.0	62.4
216	4.1	66.1	1.0	46.1	64.6
315	4.8	49.2	1.5	42.0	58.3
414	3.5	40.7	2.0	42.6	54.3
513	2.7	42.6	2.5	44.0	52.5
612	2.9	39.6	3.0	44.8	50.7
706	2.4	35.4	3.5	45.8	49.1
*****	****	*****	****	*****	*****
895	4.2	22.5	4.5	44.3	42.1
990	4.2	25.4	5.0	43.6	40.1
1080	3.6	29.4	5.5	43.3	39.1
1170	4.2	32.0	6.0	42.6	38.4
1260	4.1	21.1	6.5	42.2	36.9
1350	3.9	25.2	7.0	41.9	36.0
1440	3.5	18.8	7.5	41.9	34.9
1530	2.8	8.2	8.0	42.3	33.6
1620	3.4	6.8	8.5	42.4	32.1
1710	4.1	8.1	9.0	42.2	30.6
1800	4.9	354.1	9.5	41.9	28.1
1890	5.6	357.0	10.0	41.3	25.8

1305 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	18.0	0.0		
108	1.1	17.5	0.5	72.3	17.5
216	1.5	65.9	1.0	71.7	44.8
315	1.9	23.6	1.5	68.1	35.4
414	2.5	29.7	2.0	64.2	33.3
513	2.4	24.3	2.5	62.0	30.9
612	2.6	35.7	3.0	60.1	32.0
706	3.1	38.2	3.5	57.8	33.3
801	3.2	46.4	4.0	56.1	35.6
895	3.1	43.1	4.5	54.9	36.7
990	3.3	35.2	5.0	53.7	36.5
1080	4.1	32.3	5.5	51.8	35.9
1170	3.8	30.8	6.0	50.5	35.3
1260	2.5	31.1	6.5	50.5	35.0
1350	2.0	25.7	7.0	50.9	34.5
1440	2.8	11.4	7.5	50.8	32.9
1530	4.1	0.8	8.0	50.1	30.0
1620	3.8	350.8	8.5	49.8	27.0
1710	3.7	343.2	9.0	49.7	24.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

ATHENS 7/16/74

1330 EDT						1408 EDT					
HGT	SPD	DIR	TIME	ELV	AZ	HGT	SPD	DIR	TIME	ELV	AZ
2	2.0	70.0	0.0			2	2.6	17.0	0.0		
108	3.8	70.4	0.5	43.1	70.4	108	5.1	16.6	0.5	35.2	16.6
216	4.5	59.1	1.0	40.8	54.3	216	6.7	14.5	1.0	31.4	15.4
315	3.2	348.3	1.5	47.5	45.6	315	5.5	24.2	1.5	31.3	18.2
414	4.0	28.5	2.0	45.6	40.6	414	4.4	30.5	2.0	32.6	20.7
513	4.1	39.7	2.5	44.1	40.4	513	6.2	36.0	2.5	31.8	24.1
612	1.3	0.9	3.0	47.5	37.8	612	3.4	35.9	3.0	33.4	25.4
706	3.8	9.3	3.5	46.8	33.1	706	3.2	32.8	3.5	34.6	26.1
801	4.9	10.7	4.0	45.0	29.1	801	2.2	44.6	4.0	36.4	27.2
895	4.2	6.5	4.5	44.3	26.1	895	2.6	36.2	4.5	37.6	27.8
990	4.1	16.8	5.0	43.6	25.0	990	2.6	116.4	5.0	40.3	31.7
1080	3.7	17.7	5.5	43.2	24.3	1080	1.2	124.3	5.5	42.8	33.4
1170	3.8	35.3	6.0	42.8	25.3	1170	0.8	166.1	6.0	45.5	34.3
1260	3.4	33.3	6.5	42.7	25.9	1260	1.8	120.3	6.5	47.5	36.9
1350	3.6	34.0	7.0	42.5	26.5	1350	2.2	81.1	7.0	48.3	39.1
1440	3.8	26.5	7.5	42.2	26.5	*****	****	*****	****	*****	*****
1530	4.3	34.4	8.0	41.7	27.1	*****	****	*****	****	*****	*****
1620	2.7	33.6	8.5	42.0	27.4	*****	****	*****	****	*****	*****
1710	2.5	17.3	9.0	42.4	27.0	*****	****	*****	****	*****	*****
1800	3.4	359.2	9.5	42.5	25.6	*****	****	*****	****	*****	*****
1890	4.5	5.0	10.0	42.1	24.3	*****	****	*****	****	*****	*****

ATHENS 7/17/74

1130 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.8	90.0	0.0		
*****	****	*****	****	*****	*****
216	1.0	141.9	1.0	75.0	142.0
315	0.3	299.4	1.5	81.2	146.5
414	0.4	262.1	2.0	83.8	159.8
513	1.6	171.8	2.5	79.8	155.0
612	4.0	164.7	3.0	70.8	155.3
706	4.6	164.2	3.5	63.5	154.9
801	3.1	179.6	4.0	61.0	158.0
895	2.8	193.5	4.5	59.8	172.0
990	3.8	212.5	5.0	58.3	178.9
1080	3.9	240.1	5.5	58.0	187.5
1170	3.7	245.1	6.0	57.7	194.7
1260	2.9	244.2	6.5	57.6	199.5
1350	2.7	243.7	7.0	57.5	203.3
1440	2.5	239.2	7.5	57.4	206.0
1530	3.1	225.9	8.0	56.6	207.8
1620	2.9	211.5	8.5	55.9	208.1
1710	3.3	195.9	9.0	55.1	207.1
1800	2.9	176.9	9.5	54.8	205.1
1890	4.1	175.8	10.0	53.9	202.6

1400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.3	280.0	0.0		
108	4.2	273.8	0.5	40.6	273.8
216	4.9	272.8	1.0	38.4	273.3
315	4.3	257.4	1.5	38.3	268.2
414	2.9	252.4	2.0	40.6	265.4
513	3.1	238.8	2.5	42.1	261.2
612	3.9	242.9	3.0	42.0	258.1
706	4.2	239.2	3.5	41.5	255.2
801	3.5	230.0	4.0	41.8	252.3
895	3.1	227.2	4.5	42.4	250.0
990	3.5	220.0	5.0	42.7	247.2
1080	4.1	229.6	5.5	42.2	245.4
1170	3.4	230.1	6.0	42.2	244.2
1260	2.7	220.1	6.5	42.7	242.8
1350	2.6	221.8	7.0	43.2	241.7
1440	3.6	198.2	7.5	43.5	238.9
1530	3.0	194.8	8.0	44.0	236.6
1620	4.3	184.2	8.5	44.2	233.1
1710	4.5	184.6	9.0	44.2	229.8
1800	5.4	167.0	9.5	44.4	225.3
1890	5.5	159.0	10.0	44.7	220.8

1500 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.6	230.0	0.0		
108	2.1	227.4	0.5	59.3	227.4
216	3.5	265.4	1.0	53.3	251.2
315	2.6	251.2	1.5	52.9	251.2
414	2.2	282.8	2.0	54.4	257.9
513	2.1	272.4	2.5	55.2	260.4
612	2.3	337.6	3.0	58.3	270.7
706	0.4	313.5	3.5	61.3	271.9
801	2.8	308.5	4.0	60.3	278.2
895	3.6	287.6	4.5	57.8	280.0
990	3.6	279.3	5.0	55.8	279.9
1080	2.6	278.9	5.5	55.2	279.8
1170	1.7	264.3	6.0	55.6	278.8
1260	1.7	246.5	6.5	56.2	277.0
1350	2.1	209.5	7.0	57.2	273.1
1440	3.1	191.9	7.5	58.3	267.1
1530	3.5	170.4	8.0	60.0	260.4
1620	5.3	178.9	8.5	60.4	250.6
1710	5.8	174.2	9.0	60.3	240.7
1800	6.0	173.0	9.5	59.6	231.7
*****	****	*****	****	*****	*****

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.4	305.0	0.0		
108	2.2	276.5	0.5	58.7	276.5
216	2.1	277.9	1.0	59.1	277.2
315	2.2	284.6	1.5	58.3	279.7
414	1.7	279.2	2.0	59.4	279.6
513	2.1	286.5	2.5	59.1	281.0
612	3.2	274.3	3.0	56.6	279.4
706	2.6	266.2	3.5	55.9	277.3
801	2.7	264.3	4.0	55.1	275.4
895	2.7	259.4	4.5	54.6	273.4
990	2.4	277.3	5.0	54.4	273.8
1080	2.2	262.0	5.5	54.4	272.8
1170	1.8	246.2	6.0	54.9	271.1
1260	2.2	226.3	6.5	55.4	258.1
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

ATHENS 7/18/74

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.1	180.0	0.0		
108	2.5	209.2	0.5	55.0	209.2
216	4.0	191.4	1.0	48.2	198.3
315	2.4	211.2	1.5	50.0	201.8
414	7.3	218.5	2.0	40.8	209.4
513	3.5	252.0	2.5	42.4	215.7
612	4.9	244.4	3.0	41.4	222.3
706	5.1	250.4	3.5	40.3	227.3
801	4.1	243.8	4.0	40.1	229.4
895	3.9	237.6	4.5	40.0	230.3
990	4.1	224.4	5.0	39.6	229.7
1080	4.7	228.8	5.5	39.1	229.6
1170	5.0	239.5	6.0	38.4	230.5
1260	4.7	245.6	6.5	38.0	231.9
1350	5.6	241.5	7.0	37.2	232.8
1440	6.3	261.8	7.5	36.5	235.5
1530	3.8	278.7	8.0	37.0	237.7
1620	3.7	276.5	8.5	37.4	239.6
1710	4.2	270.9	9.0	37.5	241.3
1800	4.6	279.9	9.5	37.6	243.4
*****	****	*****	****	*****	*****

1700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.8	195.0	0.0		
108	2.5	216.7	0.5	55.0	216.7
216	1.8	211.3	1.0	58.8	214.4
315	3.5	217.3	1.5	53.1	215.7
414	4.4	233.7	2.0	48.7	222.1
513	5.8	253.4	2.5	44.6	232.1
612	5.0	233.6	3.0	41.1	232.5
706	5.4	232.0	3.5	39.3	232.4
801	4.5	238.4	4.0	38.8	233.2
895	3.0	230.8	4.5	39.5	233.0
990	2.3	256.9	5.0	40.6	234.5
1080	2.1	315.9	5.5	42.8	237.6
1170	2.1	283.9	6.0	44.0	239.8
1260	2.5	286.7	6.5	44.9	242.3
1350	3.3	256.3	7.0	44.8	243.3
1440	4.0	278.0	7.5	44.6	246.0
1530	3.8	287.9	8.0	44.7	248.8
1620	3.6	288.0	8.5	44.8	251.2
1710	3.6	285.0	9.0	44.8	253.2
1800	3.5	277.9	9.5	44.7	254.6
1890	3.2	283.6	10.0	44.8	256.0

1800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.0	225.0	0.0		
108	2.4	240.5	0.5	56.0	240.5
216	2.2	252.2	1.0	57.3	246.1
315	4.1	245.0	1.5	50.2	245.6
414	1.6	250.1	2.0	53.1	246.3
513	3.2	235.2	2.5	51.7	243.7
612	3.0	244.2	3.0	51.0	243.8
706	3.2	253.7	3.5	50.1	245.4
801	3.3	259.5	4.0	49.4	247.4
895	3.6	261.4	4.5	48.5	249.3
990	3.8	268.6	5.0	47.7	251.7
1080	4.8	269.3	5.5	46.1	254.1
1170	2.8	288.8	6.0	46.5	256.6
1260	4.3	281.0	6.5	45.7	259.1
1350	4.4	284.4	7.0	45.0	261.5
1440	3.5	288.4	7.5	44.9	263.4
1530	3.2	290.2	8.0	45.0	265.0
1620	3.0	307.7	8.5	45.4	267.2
1710	2.5	311.6	9.0	46.0	269.0
1800	2.6	319.0	9.5	46.6	271.0
1890	3.0	329.7	10.0	47.2	273.5

1900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.7	225.0	0.0		
108	2.3	239.8	0.5	57.3	239.8
216	4.4	235.8	1.0	47.0	237.2
315	1.3	239.1	1.5	52.8	237.5
414	8.6	240.0	2.0	39.8	238.8
513	5.5	244.4	2.5	37.8	240.2
612	5.9	247.3	3.0	36.2	241.7
706	4.7	249.3	3.5	35.9	242.8
*****	****	*****	****	*****	*****
895	5.0	253.1	4.5	35.2	245.2
990	4.5	252.5	5.0	35.2	245.9
1080	4.7	258.0	5.5	35.0	247.0
1170	4.7	263.3	6.0	35.2	249.9
1260	3.7	273.9	6.5	35.6	251.5
1350	4.1	276.7	7.0	35.8	253.1
1440	3.6	287.7	7.5	36.2	255.0
1530	4.1	291.1	8.0	36.5	257.0
1620	3.9	309.2	8.5	37.1	259.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

2000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	3.6	200.0	0.0		
108	2.9	228.2	0.5	50.9	228.2
216	5.5	231.0	1.0	40.6	230.0
315	4.8	229.4	1.5	38.6	229.8
414	4.6	226.3	2.0	37.9	228.9
513	4.2	229.4	2.5	37.9	229.0
612	4.4	232.6	3.0	37.7	229.6
706	4.4	230.3	3.5	37.4	229.7
801	3.9	228.8	4.0	37.6	229.6
895	3.7	233.8	4.5	37.9	230.0
990	3.2	236.6	5.0	38.5	230.5
1080	3.3	235.9	5.5	38.8	230.9
1170	2.3	251.4	6.0	39.7	231.9
1260	3.0	257.6	6.5	40.2	233.4
1350	3.0	269.1	7.0	40.6	235.3
1440	3.3	294.7	7.5	41.7	238.3
1530	4.2	295.7	8.0	42.2	241.9
1620	4.2	304.5	8.5	42.8	245.6
1710	4.4	317.1	9.0	43.6	249.6
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

2030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	195.0	0.0		
108	3.4	184.3	0.5	46.5	184.3
216	5.4	187.6	1.0	39.1	186.3
315	4.1	193.9	1.5	39.1	188.7
414	4.0	190.4	2.0	39.2	189.1
513	5.8	224.5	2.5	38.0	197.9
612	4.5	215.7	3.0	37.9	200.9
706	3.7	222.8	3.5	38.4	203.6
801	4.3	232.0	4.0	38.5	207.1
895	4.0	241.0	4.5	38.9	210.6
990	4.6	243.7	5.0	38.9	214.1
1080	3.9	249.1	5.5	39.2	217.0
1170	3.6	252.9	6.0	39.5	219.6
1260	3.1	270.2	6.5	40.5	222.4
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

ATHENS 7/18/74

2100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.8	170.0	0.0		
108	3.6	202.8	0.5	44.9	202.8
216	8.0	201.6	1.0	31.9	202.0
315	5.1	221.5	1.5	32.6	207.9
414	7.1	213.2	2.0	30.4	209.5
513	7.4	217.9	2.5	29.0	211.5
612	6.1	223.7	3.0	29.0	213.5
706	5.5	226.7	3.5	29.2	215.2
801	5.1	233.1	4.0	29.6	217.1
895	5.7	232.0	4.5	29.6	218.7
990	5.0	231.5	5.0	29.9	219.8
1080	4.4	236.9	5.5	30.3	221.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

ATHENS 7/19/74

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.7	60.0	0.0		
108	2.2	145.0	0.5	58.8	145.1
216	4.4	133.3	1.0	47.9	137.3
315	5.3	105.6	1.5	42.7	123.1
414	3.6	127.2	2.0	42.7	124.1
513	3.4	144.4	2.5	43.3	127.8
612	1.3	110.7	3.0	46.5	126.7
706	1.6	6.4	3.5	51.7	122.4
801	2.7	2.5	4.0	56.9	114.6
895	2.4	23.1	4.5	59.6	105.6
990	3.0	338.3	5.0	64.4	97.9
1080	3.6	341.2	5.5	68.0	85.0
1170	4.6	341.5	6.0	70.0	56.6
1260	5.4	341.6	6.5	69.6	46.5
1350	5.6	336.2	7.0	67.9	29.8
1440	5.6	332.4	7.5	65.6	17.4
1530	6.1	332.3	8.0	62.6	8.0
1620	6.3	327.0	8.5	59.8	0.5
1710	6.3	319.7	9.0	57.4	354.0
1800	6.5	320.4	9.5	55.0	349.1
1890	6.5	316.7	10.0	52.9	344.9

1700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.3	50.0	0.0		
108	2.4	65.6	0.5	56.7	65.6
216	4.5	106.5	1.0	48.1	92.7
315	2.7	102.8	1.5	49.0	95.7
414	2.2	142.3	2.0	52.1	104.2
513	0.9	181.0	2.5	57.3	108.7
612	0.8	13.8	3.0	61.8	104.3
706	1.9	328.3	3.5	67.7	96.4
801	3.2	320.7	4.0	73.9	79.6
895	4.2	348.2	4.5	73.8	50.9
990	3.5	330.8	5.0	73.3	30.5
1080	10.1	292.9	5.5	69.9	341.1
1170	4.2	315.4	6.0	66.4	335.0
1260	5.5	341.9	6.5	61.8	336.7
1350	6.1	309.6	7.0	58.0	331.0
1440	5.5	324.3	7.5	55.0	329.9
1530	5.7	322.3	8.0	52.4	328.8
1620	5.6	323.9	8.5	50.3	328.2
1710	5.5	321.7	9.0	48.6	327.5
1800	5.6	318.4	9.5	47.1	326.6
1890	5.2	313.6	10.0	46.0	325.5

1800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	263.0	0.0		
108	0.4	262.5	0.5	83.7	262.5
216	0.7	359.0	1.0	83.8	328.7
315	0.9	22.8	1.5	82.0	357.4
414	1.7	84.5	2.0	80.6	44.3
513	1.0	97.1	2.5	80.0	60.0
612	1.3	102.4	3.0	78.8	72.2
706	1.9	150.2	3.5	78.4	95.4
801	2.2	179.3	4.0	78.3	119.0
895	0.7	199.6	4.5	79.2	126.3
990	0.3	90.1	5.0	79.8	124.6
1080	1.1	20.5	5.5	80.9	113.6
1170	1.7	330.0	6.0	83.4	100.7
1260	2.6	323.7	6.5	85.7	66.8
1350	3.0	318.5	7.0	85.4	14.5
1440	4.0	324.2	7.5	81.8	348.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.6	305.0	0.0		
108	1.2	304.6	0.5	71.8	304.6
216	1.7	313.1	1.0	68.4	309.6
315	1.3	318.7	1.5	68.4	312.5
414	1.9	262.2	2.0	68.1	297.4
513	1.8	256.6	2.5	67.6	287.9
612	2.9	240.6	3.0	65.8	274.6
706	2.9	228.3	3.5	64.3	264.1
801	1.8	259.6	4.0	63.9	253.5
895	0.6	258.8	4.5	65.4	253.3
990	1.8	299.6	5.0	65.3	267.4
1080	3.5	308.4	5.5	63.5	274.7
1170	4.1	309.7	6.0	61.2	281.0
1260	5.0	306.8	6.5	58.2	285.8
1350	6.0	301.4	7.0	54.7	288.7
1440	5.5	301.0	7.5	52.2	290.5
1530	6.0	304.2	8.0	49.8	292.4
1620	6.4	321.7	8.5	47.9	296.1
1710	6.6	324.6	9.0	46.2	299.4
1800	6.2	321.5	9.5	44.8	301.4

2000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.6	232.0	0.0		
108	0.3	231.8	0.5	84.7	231.8
216	1.6	279.9	1.0	75.6	272.2
315	1.4	267.0	1.5	72.6	269.9
414	3.2	241.7	2.0	65.5	256.0
513	4.9	235.0	2.5	57.2	246.8
612	3.9	248.7	3.0	53.9	247.3
706	3.4	274.4	3.5	52.6	252.3
801	4.5	274.5	4.0	50.2	256.7
895	5.1	285.0	4.5	48.0	261.9
990	5.6	301.6	5.0	46.4	268.5
1080	5.5	306.7	5.5	45.1	273.9
1170	6.3	323.3	6.0	44.1	280.7
1260	6.0	320.4	6.5	43.0	285.6
1350	5.8	323.1	7.0	42.1	289.7
1440	6.5	314.3	7.5	40.7	292.5
1530	6.8	320.1	8.0	39.5	295.4
1620	6.4	326.5	8.5	38.7	298.2
1710	6.0	327.3	9.0	38.1	300.5
1800	6.0	326.7	9.5	37.5	302.2

2030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.6	154.0	0.0		
108	0.9	153.6	0.5	75.3	153.7
216	0.2	171.4	1.0	81.2	156.5
315	0.5	192.6	1.5	81.8	166.9
414	3.1	215.8	2.0	73.0	200.1
513	4.0	235.5	2.5	65.3	217.4
612	3.0	247.5	3.0	62.6	225.6
706	3.1	269.3	3.5	61.1	235.1
801	4.0	283.9	4.0	59.2	246.0
895	5.6	290.7	4.5	55.8	257.2
990	5.6	288.0	5.0	52.6	263.7
1080	4.8	301.1	5.5	51.0	269.4
1170	5.5	311.4	6.0	49.4	275.7
1260	6.0	322.6	6.5	48.0	282.4
1350	6.1	324.3	7.0	46.6	287.9
1440	3.8	341.4	7.5	46.9	291.8
1530	6.2	324.1	8.0	45.4	295.6
1620	5.3	330.5	8.5	44.6	298.8
1710	5.9	330.8	9.0	43.6	301.8
1800	6.6	330.8	9.5	42.6	304.6

ATHENS 7/19/74

2100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.5	208.0	0.0		
108	1.3	207.8	0.5	69.9	207.8
216	1.0	216.3	1.0	72.1	211.5
315	2.6	216.5	1.5	65.1	214.1
414	3.9	225.0	2.0	57.8	218.9
513	3.0	237.1	2.5	55.8	223.6
612	3.7	258.7	3.0	54.1	231.8
706	5.8	270.7	3.5	50.2	242.5
801	5.8	276.3	4.0	47.3	250.0
895	4.4	285.7	4.5	46.5	255.2
990	4.9	304.2	5.0	46.1	261.9
1080	5.9	304.1	5.5	44.7	258.2
1170	6.1	300.5	6.0	43.1	272.7
1260	5.7	310.3	6.5	42.2	277.0
1350	4.5	314.0	7.0	42.0	280.1
1440	4.7	319.7	7.5	41.8	283.3
1530	5.7	321.8	8.0	41.2	286.8
1620	5.8	323.9	8.5	40.6	290.0
1710	6.8	321.8	9.0	39.6	293.0
1800	7.9	335.7	9.5	38.7	297.1
1890	7.8	334.1	10.0	37.8	300.4

ATHENS 8/6/74

0450 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	49.0	0.0		
108	4.0	50.8	0.5	42.0	50.8
216	5.9	56.5	1.0	36.1	54.2
315	2.5	100.2	1.5	41.8	63.0
414	2.8	181.2	2.0	52.2	76.3
513	5.2	202.0	2.5	62.9	105.0
612	6.5	210.6	3.0	65.3	145.8
706	5.7	217.0	3.5	62.0	172.2
801	6.8	207.7	4.0	55.3	184.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0505 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.1	40.0	0.0		
108	3.7	53.0	0.5	43.9	53.0
215	7.5	55.4	1.0	32.6	54.6
315	2.1	94.7	1.5	39.0	60.7
414	2.0	181.0	2.0	48.8	68.9
513	5.0	132.2	2.5	48.8	86.1
612	7.7	237.0	3.0	66.1	110.5
705	5.0	218.3	3.5	69.3	143.1
801	5.7	201.9	4.0	64.3	165.6
895	4.8	213.6	4.5	61.1	178.2
990	4.3	211.6	5.0	58.5	184.9
1080	6.9	204.3	5.5	53.3	189.8
1170	5.7	212.4	6.0	50.5	193.7
1260	5.4	217.1	6.5	48.5	197.0
1350	5.5	220.0	7.0	46.8	199.9
1440	5.9	219.0	7.5	45.1	202.2
1530	5.9	206.7	8.0	43.5	202.7
1620	5.8	201.7	8.5	42.2	202.6
1710	6.0	201.5	9.0	41.0	202.5
1800	4.9	201.1	9.5	40.4	202.4
1890	4.9	205.5	10.0	39.9	202.6

0600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.8	40.0	0.0		
108	2.3	42.0	0.5	57.0	42.0
*****	****	*****	****	*****	*****
315	5.9	57.3	1.5	36.8	54.8
414	1.1	102.9	2.0	43.0	58.0
513	1.0	292.2	2.5	50.2	54.8
612	5.7	204.8	3.0	64.5	71.8
*****	****	*****	****	*****	*****
801	4.3	223.4	4.0	80.2	133.0
895	3.6	214.7	4.5	78.2	167.7
*****	****	*****	****	*****	*****
1080	4.9	205.3	5.5	67.1	190.8
1170	5.1	212.5	6.0	62.6	196.2
1260	5.0	219.9	6.5	59.5	200.9
1350	5.3	225.0	7.0	56.6	205.1
1440	5.4	214.9	7.5	53.9	206.6
1530	5.7	210.2	8.0	51.4	207.1
1620	5.7	207.1	8.5	49.3	207.1
1710	5.7	219.9	9.0	47.6	208.5
1800	5.4	218.2	9.5	46.3	209.4
1890	6.1	224.2	10.0	44.9	210.8

0638 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.7	40.0	0.0		
108	3.4	62.3	0.5	46.7	52.3
216	7.4	58.6	1.0	33.7	59.8
315	8.2	64.8	1.5	28.9	62.0
414	3.7	84.8	2.0	31.5	55.7
513	1.7	151.8	2.5	37.0	59.9
612	3.1	205.9	3.0	44.8	76.0
706	4.6	213.4	3.5	53.5	86.3
801	3.0	206.9	4.0	58.9	95.5
895	2.2	193.7	4.5	61.9	103.3
990	2.1	196.6	5.0	64.2	110.9
1080	3.7	204.0	5.5	65.8	124.2
1170	4.3	214.5	6.0	66.8	139.1
1260	4.6	223.5	6.5	67.1	153.9
1350	4.9	227.8	7.0	66.4	167.7
1440	5.0	227.4	7.5	64.8	178.7
1530	5.4	217.8	8.0	62.1	185.9
1620	6.0	215.9	8.5	59.1	191.2
1710	5.7	215.6	9.0	56.6	194.8
1800	5.5	214.6	9.5	54.5	197.3
1890	5.9	224.2	10.0	52.6	200.5

0700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	360.0	0.0		
108	3.6	61.2	0.5	44.9	61.2
216	7.6	59.7	1.0	32.6	60.2
315	5.9	68.0	1.5	31.5	62.9
414	1.5	122.1	2.0	37.6	66.9
513	2.6	206.6	2.5	46.9	73.0
612	3.9	200.4	3.0	55.6	85.9
705	2.7	199.7	3.5	60.9	96.8
801	0.9	201.1	4.0	64.2	100.8
895	4.2	194.6	4.5	66.0	119.0
990	3.8	223.6	5.0	68.7	135.4
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0730 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	360.0	0.0		
108	3.1	58.2	0.5	49.1	58.2
216	7.6	62.2	1.0	33.8	61.1
315	5.4	73.3	1.5	33.1	65.2
414	1.5	162.4	2.0	40.8	70.4
513	3.3	193.2	2.5	49.8	81.6
612	4.0	184.2	3.0	55.3	97.7
706	3.1	182.9	3.5	58.0	109.9
801	2.4	179.1	4.0	59.5	118.1
895	2.4	205.6	4.5	61.8	126.6
990	3.5	232.9	5.0	65.0	139.2
1080	4.5	219.7	5.5	65.1	154.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

ATHENS 8/6/74

0800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.5	40.0	0.0		
108	4.3	63.3	0.5	39.9	63.3
216	7.3	60.1	1.0	31.8	55.1
315	2.6	98.0	1.5	37.1	71.0
414	2.3	152.4	2.0	43.8	79.9
513	2.7	139.1	2.5	47.0	88.3
612	3.3	171.6	3.0	50.8	99.5
706	3.0	200.9	3.5	55.3	110.0
801	1.3	337.0	4.0	59.9	106.6
895	5.6	221.0	4.5	64.7	127.6
990	3.4	235.3	5.0	67.8	141.4
1080	3.7	235.9	5.5	69.2	156.9
1170	5.1	245.9	6.0	69.4	177.1
1260	2.5	214.2	6.5	68.3	182.2
1350	4.4	217.1	7.0	65.5	189.3
1440	4.9	215.7	7.5	62.5	194.3
1530	5.1	220.6	8.0	59.8	198.7
1620	5.0	219.1	8.5	57.5	201.6
1710	4.3	221.8	9.0	56.0	203.8
1800	7.4	225.8	9.5	52.9	207.3
1890	4.6	198.6	10.0	51.6	206.5

0830 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.6	40.0	0.0		
108	4.7	58.1	0.5	37.5	58.1
216	8.1	68.3	1.0	29.5	64.6
315	2.3	110.5	1.5	36.0	71.3
414	2.9	136.5	2.0	41.0	80.8
513	3.1	151.2	2.5	44.9	90.6
612	3.4	166.2	3.0	48.1	101.0
706	3.0	181.9	3.5	51.1	109.9
801	1.6	174.6	4.0	53.5	114.2
895	2.6	212.8	4.5	56.8	121.7
990	2.6	208.9	5.0	59.0	129.2
1080	2.5	221.7	5.5	61.1	136.4
1170	2.7	233.9	6.0	63.2	144.1
1260	3.4	237.9	6.5	64.8	154.0
1350	3.6	227.0	7.0	64.9	163.3
1440	4.1	212.5	7.5	63.5	170.7
1530	4.9	208.9	8.0	61.3	176.9
1620	5.0	207.8	8.5	59.1	181.4
1710	5.4	205.6	9.0	56.8	184.8
1800	5.3	202.8	9.5	54.8	187.0
1890	4.5	212.5	10.0	53.6	189.4

0900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.4	40.0	0.0		
108	3.1	50.0	0.5	49.5	50.0
216	5.0	84.3	1.0	42.9	71.4
315	2.9	119.3	1.5	46.7	83.8
414	3.1	137.1	2.0	48.9	95.9
513	3.1	146.6	2.5	50.3	105.6
612	3.9	181.4	3.0	52.6	119.5
706	4.1	186.1	3.5	53.2	131.8
801	3.6	183.0	4.0	53.1	139.8
895	3.5	182.0	4.5	52.7	145.7
990	2.4	185.3	5.0	53.3	149.2
1080	2.0	192.8	5.5	54.1	152.2
1170	2.6	218.9	6.0	55.1	157.3
1260	2.8	223.4	6.5	55.9	162.4
1350	3.0	212.6	7.0	55.9	166.8
1440	3.8	208.5	7.5	55.2	171.1
1530	2.9	224.2	8.0	55.4	174.9
1620	5.7	195.3	8.5	53.1	177.7
1710	4.5	195.8	9.0	51.6	179.5
1800	5.4	198.0	9.5	50.2	181.4
1890	5.5	202.0	10.0	48.8	183.4

0930 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.9	40.0	0.0		
108	5.1	37.1	0.5	35.0	37.1
216	4.1	59.3	1.0	38.5	46.9
315	2.4	147.2	1.5	49.6	52.0
414	2.9	145.8	2.0	54.9	79.5
513	3.3	138.0	2.5	55.5	93.3
612	3.6	139.3	3.0	54.7	103.5
706	4.0	132.4	3.5	52.6	109.6
801	4.3	134.2	4.0	50.5	114.3
895	3.4	141.3	4.5	50.0	117.8
990	3.0	183.5	5.0	51.3	123.8
1080	2.5	198.0	5.5	52.9	128.9
1170	2.4	202.2	6.0	54.3	133.7
1260	2.6	212.3	6.5	55.7	138.8
1350	3.1	210.3	7.0	56.5	144.5
1440	4.1	204.8	7.5	56.3	150.9
1530	4.1	197.8	8.0	55.6	155.8
1620	4.3	195.0	8.5	54.6	159.9
1710	4.9	187.8	9.0	53.1	163.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.6	360.0	0.0		
108	2.2	23.8	0.5	59.0	23.8
216	2.2	33.9	1.0	59.0	28.9
315	0.1	129.1	1.5	67.7	30.4
414	2.2	178.1	2.0	78.9	56.2
513	2.5	168.9	2.5	80.4	109.3
612	4.0	158.8	3.0	72.9	138.3
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
895	4.3	158.4	4.5	57.5	151.9
990	3.4	160.5	5.0	55.9	153.2
1080	3.6	166.9	5.5	54.3	155.1
1170	3.3	186.1	6.0	53.6	158.5
1260	2.8	197.1	6.5	53.6	161.7
1350	3.4	207.6	7.0	53.4	165.9
1440	4.1	204.6	7.5	52.6	169.9
1530	4.5	198.9	8.0	51.4	173.0
1620	4.8	182.4	8.5	49.9	174.0
1710	5.5	182.2	9.0	48.2	174.9
1800	5.1	184.8	9.5	47.0	175.8
1890	4.6	189.0	10.0	46.2	176.8

ATHENS 8/7/74

0431 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.9	47.0	0.0		
108	1.3	46.8	0.5	70.5	46.8
216	3.2	143.2	1.0	65.5	120.5
315	4.9	142.1	1.5	52.5	133.5
414	6.1	144.4	2.0	44.5	138.2
513	7.6	144.4	2.5	38.4	140.4
*****	****	*****	****	*****	*****
706	8.7	159.2	3.5	31.5	148.8
801	8.1	169.7	4.0	30.1	152.4
895	7.6	182.2	4.5	29.5	155.5
990	7.0	189.1	5.0	29.3	160.2
1080	8.1	192.8	5.5	28.7	164.0
1170	7.9	198.0	6.0	28.3	167.5
1260	8.4	199.5	6.5	27.8	170.7
1350	7.8	195.8	7.0	27.4	172.9
1440	7.3	191.1	7.5	27.1	174.3
1530	7.4	189.4	8.0	26.8	175.4
1620	7.5	188.4	8.5	26.5	176.3
1710	7.3	193.8	9.0	26.3	177.4
1800	6.2	187.2	9.5	26.3	177.9
1890	6.1	175.7	10.0	26.3	177.8

0500 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.8	183.0	0.0		
108	2.8	182.5	0.5	52.5	182.5
216	7.7	124.0	1.0	37.3	138.5
315	8.7	153.7	1.5	30.3	145.8
414	5.5	146.2	2.0	30.5	145.9
513	10.9	149.3	2.5	26.5	147.0
612	10.5	150.8	3.0	24.5	147.9
706	9.2	155.5	3.5	23.6	149.2
801	9.8	162.2	4.0	22.8	151.2
895	8.3	170.5	4.5	22.7	153.4
990	8.2	177.2	5.0	22.7	155.8
1080	7.6	185.0	5.5	22.8	158.3
1170	8.1	194.6	6.0	22.9	161.3
1260	10.1	195.0	6.5	22.6	164.5
1350	10.3	197.0	7.0	22.3	167.4
1440	8.9	203.8	7.5	22.3	170.0
1530	7.7	200.3	8.0	22.4	171.8
1620	7.4	199.1	8.5	22.5	173.3
1710	7.1	195.1	9.0	22.6	174.4
1800	6.7	187.4	9.5	22.7	175.0
1890	6.6	186.4	10.0	22.8	175.5

0600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	170.0	0.0		
108	4.7	155.9	0.5	37.5	156.0
216	7.8	159.6	1.0	29.9	158.3
315	7.0	161.0	1.5	28.3	159.3
414	10.2	144.9	2.0	25.1	154.4
513	11.6	150.4	2.5	22.6	153.3
612	10.5	159.1	3.0	21.6	154.5
706	11.5	157.2	3.5	20.5	155.0
801	9.2	155.7	4.0	20.3	155.1
895	8.6	161.6	4.5	20.3	155.8
990	7.3	169.1	5.0	20.6	156.9
1080	6.9	177.8	5.5	20.9	158.4
1170	7.7	187.2	6.0	21.1	160.5
1260	8.7	196.2	6.5	21.2	163.2
1350	8.3	202.2	7.0	21.4	165.8
1440	7.5	206.1	7.5	21.7	168.1
1530	7.6	203.7	8.0	21.9	170.1
1620	8.6	201.1	8.5	21.9	172.0
1710	7.9	204.0	9.0	22.0	173.7
1800	6.6	199.1	9.5	22.2	174.8
1890	6.7	186.2	10.0	22.3	175.3

0630 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.8	160.0	0.0		
108	2.7	156.9	0.5	53.2	157.0
216	5.3	148.2	1.0	42.2	151.2
315	7.5	143.7	1.5	34.2	147.6
*****	****	*****	****	*****	*****
513	9.3	150.5	2.5	26.7	149.2
612	10.5	159.8	3.0	24.7	151.7
706	9.7	162.3	3.5	23.6	153.6
801	7.7	168.8	4.0	23.5	155.5
895	7.7	176.4	4.5	23.5	157.8
990	7.8	180.7	5.0	23.5	160.1
1080	7.6	192.2	5.5	23.6	162.9
1170	8.9	199.5	6.0	23.5	166.3
1260	9.2	199.8	6.5	23.3	169.3
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.5	140.0	0.0		
108	3.0	139.5	0.5	50.1	139.6
216	4.6	148.5	1.0	43.5	145.0
315	5.4	148.5	1.5	38.9	146.5
414	6.0	154.7	2.0	36.0	149.1
513	7.6	160.7	2.5	32.9	152.4
612	7.3	165.4	3.0	31.3	155.2
706	6.9	168.7	3.5	30.3	157.5
801	7.5	172.8	4.0	29.3	159.9
895	6.6	179.7	4.5	29.0	162.3
990	6.8	188.7	5.0	28.8	165.2
1080	7.9	197.2	5.5	28.3	168.8
1170	8.0	202.8	6.0	27.9	172.3
1260	7.7	203.9	6.5	27.6	175.2
1350	7.3	203.7	7.0	27.4	177.5
1440	6.9	204.1	7.5	27.3	179.4
1530	6.5	197.4	8.0	27.2	180.5
1620	5.9	189.4	8.5	27.2	181.0
1710	6.3	184.5	9.0	27.1	181.2
1800	6.4	183.0	9.5	27.0	181.3
1890	5.9	187.6	10.0	27.0	181.6

0730 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	111.0	0.0		
108	1.5	110.7	0.5	67.2	110.8
216	4.1	161.8	1.0	54.1	148.8
315	5.7	150.5	1.5	44.0	149.7
414	6.1	144.4	2.0	39.1	147.8
513	6.4	152.5	2.5	36.2	149.1
612	6.3	159.4	3.0	34.6	151.3
706	5.7	169.3	3.5	33.9	154.2
801	5.9	177.6	4.0	33.4	157.5
895	6.0	187.0	4.5	33.1	161.2
990	8.1	190.5	5.0	31.9	165.5
1080	8.2	193.7	5.5	30.8	169.2
1170	8.8	199.3	6.0	29.8	172.9
1260	9.1	198.8	6.5	28.8	175.9
1350	8.6	201.1	7.0	28.1	178.4
1440	7.8	202.2	7.5	27.7	180.3
1530	6.4	197.3	8.0	27.6	181.4
1620	5.9	195.5	8.5	27.6	182.2
1710	5.8	185.0	9.0	27.6	182.4
1800	5.3	188.9	9.5	27.7	182.7
1890	4.2	179.9	10.0	28.0	182.6

ATHENS 8/7/74

0800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.6	109.0	0.0		
108	2.3	108.6	0.5	57.5	108.7
216	4.0	124.4	1.0	49.2	118.7
315	4.8	134.9	1.5	43.8	125.8
414	6.6	141.9	2.0	38.4	131.9
513	7.4	142.3	2.5	34.7	135.0
612	7.6	151.6	3.0	32.5	138.9
706	6.8	160.2	3.5	31.5	142.6
801	5.5	173.9	4.0	31.7	146.4
895	5.1	183.3	4.5	32.2	150.1
990	7.2	188.4	5.0	31.8	154.9
1080	7.7	193.8	5.5	31.2	159.6
1170	8.1	195.2	6.0	30.5	163.7
1260	9.3	199.4	6.5	29.6	167.9
1350	8.4	199.5	7.0	29.0	171.0
1440	7.7	198.4	7.5	28.6	173.3
1530	7.6	196.3	8.0	28.2	175.1
1620	7.7	194.0	8.5	27.8	176.5
1710	6.4	192.0	9.0	27.7	177.4
1800	5.3	186.0	9.5	27.8	177.8
1890	5.2	184.6	10.0	27.9	178.1

0830 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.2	25.0	0.0		
108	2.3	115.2	0.5	57.3	115.3
216	5.7	120.3	1.0	41.9	118.9
315	5.6	129.3	1.5	37.8	123.2
414	5.3	136.4	2.0	36.4	126.9
513	7.7	142.3	2.5	33.1	131.4
612	7.4	146.4	3.0	31.4	134.7
706	6.8	157.3	3.5	30.6	138.5
801	5.8	167.6	4.0	30.7	142.1
895	5.7	181.6	4.5	31.1	146.3
990	6.6	195.2	5.0	31.4	151.6
1080	8.9	186.1	5.5	30.3	156.3
1170	6.7	216.6	6.0	30.9	161.4
1260	8.1	201.4	6.5	30.4	165.6
1350	7.3	205.7	7.0	30.2	169.1
1440	6.7	200.2	7.5	30.0	171.5
1530	6.6	190.7	8.0	29.7	172.9
1620	6.0	186.0	8.5	29.4	173.8
1710	6.4	189.9	9.0	29.2	174.8
1800	6.3	183.3	9.5	29.0	175.3
1890	6.0	184.8	10.0	28.9	175.8

0900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.2	45.0	0.0		
108	2.3	54.5	0.5	57.2	54.5
216	2.5	140.0	1.0	63.7	99.5
315	4.6	144.3	1.5	54.2	125.0
414	5.3	144.5	2.0	47.5	133.0
513	6.4	148.2	2.5	42.2	138.1
612	6.7	149.5	3.0	38.7	141.1
706	5.5	154.1	3.5	37.4	143.4
801	5.7	166.2	4.0	36.5	146.9
895	4.5	173.4	4.5	36.6	149.8
990	4.6	187.5	5.0	36.9	153.5
1080	4.8	196.7	5.5	37.1	157.5
1170	6.8	201.2	6.0	36.5	162.6
1260	7.8	205.5	6.5	35.6	167.8
1350	8.2	204.3	7.0	34.5	172.1
1440	8.1	203.9	7.5	33.5	175.5
1530	7.3	201.3	8.0	32.8	177.8
1620	6.9	194.2	8.5	32.2	179.1
1710	6.7	191.6	9.0	31.7	180.0
1800	6.5	191.6	9.5	31.3	180.7
1890	7.5	190.6	10.0	30.7	181.4

0930 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	35.0	0.0		
108	1.5	44.2	0.5	66.8	44.2
216	1.5	63.3	1.0	67.2	53.7
315	2.9	160.7	1.5	71.5	105.3
414	4.6	154.1	2.0	61.7	133.3
513	4.9	149.1	2.5	54.4	139.6
612	7.4	148.5	3.0	46.1	143.0
706	7.0	149.8	3.5	41.5	144.8
801	6.4	154.0	4.0	39.0	146.6
895	5.8	161.3	4.5	37.7	148.8
990	4.5	174.4	5.0	37.7	151.4
1080	3.6	194.1	5.5	38.4	154.5
1170	4.3	200.0	6.0	38.8	158.1
1260	5.8	199.1	6.5	38.4	162.2
1350	6.9	192.5	7.0	37.3	165.6
1440	8.6	183.8	7.5	35.5	167.9
1530	8.3	182.6	8.0	34.1	169.5
1620	7.7	190.4	8.5	33.2	171.4
1710	7.1	194.4	9.0	32.6	173.2
1800	8.5	193.0	9.5	31.7	174.9
1890	8.5	193.7	10.0	30.9	176.4

1000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.2	55.0	0.0		
108	2.2	62.0	0.5	58.1	62.0
216	2.5	117.0	1.0	59.7	91.2
315	4.2	143.9	1.5	54.2	117.7
414	4.9	145.0	2.0	48.7	128.4
513	5.2	147.3	2.5	44.9	134.1
612	6.9	147.0	3.0	40.5	137.8
706	7.5	155.0	3.5	37.1	141.9
801	6.5	158.1	4.0	35.5	144.7
895	6.1	156.1	4.5	34.5	146.3
990	5.4	155.3	5.0	34.1	147.3
1080	4.2	178.6	5.5	34.5	149.7
1170	5.2	184.3	6.0	34.5	152.7
1260	6.9	184.2	6.5	33.8	156.0
1350	6.3	172.6	7.0	33.2	157.5
1440	6.0	175.2	7.5	32.8	158.9
1530	5.9	179.5	8.0	32.5	160.4
1620	5.7	195.3	8.5	32.5	162.6
1710	5.8	199.0	9.0	32.5	164.8
1800	7.0	193.4	9.5	32.1	166.8
1890	6.6	193.7	10.0	31.8	168.5

ATHENS 8/8/74

0405 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	197.0	0.0		
108	1.7	197.0	0.5	65.0	197.0
216	5.0	174.0	1.0	47.8	179.8
315	6.0	177.4	1.5	40.0	178.7
414	7.7	181.3	2.0	34.3	179.7
513	8.1	182.3	2.5	31.1	180.4
612	9.6	187.9	3.0	28.3	182.3
706	12.7	187.1	3.5	25.0	183.5
801	13.1	188.4	4.0	22.8	184.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0430 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	196.0	0.0		
108	1.8	195.9	0.5	63.3	195.9
216	4.8	182.0	1.0	47.6	185.8
315	7.2	183.1	1.5	37.3	184.4
414	7.5	179.3	2.0	33.0	182.6
513	8.6	184.0	2.5	29.8	183.0
612	9.0	185.2	3.0	27.7	183.5
706	11.5	189.6	3.5	25.1	184.9
801	11.6	194.6	4.0	23.4	186.7
895	15.0	152.5	4.5	21.8	180.2
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0508 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.2	188.0	0.0		
108	1.7	188.3	0.5	64.8	188.3
216	5.2	174.2	1.0	46.3	177.7
315	6.5	173.9	1.5	38.2	175.9
414	5.8	161.7	2.0	35.9	171.6
513	6.4	175.9	2.5	33.9	172.7
612	8.7	185.7	3.0	31.0	176.0
706	8.8	185.7	3.5	28.9	178.0
801	10.6	196.5	4.0	26.8	181.6
895	11.3	192.4	4.5	25.0	183.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.5	240.0	0.0		
108	3.4	240.3	0.5	46.5	240.3
216	3.7	213.0	1.0	46.2	226.1
315	6.4	200.4	1.5	38.9	213.7
414	6.5	202.3	2.0	35.4	209.9
513	8.0	202.0	2.5	32.0	207.6
612	8.3	202.9	3.0	29.8	206.5
706	10.0	204.2	3.5	27.3	205.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0645 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	168.0	0.0		
108	0.8	167.7	0.5	77.2	167.8
216	3.5	197.5	1.0	59.8	191.9
315	5.5	196.7	1.5	47.3	194.6
414	6.4	194.9	2.0	40.6	194.7
513	8.8	203.5	2.5	34.6	197.8
612	11.3	203.2	3.0	29.5	199.5
706	13.4	205.1	3.5	25.5	201.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0705 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	346.0	0.0		
108	1.0	346.1	0.5	74.3	346.1
216	2.3	219.5	1.0	75.3	245.0
315	4.4	198.3	1.5	61.0	212.0
414	4.6	208.2	2.0	52.9	210.3
513	6.7	204.2	2.5	44.9	207.9
612	10.0	204.9	3.0	36.9	206.8
706	13.6	211.0	3.5	30.0	208.2
801	14.0	215.6	4.0	26.0	210.1
895	14.6	216.3	4.5	23.3	211.4
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

ATHENS 6/8/74

0730 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	266.0	0.0		
106	0.6	260.3	0.5	77.0	250.3
216	2.4	258.5	1.0	66.2	250.5
315	4.3	210.1	1.5	57.2	231.3
414	4.4	217.6	2.0	51.2	225.9
513	6.9	205.5	2.5	44.0	218.1
612	9.2	204.9	3.0	37.3	213.6
706	10.6	205.5	3.5	32.3	211.3
801	9.6	215.2	4.0	29.6	212.1
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0805 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	162.0	0.0		
106	0.4	161.9	0.5	82.9	162.0
215	2.5	232.1	1.0	71.0	222.3
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

NEW TAZEWELL 7/16

1000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.0	81.0	0.0		
108	3.9	80.6	0.5	42.4	80.6
216	3.8	84.8	1.0	42.8	82.7
315	2.1	47.6	1.5	47.7	75.5
414	3.9	73.0	2.0	45.8	74.8
513	6.3	71.6	2.5	41.0	73.8
612	5.6	64.7	3.0	39.0	71.8
706	5.4	59.2	3.5	37.7	69.6
801	5.0	66.7	4.0	37.0	69.2
895	3.8	60.9	4.5	37.3	68.4
990	2.6	47.2	5.0	38.4	67.1
1080	3.1	41.9	5.5	39.0	65.4
1170	2.7	335.6	6.0	41.2	61.9
1260	3.5	324.8	6.5	43.5	57.4
1350	2.8	324.8	7.0	45.5	53.8
1440	2.6	2.5	7.5	46.3	51.3
1530	1.4	316.0	8.0	48.1	49.5
1620	4.2	35.0	8.5	47.3	48.3
1710	2.2	13.8	9.0	47.8	45.9
1800	5.8	26.7	9.5	46.4	44.9
1890	4.5	13.7	10.0	45.9	42.7

1030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.9	66.0	0.0		
108	2.9	66.0	0.5	50.9	66.0
216	2.9	72.8	1.0	50.9	69.4
315	3.6	41.0	1.5	48.9	58.7
414	3.8	46.1	2.0	46.9	55.0
513	4.7	64.3	2.5	44.2	57.5
612	5.6	57.5	3.0	41.4	57.5
706	5.3	60.1	3.5	39.6	58.0
801	4.2	69.6	4.0	39.3	59.5
895	4.3	63.8	4.5	39.0	60.0
990	3.5	40.1	5.0	39.4	58.3
1080	3.4	25.9	5.5	39.9	55.9
1170	3.0	20.0	6.0	40.6	53.7
1260	3.4	8.5	6.5	41.2	50.8
1350	2.8	11.6	7.0	41.9	48.8
1440	2.8	10.5	7.5	42.5	46.9
1530	3.6	15.8	8.0	42.6	45.0
1620	3.6	26.8	8.5	42.5	43.9
1710	3.6	28.1	9.0	42.4	43.0
1800	3.7	23.1	9.5	42.3	41.9
1890	3.8	21.2	10.0	42.2	40.8

1100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.2	20.0	0.0		
108	4.6	20.3	0.5	38.0	20.3
216	4.3	38.8	1.0	39.2	29.3
315	3.6	55.3	1.5	40.9	36.7
414	4.2	84.6	2.0	42.2	48.4
513	4.4	82.8	2.5	42.0	55.9
612	6.3	80.7	3.0	39.4	62.0
706	7.3	67.7	3.5	36.3	63.3
801	6.1	58.9	4.0	35.0	62.6
895	4.7	53.4	4.5	34.5	61.6
990	4.4	43.0	5.0	35.1	59.9
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
1440	3.5	19.2	7.5	38.0	49.1
1530	4.2	23.5	8.0	38.0	47.5
1620	4.6	27.4	8.5	37.8	46.2
1710	4.1	27.8	9.0	37.8	45.2
1800	4.0	31.4	9.5	37.8	44.5
1890	3.7	29.0	10.0	37.9	43.8

1130 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.8	58.0	0.0		
108	5.5	57.5	0.5	33.0	57.5
216	5.5	64.3	1.0	33.1	60.9
315	2.8	67.9	1.5	37.3	62.3
414	3.6	78.5	2.0	38.7	65.6
513	4.8	77.5	2.5	37.9	68.2
612	5.5	68.2	3.0	36.6	68.2
706	5.6	58.1	3.5	35.5	66.5
801	7.1	60.2	4.0	33.7	65.4
895	7.0	58.7	4.5	32.4	64.4
990	5.2	45.1	5.0	32.4	62.5
1080	3.9	39.3	5.5	32.9	60.9
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1200 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	3.9	76.0	0.0		
108	5.0	75.9	0.5	36.0	75.9
216	3.3	91.5	1.0	41.2	82.2
315	3.2	82.5	1.5	42.6	82.3
414	3.6	93.0	2.0	42.6	84.9
513	3.8	78.4	2.5	42.3	83.6
612	3.2	66.3	3.0	43.0	81.1
706	3.0	53.7	3.5	43.8	77.9
801	4.3	42.1	4.0	43.5	72.8
895	4.6	31.8	4.5	43.2	67.3
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1230 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	3.9	85.0	0.0		
108	3.6	85.8	0.5	44.8	85.8
216	5.7	82.0	1.0	37.6	83.5
315	6.1	76.9	1.5	34.2	80.9
414	5.4	77.0	2.0	33.5	79.9
513	4.1	59.4	2.5	34.7	76.5
612	4.4	55.6	3.0	35.3	73.5
706	4.5	40.3	3.5	35.8	69.2
801	4.8	52.7	4.0	35.6	67.1
895	4.7	44.4	4.5	35.6	64.6
990	5.1	32.2	5.0	35.6	61.2
1080	3.2	354.4	5.5	37.2	57.7
1170	5.8	32.2	6.0	36.5	55.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

NEW TAZEWELL 7/16

1300 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.9	83.0	0.0		
108	3.2	82.6	0.5	48.1	82.6
216	4.2	75.5	1.0	44.0	78.6
315	3.3	82.8	1.5	44.2	79.9
414	4.1	81.0	2.0	42.8	80.2
513	3.8	74.3	2.5	42.4	79.0
612	2.8	61.9	3.0	43.6	75.8
706	4.1	51.3	3.5	43.1	72.8
801	3.4	34.9	4.0	43.7	58.5
895	2.7	31.7	4.5	44.7	55.4
990	3.9	43.2	5.0	44.3	62.9
1080	5.1	36.4	5.5	43.1	59.5
1170	5.1	48.3	6.0	41.9	58.2
1260	5.5	37.4	6.5	40.8	55.9
1350	4.8	49.2	7.0	40.1	55.3
1440	4.0	56.7	7.5	39.9	55.4
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1330 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.0	77.0	0.0		
108	4.5	76.7	0.5	38.9	76.7
216	2.0	103.8	1.0	48.8	85.0
315	2.6	93.9	1.5	49.9	87.6
414	1.7	29.9	2.0	54.5	79.3
513	2.8	25.7	2.5	55.6	68.3
612	3.0	58.9	3.0	54.3	66.4
706	2.5	58.9	3.5	53.9	65.3
801	2.2	60.9	4.0	54.0	64.8
895	2.5	49.9	4.5	53.8	63.1
990	2.9	51.0	5.0	53.2	61.7
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.5	24.0	0.0		
108	6.0	23.8	0.5	30.8	23.8
216	5.3	31.3	1.0	32.5	27.3
315	5.1	43.5	1.5	32.9	32.3
414	6.1	36.6	2.0	31.7	33.5
513	3.7	34.9	2.5	33.3	33.7
612	3.0	51.2	3.0	35.2	35.5
706	4.1	81.1	3.5	36.4	40.8
801	6.6	67.5	4.0	35.1	45.3
895	5.3	75.7	4.5	35.0	48.9
990	8.0	63.5	5.0	33.2	51.2
1080	5.9	74.7	5.5	32.8	53.6
1170	4.7	73.3	6.0	32.9	55.1
1260	3.4	76.2	6.5	33.5	56.2
1350	3.2	77.3	7.0	34.1	57.2
1440	3.7	47.6	7.5	34.4	56.7
1530	3.3	54.4	8.0	34.8	56.6
1620	3.2	49.4	8.5	35.2	56.3
1710	3.3	36.3	9.0	35.6	55.5
1800	4.9	46.8	9.5	35.4	55.0
1890	3.6	47.6	10.0	35.6	54.7

NEW TAZEWELL 7/17

1000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.1	88.0	0.0		
108	1.6	88.0	0.5	65.7	88.0
216	1.1	82.7	1.0	69.4	35.9
315	3.7	67.8	1.5	59.1	75.5
414	4.4	103.3	2.0	53.1	36.9
513	4.3	131.0	2.5	51.2	99.4
612	2.4	130.8	3.0	52.1	104.0
706	1.0	112.5	3.5	54.4	104.5
801	0.2	93.3	4.0	57.5	104.4
895	0.6	295.2	4.5	61.2	104.0
990	0.7	247.9	5.0	64.3	105.4
1080	1.0	247.9	5.5	67.2	107.6
1170	1.5	241.2	6.0	70.1	112.1
1260	2.2	238.4	6.5	72.9	120.1
1350	2.6	233.0	7.0	74.9	131.5
1440	2.7	233.4	7.5	76.1	144.4
1530	2.6	223.5	8.0	76.1	156.0
1620	2.5	217.7	8.5	75.5	165.0
1710	3.0	212.7	9.0	74.2	172.9
1800	3.9	214.2	9.5	72.2	180.6
1890	4.6	211.6	10.0	69.7	186.4

1030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	66.0	0.0		
108	1.8	65.8	0.5	63.8	65.8
216	1.0	102.5	1.0	69.7	79.1
315	2.4	95.6	1.5	64.4	87.0
414	3.4	117.1	2.0	59.4	99.1
513	4.3	123.7	2.5	54.4	107.6
612	3.6	137.1	3.0	52.8	114.2
706	1.3	141.5	3.5	54.7	116.3
801	0.4	140.1	4.0	57.5	116.8
895	0.3	216.3	4.5	60.4	117.9
990	1.0	245.4	5.0	63.6	120.6
1080	1.2	215.0	5.5	65.6	124.8
1170	2.3	221.1	6.0	67.4	132.8
1260	2.6	222.3	6.5	68.6	141.9
1350	3.0	228.1	7.0	69.4	152.0
1440	3.6	220.4	7.5	68.9	162.3
1530	3.2	209.8	8.0	67.8	168.8
1620	3.2	209.5	8.5	66.6	174.0
1710	3.4	208.6	9.0	65.3	178.2
1800	3.6	209.2	9.5	63.9	181.8
1890	4.1	217.1	10.0	62.5	185.9

1100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.5	52.0	0.0		
108	1.4	51.6	0.5	68.7	51.6
216	1.3	92.4	1.0	70.3	71.6
315	1.7	104.4	1.5	68.5	84.7
414	1.8	135.2	2.0	68.3	99.7
513	0.8	98.9	2.5	69.7	99.6
612	0.5	76.7	3.0	71.7	98.1
706	0.2	355.3	3.5	74.1	96.6
801	0.4	227.5	4.0	76.4	99.2
895	1.1	208.4	4.5	78.3	109.0
990	2.0	222.1	5.0	80.2	127.8
1080	2.1	221.4	5.5	80.6	148.8
1170	2.9	217.2	6.0	79.1	169.7
1260	3.2	224.8	6.5	77.0	185.3
1350	3.5	222.2	7.0	74.3	194.8
1440	3.1	213.9	7.5	72.0	198.5
1530	3.3	208.2	8.0	69.7	200.2
1620	3.5	205.3	8.5	67.5	201.0
1710	3.5	212.0	9.0	65.6	202.5
1800	4.1	205.4	9.5	63.5	202.9
1890	4.9	198.6	10.0	61.1	202.5

1130 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.3	46.0	0.0		
108	1.0	45.5	0.5	73.9	45.5
216	1.4	63.8	1.0	71.4	55.1
315	2.0	110.6	1.5	69.5	80.5
414	2.3	104.5	2.0	66.1	89.4
513	1.7	106.9	2.5	65.6	93.2
612	1.8	110.4	3.0	65.1	96.4
706	1.1	109.0	3.5	65.9	97.7
801	0.4	191.0	4.0	68.5	100.0
895	0.9	212.2	4.5	71.1	104.5
990	1.8	217.7	5.0	73.7	114.4
1080	2.3	219.6	5.5	75.5	128.2
1170	3.0	227.6	6.0	76.6	146.5
1260	3.3	226.1	6.5	76.1	164.6
1350	3.2	226.4	7.0	74.8	177.9
1440	3.2	233.1	7.5	73.4	188.5
1530	3.5	230.6	8.0	71.5	196.4
1620	3.9	223.7	8.5	69.1	201.4
1710	3.7	211.2	9.0	66.9	202.9
1800	3.7	206.0	9.5	65.0	203.3
1890	3.4	207.0	10.0	63.5	203.7

1200 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.6	103.0	0.0		
108	1.5	102.8	0.5	67.9	102.9
216	3.3	86.8	1.0	57.0	91.8
315	2.5	55.8	1.5	57.0	79.6
414	1.9	53.4	2.0	58.3	74.1
513	1.7	71.0	2.5	59.2	73.6
612	1.3	43.8	3.0	60.9	70.3
706	0.6	112.3	3.5	63.4	72.2
801	0.4	220.1	4.0	66.8	73.3
895	0.6	213.9	4.5	69.8	75.3
990	1.6	226.4	5.0	73.8	80.0
1080	2.8	247.9	5.5	79.2	84.9
1170	*****	****	*****	****	*****	*****
1260	*****	****	*****	****	*****	*****
1350	*****	****	*****	****	*****	*****
1440	*****	****	*****	****	*****	*****
1530	*****	****	*****	****	*****	*****
1620	*****	****	*****	****	*****	*****
1710	*****	****	*****	****	*****	*****
1800	*****	****	*****	****	*****	*****
1890	*****	****	*****	****	*****	*****

1300 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	174.0	0.0		
108	0.8	173.8	0.5	77.3	173.9
216	0.8	125.2	1.0	78.4	149.6
315	0.9	163.0	1.5	77.3	154.7
414	0.4	212.1	2.0	79.4	151.6
513	0.9	260.0	2.5	81.3	182.5
612	1.7	285.7	3.0	82.3	218.3
706	2.6	273.8	3.5	78.6	245.2
801	3.1	277.6	4.0	74.3	257.6
895	4.0	267.2	4.5	68.9	251.1
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

NEW TAZEWELL 7/17

1312 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	89.0	0.0		
108	1.9	88.5	0.5	62.0	38.5
216	1.0	72.3	1.0	68.0	32.9
315	1.9	157.6	1.5	69.8	111.1
414	1.0	154.2	2.0	71.3	119.8
513	2.1	302.0	2.5	81.6	117.9
612	1.8	316.8	3.0	87.2	31.9
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.9	162.0	0.0		
108	1.8	161.5	0.5	64.0	161.6
215	3.4	169.4	1.0	54.6	166.8
315	2.7	160.3	1.5	53.5	164.6
414	1.3	140.2	2.0	57.0	161.2
513	1.6	123.0	2.5	59.1	155.8
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1500 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.7	198.0	0.0		
108	2.1	197.7	0.5	59.2	197.7
216	2.8	211.4	1.0	55.6	205.5
315	2.1	234.2	1.5	57.0	213.9
414	2.4	230.6	2.0	56.5	218.2
513	2.4	213.8	2.5	56.1	217.3
612	2.0	218.0	3.0	56.6	217.4
706	2.3	224.3	3.5	56.3	218.4
801	2.4	231.2	4.0	55.9	220.1
895	1.9	234.0	4.5	56.3	221.4
990	2.6	227.4	5.0	55.7	222.1
1080	2.3	229.5	5.5	55.4	222.8
1170	2.8	223.8	6.0	54.7	222.9
1260	2.9	219.7	6.5	54.0	222.6
1350	3.9	216.4	7.0	52.6	221.9
1440	4.9	213.1	7.5	50.7	220.8
1530	5.4	215.0	8.0	48.6	220.1
1620	5.2	212.4	8.5	47.3	219.3
1710	4.7	206.6	9.0	46.3	218.2
1800	5.0	206.2	9.5	45.3	217.2
1890	4.8	206.5	10.0	44.5	216.4

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	254.0	0.0		
108	1.6	254.2	0.5	66.5	254.2
216	3.0	192.1	1.0	61.0	212.4
315	3.0	194.6	1.5	56.5	204.7
414	2.3	188.5	2.0	56.4	200.7
513	2.0	189.0	2.5	56.9	198.6
612	1.2	168.0	3.0	59.1	195.7
706	0.7	170.8	3.5	61.4	194.4
801	1.2	221.4	4.0	62.5	196.6
895	2.0	273.4	4.5	64.1	204.4
990	1.5	275.7	5.0	65.5	209.8
1080	1.2	294.0	5.5	67.1	214.3
1170	2.2	227.8	6.0	66.0	216.0
1260	3.3	224.7	6.5	63.8	217.4
1350	3.9	232.1	7.0	61.5	219.7
1440	4.8	234.5	7.5	58.8	222.1
1530	4.9	234.6	8.0	56.4	223.9
1620	4.9	227.1	8.5	54.3	224.3
1710	5.6	228.3	9.0	52.1	224.8
1800	5.9	234.3	9.5	50.1	225.9
1890	6.2	234.1	10.0	48.2	226.8

NEW TAZEWELL 7/18

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	3.4	285.0	0.0		
108	4.8	263.1	0.5	37.1	253.1
216	6.1	256.9	1.0	33.5	259.6
315	3.3	244.1	1.5	36.7	256.0
414	3.0	242.4	2.0	39.0	253.6
513	3.2	225.4	2.5	40.6	249.2
612	6.8	240.5	3.0	37.4	247.0
706	6.5	243.9	3.5	35.4	246.4
801	6.0	244.4	4.0	34.3	246.1
895	7.0	248.1	4.5	32.9	246.4
990	6.3	248.9	5.0	32.2	246.7
1080	5.6	260.3	5.5	31.9	248.0
1170	7.0	261.1	6.0	31.1	249.4
1260	6.2	262.0	6.5	30.7	250.5
1350	4.8	261.5	7.0	30.8	251.2
1440	3.8	259.6	7.5	31.2	251.6
1530	4.3	257.4	8.0	31.4	251.9
1620	5.0	260.8	8.5	31.4	252.4
1710	5.2	270.8	9.0	31.4	253.4
1800	5.2	274.4	9.5	31.4	254.5
1890	5.9	270.4	10.0	31.2	255.4

1700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	3.2	245.0	0.0		
108	4.8	227.4	0.5	37.1	227.4
216	4.1	218.3	1.0	39.2	223.2
315	3.4	237.6	1.5	40.8	227.2
414	3.6	236.0	2.0	41.3	229.2
513	3.0	253.0	2.5	42.7	233.0
612	4.2	253.3	3.0	42.2	236.7
706	4.4	271.9	3.5	41.9	242.3
801	5.0	271.1	4.0	41.0	246.8
895	5.9	269.5	4.5	39.5	250.4
990	6.1	272.8	5.0	38.2	253.6
1080	6.3	272.9	5.5	36.9	256.1
1170	6.0	272.5	6.0	36.0	257.9
1260	5.9	276.2	6.5	35.3	259.7
1350	5.8	281.4	7.0	34.8	261.6
1440	5.0	285.9	7.5	34.7	263.3
1530	4.6	284.4	8.0	34.7	264.6
1620	4.6	300.7	8.5	34.9	266.6
1710	5.8	293.2	9.0	34.6	268.4
1800	5.3	288.6	9.5	34.4	269.6
*****	****	*****	****	*****	*****

1800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.9	235.0	0.0		
108	3.8	244.3	0.5	43.4	244.3
216	5.1	254.4	1.0	39.1	250.1
315	5.6	257.1	1.5	36.0	252.8
414	6.9	248.5	2.0	32.9	251.4
513	5.8	255.6	2.5	32.2	252.3
612	5.5	252.9	3.0	32.0	252.4
706	5.3	253.1	3.5	31.8	252.5
801	4.9	251.6	4.0	31.9	252.4
895	5.4	249.7	4.5	31.7	252.1
990	4.5	255.6	5.0	32.0	252.4
1080	5.3	259.0	5.5	31.8	253.0
1170	6.4	258.1	6.0	31.2	253.5
1260	6.6	258.8	6.5	30.6	254.0
1350	6.0	261.7	7.0	30.3	254.6
1440	4.8	249.5	7.5	30.4	254.3
1530	6.5	252.9	8.0	30.0	254.2
1620	6.4	264.6	8.5	29.7	254.9
1710	5.0	270.9	9.0	29.8	255.7
1800	6.1	277.0	9.5	29.7	256.9
1890	7.1	277.9	10.0	29.4	258.2

1900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	275.0	0.0		
108	1.6	298.2	0.5	65.5	298.2
216	2.8	268.6	1.0	59.2	279.5
315	3.6	250.7	1.5	53.1	255.9
414	4.2	254.9	2.0	49.0	252.1
513	3.7	259.5	2.5	47.5	251.5
612	3.3	254.0	3.0	47.1	250.2
706	2.7	262.6	3.5	47.4	250.5
801	2.2	277.8	4.0	48.3	252.1
895	3.1	285.7	4.5	48.2	254.8
990	3.3	288.2	5.0	48.0	257.3
1080	3.7	295.4	5.5	47.5	270.3
1170	4.0	292.7	6.0	46.7	272.7
1260	4.3	292.9	6.5	45.8	274.8
1350	4.5	292.1	7.0	44.9	276.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

2000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.9	24.0	0.0		
108	1.7	23.5	0.5	65.0	23.5
216	2.6	13.5	1.0	59.6	17.5
315	3.1	350.7	1.5	55.8	6.2
414	4.1	347.7	2.0	51.2	359.5
513	4.4	343.5	2.5	48.1	355.0
612	4.7	333.0	3.0	45.9	349.9
706	5.4	330.1	3.5	43.4	345.7
801	6.0	328.1	4.0	41.0	342.3
895	6.2	321.8	4.5	39.2	338.9
990	5.6	320.5	5.0	38.2	336.5
1080	4.5	313.2	5.5	38.0	334.3
1170	4.2	309.7	6.0	38.0	332.3
1260	3.9	292.6	6.5	38.4	329.6
1350	4.4	280.5	7.0	38.8	326.2
1440	5.1	281.8	7.5	38.8	322.8
1530	4.7	272.0	8.0	39.1	319.5
1620	5.0	267.9	8.5	39.3	316.1
1710	7.2	236.8	9.0	40.1	310.1
1800	4.9	265.1	9.5	40.1	307.3
1890	5.4	265.8	10.0	39.9	304.6

2030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	39.0	0.0		
108	1.9	38.6	0.5	62.5	38.6
216	0.4	258.7	1.0	77.5	29.6
315	4.0	352.5	1.5	62.8	2.8
414	4.9	334.3	2.0	54.2	349.3
513	4.7	323.0	2.5	50.0	340.9
612	4.4	327.1	3.0	47.6	337.7
706	4.5	324.3	3.5	45.6	335.1
801	3.8	318.6	4.0	45.0	332.8
895	3.1	307.3	4.5	45.3	330.2
990	2.7	305.4	5.0	45.9	328.2
1080	3.0	282.8	5.5	46.5	324.6
1170	3.5	280.4	6.0	46.7	320.8
1260	3.5	271.9	6.5	47.0	316.9
1350	3.3	268.0	7.0	47.4	313.5
1440	3.4	268.7	7.5	47.6	310.4
1530	3.6	268.1	8.0	47.6	307.4
1620	3.9	264.1	8.5	47.5	304.3
1710	4.1	254.0	9.0	47.5	300.8
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

NEW TAZEWELL 7/18

2100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.7	297.0	0.0		
108	0.2	297.2	0.5	87.0	297.2
216	1.7	312.1	1.0	75.2	310.7
315	2.7	306.9	1.5	66.4	308.5
414	4.2	309.1	2.0	57.6	308.8
513	5.3	309.0	2.5	50.5	308.9
612	5.3	304.5	3.0	46.4	307.7
706	5.4	302.2	3.5	43.5	306.5
801	4.7	297.6	4.0	42.2	305.1
895	4.7	294.2	4.5	41.2	303.6
990	3.8	289.6	5.0	41.1	302.2
1080	3.3	285.7	5.5	41.3	300.9
1170	3.2	276.9	6.0	41.6	299.2
1260	2.9	277.8	6.5	42.0	297.9
1350	3.8	274.7	7.0	41.9	296.2
1440	3.3	270.9	7.5	42.1	294.7
1530	3.2	261.7	8.0	42.4	292.9
1620	3.6	254.4	8.5	42.6	290.7
1710	4.8	259.0	9.0	42.2	288.4
1800	5.6	254.0	9.5	41.6	285.7
1890	6.3	252.9	10.0	40.8	283.0

2200 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.2	139.0	0.0		
108	0.5	138.9	0.5	82.0	139.0
216	1.4	292.0	1.0	82.0	279.0
315	4.2	310.2	1.5	64.1	304.3
414	3.9	312.6	2.0	57.1	307.9
513	4.4	308.8	2.5	52.0	308.2
612	4.2	304.4	3.0	49.3	307.3
706	4.7	303.9	3.5	46.7	306.6
801	5.6	292.6	4.0	44.0	303.8
895	4.0	279.6	4.5	43.6	300.8
990	3.4	264.6	5.0	44.0	297.4
1080	2.9	248.8	5.5	44.9	294.0
1170	2.6	242.3	6.0	45.9	290.9
1260	3.4	249.5	6.5	46.1	287.7
1350	4.8	251.9	7.0	45.4	284.1
1440	4.9	249.5	7.5	44.7	280.8
1530	5.1	246.8	8.0	44.0	277.7
1620	5.3	248.3	8.5	43.2	275.1
1710	5.6	249.8	9.0	42.3	272.9
1800	5.9	254.2	9.5	41.3	271.3
1890	5.3	260.1	10.0	40.6	270.5

NEW TAZEWELL 7/19

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.5	245.0	0.0		
108	5.2	238.0	0.5	34.9	238.0
216	6.5	222.6	1.0	31.9	229.4
315	6.4	224.6	1.5	30.3	227.7
414	5.8	238.4	2.0	30.2	230.3
513	6.3	262.0	2.5	30.3	236.8
612	6.2	264.2	3.0	30.3	241.5
706	5.9	266.3	3.5	30.3	245.0
801	6.2	283.5	4.0	30.5	249.9
895	6.5	292.5	4.5	30.7	254.9
990	8.0	296.6	5.0	30.3	260.3
1080	8.8	309.3	5.5	29.9	266.4
1170	8.5	326.3	6.0	30.1	272.7
1260	9.2	331.4	6.5	30.1	278.9
1350	9.9	331.2	7.0	29.7	284.6
1440	10.0	335.5	7.5	29.3	289.8
1530	10.7	340.0	8.0	28.8	294.9
1620	11.5	349.6	8.5	28.4	300.3
1710	11.3	358.4	9.0	28.2	305.5
1800	11.1	5.0	9.5	28.1	310.4
1890	12.2	1.0	10.0	27.6	314.9

1700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.0	240.0	0.0		
108	2.5	233.9	0.5	55.0	233.9
216	3.1	247.1	1.0	52.0	241.2
315	5.4	245.9	1.5	43.7	243.5
414	6.4	247.3	2.0	38.5	244.9
513	7.7	257.7	2.5	34.5	248.8
612	8.6	261.3	3.0	31.5	252.0
706	8.4	266.5	3.5	29.6	254.9
801	6.9	271.0	4.0	29.0	257.2
895	6.6	289.8	4.5	29.0	261.0
990	6.9	307.6	5.0	29.3	265.9
1080	7.9	318.4	5.5	29.4	271.5
1170	8.9	320.4	6.0	29.1	277.0
1260	8.9	317.5	6.5	28.6	281.3
1350	8.6	327.6	7.0	28.4	285.6
1440	7.9	349.8	7.5	28.9	290.3
1530	8.7	6.5	8.0	29.7	295.7
1620	11.1	2.7	8.5	29.8	301.9
1710	12.2	3.1	9.0	29.5	308.0
1800	13.1	0.9	9.5	28.8	313.5
1890	15.4	358.6	10.0	27.6	318.7

1800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.5	235.0	0.0		
108	5.1	239.5	0.5	35.0	239.5
216	6.9	239.7	1.0	30.8	239.6
315	7.3	237.7	1.5	28.5	238.9
414	9.3	240.4	2.0	25.7	239.4
513	9.6	243.0	2.5	24.1	240.3
612	9.6	243.8	3.0	23.1	241.0
706	9.6	247.0	3.5	22.3	242.0
801	9.7	259.4	4.0	21.8	244.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.2	250.0	0.0		
108	4.6	237.0	0.5	38.3	237.0
216	5.5	253.2	1.0	35.8	245.9
315	6.6	249.7	1.5	32.4	247.4
414	7.8	240.8	2.0	29.6	245.3
513	9.0	241.2	2.5	27.2	244.2
612	9.7	250.0	3.0	25.4	245.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

2005 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.6	311.0	0.0		
108	1.6	311.2	0.5	66.0	311.2
216	3.6	299.6	1.0	54.5	303.2
315	4.1	292.7	1.5	48.9	298.6
414	3.6	279.4	2.0	47.5	293.2
513	4.5	268.8	2.5	45.5	286.9
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

2030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.6	286.0	0.0		
108	1.7	286.4	0.5	65.3	286.4
216	3.1	281.5	1.0	56.5	283.2
315	4.6	269.1	1.5	48.5	276.3
414	5.1	263.8	2.0	44.0	271.9
513	5.0	268.0	2.5	41.6	270.9
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

NEW TAZEWELL 8/6

0400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	44.0	0.0		
108	1.8	43.8	0.5	63.5	43.8
216	4.3	48.7	1.0	50.0	47.3
315	7.3	72.3	1.5	38.9	61.0
414	8.2	72.9	2.0	33.2	65.6
513	8.8	86.4	2.5	30.1	71.7
612	8.1	100.9	3.0	29.0	77.9
706	6.3	106.4	3.5	29.0	82.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
990	3.1	140.4	5.0	34.5	91.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0415 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	53.0	0.0		
108	2.1	53.2	0.5	60.0	53.2
216	4.8	47.0	1.0	46.4	48.9
315	5.5	69.5	1.5	40.7	58.1
414	7.9	78.0	2.0	34.9	65.9
513	8.0	86.9	2.5	32.0	71.9
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0500 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.6	112.0	0.0		
108	0.0	111.9	0.5	90.0	112.0
216	4.7	43.4	1.0	56.7	43.4
315	5.4	55.2	1.5	46.3	49.7
414	6.3	65.6	2.0	40.5	55.8
513	8.3	76.1	2.5	35.3	62.7
612	5.6	93.0	3.0	35.0	68.3
706	3.7	87.2	3.5	35.8	70.4
801	3.6	88.7	4.0	36.5	72.2
895	3.0	99.1	4.5	37.6	74.2
990	1.8	120.9	5.0	39.5	76.1
1080	1.8	164.3	5.5	41.9	78.6
1170	1.9	187.5	6.0	44.6	81.2
1260	2.6	219.2	6.5	48.1	83.8
1350	2.9	235.9	7.0	52.0	86.0
1440	3.7	243.1	7.5	56.5	88.6
1530	4.7	247.0	8.0	61.7	92.2
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.2	53.0	0.0		
108	1.8	53.0	0.5	63.0	53.0
216	5.0	58.7	1.0	46.6	57.2
315	4.3	74.3	1.5	43.7	63.8
414	6.7	70.6	2.0	38.0	66.4
513	7.7	81.3	2.5	34.2	70.9
612	4.3	89.7	3.0	34.9	73.6
706	3.0	62.7	3.5	36.2	72.6
801	3.0	55.9	4.0	37.3	71.2
895	2.2	62.8	4.5	38.7	70.7
990	1.5	49.3	5.0	40.5	69.9
1080	0.5	62.3	5.5	42.6	69.8
1170	0.8	192.0	6.0	45.2	70.8
1260	2.1	250.8	6.5	48.9	70.8
1350	2.6	257.3	7.0	52.9	70.3
1440	3.5	264.6	7.5	57.4	68.7
1530	4.6	266.0	8.0	62.7	65.7
1620	5.4	253.0	8.5	68.8	63.8
1710	5.6	244.3	9.0	74.9	63.6
1800	5.9	242.1	9.5	81.0	64.5
1890	6.3	240.1	10.0	87.0	72.7

0630 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	55.0	0.0		
108	1.9	54.5	0.5	62.5	54.5
216	2.5	74.8	1.0	59.3	66.1
315	4.7	72.9	1.5	49.5	69.7
414	6.9	72.2	2.0	41.1	70.8
513	6.7	87.7	2.5	37.5	75.8
612	3.9	85.3	3.0	38.0	77.2
706	2.8	68.9	3.5	39.2	76.4
801	2.7	55.8	4.0	40.4	74.7
895	2.0	79.6	4.5	41.8	75.0
990	1.8	97.4	5.0	43.3	76.1
1080	0.6	167.5	5.5	45.8	77.1
1170	0.9	241.7	6.0	48.8	77.5
1260	1.9	255.8	6.5	52.5	77.6
1350	3.2	265.9	7.0	57.1	76.7
1440	4.6	263.1	7.5	62.9	75.5
1530	5.2	251.7	8.0	69.2	76.5
1620	9.5	257.3	8.5	79.6	75.7
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.2	49.0	0.0		
108	1.2	48.5	0.5	71.0	48.5
216	2.4	53.8	1.0	63.3	52.0
315	4.0	75.1	1.5	54.7	64.1
414	5.1	67.3	2.0	47.8	65.4
513	8.5	83.7	2.5	39.5	72.8
612	5.1	97.4	3.0	38.7	77.6
706	3.3	78.4	3.5	39.3	77.7
801	3.1	69.4	4.0	40.0	76.9
895	3.0	61.6	4.5	40.7	75.6
990	2.6	84.1	5.0	41.5	76.2
1080	1.4	96.0	5.5	43.0	76.9
1170	0.2	135.5	6.0	45.2	77.2
1260	1.7	270.0	6.5	48.6	76.6
1350	2.7	273.1	7.0	52.6	75.3
1440	3.7	267.9	7.5	57.3	73.8
1530	4.6	256.6	8.0	62.8	73.3
1620	5.3	250.9	8.5	68.3	73.9
1710	5.2	244.5	9.0	74.5	77.0
1800	5.7	238.3	9.5	80.0	86.9
1890	6.2	232.3	10.0	84.1	119.4

NEW TAZEWELL 8/6

0730 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	49.0	0.0		
108	2.0	48.5	0.5	60.5	48.5
216	3.2	50.9	1.0	54.0	50.0
315	3.2	62.6	1.5	51.3	54.8
414	6.9	77.6	2.0	42.5	65.1
513	6.9	95.1	2.5	38.8	74.4
612	4.5	108.2	3.0	39.1	80.1
706	2.9	80.1	3.5	40.1	80.1
801	2.9	55.9	4.0	41.1	77.9
895	2.2	73.4	4.5	42.3	77.6
990	0.7	72.5	5.0	44.6	77.5
1080	0.9	286.4	5.5	47.8	76.7
1170	1.9	287.4	6.0	51.5	74.9
1260	2.9	274.9	6.5	56.0	72.9
1350	3.9	258.5	7.0	61.5	72.0
1440	4.2	252.9	7.5	67.1	71.8
1530	4.4	243.5	8.0	72.7	74.1
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.2	59.0	0.0		
108	0.5	58.5	0.5	82.0	58.5
216	3.4	41.8	1.0	61.8	44.0
315	3.2	71.0	1.5	56.7	56.3
414	6.3	68.6	2.0	46.4	62.2
513	8.0	84.5	2.5	39.5	70.6
612	4.8	102.4	3.0	39.3	76.4
706	3.4	94.1	3.5	39.9	78.5
801	2.9	63.1	4.0	40.8	77.1
895	2.5	55.3	4.5	41.9	75.5
990	1.9	86.6	5.0	43.2	76.1
1080	0.5	153.5	5.5	45.6	76.9
1170	0.7	256.9	6.0	48.5	76.9
1260	1.4	282.3	6.5	51.6	75.9
1350	2.6	271.6	7.0	55.6	74.6
1440	3.5	262.5	7.5	60.3	73.6
1530	4.1	252.4	8.0	65.5	73.8
1620	4.7	239.8	8.5	70.9	77.3
1710	5.2	232.0	9.0	76.0	36.2
1800	5.5	230.4	9.5	80.3	104.5
1890	6.2	225.2	10.0	82.0	141.1

0830 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	56.0	0.0		
108	1.3	56.0	0.5	69.8	56.0
216	2.8	65.8	1.0	60.0	62.7
315	4.7	78.4	1.5	50.0	71.1
414	7.5	82.0	2.0	40.4	76.1
513	7.1	92.8	2.5	36.5	81.2
612	5.4	102.6	3.0	35.9	85.2
706	3.3	97.8	3.5	36.9	86.5
801	2.3	68.7	4.0	38.5	85.3
895	2.1	83.6	4.5	39.9	85.2
990	1.3	130.8	5.0	42.0	86.7
1080	1.0	140.4	5.5	44.0	88.0
1170	0.5	179.5	6.0	46.3	88.7
1260	0.6	236.1	6.5	48.8	89.2
1350	1.5	256.8	7.0	51.9	89.3
1440	3.0	258.3	7.5	56.0	90.3
1530	3.6	247.8	8.0	60.3	93.0
1620	4.3	239.3	8.5	64.6	98.3
1710	4.7	231.7	9.0	68.3	106.9
1800	5.2	228.8	9.5	71.2	119.3
*****	****	*****	****	*****	*****

0900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.2	79.0	0.0		
108	0.7	78.5	0.5	78.5	78.5
216	2.2	63.1	1.0	68.1	67.0
315	5.4	76.0	1.5	51.8	72.9
414	6.8	86.3	2.0	42.6	79.0
513	5.1	104.4	2.5	40.9	85.4
612	4.6	105.8	3.0	40.3	89.2
706	2.9	85.4	3.5	41.2	88.8
801	2.8	72.4	4.0	42.1	87.3
895	1.9	98.6	4.5	43.5	88.0
990	1.0	127.7	5.0	45.7	89.1
1080	0.5	135.5	5.5	47.9	89.7
1170	0.3	302.2	6.0	50.4	89.4
1260	0.9	303.4	6.5	53.1	88.5
1350	1.4	270.6	7.0	56.2	88.4
1440	2.2	247.8	7.5	59.7	90.0
1530	3.0	237.9	8.0	63.4	93.6
1620	3.9	223.1	8.5	66.7	101.0
1710	4.8	213.3	9.0	69.0	112.9
1800	5.1	212.6	9.5	70.2	126.2
1890	6.3	222.6	10.0	70.9	142.9

0930 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	55.0	0.0		
108	1.0	54.5	0.5	75.0	54.5
216	2.5	66.0	1.0	64.4	62.8
315	5.2	70.6	1.5	50.5	67.5
414	6.0	99.9	2.0	44.4	80.7
513	6.4	110.3	2.5	40.6	89.9
612	5.8	113.2	3.0	38.8	95.1
706	4.9	109.9	3.5	38.0	97.5
801	3.9	92.2	4.0	38.1	94.9
895	3.9	91.0	4.5	38.2	96.3
990	3.1	105.4	5.0	38.8	97.0
1080	1.3	93.6	5.5	40.4	96.9
1170	0.6	68.8	6.0	42.3	96.5
1260	0.9	62.1	6.5	43.9	95.8
1350	1.2	35.2	7.0	45.5	94.5
1440	1.0	340.9	7.5	47.6	93.3
1530	1.2	259.2	8.0	50.1	93.7
1620	1.5	236.0	8.5	52.5	95.0
1710	3.1	219.3	9.0	55.1	98.7
1800	4.3	214.7	9.5	57.4	104.5
1890	5.4	212.0	10.0	59.7	112.5

1000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	81.0	0.0		
108	1.1	80.5	0.5	73.0	80.5
216	1.9	52.7	1.0	68.0	62.9
315	3.4	62.5	1.5	59.0	62.7
414	5.6	105.5	2.0	51.3	82.7
513	5.7	117.5	2.5	46.8	94.4
612	5.2	117.0	3.0	44.2	99.9
706	4.4	111.5	3.5	43.0	101.9
801	3.4	109.4	4.0	43.0	102.8
895	2.2	118.0	4.5	44.1	103.9
990	2.1	114.8	5.0	45.1	104.6
1080	1.3	112.5	5.5	46.5	104.9
1170	1.0	108.5	6.0	48.0	105.0
1260	0.8	63.0	6.5	49.6	104.1
1350	0.4	43.6	7.0	51.4	103.6
1440	0.9	243.9	7.5	53.7	104.5
1530	1.5	229.4	8.0	56.0	106.6
1620	2.5	216.9	8.5	58.1	110.6
1710	3.9	212.2	9.0	59.9	117.3
1800	5.2	213.9	9.5	61.3	126.3
1890	5.8	216.2	10.0	62.1	136.3

NEW TAZEWELL 8/7

0400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	73.0	0.0		
108	1.5	73.0	0.5	67.5	73.0
216	4.8	79.0	1.0	48.8	77.6
315	5.7	101.5	1.5	41.7	89.0
414	7.0	115.4	2.0	37.0	98.8
513	8.9	129.1	2.5	33.0	108.6
612	8.2	136.3	3.0	31.1	115.1
706	5.0	157.0	3.5	32.0	120.2
801	4.2	173.5	4.0	33.5	125.0
895	4.1	209.4	4.5	36.1	130.7
990	4.9	222.8	5.0	38.8	137.6
1080	4.9	238.5	5.5	41.7	144.4
1170	4.3	232.0	6.0	43.7	150.5
1260	3.3	242.2	6.5	45.8	155.2
1350	3.0	228.5	7.0	47.1	159.2
1440	2.5	216.5	7.5	48.0	162.0
1530	2.1	203.9	8.0	48.7	163.8
1620	2.7	195.2	8.5	48.9	165.5
1710	2.6	209.0	9.0	49.3	167.6
1800	2.4	219.2	9.5	49.9	169.7
1890	2.0	223.2	10.0	50.6	171.5

0500 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	41.0	0.0		
108	0.8	41.0	0.5	78.0	41.0
216	4.4	62.9	1.0	54.8	59.7
315	4.1	99.1	1.5	50.6	77.2
414	5.1	113.5	2.0	46.5	90.6
513	7.3	131.5	2.5	41.7	105.0
612	4.4	158.6	3.0	42.7	114.3
706	3.2	192.0	3.5	45.7	122.0
801	3.5	237.3	4.0	50.9	130.5
895	4.8	249.5	4.5	56.4	142.6
990	4.9	244.3	5.0	59.5	156.9
1080	4.2	242.3	5.5	60.7	168.8
1170	3.8	235.4	6.0	60.6	177.9
1260	3.8	223.7	6.5	59.5	184.1
1350	3.3	219.1	7.0	58.6	188.0
1440	2.9	213.7	7.5	57.9	190.4
1530	2.8	199.9	8.0	57.2	191.2
1620	2.8	206.5	8.5	56.6	192.4
1710	3.0	214.4	9.0	56.0	194.1
1800	3.5	217.3	9.5	55.2	196.0
1890	2.9	216.3	10.0	54.8	197.3

0600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	77.0	0.0		
108	0.5	77.0	0.5	81.5	77.0
216	3.6	76.2	1.0	60.0	76.3
315	4.6	85.6	1.5	50.3	81.2
414	4.8	105.7	2.0	46.3	89.8
513	4.8	121.7	2.5	44.4	98.2
612	7.8	148.0	3.0	41.2	113.1
706	2.7	164.9	3.5	43.2	118.0
801	1.5	196.1	4.0	46.4	121.3
895	2.0	219.2	4.5	49.8	125.8
990	3.1	247.9	5.0	54.3	132.2
*****	****	*****	****	*****	*****
1170	4.6	248.7	6.0	61.4	155.0
1260	3.2	232.8	6.5	62.2	163.0
1350	3.6	231.3	7.0	62.2	171.2
1440	3.0	227.8	7.5	62.0	176.9
1530	2.6	212.0	8.0	61.5	180.0
1620	2.5	190.4	8.5	60.8	180.8
1710	2.6	208.1	9.0	60.3	182.9
1800	2.3	193.5	9.5	59.9	183.6
1890	2.3	183.6	10.0	59.5	183.6

0630 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.1	65.0	0.0		
108	0.7	65.3	0.5	79.4	55.3
216	3.0	64.9	1.0	63.0	65.0
315	5.0	80.8	1.5	50.8	74.1
414	5.4	100.9	2.0	45.5	84.4
513	5.9	121.1	2.5	42.5	95.4
612	6.6	132.7	3.0	40.1	104.9
706	4.9	135.3	3.5	39.5	109.9
801	3.9	141.1	4.0	39.9	113.5
895	2.3	154.3	4.5	41.5	116.1
990	0.8	193.4	5.0	44.2	117.5
1080	1.9	252.6	5.5	47.8	119.8
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	70.0	0.0		
108	1.3	70.0	0.5	69.5	70.0
216	4.2	75.5	1.0	52.5	74.2
315	5.8	83.5	1.5	42.9	79.0
414	6.1	103.6	2.0	39.0	87.6
513	6.8	122.9	2.5	36.7	97.5
612	5.3	125.5	3.0	36.3	102.7
706	4.0	118.8	3.5	36.7	104.7
801	3.3	105.7	4.0	37.4	104.8
895	1.0	78.9	4.5	39.8	104.1
990	2.2	243.7	5.0	44.0	106.5
1080	2.5	236.6	5.5	47.8	109.8
1170	3.3	221.5	6.0	51.0	115.3
1260	3.1	215.3	6.5	53.4	120.9
1350	2.7	198.7	7.0	54.7	125.6
1440	3.6	214.5	7.5	56.2	132.1
1530	3.3	209.7	8.0	57.1	137.7
1620	3.3	207.6	8.5	57.6	142.9
1710	3.4	201.2	9.0	57.6	147.5
1800	3.4	199.3	9.5	57.4	151.5
1890	3.4	194.1	10.0	57.0	154.7

0730 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.9	232.0	0.0		
108	1.6	232.3	0.5	65.9	232.3
216	3.1	74.0	1.0	77.0	95.0
315	2.9	97.1	1.5	66.7	96.4
414	4.6	99.3	2.0	56.5	97.9
513	5.8	122.0	2.5	49.4	107.3
612	5.8	141.5	3.0	46.0	116.8
706	5.0	139.3	3.5	44.0	121.3
801	4.1	134.4	4.0	43.2	123.2
895	2.4	125.7	4.5	44.1	123.4
990	1.4	136.9	5.0	45.7	124.0
1080	1.8	244.9	5.5	49.0	126.9
1170	3.9	242.6	6.0	52.6	133.6
1260	3.0	234.2	6.5	55.0	139.4
1350	3.5	220.6	7.0	56.2	145.9
1440	3.8	223.2	7.5	57.0	152.7
1530	2.6	214.6	8.0	57.5	156.8
1620	2.5	202.7	8.5	57.6	159.8
1710	2.6	193.9	9.0	57.4	162.1
1800	2.1	184.8	9.5	57.4	163.3
1890	2.0	201.5	10.0	57.6	165.1

NEW TAZEWELL 8/7

0800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.3	97.0	0.0		
108	2.3	97.1	0.5	57.0	97.2
216	3.5	91.1	1.0	51.0	93.6
315	5.7	86.7	1.5	42.4	90.2
414	6.0	103.9	2.0	38.5	94.9
513	6.2	121.5	2.5	36.6	101.8
612	6.2	141.0	3.0	36.0	109.8
706	4.1	150.8	3.5	37.0	114.7
801	3.6	144.6	4.0	37.8	117.7
895	2.5	129.6	4.5	39.0	118.5
990	1.7	156.7	5.0	40.8	120.1
1080	3.1	217.8	5.5	43.5	124.7
1170	3.7	233.8	6.0	46.6	130.2
1260	4.5	228.4	6.5	49.0	137.2
1350	4.9	233.3	7.0	51.1	144.9
1440	5.5	224.9	7.5	51.9	153.1
1530	4.4	219.8	8.0	52.2	158.9
1620	4.0	213.4	8.5	52.1	163.4
1710	3.9	209.2	9.0	51.8	167.0
1800	3.4	210.0	9.5	51.7	169.8
1890	2.5	189.9	10.0	51.7	170.8

0830 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.5	76.0	0.0		
108	1.7	75.5	0.5	65.0	75.5
216	5.0	78.8	1.0	47.2	78.0
315	5.1	88.1	1.5	41.8	82.4
414	5.4	110.6	2.0	39.6	91.2
513	6.6	119.1	2.5	37.0	99.0
612	5.3	139.1	3.0	37.1	106.3
705	2.2	165.8	3.5	39.9	110.2
801	1.9	154.8	4.0	42.1	112.8
895	2.4	122.2	4.5	43.1	113.5
990	1.3	167.5	5.0	45.3	115.3
1080	2.7	215.2	5.5	48.1	120.0
1170	3.1	228.1	6.0	51.1	125.4
1260	3.6	237.6	6.5	54.2	131.7
1350	4.0	232.7	7.0	56.5	139.2
1440	5.0	231.5	7.5	58.0	148.7
1530	4.3	220.1	8.0	58.2	156.1
1620	3.2	210.5	8.5	58.1	160.6
1710	2.9	196.0	9.0	57.7	163.3
1800	3.2	187.2	9.5	57.0	165.2
1890	3.1	194.6	10.0	56.5	167.3

0900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.9	69.0	0.0		
108	1.9	68.5	0.5	62.0	68.5
216	3.5	69.7	1.0	52.9	69.3
315	5.5	88.4	1.5	44.3	78.9
414	6.4	111.2	2.0	39.8	90.9
513	5.4	128.1	2.5	39.0	99.8
612	2.2	134.8	3.0	41.6	103.0
706	1.7	130.3	3.5	43.9	104.8
801	2.6	117.5	4.0	44.7	106.0
895	1.5	146.9	4.5	46.7	108.0
990	2.4	176.4	5.0	48.6	112.4
1080	2.4	203.4	5.5	51.0	117.2
1170	3.7	225.1	6.0	54.1	124.4
1260	2.4	229.9	6.5	56.6	129.1
1350	4.4	219.4	7.0	58.1	138.1
1440	4.3	214.7	7.5	58.6	146.3
1530	3.5	197.0	8.0	58.2	151.2
1620	3.6	184.9	8.5	57.3	154.5
1710	3.2	178.8	9.0	56.6	156.5
1800	3.4	175.0	9.5	55.8	158.0
1890	3.1	169.4	10.0	55.2	158.8

0930 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.9	63.0	0.0		
108	1.7	63.2	0.5	65.0	63.2
216	2.6	63.2	1.0	59.0	63.2
315	4.4	82.2	1.5	50.7	72.8
414	7.7	95.7	2.0	40.9	83.6
513	3.1	148.8	2.5	44.4	92.9
612	2.7	141.8	3.0	46.5	99.0
706	0.7	162.7	3.5	50.1	100.9
801	1.8	116.2	4.0	51.2	102.2
895	1.9	109.6	4.5	52.0	102.8
990	1.2	150.1	5.0	53.8	104.9
1080	1.9	195.8	5.5	56.1	109.3
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.9	80.0	0.0		
108	3.4	79.5	0.5	47.0	79.5
216	3.8	88.7	1.0	45.3	84.4
315	4.7	86.1	1.5	41.7	85.1
414	5.6	85.1	2.0	38.5	85.1
513	5.0	99.0	2.5	37.6	88.2
612	6.3	108.3	3.0	35.9	92.6
705	3.6	132.0	3.5	37.2	96.8
801	2.4	121.2	4.0	38.8	98.5
895	3.6	110.8	4.5	39.1	99.7
990	4.0	97.6	5.0	39.0	99.5
1080	2.2	113.1	5.5	40.0	100.2
1170	2.0	165.7	6.0	41.7	102.6
1260	2.4	193.6	6.5	43.8	105.8
1350	4.8	220.9	7.0	47.0	111.8
1440	5.1	212.9	7.5	49.3	118.7
1530	4.4	191.3	8.0	50.0	124.3
1620	4.5	182.4	8.5	50.0	129.1
1710	4.6	180.4	9.0	49.7	133.4
1800	4.6	175.8	9.5	49.2	136.8
1890	4.5	161.0	10.0	48.4	138.7

NEW TAZEWELL 8/8A74

0400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.2	101.0	0.0		
108	0.6	101.2	0.5	80.0	101.3
216	2.9	99.2	1.0	64.0	99.6
315	3.9	115.1	1.5	55.0	107.8
414	3.7	134.9	2.0	51.9	116.9
513	3.7	174.5	2.5	52.4	130.6
612	3.4	199.7	3.0	54.2	143.0
706	4.2	216.4	3.5	55.1	157.3
801	6.1	218.4	4.0	53.0	172.8
895	8.2	213.4	4.5	48.0	184.2
990	9.8	215.1	5.0	42.8	192.3
1080	9.8	216.3	5.5	38.8	197.4
1170	10.3	215.7	6.0	35.5	200.8
1260	10.9	217.2	6.5	32.8	203.5
1350	11.3	208.9	7.0	30.5	204.3
1440	11.7	199.0	7.5	28.6	203.6
1530	11.8	194.2	8.0	27.1	202.5
1620	13.0	203.4	8.5	25.6	202.6
1710	12.4	206.6	9.0	24.5	203.0
1800	12.3	206.4	9.5	23.6	203.3
1890	11.9	209.6	10.0	22.9	203.8

0500 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	85.0	0.0		
108	1.2	85.2	0.5	71.5	85.2
216	2.7	97.0	1.0	61.7	93.4
315	2.2	113.3	1.5	60.1	100.7
414	3.2	131.9	2.0	57.1	111.4
513	2.8	176.3	2.5	58.7	125.3
612	4.3	230.9	3.0	63.6	149.5
706	4.9	227.5	3.5	62.8	172.6
801	6.7	214.6	4.0	56.5	187.3
895	7.7	216.6	4.5	50.4	196.1
990	8.9	219.8	5.0	45.0	202.3
1080	10.0	226.3	5.5	40.4	207.8
1170	11.1	223.3	6.0	36.3	211.0
1260	11.5	222.3	6.5	33.1	213.0
1350	11.2	223.8	7.0	30.8	214.6
1440	10.8	222.6	7.5	29.1	215.6
1530	10.5	221.1	8.0	27.8	216.2
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0630 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.8	63.0	0.0		
108	2.5	62.7	0.5	55.5	62.7
216	2.3	90.5	1.0	57.4	76.0
315	1.5	140.8	1.5	62.8	90.3
414	2.5	189.5	2.0	68.0	116.8
513	3.4	211.0	2.5	69.7	149.5
612	6.7	219.4	3.0	62.4	185.5
706	8.4	219.8	3.5	52.3	200.5
801	8.6	219.2	4.0	45.2	206.5
895	8.3	217.8	4.5	40.7	209.2
990	8.8	221.6	5.0	37.3	211.7
1080	11.6	221.6	5.5	33.3	213.8
1170	12.1	223.2	6.0	30.3	215.5
1260	14.4	223.4	6.5	27.4	216.9
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	68.0	0.0		
108	1.1	68.5	0.5	73.0	68.5
216	2.4	80.0	1.0	64.3	76.4
315	2.8	109.6	1.5	60.4	91.1
414	2.7	193.1	2.0	66.5	116.7
513	5.3	211.9	2.5	65.9	160.6
612	6.1	216.0	3.0	59.2	164.8
706	7.2	228.5	3.5	52.5	200.8
801	6.8	234.3	4.0	48.0	209.8
895	8.7	227.9	4.5	42.6	214.6
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0730 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.1	28.0	0.0		
108	1.2	27.5	0.5	72.0	27.5
216	2.0	34.9	1.0	66.3	32.2
315	2.9	79.6	1.5	62.0	55.0
414	2.6	107.5	2.0	61.6	71.1
513	1.7	198.7	2.5	69.0	82.9
612	4.0	220.3	3.0	77.5	119.1
706	5.2	225.6	3.5	76.0	176.0
801	6.6	234.3	4.0	67.6	207.9
895	7.3	227.2	4.5	58.8	215.6
990	9.6	219.1	5.0	50.0	216.8
1080	10.5	218.6	5.5	43.3	217.3
1170	12.3	220.2	6.0	37.7	218.0
1260	13.3	221.8	6.5	33.4	218.8
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.5	154.0	0.0		
108	0.5	153.4	0.5	82.5	153.5
216	0.8	76.4	1.0	82.0	103.6
315	1.8	72.9	1.5	75.6	84.0
414	2.6	110.5	2.0	69.6	97.0
513	1.3	205.7	2.5	74.1	111.7
612	3.7	193.4	3.0	72.2	146.1
706	4.2	246.4	3.5	73.2	181.4
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

CROSSVILLE 7/16/74

1000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	90.0	0.0		
108	3.9	35.8	0.5	43.0	35.8
216	4.1	39.1	1.0	42.1	37.5
315	4.5	54.4	1.5	40.4	43.6
414	3.9	77.0	2.0	41.3	51.4
513	4.3	85.5	2.5	41.4	58.5
612	2.8	76.7	3.0	42.7	50.8
706	2.2	33.1	3.5	44.4	58.4
801	3.7	21.9	4.0	44.6	53.8
895	5.1	27.1	4.5	43.3	49.7
990	6.3	34.6	5.0	41.1	47.2
1080	6.3	33.1	5.5	39.3	45.2
1170	7.1	28.5	6.0	37.5	42.9
1260	7.0	28.7	6.5	36.1	41.2
1350	6.2	25.5	7.0	35.3	39.7
1440	5.8	19.2	7.5	34.8	38.0
1530	6.7	17.2	8.0	34.1	36.2
1620	7.3	8.3	8.5	33.4	33.8
1710	8.9	352.5	9.0	32.7	30.0
1800	7.7	351.3	9.5	32.3	27.1
1890	7.9	343.6	10.0	32.0	24.0

1030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.9	40.0	0.0		
108	2.5	42.8	0.5	54.9	42.8
215	3.2	29.8	1.0	51.5	35.5
315	3.7	45.9	1.5	48.1	39.6
414	2.9	53.2	2.0	48.4	42.8
513	3.5	76.1	2.5	48.2	50.0
612	2.7	76.6	3.0	49.0	53.9
705	2.1	35.3	3.5	50.1	52.0
801	3.2	18.3	4.0	50.0	47.5
895	5.6	25.1	4.5	47.2	43.1
990	4.5	33.8	5.0	45.8	41.8
1080	7.4	37.5	5.5	42.4	41.0
1170	6.6	36.1	6.0	40.3	40.3
1260	7.2	39.5	6.5	38.3	40.2
1350	6.8	42.8	7.0	36.9	40.5
1440	5.4	35.6	7.5	36.3	40.1
1530	5.4	30.9	8.0	35.8	39.4
1620	6.6	24.0	8.5	35.0	38.1
1710	7.4	13.4	9.0	34.2	36.0
1800	7.1	359.2	9.5	33.8	33.3
1890	7.9	354.0	10.0	33.3	30.3

1100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.1	20.0	0.0		
108	2.1	25.4	0.5	59.8	25.4
216	3.0	28.6	1.0	54.9	27.3
315	3.6	42.5	1.5	50.8	33.6
414	3.4	55.4	2.0	49.4	39.8
513	3.1	51.7	2.5	48.9	42.3
612	3.2	33.8	3.0	48.4	40.8
706	3.4	17.6	3.5	47.9	37.2
801	4.9	33.4	4.0	45.6	36.5
895	6.2	32.8	4.5	42.7	35.8
990	6.4	33.4	5.0	40.4	35.4
1080	6.8	36.0	5.5	38.3	35.5
1170	7.0	43.0	6.0	36.6	36.5
1260	4.3	45.8	6.5	36.5	37.2
1350	3.7	22.4	7.0	36.7	36.3
1440	5.0	16.4	7.5	36.4	34.8
1530	4.9	6.5	8.0	36.3	32.9
1620	5.0	351.2	8.5	36.4	30.3
1710	4.6	330.4	9.0	37.0	27.3
1800	3.8	332.5	9.5	37.6	25.0
1890	4.7	317.0	10.0	38.3	21.9

1130 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.4	40.0	0.0		
108	4.3	51.2	0.5	39.9	51.2
216	4.5	39.2	1.0	39.5	45.1
315	4.5	33.3	1.5	38.5	41.1
414	4.0	35.0	2.0	38.8	39.7
513	3.3	40.9	2.5	39.9	39.9
612	3.7	48.5	3.0	40.2	41.2
706	3.8	41.2	3.5	40.1	41.2
801	4.0	37.9	4.0	39.9	40.8
895	5.2	28.5	4.5	38.9	39.1
990	6.4	32.2	5.0	37.3	38.1
1080	6.1	37.3	5.5	36.1	38.0
1170	6.7	37.1	6.0	34.8	37.9
1260	7.1	42.3	6.5	33.6	38.4
1350	6.1	45.2	7.0	33.0	39.0
1440	4.3	40.7	7.5	33.1	39.1
1530	4.4	30.1	8.0	33.2	38.6
1620	5.0	25.3	8.5	33.1	37.8
1710	5.6	18.4	9.0	32.9	35.6
1800	5.0	8.9	9.5	32.8	35.0
1890	5.3	357.6	10.0	32.9	33.1

1200 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.8	40.0	0.0		
108	3.2	35.9	0.5	48.0	35.9
215	2.5	31.9	1.0	51.6	34.2
315	3.2	34.4	1.5	49.8	34.3
414	2.5	22.4	2.0	50.6	31.7
513	2.8	33.7	2.5	50.5	32.1
612	3.3	25.3	3.0	49.5	30.8
705	5.2	33.8	3.5	46.2	31.5
801	5.8	33.9	4.0	43.3	32.0
895	6.1	33.1	4.5	40.9	32.2
990	6.4	32.2	5.0	38.9	32.2
1080	6.4	38.1	5.5	37.3	33.0
1170	5.7	49.9	6.0	36.5	34.6
1260	5.0	54.9	6.5	36.2	36.5
1350	4.2	51.2	7.0	36.2	37.5
1440	3.6	33.9	7.5	36.4	37.3
1530	4.1	33.9	8.0	36.4	37.1
1620	4.7	26.0	8.5	36.2	36.4
1710	4.1	13.2	9.0	36.3	35.2
1800	4.3	358.7	9.5	36.5	33.4
1890	3.1	356.1	10.0	37.0	32.1

1230 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.8	66.0	0.0		
108	2.4	65.8	0.5	56.2	65.8
216	1.7	71.1	1.0	60.5	58.0
315	2.7	59.6	1.5	57.4	64.7
414	2.9	40.1	2.0	55.7	57.4
513	3.0	20.5	2.5	55.1	48.8
612	4.0	36.3	3.0	52.2	45.7
706	4.3	35.4	3.5	49.5	43.5
801	5.8	41.7	4.0	45.9	43.1
895	5.3	42.5	4.5	43.8	43.0
990	5.4	45.7	5.0	42.1	43.4
1080	5.8	41.2	5.5	40.4	43.1
1170	5.5	42.2	6.0	39.2	43.0
1260	4.4	57.4	6.5	38.9	44.2
1350	3.6	69.3	7.0	39.1	45.8
1440	2.9	57.8	7.5	39.5	46.4
1530	2.7	30.1	8.0	40.0	45.7
1620	3.3	15.5	8.5	40.3	44.2
1710	2.7	6.8	9.0	40.9	42.8
1800	3.2	355.7	9.5	41.4	40.8
1890	2.7	347.5	10.0	42.1	39.0

CROSSVILLE 7/16/74

1300 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.8	57.0	0.0		
108	4.6	57.3	0.5	37.8	57.3
216	4.3	43.8	1.0	38.9	50.8
315	4.9	48.8	1.5	37.2	50.1
414	3.8	36.1	2.0	38.2	47.1
513	3.8	30.6	2.5	38.9	44.2
612	5.4	42.2	3.0	37.5	43.8
706	5.4	40.8	3.5	36.4	43.3
801	5.1	33.9	4.0	35.8	42.0
895	4.7	32.2	4.5	35.6	40.9
990	5.0	33.3	5.0	35.3	40.1
1080	5.0	41.1	5.5	34.9	40.2
1170	4.4	49.2	6.0	34.9	40.9
1260	5.4	56.9	6.5	34.5	42.3
1350	5.9	61.8	7.0	34.0	44.0
1440	5.5	69.6	7.5	33.8	45.9
1530	3.8	89.4	8.0	34.4	47.9
1620	3.0	77.3	8.5	35.0	49.0
1710	2.2	59.6	9.0	35.7	49.3
1800	3.0	43.7	9.5	36.1	49.1
1890	3.5	44.2	10.0	36.3	48.9

1330 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.7	40.0	0.0		
108	2.1	30.3	0.5	59.8	30.3
216	2.5	40.7	1.0	57.3	36.0
315	4.1	44.1	1.5	50.5	39.8
414	4.7	38.3	2.0	45.9	39.3
513	4.6	38.5	2.5	43.5	39.1
612	4.8	36.2	3.0	41.8	38.5
706	3.4	38.5	3.5	41.9	38.5
801	2.6	41.8	4.0	42.8	38.8
895	2.8	50.2	4.5	43.4	39.8
990	2.8	56.9	5.0	43.9	41.2
1080	2.5	60.8	5.5	44.5	42.5
1170	1.3	54.1	6.0	45.8	42.9
1260	4.2	47.8	6.5	44.9	43.4
1350	3.2	69.9	7.0	45.0	45.2
1440	2.3	64.1	7.5	45.5	46.1
1530	2.0	65.9	8.0	46.1	46.9
1620	2.7	41.1	8.5	46.2	46.6
1710	2.6	20.3	9.0	46.5	45.4
1800	2.3	8.8	9.5	47.0	44.0
1890	2.0	14.3	10.0	47.5	43.0

1400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.2	40.0	0.0		
108	4.0	64.8	0.5	42.2	54.8
216	4.5	32.2	1.0	41.6	47.5
315	4.5	45.8	1.5	39.7	46.9
414	3.7	42.9	2.0	40.1	46.0
513	4.6	50.1	2.5	39.2	46.9
612	4.4	51.5	3.0	38.8	47.7
706	4.2	44.2	3.5	38.5	47.2
801	3.0	13.3	4.0	39.7	44.2
895	1.9	347.5	4.5	41.9	41.4
990	0.8	351.2	5.0	44.3	40.3
1080	1.4	47.6	5.5	45.6	40.6
1170	1.6	45.1	6.0	46.6	40.8
1260	2.7	46.6	6.5	46.7	41.2
1350	1.8	52.5	7.0	47.4	41.7
1440	1.4	70.2	7.5	48.4	42.6
1530	2.5	62.8	8.0	48.6	43.7
1620	1.5	28.4	8.5	49.3	43.2
1710	1.7	40.4	9.0	49.8	43.1
1800	2.0	48.1	9.5	50.1	43.3
*****	****	*****	****	*****	*****

CROSSVILLE 7/17/74

1000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.6	140.0	0.0		
108	1.5	309.8	0.5	68.0	309.8
216	5.5	118.1	1.0	60.5	114.0
315	1.9	188.3	1.5	64.9	135.5
414	2.5	250.8	2.0	72.1	165.6
513	2.9	284.8	2.5	77.0	204.8
612	2.2	285.8	3.0	76.8	231.2
706	2.7	308.4	3.5	75.8	256.9
801	1.5	289.8	4.0	74.8	253.3
895	2.5	281.8	4.5	72.1	268.0
990	2.3	255.4	5.0	70.2	265.6
1080	3.4	253.8	5.5	67.1	253.0
1170	2.9	230.5	6.0	65.6	258.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1035 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.3	90.0	0.0		
108	1.3	91.8	0.5	70.5	91.9
216	0.9	163.3	1.0	75.9	119.4
315	1.6	229.0	1.5	79.4	169.0
414	2.8	271.8	2.0	77.7	232.3
513	2.3	297.7	2.5	75.4	259.8
612	1.6	312.8	3.0	74.8	272.9
706	1.6	318.2	3.5	73.9	282.8
801	2.2	307.7	4.0	71.7	288.8
895	2.1	286.2	4.5	69.9	288.3
990	1.9	247.9	5.0	69.3	282.5
*****	****	*****	****	*****	*****
1170	3.5	241.0	6.0	64.9	267.9
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	50.0	0.0		
108	1.1	64.7	0.5	73.1	64.7
*****	****	*****	****	*****	*****
315	0.5	190.7	1.5	85.0	117.0
414	1.7	292.9	2.0	86.9	287.9
513	2.2	312.0	2.5	80.3	306.0
612	1.5	317.6	3.0	77.9	309.9
706	1.2	337.4	3.5	77.0	315.6
801	1.7	321.1	4.0	75.1	316.9
895	1.7	316.4	4.5	73.5	316.8
990	1.1	269.3	5.0	73.7	311.8
1080	2.1	247.1	5.5	73.4	301.5
1170	3.4	244.9	6.0	71.7	288.9
1260	2.2	283.4	6.5	70.2	288.1
1350	6.0	209.6	7.0	58.9	268.2
1440	4.2	205.7	7.5	67.7	257.2
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1133 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.8	6.0	0.0		
108	1.0	5.7	0.5	74.5	5.7
216	0.8	347.5	1.0	76.0	357.5
315	1.5	31.4	1.5	73.3	12.9
414	0.4	2.4	2.0	75.7	11.8
513	1.1	288.6	2.5	77.5	335.7
612	1.8	280.2	3.0	77.4	333.8
706	1.6	290.1	3.5	76.2	323.1
801	1.2	306.8	4.0	75.5	320.4
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1200 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.2	86.0	0.0		
108	1.0	85.9	0.5	74.6	85.9
216	1.0	358.7	1.0	78.8	42.7
315	1.7	351.1	1.5	75.0	14.5
414	1.2	327.5	2.0	74.8	0.8
513	0.6	303.8	2.5	76.5	353.8
612	0.5	51.5	3.0	77.9	359.0
706	0.5	21.9	3.5	78.5	1.1
801	0.7	347.7	4.0	78.5	359.5
895	0.9	300.4	4.5	78.7	351.8
990	1.3	282.9	5.0	78.8	341.3
1080	1.7	253.1	5.5	79.3	326.9
1170	2.6	237.6	6.0	79.4	306.3
1260	3.3	235.4	6.5	78.0	286.0
1350	3.8	234.5	7.0	75.5	271.4
1440	4.7	221.4	7.5	72.5	257.5
1530	5.3	205.5	8.0	69.7	244.7
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1300 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.7	360.0	0.0		
108	4.0	338.0	0.5	42.1	338.0
216	4.1	338.0	1.0	41.7	338.0
315	3.1	14.3	1.5	44.3	347.9
414	3.5	7.0	2.0	44.3	352.6
513	1.8	349.0	2.5	47.0	352.2
612	2.5	324.7	3.0	48.3	348.6
706	0.4	8.5	3.5	51.8	349.0
801	1.0	79.2	4.0	55.2	352.2
895	2.2	103.5	4.5	59.1	358.9
990	1.1	79.4	5.0	61.3	2.2
1080	0.5	237.6	5.5	63.7	0.9
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

CROSSVILLE 7/17/74

1400 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.1	360.0	0.0		
108	1.9	306.6	0.5	61.9	306.6
216	2.3	328.9	1.0	60.0	318.8
315	1.7	336.4	1.5	60.9	324.0
414	1.1	353.1	2.0	63.6	328.6
513	1.3	20.1	2.5	65.6	336.4
612	0.5	106.7	3.0	69.9	339.1
706	0.3	69.3	3.5	72.4	341.6
801	0.4	343.4	4.0	73.5	341.7
895	1.4	5.1	4.5	72.9	345.1
990	0.9	358.2	5.0	73.0	346.3
1080	0.7	201.6	5.5	75.2	343.8
1170	1.9	213.9	6.0	77.8	334.0
1260	0.3	192.4	6.5	79.0	332.5
1350	3.4	212.9	7.0	81.0	308.0
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1500 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.8	260.0	0.0		
108	0.4	260.0	0.5	83.0	260.0
215	0.6	319.5	1.0	82.5	295.8
315	0.3	9.8	1.5	84.2	311.2
414	0.3	97.9	2.0	86.5	321.7
*****	****	*****	****	*****	*****
612	1.4	119.3	3.0	96.0	290.6
705	2.2	135.5	3.5	79.8	123.3
801	1.9	134.1	4.0	77.2	126.6
895	2.3	152.2	4.5	74.7	133.5
990	2.4	145.3	5.0	72.3	136.2
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.4	51.0	0.0		
108	1.0	50.5	0.5	74.0	50.5
216	1.1	115.4	1.0	76.3	83.3
315	0.3	116.8	1.5	79.1	88.2
414	0.8	118.2	2.0	78.7	96.7
513	0.7	128.9	2.5	76.8	103.2
612	2.3	190.7	3.0	78.4	136.9
706	1.5	159.3	3.5	76.6	142.5
801	2.1	241.9	4.0	76.0	154.6
895	2.8	269.6	4.5	79.3	193.2
990	2.3	293.6	5.0	80.2	216.9
1080	1.5	268.0	5.5	79.4	226.8
1170	2.5	214.4	6.0	76.8	223.5
1260	3.7	218.3	6.5	73.0	222.0
1350	3.9	221.1	7.0	69.6	221.8
1440	3.5	210.2	7.5	67.2	219.8
1530	2.8	209.9	8.0	65.8	218.5
1620	4.4	202.3	8.5	63.3	216.0
1710	4.3	199.8	9.0	61.2	213.8
1800	5.0	183.9	9.5	59.2	209.6
1890	4.5	174.2	10.0	57.9	206.0

CROSSVILLE 7/18/74

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.9	275.0	0.0		
108	5.0	274.6	0.5	35.5	274.8
216	7.6	267.5	1.0	29.8	270.4
315	7.7	263.6	1.5	27.4	257.8
414	7.9	261.4	2.0	26.1	256.0
513	7.4	258.3	2.5	25.7	254.4
612	8.1	257.9	3.0	25.1	263.2
706	9.1	258.0	3.5	24.1	262.3
801	9.7	256.5	4.0	23.2	251.4
895	7.1	254.5	4.5	23.3	250.7
990	6.3	254.7	5.0	23.6	260.2
1080	5.3	258.7	5.5	24.0	250.1
1170	4.3	258.1	6.0	24.6	250.0
1260	6.9	156.9	6.5	26.3	259.4
1350	6.9	255.4	7.0	26.1	259.1
1440	4.5	250.4	7.5	26.5	258.7
1530	2.4	229.0	8.0	27.4	258.0
1620	3.1	215.5	8.5	28.2	256.8
1710	3.4	228.0	9.0	28.8	255.9
1800	3.6	228.4	9.5	29.3	255.0
1890	3.5	255.0	10.0	29.7	255.0

1700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.6	230.0	0.0		
108	3.8	281.5	0.5	43.7	281.5
216	5.7	288.4	1.0	37.3	285.7
315	5.2	285.7	1.5	35.7	285.7
414	6.5	279.8	2.0	33.2	283.9
513	5.5	278.5	2.5	32.8	282.8
612	4.1	276.8	3.0	33.7	282.0
706	6.1	267.5	3.5	32.8	279.6
801	7.0	257.4	4.0	31.8	276.1
895	6.0	245.7	4.5	31.7	272.5
990	5.4	229.7	5.0	32.2	268.5
1080	4.6	240.4	5.5	32.5	266.3
1170	4.6	237.2	6.0	32.7	264.1
1260	5.1	233.2	6.5	32.8	261.8
1350	5.0	239.0	7.0	32.8	260.2
1440	4.4	236.2	7.5	33.0	258.8
1530	4.8	240.7	8.0	33.0	257.7
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.1	230.0	0.0		
108	2.8	298.0	0.5	52.0	298.0
216	5.0	278.8	1.0	42.9	285.7
315	5.7	272.9	1.5	38.1	280.3
414	7.0	270.3	2.0	34.2	276.9
513	5.6	264.0	2.5	33.5	274.1
612	5.9	262.8	3.0	32.8	272.0
706	4.6	259.2	3.5	33.1	270.4
801	5.5	249.5	4.0	32.9	267.7
895	4.5	250.3	4.5	33.2	256.0
990	3.7	256.7	5.0	33.8	265.3
1080	1.0	24.3	5.5	36.4	266.3
1170	3.3	284.1	6.0	36.9	267.4
1260	1.8	270.3	6.5	38.0	257.5
1350	4.5	266.2	7.0	37.7	267.4
1440	6.0	260.9	7.5	36.8	266.8
1530	6.9	256.5	8.0	35.7	265.8
1620	6.9	252.2	8.5	34.8	264.6
1710	6.8	267.1	9.0	34.0	264.8
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.1	320.0	0.0		
108	5.6	301.8	0.5	44.8	301.8
216	4.7	301.2	1.0	40.9	301.5
315	4.8	296.3	1.5	38.7	299.6
414	5.0	293.7	2.0	37.4	296.0
513	4.7	292.7	2.5	36.9	296.9
612	4.8	265.3	3.0	36.6	294.9
706	4.0	265.1	3.5	37.0	291.0
801	4.8	268.7	4.0	36.8	238.1
895	5.1	272.0	4.5	36.3	286.1
990	5.4	273.2	5.0	35.7	284.6
1080	5.0	265.0	5.5	35.4	282.7
1170	4.6	265.1	6.0	35.2	282.9
1260	5.6	266.1	6.5	34.6	283.2
1350	5.4	274.5	7.0	34.2	282.5
1440	7.6	273.9	7.5	33.0	281.6
1530	7.4	280.5	8.0	32.1	281.5
1620	6.1	281.5	8.5	31.7	281.5
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

2000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	285.0	0.0		
108	1.9	284.5	0.5	62.1	284.5
216	3.1	281.9	1.0	55.4	282.9
315	3.2	284.9	1.5	52.0	283.7
414	3.8	278.9	2.0	49.0	282.2
513	4.0	284.2	2.5	47.0	282.7
612	3.8	285.8	3.0	46.0	283.3
706	3.4	286.0	3.5	45.6	283.7
801	3.2	290.3	4.0	45.5	284.5
895	3.4	292.3	4.5	45.2	285.4
990	3.4	291.2	5.0	45.0	286.0
1080	3.4	287.0	5.5	44.7	286.1
1170	2.6	290.5	6.0	45.0	286.4
1260	3.7	286.4	6.5	44.5	286.4
1350	3.1	281.9	7.0	44.5	286.1
1440	3.4	281.7	7.5	44.3	285.8
1530	3.7	278.5	8.0	44.0	285.3
1620	4.2	272.9	8.5	43.5	284.4
1710	4.2	268.1	9.0	43.1	283.3
1800	4.1	264.0	9.5	42.8	282.1
1890	4.6	266.8	10.0	42.3	281.1

2030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.1	244.0	0.0		
108	3.1	243.9	0.5	49.5	243.9
216	3.6	258.0	1.0	47.5	251.5
315	2.8	269.4	1.5	48.5	256.8
414	2.6	273.9	2.0	49.5	260.5
513	2.9	266.1	2.5	49.4	251.6
612	3.0	259.2	3.0	49.2	251.2
706	2.6	250.3	3.5	49.4	259.8
801	2.8	259.8	4.0	49.3	259.8
895	3.3	259.8	4.5	48.7	259.8
990	3.5	260.7	5.0	48.0	259.9
1080	3.6	263.6	5.5	47.2	250.3
1170	3.3	262.5	6.0	46.8	260.5
1260	3.2	259.3	6.5	46.5	260.4
1350	3.0	264.7	7.0	46.4	260.7
1440	3.2	257.8	7.5	46.2	260.5
1530	3.6	254.9	8.0	45.8	260.1
1620	3.8	257.3	8.5	45.3	259.9
1710	4.6	252.3	9.0	44.5	259.3
1800	6.1	254.1	9.5	43.1	258.8
1890	6.1	253.1	10.0	41.9	258.3

CROSSVILLE 7/18/74

2100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.0	255.0	0.0		
108	2.9	255.3	0.5	51.3	255.3
216	5.0	255.0	1.0	42.5	255.1
315	5.1	262.7	1.5	39.1	258.1
414	4.7	269.8	2.0	38.2	251.2
513	3.7	269.3	2.5	38.9	252.6
612	3.4	273.4	3.0	39.7	254.1
706	3.2	276.4	3.5	40.4	255.5
801	3.2	274.2	4.0	40.9	256.4
895	3.2	277.0	4.5	41.3	257.4
990	3.2	269.7	5.0	41.6	257.6
1080	3.0	273.0	5.5	41.9	258.0
1170	2.7	251.9	6.0	42.4	257.0
1260	3.2	246.3	6.5	42.6	255.6
1350	3.0	242.2	7.0	42.9	254.2
1440	3.0	237.6	7.5	43.2	252.7
1530	3.3	249.3	8.0	43.2	251.9
1620	5.2	229.4	8.5	42.6	259.2
1710	6.0	253.8	9.0	41.4	258.7
1800	6.7	238.2	9.5	40.2	256.8
1890	6.5	252.1	10.0	39.1	256.4

CROSSVILLE 7/19/74

1600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.6	310.0	0.0		
108	2.9	309.9	0.5	51.0	309.9
216	3.1	319.7	1.0	50.1	315.0
315	2.8	316.6	1.5	50.1	315.5
414	3.9	302.0	2.0	47.7	311.4
513	3.5	303.6	2.5	46.8	309.7
612	4.9	285.0	3.0	44.7	304.0
706	5.0	289.6	3.5	42.7	301.2
801	5.2	288.1	4.0	41.1	299.0
895	4.6	300.5	4.5	40.3	299.2
990	6.1	309.4	5.0	38.7	300.7
1080	6.1	305.3	5.5	37.3	301.3
1170	6.1	291.6	6.0	36.2	300.2
1260	6.9	301.0	6.5	34.9	300.3
1350	6.3	304.5	7.0	34.1	300.7
1440	6.4	310.9	7.5	33.4	301.6
1530	5.8	308.4	8.0	33.0	302.1
1620	9.3	320.2	8.5	31.7	304.0
1710	11.3	320.7	9.0	30.1	305.9
1800	12.2	323.2	9.5	28.6	307.8
1890	11.3	322.9	10.0	27.5	309.2

1700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.4	310.0	0.0		
108	2.2	257.2	0.5	58.1	257.2
216	1.4	260.4	1.0	63.4	258.4
315	1.4	315.9	1.5	66.8	273.4
414	2.0	340.3	2.0	68.0	292.4
513	2.6	323.4	2.5	65.2	302.1
612	1.8	296.8	3.0	64.5	301.1
706	3.0	303.2	3.5	61.7	301.6
801	2.4	299.7	4.0	60.6	301.3
895	3.7	308.9	4.5	57.9	302.8
990	3.7	316.8	5.0	55.9	305.1
1080	3.3	315.2	5.5	54.6	306.4
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

1800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.6	137.0	0.0		
108	4.5	137.5	0.5	38.6	137.6
216	4.2	137.7	1.0	39.7	137.7
315	1.7	153.0	1.5	45.5	140.2
414	3.2	231.2	2.0	52.1	157.5
513	4.1	254.0	2.5	57.1	179.3
612	5.2	283.6	3.0	61.7	206.4
706	5.6	287.1	3.5	60.9	231.3
801	7.3	289.4	4.0	55.9	251.4
895	8.2	285.8	4.5	49.7	262.0
990	7.7	287.2	5.0	45.5	267.8
1080	5.2	314.0	5.5	44.8	273.8
1170	7.6	320.9	6.0	43.0	281.5
1260	7.8	320.7	6.5	41.1	287.4
1350	8.5	326.6	7.0	39.3	293.0
1440	9.8	322.8	7.5	37.0	297.4
1530	9.8	319.5	8.0	35.0	300.3
1620	10.7	317.6	8.5	33.0	302.5
1710	11.1	312.7	9.0	31.2	303.7
1800	11.2	313.1	9.5	29.7	304.7
1890	11.9	313.5	10.0	28.3	305.6

1900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.4	180.0	0.0		
108	2.4	205.8	0.5	56.7	205.8
216	3.8	193.6	1.0	49.6	198.3
315	5.4	212.8	1.5	42.6	205.1
414	4.6	225.9	2.0	41.2	211.0
513	4.5	249.4	2.5	41.3	219.2
612	5.4	265.1	3.0	40.9	228.7
706	6.0	272.3	3.5	39.9	237.1
801	5.9	276.2	4.0	39.0	243.6
895	7.4	274.5	4.5	37.1	249.1
990	7.5	279.9	5.0	35.6	253.9
1080	8.1	285.0	5.5	34.1	258.4
1170	7.9	293.7	6.0	33.1	262.8
1260	7.2	304.2	6.5	32.7	267.0
1350	6.6	310.4	7.0	32.6	270.7
1440	7.1	318.3	7.5	32.5	274.7
1530	8.9	319.4	8.0	31.9	279.1
1620	10.5	315.2	8.5	30.8	283.0
1710	11.2	314.0	9.0	29.6	286.3
1800	11.0	315.6	9.5	28.6	289.1
1890	11.4	314.1	10.0	27.6	291.4

2000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.3	230.0	0.0		
108	3.1	205.2	0.5	49.0	205.2
216	7.2	192.6	1.0	35.1	196.4
315	6.5	213.7	1.5	32.4	203.1
414	6.8	240.6	2.0	31.7	213.8
513	6.8	262.9	2.5	32.1	224.6
612	8.0	274.3	3.0	31.7	235.3
706	7.8	273.2	3.5	30.8	242.3
801	8.5	279.1	4.0	29.8	248.6
895	8.3	280.0	4.5	29.0	253.2
990	8.4	289.7	5.0	28.5	257.9
1080	6.7	302.2	5.5	28.7	262.0
1170	6.2	310.1	6.0	29.1	265.8
1260	8.3	318.0	6.5	29.1	270.8
1350	8.9	323.3	7.0	29.0	275.8
1440	10.1	325.4	7.5	28.6	280.8
1530	10.3	326.3	8.0	28.1	285.2
1620	10.5	325.9	8.5	27.5	289.0
1710	10.9	324.2	9.0	26.8	292.2
1800	11.5	331.3	9.5	26.2	295.6
1890	11.8	327.5	10.0	25.5	298.3

2030 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.3	180.0	0.0		
108	4.9	204.8	0.5	36.5	204.8
216	7.2	219.2	1.0	31.1	213.4
315	6.1	235.9	1.5	30.6	221.0
414	8.0	258.1	2.0	29.3	232.3
513	8.2	262.9	2.5	28.2	239.8
612	8.7	262.5	3.0	27.0	244.6
706	8.6	267.6	3.5	26.1	248.6
801	8.9	274.0	4.0	25.4	252.5
895	8.2	278.2	4.5	25.1	255.7
990	7.6	284.8	5.0	25.1	258.7
1080	6.7	302.0	5.5	25.5	262.2
1170	8.1	310.9	6.0	25.7	266.5
1260	8.8	317.2	6.5	25.8	271.0
1350	10.0	322.2	7.0	25.7	275.8
1440	10.4	324.9	7.5	25.5	280.3
1530	11.0	323.9	8.0	25.1	284.3
1620	10.6	326.8	8.5	24.8	287.8
1710	10.5	332.7	9.0	24.6	291.2
1800	11.1	328.6	9.5	24.2	294.1
1890	11.5	324.3	10.0	23.7	296.4

CROSSVILLE 7/19/74

2100 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.6	230.0	0.0		
108	4.0	219.2	0.5	42.0	219.2
216	6.6	227.6	1.0	34.3	224.4
315	6.8	251.0	1.5	31.8	234.8
414	7.7	265.8	2.0	30.0	244.4
513	9.3	263.1	2.5	27.5	249.6
612	9.9	263.0	3.0	25.6	252.7
706	8.4	274.7	3.5	25.0	256.3
801	8.7	279.2	4.0	24.5	259.6
895	7.5	288.8	4.5	24.6	252.8
990	6.8	299.5	5.0	25.0	266.1
1080	7.2	305.1	5.5	25.2	259.5
1170	8.1	317.5	6.0	25.4	273.7
1260	8.8	319.7	6.5	25.4	277.8
1350	9.0	320.9	7.0	25.3	281.5
1440	9.8	321.3	7.5	25.0	285.0
1530	8.4	326.3	8.0	25.0	287.9
1620	10.0	320.2	8.5	24.6	290.5
1710	9.9	324.4	9.0	24.3	293.0
1800	10.1	326.9	9.5	24.0	295.4
1890	12.0	321.8	10.0	23.4	297.5

2130 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	0.4	223.0	0.0		
108	4.6	223.0	0.5	37.8	223.0
216	8.3	232.8	1.0	29.2	229.3
315	8.2	253.9	1.5	27.0	238.8
414	10.6	256.6	2.0	24.1	244.8
513	10.4	258.3	2.5	22.6	248.2
612	10.9	267.4	3.0	21.6	252.2
706	9.7	272.0	3.5	21.2	255.3
801	8.6	276.5	4.0	21.2	257.9
895	12.6	272.1	4.5	20.2	260.1
990	5.4	310.6	5.0	21.3	262.9
1080	7.4	302.6	5.5	21.7	265.9
1170	8.2	310.0	6.0	22.0	269.3
1260	8.7	318.7	6.5	22.3	273.0
1350	9.4	327.9	7.0	22.6	277.1
1440	10.5	330.1	7.5	22.7	281.3
1530	10.9	332.3	8.0	22.7	285.3
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

CROSSVILLE 8/7/74

0420 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.2	153.0	0.0		
108	3.7	153.2	0.5	44.0	153.3
216	7.7	166.1	1.0	32.4	152.0
315	10.3	172.5	1.5	26.0	157.0
414	12.1	169.7	2.0	22.3	158.0
513	8.0	167.9	2.5	22.3	158.0
612	11.5	165.6	3.0	21.0	157.5
706	12.6	170.6	3.5	19.7	158.1
801	13.2	173.4	4.0	18.7	159.0
895	13.1	176.0	4.5	18.0	170.0
990	12.2	176.7	5.0	17.6	170.8
1080	11.0	179.2	5.5	17.4	171.6
1170	9.7	179.3	6.0	17.4	172.2
1260	9.7	181.8	6.5	17.4	172.9
1350	9.7	183.2	7.0	17.4	173.6
1440	9.7	184.6	7.5	17.4	174.3
1530	9.0	192.5	8.0	17.5	175.3
1620	7.7	190.8	8.5	17.7	176.0
1710	7.5	190.2	9.0	17.9	176.6
1800	7.4	194.1	9.5	18.1	177.3
1890	7.1	190.7	10.0	18.3	177.8

0500 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.1	146.0	0.0		
108	4.0	145.9	0.5	42.1	146.0
216	8.6	157.9	1.0	29.8	154.2
315	10.0	156.2	1.5	25.0	155.1
414	11.3	161.3	2.0	22.2	157.2
513	12.5	166.4	2.5	20.3	159.7
612	12.9	171.1	3.0	19.1	162.2
706	12.1	172.8	3.5	18.4	164.0
801	10.5	172.5	4.0	18.2	165.1
895	10.7	172.8	4.5	18.0	166.0
990	8.6	173.0	5.0	18.2	166.6
1080	7.4	178.3	5.5	18.5	167.4
1170	6.5	181.5	6.0	18.9	168.2
1260	6.9	180.6	6.5	19.2	168.9
1350	6.6	182.3	7.0	19.5	169.6
1440	8.1	188.1	7.5	19.6	170.7
1530	9.5	185.9	8.0	19.5	171.7
1620	8.1	190.8	8.5	19.6	172.7
1710	8.2	196.6	9.0	19.7	173.9
1800	7.3	199.8	9.5	19.9	175.0
1890	8.5	187.3	10.0	19.9	175.6

0600 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.5	155.0	0.0		
108	4.4	154.4	0.5	39.3	154.5
216	8.0	157.5	1.0	30.1	156.5
315	9.4	154.3	1.5	25.7	155.6
414	11.0	154.0	2.0	22.8	155.1
513	11.5	161.6	2.5	21.1	156.8
612	11.9	168.1	3.0	20.0	159.2
706	12.7	174.4	3.5	19.0	162.0
801	13.3	179.3	4.0	18.2	164.8
895	12.2	181.7	4.5	17.8	167.0
990	12.1	183.5	5.0	17.5	168.9
1080	9.3	188.7	5.5	17.6	170.5
1170	8.0	196.9	6.0	17.9	172.2
1260	8.3	192.8	6.5	18.1	173.5
1350	7.2	194.5	7.0	18.4	174.6
1440	7.0	195.3	7.5	18.7	175.6
1530	6.9	199.9	8.0	19.0	176.7
1620	5.6	199.0	8.5	19.4	177.5
1710	5.7	206.6	9.0	19.8	178.5
1800	5.9	195.4	9.5	20.1	179.1
1890	6.3	209.3	10.0	20.4	180.1

0630 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.4	157.0	0.0		
108	4.1	156.8	0.5	41.0	156.9
216	7.8	152.7	1.0	31.2	154.2
315	8.0	150.4	1.5	27.8	152.7
414	9.7	156.3	2.0	25.0	153.9
513	10.7	165.9	2.5	23.1	157.1
612	12.0	170.6	3.0	21.5	160.2
706	12.4	177.9	3.5	20.3	163.6
801	11.4	182.1	4.0	19.7	166.4
895	12.5	181.1	4.5	19.0	168.5
990	12.4	185.4	5.0	18.5	170.6
1080	8.2	191.6	5.5	18.7	172.2
1170	7.7	199.6	6.0	19.0	174.0
1260	9.8	202.4	6.5	19.0	175.2
1350	12.1	202.3	7.0	18.7	178.5
1440	8.5	218.1	7.5	19.0	180.6
1530	8.7	206.8	8.0	19.1	182.1
1620	8.8	210.1	8.5	19.4	183.3
1710	7.3	205.9	9.0	19.8	184.3
1800	7.4	212.4	9.5	19.8	185.5
1890	5.1	213.2	10.0	20.2	185.3

0700 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.8	157.0	0.0		
108	4.9	156.5	0.5	36.5	156.6
216	8.7	154.3	1.0	28.0	155.2
315	9.5	149.8	1.5	24.5	153.0
414	11.1	149.9	2.0	22.0	152.0
513	11.4	155.9	2.5	20.6	153.0
612	11.9	163.1	3.0	19.6	155.1
706	11.5	170.7	3.5	19.0	157.7
801	12.6	179.1	4.0	18.4	161.0
895	13.2	177.4	4.5	17.8	163.3
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0730 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.9	130.0	0.0		
108	4.8	130.3	0.5	37.0	130.4
216	8.0	139.6	1.0	29.5	136.2
315	9.1	138.1	1.5	25.7	137.0
414	10.5	146.8	2.0	23.2	140.2
513	10.4	160.4	2.5	22.1	145.1
612	11.8	167.8	3.0	21.0	150.0
706	11.4	179.5	3.5	20.4	155.1
801	10.3	187.7	4.0	20.3	159.5
895	10.7	184.7	4.5	20.0	162.7
990	9.5	188.3	5.0	20.0	165.3
1080	9.1	191.2	5.5	20.0	167.6
1170	8.4	192.5	6.0	20.1	169.5
1260	7.2	198.8	6.5	20.4	171.3
1350	6.7	206.9	7.0	20.6	173.2
1440	5.2	213.9	7.5	21.4	174.8
1530	6.7	207.2	8.0	21.7	176.4
1620	7.5	200.5	8.5	21.8	177.7
1710	6.4	195.6	9.0	22.0	178.5
1800	7.6	192.2	9.5	22.0	179.2
1890	6.8	192.9	10.0	22.1	179.8

CROSSVILLE 8/7/74

0800 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.0	139.0	0.0		
108	3.1	139.3	0.5	49.6	139.4
216	5.5	139.2	1.0	40.0	139.3
315	6.6	145.4	1.5	34.7	142.0
414	9.0	150.3	2.0	29.8	145.1
513	10.7	159.3	2.5	26.3	149.5
612	11.9	167.9	3.0	23.9	154.2
706	14.1	178.3	3.5	21.7	159.8
801	12.9	185.8	4.0	20.6	164.4
895	11.5	190.0	4.5	20.1	167.9
990	10.7	188.0	5.0	19.8	170.2
1080	9.3	188.8	5.5	19.7	171.9
1170	8.1	189.4	6.0	19.8	173.2
1260	7.4	192.1	6.5	20.0	174.4
1350	6.3	202.3	7.0	20.4	175.8
1440	7.5	202.4	7.5	20.6	177.3
1530	5.9	207.7	8.0	21.0	178.6
1620	4.5	200.2	8.5	21.5	179.3
1710	2.9	204.5	9.0	22.2	179.8
1800	3.3	200.6	9.5	22.8	180.2
1890	4.4	197.0	10.0	23.2	180.7

0830 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.1	139.0	0.0		
108	2.9	138.4	0.5	51.0	138.5
215	5.6	143.6	1.0	40.1	141.9
315	7.4	147.2	1.5	33.4	144.4
414	9.0	151.0	2.0	29.0	146.8
513	10.1	161.7	2.5	26.2	151.1
612	11.6	171.9	3.0	24.0	156.3
706	12.8	180.4	3.5	22.2	161.5
801	11.6	185.1	4.0	21.3	165.4
895	10.7	186.3	4.5	20.8	168.2
990	9.5	183.1	5.0	20.6	169.8
1080	9.3	184.5	5.5	20.4	171.2
1170	8.9	186.7	6.0	20.3	172.5
1260	8.9	185.3	6.5	20.2	173.5
1350	8.3	183.8	7.0	20.2	174.2
1440	7.7	187.8	7.5	20.3	175.0
1530	6.3	194.8	8.0	20.6	175.9
1620	5.4	197.4	8.5	21.0	176.7
1710	5.1	197.1	9.0	21.4	177.4
1800	4.8	196.4	9.5	21.8	178.0
1890	1.7	216.3	10.0	22.6	178.4

0900 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	1.5	130.0	0.0		
108	1.7	129.9	0.5	64.6	130.0
216	2.3	132.5	1.0	60.6	131.5
315	4.2	150.7	1.5	52.2	141.3
414	6.9	154.8	2.0	42.8	147.5
513	9.0	163.4	2.5	35.8	153.5
612	11.0	170.9	3.0	30.7	159.0
706	12.1	179.9	3.5	27.2	154.4
801	11.2	183.9	4.0	25.3	168.2
895	10.2	183.2	4.5	24.2	170.5
990	10.0	182.7	5.0	23.4	172.1
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

0930 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	2.3	127.0	0.0		
108	3.2	126.7	0.5	48.7	126.8
216	4.4	147.2	1.0	44.1	138.7
315	4.5	149.9	1.5	41.6	142.9
414	5.9	157.9	2.0	38.1	147.9
513	9.5	162.1	2.5	32.4	152.9
612	10.8	175.4	3.0	28.8	159.3
706	11.5	186.3	3.5	26.3	165.6
801	10.7	187.0	4.0	24.8	169.5
895	10.8	190.6	4.5	23.7	172.8
990	10.8	186.0	5.0	22.8	174.6
1080	10.5	189.1	5.5	22.1	175.3
1170	9.3	194.4	6.0	21.8	178.0
1260	9.1	198.2	6.5	21.6	179.7
1350	8.0	199.4	7.0	21.6	181.0
1440	6.7	201.0	7.5	21.8	182.1
1530	5.7	193.2	8.0	22.1	182.6
1620	3.5	190.0	8.5	22.7	182.6
1710	3.3	194.8	9.0	23.3	183.1
1800	4.4	195.5	9.5	23.7	183.5
1890	4.8	186.4	10.0	24.0	183.6

1000 EDT

HGT	SPD	DIR	TIME	ELV	AZ
2	3.1	128.0	0.0		
108	4.2	127.6	0.5	40.8	127.7
215	3.8	137.7	1.0	42.3	132.5
315	3.5	145.9	1.5	42.8	136.6
414	4.1	156.0	2.0	42.2	141.7
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****
*****	****	*****	****	*****	*****

8. TETROON DATA

In this section, tetroon position data are presented. Positions are given in meters north (Y) and east (X) relative to the radar site. Elevations are given in meters above MSL. All times are given in minutes after midnight (EDT). Asterisks indicate missing data.

DAY 7/16/74 TETROON NO. 7161 RELEASE TIME = 598 MIN AFTER MIDNIGHT.
XO = -664 (M) YO = -22420 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
606	-1384	-23468	403	663	-11221	-31953	687	713	-21000	-37934	794	763	-29535	-44297	625
607	-1560	-24411	452	664	-11474	-32067	719	714	-21106	-38126	794	764	-29708	-44460	886
609	-1854	-24483	474	665	-11608	-32243	718	715	-21259	-38313	879	765	-29821	-44725	834
610	-1946	-24129	576	666	-11740	-32409	751	716	-21493	-38466	922	766	-30018	-44924	940
611	-1988	-23777	559	667	-11921	-32509	716	717	-21685	-38631	923	767	-30264	-45101	1154
612	-2093	-23897	604	668	-12026	-32597	749	718	-21953	-38753	923	768	-30450	-45186	995
613	-2177	-24037	649	669	-12224	-32640	748	719	-22162	-38854	879	769	-30576	-45277	1049
614	-2304	-24127	695	670	-12462	-32687	748	720	-22388	-39072	835	770	-30684	-45436	1104
615	-2406	-25192	657	671	-12675	-32763	781	721	-22723	-39387	879	771	-30846	-45580	1105
616	-2568	-25316	880	672	-12882	-32819	781	722	-22958	-39525	835	772	-30832	-45656	1160
623	-4390	-25601	700	673	-13033	-32917	780	723	-23229	-39631	789	773	-30893	-45747	1052
624	-4472	-25773	724	674	-13145	-33011	815	724	-23452	-39744	789	774	-30980	-45875	998
625	-4535	-25985	722	675	-13307	-33133	779	725	-23808	-39809	834	775	-31088	-46034	945
626	-4669	-26147	720	676	-13390	-33246	708	726	-24031	-39915	834	776	-31190	-46187	1109
627	-4832	-26311	665	677	-13452	-33399	707	727	-24292	-39993	880	777	-31328	-46292	1055
628	-5019	-26454	690	678	-13549	-33547	706	728	-24459	-40090	972	778	-31481	-46420	1166
629	-5560	-27531	705	679	-13704	-33642	741	729	-24499	-40066	1018	779	-31609	-46610	1168
630	-5796	-27716	703	680	-13954	-33688	776	730	-24619	-40175	1111	780	-31896	-46835	1226
631	-5811	-26994	737	681	-14010	-33824	811	731	-24731	-40267	1066	781	-32107	-47045	1312
632	-5983	-27143	708	682	-14262	-33867	775	732	-24818	-40321	1020	782	-32277	-47294	1399
633	-6126	-27280	707	683	-14430	-33984	738	733	-24885	-40430	1067	783	-32499	-47619	1375
634	-6255	-27351	568	684	-14561	-34107	773	734	-25134	-40566	1115	784	-32675	-47776	1349
635	-6391	-27449	455	685	-14748	-34265	699	735	-25222	-40619	1115	785	-32752	-47989	1352
636	-6474	-27560	425	686	-14910	-34454	661	736	-25330	-40703	1116	786	-32886	-48186	1354
637	-6564	-27701	506	687	-15038	-34657	659	737	-25482	-40770	1069	787	-33030	-48397	1414
638	-6688	-27860	531	688	-15176	-34787	658	738	-25653	-40954	1118	788	-33096	-48596	1301
639	-6782	-28006	501	689	-15305	-34990	657	739	-25736	-41086	1119	789	-33247	-48714	1187
640	-7134	-28965	514	690	-15458	-35153	693	740	-25985	-41123	1072	790	-33317	-48921	1246
641	-7298	-29134	658	691	-15717	-35269	767	741	-26183	-41257	929	791	-33501	-48983	1481
642	-7386	-29245	716	692	-15980	-35392	767	742	-26393	-41498	978	792	-33632	-49071	1424
643	-7216	-28570	664	693	-16311	-35472	766	743	-26529	-41622	882	793	-33762	-49158	1543
644	-7347	-28733	545	694	-16477	-35557	804	744	-26695	-41792	784	794	-33948	-49118	1720
645	-7572	-28902	572	695	-16744	-35583	726	745	-26830	-41912	784	795	-34037	-49144	1838
646	-7880	-29030	687	696	-16888	-35707	764	746	-26978	-42052	735	796	-34138	-49186	1781
647	-8143	-29202	566	697	-17193	-35715	958	747	-27171	-42170	735	797	-34295	-49310	1902
648	-8291	-29398	593	698	-17472	-35753	1076	748	-27315	-42212	685	798	-34470	-49456	1847
649	-8701	-30509	610	699	-17775	-35837	919	749	-27364	-42378	784	799	-34665	-49632	1852
650	-8624	-29904	678	700	-17971	-35964	841	750	-27493	-42578	833	800	-34839	-49777	1975
651	-8749	-30114	614	701	-18198	-36065	840	751	-27543	-42840	833	801	-34975	-49972	1920
652	-8937	-30316	611	702	-18387	-36174	840	752	-27684	-42966	833	802	-35248	-50048	2045
653	-9363	-31420	567	703	-18686	-36319	840	753	-27783	-43120	833	803	-35440	-50215	1990
654	-9326	-30744	606	704	-19022	-36444	880	754	-27981	-43241	732	804	-36189	-50484	2003
655	-9525	-30854	541	705	-19253	-36622	839	755	-28186	-43370	732	810	-36941	-50739	2510
656	-10027	-31923	526	706	-19478	-36875	798	756	-28415	-43536	629	811	-37106	-51072	2458
657	-10170	-32157	523	707	-19715	-37059	756	757	-28564	-43765	526	812	-37114	-51400	2092
658	-10008	-31431	532	708	-19991	-37223	755	758	-28698	-43875	576	813	-37320	-51579	2093
659	-10126	-31586	562	709	-20187	-37326	796	759	-28859	-43933	524	814	-37439	-51742	2039
660	-10247	-31750	691	710	-20430	-37422	754	760	-29069	-43970	575	815	-37559	-52016	2109
661	-10549	-31931	722	711	-20622	-37599	837	761	-29222	-44013	678	816	-37569	-52246	2050
662	-10851	-31897	689	712	-20843	-37738	752	762	-29377	-44152	730	817	-37660	-52372	2053

****

DAY 7/17/74 TETROON NO. 7171 RELEASE TIME = 681 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = 121700 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
682	8313	-11682	341	721	5860	-13399	644	792	6174	-12059	738	881	12113	-4134	804
684	8152	-11870	508	723	5670	-13355	490	795	6322	-11857	727	886	12264	-3812	1358
685	8176	-11854	508	725	5515	-13389	449	798	6171	-11880	583	890	12666	-3612	1418
686	8032	-12021	563	727	5337	-13480	434	801	6806	-11665	566	893	13100	-3349	1283
687	8035	-12052	577	730	5100	-13538	591	804	7079	-11758	546	896	13736	-3056	1373
688	8074	-12059	576	733	5047	-13600	676	807	7417	-11562	383	899	14140	-2812	763
689	8031	-12045	591	735	4737	-13661	606	810	7852	-11338	638	902	14553	-2144	815
690	8048	-12046	648	739	4398	-13767	450	813	8288	-11198	744	905	14750	-1526	799
691	8091	-12059	590	742	4242	-13789	479	816	8487	-11008	594	908	14905	-835	725
692	8072	-12107	660	745	4177	-13772	523	819	8826	-10973	561	911	14986	-353	635
693	8055	-12030	662	748	4062	-13730	525	822	9291	-10664	503	914	15012	191	515
694	8033	-12023	648	751	3891	-13643	446	825	9367	-10646	139	917	15257	524	718
695	8045	-12015	648	754	4038	-13406	605	839	10257	-8760	381	920	15479	1157	695
696	8018	-12000	663	757	3991	-13157	741	842	10305	-8576	622	923	15795	1728	784
697	7970	-11980	749	760	3968	-12898	872	845	10245	-8357	991	926	15902	2247	524
699	7539	-12302	1018	763	3929	-12639	718	851	10767	-7806	678	929	16136	2409	585
701	7284	-12656	1018	765	3944	-12344	623	854	11009	-7657	464	932	16182	3021	598
703	7188	-12689	989	768	4280	-12345	542	857	11238	-7039	1460	935	16167	3513	517
705	7093	-12784	946	771	4589	-12328	759	860	11642	-6732	1268	938	15995	3757	857
707	7066	-12914	945	774	5053	-12132	630	863	11890	-6385	1011	941	16141	4009	1247
711	6597	-13774	598	777	5130	-12050	631	866	12158	-6120	750	944	16420	4198	1735
713	6335	-13885	553	780	5342	-12052	784	869	12346	-5809	615	947	16256	4378	1795
715	6291	-13861	794	783	5582	-12140	624	872	12464	-5437	603	950	17504	5235	1594
717	6204	-13742	959	786	5759	-12177	594	875	12442	-5011	530	953	17744	5861	1367
719	6079	-13536	843	789	6119	-12157	710	878	12209	-4558	620	956	17788	6602	1395
												959	17556	7070	815
												962	16647	7087	771
												965	17420	7989	883

****

DAY 7/17/74 TETROON NO. 7172 RELEASE TIME = 697 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
714	8357	-11720	367	769	5313	-14187	780	839	9989	-10450	535	913	14311	-3659	555
716	7373	-12412	507	772	5377	-14064	781	842	9794	-10307	1059	916	14468	-3548	579
718	7272	-12549	590	775	5661	-13783	710	845	9979	-10138	1283	919	14758	-3466	943
720	7247	-12677	530	778	5773	-13709	813	848	9983	-9866	1128	922	14980	-3441	1123
722	7080	-12790	486	782	5957	-13730	812	850	10097	-9670	990	926	15694	-2343	1454
724	6772	-13131	481	785	6347	-13524	871	856	10596	-9268	727	928	15814	-1950	1394
726	6788	-13323	621	788	6630	-13204	858	859	10894	-9030	698	931	16083	-1440	1002
728	6825	-13461	707	791	6623	-13126	945	862	11240	-8736	892	934	16363	-1255	809
730	6861	-13597	749	794	6660	-13231	959	865	11657	-8469	805	937	16528	-974	758
732	6790	-13523	929	797	6926	-13269	1062	868	11805	-8211	452	940	16571	-651	758
734	6685	-13413	974	800	7245	-13087	974	874	11997	-7847	482	943	16509	-243	759
736	6519	-13341	1018	803	7348	-12651	1003	877	11924	-7716	376	946	16543	113	595
738	6283	-13353	931	806	7551	-12241	1003	880	12149	-7379	445	949	16649	392	510
740	6139	-13455	655	809	7651	-12242	890	883	12317	-7073	390	952	16651	586	691
742	6113	-13648	680	812	7719	-12059	961	886	12500	-6729	432	955	16607	1110	594
745	6104	-13735	841	815	7572	-11752	935	889	12550	-6550	364	958	16541	1154	511
748	6097	-13719	856	818	7486	-11644	963	892	12497	-6336	398	961	16519	1267	840
751	5837	-13748	680	821	7679	-11299	575	895	12621	-6106	398	964	16547	1384	1002
754	5381	-13749	786	824	7951	-11173	815	899	12666	-6112	562	967	16716	1646	1184
777	5229	-13758	772	827	8332	-11075	800	901	12664	-5703	526	970	16953	2006	1170
760	5260	-13962	783	830	8443	-11085	1141	904	12956	-4794	1207	973	16959	2413	1473
763	5287	-14117	751	833	8854	-10534	1112	907	13487	-4382	1212	976	17183	2808	1555
766	5287	-14118	796	836	9227	-10140	411	910	14049	-3947	946	979	17232	2955	1503

****

DAY 7/17/74 TETROON NO. 7173 RELEASE TIME = 727 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
774	6143	-13677	266	825	8507	-13063	850	876	10794	-8770	976	938	13556	-4655	426
777	8348	-12080	296	828	8805	-12848	636	879	10918	-8625	785	941	13943	-4319	387
780	8283	-12397	417	831	8901	-12533	580	881	11066	-8532	606	944	14249	-4170	449
783	8277	-12388	403	834	9208	-11919	589	884	11179	-8601	449	947	14636	-4004	675
786	7837	-12567	261	837	9217	-11390	643	887	11117	-8623	465	950	14798	-3799	913
789	7266	-12797	656	840	9298	-10930	651	890	11035	-8525	565	955	15172	-3501	1232
792	6951	-13006	279	843	9357	-10509	907	893	11415	-8641	835	959	15493	-3097	1142
795	6856	-13168	449	846	9364	-10454	893	896	11061	-8220	598	962	15512	-2754	1003
798	6809	-13077	641	849	9289	-10412	1031	899	10977	-7893	473	965	15614	-2473	863
801	6986	-12917	542	852	9442	-10235	935	908	10752	-7588	642	968	15904	-1914	845
804	6799	-13089	554	855	9682	-9912	650	911	11281	-7144	650	971	16008	-1449	829
807	6852	-13127	669	858	10151	-9837	518	914	11529	-6834	807	974	16344	-867	1002
810	7193	-13053	1105	861	10492	-9776	637	917	11569	-6629	611	977	16467	-161	970
813	7331	-13091	1150	864	10877	-9877	844	920	11552	-6469	562	980	16421	548	857
816	7677	-12953	1328	867	11466	-10029	1167	923	11677	-6315	522	983	16401	951	760
819	7835	-12957	1062	870	10672	-9115	1155	926	11807	-6016	601	986	16351	1044	890
822	8210	-12994	988	873	10651	-9042	1004	935	13164	-4974	547	989	16190	1258	939
												992	16240	1454	570

****

DAY 7/18/74 TETROON NO. 7181 RELEASE TIME = 945 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
947	8033	-12256	442	970	13850	-7057	926	1025	30173	-148	864	1079	47093	8351	740
948	8168	-12096	588	972	14394	-6842	1065	1028	31180	0	953	1085	48771	9253	882
949	8273	-11870	634	974	15015	-6673	1099	1031	32174	442	1158	1088	49651	9572	1131
950	8726	-11551	591	977	15060	-6100	1082	1034	33099	812	1376	1091	50523	9689	1338
951	8968	-11376	605	980	15050	-5435	987	1037	33870	1297	1419	1094	51366	9955	1347
952	9328	-11031	507	983	17617	-5514	803	1040	34768	1707	1364	1097	52101	10150	1437
953	9648	-10857	418	986	16681	-4475	799	1043	35858	2043	1342	1100	52762	10387	1468
954	9949	-10721	428	989	17571	-4036	719	1046	36945	2542	1283	1103	53541	10595	1478
955	10167	-10554	456	992	20391	-4035	553	1049	37903	3095	1180	1106	54329	10806	1542
956	10454	-10312	513	995	21219	-3489	791	1052	38792	3436	1301	1109	55018	10999	1437
957	10741	-10027	541	998	21967	-2950	1242	1055	39765	3837	1076	1112	55760	11205	1395
958	11064	-9754	569	1001	22721	-2463	1542	1058	40612	4362	960	1115	56641	11555	1175
959	11358	-9510	552	1004	23738	-1868	1682	1061	41602	4965	962	1118	57499	11966	1012
960	11602	-9239	537	1007	24628	-1355	1537	1064	42501	5581	921	1121	58400	12213	957
962	12044	-8841	519	1010	23648	-882	1166	1067	43427	6354	836	1124	59279	12519	1020
964	12406	-8342	533	1013	27346	-805	954	1070	44473	6954	791	1127	60176	12831	1085
966	12897	-7816	603	1016	27388	-564	873	1073	45389	7371	834	1130	60986	13067	1090
968	13313	-7455	763	1019	28258	-527	898	1076	46274	7842	742	1133	61791	13366	1095
												1136	62546	13465	1100
												1139	63449	13529	1041
												1142	64334	13718	1111

****

DAY 7/18/74 TETROON NO. 7182 RELEASE TIME = 960 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
961	7789	-12116	367	1017	23891	-6738	737	1080	44627	-438	792	1143	63347	5298	1035
963	8425	-12063	584	1020	24866	-6462	753	1083	45444	89	835	1146	64119	5553	1070
965	9059	-11895	592	1023	25767	-6320	590	1086	46237	499	834	1149	64890	5812	1107
967	9431	-11796	795	1026	26649	-6039	525	1089	47048	692	834	1152	65495	6126	1046
969	9956	-11564	1243	1029	27596	-5828	621	1092	47884	940	739	1155	66177	6386	1050
971	10552	-11392	1506	1032	28451	-5659	583	1095	48686	1434	738	1157	67002	6598	1055
973	11327	-11260	1661	1035	29428	-5524	600	1098	49594	1899	687	1179	72776	8251	1091
975	11921	-11238	1662	1038	30368	-5208	620	1101	50425	2377	734	1182	73631	8494	1097
978	12796	-10799	1545	1041	31251	-4667	612	1104	51186	2766	1085	1185	74633	8907	1104
981	13584	-10409	1372	1044	32014	-4460	921	1107	52902	2702	1146	1189	75704	9186	1112
984	14186	-9949	1155	1047	33018	-4336	1247	1110	52933	2808	1224	1190	76004	9374	1189
987	15032	-9622	932	1050	34019	-4365	1324	1113	53761	2905	1310	1191	76303	9486	1116
990	15989	-9477	765	1053	35225	-4450	1338	1116	54698	3171	1292	1194	77246	9835	1200
993	16893	-9201	756	1056	36424	-4130	1279	1119	55727	3286	1233	1196	77861	9991	1123
996	17766	-8768	730	1059	37555	-3885	1178	1122	56713	3344	1171	1198	78522	10232	1133
999	18640	-8394	721	1062	38703	-3505	1034	1125	55939	3408	1001	1200	79162	10553	1138
1002	17898	-7413	717	1065	39780	-3130	919	1128	58702	3750	955	1202	80172	10928	1145
1005	20463	-7963	593	1068	40906	-2775	920	1131	59651	4105	1075	1205	77449	10325	1125
1008	21309	-7719	647	1071	41799	-2259	879	1134	60614	4351	1021	1222	38586	6111	958
1011	22103	-7471	683	1074	42806	-1639	837	1137	61572	4541	1026	1224	19287	3093	964
1014	23010	-7103	697	1077	43713	-987	750	1140	62488	4917	1030	1226	9640	1565	989
												1228	4817	801	1007
												1230	4815	811	1007

****

DAY 7/18/74 TETROON NO. 7183 RELEASE TIME = 975 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
976	7560	-12202	298	1057	29675	-5933	626	1138	51616	5339	986	1220	72000	14395	1092
979	8066	-11819	512	1060	31029	-5572	705	1141	52394	6044	989	1221	72300	14528	1094
982	8734	-11215	724	1063	31840	-5235	858	1144	53239	6301	1045	1223	72910	14875	1099
985	9697	-10720	1174	1066	32881	-4976	855	1147	53951	6654	1048	1225	73532	15077	1177
988	10456	-10477	1250	1069	33819	-4610	752	1150	54634	7010	997	1227	74188	15515	1183
991	11319	-10381	1335	1072	34622	-4166	714	1153	55309	7484	945	1229	74824	15648	1113
994	12090	-10285	1595	1075	35284	-3685	710	1156	56029	7693	1003	1231	75410	15925	1193
997	12996	-10433	1690	1078	36112	-3092	777	1181	61420	9913	1089	1242	75685	16216	1120
1000	13939	-10552	1861	1081	36990	-2546	846	1192	64066	11051	978	1243	75980	16279	1122
1003	15128	-10721	1676	1084	37845	-2045	807	1193	64312	11289	980	1244	76279	16500	1201
1006	16776	-9766	1212	1087	38536	-1514	692	1195	64886	11455	982	1245	76541	16714	1204
1009	15584	-9655	930	1090	39179	-846	727	1197	65404	11679	985	1246	76889	16790	1207
1012	17942	-10211	739	1093	39681	-233	725	1201	66803	12064	1058	1247	77150	16927	1209
1015	18606	-9875	713	1096	40421	277	682	1204	67355	12301	1061	1248	77435	16969	1212
1018	19303	-9480	834	1099	40900	803	799	1206	67927	12474	1065	1249	77703	17048	1214
1021	20081	-9162	916	1102	41451	1139	920	1208	68492	12786	1069	1250	77944	17101	1215
1024	20862	-9003	1137	1105	42125	1530	879	1209	68714	12898	1070	1251	78221	17162	1218
1027	21712	-8819	1280	1108	42724	1888	1005	1210	69082	12967	1072	1252	78399	17120	1299
1030	22726	-8664	1267	1111	43488	2179	1050	1211	69438	13104	1075	1253	78614	17167	1301
1033	23702	-8585	1277	1114	44364	2572	1010	1212	69734	13160	1076	1254	78818	17130	1223
1036	24552	-8514	1287	1117	45286	2938	1013	1213	70009	13426	1078	1255	79031	17096	1225
1039	25501	-8480	1007	1120	46238	3228	1016	1214	70301	13553	1080	1256	79236	17058	1227
1042	26440	-7935	954	1123	47146	3710	973	1215	70584	13680	1082	1257	79395	17011	1144
1045	27204	-7528	898	1126	48025	4064	975	1216	70858	13949	1084	1260	79886	17034	1313
1048	28030	-7343	868	1129	48938	4529	881	1217	71122	14074	1086	1261	80144	17007	1235
1051	28898	-6997	690	1132	49849	4909	981	1218	71422	14206	1088	1262	80394	17060	1155
1054	29714	-6550	624	1135	50743	5249	1033	1219	71727	14267	1090	1263	80573	17098	1158

****

DAY 7/19/74 TETROON NO. 7191 RELEASE TIME = 957 MIN AFTER MIDNIGHT.
XO = -664 (M) YO = -22420 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
971	-4056	-22717	709	994	-13004	-24619	954	1004	-17491	-26570	922	1020	-25199	-30704	1270
972	-4332	-22713	731	995	-13398	-24772	1009	1005	-17897	-26784	953	1023	-26718	-31533	1082
973	-4832	-22660	821	998	-14696	-25302	1039	1006	-18205	-27073	1049	1024	-27155	-31857	1003
974	-5068	-22673	821	999	-15259	-25458	1040	1008	-19118	-27488	1446	1025	-27485	-32116	962
975	-5440	-22662	798	1000	-15766	-25728	1042	1013	-21364	-27654	1571	1026	-27880	-32320	1005
976	-5912	-22658	1119	1001	-16096	-25922	1013	1014	-22355	-28587	1489	1027	-28101	-32576	1006
992	-12154	-24325	847	1002	-16533	-26166	953	1016	-23154	-29251	1395	1028	-28401	-32859	922
993	-12523	-24518	873	1003	-17033	-26323	922	1018	-24075	-30050	1259	1029	-28721	-33163	922
												1030	-28987	-33404	836
												1031	-29262	-33588	748
												1032	-29574	-33812	659

****

DAY 7/19/74 TETROON NO. 7193 RELEASE TIME = 1059 MIN AFTER MIDNIGHT.
XO = -664 (M) YO = -22420 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
1062	-610	-23897	206	1112	3989	-14041	631	1161	19812	-4449	723	1217	47997	11025	833
1063	-605	-23728	374	1113	4275	-13850	605	1162	20629	-3935	734	1218	48423	11173	882
1064	-577	-23511	426	1114	4445	-13683	664	1163	21027	-3691	751	1219	48818	11416	931
1065	-548	-22342	476	1115	4902	-13450	722	1164	21464	-3464	768	1220	49285	11627	933
1066	-542	-22078	526	1116	4998	-13346	738	1165	21736	-3355	765	1221	49725	11834	934
1067	-620	-21794	596	1117	5252	-13189	725	1166	22020	-3156	763	1222	50057	12017	1035
1068	-739	-21509	749	1118	5539	-13011	712	1167	22267	-2968	782	1223	50445	12006	986
1069	-792	-21235	898	1119	5834	-12853	782	1168	22699	-2686	779	1224	50837	12099	987
1070	-803	-20978	920	1120	6268	-12637	796	1169	23143	-2417	775	1225	51243	12089	989
1071	-812	-20685	982	1121	6383	-12589	782	1170	23580	-2182	771	1226	51578	12382	990
1072	-781	-20403	922	1122	6470	-12546	823	1171	24025	-1914	767	1227	51947	12525	939
1073	-711	-20128	705	1123	6963	-12291	948	1172	24440	-1634	788	1228	52344	12675	993
1075	-676	-19664	809	1124	7148	-12195	948	1173	24905	-1370	784	1229	52776	12834	941
1076	-669	-19464	887	1125	7543	-11965	892	1174	25375	-1121	781	1230	53229	12945	996
1077	-645	-19335	774	1126	7733	-11875	837	1175	25835	-812	777	1231	53608	13204	998
1078	-696	-19152	870	1127	8048	-11693	669	1176	26308	-568	800	1232	54070	13318	1054
1079	-688	-18933	909	1128	8229	-11612	696	1177	26779	-289	797	1233	54465	13472	1001
1080	-626	-18770	854	1129	8600	-11362	668	1178	27292	0	766	1234	54833	13620	1058
1081	-550	-18689	782	1130	8789	-11262	639	1179	27767	272	763	1235	55215	13715	1004
1082	-402	-18620	819	1131	9135	-11043	652	1180	28274	582	787	1236	55507	13903	1062
1083	-364	-18529	802	1132	9391	-10909	608	1181	28770	875	784	1237	55830	14043	1007
1084	-270	-18366	785	1133	9836	-10641	804	1182	29287	1237	780	1238	56137	14061	1008
1085	-197	-18230	787	1134	10112	-10517	745	1183	29828	1612	777	1239	56478	14205	1067
1086	-142	-18084	789	1135	10418	-10357	744	1184	30367	1940	803	1240	56758	14513	1069
1087	-17	-17902	826	1136	10772	-10176	727	1185	30910	2310	801	1241	57222	14094	1013
1088	86	-17747	845	1137	11061	-10025	725	1186	31430	2690	798	1242	57572	14240	1014
1089	224	-17617	829	1138	11387	-9822	722	1187	31963	2989	795	1243	58012	14289	1015
1090	394	-17467	796	1139	11728	-9586	720	1188	32486	3457	793	1244	58324	14244	1018
1091	510	-17327	781	1140	12055	-9351	703	1189	33052	3583	790	1245	58606	14130	1078
1092	642	-17213	799	1141	12436	-9072	685	1190	33604	3910	787	1246	58886	14137	1080
1093	754	-17080	801	1142	12759	-8874	743	1191	34157	4212	785	1247	59136	14074	1021
1094	915	-16944	802	1143	13087	-8652	772	1192	34699	4521	816	1248	59358	14006	1022
1095	1056	-16789	787	1144	13435	-8397	769	1193	35260	4806	814	1249	59596	13998	1023
1096	1195	-16652	789	1145	13771	-8162	767	1194	35766	5090	813	1250	59775	13916	1024
1097	1331	-16504	791	1146	14126	-7929	748	1195	36328	5352	811	1251	59967	13775	1025
1098	1444	-16310	777	1147	14487	-7688	729	1196	37815	5799	881	1252	60096	13743	1025
1099	1590	-16149	763	1148	14860	-7425	758	1197	37442	5930	807	1253	60266	13533	1026
1100	1742	-16069	764	1149	15198	-7188	722	1198	38017	6212	806	1254	60431	13507	1027
1101	1869	-15797	768	1150	15543	-6963	701	1199	38515	6449	766	1255	60600	13420	1027
1102	2036	-15629	770	1151	15964	-6704	730	1200	39042	6734	764	1256	60742	13327	1028
1103	2216	-15466	788	1152	16327	-6446	761	1201	39621	7035	841	1257	60849	13225	1028
1104	2394	-15310	790	1153	16705	-6200	722	1202	40153	7333	920	1258	60968	13063	1029
1105	2556	-15173	806	1154	17088	-6001	753	1203	40718	7601	920	1259	61099	12840	1029
1106	2757	-15017	808	1155	17475	-5773	767	1204	41278	7832	756	1260	61174	12793	1029
1107	2913	-14875	780	1156	17851	-5588	745	1205	41787	8141	879	1261	61271	12688	1030
1108	3082	-14737	722	1157	18233	-5336	722	1206	42311	8416	879	1262	61356	12455	1030
1109	3350	-14584	694	1158	18614	-5131	718	1207	42859	8656	836	1263	61438	12283	1030
1110	3536	-14417	653	1159	19030	-4886	732	1208	43362	8979	836	1264	61515	12173	1030
1111	3728	-14233	555	1160	19415	-4661	728	1209	43944	9190	835	1265	61617	11942	1031
												1266	61793	11850	1031

****

DAY 7/22/74 TETROON NO. 7221 RELEASE TIME = 615 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
618	7628	-12340	433	647	10427	-9193	621	675	12929	-6894	658	703	15807	-4931	466
620	7566	-12402	504	649	10652	-8918	649	677	13095	-6753	656	705	16104	-4730	392
622	7485	-12135	625	651	10878	-8610	622	679	13216	-6652	582	707	16330	-4501	370
624	7572	-11855	658	653	11110	-8324	622	681	13421	-6526	563	709	16497	-4426	482
626	7773	-11535	621	655	11303	-8044	622	683	13665	-6397	573	711	16667	-4366	596
628	7901	-11337	637	657	11511	-7840	593	685	13881	-6300	554	713	16888	-4318	591
630	8259	-11022	625	659	11761	-7610	563	687	14078	-6191	504	715	17101	-4176	570
632	8473	-10858	612	661	12008	-7440	518	689	14267	-6124	499	717	17339	-3929	583
634	8053	-11200	584	663	12133	-7321	488	691	14432	-5995	558	719	17607	-3718	507
636	7619	-11526	556	665	12221	-7228	501	693	14597	-5862	616	721	17760	-3478	540
638	7732	-11450	556	667	12243	-7176	544	695	14789	-5721	566	723	18078	-3265	497
641	9745	-9745	625	669	12365	-7166	540	697	15015	-5539	610	725	18422	-3196	414
643	9990	-9587	623	671	12536	-7085	494	699	15226	-5263	464	727	18593	-3094	595
645	10228	-9399	608	673	12756	-6980	589	701	15517	-5143	440	729	18759	-2952	778
												731	18806	-2770	890
												733	18899	-2425	834
												735	19142	-1980	700

****

DAY 7/22/74 TETROON NO. 7222 RELEASE TIME = 615 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
619	7566	-12347	449	548	10322	-9337	607	676	12269	-7452	510	704	14650	-6271	815
621	7521	-12356	520	550	10456	-9146	608	678	12405	-7402	507	706	14720	-6148	736
623	7569	-12083	639	552	10578	-8945	568	680	12562	-7313	446	708	15024	-5931	669
625	7733	-11823	560	554	10739	-8778	541	682	12703	-7212	429	710	15338	-5710	938
627	7823	-11585	509	556	10919	-8643	539	684	12867	-7123	411	712	15644	-5511	1019
629	7888	-11486	525	558	11121	-8608	548	686	13030	-7080	479	714	15957	-5271	887
631	8440	-11150	647	560	11284	-8559	531	688	13286	-7068	500	716	16178	-4803	720
633	8044	-11351	690	562	11545	-8457	582	690	13479	-6951	437	718	16349	-4438	753
635	7772	-11436	596	564	11618	-8406	637	692	13633	-6929	402	720	16532	-4054	685
637	7681	-11447	462	566	11693	-8269	624	694	13846	-6935	409	722	16621	-3749	551
640	9323	-10287	649	568	11762	-8232	566	696	14111	-6947	539	724	16831	-3468	514
642	9571	-10073	731	570	11819	-7998	807	698	14326	-6844	628	726	16992	-3120	512
644	9841	-9784	758	572	11927	-7751	724	700	14401	-6759	799	728	17177	-2789	541
646	10142	-9562	661	574	12097	-7561	583	702	14573	-6425	846	730	17274	-2649	573
												732	17555	-2498	567
												734	17797	-2319	420

****

DAY 7/22/74 TETROON NO. 7223 RELEASE TIME = 785 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
786	7670	-12193	395	806	10989	-9842	641	826	14707	-8465	852	890	24421	-1295	595
788	7924	-12013	509	808	11391	-9767	531	828	15159	-8333	832	892	24824	-963	541
790	8179	-11834	622	810	11887	-9756	474	859	19206	1511	17	894	25223	-619	510
792	8523	-11683	734	812	12322	-9832	507	862	19382	2082	6	896	25588	-50	553
794	8852	-11458	705	814	12644	-9827	625	864	20544	2492	250	898	26017	306	597
796	9109	-11325	675	816	12926	-9626	702	865	19754	2495	337	900	26478	649	568
798	9493	-11027	632	818	13093	-9414	717	870	19896	2612	667	902	26998	1007	662
800	9888	-10592	761	820	13289	-9069	686	887	23832	-2040	863	904	27549	1353	575
802	10161	-10201	777	822	13719	-8801	698	888	24063	-1775	767	906	28075	1572	457
804	10548	-9984	661	824	14173	-8628	742	889	24241	-1573	670	908	28339	1782	507
												910	28687	1946	614
												912	29040	2027	639
												914	29430	2228	750

****

DAY 7/22/74 TETROON NO. 7224 RELEASE TIME = 785 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
787	7797	-12180	449	815	14075	-10121	917	845	18544	-6471	443	885	24643	-1744	762
789	8184	-12017	546	817	14426	-9908	916	848	18974	-6371	432	886	24853	-1612	711
791	8553	-11895	600	819	14771	-9870	862	849	19090	-6369	429	891	26215	-952	774
793	9125	-11764	579	821	15248	-9909	823	850	19211	-6388	485	893	26668	-497	981
795	9638	-11535	501	823	15661	-9745	567	851	19250	-6338	604	895	27248	-80	1195
797	9994	-11359	453	825	15795	-9594	530	852	19328	-6259	803	897	27585	297	1143
799	10471	-11107	643	827	15951	-9307	403	863	18863	-3964	964	899	28027	687	1132
801	10872	-10872	716	829	15944	-8563	806	866	19272	-3637	809	901	28510	1036	1121
803	11319	-10671	621	831	15770	-8074	706	873	22592	-3125	533	903	29011	1510	1010
805	11782	-10574	645	834	16346	-7731	647	874	22771	-3035	552	905	29506	2089	924
807	12225	-10545	749	836	16892	-7408	567	881	24197	-2263	790	907	29775	2519	894
809	12635	-10516	825	839	17559	-7092	481	882	24270	-2270	837	909	29984	3131	1130
811	13187	-10417	903	843	18280	-6581	410	883	24383	-1919	812	911	30237	3578	1282
813	13707	-10312	918	844	18409	-6546	407	884	24441	-1875	812	913	30473	3910	1254
												915	30756	4346	1253

****

DAY 7/25/74 TETROON NO. 7251 RELEASE TIME = 720 MIN AFTER MIDNIGHT.
XO = 16790 (M) YO = -10050 (M) INITIAL ELEV = 250 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
724	17329	-9817	513	744	21105	-5774	1003	772	25351	-1595	1055	793	26203	1545	545
726	17541	-9688	648	745	21257	-5703	981	774	25491	-1402	955	794	26205	1674	723
728	17649	-9434	688	746	21504	-5409	1025	775	25586	-1332	1131	795	26187	1802	697
730	18063	-8893	824	747	21683	-5295	1134	776	25647	-1209	980	796	26166	1955	620
734	18943	-7955	982	748	21918	-5057	1113	777	25681	-1059	1006	797	26131	2159	620
735	19178	-7746	962	749	22154	-4883	1025	778	25743	-885	1031	798	26114	2339	543
736	19418	-7512	1002	750	22357	-4675	958	779	25820	-760	1006	799	26137	2574	491
737	19666	-7321	1023	751	22537	-4483	1139	780	25852	-583	1006	800	26253	2715	543
738	19826	-7204	1002	752	22692	-4305	1162	781	25854	-457	955	801	26352	2856	772
740	20295	-6660	1023	754	22980	-3894	1095	782	25884	-228	853	802	26414	3021	641
742	20736	-6135	1003	755	23091	-3727	1095	783	25949	0	879	803	26436	3076	567
743	20954	-5909	1003	756	23204	-3535	1050	785	26049	306	955	804	26444	3261	850

****

DAY 7/25/74 TETROON NO. 7253 RELEASE TIME = 980 MIN AFTER MIDNIGHT.
XO = 16790 (M) YO = -10050 (M) INITIAL ELEV = 250 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
983	16988	-9912	480	997	17734	-7550	1097	1011	18562	-4766	889	1025	20168	-2850	642
985	16977	-9861	501	999	17815	-7114	1115	1013	18773	-4409	907	1027	20409	-2782	699
987	17310	-9252	655	1001	17871	-6613	1095	1015	19076	-4146	944	1029	20520	-2490	657
989	17406	-8998	867	1003	17973	-6193	1095	1017	19379	-3854	847	1031	20862	-2178	899
991	17471	-8751	1002	1005	18134	-5794	946	1019	19676	-3613	825	1033	21189	-1940	1107
993	17516	-8390	1135	1007	18348	-5408	927	1021	19877	-3409	685	1035	21479	-1648	1277
995	17650	-7948	1116	1009	18476	-5093	927	1023	20037	-3072	425	1037	21685	-1449	1280
												1039	21888	-1290	1239

****

DAY 7/25/74 TETROON NO. 7254 RELEASE TIME = 980 MIN AFTER MIDNIGHT.
XO = 16790 (M) YO = -10050 (M) INITIAL ELEV = 250 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
984	16936	-9837	463	998	18017	-7796	1021	1012	19185	-5471	806	1026	21067	-4796	1215
986	17257	-9224	445	1000	18253	-7519	1002	1014	19287	-5235	708	1028	21417	-4655	1175
988	17342	-9139	829	1002	18542	-7089	963	1016	19544	-5120	665	1030	21685	-4491	1242
990	17424	-8964	1002	1004	18666	-6782	924	1018	19813	-5108	721	1032	21867	-4238	1156
992	17618	-8803	1118	1006	18770	-6405	1099	1020	18461	-4720	871	1034	22044	-3936	915
994	17730	-8556	1041	1008	18944	-5991	982	1022	18862	-4626	1021	1036	22280	-3753	1047
996	17861	-8234	983	1010	19068	-5743	846	1024	20789	-4904	1149	1038	22488	-3561	981
												1040	22683	-3364	846

****

DAY 7/26/74 TETROON NO. 7261 RELEASE TIME = 908 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
910	7874	-12300	358	932	10820	-10161	610	954	14376	-8907	687	976	17897	-8144	596
912	8168	-12224	498	934	11197	-9950	576	956	14700	-8850	682	978	18367	-8055	588
914	8400	-12103	598	936	11575	-9808	586	958	14196	-8320	695	980	18698	-7961	623
916	8625	-11946	656	938	11940	-9682	565	960	15238	-8731	726	982	19085	-7817	638
918	8939	-11666	642	940	12257	-9546	560	962	15611	-8582	565	984	19482	-7713	652
920	8991	-11521	601	942	12543	-9398	541	964	15920	-8570	594	986	19852	-7546	590
922	9269	-11249	559	944	12846	-9295	551	966	16239	-8476	570	988	20127	-7492	728
924	9519	-11035	488	946	13139	-9215	545	968	16591	-8290	583	990	20467	-7391	810
926	9882	-10776	544	948	13415	-9155	572	970	16911	-8182	651	992	20831	-7292	721
928	10188	-10555	629	950	13682	-9103	599	972	17181	-8229	628	994	21155	-7220	596
930	10458	-10418	655	952	14018	-9012	675	974	17600	-8135	640	996	21534	-6950	592
												998	21792	-6892	544

****

DAY 7/26/74 TETROON NO. 7262 RELEASE TIME = 908 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
909	7761	-12283	332	931	10840	-10485	633	953	14346	-8830	605	975	18018	-7776	539
911	7986	-12316	383	933	11145	-10363	629	955	14653	-8744	550	977	18380	-7719	513
913	8298	-12236	495	935	11554	-10166	564	957	14989	-8647	679	979	18722	-7712	585
915	8475	-12161	566	937	11872	-10039	636	959	15328	-8584	588	981	19134	-7619	577
917	8671	-11935	670	939	12196	-9909	694	961	15701	-8392	495	983	19507	-7524	674
919	8979	-11623	599	941	12528	-9678	629	963	15986	-8344	524	985	19820	-7445	507
921	9092	-11510	585	943	12846	-9547	625	965	16337	-8223	553	987	20152	-7367	544
923	9475	-11205	484	945	13194	-9409	605	967	16680	-8151	583	989	20493	-7287	704
925	9854	-10937	540	947	13514	-9223	633	969	17040	-8059	650	991	20840	-7181	721
927	10196	-10710	596	949	13798	-9063	629	971	17366	-8006	570	993	21178	-7065	674
929	10478	-10602	593	951	14027	-8979	659	973	17645	-7988	564	995	21487	-7005	592
												997	21849	-6862	543

****

DAY 7/27/74 TETROON NO. 7271 RELEASE TIME = 728 MIN AFTER MIDNIGHT.
XO = 16790 (M) YO = -10050 (M) INITIAL ELEV = 250 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
729	16613	-10091	391	761	14205	-11705	1020	793	11411	-13711	1265	825	8405	-14974	1086
731	16301	-10100	531	763	13929	-12087	893	795	11266	-13701	1194	827	8238	-15056	1103
733	16172	-10130	646	765	13797	-12140	894	797	11161	-13681	1123	829	7891	-15302	1002
735	16149	-10204	721	767	13600	-12278	804	799	10982	-13791	1019	831	7908	-15520	1105
737	15989	-10279	834	769	13482	-12487	731	801	10744	-13907	916	833	7922	-15738	1123
739	15816	-10478	816	771	13295	-12658	677	803	10562	-13953	899	835	7757	-15953	1176
741	15677	-10654	890	773	13190	-12782	731	805	10340	-14028	951	837	7563	-16196	1230
743	15572	-10808	1058	775	13024	-12771	823	807	10041	-14110	917	839	7462	-16313	1249
745	15458	-11000	1225	777	12858	-12732	931	809	9883	-14210	917	841	7408	-16408	1285
747	15334	-11141	1281	779	12675	-12825	1020	811	9667	-14346	985	843	7382	-16436	1462
749	15165	-11340	1188	781	12542	-12993	1108	813	9469	-14478	985	845	7256	-16589	1553
751	14990	-11510	1206	783	12369	-13120	1179	815	9312	-14547	968	847	7037	-16895	1739
753	14813	-11678	1224	785	12093	-13264	1178	817	9169	-14638	985	849	6928	-17202	1858
755	14605	-11748	1168	787	11912	-13352	1213	819	9015	-14744	1036	851	6676	-17565	1870
757	14378	-11753	1111	789	11762	-13448	1230	821	8754	-14869	1087	853	6347	-18017	1865
759	14157	-11806	1092	791	11568	-13626	1265	823	8507	-14948	1086	855	6130	-18255	1564
												857	5645	-18609	1345

****

DAY 7/27/74 TETROON NO. 7272 RELEASE TIME = 728 MIN AFTER MIDNIGHT.
XO = 16790 (M) YO = -10050 (M) INITIAL ELEV = 250 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
730	16458	-10085	452	762	13997	-11696	1235	794	10780	-13083	1185	826	8953	-12874	1110
732	16303	-10101	606	764	13724	-11722	1232	796	10586	-13135	1085	828	8806	-12931	1095
734	16281	-10087	701	766	13461	-11845	1125	798	10376	-13162	969	830	8661	-12962	987
736	16159	-10233	795	768	13242	-11884	1124	800	10182	-13127	855	832	8609	-13106	941
738	16156	-10342	832	770	12920	-12061	1002	802	10081	-13102	954	834	8563	-13320	816
740	16135	-10441	832	772	12768	-12181	898	804	9959	-13103	1067	836	8626	-13475	830
742	16094	-10504	775	774	12537	-12366	812	806	9825	-13113	1018	838	8566	-13557	845
744	16022	-10479	758	776	12482	-12433	794	808	9679	-13051	955	840	8552	-13448	956
746	16069	-10578	1229	778	12346	-12468	899	810	9646	-13006	891	842	8382	-13382	1018
748	15926	-10824	1172	780	12042	-12648	916	812	9624	-12976	828	844	7796	-13606	1033
750	15537	-11126	1208	782	11830	-12747	900	814	9564	-12950	734	846	7756	-13629	972
752	15371	-11260	1226	784	11618	-12818	1002	816	9482	-12864	767	848	7568	-13640	925
754	15125	-11333	1206	786	11493	-12857	1070	818	9425	-12839	846	850	7408	-13571	502
756	14833	-11459	1260	788	11355	-12906	1120	820	9269	-12863	940	852	7180	-13593	580
758	14643	-11567	1277	790	11211	-12946	1187	822	9192	-12863	1018	854	6986	-13645	557
760	14301	-11643	1255	792	11018	-12978	1253	824	9070	-12825	987	856	6868	-13646	778
												858	6493	-13870	1198

****

DAY 7/27/74 TETROON NO. 7273 RELEASE TIME = 868 MIN AFTER MIDNIGHT.
XO = 16790 (M) YO = -10050 (M) INITIAL ELEV = 250 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
869	16576	-10247	543	893	13917	-12515	1664	917	12193	-14858	473	941	11787	-18021	950
871	16432	-10518	734	895	13671	-12737	1479	919	11996	-15064	472	943	11556	-18304	950
873	15108	-12276	1136	897	13603	-12825	1406	921	11961	-15265	450	945	11402	-18525	981
875	16150	-10791	1555	899	13578	-12827	1314	923	11972	-15466	445	947	10994	-18929	1003
877	16002	-10944	1592	901	13344	-13084	1259	925	12096	-15658	438	949	10876	-19155	1024
879	15620	-11116	1717	903	13157	-13287	1094	927	12051	-16050	470	951	10631	-19428	1111
881	15477	-11152	1845	905	12972	-13492	1020	929	12045	-16409	522	953	10180	-19740	1057
883	15190	-11312	2025	907	12799	-13657	983	931	12083	-16734	577	955	10005	-19829	1003
885	14862	-11552	2130	909	12647	-13872	983	933	12152	-16900	614	957	9842	-19941	1046
887	14572	-11959	2132	911	12486	-14162	817	935	12191	-17167	713	959	9404	-20191	1112
889	14410	-12186	1669	913	12341	-14450	535	937	12155	-17403	648	961	9153	-20402	915
891	14174	-12349	1648	915	12291	-14681	457	939	12141	-17604	750	963	8995	-20566	959
												965	8632	-20840	892

****

DAY 7/27/74 TETROON NO. 7274 RELEASE TIME = 868 MIN AFTER MIDNIGHT.
XO = 16790 (M) YO = -10050 (M) INITIAL ELEV = 250 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
870	16620	-10185	408	894	15324	-11388	983	918	13947	-12394	654	942	12771	-13870	465
872	16555	-10280	524	896	15232	-11343	983	920	13872	-12573	671	944	12488	-14137	446
874	16536	-10540	694	898	15121	-11399	965	922	13894	-12742	780	946	12357	-14382	387
876	16387	-10626	964	900	14961	-11534	965	924	13887	-12964	703	948	12225	-14486	481
878	16231	-10730	1155	902	14716	-11625	947	926	13878	-13135	758	950	12089	-14671	479
880	16272	-10780	1404	904	14534	-11691	855	928	13694	-13560	718	952	11923	-14912	477
882	16041	-11133	1520	906	14368	-11792	819	930	13715	-13501	794	954	11865	-15051	494
884	15792	-11356	1575	908	14261	-11821	802	932	13564	-13484	739	956	11820	-15238	491
886	15617	-11346	1627	910	14136	-11954	729	934	13432	-13512	703	958	11835	-15320	508
888	15479	-11386	1474	912	14054	-12075	620	936	13333	-13597	740	960	11775	-15460	582
890	15404	-11401	1303	914	14086	-12151	637	938	13189	-13610	704	962	11532	-15646	716
892	15375	-11426	1115	916	14049	-12264	654	940	12942	-13728	594	964	11280	-15851	715
												966	11271	-15937	772
												968	11171	-16163	770

****

DAY 7/29/74 TETRCON NO. 7291 RELEASE TIME = 721 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
722	7684	-12215	365	746	11898	-8467	544	770	15200	-5021	751	794	19146	-1317	418
724	7858	-11887	401	748	12139	-8197	514	772	15669	-4753	761	796	19114	-1033	607
726	8086	-11602	462	750	12291	-7936	558	774	16168	-4474	755	798	19039	-654	628
728	8693	-11414	567	752	12566	-7565	557	776	16618	-4162	699	800	18860	-185	724
730	8782	-11208	598	754	12694	-7473	526	778	17024	-3788	608	802	18831	184	651
732	9155	-10720	477	756	12856	-7200	670	780	17293	-3404	656	804	18713	532	597
734	9502	-10341	521	758	13263	-6989	694	782	17592	-3052	756	806	18597	675	545
736	9824	-10117	616	760	13560	-6792	720	784	18137	-2708	660	808	18537	837	583
738	10295	-9860	555	762	13904	-6543	701	786	18466	-2443	508	810	18612	1207	782
740	10725	-9531	581	764	14176	-6118	684	788	18756	-2033	557	812	18569	1755	819
742	11224	-9156	591	766	14444	-5735	713	790	19076	-1746	456	814	18594	2274	744
744	11613	-8809	574	768	14721	-5365	680	792	19155	-1564	436	816	18899	2879	739
												818	19167	3325	658
												820	19373	3735	750

****

DAY 7/29/74 TETROON NO. 7292 RELEASE TIME = 721 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
723	7729	-12023	357	747	11197	-8562	713	771	14212	-4881	634	795	17394	-1180	728
725	7969	-11628	477	749	11466	-8400	696	773	14600	-4649	792	797	17450	-788	607
727	8256	-11364	590	751	11898	-8155	706	775	14885	-4404	759	799	17493	-257	573
729	8570	-11094	591	753	12171	-7841	648	777	15383	-4257	720	801	17355	204	525
731	8817	-10744	567	755	12379	-7469	577	779	15694	-4013	684	803	17481	686	573
733	9069	-10410	529	757	12556	-7162	506	781	15981	-3836	615	805	17458	1236	504
735	9371	-10137	488	759	12668	-6771	510	783	16235	-3495	578	807	17338	1570	472
737	9614	-9960	528	761	12743	-6430	541	785	16459	-3072	542	809	17115	1872	461
739	10084	-9657	537	763	12996	-6147	622	787	16676	-2523	654	811	17036	2135	732
741	10311	-9254	609	765	13383	-5823	588	789	16837	-2244	719	813	17055	2478	799
743	10500	-9057	691	767	13754	-5508	639	791	17029	-1880	767	815	17215	2761	814
745	10853	-8747	675	769	13950	-5146	580	793	17257	-1528	764	817	17499	3213	792
												819	17633	3723	931
												821	17777	4212	966

****

DAY 7/29/74 TETROON NO. 7293 RELEASE TIME = 841 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
842	8301	-12968	277	862	10694	-8413	362	882	13463	-3414	1004	902	17528	2582	724
844	8136	-12049	546	864	10919	-7770	478	884	13893	-2891	990	904	17956	3188	544
846	8280	-11881	833	866	11108	-7110	421	886	14304	-2265	875	906	18353	3650	653
848	8675	-11414	961	868	11281	-6537	543	888	14664	-1648	829	908	18712	4202	505
850	9247	-11111	1018	870	11524	-6044	608	890	15061	-1111	721	910	18918	4837	638
852	9596	-10713	933	872	11702	-5549	674	892	15355	-603	716	912	19207	5518	649
854	9853	-10309	737	874	11995	-5177	838	894	15775	139	584	914	19474	6053	541
856	10103	-9906	670	876	12186	-4659	851	896	16087	742	575	916	19851	6666	488
858	10331	-9419	537	878	12464	-4185	1004	898	16549	1416	643	918	20113	7196	520
860	10543	-8880	449	880	13017	-3699	1031	900	16989	1993	750	920	20284	7710	491
												922	20411	8314	548
												924	20437	8796	544
												926	20523	9682	735

****

DAY 7/29/74 TETROON NO. 7294 RELEASE TIME = 841 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
843	7990	-12216	387	863	10756	-8916	523	883	13381	-3492	678	903	16133	3209	922
845	8173	-11951	662	865	10980	-8397	488	885	13599	-2844	676	905	16368	3929	936
847	8425	-11790	847	867	11077	-7916	549	887	13911	-2147	658	907	16651	4450	917
849	8885	-11595	745	869	11098	-7416	506	889	14143	-1505	668	909	16969	5038	846
851	9122	-11340	746	871	11519	-6827	675	891	14322	-915	707	911	17189	5529	771
853	9517	-11099	1018	873	11897	-6269	476	893	14469	-213	691	913	17384	6066	676
855	9987	-10761	729	875	12171	-5756	422	895	14750	318	670	915	17527	6603	597
857	10302	-10302	631	877	12443	-5297	552	897	15054	1036	603	917	17612	7396	514
859	10409	-9756	611	879	12798	-4707	642	899	15364	1787	699	919	17597	8007	584
861	10557	-9307	603	881	13144	-4057	653	901	15798	2533	814	921	17701	8478	636
												923	17717	9049	709

****

DAY 7/30/74 TETROON NO. 7301 RELEASE TIME = 669 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
670	7738	-12354	359	694	8527	-16416	511	720	10281	-20130	1025	744	10258	-23327	855
672	7791	-12602	377	696	8680	-16831	481	722	10329	-20321	981	746	10518	-23542	1158
674	7849	-12809	516	700	9361	-16910	793	724	10322	-20508	891	748	10560	-23823	1287
676	7951	-13236	745	702	9083	-17528	1002	726	10335	-20838	775	750	10749	-24059	1317
678	7926	-13678	894	704	9296	-18025	1072	728	10252	-21243	679	752	10833	-24312	1373
680	8000	-14090	939	706	9580	-18444	1145	730	10161	-21539	630	754	10889	-24567	1324
682	8174	-14464	970	708	9901	-18657	1210	732	10083	-21817	626	756	11115	-24747	1354
684	8354	-14918	935	710	9887	-18944	1128	734	9928	-22048	577	758	11261	-25072	1386
686	8347	-15325	659	712	9947	-19149	1214	736	9891	-22315	573	760	11396	-25241	1443
688	8253	-15663	567	714	10033	-19455	1261	738	10002	-22566	568	762	11644	-25455	1696
690	8352	-16003	541	716	10103	-19830	1199	740	9990	-22840	515	764	11877	-25763	1956
692	8375	-16239	553	718	10234	-19989	1025	742	10018	-23089	610	766	12133	-26051	1856
												768	12365	-26278	1780
												770	12482	-26459	1614

****

DAY 7/30/74 TETROON NO. 7302 RELEASE TIME = 669 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
671	7707	-12439	385	695	9362	-15974	1093	719	10366	-20053	781	743	11809	-22517	856
673	7877	-12855	485	697	9610	-16069	1388	721	10355	-20080	848	745	11871	-22745	829
675	8043	-13126	428	699	9819	-16309	1189	723	10350	-20216	780	747	11763	-22975	778
677	8201	-13266	451	701	9853	-16736	1116	725	10426	-20168	1048	749	11734	-23142	649
679	8349	-13476	785	703	10158	-17331	1071	727	10766	-20143	1317	751	11772	-23273	520
681	8481	-13749	764	705	10346	-17772	1022	729	11061	-20261	1525	753	11808	-23459	491
683	8207	-14323	613	707	10351	-18065	1002	731	11422	-20585	1489	755	11693	-23751	487
685	9031	-14292	969	709	10465	-18347	1023	733	11718	-20925	1357	759	11202	-24299	481
687	9013	-14740	374	711	10582	-18680	1045	735	11937	-21317	1244	761	10973	-24496	612
689	9140	-15048	362	713	10725	-19020	1024	737	12006	-21687	1151	763	11021	-24538	796
691	9147	-15228	758	715	10799	-19418	1134	739	12005	-22042	1128	765	11157	-24518	1060
693	9316	-15544	877	717	10577	-19789	981	741	12022	-22387	1030	767	11380	-24687	1274
												769	11534	-24827	1303
												771	11796	-25069	1199

****

DAY 7/30/74 TETROON NO. 7303 RELEASE TIME = 800 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
801	7635	-12323	391	819	7344	-14520	699	837	6550	-15512	1432	855	6079	-16479	1019
803	7501	-12600	456	821	7359	-14585	730	839	6306	-15659	1549	857	5987	-16530	760
805	7366	-12886	610	823	7268	-14654	488	841	6168	-15760	1650	859	5753	-16591	657
807	7507	-13191	913	825	7195	-14762	502	843	5802	-15921	1785	861	5463	-16539	472
809	7683	-13502	942	827	7154	-14937	579	845	5786	-16023	1822	863	5189	-16521	458
811	7787	-13779	909	829	6995	-15097	757	847	5832	-16199	1865	865	5028	-16288	584
813	7750	-13967	893	831	6900	-15163	970	849	5992	-16242	1784	867	4909	-16013	772
815	7472	-14385	843	833	6829	-15205	1133	851	6130	-16370	1706	869	4777	-15750	1018
817	7360	-14481	699	835	6788	-15313	1232	853	6061	-16430	1552	871	4675	-15579	1225
												873	3844	-15675	543

****

DAY 7/30/74 TETROON NO. 7304 RELEASE TIME = 800 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
802	7569	-12462	445	816	7501	-14372	939	832	6355	-15823	851	846	6302	-16678	809
804	7514	-12763	465	818	7496	-14537	777	834	6139	-16103	782	848	6194	-16540	707
806	7360	-12993	578	820	7352	-14600	617	836	6111	-16270	763	850	6256	-16459	708
808	7442	-13227	839	824	7016	-14611	413	838	6111	-16367	745	852	6236	-16406	557
810	7603	-13452	942	826	6866	-14932	631	840	6111	-16417	778	854	6293	-16315	607
812	7738	-13754	894	828	6660	-15227	741	842	6211	-16585	845	862	6597	-15709	517
814	7722	-13982	846	830	6567	-15467	771	844	6279	-16716	844	864	6444	-15429	707
												866	6216	-15219	857
												870	6004	-14907	703

****

DAY 7/31/74 TETROON NO. 7311 RELEASE TIME = 787 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
788	7561	-12230	424	810	4324	-13535	697	832	2627	-14075	1791	854	531	-18049	807
790	7161	-12274	571	812	4332	-13561	528	834	2369	-14502	1768	856	233	-18327	1038
792	6895	-12340	1142	814	4325	-13677	482	836	2181	-15011	1599	858	55	-18717	1186
794	6512	-12358	1305	816	4343	-13593	457	838	1987	-15488	1340	860	37	-18970	1430
796	6230	-12378	1398	818	4263	-13389	465	840	1838	-15932	892	862	-190	-19410	1307
798	5935	-12517	1548	820	4151	-13261	471	842	1725	-16363	663	864	-287	-19538	1155
800	5463	-12831	1497	822	4078	-13211	460	844	1510	-16682	476	866	-481	-19617	1108
802	5147	-12965	1374	824	3838	-13163	708	846	1191	-17069	582	868	-758	-19808	871
804	4896	-13193	1100	826	3665	-13399	1495	848	895	-16562	644	870	-784	-19959	529
806	4881	-13394	723	828	3331	-13641	1735	850	820	-17762	688	872	-888	-20097	469
808	4792	-13395	640	830	2957	-13737	1708	852	772	-17886	861	874	-1031	-20186	327
												876	-1096	-20292	303
												878	-1286	-20439	358
												880	-1439	-20615	454

****

DAY 7/31/74 TETROON NO. 7312 RELEASE TIME = 787 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
789	7372	-12246	470	813	5250	-12853	1167	837	4397	-14445	484	861	1063	-16648	1166
791	7008	-12371	990	815	5328	-13155	1491	839	3922	-14561	455	863	837	-17042	1103
793	7017	-12445	1060	817	5453	-13351	1499	841	3760	-14705	511	865	832	-17289	1189
795	6750	-12628	1088	819	5410	-13472	1331	843	3486	-14777	511	867	705	-17532	1140
797	6398	-12712	1157	821	5373	-13572	1175	845	3145	-14893	569	869	542	-17808	984
799	6132	-12867	1227	823	5427	-13669	974	847	2878	-14850	617	871	443	-18056	771
801	5780	-13041	1760	325	5413	-13752	800	849	2392	-14728	871	873	394	-18248	697
803	5769	-13015	1017	827	5204	-13856	756	851	1914	-15034	973	875	127	-18551	583
805	5582	-12901	866	829	5094	-13851	699	853	1715	-15541	1095	877	0	-18776	633
807	5499	-12812	853	831	4828	-13923	569	855	1543	-15993	1334	879	-39	-19818	865
809	5454	-12810	758	833	4633	-14165	505	857	1464	-16176	1497	881	-78	-19986	1355
811	5334	-12703	801	835	4447	-14358	486	859	1354	-16382	1519	883	-493	-20109	172
												885	-1631	-20225	1640

****

DAY 7/31/74 TETROON NO. 7313 RELEASE TIME = 911 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
912	7495	-12313	409	938	6360	-11569	1225	970	3251	-12026	699	996	1343	-11747	2076
914	7125	-12157	561	940	5973	-11471	1170	972	3146	-12059	564	998	1597	-11807	1849
916	6726	-11984	923	942	5717	-11443	1105	974	2832	-12058	591	1000	1690	-11963	1646
918	6584	-11812	1004	944	5385	-11592	854	976	2392	-12028	620	1002	1558	-11956	1598
920	6627	-11835	1164	946	5150	-11406	771	978	1893	-12107	765	1004	1708	-12002	1434
922	6687	-11805	1230	948	4759	-11208	778	980	1631	-12060	1101	1006	1647	-12083	1317
924	6933	-11910	1315	950	4350	-11179	899	982	1397	-12011	1385	1008	1564	-12192	1234
926	7035	-12111	1265	952	4120	-11100	913	984	1395	-11996	1563	1010	1497	-12144	1282
928	7019	-12279	1240	954	3996	-11066	809	986	1507	-12027	1589	1012	1461	-12146	1131
930	7025	-12095	1320	956	3926	-11217	831	988	1422	-12019	1600	1014	1338	-12345	981
932	6922	-11678	1311	964	3369	-12083	1190	990	1176	-11941	1666	1016	1338	-12575	1079
934	6901	-11514	1347	966	3482	-12119	1091	992	1074	-11868	1814	1018	1416	-12603	967
936	6673	-11567	424	968	3455	-12070	746	994	1023	-11819	1974	1020	1162	-12840	967
												1022	1068	-13082	1172

****

DAY 7/31/74 TETROON NO. 7314 RELEASE TIME = 911 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
913	7234	-12177	544	939	5552	-12832	564	967	4026	-14278	1192	993	1098	-15963	877
915	6832	-12061	949	941	5425	-13098	669	969	3786	-14395	828	995	955	-15935	861
917	6692	-11867	1084	943	5245	-13212	738	971	3640	-14534	723	997	843	-15901	909
919	6715	-11827	1151	945	5051	-13211	809	973	3527	-14885	1003	999	685	-15862	878
921	6718	-11832	1057	947	5019	-13204	893	975	3087	-15132	1170	1001	559	-15826	863
923	6708	-11979	1071	949	4977	-13211	948	977	2969	-15323	1167	1003	498	-15851	862
925	6618	-12123	1085	951	4917	-13289	1324	979	2677	-15433	1064	1005	468	-15889	955
927	6448	-12265	929	953	5005	-13569	1500	981	2328	-15489	972	1007	514	-15887	878
929	6308	-12412	771	955	4895	-13810	1593	983	2206	-15507	972	1009	716	-15861	940
931	6168	-12375	596	957	4620	-13986	1698	985	2077	-15585	1018	1011	925	-15695	895
933	6152	-12527	510	959	4410	-14188	1806	987	1840	-15683	879	1013	987	-15456	790
935	6160	-12637	548	961	4250	-14314	1795	989	1632	-15779	862	1015	894	-15175	660
937	5832	-12784	286	965	4000	-14291	1411	991	1358	-15865	893	1017	764	-14973	753
												1019	657	-14871	930
												1021	640	-14822	1018

****

DAY 8/01/74 TETROON NO. 8011 RELEASE TIME = 778 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
779	7585	-12270	437	801	4451	-13980	701	823	3816	-12807	1647	849	3714	-11062	1464
781	7263	-12504	663	803	4185	-14046	1190	825	3914	-12723	1593	861	2927	-10998	1308
783	6927	-12809	746	805	4178	-14072	1234	827	3863	-12780	1608	863	2625	-10983	1683
785	6652	-13056	701	807	4170	-14097	1277	829	3712	-12777	1619	865	2478	-10985	1881
787	6594	-13164	598	809	4132	-14121	1523	831	3654	-12719	1459	867	2426	-10955	1801
789	6232	-13347	308	811	3855	-13932	1785	833	3603	-12541	1530	869	2540	-11011	1695
791	5940	-13402	355	813	3575	-13812	1887	835	3537	-12312	1521	871	2758	-11014	1542
793	5530	-13539	687	815	3369	-13621	1831	837	3372	-12095	1461	873	3080	-10923	1564
795	5314	-13578	731	817	3263	-13362	1707	839	3332	-11815	1355	875	3280	-10929	1511
797	6396	-13121	645	819	3426	-13290	1759	841	3358	-11687	1220	877	3472	-10906	1557
799	4772	-13762	545	821	3523	-13031	1773	847	3539	-11268	1563	879	3450	-10986	1528

****

DAY 8/01/74 TETROON NO. 8012 RELEASE TIME = 778 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
780	7395	-12284	553	802	4275	-13029	762	824	3865	-12970	579	846	2117	-12643	703
782	7057	-12401	933	804	4030	-12966	684	826	3606	-13083	591	848	2254	-12623	854
784	6575	-12449	769	806	3910	-12892	647	828	3344	-13133	458	850	2286	-12451	980
786	6365	-12403	771	808	3808	-12780	664	830	3166	-13188	498	852	2197	-12303	858
788	6200	-12348	746	810	3444	-12739	797	832	2899	-13217	871	862	2734	-12120	1261
790	5793	-12437	343	812	3258	-13007	951	834	2730	-13122	859	864	2941	-12043	530
792	5366	-12604	775	814	3519	-12814	822	836	2648	-12916	888	866	3137	-12023	553
794	5065	-12650	790	816	3820	-12868	1004	838	2359	-12850	863	868	3435	-12046	573
796	4838	-12768	789	818	3909	-12887	859	840	2356	-12832	658	870	3291	-12123	659
798	4737	-12879	802	820	3975	-12878	700	842	2244	-12861	825	872	3087	-12173	548
800	4441	-13013	828	822	3934	-12879	621	844	2094	-12739	890	874	4154	-11792	833
												876	4240	-11669	859
												878	4255	-11605	859
												880	4316	-11700	895

****

DAY 8/01/74 TETROON NO. 8013 RELEASE TIME = 903 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
904	7692	-12174	904	916	6678	-12349	1210	928	6519	-12733	1200	945	6799	-13442	1965
906	7355	-12217	429	918	6481	-12477	1335	930	6573	-12777	1003	947	6777	-13598	1944
908	7170	-12205	447	920	6494	-12563	1323	932	6528	-12814	806	969	9846	-13496	1593
910	6924	-12224	410	922	6493	-12590	1296	934	6552	-12954	761	971	9875	-13452	1822
912	6907	-12220	756	924	6475	-12677	1241	936	6600	-13080	1305	973	10131	-13577	1701
914	6838	-12325	1114	926	6500	-12757	1228	943	6533	-13335	1864	975	10186	-13877	1915
												977	10314	-14226	1917

****

DAY 8/01/74 TETROON NO. 8014 RELEASE TIME = 903 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
905	7594	-12150	1003	919	6427	-12432	1375	933	6271	-12399	2413	950	4879	-8594	2752
907	7252	-12235	529	921	6431	-12531	1571	935	6212	-11988	2481	956	4961	-8168	2863
909	7028	-12238	643	923	6411	-12706	1857	937	6096	-11405	2638	968	3312	-5162	2763
911	6943	-12257	727	925	6495	-12716	1986	939	5990	-10697	2627	970	3016	-4692	2677
913	6750	-12308	797	927	6402	-12844	2062	944	5715	-9367	2777	972	2854	-4272	2791
915	6564	-12339	1086	929	6445	-12964	2157	946	5488	-9055	2748	974	2669	-3861	2784
917	6448	-12384	1113	931	6373	-12692	2374	948	5223	-8793	2740	976	2756	-3260	2741

****

DAY 8/02/74 TETROON NO. 8021 RELEASE TIME = 791 MIN AFTER MIDNIGHT.
XO = 16790 (M) YO = -10050 (M) INITIAL ELEV = 250 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
792	17032	-10163	476	816	19616	-6523	1043	842	22154	-674	1003	866	25449	4544	955
794	17340	-10049	549	818	19696	-5974	942	844	22400	-219	871	868	25704	5008	1006
796	17633	-9875	625	820	19837	-5343	800	846	22811	179	734	870	25951	5427	955
798	17677	-9695	665	824	20491	-4159	715	848	23288	708	752	872	26240	5811	1033
800	17738	-9392	667	826	20786	-3944	649	850	23580	1158	888	874	26470	6190	1007
802	17807	-9073	747	828	21093	-3660	750	852	23950	1719	1098	876	26709	6523	1062
804	18023	-8785	805	830	21246	-3258	834	854	24389	2136	1125	878	27048	6944	1036
806	18346	-8305	844	832	21491	-2951	832	856	24800	2442	956	880	27395	7350	1009
808	18649	-7897	843	834	21843	-2628	808	858	25079	2893	832	882	27726	7702	1010
810	18876	-7495	783	836	22035	-2345	916	860	25212	3336	806	884	28221	8108	982
812	19122	-7140	782	838	22060	-1954	1057	862	25184	3735	830	886	28568	8330	1011
814	19452	-6809	881	840	22081	-1280	1198	864	25340	4166	905	888	28978	8542	953
												890	29278	8630	833

****

DAY 8/02/74 TETROON NO. 8022 RELEASE TIME = 791 MIN AFTER MIDNIGHT.
XO = 16790 (M) YO = -10050 (M) INITIAL ELEV = 250 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
793	17266	-10120	530	817	18967	-6473	1002	841	21533	-1801	493	865	25378	2474	780
795	17488	-10020	567	819	19261	-6112	982	843	21849	-1374	594	867	24742	2559	809
797	17631	-9874	645	821	19609	-5864	882	845	22258	-940	587	869	25001	2834	956
799	17739	-9616	764	823	19651	-5563	661	847	22672	-489	535	871	25213	3235	1005
801	17875	-9174	706	825	19700	-5161	602	849	23164	0	639	873	25474	3651	879
803	18015	-8629	747	827	19875	-4833	620	851	23396	390	613	875	25716	3917	853
805	18226	-8122	708	829	20150	-4338	577	853	23576	787	564	877	26071	4313	981
807	18399	-7663	767	831	20292	-3891	495	855	23769	1167	560	879	26323	4700	823
809	18478	-7316	885	833	20447	-3362	453	857	23966	1484	627	881	26828	5117	874
811	18546	-6945	827	835	20769	-3080	507	859	24108	1706	719	883	27157	5568	954
813	18610	-6803	866	837	20986	-2651	483	861	24216	1905	766	885	27471	6055	898
815	18776	-6739	904	839	21338	-2101	560	863	24362	2206	788	887	27751	6432	841
												889	28037	6935	726
												891	28352	7398	594

****

DAY 3/02/74 TETROON NO. 8023 RELEASE TIME = 902 MIN AFTER MIDNIGHT.
XO = 16790 (M) YO = -10050 (M) INITIAL ELEV = 850 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
903	16976	-9838	424	923	20848	-5769	1003	943	23800	-2722	1310	963	26387	414	773
905	17271	-9561	595	925	21144	-5406	1367	945	24068	-2466	1123	965	26660	916	745
907	17783	-9326	667	927	21335	-5122	1498	947	24391	-2281	908	967	26922	1349	716
909	18393	-9145	599	929	21658	-4930	1526	949	24611	-2107	908	969	27230	1820	793
911	18736	-8794	718	931	21875	-4575	1508	951	24887	-1394	931	971	27545	2331	845
913	19208	-8334	817	933	22215	-4147	1536	953	25134	-1482	906	973	27866	2634	925
915	19653	-7871	815	935	22535	-3773	1631	955	25417	-1123	831	975	28143	3051	926
917	19979	-7259	668	937	22873	-3415	1662	957	25665	-756	804	977	28352	3496	981
919	20177	-6797	605	939	23190	-3161	1486	959	25878	-381	803	979	28528	4060	1038
921	20420	-6304	730	941	23467	-2917	1422	961	26126	51	775	981	28723	4491	1067
												983	29029	4890	1011
												985	29265	5374	1041

****

DAY 8/02/74 TETROON NO. 8024 RELEASE TIME = 902 MIN AFTER MIDNIGHT.
XO = 16790 (M) YO = -10050 (M) INITIAL ELEV = 850 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
904	17085	-9634	482	924	20713	-6707	1665	944	24612	-1306	2385	964	27318	4712	2534
906	17525	-9390	690	926	21071	-6392	1803	946	24756	-729	2490	966	27563	5201	2497
908	18052	-9086	565	928	21512	-5908	1879	948	24939	-49	2549	968	27773	5751	2458
910	18365	-8908	481	930	22131	-5313	1875	950	25147	493	2513	970	27995	6286	2447
912	18723	-8631	557	932	22603	-4773	1888	952	25436	1099	2457	972	28320	6916	2471
914	19168	-8272	572	934	23083	-4239	1949	954	25745	1771	2477	974	28596	7612	2523
916	19596	-8004	607	936	23425	-3663	2052	956	26089	2362	2448	976	28889	8116	2545
918	19852	-7590	668	938	23776	-3074	2087	958	26439	3023	2497	978	29199	8701	2539
920	20169	-7127	876	940	24096	-2516	2171	960	26740	3591	2492	980	29465	9382	2533
922	20416	-6923	1320	942	24339	-1939	2276	962	27065	4177	2569	982	29762	9994	2495
												984	29946	10549	2512

****

DAY 8/06/74 TETROON NO. 8062 RELEASE TIME = 253 MIN AFTER MIDNIGHT.
XO = -664 (M) YO = -22420 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
273	20826	-28548	607	311	8330	-37617	616	320	5701	-39232	608	330	3479	-40638	599
276	19795	-29189	608	312	7912	-37833	578	321	5446	-39379	607	332	2977	-40917	598
279	18467	-29937	781	313	7561	-38013	615	322	5192	-39542	567	334	2353	-41292	677
282	17166	-30724	1023	314	7399	-38180	690	323	4938	-39722	566	336	1677	-41650	675
285	16026	-31455	434	315	7197	-38345	689	324	4721	-39891	565	338	1031	-42037	573
288	15246	-32073	710	316	6877	-38515	689	325	4418	-40022	524	340	374	-42414	571
291	14183	-32864	603	317	6482	-38713	649	326	4346	-40094	563	342	-294	-42762	569
294	13102	-33769	457	318	6315	-38887	571	327	4119	-40210	562	344	-590	-42940	542
297	12775	-34215	417	319	6106	-39055	609	328	3969	-40309	602	346	-1187	-43166	543
												348	-1699	-43252	-1801
												350	-2133	-43425	-1813

****

DAY 8/07/74 TETROON NO. 8071 RELEASE TIME = 299 MIN AFTER MIDNIGHT.
XO = 7887 (M) YO = -13180 (M) INITIAL ELEV = 350 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
303	8130	-12979	928	328	8238	-6967	1060	346	7894	-2101	963	375	5940	1707	1069
309	8368	-12134	1032	331	8097	-6255	1058	349	7822	-1231	957	379	5951	3180	967
315	8463	-10312	1122	334	7950	-5414	1046	355	7800	360	981	381	5705	4094	1054
318	8405	-9763	1169	337	7862	-4577	1018	358	7878	1168	1003	384	5562	5243	1027
322	8248	-8495	1087	340	7889	-3807	1036	367	6428	3355	1076	387	6030	5797	1191
325	8260	-7833	984	343	7829	-2923	1051	370	5427	2698	1128	390	5198	7585	1262
												393	5162	8423	1348
												402	5885	11551	1272

****

DAY 8/07/74 TETROON NO. 8072 RELEASE TIME = 310 MIN AFTER MIDNIGHT.
XO = 7887 (M) YO = -13180 (M) INITIAL ELEV = 350 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
315	7748	-13073	988	333	7313	-8717	1174	351	6125	-3083	1026	369	5710	3125	956
318	7954	-12507	1003	336	7070	-7832	1090	354	5989	-2110	1001	379	5359	6743	1078
321	8368	-12794	898	339	6852	-6893	1018	357	5903	-1114	1021	383	5368	8296	1289
324	7903	-11364	854	342	6658	-5976	1018	360	5808	-159	1029	389	4312	9003	1224
327	7862	-10493	979	345	6486	-4990	1007	363	5753	911	1038	392	5301	11499	1253
330	7602	-9644	1065	348	6349	-4064	997	366	5820	1999	1026	395	5380	12137	1187

****

JAY 8/07/74 TETROON NO. 8073 RELEASE TIME = 320 MIN AFTER MIDNIGHT.
XO = 7887 (M) YO = -13180 (M) INITIAL ELEV = 350 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
322	7689	-13149	494	340	7347	-9765	1101	358	6324	-4604	1011	381	5614	3593	1020
325	7543	-13255	913	343	7146	-8920	1118	361	6148	-3677	1041	384	5432	4733	991
328	7605	-13093	988	346	6984	-8000	1122	364	6087	-2670	1053	387	5814	5374	957
331	7620	-12435	946	349	6822	-7165	1047	367	6139	1189	1109	390	5163	7180	1383
334	7492	-11504	1004	352	6688	-6368	1032	370	5528	2101	1160	393	5849	7330	1294
337	7471	-10630	941	355	6488	-5475	1018	377	5736	2071	1074	396	4954	9096	1262
												401	4861	11025	1254
												405	4584	12579	1464

****

DAY 8/08/74 TETROON NO. 8081 RELEASE TIME = 243 MIN AFTER MIDNIGHT.
XO = 7887 (M) YO = -13180 (M) INITIAL ELEV = 350 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
244	7894	-13026	464	249	7868	-11651	700	253	8047	-9516	1005	260	8841	-5141	1028
245	7985	-12832	513	250	7808	-11203	682	254	8099	-9205	1029	261	9009	-4132	1066
247	7893	-12465	713	251	7888	-10636	757	257	9224	-6702	1051	264	9590	-1790	1056
248	7846	-12126	720	252	7913	-10140	752	258	8559	-6155	1049	267	10074	148	1155
												270	10631	2158	1177
												273	11084	3953	1063
												276	11514	5655	942

****

DAY 8/08/74 TETROON NO. 8082 RELEASE TIME = 253 MIN AFTER MIDNIGHT.
XJ = 7887 (M) YO = -13180 (M) INITIAL ELEV = 350 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
256	8193	-12800	540	265	9498	-6759	1120	274	10336	-1982	1069	283	12427	4515	1069
259	8087	-11555	671	268	9115	-6091	1017	277	11033	270	1115	286	13130	6657	1075
262	8278	-9986	724	271	9749	-4083	1043	280	11703	2327	1123	289	13731	8601	1082

****

DAY 8/08/74 TETROON NO. 8083 RELEASE TIME = 263 MIN AFTER MIDNIGHT.
XO = 7887 (M) YO = -13180 (M) INITIAL ELEV = 350 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
266	7869	-12564	625	278	8976	-6036	1007	290	11321	2367	1131	300	13360	9311	1066
269	7812	-11280	721	281	9579	-3968	1048	293	11912	4811	1106	301	13589	9934	1085
272	8055	-9816	805	284	10144	-1863	1068	296	12463	6661	1059	302	13780	10624	1122
275	8469	-7984	983	287	10746	369	1112	299	13169	8613	1064	303	13996	11281	1125
												304	14121	12061	1148
												311	15302	16883	1160
												312	15481	17594	1142

****

DAY 8/08/74 TETROON NO. 8084 RELEASE TIME = 333 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
339	7868	-12159	505	342	8255	-11747	594	345	8948	-10969	573	348	9615	-10199	522
340	8084	-11997	563	343	8582	-11431	610	346	9191	-10655	506	349	9720	-10110	494
341	8171	-11872	579	344	8743	-11203	585	347	9390	-10442	493	350	9735	-10026	400

****

DAY 8/08/74 TETROON NO. 8085 RELEASE TIME = 371 MIN AFTER MIDNIGHT.
XO = 7784 (M) YO = -12170 (M) INITIAL ELEV = 230 (M MSL) X, Y, AND ELEV IN M.

TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV	TIME	X	Y	ELEV
373	7736	-12217	975	412	24006	5143	2042	451	44932	13581	2355	490	65571	18284	2730
374	7774	-12144	961	413	24499	5375	2040	452	45483	13748	2373	491	66038	18414	2745
375	7770	-12085	622	414	25012	5720	2039	453	46049	13870	2345	492	66563	18420	2760
376	8009	-11861	596	415	25501	6042	2036	454	46609	14038	2363	493	67079	18492	2776
377	8137	-11675	626	416	25995	6376	2032	455	47166	14156	2381	494	67578	18487	2791
378	8490	-11217	700	417	26514	6641	2028	456	47719	14270	2398	495	68094	18628	2807
379	8655	-10803	868	418	26987	6900	2021	457	48283	14439	2417	496	68606	18696	2823
380	8970	-10095	958	419	27483	7171	2041	458	48813	14598	2434	497	69110	18760	2838
381	9126	-9491	1053	420	27995	7452	2063	459	49352	14759	2452	498	69609	18822	2854
382	9400	-8862	1144	421	28497	7735	2055	460	49919	14875	2419	499	70073	18948	2798
383	9623	-8384	1205	422	28997	8024	2046	461	50455	15035	2384	500	70632	18950	2814
384	9973	-7799	1328	423	29475	8312	2096	462	51007	15199	2402	501	71127	19008	2829
385	10358	-7234	1290	424	30032	8565	2088	463	51511	15349	2417	502	71650	19148	2772
386	10710	-6709	1315	425	30544	8808	2045	464	52097	15413	2435	503	72169	19135	2787
387	10847	-6661	1342	426	31070	9093	2066	465	52665	15525	2452	504	72687	19196	2802
388	11614	-5535	1371	427	31613	9319	2086	466	53211	15629	2469	505	73213	19335	2818
389	12112	-4961	1403	428	32155	9582	2106	467	53779	15738	2487	506	73777	19329	2834
390	12624	-4322	1437	429	32688	9810	2126	468	54360	15851	2505	507	74294	19386	2599
391	13153	-3779	1488	430	33236	10082	2148	469	54879	16002	2465	508	74854	19375	2714
392	13701	-3218	1501	431	33796	10251	2168	470	55406	16155	2481	509	75414	19441	2653
393	14237	-2715	1544	432	34334	10488	2224	471	55957	16197	2440	510	75947	19499	2667
394	14739	-2245	1574	433	34892	10696	2245	472	56465	16284	2455	511	76479	19556	2681
395	15262	-1776	1606	434	35422	10897	2302	473	56990	16375	2470	512	77021	19614	2696
396	15779	-1335	1640	435	35998	11074	2325	474	57517	16526	2486	513	77583	19595	2711
397	16304	-897	1644	436	36549	11243	2346	475	58061	16621	2502	514	78153	19576	2726
398	16796	-494	1679	437	37090	11410	2367	476	58571	16767	2517	515	78660	19703	2660
399	17314	-85	1716	438	37682	11551	2274	477	59097	16855	2533	516	79220	19760	2675
400	17796	349	1719	439	38238	11640	2293	478	59594	16996	2548	517	79763	19813	2690
401	18321	809	1740	440	38788	11807	2313	479	60120	17083	2564	518	80297	19862	2704
402	18835	1259	1781	441	39368	11942	2334	480	60635	17229	2579	519	80831	19994	2637
403	19340	1655	1822	442	39903	12104	2313	481	61110	17364	2594	520	81385	19961	2650
404	19849	2053	1845	443	40452	12314	2291	482	61619	17443	2609	521	81908	20090	2747
405	20335	2548	1868	444	41083	12447	2311	483	62129	17522	2624	522	82452	20137	2762
406	20889	2889	1893	445	41584	12614	2330	484	62631	17663	2640	523	82969	20177	2776
407	21404	3282	1917	446	42145	12784	2306	485	63115	17800	2655	524	83504	20220	2790
408	21933	3650	1942	447	42700	12907	2325	486	63634	17946	2671	525	84033	20174	2804
409	22460	4056	1967	448	43243	13071	2299	487	64100	18010	2685	526	84530	20293	2818
410	22963	4450	1992	449	43811	13242	2363	488	64583	18145	2766	527	85077	20248	2832
411	23482	4742	2016	450	44381	13415	2337	489	65095	18220	2716	528	85561	20274	2759
												529	86032	20386	2772
												530	86513	20500	2785
												531	86991	20523	2798

****

9. TVA METEOROLOGICAL TOWER DATA

In this section, meteorological data taken by the Tennessee Valley Authority at several sites throughout the greater ETTEX region are presented. Wind speeds have been converted to m/s. Note that temperatures and temperature differences are in degrees Farenheit (°F). The column headed by "PER RDGS" lists the percent of readings made during the hours in which the wind direction was in the 22.5° sector containing the average wind direction. A large number implies steady wind direction, while a small number implies rather variable wind direction. All times are local daylight savings time. This is important to remember because the central time zone passes through the ETTEX region. Locations of the TVA Sites were given in Table 2, above.

PHIPPS BEND NUCLEAR PLANT JULY 16, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	2	68	69	2	22	53	66.4	69.0	69.0	-2.6	-2.6	.0
0200	2	73	53	2	26	39	65.7	68.1	68.3	-2.4	-2.6	-.2
0300	2	73	46	3	10	38	65.7	67.6	67.6	-1.9	-1.9	.0
0400	2	43	43	2	38	31	65.3	67.1	67.1	-1.8	-1.8	.0
0500	2	106	26	2	161	34	65.9	67.2	67.2	-1.3	-1.3	.0
0600	3	80	31	3	71	25	66.0	67.5	67.6	-1.5	-1.6	-.1
0700	1	59	26	2	51	29	65.7	67.2	67.1	-1.5	-1.4	.1
0800	2	94	44	3	70	36	65.8	67.0	66.8	-1.2	-1.0	.2
0900	4	70	78	5	44	66	66.1	67.2	66.8	-1.1	-.7	.4
1000	3	61	71	4	34	63	67.4	68.1	67.5	-.7	-.1	.6
1100	3	86	75	4	71	54	70.2	70.2	69.5	.0	.7	.7
1200	4	102	53	6	88	50	73.6	73.1	72.2	.5	1.4	.9
1300	5	86	66	7	67	53	76.6	76.0	74.9	.6	1.7	1.1
1400	6	73	18	8	51	16	82.4	80.1	****	2.3	****	***
1500	5	73	36	7	48	31	82.9	80.7	79.5	2.2	3.4	1.2
1600	5	62	50	8	38	43	84.0	81.8	80.6	2.2	3.4	1.2
1700	5	55	64	7	28	56	85.0	82.8	81.8	2.2	3.2	1.0
1800	5	49	56	7	17	48	85.3	83.6	82.7	1.7	2.6	.9
1900	5	50	59	8	33	63	84.7	83.0	82.8	1.1	1.9	.8
2000	5	68	76	7	46	73	83.2	83.0	82.5	.2	.7	.5
2100	5	62	89	5	43	89	80.3	81.1	81.1	-.8	-.8	.0
2200	5	71	89	6	46	84	76.4	77.9	78.3	-1.5	-1.9	-.4
2300	4	73	96	4	45	59	72.0	74.8	75.9	-2.8	-3.9	-1.1
2400	5	80	98	4	12	78	67.8	71.3	74.0	-3.5	-6.2	-2.7

PHIPPS BEND NUCLEAR PLANT JULY 17, 1974

PERIOD ENDING	WIND 150 FEET SPEED AV	WIND 150 FEET DIR AV	WIND 150 FEET PER RDGS	WIND 33 FEET SPEED AV	WIND 33 FEET DIR AV	WIND 33 FEET PER RDGS	TEMPERATURE 4FT	TEMPERATURE 33FT	TEMPERATURE 150FT	TEMP DIFFERENCE T4 -T33	TEMP DIFFERENCE T4 -T150	TEMP DIFFERENCE T33 -T150
0100	5	73	93	4	14	73	66.1	70.2	72.1	-4.1	-6.0	-1.9
0200	4	80	100	3	28	69	66.1	68.8	71.1	-2.7	-5.0	-2.3
0300	4	74	96	3	347	73	64.2	66.8	69.4	-2.6	-5.2	-2.6
0400	4	70	91	3	348	81	63.6	65.9	68.0	-2.3	-4.4	-2.1
0500	4	82	93	3	11	61	63.4	65.6	67.1	-2.2	-3.7	-1.5
0600	4	72	96	4	4	53	62.1	63.9	65.3	-1.8	-3.2	-1.4
0700	4	77	73	4	11	58	62.3	64.5	65.5	-2.2	-3.2	-1.0
0800	4	68	89	4	10	69	62.2	64.0	64.6	-1.8	-2.4	-.6
0900	4	65	93	4	16	76	64.6	64.7	64.9	-.1	-.3	-.2
1000	4	67	96	5	41	88	67.5	66.8	66.4	.7	1.1	.4
1100	4	65	83	6	39	66	72.1	69.9	69.1	2.2	3.0	.8
1200	4	70	83	6	60	71	76.8	74.2	73.1	2.6	3.7	1.1
1300	4	53	84	5	26	64	80.7	77.8	76.8	2.9	3.9	1.0
1400	3	40	50	5	11	48	83.7	81.0	80.1	2.7	3.6	.9
1500	2	40	33	4	39	26	85.5	83.1	82.2	2.4	3.3	.9
1600	2	312	28	3	303	28	86.5	84.5	83.8	2.0	2.7	.7
1700	2	275	33	3	280	34	87.6	85.8	85.1	1.8	2.5	.7
1800	1	243	18	2	329	18	88.2	86.8	86.0	1.4	2.2	.8
1900	2	58	43	3	24	29	87.8	86.8	86.2	1.0	1.6	.6
2000	3	93	78	4	70	78	86.4	86.1	85.6	.3	.8	.5
2100	3	113	100	3	93	93	84.1	84.4	84.9	-.3	-.8	-.5
2200	3	129	86	1	90	28	78.7	81.7	83.3	-3.0	-4.6	-1.6
2300	2	230	23	2	267	18	76.7	80.0	81.0	-3.3	-4.3	-1.0
2400	4	204	54	5	187	44	77.4	77.9	78.0	-.5	-.6	-.1

PHIPPS BEND NUCLEAR PLANT JULY 18, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	1	168	29	3	139	25	74.8	76.2	77.5	-1.4	-2.7	-1.3
0200	1	67	28	2	200	38	72.9	74.4	76.3	-1.5	-3.4	-1.9
0300	1	11	34	1	324	43	70.9	72.9	74.7	-2.0	-3.8	-1.8
0400	1	167	26	2	169	26	69.9	71.3	73.5	-1.4	-3.6	-2.2
0500	1	80	51	1	93	26	69.3	70.3	72.1	-1.0	-2.8	-1.8
0600	2	95	59	1	5	51	68.7	69.8	71.4	-1.1	-2.7	-1.6
0700	2	62	76	1	329	41	68.2	69.1	71.0	-.9	-2.8	-1.9
0800	2	86	36	2	339	43	68.4	69.4	70.4	-1.0	-2.0	-1.0
0900	2	81	33	1	24	33	69.3	69.2	70.0	.1	-.7	-.8
1000	1	65	41	1	15	54	72.7	71.7	71.4	1.0	1.3	.3
1100	1	59	41	2	59	38	76.5	74.9	74.3	1.6	2.2	.6
1200	1	225	16	2	91	16	80.2	78.5	77.9	1.7	2.3	.6
1300	2	248	36	3	275	25	83.3	81.7	80.9	1.6	2.4	.8
1400	3	269	39	4	257	29	85.6	84.0	83.1	1.6	2.5	.9
1500	4	268	44	5	214	28	87.6	85.8	84.9	1.8	2.7	.9
1600	5	252	64	7	217	36	89.3	87.5	86.5	1.8	2.8	1.0
1700	5	268	69	7	254	50	89.9	88.4	87.6	1.5	2.3	.8
1800	5	263	64	7	246	51	89.4	88.2	87.5	1.2	1.9	.7
1900	5	285	64	5	272	68	88.9	88.1	87.6	.8	1.3	.5
2000	4	270	66	4	267	56	87.8	87.4	87.1	.4	.7	.3
2100	3	247	81	3	238	61	84.5	85.7	85.9	-1.2	-1.4	-.2
2200	2	269	36	2	208	25	78.5	82.1	83.9	-3.6	-5.4	-1.8
2300	4	229	94	2	224	36	77.9	79.4	82.5	-1.5	-4.6	-3.1
2400	2	231	83	2	241	58	76.4	78.9	80.7	-2.5	-4.3	-1.8

PHIPPS BEND NUCLEAR PLANT JULY 19, 1974

PERIOD ENDING	WIND 150 FEET SPEED AV	WIND 150 FEET DIR AV	WIND 150 FEET PER RDGS	WIND 33 FEET SPEED AV	WIND 33 FEET DIR AV	WIND 33 FEET PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	3	243	73	3	225	46	73.9	77.3	79.3	-3.4	-5.4	-2.0
0200	3	247	66	2	214	29	72.3	75.2	77.5	-2.9	-5.2	-2.3
0300	2	254	71	2	217	36	71.7	73.7	76.1	-2.0	-4.4	-2.4
0400	2	252	71	1	298	51	71.4	72.7	75.2	-1.3	-3.8	-2.5
0500	2	268	41	0	***	**	69.9	71.3	74.2	-1.4	-4.3	-2.9
0600	1	252	43	0	***	**	68.9	70.3	72.9	-1.4	-4.0	-2.6
0700	2	286	61	1	190	39	67.9	69.3	72.1	-1.4	-4.2	-2.8
0800	2	244	46	2	323	26	68.0	69.0	72.1	-1.0	-4.1	-3.1
0900	1	244	36	1	199	48	69.9	69.4	71.2	.5	-1.3	-1.8
1000	1	257	39	1	9	51	72.7	72.0	72.3	.7	.4	-.3
1100	2	259	43	2	250	28	75.6	74.8	74.3	.8	1.3	.5
1200	2	297	61	2	284	59	76.7	76.0	75.5	.7	1.2	.5
1300	2	246	53	2	230	36	75.8	75.2	74.9	.6	.9	.3
1400	2	339	34	2	336	28	74.4	74.0	73.7	.4	.7	.3
1500	2	217	63	3	192	56	74.2	73.3	72.9	.9	1.3	.4
1600	3	211	58	3	192	46	74.8	74.0	73.6	.8	1.2	.4
1700	6	239	69	6	216	63	74.3	73.6	73.3	.7	1.0	.3
1800	5	258	88	6	234	69	75.8	74.7	74.2	1.1	1.6	.5
1900	5	260	91	7	238	63	77.2	76.1	75.4	1.1	1.8	.7
2000	6	262	91	7	241	76	77.0	76.2	75.7	.8	1.3	.5
2100	4	259	83	4	232	59	76.1	75.5	75.2	.6	.9	.3
2200	2	227	64	3	197	58	74.0	74.4	74.6	-.4	-.6	-.2
2300	2	253	66	3	231	63	71.2	73.2	74.5	-2.0	-3.3	-1.3
2400	3	231	89	3	241	53	70.4	71.4	72.8	-1.0	-2.4	-1.4

PHIPPS BEND NUCLEAR PLANT JULY 22, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	4	64	88	4	338	61	66.1	68.8	70.7	-2.7	-4.6	-1.9
0200	4	71	84	3	28	36	66.4	69.2	70.6	-2.8	-4.2	-1.4
0300	4	71	78	4	9	31	64.8	67.7	69.3	-2.9	-4.5	-1.6
0400	5	66	100	5	9	75	63.6	66.5	67.8	-2.9	-4.2	-1.3
0500	4	53	89	4	348	46	62.9	65.2	66.1	-2.3	-3.2	-.9
0600	4	73	81	3	22	51	62.6	64.1	64.9	-1.5	-2.3	-.8
0700	5	61	81	5	11	71	61.7	63.4	64.0	-1.7	-2.3	-.6
0800	4	72	98	3	38	73	61.5	62.9	63.6	-1.4	-2.1	-.7
0900	4	53	91	4	9	66	62.8	63.5	63.6	-.7	-.8	-.1
1000	3	78	78	4	54	68	66.3	65.6	65.2	.7	1.1	.4
1100	3	70	71	5	54	54	70.4	68.6	67.8	1.8	2.6	.8
1200	2	40	34	3	11	29	73.5	71.3	70.6	2.2	2.9	.7
1300	2	123	26	4	95	26	77.2	75.0	74.0	2.2	3.2	1.0
1400	3	254	36	4	232	29	79.0	77.0	76.2	2.0	2.8	.8
1500	4	273	48	5	246	39	80.1	78.4	77.5	1.7	2.6	.9
1600	3	240	26	5	205	21	82.8	80.8	79.9	2.0	2.9	.9
1700	3	251	43	4	244	29	84.4	82.6	81.8	1.8	2.6	.8
1800	*	325	29	4	246	23	84.8	83.3	82.5	1.5	2.3	.8
1900	*	303	38	3	295	31	85.2	84.0	83.4	1.2	1.8	.6
2000	*	295	43	3	249	39	83.9	83.3	83.0	.6	.9	.3
2100	*	264	54	3	249	48	78.4	81.1	81.5	-2.7	-3.1	-.4
2200	*	232	43	2	335	39	72.5	76.2	78.6	-3.7	-6.1	-2.4
2300	*	184	33	2	84	29	69.9	72.6	74.9	-2.7	-5.0	-2.3
2400	*	187	28	3	344	29	68.2	70.4	73.8	-2.2	-5.6	-3.4

PHIPPS BEND NUCLEAR PLANT JULY 25, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	*	76	89	4	34	46	72.4	72.6	72.7	-.2	-.3	-.1
0200	*	53	46	4	350	38	71.6	72.2	72.4	-.6	-.8	-.2
0300	*	52	61	4	10	50	69.6	70.7	70.9	-1.1	-1.3	-.2
0400	*	69	61	2	27	33	68.6	69.8	70.0	-1.2	-1.4	-.2
0500	*	70	86	2	13	75	67.6	69.0	69.2	-1.4	-1.6	-.2
0600	*	66	96	4	17	78	66.7	68.0	68.2	-1.3	-1.5	-.2
0700	*	70	96	3	29	86	66.5	67.3	67.5	-.8	-1.0	-.2
0800	*	70	88	4	23	83	65.9	66.8	67.0	-.9	-1.1	-.2
0900	*	70	94	2	32	94	67.0	66.6	66.5	.4	.5	.1
1000	*	66	64	4	33	61	69.2	67.8	67.3	1.4	1.9	.5
1100	*	56	48	3	52	41	72.1	70.5	69.8	1.6	2.3	.7
1200	0	**	**	3	22	39	76.0	73.9	73.1	2.1	2.9	.8
1300	2	313	29	3	284	29	79.7	77.7	76.8	2.0	2.9	.9
1400	2	345	26	3	340	29	82.0	79.7	78.8	2.3	3.2	.9
1500	2	98	18	4	76	21	84.0	81.9	81.2	2.1	2.8	.7
1600	2	106	29	3	72	33	84.5	82.8	82.0	1.7	2.5	.8
1700	2	256	29	3	239	25	86.3	84.6	83.7	1.7	2.6	.9
1800	2	9	25	3	30	25	86.7	85.1	84.3	1.6	2.4	.8
1900	2	163	51	3	144	38	86.7	85.6	84.9	1.1	1.8	.7
2000	2	161	71	2	125	43	84.3	84.6	84.4	-.3	-.1	.2
2100	2	165	38	2	155	33	80.4	81.9	83.0	-1.5	-2.6	-1.1
2200	1	226	56	2	76	34	77.1	79.4	81.2	-2.3	-4.1	-1.8
2300	1	343	25	2	312	33	73.0	76.0	78.4	-3.0	-5.4	-2.4
2400	2	42	44	2	321	36	71.6	73.6	76.1	-2.0	-4.5	-2.5

PHIPPS BEND NUCLEAR PLANT JULY 26, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	1	340	28	2	172	29	70.7	72.0	73.9	-1.3	-3.2	-1.9
0200	1	71	31	1	305	29	69.7	71.3	73.4	-1.6	-3.7	-2.1
0300	1	273	63	2	237	53	70.0	70.5	72.3	-.5	-2.3	-1.8
0400	1	241	38	2	16	19	69.9	70.1	71.9	-.2	-2.0	-1.8
0500	2	43	73	3	339	71	70.1	70.1	70.9	.0	-.8	-.8
0600	1	77	38	1	28	25	70.2	70.3	70.6	-.1	-.4	-.3
0700	3	244	25	4	37	28	70.5	70.3	70.3	.2	.2	.0
0800	4	146	26	5	141	18	69.2	69.7	70.3	-.5	-1.1	-.6
0900	2	47	39	2	7	43	69.2	69.1	69.5	.1	-.3	-.4
1000	2	58	81	3	30	66	71.2	70.1	69.6	1.1	1.6	.5
1100	2	47	39	2	29	44	73.1	71.9	71.4	1.2	1.7	.5
1200	2	71	39	3	27	43	75.7	73.9	73.2	1.8	2.5	.7
1300	1	33	28	2	8	25	78.6	76.9	76.2	1.7	2.4	.7
1400	2	38	41	4	23	26	81.6	79.4	78.7	2.2	2.9	.7
1500	2	135	23	3	88	25	80.6	79.5	79.0	1.1	1.6	.5
1600	2	325	28	3	324	43	78.8	77.7	77.4	1.1	1.4	.3
1700	2	88	36	2	86	21	81.6	80.2	79.6	1.4	2.0	.6
1800	1	58	28	2	86	23	82.4	81.4	80.8	1.0	1.6	.6
1900	1	39	36	2	42	28	82.2	81.5	81.0	.7	1.2	.5
2000	1	124	43	2	101	34	81.4	81.0	80.8	.4	.6	.2
2100	2	93	48	1	120	43	79.8	79.5	80.1	.3	-.3	-.6
2200	6	123	38	8	122	33	74.6	74.8	75.0	-.2	-.4	-.2
2300	5	204	31	6	204	18	69.4	69.5	70.3	-.1	-.9	-.8
2400	3	346	29	4	342	29	69.3	69.2	69.1	.1	.2	.1

PHIPPS BEND NUCLEAR PLANT JULY 27, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	4	86	83	5	62	73	69.1	68.8	68.7	.3	.4	.1
0200	2	107	46	1	338	29	69.0	69.4	69.4	-.4	-.4	.0
0300	2	7	34	2	323	39	68.8	68.6	68.8	.2	.0	-.2
0400	0	**	**	0	**	**	68.9	68.4	68.5	.5	.4	-.1
0500	2	81	51	3	44	61	68.8	68.5	68.3	.3	.5	.2
0600	3	69	48	3	33	50	68.9	68.6	68.5	.3	.4	.1
0700	1	34	69	0	**	**	69.5	69.0	68.9	.5	.6	.1
0800	2	71	58	1	46	58	69.2	68.9	68.8	.3	.4	.1
0900	3	65	98	2	32	88	69.6	69.2	69.0	.4	.6	.2
1000	3	70	94	4	43	88	71.2	70.1	69.6	1.1	1.6	.5
1100	3	66	84	4	47	71	73.6	72.1	71.4	1.5	2.2	.7
1200	3	75	73	4	49	59	76.6	74.4	73.5	2.2	3.1	.9
1300	3	44	54	5	19	53	79.4	76.7	75.7	2.7	3.7	1.0
1400	3	62	50	4	42	31	81.5	79.0	78.0	2.5	3.5	1.0
1500	3	53	50	4	17	36	83.5	81.1	80.3	2.4	3.2	.8
1600	2	41	31	3	21	28	84.8	82.7	81.8	2.1	3.0	.9
1700	2	18	46	3	344	38	85.8	84.0	83.2	1.8	2.6	.8
1800	2	24	38	4	348	34	86.5	85.0	84.2	1.5	2.3	.8
1900	4	41	36	5	17	34	80.6	80.5	80.0	.1	.6	.5
2000	1	160	36	3	135	44	80.3	79.6	79.1	.7	1.2	.5
2100	1	78	44	1	42	76	79.1	79.7	79.5	-.6	-.4	.2
2200	1	116	46	1	110	44	74.1	77.1	78.7	-3.0	-4.6	-1.6
2300	2	56	58	1	123	21	71.7	73.6	76.7	-1.9	-5.0	-3.1
2400	2	67	78	2	348	48	70.5	72.0	74.2	-1.5	-3.7	-2.2

PHIPPS BEND NUCLEAR PLANT JULY 29

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	1	55	71	1	219	33	68.0	69.7	71.8	-1.7	-3.8	-2.1
0200	1	62	66	0	***	**	67.6	68.9	70.2	-1.3	-2.6	-1.3
0300	1	73	68	0	***	**	67.3	68.3	69.1	-1.0	-1.8	-.8
0400	2	61	63	0	***	**	66.7	67.5	68.4	-.8	-1.7	-.9
0500	1	107	61	0	***	**	66.6	66.7	67.9	-.1	-1.3	-1.2
0600	2	97	23	1	322	34	66.1	65.9	66.9	.2	-.8	-1.0
0700	1	151	21	0	***	**	66.6	66.0	65.9	.6	.7	.1
0800	1	9	28	0	***	**	66.1	65.4	65.3	.7	.8	.1
0900	1	33	36	0	***	**	66.4	65.5	65.3	.9	1.1	.2
1000	1	22	23	1	10	25	67.5	66.3	66.1	1.2	1.4	.2
1100	2	45	58	3	17	36	70.2	68.3	67.7	1.9	2.5	.6
1200	1	347	25	2	318	16	74.9	73.0	72.1	1.9	2.8	.9
1300	3	284	50	4	272	38	79.8	78.1	77.4	1.7	2.4	.7
1400	4	267	76	6	242	69	80.9	79.6	78.8	1.3	2.1	.8
1500	5	254	66	6	241	48	83.3	81.8	80.8	1.5	2.5	1.0
1600	5	247	68	7	204	44	85.2	83.6	82.5	1.6	2.7	1.1
1700	5	259	64	8	237	56	86.1	84.7	83.7	1.4	2.4	1.0
1800	5	240	76	6	215	64	86.0	85.0	84.3	1.0	1.7	.7
1900	5	265	75	6	258	59	86.1	85.3	84.8	.8	1.3	.5
2000	5	264	88	5	242	76	84.8	84.5	84.3	.3	.5	.2
2100	4	259	83	3	232	51	82.9	83.1	83.3	-.2	-.4	-.2
2200	4	241	81	3	231	43	79.0	80.4	81.5	-1.4	-2.5	-1.1
2300	4	259	71	3	245	44	76.1	78.8	80.1	-2.7	-4.0	-1.3
2400	4	255	98	3	239	63	74.9	77.3	78.9	-2.4	-4.0	-1.6

PHIPPS BEND NUCLEAR PLANT JULY 30, 1974

PERC ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	3	300	33	3	336	41	73.6	76.1	77.3	-2.5	-3.7	-1.2
0200	1	259	23	2	197	31	72.0	74.0	75.7	-2.0	-3.7	-1.7
0300	4	87	48	4	60	31	69.8	72.0	73.3	-2.2	-3.5	-1.3
0400	2	61	48	2	176	39	67.4	69.7	71.0	-2.3	-3.6	-1.3
0500	1	258	34	2	159	25	66.2	67.7	69.7	-1.5	-3.5	-2.0
0600	2	258	48	2	203	29	64.8	66.4	68.2	-1.6	-3.4	-1.8
0700	2	234	81	2	226	39	63.0	65.4	67.8	-2.4	-4.8	-2.4
0800	1	41	46	0	***	**	62.8	62.9	64.1	-.1	-1.3	-1.2
0900	1	32	21	1	348	50	64.2	63.5	63.3	.7	.9	.2
1000	1	43	48	1	10	53	65.2	64.1	63.9	1.1	1.3	.2
1100	1	201	14	2	155	28	68.1	66.8	66.3	1.3	1.8	.5
1200	1	291	19	2	297	16	74.8	73.4	72.9	1.4	1.9	.5
1300	3	12	38	5	339	33	78.7	76.5	75.5	2.2	3.2	1.0
1400	4	342	43	6	323	31	80.2	77.9	77.0	2.3	3.2	.9
1500	2	298	28	4	241	19	81.1	79.2	78.4	1.9	2.7	.8
1600	2	255	16	3	167	19	81.7	80.1	79.3	1.6	2.4	.8
1700	2	255	28	4	339	23	82.8	81.1	80.3	1.7	2.5	.8
1800	2	255	39	4	240	29	83.2	81.9	81.1	1.3	2.1	.8
1900	2	172	38	4	144	31	82.7	81.8	81.2	.9	1.5	.6
2000	2	73	39	2	21	26	80.0	81.3	81.0	-1.3	-1.0	.3
2100	2	55	88	2	27	54	78.2	79.8	80.0	-1.6	-1.8	-.2
2200	2	349	38	2	318	38	71.3	75.6	77.1	-4.3	-5.8	-1.5
2300	1	106	63	1	165	50	67.5	71.5	75.5	-4.0	-8.0	-4.0
2400	1	105	39	1	69	46	65.5	68.2	70.4	-2.7	-4.9	-2.2

PHIPPS BEND NUCLEAR PLANT JULY 31, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	2	53	53	2	329	31	64.3	66.1	68.2	-1.8	-3.9	-2.1
0200	2	61	44	1	337	39	63.0	65.1	66.7	-2.1	-3.7	-1.6
0300	1	27	36	1	348	51	61.9	63.4	65.0	-1.5	-3.1	-1.6
0400	1	43	44	1	347	59	60.8	62.2	64.1	-1.4	-3.3	-1.9
0500	1	5	33	0	***	**	60.2	61.3	62.6	-1.1	-2.4	-1.3
0600	1	17	94	0	***	**	59.6	60.4	61.5	-.8	-1.9	-1.1
0700	1	100	39	0	***	**	59.3	59.6	61.0	-.3	-1.7	-1.4
0800	1	17	48	0	***	**	58.5	58.9	60.2	-.4	-1.7	-1.3
0900	1	25	29	1	161	46	59.1	58.6	59.9	.5	-.8	-1.3
1000	1	39	41	1	42	34	61.2	60.1	60.1	1.1	1.1	.0
1100	1	37	59	3	10	44	66.4	64.5	64.3	1.9	2.1	.2
1200	2	59	56	4	25	44	73.4	71.1	70.3	2.3	3.1	.8
1300	2	14	43	4	347	44	****	****	.0	***	***	***
1400	3	121	21	4	125	16	79.9	77.2	76.5	2.7	3.4	.7
1500	2	8	23	4	328	21	80.7	78.2	77.4	2.5	3.3	.8
1600	2	43	29	3	327	29	81.8	79.4	78.4	2.4	3.4	1.0
1700	2	92	29	4	84	34	82.5	80.5	79.6	2.0	2.9	.9
1800	2	59	39	4	30	31	82.8	81.1	80.2	1.7	2.6	.9
1900	2	80	34	3	72	34	82.3	81.3	80.6	1.0	1.7	.7
2000	2	44	28	3	88	33	81.9	81.3	80.9	.6	1.0	.4
2100	2	73	86	2	83	61	79.0	80.6	80.6	-1.6	-1.6	.0
2200	2	19	44	0	***	**	71.9	76.7	78.6	-4.8	-6.7	-1.9
2300	2	49	41	2	159	31	67.9	71.4	74.2	-3.5	-6.3	-2.8
2400	3	63	53	2	330	68	65.1	68.4	71.8	-3.3	-6.7	-3.4

PHIPPS BEND NUCLEAR PLANT AUGUST 1, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	2	58	71	1	346	78	64.2	66.8	68.6	-2.6	-4.4	-1.8
0200	2	70	76	1	10	43	62.9	64.5	67.3	-1.6	-4.4	-2.8
0300	3	73	56	2	337	64	61.7	63.5	66.4	-1.8	-4.7	-2.9
0400	2	65	64	1	344	28	61.4	62.8	65.0	-1.4	-3.6	-2.2
0500	2	70	58	1	351	48	60.6	61.9	63.3	-1.3	-2.7	-1.4
0600	3	65	88	4	11	43	60.2	61.8	63.2	-1.6	-3.0	-1.4
0700	3	54	81	4	10	58	61.3	62.9	63.4	-1.6	-2.1	-.5
0800	4	71	79	5	28	64	60.6	62.6	63.2	-2.0	-2.6	-.6
0900	3	66	96	4	29	83	61.5	62.4	62.5	-.9	-1.0	-.1
1000	4	59	89	5	28	75	64.7	64.0	63.7	.7	1.0	.3
1100	3	65	71	5	53	56	69.2	67.2	66.5	2.0	2.7	.7
1200	4	56	75	5	34	68	74.7	72.3	71.4	2.4	3.3	.9
1300	3	53	69	5	25	64	78.8	76.0	75.0	2.8	3.8	1.0
1400	3	58	38	4	34	38	81.4	78.8	77.9	2.6	3.5	.9
1500	2	60	28	4	21	33	83.6	81.2	80.4	2.4	3.2	.8
1600	2	324	31	4	305	21	85.3	83.2	82.4	2.1	2.9	.8
1700	2	194	23	4	114	19	86.7	85.1	84.5	1.6	2.2	.6
1800	3	21	53	5	8	34	86.9	85.4	84.7	1.5	2.2	.7
1900	3	26	54	4	8	38	86.0	85.0	84.3	1.0	1.7	.7
2000	4	47	93	5	27	78	84.7	84.6	84.1	.1	.6	.5
2100	4	76	71	4	67	54	81.8	82.8	83.0	-1.0	-1.2	-.2
2200	4	92	66	3	82	21	77.1	80.1	81.4	-3.0	-4.3	-1.3
2300	9	184	43	13	122	46	77.4	78.3	78.5	-.9	-1.1	-.2
2400	8	140	69	10	119	64	75.2	75.8	76.0	-.6	-.8	-.2

PHIPPS BEND NUCLEAR PLANT AUGUST 2, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	2	73	33	3	73	26	71.9	73.5	74.8	-1.6	-2.9	-1.3
0200	3	54	63	2	352	36	69.0	70.4	71.6	-1.4	-2.6	-1.2
0300	2	71	59	1	51	26	68.1	69.4	70.1	-1.3	-2.0	-.7
0400	3	61	73	3	23	43	67.8	68.9	69.4	-1.1	-1.6	-.5
0500	4	71	84	4	42	66	68.2	69.2	69.3	-1.0	-1.1	-.1
0600	3	55	79	3	26	39	68.3	68.8	68.8	-.5	-.5	.0
0700	2	57	78	2	11	50	68.0	68.3	68.3	-.3	-.3	.0
0800	2	61	63	1	351	31	67.9	68.4	68.5	-.5	-.6	-.1
0900	2	77	64	1	110	34	68.2	68.0	68.3	.2	-.1	-.3
1000	2	54	63	2	26	54	69.9	69.2	69.0	.7	.9	.2
1100	2	60	83	3	49	63	71.8	70.7	70.1	1.1	1.7	.6
1200	2	55	71	2	59	36	74.1	72.7	72.0	1.4	2.1	.7
1300	1	86	43	2	91	36	76.6	75.2	74.6	1.4	2.0	.6
1400	2	200	26	3	344	19	79.8	77.8	77.2	2.0	2.6	.6
1500	5	193	63	8	170	58	84.2	81.8	80.9	2.4	3.3	.9
1600	4	195	64	7	169	51	86.1	83.6	82.5	2.5	3.6	1.1
1700	4	164	41	6	144	43	87.6	84.8	83.8	2.8	3.8	1.0
1800	4	179	54	6	135	43	88.0	85.7	84.7	2.3	3.3	1.0
1900	5	181	83	9	157	83	86.7	85.2	84.5	1.5	2.2	.7
2000	5	295	38	6	271	39	74.9	74.9	75.6	.0	-.7	-.7
2100	3	248	53	3	248	51	72.1	71.6	72.1	.5	.0	-.5
2200	1	119	33	1	318	31	70.9	70.8	71.6	.1	-.7	-.8
2300	2	80	58	1	7	31	70.6	70.8	71.7	-.2	-1.1	-.9
2400	2	5	31	1	305	33	70.4	70.4	70.8	.0	-.4	-.4

PHIPPS BEND NUCLEAR PLANT AUGUST 5, 1974

PERIOD ENDING	WIND 150 FEET SPEED AV	WIND 150 FEET DIR AV	WIND 150 FEET PER RDGS	WIND 33 FEET SPEED AV	WIND 33 FEET DIR AV	WIND 33 FEET PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	4	245	93	3	224	73	69.6	69.2	69.4	.4	.2	-.2
0200	2	240	53	3	241	50	69.0	68.8	69.1	.2	-.1	-.3
0300	3	247	73	2	210	39	67.6	67.8	68.1	-.2	-.5	-.3
0400	2	246	46	1	241	21	65.6	66.6	68.0	-1.0	-2.4	-1.4
0500	0	***	**	1	320	31	65.2	65.7	66.6	-.5	-1.4	-.9
0600	1	13	38	0	***	**	65.1	64.8	65.4	.3	-.3	-.6
0700	1	73	26	1	338	34	64.9	64.4	64.3	.5	.6	.1
0800	1	285	33	0	***	**	64.4	63.8	63.7	.6	.7	.1
0900	1	12	21	0	***	**	64.2	63.4	63.4	.8	.8	.0
1000	1	32	26	1	77	25	64.3	63.4	63.3	.9	1.0	.1
1100	2	81	43	3	67	43	66.7	65.1	64.3	1.6	2.4	.8
1200	3	83	66	4	70	68	71.6	69.8	68.7	1.8	2.9	1.1
1300	2	18	21	3	74	23	74.3	72.5	71.6	1.8	2.7	.9
1400	2	342	29	4	322	19	76.4	74.2	73.0	2.2	3.4	1.2
1500	2	236	21	4	204	16	78.3	76.2	75.0	2.1	3.3	1.2
1600	2	89	25	3	69	26	78.8	76.9	75.8	1.9	3.0	1.1
1700	2	30	38	4	11	36	80.2	78.0	76.8	2.2	3.4	1.2
1800	3	337	54	5	317	53	80.5	78.2	77.1	2.3	3.4	1.1
1900	3	57	33	4	37	31	81.0	78.9	77.7	2.1	3.3	1.2
2000	1	63	46	2	57	51	79.7	78.5	77.7	1.2	2.0	.8
2100	2	69	63	2	40	41	76.3	76.2	76.7	.1	-.4	-.5
2200	3	65	98	2	17	33	71.8	73.1	74.1	-1.3	-2.3	-1.0
2300	4	80	98	2	23	63	67.8	70.1	72.0	-2.3	-4.2	-1.9
2400	5	81	94	4	43	75	67.6	69.0	70.5	-1.4	-2.9	-1.5

PHIPPS BEND NUCLEAR PLANT AUGUST 6, 1974

PERC ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	5	73	100	5	33	68	66.3	67.7	68.9	-1.4	-2.6	-1.2
0200	5	72	100	5	38	84	67.1	67.5	68.1	-.4	-1.0	-.6
0300	4	76	93	4	41	69	65.8	66.4	67.0	-.6	-1.2	-.6
0400	4	75	96	4	42	76	65.6	65.7	66.1	-.1	-.5	-.4
0500	4	76	96	4	44	75	65.1	65.2	65.6	-.1	-.5	-.4
0600	4	76	91	4	37	53	64.7	64.8	65.0	-.1	-.3	-.2
0700	4	74	93	4	31	68	65.0	64.9	65.0	.1	.0	-.1
0800	4	76	81	4	52	53	65.5	65.3	65.3	.2	.2	.0
0900	4	70	93	4	28	73	65.3	65.0	65.0	.3	.3	.0
1000	4	61	69	4	31	53	66.2	65.6	65.4	.6	.8	.2
1100	4	60	84	5	31	61	68.3	67.2	66.6	1.1	1.7	.6
1200	4	68	91	6	49	79	71.2	69.6	68.8	1.6	2.4	.8
1300	3	53	56	4	33	51	74.4	72.5	71.5	1.9	2.9	1.0
1400	2	13	46	3	339	43	76.5	74.7	73.9	1.8	2.6	.8
1500	2	339	29	3	302	43	77.5	75.8	74.9	1.7	2.6	.9
1600	2	28	41	3	31	28	78.8	76.9	76.0	1.9	2.8	.9
1700	2	278	50	4	263	39	79.6	78.0	77.1	1.6	2.5	.9
1800	2	306	29	3	299	26	80.0	78.3	77.4	1.7	2.6	.9
1900	3	69	31	5	41	26	78.5	77.4	76.6	1.1	1.9	.8
2000	3	53	50	4	26	43	73.7	72.9	72.5	.8	1.2	.4
2100	4	49	59	5	22	61	73.3	72.5	72.0	.8	1.3	.5
2200	4	78	64	4	54	53	72.0	71.7	71.6	.3	.4	.1
2300	3	56	54	3	342	43	70.2	70.6	70.6	-.4	-.4	.0
2400	3	38	73	4	18	46	68.8	69.6	69.7	-.8	-.9	-.1

PHIPPS BEND NUCLEAR PLANT AUGUST 7, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	3	31	63	3	346	39	67.4	68.3	69.4	-.9	-2.0	-1.1
0200	4	70	78	4	27	54	67.7	68.5	69.3	-.8	-1.6	-.8
0300	4	72	75	4	61	51	67.9	68.3	68.6	-.4	-.7	-.3
0400	4	61	81	4	10	46	66.1	66.9	67.6	-.8	-1.5	-.7
0500	2	72	51	2	58	39	64.5	65.5	66.8	-1.0	-2.3	-1.3
0600	4	61	68	4	9	48	64.0	64.9	65.6	-.9	-1.6	-.7
0700	2	71	71	2	29	73	63.9	64.4	64.6	-.5	-.7	-.2
0800	3	72	86	1	40	38	62.5	63.5	64.1	-1.0	-1.6	-.6
0900	3	72	86	3	25	83	62.9	63.3	63.8	-.4	-.9	-.5
1000	3	66	73	4	21	46	66.3	65.4	65.0	.9	1.3	.4
1100	4	66	88	6	46	79	70.6	69.1	68.1	1.5	2.5	1.0
1200	4	53	71	6	32	58	74.8	72.4	71.2	2.4	3.6	1.2
1300	8	60	63	7	27	46	78.3	75.5	74.1	2.8	4.2	1.4
1400	6	39	64	6	11	54	80.2	77.6	76.4	2.6	3.8	1.2
1500	5	83	43	5	68	31	82.5	79.8	78.6	2.7	3.9	1.2
1600	6	65	54	5	23	34	83.3	80.8	79.5	2.5	3.8	1.3
1700	4	50	54	4	27	54	84.3	81.9	80.8	2.4	3.5	1.1
1800	4	109	38	4	91	41	84.1	82.5	81.7	1.6	2.4	.8
1900	12	138	61	8	121	53	76.9	76.5	76.5	.4	.4	.0
2000	4	32	63	4	352	53	73.2	72.5	72.2	.7	1.0	.3
2100	3	63	64	2	349	53	72.1	71.5	71.3	.6	.8	.2
2200	3	47	83	1	347	46	71.4	71.2	71.2	.2	.2	.0
2300	3	44	50	2	338	34	70.4	70.4	70.4	.0	.0	.0
2400	3	98	34	1	37	31	69.7	69.5	69.9	.2	-.2	-.4

PHIPPS BEND NUCLEAR PLANT AUGUST 8, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	---TEMPERATURE--- 4FT	33FT	150FT	TEMP DIFFERENCE T4 -T33	T4 -T150	T33 -T150
0100	3	42	50	2	339	56	69.5	69.5	70.5	.0	-1.0	-1.0
0200	3	82	34	2	328	41	69.2	69.1	70.3	.1	-1.1	-1.2
0300	4	76	91	2	44	58	68.9	68.6	69.2	.3	-.3	-.6
0400	6	59	50	4	15	39	68.7	68.5	68.6	.2	.1	-.1
0500	3	29	41	2	326	36	68.1	67.9	68.0	.2	.1	-.1
0600	3	89	43	1	83	44	67.5	67.3	67.7	.2	-.2	-.4
0700	2	34	61	2	334	28	67.4	67.2	67.5	.2	-.1	-.3
0800	1	101	59	1	81	36	67.5	67.1	67.3	.4	.2	-.2
0900	2	163	28	1	172	28	67.8	67.3	67.3	.5	.5	.0
1000	3	58	59	2	18	51	68.1	67.4	67.1	.7	1.0	.3
1100	3	68	61	2	39	61	68.9	68.0	67.5	.9	1.4	.5
1200	3	58	53	3	28	43	70.1	69.1	68.5	1.0	1.6	.6
1300	3	215	39	3	218	21	71.1	70.2	69.7	.9	1.4	.5
1400	5	226	75	4	205	46	72.3	71.3	70.6	1.0	1.7	.7
1500	5	239	53	4	202	41	72.7	71.6	70.9	1.1	1.8	.7
1600	6	238	53	5	201	46	73.2	71.7	70.9	1.5	2.3	.8
1700	5	252	54	5	236	43	74.9	73.4	72.6	1.5	2.3	.8
1800	5	269	51	4	234	43	76.5	75.1	74.3	1.4	2.2	.8
1900	5	274	36	4	226	39	77.6	76.1	75.3	1.5	2.3	.8
2000	4	268	53	3	258	39	77.8	76.6	75.9	1.2	1.9	.7
2100	4	290	53	2	296	53	76.1	75.6	75.3	.5	.8	.3
2200	4	225	50	3	203	34	73.8	74.2	74.4	-.4	-.6	-.2
2300	3	221	58	2	209	33	72.5	72.8	73.3	-.3	-.8	-.5
2400	4	229	58	2	220	43	72.0	72.0	72.4	.0	-.4	-.4

BULL RUN STEAM PLANT JULY 16, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	11	62	1.9	72	68	-.8	-.2	-.5	.00	.43
0200	4	64	1.8	71	68	-.6	-.9	.3	.00	.43
0300	5	355	3.4	71	67	-.7	-.3	-.4	.00	.43
0400	9	345	1.3	70	67	-2.1	-.7	-1.4	.00	.43
0500	11	9	.6	69	66	-3.1	-1.0	-2.1	.00	.42
0600	13	7	1.2	68	65	-3.4	-.6	-2.8	.00	.41
0700	14	7	1.6	67	64	-3.1	-.4	-2.7	.00	.42
0800	12	11	1.7	67	64	-2.6	-.7	-1.9	.00	.43
0900	12	13	1.3	67	65	-1.8	.2	-2.0	.10	***
1000	8	15	2.0	71	67	2.2	2.1	.2	.33	***
1100	9	12	4.3	76	68	5.5	3.6	1.9	.59	***
1200	9	22	6.8	79	69	6.7	4.5	2.3	.82	***
1300	11	15	7.6	82	70	7.3	4.6	2.8	.91	***
1400	10	36	8.0	84	70	7.9	4.9	2.9	1.07	***
1500	10	23	6.7	85	69	7.0	4.3	2.6	.99	***
1600	9	34	7.9	86	69	6.8	4.0	2.8	1.05	***
1700	9	24	6.7	87	69	6.7	3.9	2.8	1.01	***
1800	9	50	9.3	88	69	6.3	3.6	2.7	.82	***
1900	10	41	4.6	84	67	3.3	1.2	2.1	.36	***
2000	15	353	4.7	84	68	2.8	.7	2.1	.31	***
2100	16	357	2.8	82	65	1.3	-.5	1.8	.16	***
2200	16	1	2.8	79	63	-.4	-1.6	1.2	.04	.46
2300	19	6	1.9	76	61	-1.2	-1.9	.7	***	.43
2400	21	8	1.0	74	61	-1.8	-1.9	.1	.00	.42

BULL RUN STEAM PLANT JULY 17, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	23	9	.8	73	61	-1.5	-1.5	.0	.00	.42
0200	23	11	1.1	72	60	-1.5	-1.2	-.2	.00	.41
0300	20	12	1.5	70	59	-1.8	-1.4	-.3	.00	.40
0400	18	13	1.5	69	59	-2.2	-1.5	-.7	.00	.40
0500	17	6	1.4	68	58	-2.3	-1.3	-.9	.00	.39
0600	18	5	.7	67	58	-2.9	-1.4	-1.5	.00	.39
0700	19	6	.7	66	58	-3.2	-1.4	-1.7	.00	.38
0800	19	6	.4	66	58	-2.9	-1.2	-1.7	.00	.38
0900	17	6	.6	67	59	-1.5	-.3	-1.2	.09	***
1000	14	12	2.4	71	62	2.4	1.8	.6	.31	***
1100	9	25	5.4	74	62	4.7	2.8	1.9	.51	***
1200	3	27	13.8	78	64	5.8	3.3	2.4	.80	***
1300	3	14	18.2	81	66	6.3	3.7	2.6	.99	***
1400	2	57	19.0	84	67	6.7	4.0	2.7	1.11	***
1500	6	179	8.5	87	69	7.2	4.5	2.7	1.21	***
1600	6	195	10.0	89	69	7.1	4.4	2.7	1.17	***
1700	7	194	9.3	90	67	6.7	4.1	2.7	1.08	***
1800	4	247	13.4	90	68	6.0	3.2	2.8	.81	***
1900	4	196	9.4	89	68	4.5	2.2	2.3	.53	***
2000	1	121	11.7	87	68	3.2	1.2	2.0	.31	***
2100	6	202	4.4	85	69	1.0	-.3	1.3	.14	***
2200	7	187	.5	82	67	-.6	-1.8	1.2	.04	.48
2300	7	181	.3	80	66	-2.1	-2.3	.2	.00	.46
2400	9	158	1.7	78	67	-2.4	-2.3	-.1	.00	.44

BULL RUN STEAM PLANT JULY 18, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	3	222	3.9	77	67	-1.1	-2.4	1.2	.00	.44
0200	13	184	2.5	76	68	-1.6	-2.1	.4	.00	.44
0300	15	182	1.4	75	69	-.5	-.8	.4	.00	.43
0400	13	200	.6	74	68	-1.1	-1.2	.1	.00	.43
0500	10	206	1.1	73	68	-1.8	-1.5	-.3	.00	.43
0600	11	218	1.2	71	68	-3.0	-1.5	-1.6	.00	.43
0700	11	248	1.0	70	68	-3.9	-2.7	-1.2	.00	.43
0800	10	251	1.2	70	67	-4.8	-1.8	-3.0	.00	.44
0900	9	234	1.0	70	68	-3.7	-.5	-3.2	.10	***
1000	8	212	1.1	75	70	1.1	2.1	-.9	.30	***
1100	6	223	6.7	79	71	5.1	2.9	2.2	.52	***
1200	7	218	9.9	82	72	6.6	3.8	2.8	.76	***
1300	8	202	7.6	85	73	7.3	4.8	2.5	.95	***
1400	10	193	8.6	87	72	7.5	4.7	2.8	1.09	***
1500	10	183	8.1	89	72	7.4	4.7	2.7	1.10	***
1600	10	188	9.2	89	70	6.6	4.0	2.7	.93	***
1700	11	206	8.6	90	69	6.3	3.5	2.8	.76	***
1800	10	223	7.0	91	69	6.1	3.3	2.8	.72	***
1900	8	227	7.5	90	69	5.2	2.5	2.7	.55	***
2000	8	216	5.6	88	69	3.3	1.2	2.2	.36	***
2100	9	206	2.0	85	70	.9	-.6	1.5	.12	***
2200	11	214	1.6	82	69	-1.1	-1.8	.7	.03	.47
2300	11	201	1.8	80	68	-1.5	-1.7	.2	.00	.46
2400	13	200	.8	78	69	-2.1	-1.5	-.6	.00	.45

BULL RUN STEAM PLANT JULY 19, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	15	202	.5	77	69	-2.1	-1.2	-.9	.00	.44
0200	19	211	.5	76	69	-2.9	-2.1	-.8	.00	.44
0300	15	222	.9	75	68	-1.7	-1.3	-.3	.00	.43
0400	15	227	.6	74	68	-2.3	-1.3	-1.1	.00	.43
0500	14	231	.7	72	68	-4.0	-1.0	-3.0	.00	.42
0600	14	221	1.0	72	68	-3.4	-.9	-2.5	.00	.43
0700	16	213	.7	71	68	-2.9	-.8	-2.1	.00	.43
0800	17	217	.7	70	67	-2.9	-.9	-2.0	.00	.43
0900	18	220	1.2	71	68	-1.6	.4	-2.1	.07	***
1000	15	215	1.7	73	69	.4	1.5	-1.1	.13	***
1100	13	226	3.3	76	71	3.7	2.7	1.0	.34	***
1200	10	222	4.0	79	72	4.1	2.8	1.3	.37	***
1300	5	191	6.2	81	73	4.6	2.5	2.1	.41	***
1400	4	175	7.7	79	74	3.0	1.5	1.5	.20	***
1500	9	79	8.0	70	69	-.4	.6	-.9	.05	***
1600	8	75	3.8	73	72	.7	1.5	-.8	.43	***
1700	8	91	6.7	76	73	4.1	2.6	1.5	.62	***
1800	10	133	5.9	73	71	2.2	1.1	1.0	.06	***
1900	8	211	4.9	74	74	3.1	1.8	1.3	.26	***
2000	9	225	4.4	74	73	3.4	1.9	1.5	.26	***
2100	13	230	1.8	74	72	2.5	1.5	1.0	.11	***
2200	10	233	2.7	73	71	1.7	.8	.9	.02	.49
2300	7	253	1.7	72	71	-.6	.3	-.9	.00	.50
2400	3	360	3.7	71	70	-.4	.1	-.5	.00	.53

BULL RUN STEAM PLANT JULY 22, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	15	4	.5	70	68	-4.7	-1.8	-2.9	.00	.40
0200	15	5	.6	68	59	-5.9	-2.2	-3.7	.00	.39
0300	16	2	1.0	67	60	-6.6	-2.2	-4.4	.00	.38
0400	14	8	1.0	66	59	-6.3	-1.9	-4.4	.00	.38
0500	10	13	1.8	64	60	-5.2	-2.5	-2.7	.00	.38
0600	11	15	.6	63	59	-6.3	-1.5	-4.8	.00	.40
0700	12	17	.3	62	59	-5.0	-1.2	-3.9	.00	.41
0800	11	24	.5	62	59	-3.5	-1.1	-2.4	.01	.41
0900	10	18	.9	64	61	-1.6	.5	-2.1	.12	***
1000	7	21	1.8	67	63	1.2	1.7	-.5	.26	***
1100	2	51	6.2	70	64	4.1	2.7	1.5	.53	***
1200	2	198	16.3	74	65	4.6	2.8	1.8	.71	***
1300	7	208	10.1	78	68	6.2	3.9	2.4	.91	***
1400	6	210	9.7	80	69	6.2	3.9	2.4	.90	***
1500	7	212	8.2	80	69	5.7	3.5	2.2	.83	***
1600	9	191	8.9	84	68	6.6	4.2	2.5	1.18	***
1700	7	202	10.3	84	68	5.5	3.2	2.3	.94	***
1800	7	211	5.9	84	68	5.2	2.9	2.2	.72	***
1900	10	235	5.2	83	68	3.9	1.8	2.1	.53	***
2000	11	227	1.7	80	69	2.0	.6	1.4	.25	***
2100	12	207	1.2	79	68	.6	-.2	.8	.13	***
2200	12	194	.5	76	66	-1.1	-1.1	.1	.02	.44
2300	15	178	1.4	76	66	-.2	-.4	.3	***	.44
2400	15	191	2.6	75	66	.0	-.7	.7	***	.44

BULL RUN STEAM PLANT JULY 25, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW. POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	14	4	.7	72	66	-2.5	-1.2	-1.3	.00	.42
0200	14	6	1.2	71	66	-3.0	-1.4	-1.6	.00	.42
0300	13	10	.9	71	66	-2.0	-.6	-1.4	.00	.42
0400	13	5	1.2	69	66	-3.1	-1.3	-1.8	.00	.43
0500	13	7	.6	69	66	-2.9	-.9	-2.0	.00	.43
0600	12	9	.5	68	66	-2.6	-.8	-1.9	.00	.44
0700	5	34	1.7	67	65	-2.8	-1.0	-1.8	.00	.46
0800	5	18	1.4	66	65	-3.2	-1.1	-2.1	.00	.48
0900	7	6	.4	66	65	-2.8	-.1	-2.6	.05	.47
1000	5	27	.8	67	66	-1.3	.9	-2.2	.22	***
1100	2	69	8.3	71	69	2.0	1.8	.3	.42	***
1200	1	253	22.0	74	70	3.9	2.4	1.5	.43	***
1300	5	247	8.6	77	71	4.4	2.2	2.2	.54	***
1400	6	197	11.4	81	72	5.4	3.1	2.3	.97	***
1500	8	185	7.3	83	73	6.1	3.7	2.4	1.18	***
1600	7	192	7.1	84	72	5.4	3.1	2.3	1.12	***
1700	6	212	6.8	84	73	5.0	2.5	2.4	.78	***
1800	5	195	9.6	85	74	4.7	2.2	2.5	.81	***
1900	4	196	8.9	85	72	3.9	1.6	2.3	.63	***
2000	4	215	5.0	83	73	2.6	.6	2.0	.35	***
2100	5	228	2.8	81	73	1.2	-.4	1.6	.14	***
2200	3	218	1.5	79	70	.2	-1.5	1.7	.02	.46
2300	6	208	.9	77	70	-1.6	-2.0	.4	.00	.45
2400	6	240	1.0	76	70	-1.6	-1.4	-.2	.00	.44

BULL RUN STEAM PLANT JULY 26, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	10	187	1.6	74	71	-2.1	-1.7	-.3	.00	.45
0200	13	189	1.5	74	71	-1.3	-.8	-.6	.00	.45
0300	7	205	1.7	73	70	-.3	-.6	.4	.00	.45
0400	9	208	2.1	72	70	-.7	-.8	.1	.00	.45
0500	12	208	1.1	72	69	-.6	-.4	-.2	.00	.45
0600	9	222	2.1	71	69	-.6	-.5	-.1	.00	.51
0700	8	216	2.2	71	69	-1.2	-.5	-.7	.00	.46
0800	7	211	2.1	70	69	-1.1	-.2	-.9	.00	.46
0900	6	214	.9	71	69	-.8	-.1	-.7	.03	.46
1000	5	210	1.9	73	70	1.2	1.0	.2	.21	***
1100	3	217	4.2	74	70	2.5	1.4	1.2	.18	***
1200	1	159	2.4	74	70	2.9	1.4	1.6	.13	***
1300	4	187	3.5	73	71	2.5	1.3	1.2	.14	***
1400	2	191	8.9	76	73	3.3	2.2	1.1	.64	***
1500	8	190	6.2	79	73	5.1	3.1	2.1	.88	***
1600	6	205	6.9	79	72	4.5	2.5	2.1	.61	***
1700	7	220	4.1	78	72	4.1	2.1	2.0	.38	***
1800	5	235	5.1	78	72	3.8	1.9	2.0	.31	***
1900	8	222	4.7	77	72	3.6	1.8	1.9	.26	***
2000	7	247	3.8	75	70	2.4	1.0	1.4	.11	***
2100	10	216	2.9	74	70	1.5	.6	.9	.06	.44
2200	13	211	1.8	72	68	.8	.2	.6	.01	.44
2300	5	226	2.8	72	68	1.4	.1	1.3	.00	.44
2400	2	264	1.6	71	69	-.2	-.2	.0	.00	.44

BULL RUN STEAM PLANT JULY 27, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	4	182	2.2	71	69	-.9	.0	-.9	.00	.45
0200	5	173	3.3	70	69	-.1	.4	-.5	.00	.47
0300	3	19	3.2	70	68	.1	.3	-.2	.00	.47
0400	3	14	2.7	70	68	-.5	.0	-.5	.00	.48
0500	5	24	.9	69	68	-.4	.2	-.6	.00	.48
0600	7	44	.9	69	68	-.5	.2	-.6	.00	.48
0700	8	21	1.8	69	67	-.7	.2	-.9	.00	.49
0800	9	16	1.0	69	68	-.2	.1	-.4	.00	.49
0900	11	9	1.6	69	68	.7	.5	.2	.05	.48
1000	8	25	4.5	71	70	2.1	1.2	.9	.15	***
1100	4	40	8.5	72	71	2.6	1.6	1.0	.67	***
1200	3	30	13.5	81	73	3.4	1.4	2.0	.92	***
1300	3	0	13.9	81	73	3.4	1.3	2.1	1.12	***
1400	3	333	16.4	82	73	3.5	1.7	1.7	1.16	***
1500	3	23	18.1	83	72	3.0	1.2	1.8	1.14	***
1600	3	1	12.4	87	72	6.1	3.5	2.6	1.11	***
1700	4	347	16.0	***	71	***	***	1.8	1.12	***
1800	5	8	10.1	89	70	5.1	3.3	1.8	.94	***
1900	9	324	6.5	88	72	4.3	2.8	1.4	.64	***
2000	7	342	4.7	85	73	2.4	1.5	.9	.42	***
2100	7	344	3.7	83	72	.6	-.2	.8	.14	***
2200	13	5	2.8	80	71	-1.3	-1.7	.5	.04	.48
2300	15	5	.9	79	68	-1.7	-1.7	.1	***	.46
2400	14	10	1.3	77	68	-1.4	-1.2	-.2	***	.46

BULL RUN STEAM PLANT JULY 29, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	6	347	.6	73	66	-6.6	-2.8	-3.8	.00	.43
0200	4	319	.5	71	66	-7.5	-2.9	-4.6	.00	.42
0300	3	266	1.9	70	65	-6.6	-2.2	-4.3	.00	.42
0400	5	215	1.6	69	66	-6.2	-1.2	-5.0	.00	.44
0500	2	169	1.6	68	65	-5.2	-1.0	-4.3	.00	.45
0600	0	***	.0	67	65	-5.0	-.8	-4.2	.00	.45
0700	0	***	.0	67	64	-5.1	-.9	-4.2	.00	.46
0800	5	216	1.1	67	65	-3.3	-.5	-2.8	.00	.46
0900	5	199	1.5	68	66	-2.8	.4	-3.2	.10	***
1000	5	221	1.5	70	67	-.9	1.4	-2.2	.13	***
1100	9	225	2.1	71	69	1.5	2.0	-.4	.17	***
1200	19	223	1.9	72	69	1.1	1.5	-.4	.14	***
1300	8	234	8.2	77	71	4.7	3.0	1.7	.47	***
1400	7	185	8.1	80	70	5.3	3.6	1.7	.86	***
1500	10	188	6.9	84	71	6.3	4.5	1.8	1.12	***
1600	12	189	5.3	86	72	6.5	4.6	2.0	1.14	***
1700	13	191	4.8	88	72	6.2	4.2	2.0	1.06	***
1800	14	197	5.5	88	73	5.4	3.4	2.0	.85	***
1900	15	208	4.6	88	73	3.6	2.1	1.5	.55	***
2000	16	212	3.5	86	74	2.2	.9	1.2	.35	***
2100	16	223	3.1	84	73	.3	-.4	.6	.13	***
2200	14	223	2.4	81	71	-1.4	-1.4	.1	.03	.48
2300	16	245	.9	80	70	-1.9	-1.3	-.6	***	.47
2400	16	241	1.3	79	70	-2.2	-1.3	-.8	***	.46

BULL RUN STEAM PLANT JULY 30, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	14	255	2.4	77	71	-1.1	-1.2	.1	.00	.46
0200	18	323	3.6	76	68	-1.0	-1.0	.0	.00	.45
0300	16	341	4.2	74	58	-.8	-1.6	.8	.00	.43
0400	13	340	3.9	72	56	-.8	-1.4	.6	.00	.42
0500	8	339	3.3	70	56	-1.3	-1.5	.2	.00	.41
0600	6	323	4.1	68	55	-3.0	-2.6	-.4	.00	.40
0700	4	307	3.6	67	55	-2.6	-2.6	.0	.00	.39
0800	4	349	1.4	64	57	-4.5	-2.0	-2.5	.00	.38
0900	5	357	1.0	64	58	-4.1	-.9	-3.2	.09	***
1000	4	333	2.3	67	60	-1.0	1.9	-2.8	.35	***
1100	5	334	9.7	73	60	3.4	3.0	.4	.66	***
1200	2	346	14.5	77	61	5.6	3.8	1.8	.82	***
1300	6	312	9.6	81	60	6.9	4.9	1.9	1.09	***
1400	6	306	11.3	83	56	6.8	4.5	2.3	1.14	***
1500	5	300	15.3	83	57	5.6	3.7	1.9	1.04	***
1600	4	170	18.0	85	60	5.3	3.6	1.7	1.12	***
1700	5	161	14.3	86	57	5.1	3.3	1.8	1.03	***
1800	5	187	12.2	86	44	5.4	3.4	1.9	.98	***
1900	6	185	9.3	86	59	4.3	2.6	1.6	.74	***
2000	5	183	6.6	84	59	2.6	1.1	1.5	.47	***
2100	9	244	5.0	80	58	.4	-.6	.9	.13	***
2200	13	6	4.6	77	57	-.8	-1.7	.8	.07	.45
2300	13	346	2.7	74	56	-1.9	-2.0	.1	.05	.43
2400	14	350	3.4	73	56	-2.0	-1.7	-.2	.05	.43

BULL RUN STEAM PLANT JULY 31, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	16	358	1.5	71	56	-3.0	-2.0	-1.1	.00	.41
0200	20	357	1.5	69	56	-3.4	-1.7	-1.7	.00	.41
0300	18	355	1.4	68	56	-4.1	-1.8	-2.3	.00	.40
0400	15	1	1.0	67	55	-3.8	-1.7	-2.0	.00	.40
0500	14	12	1.0	65	56	-5.2	-1.4	-3.8	.00	.39
0600	12	13	1.2	64	56	-6.3	-1.6	-4.7	.00	.38
0700	12	7	.7	62	56	-8.6	-2.1	-6.5	.00	.37
0800	9	5	.9	61	56	-6.6	-3.1	-3.5	.00	.37
0900	12	1	.7	61	57	-8.2	-.6	-7.6	.08	.38
1000	9	0	1.7	72	47	1.7	3.0	-1.3	.68	***
1100	6	360	8.1	73	64	3.5	2.2	1.3	.77	***
1200	7	5	8.9	78	62	***	***	***	.84	***
1300	8	26	8.5	81	25	***	4.6	***	1.12	***
1400	5	33	13.5	83	58	6.7	***	***	1.23	***
1500	6	353	16.4	85	58	7.0	***	***	1.28	***
1600	5	3	15.1	85	58	6.7	***	***	1.17	***
1700	5	9	13.1	87	58	7.0	***	***	1.14	***
1800	5	56	13.4	87	57	6.0	***	***	1.03	***
1900	3	321	14.9	86	58	4.9	***	***	.73	***
2000	4	29	11.1	85	57	3.4	***	***	.50	***
2100	8	15	2.9	82	58	.9	***	***	.13	***
2200	11	22	1.1	79	56	-1.4	***	***	.05	.46
2300	15	3	1.3	76	55	-2.0	***	***	.01	.44
2400	14	12	1.1	74	56	-1.9	***	***	.01	.43

BULL RUN STEAM PLANT AUGUST 1, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	14	18	.5	71	56	-5.3	***	***	.00	.41
0200	13	15	1.1	68	56	-6.7	***	***	.00	.40
0300	16	14	1.3	66	57	-8.3	***	***	.00	.38
0400	16	10	.6	66	56	-6.9	***	***	.00	.38
0500	16	6	1.0	64	57	-8.0	***	***	.00	.38
0600	18	8	.7	64	57	-7.5	***	***	.00	.38
0700	18	14	.6	63	57	-7.5	***	***	.00	.38
0800	18	15	1.0	63	57	-7.2	***	***	.00	.38
0900	15	12	.8	64	58	-4.6	***	***	.05	***
1000	15	14	1.0	67	61	-1.8	***	***	.25	***
1100	9	22	4.4	73	64	4.0	***	***	.53	***
1200	7	8	6.8	77	65	6.3	***	***	.72	***
1300	5	2	8.9	80	66	6.1	***	***	.88	***
1400	7	10	8.3	84	65	6.7	***	***	1.06	***
1500	4	359	18.2	86	63	6.1	***	***	1.22	***
1600	4	333	16.0	87	62	5.8	***	***	1.07	***
1700	6	308	9.9	89	61	6.8	***	***	1.13	***
1800	4	13	17.3	89	59	5.8	***	***	.97	***
1900	3	316	12.6	89	58	4.7	***	***	.73	***
2000	3	231	7.2	87	58	3.0	***	***	.45	***
2100	2	231	3.3	84	60	-.1	***	***	.12	***
2200	3	189	1.4	82	55	-1.0	***	***	.03	.48
2300	3	163	6.2	79	60	-2.7	***	***	***	.46
2400	6	116	1.2	76	60	-6.6	***	***	.00	.44

BULL RUN STEAM PLANT AUGUST 2, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	7	107	4.5	74	60	-4.6	***	***	.00	.43
0200	12	194	2.1	73	60	-3.3	***	***	.00	.43
0300	11	219	2.8	73	62	-1.3	***	***	.00	.43
0400	12	242	2.0	72	62	-1.8	***	***	.00	.42
0500	12	231	1.9	69	62	-3.7	***	***	.00	.41
0600	12	231	.9	70	63	-2.7	***	***	.00	.41
0700	16	227	1.0	69	63	-2.4	***	***	.00	.41
0800	15	236	1.3	68	63	-1.7	***	***	.00	.41
0900	11	230	1.1	69	64	-.9	***	***	.04	.41
1000	9	231	1.6	71	66	1.6	***	***	.19	***
1100	5	240	9.5	75	68	4.5	***	***	.45	***
1200	5	206	12.0	78	68	5.0	***	***	.60	***
1300	4	211	13.1	80	69	5.1	***	***	.68	***
1400	5	267	8.9	81	70	5.6	***	***	.70	***
1500	4	251	14.9	85	71	6.3	***	***	1.00	***
1600	6	244	12.3	86	70	6.0	***	***	1.04	***
1700	8	220	10.2	89	70	6.5	***	***	.95	***
1800	17	182	4.5	83	68	3.5	***	***	.30	***
1900	13	185	4.6	73	69	1.9	***	***	.12	***
2000	5	261	8.6	74	68	1.8	***	***	.40	***
2100	1	268	9.7	74	68	2.0	***	***	.18	***
2200	1	242	3.1	74	67	1.2	***	***	.03	.44
2300	4	95	3.0	72	67	.1	***	***	.00	.45
2400	7	145	4.5	71	68	-.2	***	***	.00	.46

BULL RUN STEAM PLANT AUGUST 5, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	11	357	2.1	69	60	-2.4	***	***	.00	.41
0200	16	357	1.6	67	58	-2.8	***	***	.00	.40
0300	19	355	2.1	66	56	-3.0	***	***	.00	.39
0400	19	351	2.1	65	56	-2.7	***	***	.00	.38
0500	19	355	1.8	64	56	-3.0	***	***	.00	.38
0600	17	360	1.9	64	55	-2.8	***	***	.00	.37
0700	16	4	.6	64	54	-3.1	***	***	.00	.37
0800	14	2	1.0	61	54	-4.2	***	***	.00	.36
0900	11	7	1.2	60	55	-4.1	***	***	.06	.37
1000	12	5	.5	62	58	-3.5	***	***	.19	***
1100	10	11	1.2	67	60	2.0	***	***	.61	***
1200	8	17	5.4	73	61	5.8	***	***	.76	***
1300	8	10	6.6	75	59	6.1	***	***	.88	***
1400	6	21	10.0	78	58	6.8	***	***	1.15	***
1500	4	19	14.8	78	56	5.5	***	***	.91	***
1600	4	63	13.1	79	58	5.8	***	***	1.10	***
1700	5	351	14.3	81	59	6.2	***	***	1.10	***
1800	6	348	12.3	82	60	6.2	***	***	.97	***
1900	8	14	9.0	82	61	5.2	3.1	2.0	.76	***
2000	11	33	9.1	80	60	3.1	1.4	1.7	.44	***
2100	11	45	8.2	77	60	1.3	-.1	1.5	.15	***
2200	16	26	1.9	74	60	-.5	-1.3	.8	.05	.44
2300	21	12	1.4	72	59	-1.4	-1.5	.1	.01	.41
2400	19	9	1.3	70	58	-1.2	-1.0	-.3	.00	.41

BULL RUN STEAM PLANT AUGUST 6, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	20	10	1.5	69	58	-.8	-.7	-.1	.00	.40
0200	21	21	1.2	68	58	-.8	-.6	-.2	.00	.40
0300	21	21	1.5	67	59	-1.1	-.5	-.5	.00	.39
0400	19	19	1.3	66	59	-1.0	-.4	-.6	.00	.39
0500	20	18	1.2	66	59	-.8	-.2	-.6	.00	.39
0600	21	14	1.3	66	59	-.5	-.2	-.2	.00	.39
0700	21	17	1.7	67	59	.3	-.1	.4	.00	.39
0800	18	23	2.1	66	58	.1	-.3	.3	.00	.39
0900	17	24	1.7	66	59	.1	.0	.1	.03	.39
1000	15	23	2.1	67	61	1.8	1.2	.7	.15	***
1100	11	27	5.3	70	62	3.9	2.4	1.5	.35	***
1200	8	27	7.1	73	64	5.8	3.8	2.0	.60	***
1300	3	20	12.7	75	65	5.4	3.2	2.1	.63	***
1400	3	292	11.0	78	66	5.7	3.8	1.9	.73	***
1500	2	74	19.2	79	65	4.9	3.0	1.9	.72	***
1600	4	121	12.1	80	66	5.1	3.1	2.0	.83	***
1700	4	107	11.2	82	67	5.3	3.5	1.9	1.03	***
1800	5	98	8.6	82	66	4.2	2.5	1.7	.54	***
1900	6	126	8.4	83	67	4.6	2.8	1.8	.71	***
2000	7	98	4.1	81	66	3.0	1.3	1.7	.23	***
2100	5	73	5.0	79	67	1.4	.3	1.2	.12	***
2200	7	95	5.5	77	66	1.3	.3	.9	.02	.45
2300	2	215	8.6	74	63	-.8	-.7	-.1	.01	.43
2400	1	82	7.4	72	62	-1.2	-1.6	.4	.00	.43

BULL RUN STEAM PLANT AUGUST 7, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	1	5	5.5	71	63	-2.7	-1.7	-1.0	.01	.42
0200	3	102	5.1	71	62	-2.1	-1.1	-1.0	.00	.42
0300	5	202	4.4	69	63	-3.2	-1.5	-1.7	.00	.41
0400	5	282	4.4	68	63	-2.2	-.4	-1.8	.00	.41
0500	2	289	4.5	68	63	-1.9	-2.1	.2	.00	.41
0600	1	263	5.8	68	64	-2.5	-.6	-1.9	.00	.43
0700	2	10	8.1	67	64	-1.9	-.2	-1.7	.00	.44
0800	4	51	1.6	67	64	-1.1	.6	-1.7	.00	.46
0900	4	81	.9	67	65	-.7	.7	-1.4	.04	.46
1000	7	65	1.4	68	66	.5	1.8	-1.4	.12	***
1100	5	51	4.0	70	67	2.8	2.3	.5	.20	***
1200	4	51	7.2	72	67	4.1	2.4	1.8	.33	***
1300	5	60	6.2	74	68	4.2	2.3	1.9	.30	***
1400	6	65	5.4	75	68	4.2	2.4	1.8	.33	***
1500	3	37	7.8	75	68	4.2	2.3	1.9	.38	***
1600	2	24	9.4	76	68	4.0	2.2	1.9	.33	***
1700	2	14	9.5	76	69	4.0	2.2	1.8	.31	***
1800	1	354	14.6	77	69	3.9	2.1	1.8	.33	***
1900	1	229	11.4	77	69	3.7	2.1	1.6	.33	***
2000	4	222	6.9	77	70	3.7	2.0	1.6	.27	***
2100	6	174	2.9	76	69	2.5	1.1	1.4	.07	***
2200	10	182	2.0	74	68	1.7	.5	1.1	.01	.44
2300	8	202	1.9	72	68	.8	.0	.8	.00	.43
2400	9	198	1.4	71	68	.7	.0	.7	.00	.43

BULL RUN STEAM PLANT AUGUST 8, 1974

PERD ENDG	WIND 400 FEET SPEED AV	DIR AV	STD DEV AV	TEMPERATURE DRY BULB	DEW POINT	TEMPERATURE DIFFERENCE T4-T400	T4-T100	T100-T400	SOL RAD	TOT RAD
0100	8	210	2.0	71	68	1.1	.5	.6	.00	.44
0200	8	201	2.5	71	68	1.3	.6	.6	.00	.44
0300	7	209	2.0	70	67	1.6	.6	1.0	.00	.44
0400	8	209	6.7	70	67	1.3	.7	.6	.01	.44
0500	5	183	4.0	70	67	1.4	.7	.7	.00	.43
0600	2	219	3.6	70	67	1.7	.6	1.1	.00	.44
0700	1	197	5.6	69	67	1.6	.7	.9	.00	.44
0800	3	193	8.8	69	67	1.7	.9	.8	.01	.48
0900	5	174	4.0	69	68	2.1	1.0	1.1	.01	.50
1000	7	176	4.5	69	68	2.8	1.6	1.2	.04	.60
1100	11	176	3.7	69	68	2.8	1.7	1.1	.07	.63
1200	9	195	3.5	70	69	3.0	1.9	1.2	.11	***
1300	7	183	4.6	71	70	3.3	2.0	1.3	.16	***
1400	7	176	5.6	73	71	4.4	2.9	1.5	.46	***
1500	7	167	5.3	73	70	3.7	2.3	1.5	.32	***
1600	8	151	7.5	74	72	4.5	2.9	1.7	.66	***
1700	5	170	10.2	76	72	4.6	2.8	1.7	.66	***
1800	3	164	10.0	77	71	4.1	2.5	1.6	.59	***
1900	4	213	10.2	78	72	4.1	2.3	1.7	.62	***
2000	4	196	5.5	78	72	3.3	1.8	1.5	.35	***
2100	6	164	3.2	76	71	3.0	1.5	1.5	.12	***
2200	9	185	1.3	74	71	1.4	.6	.9	.02	.45
2300	9	196	1.3	73	71	.9	.3	.6	***	.47
2400	7	200	1.3	72	71	.9	.3	.6	.00	.48

MCGHEE TYSON AIRPORT JULY 16, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	0	0.0	75	66	1013.1
0200	360	3.6	73	66	1012.8
0300	360	3.1	72	66	1012.8
0400	60	3.1	72	67	1012.8
0500	60	2.6	72	67	1013.1
0600	40	2.1	71	67	1013.7
0700	40	1.5	70	66	1014.1
0800	40	3.1	70	66	1014.8
0900	20	3.6	72	67	1015.4
1000	50	4.6	76	68	1015.7
1100	80	4.1	79	68	1016.0
1200	60	4.1	82	68	1016.3
1300	70	5.7	84	68	1016.0
1400	50	5.1	85	68	1015.6
1500	40	4.6	86	66	1015.3
1600	60	5.1	87	66	1015.0
1700	50	4.6	87	65	1014.6
1800	90	4.6	87	65	1014.6
1900	80	5.1	87	65	1014.9
2000	70	4.6	85	64	1015.0
2100	50	3.6	81	64	1016.1
2200	40	3.6	80	61	1017.1
2300	40	4.1	77	60	1018.2
2400	60	4.1	76	60	1018.5

MCGHEE TYSON AIRPORT JULY 17, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	60	3.6	74	60	1018.8
0200	60	4.1	74	60	1018.8
0300	70	4.1	73	59	1018.0
0400	40	3.6	71	59	1017.6
0500	30	3.6	69	59	1018.0
0600	60	2.6	68	58	1018.8
0700	50	2.1	68	58	1019.6
0800	60	3.1	68	59	1020.3
0900	50	3.6	71	60	1021.0
1000	60	2.6	73	61	1021.3
1100	130	2.6	78	62	1021.7
1200	120	2.1	82	64	1021.7
1300	0	0.0	85	66	1021.7
1400	0	0.0	86	68	1021.3
1500	0	0.0	90	69	1021.0
1600	220	5.1	90	67	1020.2
1700	210	3.1	91	67	1019.4
1800	0	0.0	90	66	1019.0
1900	330	3.1	89	66	1019.0
2000	250	2.6	88	68	1019.4
2100	210	3.6	85	69	1020.2
2200	160	2.6	82	69	1020.6
2300	160	3.1	81	69	1021.2
2400	210	3.1	81	68	1021.9

MCGHEE TYSON AIRPORT JULY 18, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	0	0.0	80	68	1021.9
0200	250	1.5	78	69	1021.9
0300	360	1.0	76	68	1021.1
0400	310	3.6	75	67	1021.1
0500	320	4.1	75	67	1021.5
0600	230	3.1	74	66	1021.8
0700	140	3.1	73	66	1022.2
0800	160	1.5	73	66	1022.9
0900	140	2.1	76	67	1023.3
1000	220	2.6	79	67	1023.5
1100	280	3.1	82	69	1023.8
1200	280	4.6	83	69	1023.5
1300	290	4.1	85	70	1023.5
1400	250	4.1	87	70	1022.7
1500	260	5.1	89	68	1022.0
1600	280	4.6	90	66	1021.5
1700	250	4.1	90	65	1020.7
1800	250	4.1	90	64	1020.8
1900	270	3.6	89	69	1020.4
2000	250	3.6	86	68	1020.8
2100	250	2.6	83	68	1020.4
2200	250	2.1	82	68	1020.8
2300	270	2.1	80	68	1021.2
2400	250	3.6	79	67	1021.2

MCGHEE TYSON AIRPORT JULY 19, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	260	3.1	78	66	1021.2
0200	270	2.6	77	66	1021.2
0300	280	2.6	75	66	1021.2
0400	240	2.6	75	66	1020.9
0500	260	2.6	75	66	1020.2
0600	270	2.6	74	66	1020.2
0700	270	3.1	73	66	1020.5
0800	270	3.1	74	67	1021.2
0900	250	3.6	76	68	1021.2
1000	260	4.6	78	70	1021.2
1100	260	3.6	80	70	1021.5
1200	280	2.6	81	71	1021.9
1300	240	2.6	84	71	1020.9
1400	360	7.7	71	68	1022.6
1500	130	4.6	72	68	1022.2
1600	160	3.6	72	67	1020.7
1700	30	3.6	75	68	1020.8
1800	250	2.6	74	69	1018.6
1900	280	3.6	75	70	1017.9
2000	280	4.1	75	71	1017.9
2100	260	3.1	75	71	1017.5
2200	30	2.1	75	71	1018.2
2300	70	2.6	74	70	1019.0
2400	80	3.1	73	70	1018.6

MCGHEE TYSON AIRPORT JULY 22, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	50	2.1	70	60	1014.3
0200	350	3.1	68	62	1014.2
0300	300	2.1	68	61	1014.2
0400	350	2.6	67	61	1014.4
0500	230	1.5	67	61	1014.4
0600	60	2.1	66	61	1014.7
0700	300	1.5	65	61	1015.0
0800	30	2.1	65	61	1015.9
0900	60	2.6	68	61	1016.5
1000	90	1.5	72	63	1017.3
1100	240	2.1	75	65	1016.6
1200	280	2.6	78	65	1016.4
1300	230	2.6	80	65	1016.4
1400	360	2.1	81	66	1016.4
1500	270	3.1	84	66	1015.3
1600	250	3.1	84	66	1014.7
1700	260	3.6	85	65	1014.0
1800	310	4.6	85	65	1014.0
1900	280	3.6	83	65	1014.1
2000	290	3.6	82	65	1014.1
2100	220	4.1	80	66	1014.1
2200	220	3.1	79	66	1014.0
2300	240	3.1	78	65	1014.0
2400	270	2.6	76	64	1014.7

MCGHEE TYSON AIRPORT JULY 25, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	40	2.6	75	67	1015.9
0200	10	1.5	72	67	1015.9
0300	30	3.1	72	67	1015.6
0400	140	1.5	71	67	1015.3
0500	350	1.5	69	66	1015.6
0600	230	2.1	69	65	1015.9
0700	140	1.5	68	65	1015.9
0800	40	1.5	69	66	1016.7
0900	50	2.1	71	66	1017.2
1000	290	2.6	75	69	1017.5
1100	310	3.1	78	70	1017.6
1200	230	2.6	81	70	1017.6
1300	260	3.6	83	70	1016.3
1400	260	2.1	84	70	1016.1
1500	0	0.0	86	70	1014.9
1600	290	2.6	86	69	1014.5
1700	290	2.6	88	68	1014.5
1800	270	2.1	87	67	1014.3
1900	290	2.6	87	69	1014.0
2000	320	3.6	84	70	1014.7
2100	310	2.6	82	71	1014.7
2200	180	2.6	79	67	1015.0
2300	210	4.1	76	65	1015.4
2400	200	2.6	76	64	1015.6

MCGHEE TYSON AIRPORT JULY 26, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	200	2.1	75	65	1014.6
0200	100	2.6	74	65	1014.9
0300	0	0.0	74	66	1014.5
0400	160	2.1	72	65	1014.5
0500	40	2.1	71	66	1014.9
0600	100	3.1	71	66	1014.9
0700	40	2.1	70	66	1015.2
0800	40	2.6	70	66	1015.7
0900	50	2.6	74	67	1016.4
1000	40	3.1	80	68	1015.6
1100	70	3.1	77	69	1016.2
1200	320	3.1	78	68	1016.5
1300	290	2.6	78	69	1016.5
1400	300	2.1	80	70	1015.8
1500	240	3.1	80	70	1015.0
1600	330	3.1	80	70	1014.7
1700	290	3.6	80	70	1014.9
1800	300	3.1	79	70	1015.1
1900	310	3.6	77	71	1015.5
2000	270	2.6	76	71	1015.2
2100	0	0.0	75	69	1015.2
2200	360	2.1	73	68	1015.4
2300	0	0.0	73	68	1015.2
2400	180	3.1	72	67	1015.9

MCGHEE TYSON AIRPORT JULY 27, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	120	2.1	72	67	1015.5
0200	50	2.1	72	67	1015.0
0300	30	4.1	72	67	1014.3
0400	40	2.6	71	67	1014.6
0500	30	3.1	71	67	1014.6
0600	60	2.6	71	67	1015.4
0700	60	3.6	71	67	1015.8
0800	50	3.1	71	67	1016.2
0900	70	2.6	72	71	1016.9
1000	50	2.1	74	69	1017.3
1100	90	2.1	78	70	1016.8
1200	70	2.6	82	70	1016.4
1300	20	4.1	83	70	1016.4
1400	90	2.6	86	68	1015.6
1500	100	2.6	89	66	1015.2
1600	60	2.1	84	66	1014.5
1700	240	4.1	89	70	1014.3
1800	320	2.1	88	69	1014.4
1900	310	2.6	88	69	1013.8
2000	30	2.6	87	66	1014.2
2100	140	2.6	83	68	1014.7
2200	120	3.1	80	69	1015.7
2300	220	2.1	77	69	1016.0
2400	280	1.5	76	69	1015.6

MCGHEE TYSON AIRPORT JULY 29, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	0	0.0	75	65	1013.2
0200	0	0.0	73	65	1013.2
0300	0	0.0	72	65	1012.8
0400	0	0.0	70	65	1012.1
0500	0	0.0	70	65	1012.1
0600	0	0.0	69	65	1012.1
0700	0	0.0	68	64	1012.5
0800	0	0.0	68	64	1012.5
0900	0	0.0	74	67	1013.6
1000	200	3.6	75	67	1013.6
1100	200	4.6	79	67	1012.2
1200	200	6.2	79	67	1013.5
1300	200	5.1	84	70	1012.4
1400	240	2.6	88	71	1011.9
1500	250	4.6	89	67	1011.4
1600	280	4.6	89	65	1010.7
1700	270	5.7	90	65	1010.4
1800	270	5.1	89	66	1009.9
1900	240	5.7	88	68	1009.7
2000	260	4.1	85	69	1010.0
2100	260	3.6	82	68	1010.5
2200	260	3.6	80	69	1010.8
2300	250	3.1	78	69	1011.0
2400	270	4.1	78	69	1011.4

MCGHEE TYSON AIRPORT JULY 30, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	320	3.6	78	69	1011.6
0200	10	4.6	77	58	1012.6
0300	360	2.6	74	56	1012.9
0400	320	2.1	71	56	1012.9
0500	250	2.1	68	58	1012.9
0600	260	1.5	67	56	1013.4
0700	130	2.1	65	57	1014.1
0800	260	1.5	66	57	1014.7
0900	230	2.6	71	59	1015.4
1000	20	2.6	75	56	1015.8
1100	50	3.6	79	54	1015.7
1200	270	3.1	80	53	1015.6
1300	240	2.1	82	52	1015.6
1400	360	2.1	84	50	1015.6
1500	250	2.6	85	51	1014.8
1600	310	4.1	85	51	1014.5
1700	290	3.1	86	51	1014.5
1800	290	2.6	86	52	1014.3
1900	320	2.6	86	52	1014.3
2000	290	2.6	84	55	1014.3
2100	320	4.1	80	55	1015.1
2200	10	3.1	77	55	1016.0
2300	10	2.1	75	55	1017.1
2400	20	2.1	74	55	1017.1

MCGHEE TYSON AIRPORT JULY 31, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	60	2.1	72	57	1017.5
0200	80	2.6	69	57	1017.1
0300	80	1.5	68	57	1017.5
0400	0	0.0	67	58	1017.2
0500	320	2.1	64	57	1018.0
0600	50	1.5	64	57	1018.0
0700	350	2.6	62	57	1018.3
0800	100	2.1	62	57	1018.8
0900	80	2.1	67	59	1019.4
1000	60	2.6	72	59	1019.7
1100	60	2.6	78	60	1019.7
1200	90	4.6	82	58	1019.4
1300	70	3.6	83	57	1018.9
1400	80	2.6	85	57	1018.6
1500	0	0.0	86	56	1018.3
1600	330	3.6	86	56	1017.5
1700	310	3.1	86	52	1016.9
1800	350	3.1	86	51	1016.5
1900	360	3.6	86	50	1016.5
2000	360	2.6	84	51	1016.5
2100	20	3.1	80	53	1017.2
2200	20	3.6	77	54	1018.0
2300	60	3.1	75	57	1018.2
2400	110	2.1	73	58	1018.2

MCGHEE TYSON AIRPORT AUGUST 1, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	30	2.6	70	57	1018.2
0200	70	2.1	69	58	1018.2
0300	40	2.6	69	58	1017.9
0400	70	2.1	68	58	1017.9
0500	40	1.5	66	58	1017.9
0600	90	2.1	65	58	1017.9
0700	0	0.0	65	58	1017.9
0800	0	0.0	65	59	1018.3
0900	60	4.1	69	60	1019.0
1000	60	3.1	73	61	1018.6
1100	0	0.0	78	61	1018.1
1200	340	2.6	80	61	1018.2
1300	340	2.6	84	60	1017.9
1400	310	2.6	86	61	1017.2
1500	300	4.1	87	59	1016.4
1600	150	2.6	89	59	1015.8
1700	300	4.6	88	59	1015.4
1800	330	3.1	89	59	1014.6
1900	300	2.6	88	59	1014.6
2000	360	1.0	87	59	1014.6
2100	280	1.5	84	61	1015.0
2200	0	0.0	82	62	1015.4
2300	180	5.1	80	65	1016.0
2400	240	3.6	74	69	1016.0

MCGHEE TYSON AIRPORT AUGUST 2, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	280	2.6	74	69	1015.6
0200	310	2.6	74	67	1015.2
0300	90	2.6	73	66	1015.2
0400	310	2.6	72	67	1015.2
0500	0	0.0	72	65	1015.2
0600	0	0.0	71	65	1015.9
0700	0	0.0	70	65	1016.3
0800	130	2.1	70	65	1016.7
0900	0	0.0	73	64	1017.2
1000	280	2.1	75	65	1016.6
1100	0	0.0	79	68	1016.7
1200	200	4.1	83	67	1016.3
1300	240	5.7	88	66	1015.9
1400	210	6.2	88	64	1015.3
1500	310	3.6	86	64	1014.7
1600	190	4.1	87	64	1013.7
1700	280	5.1	78	67	1014.3
1800	260	4.1	77	70	1014.3
1900	280	2.1	76	70	1013.8
2000	330	1.5	77	70	1014.0
2100	10	1.0	76	70	1014.8
2200	160	4.1	74	69	1015.9
2300	210	3.1	71	68	1015.9
2400	210	1.5	71	68	1015.9

MCGHEE TYSON AIRPORT AUGUST 5, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	10	2.6	70	60	1017.6
0200	350	2.1	69	58	1017.6
0300	20	2.6	68	58	1017.6
0400	20	2.1	67	59	1017.6
0500	360	2.1	65	58	1017.7
0600	30	2.1	63	58	1017.7
0700	360	2.6	62	58	1018.3
0800	40	2.1	62	59	1018.9
0900	20	2.1	65	60	1018.8
1000	20	2.6	68	59	1018.7
1100	60	2.6	73	60	1018.7
1200	330	3.1	75	59	1018.3
1300	20	3.1	76	58	1018.0
1400	30	3.1	78	59	1017.3
1500	20	2.6	79	59	1016.9
1600	40	2.6	79	58	1015.9
1700	30	3.6	80	55	1015.5
1800	20	3.6	80	52	1015.5
1900	40	3.6	81	54	1015.5
2000	50	4.6	80	57	1016.0
2100	40	2.6	75	59	1016.0
2200	40	2.1	73	59	1016.6
2300	30	3.1	72	59	1017.0
2400	50	3.1	70	59	1017.0

MCGHEE TYSON AIRPORT AUGUST 6, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	40	3.1	70	60	1016.6
0200	60	3.1	68	60	1016.7
0300	20	2.6	68	60	1016.1
0400	30	2.6	68	60	1016.6
0500	40	2.6	68	60	1016.6
0600	30	2.1	68	60	1016.9
0700	60	2.6	67	60	1017.3
0800	10	2.6	67	60	1017.3
0900	60	3.1	67	60	1017.7
1000	30	3.1	67	61	1018.0
1100	350	2.6	72	63	1017.9
1200	340	2.6	74	63	1018.5
1300	0	0.0	75	63	1018.5
1400	50	2.6	70	64	1018.3
1500	100	2.6	80	66	1017.7
1600	60	3.6	81	67	1016.9
1700	70	4.1	82	66	1016.5
1800	90	4.6	82	66	1016.5
1900	70	4.1	82	66	1016.5
2000	50	3.6	80	66	1016.8
2100	230	3.6	78	67	1017.2
2200	220	2.6	75	65	1018.0
2300	240	1.5	74	66	1018.4
2400	230	2.1	72	65	1019.1

MCGHEE TYSON AIRPORT AUGUST 7, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	240	2.1	71	65	1019.0
0200	280	2.1	70	65	1019.0
0300	360	2.6	69	65	1019.0
0400	0	0.0	69	65	1019.4
0500	350	2.1	69	64	1019.7
0600	30	2.1	68	65	1020.1
0700	0	0.0	68	64	1020.8
0800	0	0.0	69	65	1020.8
0900	60	3.6	69	65	1021.1
1000	60	2.6	69	65	1021.5
1100	30	2.6	70	65	1021.9
1200	110	3.1	73	67	1021.9
1300	100	3.1	75	65	1021.5
1400	20	2.1	76	67	1021.5
1500	50	2.6	77	67	1020.8
1600	150	2.1	77	65	1020.8
1700	220	1.5	78	67	1020.4
1800	280	2.1	77	67	1020.4
1900	230	3.1	76	68	1020.4
2000	180	2.1	76	68	1020.4
2100	220	3.1	74	68	1020.8
2200	190	3.1	73	66	1020.4
2300	180	3.1	72	66	1020.8
2400	300	2.1	72	66	1021.2

MCGHEE TYSON AIRPORT AUGUST 8, 1974

PERD ENDG	WIND DIR	WIND SPEED	TEMP	DEW POINT	SEA LEVEL PRESSURE
0100	280	2.1	71	67	1021.5
0200	230	2.1	71	66	1021.1
0300	240	2.1	70	66	1020.8
0400	120	2.6	70	66	1020.0
0500	20	2.1	70	66	1020.4
0600	10	2.6	70	66	1020.8
0700	20	2.1	70	66	1021.2
0800	0	0.0	69	66	1021.9
0900	0	0.0	69	66	1021.9
1000	0	0.0	69	66	1022.2
1100	0	0.0	69	66	1022.2
1200	150	2.1	70	67	1022.2
1300	120	2.1	71	68	1022.2
1400	60	2.1	72	69	1021.4
1500	0	0.0	73	69	1020.8
1600	0	0.0	76	69	1020.5
1700	240	2.1	79	70	1020.5
1800	220	3.6	75	71	1020.2
1900	190	2.6	75	70	1020.2
2000	130	1.5	75	70	1020.2
2100	150	2.1	75	70	1020.2
2200	180	2.1	74	70	1020.5
2300	190	1.5	73	70	1020.5
2400	180	1.5	72	70	1020.5

JOHN SEVIER STEAM PLANT JULY 16, 1974

PERD ENDG	WIND 80 FEET SPEED AV	DIR AV	PER RDGS
0100	4	75	59
0200	3	44	41
0300	7	58	89
0400	6	50	61
0500	5	86	56
0600	4	72	41
0700	3	81	64
0800	3	90	29
0900	7	52	84
1000	10	53	98
1100	9	76	73
1200	10	73	83
1300	10	51	75
1400	13	56	76
1500	11	39	69
1600	11	39	58
1700	10	45	54
1800	9	28	56
1900	9	33	48
2000	10	24	64
2100	11	38	81
2200	10	33	68
2300	5	55	73
2400	6	50	59

JOHN SEVIER STEAM PLANT JULY 17, 1974

PERD ENDG	WIND 80 FEET SPEED AV	DIR AV	PER RDGS
0100	7	58	81
0200	5	55	56
0300	6	54	68
0400	6	67	56
0500	6	62	73
0600	6	64	79
0700	5	57	61
0800	6	67	98
0900	7	66	93
1000	8	62	89
1100	9	58	83
1200	7	53	54
1300	4	44	58
1400	4	12	44
1500	4	341	36
1600	4	329	23
1700	5	323	56
1800	5	326	28
1900	5	305	56
2000	4	265	50
2100	3	133	79
2200	6	130	76
2300	6	170	78
2400	7	140	44

JOHN SEVIER STEAM PLANT JULY 18, 1974

PERD ENDG	WIND 80 FEET SPEED AV	DIR AV	PER RDGS
0100	5	185	31
0200	4	73	58
0300	4	69	48
0400	3	59	43
0500	5	70	61
0600	5	60	53
0700	5	59	53
0800	5	65	51
0900	3	84	38
1000	2	84	34
1100	2	12	25
1200	3	341	40
1300	5	325	38
1400	6	262	48
1500	8	296	51
1600	9	270	43
1700	11	257	71
1800	11	275	68
1900	8	261	78
2000	7	263	75
2100	6	231	69
2200	5	224	33
2300	5	247	63
2400	3	285	43

JOHN SEVIER STEAM PLANT JULY 19, 1974

WIND 80 FEET

PERD ENDG	SPEED AV	DIR AV	PER RDGS
0100	3	271	36
0200	4	239	36
0300	4	242	44
0400	4	207	50
0500	3	208	44
0600	3	227	75
0700	3	284	59
0800	4	213	54
0900	3	215	41
1000	3	218	58
1100	4	258	59
1200	5	280	64
1300	4	17	25
1400	5	22	66
1500	3	126	31
1600	6	150	38
1700	8	222	76
1800	8	240	84
1900	9	242	88
2000	9	255	81
2100	7	260	48
2200	3	307	50
2300	4	171	50
2400	5	206	56

JOHN SEVIER STEAM PLANT JULY 22, 1974

PERD ENDG	WIND 80 FEET SPEED AV	DIR AV	PER RDGS
0100	6	61	68
0200	5	70	66
0300	4	61	69
0400	4	55	63
0500	4	61	73
0600	6	70	71
0700	5	53	64
0800	6	61	75
0900	5	49	73
1000	6	60	63
1100	7	50	66
1200	4	43	36
1300	4	213	33
1400	5	327	44
1500	6	333	61
1600	6	345	50
1700	5	261	33
1800	6	252	46
1900	5	344	44
2000	4	327	39
2100	2	312	63
2200	3	160	46
2300	6	179	58
2400	9	183	86

JOHN SEVIER STEAM PLANT JULY 25, 1974

WIND 80 FEET

PERD ENDG	SPEED AV	DIR AV	PER RDGS
0100	6	71	63
0200	4	69	44
0300	3	28	31
0400	4	67	53
0500	5	55	59
0600	4	64	66
0700	4	70	53
0800	4	59	48
0900	5	66	64
1000	5	60	43
1100	3	39	43
1200	2	50	18
1300	3	344	21
1400	4	340	29
1500	4	187	26
1600	4	261	25
1700	4	342	18
1800	4	322	56
1900	4	178	48
2000	2	214	53
2100	2	205	41
2200	2	271	25
2300	3	62	19
2400	3	12	21

JOHN SEVIER STEAM PLANT JULY 26, 1974

WIND 80 FEET

PERD ENDG	SPEED AV	DIR AV	PER RDGS
0100	3	69	63
0200	3	74	34
0300	3	236	38
0400	2	160	29
0500	2	26	41
0600	2	132	38
0700	4	36	21
0800	4	66	43
0900	5	53	41
1000	5	61	50
1100	4	69	59
1200	4	53	53
1300	3	51	38
1400	3	119	19
1500	6	203	54
1600	4	247	33
1700	4	334	29
1800	3	312	41
1900	6	291	56
2000	6	284	83
2100	3	279	54
2200	5	270	56
2300	11	164	38
2400	7	83	34

JOHN SEVIER STEAM PLANT JULY 27, 1974

WIND 80 FEET

PERD ENDG	SPEED AV	DIR AV	PER RDGS
0100	5	78	44
0200	5	88	43
0300	1	313	23
0400	1	8	31
0500	6	56	51
0600	3	93	41
0700	4	60	50
0800	5	54	58
0900	3	60	73
1000	4	71	64
1100	5	63	41
1200	3	43	41
1300	5	20	48
1400	5	87	31
1500	4	9	26
1600	4	12	39
1700	4	32	31
1800	5	35	28
1900	10	23	48
2000	4	81	46
2100	5	39	51
2200	3	53	59
2300	4	54	68
2400	5	49	69

JCHN SEVIER STEAM PLANT JULY 29, 1974

WIND 80 FEET

PERD ENDG	SPEED AV	DIR AV	PER RDGS
0100	2	71	34
0200	3	62	50
0300	3	71	71
0400	2	62	39
0500	1	11	21
0600	1	111	25
0700	1	112	31
0800	2	59	44
0900	1	344	21
1000	2	86	31
1100	2	39	26
1200	3	8	18
1300	3	339	34
1400	5	285	31
1500	7	286	44
1600	8	226	44
1700	9	236	56
1800	10	248	48
1900	9	278	44
2000	8	253	79
2100	7	244	75
2200	6	230	93
2300	4	231	46
2400	4	233	79

JOHN SEVIER STEAM PLANT JULY 30, 1974

PERD ENDG	WIND 80 FEET SPEED AV	DIR AV	PER RDGS
0100	4	327	26
0200	0	342	48
0300	4	11	38
0400	3	339	26
0500	3	279	34
0600	3	270	34
0700	2	271	39
0800	2	31	46
0900	3	71	38
1000	1	43	19
1100	2	166	23
1200	3	33	29
1300	6	329	34
1400	7	342	48
1500	6	302	50
1600	6	304	51
1700	6	204	23
1800	6	274	33
1900	7	296	59
2000	6	295	36
2100	5	16	50
2200	5	27	63
2300	3	59	34
2400	2	43	48

JOHN SEVIER STEAM PLANT JULY 31, 1974

WIND 80 FEET

PERD ENDG	SPEED AV	DIR AV	PER RDGS
0100	4	54	51
0200	4	72	56
0300	1	122	46
0400	1	75	69
0500	1	79	36
0600	2	68	64
0700	3	76	71
0800	2	15	36
0900	3	70	46
1000	3	97	31
1100	4	42	48
1200	5	65	61
1300	5	23	34
1400	5	123	21
1500	4	31	8
1600	4	98	18
1700	5	193	28
1800	5	60	29
1900	5	69	53
2000	5	26	43
2100	5	46	63
2200	4	58	66
2300	3	64	53
2400	3	59	51

JOHN SEVIER STEAM PLANT AUGUST 1, 1974

WIND 80 FEET

PERD ENDG	SPEED AV	DIR AV	PER RDGS
0100	5	57	64
0200	5	65	59
0300	3	77	50
0400	3	70	61
0500	4	66	63
0600	5	60	59
0700	5	54	58
0800	5	59	56
0900	4	59	75
1000	7	65	79
1100	6	71	64
1200	6	71	54
1300	6	45	43
1400	4	43	31
1500	3	329	28
1600	5	301	19
1700	4	250	28
1800	5	17	54
1900	5	9	53
2000	4	13	54
2100	6	72	54
2200	7	133	41
2300	5	117	81
2400	6	65	76

JOHN SEVIER STEAM PLANT AUGUST 2, 1974

WIND 80 FEET

PERD ENDG	SPEED AV	DIR AV	PER RDGS
0100	4	69	56
0200	3	101	29
0300	2	71	29
0400	4	69	36
0500	7	63	98
0600	6	64	78
0700	6	56	81
0800	4	76	64
0900	4	83	68
1000	4	68	41
1100	4	53	58
1200	3	53	46
1300	3	182	33
1400	4	171	31
1500	7	158	44
1600	6	160	46
1700	7	190	48
1800	7	166	56
1900	8	184	43
2000	7	49	31
2100	5	198	38
2200	3	252	25
2300	5	69	64
2400	4	7	19

JCHN SEVIER STEAM PLANT AUGUST 5, 1974

PERD ENDG	WIND 80 FEET SPEED AV	DIR AV	PER RDGS
0100	3	204	34
0200	2	231	29
0300	2	287	25
0400	2	171	39
0500	1	347	41
0600	2	53	53
0700	1	182	25
0800	1	236	33
0900	2	151	29
1000	2	72	31
1100	4	49	63
1200	5	43	44
1300	4	26	43
1400	3	8	21
1500	4	344	31
1600	4	302	31
1700	4	11	31
1800	6	18	34
1900	6	38	63
2000	6	28	51
2100	4	84	51
2200	2	79	36
2300	6	59	66
2400	6	59	61

JOHN SEVIER STEAM PLANT AUGUST 6, 1974

WIND 80 FEET

PERD ENDG	SPEED AV	DIR AV	PER RDGS
0100	7	55	64
0200	8	53	73
0300	6	60	66
0400	6	59	71
0500	5	71	59
0600	6	61	63
0700	7	59	63
0800	6	65	98
0900	5	68	93
1000	5	61	81
1100	7	63	64
1200	6	60	63
1300	4	58	50
1400	3	38	29
1500	3	49	23
1600	4	32	41
1700	2	163	18
1800	3	156	19
1900	3	96	26
2000	5	54	34
2100	6	71	56
2200	9	56	83
2300	9	78	89
2400	3	48	54

JOHN SEVIER STEAM PLANT AUGUST 7, 1974

WIND 80 FEET

PERD ENDG	SPEED AV	DIR AV	PER RDGS
0100	2	273	33
0200	5	62	75
0300	4	76	79
0400	4	73	44
0500	3	65	56
0600	5	66	86
0700	5	80	63
0800	6	64	86
0900	5	73	79
1000	4	53	79
1100	7	59	81
1200	8	44	63
1300	7	28	54
1400	6	27	63
1500	6	33	44
1600	6	26	54
1700	4	51	28
1800	6	202	75
1900	10	184	81
2000	10	170	78
2100	7	167	84
2200	9	172	79
2300	8	178	66
2400	6	174	51

JOHN SEVIER STEAM PLANT AUGUST 8, 1974

WIND 80 FEET

PERD ENDG	SPEED AV	DIR AV	PER RDGS
0100	6	175	68
0200	4	67	61
0300	5	84	73
0400	4	60	48
0500	6	55	48
0600	5	54	69
0700	4	71	48
0800	2	18	39
0900	3	81	41
1000	5	50	59
1100	5	44	68
1200	3	28	41
1300	5	169	69
1400	4	164	54
1500	5	188	44
1600	5	199	68
1700	3	210	34
1800	4	342	44
1900	3	339	51
2000	2	182	31
2100	2	293	33
2200	3	315	29
2300	3	178	44
2400	2	259	39

WATTS BAR NUCLEAR PLANT JULY 16, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	----WIND 33 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	TEMP 4 FT DRY BULB	DEW POINT	TEMP 33 FT DRY BULB	------TEMPERATURE DIFFERENCE------ T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	5.3	97	52	13	11	2.2	81	25	23	8	72.8	65.7	72.9	-.1	.0	-.5	.1	-.4	-.5	****	29.18
0200	7.8	68	37	8	6	4.6	23	27	27	7	71.1	64.9	70.8	.3	.2	-.9	-.1	-1.2	-1.1	****	29.20
0300	5.8	45	59	6	6	2.7	68	15	29	6	69.7	66.2	69.6	.1	-.3	-1.3	-.4	-1.4	-1.0	****	29.19
0400	5.2	***	53	16	8	2.4	356	31	21	7	69.1	65.6	69.6	-.5	-.9	-3.9	-.4	-3.4	-3.0	****	29.19
0500	4.3	12	58	5	5	1.2	221	46	11	5	68.2	65.7	68.1	.1	-.8	-2.4	-.9	-2.5	-1.6	****	29.19
0600	3.0	58	60	6	6	1.3	330	34	13	5	66.3	64.9	67.5	-1.2	-1.5	-4.7	-.3	-3.5	-3.2	****	29.19
0700	3.5	106	40	7	5	.6	149	38	15	7	66.3	64.2	66.3	.0	-1.1	-3.8	-1.1	-3.8	-2.7	****	29.19
0800	3.4	58	80	6	5	1.3	338	54	15	6	66.5	64.6	66.1	.4	-.1	-1.7	-.5	-2.1	-1.6	.01	29.21
0900	3.5	44	68	7	6	.6	333	75	11	8	69.6	66.6	68.7	.9	1.7	1.2	.8	.3	-.5	.13	29.23
1000	1.5	43	49	8	13	1.2	218	32	23	12	73.4	68.3	72.1	1.3	2.2	2.9	.9	1.6	.7	.33	29.25
1100	3.0	56	35	30	21	2.7	67	30	33	15	78.8	68.8	76.4	2.4	3.4	4.1	1.0	1.7	.7	.61	29.25
1200	6.5	47	53	15	16	5.8	40	46	43	11	82.4	69.3	79.5	2.9	4.0	5.1	1.1	2.2	1.1	.88	29.26
1300	6.3	47	45	19	18	5.7	37	38	48	13	84.9	68.8	81.5	3.4	4.7	5.5	1.3	2.1	.8	1.10	29.26
1400	8.8	17	45	59	16	7.4	350	40	80	11	87.8	68.1	84.1	3.7	5.5	6.3	1.8	2.6	.8	1.22	29.27
1500	9.0	7	62	58	14	7.8	345	55	68	11	88.9	67.4	86.3	2.6	4.4	5.4	1.8	2.8	1.0	1.28	29.26
1600	8.4	17	49	77	17	7.4	***	**	**	13	90.4	68.5	86.8	3.6	5.3	6.2	1.7	2.6	.9	1.24	29.25
1700	8.6	12	32	54	18	6.9	340	25	56	13	92.2	68.4	88.4	3.8	5.2	5.7	1.4	1.9	.5	1.18	29.24
1800	7.0	99	34	13	16	6.6	93	27	18	11	92.1	66.9	89.6	2.5	3.8	4.6	1.3	2.1	.8	1.02	29.23
1900	6.8	12	38	42	19	6.4	359	30	41	13	91.8	66.2	89.2	2.6	4.0	5.0	1.4	2.4	1.0	.79	29.22
2000	12.2	40	75	8	9	9.6	26	55	22	9	88.1	67.4	86.9	1.2	2.2	3.1	1.0	1.9	.9	.37	29.22
2100	13.5	41	84	7	7	9.1	27	62	27	8	85.0	68.1	84.2	.8	1.5	2.4	.7	1.6	.9	.12	29.24
2200	12.3	47	93	7	6	7.7	31	74	14	8	83.0	69.0	82.5	.5	1.2	1.8	.7	1.3	.6	.03	29.26
2300	10.5	46	93	7	7	5.3	33	58	21	8	81.6	68.5	81.7	-.1	.2	.6	.3	.7	.4	****	29.28
2400	12.8	47	92	7	7	6.6	30	56	16	8	80.9	65.3	80.7	.2	.7	1.3	.5	1.1	.6	****	29.31

WATTS BAR NUCLEAR PLANT JULY 17, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	----WIND 33 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	TEMP 4 FT DRY BULB	DEW POINT	TEMP 33 FT DRY BULB	------TEMPERATURE DIFFERENCE------ T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	12.5	55	82	6	3	6.7	39	45	11	9	79.1	66.3	79.0	.1	.6	.7	.5	.6	.1	****	29.32
0200	14.3	58	80	9	8	8.8	44	59	15	8	78.9	62.0	78.9	.0	.6	1.3	.6	1.3	.7	****	29.33
0300	14.3	53	82	9	8	9.0	36	67	14	8	77.0	61.5	76.9	.1	.5	1.0	.4	.9	.5	****	29.33
0400	11.6	53	76	8	8	6.7	35	61	27	8	75.2	60.5	75.3	-.1	.2	.6	.3	.7	.4	****	29.33
0500	11.4	42	85	8	7	5.6	32	60	24	9	73.5	60.9	74.0	-.5	-.5	-.1	.0	.4	.4	****	29.33
0600	9.5	43	88	7	8	3.6	44	50	15	7	72.2	60.9	72.7	-.5	-.9	-.8	-.4	-.3	.1	****	29.33
0700	9.0	43	90	7	7	2.4	67	46	14	7	69.1	61.6	70.5	-1.4	-2.1	-3.1	-.7	-1.7	-1.0	****	29.34
0800	8.9	44	96	6	6	1.6	37	41	17	6	69.3	61.6	69.9	-.6	-1.9	-2.5	-1.3	-1.9	-.6	.01	29.36
0900	9.4	54	95	6	5	2.5	45	43	20	8	72.7	62.5	72.0	.7	1.0	1.3	.3	.6	.3	.12	29.38
1000	8.7	58	74	10	10	6.1	56	65	13	9	75.4	61.1	73.9	1.5	2.6	3.3	1.1	1.8	.7	.34	29.40
1100	7.0	62	76	10	12	6.2	49	57	15	10	78.0	63.2	76.2	1.8	3.2	4.2	1.4	2.4	1.0	.59	29.42
1200	4.0	84	48	18	20	3.9	83	35	29	14	81.5	65.9	78.6	2.9	4.4	4.9	1.5	2.0	.5	.82	29.42
1300	2.8	46	17	37	21	3.3	50	15	46	19	85.2	67.8	82.6	2.6	4.3	5.2	1.7	2.6	.9	1.04	29.42
1400	4.9	231	40	26	21	4.4	228	25	32	17	87.5	69.4	84.4	3.1	4.2	4.5	1.1	1.4	.3	1.20	29.42
1500	****	***	**	**	**	***	***	**	**	**	****	****	****	****	****	****	****	****	****	****	*****
1600	****	***	**	**	**	***	***	**	**	**	****	****	****	****	****	****	****	****	****	****	*****
1700	****	***	**	**	**	***	***	**	**	**	****	****	****	****	****	****	****	****	****	****	*****
1800	****	***	**	**	**	***	***	**	**	**	****	****	****	****	****	****	****	****	****	****	*****
1900	****	***	**	**	**	***	***	**	**	**	****	****	****	****	****	****	****	****	****	****	*****
2000	****	***	**	**	**	***	***	**	**	**	****	****	****	****	****	****	****	****	****	****	*****
2100	7.6	288	10	17	8	2.0	272	5	19	7	81.9	66.2	83.2	-1.3	-2.3	-2.3	-1.0	-1.0	.0	.01	29.38
2200	7.2	308	15	12	6	.6	287	14	16	5	82.3	66.4	82.9	-.6	-1.4	-1.8	-.8	-1.2	-.4	.01	29.38
2300	3.9	316	82	14	9	.6	183	46	10	3	78.0	67.6	79.0	-1.0	-4.2	-4.8	-3.2	-3.8	-.6	****	29.40
2400	2.0	328	48	15	8	.6	198	45	12	4	75.0	68.6	76.0	-1.0	-3.3	-7.0	-2.3	-6.0	-3.7	****	29.42

WATTS BAR NUCLEAR PLANT JULY 18, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	----WIND 33 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	TEMP 4 FT DRY BULB	DEW POINT	TEMP 33 FT DRY BULB	------TEMPERATURE DIFFERENCE------ T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	2.0	126	51	10	8	1.0	72	46	8	3	73.5	68.4	73.2	.3	-3.6	-7.7	-3.9	-8.0	-4.1	****	29.44
0200	2.6	220	47	12	7	1.5	307	33	21	5	72.7	68.2	73.2	-.5	-3.7	-5.8	-3.2	-5.3	-2.1	****	29.44
0300	6.1	261	49	12	5	2.1	306	19	24	6	71.9	67.6	71.6	.3	-1.7	-6.1	-2.0	-6.4	-4.4	****	29.44
0400	8.8	231	88	9	5	1.0	360	39	14	6	71.7	67.6	72.3	-.6	-2.4	-4.8	-1.8	-4.2	-2.4	****	29.42
0500	7.3	230	92	10	5	.9	49	26	21	4	71.1	67.2	71.0	.1	-2.2	-3.4	-2.3	-3.5	-1.2	****	29.42
0600	3.3	259	31	19	9	.6	325	21	14	4	70.3	66.8	70.4	-.1	-2.5	-3.1	-2.4	-3.0	-.6	****	29.42
0700	1.9	304	32	9	6	.6	110	40	11	4	69.4	66.4	69.6	-.2	-1.6	-3.7	-1.4	-3.5	-2.1	****	29.42
0800	1.3	110	47	15	6	.6	110	98	6	6	69.1	66.5	68.9	.2	-.4	-3.6	-.6	-3.8	-3.2	.01	29.45
0900	4.4	202	69	12	5	.8	254	52	13	7	71.2	67.9	70.5	.7	.7	-.9	.0	-1.6	-1.6	.12	29.47
1000	8.0	217	74	11	5	3.2	234	45	18	11	77.0	69.7	75.1	1.9	2.9	3.5	1.0	1.6	.6	.34	29.49
1100	10.7	232	95	11	7	7.2	215	57	16	11	80.3	70.9	78.2	2.1	3.8	4.7	1.7	2.6	.9	.58	29.49
1200	8.9	235	74	13	9	6.7	220	42	20	13	83.0	71.5	80.7	2.3	3.5	4.4	1.2	2.1	.9	.83	29.49
1300	9.2	232	65	15	12	7.0	227	47	21	13	87.4	71.6	84.0	3.4	5.1	6.3	1.7	2.9	1.2	1.02	29.50
1400	8.9	242	63	15	13	6.8	227	38	23	13	89.0	72.3	85.7	3.3	4.6	5.1	1.3	1.8	.5	1.17	29.49
1500	9.2	241	78	14	11	6.8	221	45	21	15	91.0	71.9	88.4	2.6	4.6	5.6	2.0	3.0	1.0	1.25	29.47
1600	10.0	235	65	14	10	7.5	221	43	22	13	93.4	68.7	90.0	3.4	4.8	6.0	1.4	2.6	1.2	1.23	29.45
1700	9.8	246	60	14	10	6.9	228	38	23	14	93.1	65.8	90.7	2.4	3.6	4.6	1.2	2.2	1.0	1.09	29.43
1800	9.8	242	65	14	10	7.0	220	50	20	13	92.9	64.8	91.0	1.9	3.3	4.0	1.4	2.1	.7	.85	29.42
1900	10.6	243	80	13	7	6.7	223	57	18	13	91.7	66.9	90.2	1.5	3.0	3.7	1.5	2.2	.7	.60	29.40
2000	9.6	224	82	12	7	6.6	208	65	16	10	90.1	68.1	89.0	1.1	1.9	2.6	.8	1.5	.7	.37	29.40
2100	11.6	232	97	9	6	4.6	220	61	16	13	86.3	68.8	86.3	.0	-.4	-.3	-.4	-.3	.1	.12	29.40
2200	10.5	235	52	12	6	4.1	220	39	20	11	85.0	69.4	85.0	.0	.0	.4	.0	.4	.4	.01	29.40
2300	7.1	233	84	11	5	2.0	220	38	17	8	81.2	70.6	82.1	-.9	-1.6	-1.5	-.7	-.6	.1	****	29.40
2400	9.7	226	100	8	4	2.7	216	41	20	9	79.1	70.4	80.1	-1.0	-1.8	-2.2	-.8	-1.2	-.4	****	29.41

WATTS BAR NUCLEAR PLANT JULY 19, 1974

	----WIND 300 FEET----					----WIND 33 FEET----					TEMP 4 FT		TEMP 33 FT	------TEMPERATURE DIFFERENCE------							
PERD ENDG	SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	DRY BULB	T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	11.5	228	99	9	5	3.5	212	57	15	8	78.5	69.4	78.8	-.3	-.4	-1.0	-.1	-.7	-.6	****	29.42
0200	11.0	233	98	9	5	3.4	209	78	15	8	77.6	69.2	78.0	-.4	-.2	-.3	.2	.1	-.1	****	29.42
0300	4.8	243	59	17	13	1.6	348	42	16	6	75.3	70.0	75.6	-.3	-1.2	-2.0	-.9	-1.7	-.8	****	29.42
0400	7.5	228	90	11	6	1.3	343	32	21	7	73.7	69.7	74.4	-.7	-1.8	-2.5	-1.1	-1.8	-.7	****	29.41
0500	6.5	222	98	10	5	.6	329	73	10	4	72.5	69.3	72.9	-.4	-2.1	-3.3	-1.7	-2.9	-1.2	****	29.40
0600	7.3	220	100	10	5	.6	261	63	11	4	71.8	68.9	72.1	-.3	-2.3	-3.1	-2.0	-2.8	-.8	****	29.39
0700	7.7	222	100	9	4	1.2	290	37	13	4	71.5	68.6	72.0	-.5	-2.0	-2.8	-1.5	-2.3	-.8	****	29.39
0800	6.5	220	100	8	4	.6	13	70	14	4	70.5	68.1	70.8	-.3	-1.8	-3.4	-1.5	-3.1	-1.6	.01	29.39
0900	7.3	233	96	9	4	1.5	332	40	12	6	72.5	69.5	72.0	.5	-.3	-1.0	-.8	-1.5	-.7	.05	29.42
1000	7.3	227	95	12	5	1.5	162	35	17	8	76.4	70.6	75.6	.8	1.6	.6	.8	-.2	-1.0	.23	29.42
1100	4.8	232	64	13	10	3.5	204	45	20	13	82.1	73.0	80.8	1.3	2.6	3.4	1.3	2.1	.8	.49	29.42
1200	5.4	242	55	14	12	4.6	210	46	19	12	84.6	74.1	82.7	1.9	3.2	4.0	1.3	2.1	.8	.48	29.44
1300	6.3	237	54	14	13	5.7	207	51	20	12	87.6	74.3	85.5	2.1	3.8	4.6	1.7	2.5	.8	.73	29.43
1400	6.8	235	55	13	11	5.2	212	48	18	12	90.5	74.1	87.8	2.7	4.0	4.9	1.3	2.2	.9	.67	29.40
1500	8.5	301	27	20	13	5.8	289	22	24	13	90.0	70.7	88.3	1.7	2.5	3.4	.8	1.7	.9	.58	29.38
1600	7.2	58	35	25	17	6.1	86	32	19	12	90.3	70.9	88.3	2.0	3.1	4.3	1.1	2.3	1.2	1.26	29.26
1700	8.9	48	51	11	11	7.2	22	28	35	10	86.6	71.6	85.5	1.1	1.9	2.6	.8	1.5	.7	.80	29.24
1800	5.0	287	30	21	16	5.2	285	24	24	14	88.0	71.6	85.9	2.1	3.1	3.4	1.0	1.3	.3	.91	29.22
1900	13.7	270	57	12	6	8.6	259	32	24	12	73.8	67.5	73.6	.2	-.9	-1.2	-1.1	-1.4	-.3	.36	29.26
2000	7.7	***	**	17	10	4.3	12	26	40	11	76.0	70.6	75.0	1.0	2.1	1.4	1.1	.4	-.7	.35	29.22
2100	13.1	357	40	41	9	5.9	45	32	40	13	73.6	67.7	73.8	-.2	.2	.6	.4	.8	.4	.08	29.25
2200	11.6	107	45	16	10	7.2	87	29	13	8	73.1	67.2	73.0	.1	-.2	-.7	-.3	-.8	-.5	.02	29.24
2300	10.7	358	64	26	11	6.1	335	32	39	8	71.9	67.2	71.8	.1	.3	-2.6	.2	-2.7	-2.9	****	29.25
2400	4.8	17	59	11	7	1.9	30	29	12	4	70.2	68.0	70.1	.1	-.4	-1.9	-.5	-2.0	-1.5	****	29.26

WATTS BAR NUCLEAR PLANT JULY 22, 1974

	----WIND 300 FEET----					----WIND 33 FEET----					TEMP 4 FT		TEMP 33 FT	------TEMPERATURE DIFFERENCE------							
PERD ENDG	SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	DRY BULB	T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	5.1	34	92	9	8	.6	48	47	6	4	70.8	67.6	71.7	-.9	-2.7	-4.2	-1.8	-3.3	-1.5	****	29.22
0200	3.8	30	55	6	8	.6	10	70	3	2	69.9	67.0	69.7	.2	-2.4	-4.0	-2.6	-4.2	-1.6	****	29.22
0300	8.8	65	99	5	5	1.5	21	36	21	6	68.9	65.9	69.0	-.1	-3.2	-5.1	-3.1	-5.0	-1.9	****	29.21
0400	7.5	66	95	6	5	1.9	315	45	14	7	67.9	65.2	68.1	-.2	-1.9	-4.2	-1.7	-4.0	-2.3	****	29.21
0500	5.3	61	89	6	6	.7	262	40	9	10	66.9	64.5	67.7	-.8	-1.6	-3.1	-.8	-2.3	-1.5	****	29.21
0600	4.2	70	77	7	7	.8	347	33	10	6	66.2	63.8	66.3	-.1	-.8	-3.0	-.7	-2.9	-2.2	****	29.21
0700	1.9	113	59	7	8	.6	309	99	5	6	66.0	63.7	65.7	.3	-.2	-2.8	-.5	-3.1	-2.6	****	29.22
0800	2.6	229	49	10	6	1.4	250	55	9	11	65.2	62.6	65.0	.2	.2	-.8	.0	-1.0	-1.0	.01	29.23
0900	1.2	298	88	8	5	.6	257	51	1	**	67.2	64.8	66.6	.6	1.1	.3	.5	-.3	-.8	.09	29.26
1000	.7	308	81	11	2	.6	26	53	12	8	69.7	66.2	68.9	.8	1.6	2.0	.8	1.2	.4	.25	29.30
1100	5.8	225	58	17	11	3.3	211	36	19	12	74.5	67.9	73.5	1.9	2.9	3.7	1.0	1.8	.8	.48	29.30
1200	****	***	**	**	**	***	***	**	**	**	****	****	****	****	****	****	****	****	****	****	*****
1300	8.1	237	51	16	13	6.0	228	39	20	13	82.0	68.5	79.1	2.9	4.6	5.3	1.7	2.4	.7	.81	29.28
1400	8.8	242	62	15	12	6.6	213	47	21	13	83.7	67.0	83.1	2.4	4.2	5.2	1.8	2.8	1.0	1.05	29.28
1500	11.2	238	51	15	10	8.1	222	38	22	13	84.2	66.9	81.3	2.9	4.5	4.9	1.6	2.0	.4	1.27	29.28
1600	11.4	248	55	15	9	8.5	207	42	22	12	87.0	67.3	84.1	2.9	4.7	6.4	1.8	3.5	1.7	1.27	29.25
1700	11.3	247	60	12	9	7.6	238	35	24	13	85.9	26.9	83.5	2.4	3.9	4.7	1.5	2.3	.8	1.08	29.23
1800	10.3	245	71	16	10	6.9	223	36	22	14	87.5	65.1	85.4	2.1	3.9	4.6	1.8	2.5	.7	1.03	29.22
1900	10.6	242	78	12	7	6.7	226	48	19	13	87.5	63.2	85.6	1.9	3.4	4.1	1.5	2.2	.7	.61	29.21
2000	11.6	235	96	11	6	6.9	219	58	17	13	85.9	64.2	84.8	1.1	2.1	2.8	1.0	1.7	.7	.53	29.21
2100	10.8	237	95	12	6	4.1	216	46	19	11	81.3	65.4	81.4	-.1	-.5	-.5	-.4	-.4	.0	.12	29.21
2200	14.0	224	95	9	5	5.0	205	69	15	8	80.0	65.1	80.4	-.4	-.6	-.5	-.2	-.1	.1	.02	29.21
2300	16.6	209	88	11	7	9.1	198	71	13	8	80.0	64.6	79.8	.2	.7	1.0	.5	.8	.3	****	29.19
2400	14.6	227	88	11	6	7.0	209	55	17	11	78.3	65.5	78.1	.2	.3	.8	.1	.6	.5	****	29.22

WATTS BAR NUCLEAR PLANT JULY 25, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	----WIND 33 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	TEMP 4 FT DRY BULB	DEW POINT	TEMP 33 FT DRY BULB	------TEMPERATURE DIFFERENCE------ T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	6.1	38	89	6	6	.8	135	44	22	4	74.3	71.3	75.6	-1.3	-2.8	-2.8	-1.5	-1.5	.0	****	29.26
0200	5.3	57	61	5	6	1.5	104	28	16	5	73.0	69.8	73.8	-.8	-2.1	-2.6	-1.3	-1.8	-.5	****	29.27
0300	4.1	61	73	8	6	1.1	330	43	13	6	71.9	68.8	72.4	-.5	-1.4	-2.1	-.9	-1.6	-.7	****	29.27
0400	6.7	33	85	4	5	1.8	69	43	9	5	70.2	68.0	71.0	-.8	-1.6	-2.7	-.8	-1.9	-1.1	****	29.26
0500	3.3	57	47	8	9	.9	207	30	30	6	69.9	67.5	69.9	.0	-.6	-1.1	-.6	-1.1	-.5	****	29.25
0600	3.1	64	49	8	7	1.6	328	64	13	7	69.2	67.2	69.1	.1	.0	-1.3	-.1	-1.4	-1.3	****	29.25
0700	1.2	30	87	4	11	.9	329	88	9	8	68.2	66.4	68.3	-.1	-.4	-2.0	-.3	-1.9	-1.6	****	29.26
0800	1.1	351	90	8	9	.6	233	50	7	7	67.7	65.7	67.6	.1	-.5	-1.3	-.6	-1.4	-.8	.01	29.27
0900	1.4	259	77	14	11	.6	216	49	9	8	69.0	67.4	68.5	.5	1.0	.2	.5	-.3	-.8	.04	29.28
1000	3.5	223	73	13	10	.6	313	88	4	7	71.0	68.8	70.0	1.0	1.7	1.0	.7	.0	-.7	.10	29.30
1100	3.2	224	63	12	11	1.5	292	38	22	11	74.3	70.3	73.0	1.3	2.5	3.0	1.2	1.7	.5	.24	29.31
1200	6.0	246	82	13	10	4.0	228	52	19	13	76.3	70.2	75.0	1.3	2.5	3.4	1.2	2.1	.9	.32	29.32
1300	7.1	240	75	15	10	5.1	219	47	21	12	78.0	71.1	76.3	1.7	2.6	3.5	.9	1.8	.9	.40	29.31
1400	6.8	246	70	14	11	5.2	232	42	20	12	82.0	72.3	79.4	2.6	4.1	5.4	1.5	2.8	1.3	.77	29.30
1500	6.0	233	41	20	17	4.8	220	28	34	16	83.0	72.4	81.4	1.6	3.0	3.7	1.4	2.1	.7	1.03	29.27
1600	5.6	251	47	23	20	4.7	213	22	33	15	86.7	73.4	84.0	2.7	4.2	4.7	1.5	2.0	.5	1.12	29.25
1700	5.1	253	47	24	19	4.3	242	28	32	15	85.3	71.6	84.0	1.3	2.5	3.3	1.2	2.0	.8	.87	29.24
1800	4.3	262	78	13	8	2.9	282	33	20	12	84.0	72.0	82.9	1.1	1.9	2.4	.8	1.3	.5	.22	29.23
1900	3.4	279	46	25	16	2.9	286	31	38	13	86.4	73.4	84.9	1.5	2.7	3.2	1.2	1.7	.5	.49	29.22
2000	3.5	245	33	26	18	2.6	242	37	24	13	85.6	72.6	84.5	1.1	2.0	2.7	.9	1.6	.7	.39	29.22
2100	3.5	228	47	13	11	1.8	218	32	16	7	83.2	73.2	82.8	.4	.0	.7	-.4	.3	.7	.17	29.22
2200	10.0	236	84	12	6	3.4	227	45	18	11	79.2	70.0	79.2	.0	.3	.4	.3	.4	.1	.03	29.22
2300	7.7	251	66	14	7	2.5	243	31	19	9	76.8	69.6	77.0	-.2	-.2	-.2	.0	.0	.0	****	29.24
2400	8.1	229	96	9	5	2.6	172	32	15	6	75.5	70.0	75.2	.3	-.6	-.9	-.9	-1.2	-.3	****	29.24

WATTS BAR NUCLEAR PLANT JULY 26, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	----WIND 33 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	TEMP 4 FT DRY BULB	DEW POINT	TEMP 33 FT DRY BULB	------TEMPERATURE DIFFERENCE------ T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	9.0	220	90	10	5	1.6	184	54	18	6	75.0	70.2	74.9	.1	-.5	-1.6	-.6	-1.7	-1.1	****	29.24
0200	9.3	217	92	8	5	2.1	293	44	12	5	73.0	69.7	74.0	-1.0	-2.2	-2.7	-1.2	-1.7	-.5	****	29.23
0300	8.1	234	84	10	6	1.6	198	35	15	6	73.1	70.3	73.3	-.2	-.4	-.7	-.2	-.5	-.3	****	29.23
0400	6.6	235	75	12	4	1.6	163	40	20	5	72.8	70.1	72.7	.1	-.2	-.5	-.3	-.6	-.3	****	29.23
0500	5.6	236	69	10	4	1.0	210	37	20	5	73.0	70.7	72.7	.3	.3	.1	.0	-.2	-.2	****	29.23
0600	4.8	240	63	12	5	1.0	135	70	12	6	73.6	71.1	73.2	.4	.8	.6	.4	.2	-.2	****	29.23
0700	6.0	231	84	11	4	1.2	162	30	13	4	72.8	70.9	72.5	.3	.4	.3	.1	.0	-.1	****	29.23
0800	5.9	218	86	11	5	.8	91	28	20	4	72.5	70.6	72.3	.2	.1	.1	-.1	-.1	.0	****	29.24
0900	4.3	237	70	10	5	.7	349	22	18	5	73.7	71.3	73.0	.7	1.2	1.4	.5	.7	.2	.03	29.26
1000	5.5	212	70	10	5	2.6	166	50	13	6	74.8	70.8	74.0	.8	1.7	2.4	.9	1.6	.7	.08	29.26
1100	5.8	218	67	13	8	4.3	201	72	15	9	74.5	70.6	73.8	.7	1.5	2.3	.8	1.6	.8	.16	29.26
1200	6.7	193	49	15	10	4.5	175	42	14	12	74.7	71.8	73.4	1.3	2.3	3.2	1.0	1.9	.9	.17	29.28
1300	4.0	203	62	14	11	3.8	192	50	20	11	75.0	70.3	74.1	.9	1.7	2.5	.8	1.6	.8	.32	29.29
1400	5.0	193	57	14	10	4.6	194	33	16	9	76.5	70.2	74.5	2.0	3.2	4.2	1.2	2.2	1.0	.40	29.28
1500	2.6	96	18	24	24	2.9	75	26	28	14	76.6	70.1	75.1	1.5	2.4	3.2	.9	1.7	.8	.55	29.27
1600	2.4	101	42	21	17	2.1	90	26	26	12	76.7	69.3	75.8	.9	1.9	2.7	1.0	1.8	.8	.33	29.25
1700	3.1	348	58	35	12	2.8	1	62	56	8	75.6	70.2	75.0	.6	1.3	2.1	.7	1.5	.8	.12	29.25
1800	3.9	312	65	13	7	2.3	298	45	16	7	75.6	70.4	75.0	.6	1.4	1.9	.8	1.3	.5	.11	29.25
1900	8.8	249	62	11	6	4.6	225	51	17	11	73.8	70.4	73.1	.7	1.3	2.0	.6	1.3	.7	.11	29.25
2000	8.2	224	41	11	7	4.7	200	37	16	10	74.0	70.8	73.4	.6	1.3	2.0	.7	1.4	.7	.10	29.24
2100	5.6	81	51	9	7	4.3	29	34	15	8	73.8	70.3	73.4	.4	1.0	1.8	.6	1.4	.8	.06	29.24
2200	3.0	85	56	9	9	1.6	66	52	9	8	72.8	70.6	72.2	.6	.6	.6	.0	.0	.0	.02	29.23
2300	2.9	164	41	9	9	1.5	189	65	15	8	72.4	70.4	71.8	.6	1.1	1.6	.5	1.0	.5	****	29.24
2400	***	***	**	**	**	***	***	**	**	**	****	****	****	***	***	***	***	***	***	****	*****

WATTS BAR NUCLEAR PLANT JULY 27, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	----WIND 33 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	TEMP 4 FT DRY BULB	DEW POINT	TEMP 33 FT DRY BULB	------TEMPERATURE DIFFERENCE------ T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	6.0	66	74	7	8	2.4	23	44	12	11	72.1	70.2	71.7	.4	.6	1.0	.2	.6	.4	****	29.26
0200	3.5	196	39	13	10	2.8	198	37	17	10	71.8	70.0	71.3	.5	.9	1.5	.4	1.0	.6	****	29.26
0300	1.7	132	64	17	9	1.3	334	87	8	9	71.5	70.2	71.0	.5	.4	.6	-.1	.1	.2	****	29.25
0400	4.5	268	45	12	5	1.5	214	57	7	9	71.2	69.9	70.8	.4	.7	.6	.3	.2	-.1	****	29.24
0500	2.0	248	82	13	8	1.2	212	93	3	9	71.3	69.9	70.7	.6	1.1	1.1	.5	.5	.0	****	29.23
0600	2.2	250	100	12	**	1.0	***	**	13	8	71.1	69.6	70.6	.5	.9	1.1	.4	.6	.2	****	29.23
0700	2.6	250	93	11	6	1.0	322	63	6	7	71.3	69.9	70.8	.5	.8	.7	.3	.2	-.1	****	29.25
0800	3.0	76	36	13	6	1.3	324	48	4	8	71.5	69.9	71.2	.3	.4	1.1	.1	.8	.7	****	29.26
0900	5.0	67	82	6	7	1.6	33	62	7	9	72.3	70.6	71.6	.7	1.4	1.7	.7	1.0	.3	.04	29.27
1000	7.6	54	92	7	5	3.7	61	55	11	8	73.3	71.2	72.5	.8	1.7	2.3	.9	1.5	.6	.12	29.28
1100	7.6	70	79	8	9	5.2	57	60	13	10	75.1	71.8	74.0	1.1	2.3	3.1	1.2	2.0	.8	.34	29.29
1200	6.2	84	65	17	12	5.0	81	39	15	10	77.3	72.7	76.0	1.3	2.2	3.2	.9	1.9	1.0	.59	29.29
1300	3.7	64	47	19	19	3.5	37	24	28	15	82.0	74.8	79.5	2.5	3.8	4.7	1.3	2.2	.9	.97	29.30
1400	3.1	96	16	35	21	2.8	106	14	35	16	82.8	73.4	81.1	1.7	3.0	3.8	1.3	2.1	.8	.72	29.29
1500	3.2	24	32	48	22	3.2	11	22	46	14	83.5	71.7	81.9	1.6	2.3	3.1	.7	1.5	.8	.85	29.27
1600	2.6	233	30	18	20	4.0	204	47	19	12	85.0	71.8	83.9	1.1	2.2	3.0	1.1	1.9	.8	.66	29.27
1700	3.5	207	44	22	21	4.3	202	32	26	14	89.2	71.8	86.6	2.6	3.8	4.6	1.2	2.0	.8	1.03	29.25
1800	4.1	188	23	32	21	4.1	186	16	33	15	90.5	70.8	88.3	2.2	3.1	4.2	.9	2.0	1.1	1.02	29.22
1900	7.4	15	49	61	15	6.7	341	45	61	11	90.1	69.0	88.1	2.0	2.9	3.9	.9	1.9	1.0	.83	29.22
2000	7.5	212	34	22	11	6.4	194	26	22	9	86.7	74.0	85.4	1.3	2.2	2.9	.9	1.6	.7	.48	29.22
2100	8.0	232	62	10	6	5.0	202	45	14	8	83.0	72.7	82.8	.2	.7	1.5	.5	1.3	.8	.16	29.22
2200	5.3	244	73	11	7	2.3	205	42	21	9	80.5	72.7	80.4	.1	.1	.5	.0	.4	.4	.03	29.23
2300	5.1	249	75	11	5	1.1	219	47	17	7	76.5	72.6	78.2	-1.7	-2.6	-2.3	-.9	-.6	.3	****	29.24
2400	3.2	249	83	11	5	.6	325	62	13	3	75.0	72.7	75.0	.0	-1.9	-3.0	-1.9	-3.0	-1.1	****	29.27

WATTS BAR NUCLEAR PLANT JULY 29, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	----WIND 33 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	TEMP 4 FT DRY BULB	DEW POINT	TEMP 33 FT DRY BULB	------TEMPERATURE DIFFERENCE------ T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	4.1	3	66	6	6	.8	195	38	12	2	71.6	67.9	71.7	-.1	-1.5	-5.9	-1.4	-5.8	-4.4	****	29.21
0200	5.1	354	47	29	6	.6	275	66	4	3	70.8	67.3	71.3	-.5	-3.3	-5.8	-2.8	-5.3	-2.5	****	29.20
0300	5.9	34	81	4	4	.6	264	41	5	3	70.4	67.5	70.4	.0	-1.1	-6.1	-1.1	-6.1	-5.0	****	29.19
0400	3.1	40	73	5	7	.6	259	82	5	5	69.3	66.9	69.1	.2	-1.0	-5.6	-1.2	-5.8	-4.6	****	29.18
0500	1.8	166	58	10	8	.6	277	96	2	8	69.0	66.3	68.9	.1	-1.0	-5.0	-1.1	-5.1	-4.0	****	29.17
0600	1.5	130	58	11	6	.6	320	70	4	6	68.6	66.1	68.5	.1	-1.1	-3.4	-1.2	-3.5	-2.3	****	29.16
0700	1.3	208	77	10	6	.7	321	82	3	9	67.7	65.3	67.7	.0	-1.2	-3.8	-1.2	-3.8	-2.6	****	29.16
0800	4.2	230	85	11	5	.8	256	74	6	7	67.7	65.3	67.2	.5	-1.2	-3.0	-1.7	-3.5	-1.8	.01	29.18
0900	5.3	236	66	9	5	1.7	268	48	15	9	68.8	66.5	68.0	.8	-.3	-1.0	-1.1	-1.8	-.7	.06	29.18
1000	2.5	257	43	15	11	.9	64	35	6	9	71.8	68.8	71.0	.8	1.5	1.9	.7	1.1	.4	.15	29.21
1100	2.3	356	27	24	17	2.3	326	32	30	12	74.0	70.0	73.0	1.0	1.6	2.2	.6	1.2	.6	.34	29.23
1200	6.7	203	30	13	13	5.1	353	17	26	14	73.1	71.2	72.4	.7	-.4	-.4	-1.1	-1.1	.0	.09	29.19
1300	8.5	214	32	14	9	5.5	203	21	27	10	74.6	71.3	74.0	.6	1.3	1.7	.7	1.1	.4	.19	29.19
1400	4.9	212	26	20	16	4.6	175	24	21	13	81.0	75.6	78.9	2.1	3.5	4.0	1.4	1.9	.5	1.05	29.16
1500	6.9	212	49	16	15	6.1	174	32	21	13	84.7	75.2	82.7	2.0	3.4	3.8	1.4	1.8	.4	1.23	29.14
1600	****	***	**	**	**	***	***	**	**	**	****	****	****	***	***	***	***	***	**	****	*****
1700	12.0	225	11	38	8	8.6	201	8	17	12	89.7	73.2	88.0	1.7	2.8	3.7	1.1	2.0	.9	.70	29.11
1800	13.3	226	25	14	7	9.4	201	16	15	11	90.2	72.2	88.5	1.7	3.1	3.9	1.4	2.2	.8	.84	29.10
1900	11.7	229	58	14	8	7.3	211	40	22	13	90.6	71.6	89.3	1.3	2.3	3.3	1.0	2.0	1.0	.68	29.11
2000	7.4	286	58	22	10	4.8	275	40	24	12	88.4	70.9	87.9	.5	1.2	1.9	.7	1.4	.7	.44	29.10
2100	8.7	275	87	13	6	2.8	272	56	17	11	85.3	72.5	85.3	.0	-.6	-.5	-.6	-.5	.1	.17	29.10
2200	8.8	273	82	12	5	2.5	238	46	18	8	80.3	74.2	82.9	-2.6	-4.3	-4.1	-1.7	-1.5	.2	.03	29.11
2300	8.0	253	99	9	6	1.C	264	51	14	4	77.0	74.1	78.2	-1.2	-4.6	-5.5	-3.4	-4.3	-.9	****	29.12
2400	8.9	249	76	9	6	.7	213	39	13	4	75.9	73.2	77.5	-1.6	-4.3	-4.8	-2.7	-3.2	-.5	****	29.14

WATTS BAR NUCLEAR PLANT JULY 30, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	----WIND 33 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	TEMP 4 FT DRY BULB	DEW POINT	TEMP 33 FT DRY BULB	------TEMPERATURE DIFFERENCE------ T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	11.4	341	45	28	7	3.3	313	52	18	7	79.5	69.9	80.1	-.6	-.8	-.5	-.2	.1	.3	****	29.15
0200	15.1	360	88	64	5	7.9	352	62	74	9	76.8	60.9	78.0	-1.2	-.9	-.4	.3	.8	.5	****	29.18
0300	12.1	15	94	29	5	7.3	357	76	74	8	74.1	58.2	75.5	-1.4	-1.5	-1.2	-.1	.2	.3	****	29.19
0400	8.8	12	97	25	5	3.7	348	56	35	7	67.5	60.0	72.2	-4.7	-6.5	-6.1	-1.8	-1.4	.4	****	29.20
0500	10.4	8	97	3	5	4.5	342	73	43	8	69.1	57.8	71.0	-1.9	-3.4	-3.2	-1.5	-1.3	.2	****	29.20
0600	8.3	10	100	3	5	1.4	314	34	18	4	64.7	58.3	67.0	-2.3	-5.8	-6.6	-3.5	-4.3	-.8	****	29.20
0700	7.7	1	81	41	7	1.8	330	57	17	6	63.5	58.3	65.7	-2.2	-4.4	-4.6	-2.2	-2.4	-.2	****	29.21
0800	10.3	358	90	19	5	.7	322	43	15	7	62.9	58.1	64.1	-1.2	-3.8	-6.1	-2.6	-4.9	-2.3	.01	29.22
0900	9.2	22	93	7	5	2.0	308	22	35	7	69.1	57.6	69.2	-.1	.1	-.1	.2	.0	-.2	.14	29.23
1000	8.8	22	87	11	7	3.8	13	37	27	10	73.0	57.3	71.6	1.4	2.3	3.0	.9	1.6	.7	.39	29.25
1100	7.6	13	71	38	10	5.6	***	**	**	11	76.9	58.2	75.1	1.8	3.0	3.9	1.2	2.1	.9	.71	29.26
1200	10.2	20	71	38	10	8.3	21	41	57	10	79.8	58.8	77.6	2.2	3.5	4.4	1.3	2.2	.9	.93	29.26
1300	10.1	41	50	32	13	8.6	36	45	17	9	81.9	56.5	79.5	2.4	3.6	4.3	1.2	1.9	.7	1.16	29.27
1400	9.7	3	37	44	14	7.7	343	29	43	12	83.3	55.7	80.7	2.6	4.0	5.1	1.4	2.5	1.1	1.31	29.27
1500	7.9	58	41	17	15	6.5	53	34	31	13	83.0	56.3	80.9	2.1	3.5	4.3	1.4	2.2	.8	1.24	29.26
1600	6.5	60	34	29	18	5.8	58	27	39	14	85.2	56.3	83.0	2.2	3.6	4.3	1.4	2.1	.7	1.28	29.25
1700	5.8	50	32	30	22	4.9	41	27	26	17	86.6	54.8	84.3	2.3	3.5	4.2	1.2	1.9	.7	1.22	29.25
1800	8.5	17	35	50	16	6.8	19	32	37	12	85.0	53.9	85.0	.0	1.1	2.0	1.1	2.0	.9	1.05	29.23
1900	11.2	24	51	27	12	9.0	18	41	34	9	87.4	53.2	85.4	2.0	3.1	4.1	1.1	2.1	1.0	.82	29.22
2000	13.7	349	77	49	8	9.4	346	48	54	10	85.5	53.3	84.2	1.3	2.2	3.1	.9	1.8	.9	.56	29.22
2100	12.7	347	88	48	7	7.6	332	62	38	9	82.2	55.5	81.8	.4	.9	1.5	.5	1.1	.6	.21	29.23
2200	11.8	356	80	58	5	5.1	347	49	76	9	76.8	56.0	78.0	-1.2	-1.6	-1.6	-.4	-.4	.0	.04	29.25
2300	13.0	3	100	23	5	4.6	1	71	44	7	74.0	56.0	75.6	-1.6	-2.3	-2.4	-.7	-.8	-.1	****	29.27
2400	9.7	17	95	8	6	3.2	14	48	26	6	71.9	58.3	73.2	-1.3	-2.5	-3.5	-1.2	-2.2	-1.0	****	29.30

WATTS BAR NUCLEAR PLANT JULY 31,1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	----WIND 33 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	TEMP 4 FT DRY BULB	DEW POINT	TEMP 33 FT DRY BULB	------TEMPERATURE DIFFERENCE------ T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	8.1	29	85	4	6	.8	9	72	4	5	66.9	58.5	68.9	-2.0	-4.5	-7.0	-2.5	-5.0	-2.5	****	29.30
0200	9.7	25	100	4	5	.9	1	42	19	5	65.0	58.8	67.0	-2.0	-5.0	-8.2	-3.0	-6.2	-3.2	****	29.31
0300	9.1	29	94	4	4	1.2	307	33	8	4	63.8	59.3	65.4	-1.6	-5.9	-7.8	-4.3	-6.2	-1.9	****	29.30
0400	7.1	34	90	5	6	.6	57	35	17	6	63.0	58.6	64.5	-1.5	-4.5	-7.5	-3.0	-6.0	-3.0	****	29.30
0500	4.8	12	67	3	5	.6	343	89	10	4	62.0	58.3	63.1	-1.1	-4.5	-7.0	-3.4	-5.9	-2.5	****	29.30
0600	5.4	12	80	4	5	.6	344	100	3	4	61.9	58.3	62.2	-.3	-1.9	-4.9	-1.6	-4.6	-3.0	****	29.31
0700	4.0	35	47	6	5	1.0	324	57	7	7	61.0	57.6	61.1	-.1	-2.4	-5.8	-2.3	-5.7	-3.4	****	29.32
0800	4.8	37	75	4	4	1.2	332	57	20	8	59.8	56.7	61.2	-1.4	-3.4	-6.0	-2.0	-4.6	-2.6	.01	29.33
0900	3.7	14	66	4	5	.6	331	72	13	7	64.0	61.2	63.3	.7	1.1	-2.4	.4	-3.1	-3.5	.12	29.35
1000	4.1	14	95	21	6	.9	176	26	24	9	68.3	63.0	67.1	1.2	1.8	1.7	.6	.5	-.1	.35	29.36
1100	4.9	21	60	36	11	3.2	85	24	20	13	77.5	60.7	75.2	2.3	3.3	4.0	1.0	1.7	.7	.70	29.36
1200	8.7	17	51	41	13	7.6	354	32	42	11	79.0	56.7	77.6	1.4	2.3	3.0	.9	1.6	.7	.88	29.37
1300	8.5	43	34	28	16	7.1	33	42	48	12	82.9	57.8	80.0	2.9	4.6	5.5	1.7	2.6	.9	1.10	29.37
1400	9.5	68	40	21	14	7.9	45	30	20	11	84.1	55.8	81.3	2.8	4.5	5.5	1.7	2.7	1.0	1.14	29.36
1500	14.3	68	28	13	11	12.7	43	13	28	12	86.8	54.4	84.7	2.1	3.5	4.3	1.4	2.2	.8	1.23	29.32
1600	8.8	94	11	10	12	6.8	88	5	15	11	87.0	54.3	84.6	2.4	3.5	4.4	1.1	2.0	.9	1.14	29.31
1700	7.5	97	7	19	18	5.8	91	7	18	11	88.0	54.3	85.4	2.6	3.7	5.0	1.1	2.4	1.3	1.12	29.31
1800	5.6	43	24	43	20	5.0	347	12	48	15	88.6	54.8	86.6	2.0	3.8	4.9	1.8	2.9	1.1	1.03	29.31
1900	5.7	8	40	39	18	5.0	346	25	65	13	87.6	55.6	85.8	1.8	3.2	4.0	1.4	2.2	.8	.81	29.29
2000	4.9	20	35	28	16	4.1	331	20	27	11	86.3	56.7	85.1	1.2	2.1	2.9	.9	1.7	.8	.42	29.29
2100	6.0	344	78	45	8	4.1	310	61	11	7	84.0	57.2	83.9	.1	.4	1.0	.3	.9	.6	.26	29.28
2200	5.4	2	99	3	4	2.2	335	65	17	5	76.0	59.9	77.3	-1.3	-5.9	-6.6	-4.6	-5.3	-.7	.05	29.30
2300	12.2	14	97	7	5	3.6	337	42	43	7	73.5	58.4	75.5	-2.0	-3.1	-4.6	-1.1	-2.6	-1.5	****	29.32
2400	8.1	29	97	3	4	.7	351	76	15	3	69.5	59.1	71.6	-2.1	-5.8	-7.3	-3.7	-5.2	-1.5	****	29.33

WATTS BAR NUCLEAR PLANT AUGUST 1, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	----WIND 33 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	TEMP 4 FT DRY BULB	DEW POINT	TEMP 33 FT DRY BULB	------TEMPERATURE DIFFERENCE------ T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	7.6	34	98	5	5	.7	153	57	12	5	67.9	59.8	69.0	-1.1	-3.8	-7.8	-2.7	-6.7	-4.0	****	29.33
0200	6.2	40	92	6	5	.7	129	41	15	3	66.1	59.8	67.4	-1.3	-5.8	-7.5	-4.5	-6.2	-1.7	****	29.33
0300	8.9	56	92	5	4	.7	359	52	**	1	64.0	59.3	65.8	-1.8	-4.4	-9.0	-2.6	-7.2	-4.6	****	29.33
0400	8.6	46	98	5	5	1.2	360	39	16	5	63.2	58.8	64.7	-1.5	-4.2	-7.5	-2.7	-6.0	-3.3	****	29.32
0500	6.5	38	95	4	5	1.7	2	36	12	6	62.5	58.6	64.7	-2.2	-5.2	-6.5	-3.0	-4.3	-1.3	****	29.32
0600	5.1	49	78	4	5	1.2	19	45	15	5	61.7	58.1	64.2	-2.5	-4.8	-6.8	-2.3	-4.3	-2.0	****	29.31
0700	7.1	53	96	5	4	1.2	30	82	3	6	62.1	58.5	64.0	-1.9	-3.4	-4.4	-1.5	-2.5	-1.0	.01	29.31
0800	6.8	65	84	6	6	1.3	16	66	3	8	61.7	58.5	64.0	-2.3	-2.8	-4.0	-.5	-1.7	-1.2	.01	29.32
0900	7.0	41	90	4	4	1.6	44	42	7	8	65.0	60.4	64.6	.4	.5	-1.9	.1	-2.3	-2.4	.10	29.33
1000	4.4	48	60	8	7	1.2	3	38	14	9	69.5	63.2	68.1	1.4	2.1	2.3	.7	.9	.2	.27	29.34
1100	4.1	50	17	13	10	3.1	54	15	14	10	77.5	62.6	75.3	2.2	3.4	4.0	1.2	1.8	.6	.56	29.33
1200	6.7	28	12	28	13	6.8	**	**	**	10	78.6	63.2	76.4	2.2	3.5	4.4	1.3	2.2	.9	1.01	29.35
1300	4.2	22	31	39	2	5.2	1	90	**	11	****	****	****	***	***	***	***	***	***	1.01	*****
1400	5.8	66	31	30	**	5.9	1	85	**	10	****	****	****	***	***	***	***	***	***	1.17	*****
1500	5.1	355	14	75	21	4.4	20	8	69	17	86.3	63.1	84.9	1.4	2.8	3.2	1.4	1.8	.4	1.18	29.31
1600	5.4	221	10	37	22	5.0	184	11	28	18	91.0	64.4	88.3	2.7	4.4	5.6	1.7	2.9	1.2	1.27	29.28
1700	3.9	336	20	36	23	4.5	318	17	31	15	90.2	62.0	87.0	3.2	4.2	5.2	1.0	2.0	1.0	.87	29.27
1800	7.4	25	32	38	15	6.5	***	**	18	12	89.9	61.5	87.9	2.0	3.4	4.5	1.4	2.5	1.1	.90	29.25
1900	5.9	28	43	28	17	5.5	28	33	62	12	89.8	60.4	87.8	2.0	3.2	3.9	1.2	1.9	.7	.74	29.24
2000	4.3	6	37	43	16	4.0	1	35	58	11	88.8	59.7	87.6	1.2	2.2	2.9	1.0	1.7	.7	.47	29.23
2100	2.5	27	53	10	12	2.4	1	45	20	9	83.0	66.7	83.4	-.4	-2.5	-2.3	-2.1	-1.9	.2	.19	29.23
2200	2.6	25	52	11	7	1.5	285	34	8	9	77.3	63.9	79.0	-1.7	-6.0	-5.7	-4.3	-4.0	.3	.02	29.24
2300	3.0	264	42	13	8	.7	183	62	17	5	73.8	63.8	76.2	-2.4	-6.9	-8.9	-4.5	-6.5	-2.0	****	29.24
2400	8.6	173	74	10	5	1.3	265	56	15	6	72.8	64.1	76.1	-3.3	-4.1	-4.4	-.8	-1.1	-.3	****	29.25

WATTS BAR NUCLEAR PLANT AUGUST 2, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	----WIND 33 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	TEMP 4 FT DRY BULB	DEW POINT	TEMP 33 FT DRY BULB	------TEMPERATURE DIFFERENCE------ T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	7.3	192	47	12	7	3.5	221	44	17	8	75.0	64.6	75.3	-.3	-1.3	-1.2	-1.0	-.9	.1	****	29.28
0200	8.0	233	62	12	6	2.7	218	32	18	9	74.5	63.4	75.0	-.5	-1.7	-1.5	-1.2	-1.0	.2	****	29.28
0300	8.6	244	94	11	7	2.7	252	33	14	9	72.9	63.9	73.8	-.9	-1.3	-1.6	-.4	-.7	-.3	****	29.26
0400	7.9	238	92	11	5	.6	176	69	12	4	68.7	63.7	71.2	-2.5	-4.2	-4.4	-1.7	-1.9	-.2	****	29.25
0500	8.9	200	60	10	5	1.4	190	34	19	7	68.0	63.5	70.2	-2.2	-2.8	-3.2	-.6	-1.0	-.4	****	29.25
0600	8.4	201	84	9	5	1.3	259	45	13	6	68.3	64.2	69.2	-.9	-2.4	-2.9	-1.5	-2.0	-.5	****	29.26
0700	6.8	214	63	8	6	2.0	213	31	17	8	68.0	64.2	69.2	-1.2	-1.9	-2.2	-.7	-1.0	-.3	****	29.27
0800	6.5	229	100	10	5	.6	311	54	14	2	67.9	64.4	68.0	-.1	-.5	-1.1	-.4	-1.0	-.6	.01	29.28
0900	6.2	215	92	10	5	.9	313	26	12	4	70.0	65.5	69.3	.7	.8	.7	.1	.0	-.1	.07	29.28
1000	6.2	215	92	10	5	1.8	261	42	19	10	71.5	65.9	70.8	.7	1.5	1.7	.8	1.0	.2	.16	29.30
1100	3.6	230	55	21	17	2.5	204	22	30	14	75.6	66.9	74.0	1.6	2.6	3.5	1.0	1.9	.9	.33	29.30
1200	10.4	220	10	16	9	7.4	195	5	21	11	81.4	67.7	78.7	2.7	4.2	4.8	1.5	2.1	.6	.82	29.30
1300	12.5	220	77	12	10	9.5	199	55	16	10	83.1	67.6	80.7	2.4	4.2	5.0	1.8	2.6	.8	.83	29.28
1400	10.3	237	20	23	26	8.0	223	16	28	12	83.6	68.6	81.4	2.2	3.8	4.5	1.6	2.3	.7	.85	29.29
1500	11.2	242	50	14	16	7.6	220	29	20	14	85.1	68.9	83.0	2.1	4.1	5.1	2.0	3.0	1.0	.85	29.27
1600	14.3	247	14	57	18	9.4	217	11	17	11	85.8	69.0	83.6	2.2	3.8	4.7	1.6	2.5	.9	.90	29.23
1700	15.3	243	85	12	8	10.6	218	54	18	13	87.2	69.5	84.5	2.7	4.5	5.3	1.8	2.6	.8	1.12	29.22
1800	14.2	162	48	13	9	10.1	132	38	15	10	82.7	63.3	80.1	2.6	4.1	4.8	1.5	2.2	.7	.56	29.22
1900	9.5	194	56	13	10	8.3	174	51	12	8	85.4	67.1	83.2	2.2	3.5	4.1	1.3	1.9	.6	.64	29.20
2000	9.2	203	65	14	10	7.7	177	54	15	9	83.4	68.3	82.0	1.4	2.7	3.4	1.3	2.0	.7	.43	29.19
2100	17.8	183	35	14	6	9.8	167	35	16	10	72.3	68.1	71.6	.7	-.8	-3.5	-1.5	-4.2	-2.7	.10	29.21
2200	10.7	236	100	10	6	1.5	179	42	17	11	72.9	70.0	72.3	.6	.5	-.8	-.1	-1.4	-1.3	.02	29.22
2300	8.2	247	54	12	5	2.6	306	39	20	11	72.7	69.7	72.2	.5	.1	-.3	-.4	-.8	-.4	****	29.24
2400	10.0	226	83	12	6	3.0	177	44	17	11	73.0	70.1	72.9	.1	-.3	-.3	-.4	-.4	.0	****	29.26

WATTS BAR NUCLEAR PLANT AUGUST 5, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	----WIND 33 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	TEMP 4 FT DRY BULB	DEW POINT	TEMP 33 FT DRY BULB	------TEMPERATURE DIFFERENCE------ T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	10.5	24	96	5	5	2.7	349	39	32	6	64.9	58.6	66.0	-1.1	-3.5	-6.6	-2.4	-5.5	-3.1	****	29.32
0200	9.9	47	88	7	6	2.0	341	39	28	6	62.5	59.0	64.4	-1.9	-7.1	-8.4	-5.2	-6.5	-1.3	****	29.32
0300	9.2	25	82	6	5	1.6	81	23	18	6	62.2	58.1	64.5	-2.3	-5.0	-6.4	-2.7	-4.1	-1.4	****	29.32
0400	9.1	27	98	4	5	.8	96	41	16	5	62.7	58.3	64.8	-2.1	-3.1	-4.2	-1.0	-2.1	-1.1	****	29.32
0500	7.1	32	88	6	6	1.0	349	35	13	4	61.3	57.6	62.7	-1.4	-3.8	-4.8	-2.4	-3.4	-1.0	****	29.32
0600	8.3	41	97	5	5	.9	41	71	4	4	60.0	56.9	62.2	-2.2	-4.2	-6.2	-2.0	-4.0	-2.0	****	29.32
0700	4.7	43	72	6	6	1.6	323	42	14	7	60.2	56.6	61.2	-1.0	-2.9	-4.0	-1.9	-3.0	-1.1	****	29.32
0800	3.5	20	96	4	6	.6	332	65	3	8	59.2	56.0	60.0	-.8	-2.0	-4.1	-1.2	-3.3	-2.1	****	29.32
0900	3.6	38	57	5	5	.8	333	68	7	8	60.4	57.6	60.0	.4	-.5	-2.3	-.9	-2.7	-1.8	.07	29.34
1000	3.5	44	95	4	4	.7	333	45	6	8	64.6	60.5	64.0	.6	1.2	1.0	.6	.4	-.2	.28	29.34
1100	2.7	20	40	16	13	1.2	59	35	21	14	69.9	62.6	68.6	1.3	2.5	3.1	1.2	1.8	.6	.54	29.34
1200	4.9	79	57	14	15	4.3	74	50	15	12	74.0	57.9	72.2	1.8	2.7	3.7	.9	1.9	1.0	.83	29.35
1300	7.9	52	49	13	12	6.7	21	46	23	11	76.8	57.3	74.3	2.5	3.4	4.2	.9	1.7	.8	1.00	29.35
1400	11.4	66	76	10	10	9.2	49	55	18	10	78.9	55.1	76.3	2.6	3.7	4.4	1.1	1.8	.7	1.24	29.33
1500	8.3	54	45	28	16	6.8	32	42	13	11	80.0	57.8	77.7	2.3	3.4	4.1	1.1	1.8	.7	1.21	29.31
1600	6.8	11	31	17	18	5.6	336	27	63	12	81.9	55.5	80.0	1.9	3.0	4.0	1.1	2.1	1.0	1.24	29.30
1700	7.0	37	34	19	15	6.1	51	22	19	12	83.0	56.2	80.7	2.3	3.5	4.3	1.2	2.0	.8	1.10	29.27
1800	7.6	75	52	14	16	6.4	51	42	14	11	83.0	58.0	81.0	2.0	3.1	3.8	1.1	1.8	.7	.97	29.25
1900	8.5	67	55	14	12	7.1	45	35	34	10	83.6	56.1	82.0	1.6	2.6	3.4	1.0	1.8	.8	.77	29.25
2000	7.3	68	32	12	11	5.7	42	29	27	9	82.4	58.3	81.7	.7	1.6	2.2	.9	1.5	.6	.51	29.24
2100	9.2	107	87	9	7	5.7	91	64	11	7	79.7	59.8	79.5	.2	.6	.9	.4	.7	.3	.24	29.25
2200	9.7	84	80	7	6	4.0	55	49	12	8	74.7	61.4	76.8	-2.1	-2.2	-1.8	-.1	.3	.4	.04	29.26
2300	10.2	43	63	8	7	3.7	12	39	33	8	73.4	61.1	73.8	-.4	-2.0	-2.1	-1.6	-1.7	-.1	****	29.27
2400	14.7	45	94	8	7	7.7	28	67	31	9	74.0	58.3	74.4	-.4	.0	.4	.4	.8	.4	****	29.28

WATTS BAR NUCLEAR PLANT AUGUST 6, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	----WIND 33 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	TEMP 4 FT DRY BULB	DEW POINT	TEMP 33 FT DRY BULB	------TEMPERATURE DIFFERENCE------ T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	12.1	47	91	7	7	5.2	27	59	19	8	70.8	60.1	71.1	-.3	-.7	-.7	-.4	-.4	.0	****	29.28
0200	8.0	57	88	6	6	2.7	73	52	13	6	66.8	60.4	69.4	-2.6	-3.1	-3.4	-.5	-.8	-.3	****	29.28
0300	8.2	47	90	5	6	2.3	13	42	22	6	66.1	61.0	67.5	-1.4	-2.5	-3.2	-1.1	-1.8	-.7	****	29.28
0400	11.2	49	93	7	7	2.2	64	52	24	8	68.6	60.2	68.9	-.3	-.5	-.4	-.2	-.1	.1	****	29.28
0500	10.5	50	92	8	6	3.7	34	41	12	8	67.7	59.7	68.0	-.3	-.7	-.8	-.4	-.5	-.1	****	29.28
0600	9.8	44	89	7	7	3.2	76	50	13	7	66.6	60.4	66.6	.0	-1.2	-1.8	-1.2	-1.8	-.6	****	29.28
0700	9.9	52	95	6	6	3.1	75	42	20	7	66.0	59.8	66.2	-.2	-1.0	-1.4	-.8	-1.2	-.4	****	29.28
0800	10.0	60	97	6	6	2.4	46	47	12	8	65.4	59.9	65.9	-.5	-1.1	-1.5	-.6	-1.0	-.4	****	29.29
0900	9.0	66	96	6	5	2.5	69	34	10	6	64.1	59.7	65.0	-.9	-1.4	-1.8	-.5	-.9	-.4	.03	29.30
1000	7.3	52	75	7	7	2.2	341	26	26	7	68.8	62.4	67.7	1.1	1.3	1.7	.2	.6	.4	.21	29.31
1100	6.5	66	62	12	12	5.2	46	49	25	9	72.7	62.3	70.9	1.8	3.0	3.7	1.2	1.9	.7	.57	29.32
1200	9.7	59	44	13	15	4.0	81	27	12	12	****	****	****	***	***	***	***	***	***	.50	*****
1300	6.1	68	28	30	23	3.3	53	21	29	14	75.5	64.6	73.9	1.6	2.8	3.4	1.2	1.8	.6	.50	29.33
1400	4.0	66	14	14	17	3.3	36	13	33	13	75.6	64.9	74.1	1.5	2.5	3.2	1.0	1.7	.7	.59	29.33
1500	***	**	**	**	**	***	**	**	**	**	****	****	****	***	***	***	***	***	***	****	*****
1600	3.0	241	3	52	31	3.5	167	4	61	18	84.9	67.5	82.5	2.4	3.4	4.0	1.0	1.6	.6	1.21	29.29
1700	3.0	196	8	58	27	3.2	178	10	42	14	83.9	66.6	82.1	1.8	2.6	3.3	.8	1.5	.7	.85	29.29
1800	6.1	38	31	46	15	5.5	36	40	21	13	85.0	68.2	82.5	2.5	3.5	4.4	1.0	1.9	.9	.89	29.28
1900	4.6	83	36	17	16	4.2	79	36	16	12	84.5	65.8	83.0	1.5	2.1	2.6	.6	1.1	.5	.66	29.28
2000	6.0	140	37	28	15	4.9	136	35	24	12	80.9	66.0	80.0	.9	1.8	2.5	.9	1.6	.7	.46	29.28
2100	11.8	164	50	12	8	7.9	150	39	15	9	77.3	64.7	76.9	.4	.9	1.2	.5	.8	.3	.12	29.28
2200	8.2	109	50	15	12	4.3	103	35	22	11	75.6	62.5	75.2	.4	1.1	1.7	.7	1.3	.6	.02	29.29
2300	3.4	51	22	15	9	2.7	72	27	24	7	72.2	64.1	72.0	.2	-.4	-.3	-.6	-.5	.1	****	29.31
2400	6.0	78	35	10	5	3.8	70	24	13	6	70.8	63.7	70.9	-.1	-.6	-1.2	-.5	-1.1	-.6	****	29.34

WATTS BAR NUCLEAR PLANT AUGUST 7, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	----WIND 33 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	TEMP 4 FT DRY BULB	DEW POINT	TEMP 33 FT DRY BULB	------TEMPERATURE DIFFERENCE------ T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	5.0	285	33	16	7	2.6	262	23	21	7	71.0	65.5	70.7	.3	-.8	-3.1	-1.1	-3.4	-2.3	****	29.34
0200	3.9	155	56	12	6	2.4	266	22	18	6	69.5	65.1	69.4	.1	-.3	-1.5	-.4	-1.6	-1.2	****	29.35
0300	2.0	203	28	12	7	1.1	311	52	12	4	69.2	65.3	69.4	-.2	-.2	-.8	.0	-.6	-.6	****	29.35
0400	3.8	207	57	11	6	1.2	141	45	18	5	68.0	64.9	67.9	.1	-.2	-1.4	-.3	-1.5	-1.2	****	29.35
0500	5.2	227	70	11	4	.6	349	78	5	1	68.5	65.3	68.2	.3	.0	-.3	-.3	-.6	-.3	****	29.35
0600	2.3	51	47	16	11	2.6	43	48	10	5	68.6	64.8	68.1	5	.6	-.3	.1	-.8	-.9	****	29.36
0700	2.9	68	77	8	5	1.1	70	51	7	4	68.4	65.2	68.0	.4	.4	-.5	.0	-.9	-.9	****	29.37
0800	2.5	87	45	8	6	.8	266	42	8	3	68.6	65.7	68.0	.6	.4	-1.0	-.2	-1.6	-1.4	****	29.39
0900	2.1	71	32	10	5	1.0	16	37	8	5	69.4	65.4	68.9	.5	1.2	1.3	.7	.8	.1	.03	29.40
1000	2.9	96	42	7	6	2.5	71	64	10	6	70.1	65.4	69.4	.7	1.1	1.2	.4	.5	.1	.09	29.40
1100	3.9	87	62	8	7	3.0	61	47	10	8	73.9	66.3	72.0	1.9	3.2	3.8	1.3	1.9	.6	.26	29.42
1200	3.7	95	39	15	14	3.2	71	52	15	10	75.1	66.1	73.4	1.7	2.7	3.5	1.0	1.8	.8	.33	29.42
1300	3.9	73	57	17	14	3.3	46	42	17	10	76.2	66.6	74.6	1.6	2.6	3.3	1.0	1.7	.7	.36	29.43
1400	5.1	121	34	18	15	3.6	111	27	25	12	78.5	66.4	77.0	1.5	2.5	3.3	1.0	1.8	.8	.64	29.41
1500	7.5	139	67	11	10	5.5	134	56	14	10	78.1	66.2	77.0	1.1	2.1	2.9	1.0	1.8	.8	.41	29.41
1600	7.2	146	71	12	10	5.2	133	55	14	10	77.2	65.3	76.4	.8	1.6	2.3	.8	1.5	.7	.26	29.41
1700	7.0	194	43	12	10	5.6	147	37	14	9	78.2	67.4	76.6	1.6	2.6	3.2	1.0	1.6	.6	.36	29.40
1800	7.9	164	62	13	10	6.1	160	47	15	8	77.0	66.9	76.1	.9	1.8	2.6	.9	1.7	.8	.28	29.40
1900	8.1	164	70	13	10	6.4	151	57	14	9	76.6	67.4	75.8	.8	1.7	2.5	.9	1.7	.8	.26	29.40
2000	7.9	162	62	12	10	5.7	156	49	13	8	74.0	67.4	73.6	.4	1.1	1.8	.7	1.4	.7	.09	29.38
2100	6.1	171	65	17	13	4.1	148	35	18	9	73.0	66.6	72.7	.3	1.1	1.8	.8	1.5	.7	.06	29.38
2200	6.1	162	66	12	9	3.7	156	37	16	8	72.0	65.8	71.9	.1	.8	1.5	.7	1.4	.7	.01	29.39
2300	5.1	164	99	9	5	2.6	150	56	11	6	71.0	65.8	71.2	-.2	.1	.5	.3	.7	.4	****	29.40
2400	5.5	171	91	8	6	2.6	153	39	13	5	70.4	66.2	70.6	-.2	.2	.6	.4	.8	.4	****	29.40

WATTS BAR NUCLEAR PLANT AUGUST 8, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	----WIND 33 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	TEMP 4 FT DRY BULB	DEW POINT	TEMP 33 FT DRY BULB	------TEMPERATURE DIFFERENCE------ T4-T33	T4-T150	T4-T300	T33-T150	T33-T300	T150-T300	SOL RAD	ATMS PRES
0100	3.7	251	39	19	12	2.3	279	43	23	7	70.4	66.3	70.2	.2	.7	1.1	.5	.9	.4	****	29.40
0200	5.2	220	73	11	7	2.6	172	64	14	6	70.1	66.9	69.7	.4	.9	1.1	.5	.7	.2	****	29.40
0300	6.0	203	88	11	5	3.3	167	64	10	5	70.0	66.3	69.5	.5	.8	1.0	.3	.5	.2	****	29.40
0400	6.4	196	49	10	5	3.0	166	50	15	5	69.9	67.0	69.4	.5	.7	.9	.2	.4	.2	****	29.39
0500	4.1	209	62	12	5	1.2	153	54	16	8	70.1	66.7	69.7	.4	1.0	1.4	.6	1.0	.4	****	29.39
0600	2.0	247	80	9	5	1.3	121	63	6	4	70.2	67.2	69.8	.4	.9	1.3	.5	.9	.4	****	29.39
0700	2.8	219	37	16	11	1.2	16	42	11	5	70.0	67.0	69.4	.6	1.0	1.5	.4	.9	.5	****	29.40
0800	7.2	200	72	11	8	3.0	147	33	15	8	70.6	66.8	70.2	.4	1.1	1.6	.7	1.2	.5	****	29.41
0900	11.2	211	95	10	7	6.3	201	75	15	10	71.2	66.5	70.7	.5	1.3	2.0	.8	1.5	.7	.03	29.42
1000	10.5	218	92	11	7	6.5	202	70	16	10	72.5	67.3	71.6	.9	1.9	2.6	1.0	1.7	.7	.13	29.42
1100	9.5	217	93	11	6	6.7	197	74	13	9	71.8	67.6	71.0	.8	1.7	2.4	.9	1.6	.7	.16	29.42
1200	7.8	226	75	11	6	4.4	215	48	18	12	71.2	68.1	70.3	.9	1.4	1.9	.5	1.0	.5	.11	29.42
1300	9.3	210	82	11	7	5.6	195	60	15	12	72.8	70.2	71.9	.9	1.8	2.4	.9	1.5	.6	.27	29.42
1400	8.4	195	72	13	8	6.1	187	53	13	10	73.7	70.1	72.7	1.0	1.7	2.4	.7	1.4	.7	.37	29.42
1500	9.1	190	84	11	8	7.3	175	67	12	8	76.2	70.6	74.8	1.4	2.4	3.2	1.0	1.8	.8	.46	29.40
1600	7.6	206	66	13	9	5.8	193	60	16	10	77.0	71.0	75.7	1.3	2.2	3.0	.9	1.7	.8	.38	29.40
1700	4.9	224	57	18	16	3.8	216	36	22	14	81.0	73.2	79.0	2.0	3.2	4.0	1.2	2.0	.8	.76	29.38
1800	6.0	217	50	18	16	4.6	213	32	25	15	83.7	72.2	81.2	2.5	3.5	4.2	1.0	1.7	.7	1.04	29.36
1900	7.8	186	61	15	11	6.5	184	60	17	9	81.3	71.3	80.2	1.1	2.0	2.9	.9	1.8	.9	.54	29.36
2000	9.8	198	50	14	7	6.9	187	41	19	10	76.3	70.0	75.7	.6	1.4	1.8	.8	1.2	.4	.10	29.36
2100	3.8	232	24	28	14	2.6	300	29	33	8	74.8	69.5	74.0	.8	1.3	1.8	.5	1.0	.5	.04	29.37
2200	2.1	84	25	20	11	2.2	2	32	16	6	73.0	69.8	72.7	.3	.5	.2	.2	-.1	-.3	.01	29.37
2300	4.4	211	65	13	8	1.1	295	48	15	5	72.0	69.7	71.9	.1	.0	***	-.1	***	***	****	29.38
2400	7.8	198	94	10	6	.9	200	42	13	7	72.1	69.9	72.2	-.1	.1	.3	.2	.4	.2	****	29.39

SEQUOYAH NUCLEAR PLANT JULY 16, 1976

----WIND 300 FEET----					-----WIND 30 FEET----														
SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
4.7	125	39	12	14	2.5	145	34	22	20	75.1	60.7	-.2	-.7	-1.5	-1.3	-.8	***	.43	29.12
7.0	125	45	11	7	2.4	73	21	33	18	71.1	60.5	-1.0	-3.1	-3.0	-2.0	.1	***	.43	29.13
10.7	21	48	21	6	4.7	11	37	52	13	71.7	61.1	-.7	-.7	-.2	.5	.5	***	.43	29.13
8.3	19	71	7	5	3.3	13	35	52	15	70.3	59.7	-.1	-1.0	-1.1	-1.0	-.1	***	.43	29.13
5.2	354	70	26	5	2.4	356	38	38	13	67.4	59.1	-3.4	-4.2	-4.5	-1.1	-.3	***	.39	29.13
8.1	333	70	19	5	3.0	13	39	25	10	69.0	58.3	-.6	-1.5	-3.2	-2.6	-1.7	***	.44	29.13
5.1	3	77	14	5	2.1	67	51	7	9	68.3	59.2	-.7	-1.7	-1.7	-1.0	.0	***	.43	29.14
2.1	242	43	19	7	2.2	257	25	29	12	67.4	59.1	-.9	-2.2	-3.0	-2.1	-.8	***	.41	29.15
3.1	188	46	19	6	1.3	251	58	28	14	71.4	63.1	.8	.9	1.1	.3	.2	.12	.58	29.16
2.7	11	26	29	13	1.8	220	24	36	17	75.0	62.9	1.5	2.1	3.0	1.5	.9	.32	.87	29.18
4.6	31	52	23	12	3.7	33	34	32	20	77.2	21.4	1.5	3.0	3.4	1.8	.4	.59	1.24	29.20
6.3	22	62	30	13	4.5	30	42	57	20	81.0	65.0	2.8	4.0	4.6	1.8	.6	.86	1.61	29.20
***	**	**	**	**	***	**	**	**	**	****	****	****	****	****	****	****	***	****	*****
6.2	7	12	18	13	5.7	14	10	37	21	88.6	70.2	2.9	6.0	6.6	3.7	.6	1.09	1.90	29.20
***	**	**	**	**	***	**	**	**	**	****	****	****	****	****	****	****	***	****	*****
7.7	55	34	17	12	5.1	37	21	44	19	88.7	69.2	2.9	4.5	5.1	2.2	.6	1.21	2.12	29.15
7.7	27	35	41	17	5.0	27	30	36	21	89.5	69.9	1.9	3.8	4.2	2.4	.5	1.12	1.99	29.17
6.9	56	51	14	15	4.2	45	26	36	24	90.5	70.5	2.2	3.7	4.3	2.1	.6	.95	1.70	29.17
7.0	55	52	15	13	3.9	46	32	29	23	89.0	69.6	1.3	1.9	2.8	1.2	.6	.61	1.29	29.16
7.8	53	45	13	10	4.0	336	23	33	17	84.8	67.5	.9	1.9	2.5	1.6	.6	.25	.79	29.16
14.7	322	84	15	7	7.3	321	45	53	16	81.3	66.3	.3	.5	.9	.6	.4	.28	.81	29.17
10.2	358	62	46	5	4.5	10	49	70	14	78.8	66.6	-1.0	-1.1	-1.2	-.2	-.1	.06	.54	29.20
11.5	4	92	17	5	4.3	15	60	41	12	77.1	64.5	-.8	-1.2	-2.6	-1.8	-1.4	****	.44	29.22
12.1	11	98	10	5	4.1	21	82	9	10	75.5	64.5	-1.5	-2.0	-2.3	-.8	-.3	****	.44	29.23

SEQUOYAH NUCLEAR PLANT JULY 17, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	-----WIND 30 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	12.4	11	98	5	4	4.5	10	69	69	10	74.7	63.8	-1.0	-2.5	-3.0	-2.0	-.5	***	.45	29.25
0200	13.2	13	97	10	6	4.5	11	52	46	12	75.3	61.4	.0	-1.0	-1.4	-1.4	-.4	***	.43	29.27
0300	13.5	18	98	6	6	4.9	21	72	35	10	73.2	60.6	-1.8	-2.7	-2.7	-.9	.0	***	.42	29.27
0400	14.1	19	97	6	6	5.0	17	82	54	10	71.6	59.7	-1.9	-3.3	-3.2	-1.3	.1	***	.39	29.26
0500	15.1	15	98	4	4	5.3	16	72	52	11	71.2	58.5	-1.4	-2.0	-2.5	-1.1	-.5	***	.40	29.26
0600	13.7	13	98	10	5	4.9	15	78	53	10	70.0	57.7	-1.6	-2.5	-2.6	-1.0	-.1	***	.40	*****
0700	10.5	14	97	7	6	3.1	24	59	21	12	69.6	58.1	-.6	-1.7	-2.1	-1.5	-.4	***	.40	29.28
0800	8.8	13	98	7	5	2.2	20	63	18	15	67.2	56.5	-1.3	-3.2	-4.0	-2.7	-.8	.02	.40	29.30
0900	10.7	16	98	7	5	4.1	27	82	8	10	71.1	60.2	.4	.7	.1	-.3	-.6	.10	.53	29.31
1000	9.9	22	82	8	8	5.1	27	63	31	15	74.4	61.2	1.7	2.5	3.2	1.5	.7	.30	.84	29.33
1100	10.6	24	83	18	9	6.0	32	53	50	17	76.5	62.9	1.5	2.6	3.2	1.7	.6	.57	1.21	29.35
1200	6.3	32	52	19	11	4.2	35	40	54	20	79.2	65.1	1.9	3.2	3.2	1.3	.0	.80	1.54	29.35
1300	2.6	58	32	47	21	3.1	15	25	54	28	83.7	68.5	2.1	3.2	3.7	1.6	.5	1.02	1.83	29.35
1400	4.5	226	54	19	16	5.0	225	45	27	19	86.0	69.0	2.8	4.3	5.0	2.2	.7	1.20	1.99	29.35
1500	5.3	215	55	24	16	5.0	223	34	26	23	89.1	67.1	2.9	4.1	4.3	1.4	.2	1.29	2.11	29.34
1600	5.6	224	46	23	16	5.0	228	32	28	20	89.8	64.2	2.4	3.0	3.7	1.3	.7	1.26	2.11	29.33
1700	6.3	212	66	19	14	5.2	191	32	29	17	91.8	59.9	2.1	3.4	3.8	1.7	.4	1.16	1.95	29.31
1800	5.1	216	42	22	17	4.1	243	30	34	22	93.0	60.3	1.9	2.6	3.8	1.9	1.2	.99	1.72	29.30
1900	4.5	190	16	29	17	4.0	200	19	46	23	92.0	61.4	2.0	2.7	3.3	1.3	.6	.68	1.34	29.28
2000	6.8	25	45	27	11	4.2	23	35	41	20	89.4	66.0	.6	1.2	1.8	1.2	.6	.47	1.09	29.28
2100	7.2	330	79	27	7	3.8	327	45	56	15	86.8	64.8	.2	.0	.5	.3	.5	.21	.73	29.31
2200	9.5	336	98	22	5	3.0	343	57	52	10	82.4	64.0	-.6	-2.1	****	****	****	****	****	*****
2300	6.1	8	80	20	4	2.4	19	66	11	10	79.0	64.0	-.8	-3.1	-4.5	-3.7	-1.4	****	.43	29.33
2400	2.2	24	97	3	4	1.7	70	52	14	7	76.7	65.9	-.2	-3.7	-4.7	-4.5	-1.0	.00	.44	29.36

SEQUOYAH NUCLEAR PLANT JULY 18, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	-----WIND 30 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	6.1	163	84	14	6	3.3	214	50	17	8	73.0	66.2	-.9	-4.6	-7.0	-6.1	-2.4	***	.44	29.36
0200	9.1	222	45	17	6	3.0	233	62	17	14	75.3	63.3	-1.3	-3.0	-4.3	-3.0	-1.3	***	.47	29.38
0300	7.9	186	39	14	8	2.5	151	36	25	14	75.8	64.1	-.6	-2.1	-2.6	-1.8	-.5	***	.47	29.38
0400	8.0	164	75	15	9	2.2	98	22	21	21	75.8	65.7	-.2	-.2	.2	.4	.4	***	.44	29.36
0500	8.2	170	46	16	9	3.7	204	37	26	16	74.6	65.0	.0	-.3	.2	.2	.5	***	.42	29.36
0600	6.8	175	63	11	6	2.6	129	41	21	21	73.0	64.3	-.5	-.9	-.7	-.2	.2	***	.42	29.36
0700	5.1	188	72	13	5	1.3	173	55	20	11	71.4	63.1	-.9	-1.6	-1.9	-1.0	-.3	***	.42	29.36
0800	5.6	154	65	13	7	2.2	30	16	19	15	70.5	63.0	-1.2	-1.5	-1.5	-.3	.0	.00	.43	29.39
0900	7.8	205	53	14	7	2.9	190	28	24	13	73.0	65.7	.3	.4	.6	.3	.2	.08	.54	29.40
1000	6.6	221	73	14	6	3.9	231	38	30	16	75.1	66.3	.8	1.3	1.8	1.0	.5	.26	.79	29.42
1100	9.5	202	85	15	8	6.1	205	40	22	16	79.0	67.2	1.8	3.1	3.7	1.9	.6	.51	1.11	29.43
1200	8.0	219	77	19	8	6.2	224	58	25	14	80.6	68.1	1.6	2.6	3.6	2.0	1.0	.77	1.45	29.43
1300	9.0	224	82	18	7	7.3	219	63	25	14	83.1	69.2	2.5	3.6	4.1	1.6	.5	.99	1.71	29.43
1400	9.2	226	95	15	7	7.1	218	60	25	16	85.9	70.0	3.0	3.7	4.5	1.5	.8	1.12	1.69	29.43
1500	9.6	220	89	15	7	8.0	222	70	26	12	87.4	70.5	3.1	3.7	3.8	.7	.1	1.20	1.97	29.41
1600	7.8	222	69	19	9	6.6	230	57	27	14	90.8	71.6	1.8	3.8	****	****	***	1.14	1.94	29.39
1700	7.5	217	75	18	8	6.5	234	56	24	13	91.8	71.3	3.8	3.8	4.3	.5	.5	1.06	1.85	29.36
1800	6.7	215	65	16	9	5.6	228	42	21	15	91.0	69.1	1.2	2.0	2.5	1.3	.5	.86	1.60	29.35
1900	9.3	223	43	15	8	6.0	198	37	28	16	88.2	70.5	1.2	1.8	2.3	1.1	.5	.55	1.16	29.34
2000	11.0	230	95	16	6	6.3	225	60	24	13	85.3	69.4	.9	.9	1.3	.4	.4	.26	.60	29.34
2100	10.8	213	97	14	5	5.0	207	57	21	14	83.9	68.4	.4	-.1	-.1	-.5	.8	.12	.60	29.34
2200	10.7	216	97	16	4	4.9	209	63	23	12	82.0	68.3	.2	-1.2	-1.6	-1.8	-.4	***	.49	29.34
2300	10.7	217	95	15	5	4.2	199	63	22	13	79.5	67.6	-.5	-1.7	-2.6	-2.1	-.9	***	.44	29.34
2400	9.2	220	77	18	5	3.8	206	53	21	10	77.9	65.7	-.2	-1.3	-3.0	-2.8	-1.7	***	.44	29.36

SEQUOYAH NUCLEAR PLANT JULY 19, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	-----WIND 30 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	9.7	211	78	15	6	3.5	182	63	18	10	76.4	66.8	-.3	-.8	-2.6	-2.3	-1.8	***	.43	29.36
0200	8.3	211	97	14	4	2.8	182	43	23	9	75.1	66.1	-.2	-.8	-2.9	-2.7	-2.1	***	.44	29.36
0300	7.4	210	99	16	4	2.8	221	76	16	7	73.5	65.6	-1.4	-1.8	-2.5	-1.1	-.7	***	.43	29.36
0400	6.5	213	98	12	5	2.0	164	81	12	9	73.5	66.2	-.1	-1.3	-3.3	-3.2	-2.0	***	.44	29.35
0500	7.2	199	72	14	4	3.0	180	58	13	10	72.9	65.7	-.2	-1.5	-2.1	-1.9	-.6	***	.44	*****
0600	9.4	206	97	17	5	3.9	196	72	20	11	73.4	65.6	.1	-.1	.1	.0	.2	***	.43	29.34
0700	7.3	211	87	12	6	3.3	180	65	17	12	72.0	64.8	-.3	-.5	-1.0	-.7	-.5	***	.43	29.33
0800	6.8	212	95	13	5	3.5	180	80	13	11	71.9	64.5	-.1	-.4	-1.0	-.9	-.6	.01	.43	29.34
0900	7.3	208	91	14	6	3.3	183	76	21	11	73.7	65.5	.2	.1	.1	-.1	.0	.05	.52	29.35
1000	6.6	198	97	12	5	3.1	186	50	19	17	75.7	66.6	.6	.8	.3	-.3	-.5	.19	.70	29.36
1100	7.2	208	79	17	7	4.5	191	50	24	15	81.0	70.4	1.4	2.5	3.1	1.7	.6	.47	1.09	29.38
1200	7.9	205	88	16	7	6.0	191	57	22	14	84.7	72.3	1.7	2.5	3.4	1.7	.9	.70	1.39	29.38
1300	7.4	197	67	18	9	5.9	190	50	23	15	87.4	72.3	1.4	2.3	2.9	1.5	.6	.86	1.59	29.38
1400	8.2	185	22	25	13	5.3	216	26	30	19	89.9	70.8	1.9	2.8	3.3	1.4	.5	.84	1.60	29.34
1500	8.8	266	34	27	15	6.2	253	26	38	17	92.2	71.1	2.1	3.2	3.6	1.5	.4	1.01	1.84	29.32
1600	10.5	286	49	27	13	6.8	283	33	45	18	91.7	69.8	1.7	2.6	3.2	1.5	.6	.96	1.78	29.30
1700	9.7	299	34	25	13	6.1	276	22	50	19	91.6	70.1	1.3	2.3	3.1	1.8	.8	.86	1.67	29.29
1800	14.3	65	35	12	9	6.2	64	22	32	23	84.3	70.2	.0	3.3	3.7	2.9	.4	.92	1.68	29.29
1900	7.4	109	46	14	13	3.9	60	29	42	27	81.0	69.3	1.8	2.7	3.2	1.4	.5	.65	1.32	29.29
2000	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
2100	7.7	32	72	9	9	3.7	26	35	43	17	79.4	67.7	.0	.0	.6	.6	.6	.11	.60	29.26
2200	3.7	52	46	17	6	1.9	21	29	29	20	78.0	67.4	.0	-.1	.0	.0	.1	***	.48	29.27
2300	2.5	247	60	15	6	1.7	197	27	21	13	76.1	67.9	-1.1	-1.4	-1.8	-.7	-.4	***	.48	29.26
2400	3.4	245	73	13	5	1.6	159	47	19	14	76.6	68.0	.0	-.7	-1.6	-1.6	-.9	***	.49	29.26

SEQUOYAH NUCLEAR PLANT JULY 22,1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	-----WIND 30 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	7.2	333	70	30	6	2.0	24	68	18	9	73.2	64.5	-.9	-4.5	-4.5	-3.6	.0	***	.42	29.15
0200	5.9	9	42	13	7	2.5	27	36	15	11	72.2	63.6	-1.3	-3.5	-3.5	-2.2	.0	***	.44	29.15
0300	2.7	11	27	16	8	1.7	20	33	28	17	72.1	62.7	.0	-3.6	-3.6	-3.6	.0	.00	.43	29.15
0400	3.2	291	46	25	9	2.1	188	31	24	15	71.0	61.9	-.4	-2.1	-3.9	-3.5	-1.8	***	.43	29.15
0500	6.0	212	40	18	9	1.7	206	38	29	19	68.7	60.5	-1.9	-5.2	-5.2	-3.3	.0	***	.40	29.15
0600	9.7	214	67	14	5	2.5	211	34	25	14	70.3	61.3	.0	-1.4	-1.9	-1.9	-.5	***	.41	29.15
0700	10.6	214	91	15	6	4.2	216	51	17	11	70.7	62.0	.0	-.5	-.4	-.4	.1	***	.39	29.16
0800	14.1	201	96	13	6	5.3	186	56	26	15	70.6	61.7	.2	.1	-.1	-.3	-.2	.02	.40	29.17
0900	12.5	208	88	15	5	5.5	201	50	24	16	71.7	61.3	.4	.7	1.1	.7	.4	.09	.50	29.20
1000	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	***	****	*****
1100	12.9	195	75	13	7	7.6	191	42	24	16	75.0	62.3	1.0	2.0	2.7	1.7	.7	.56	1.12	29.23
1200	12.1	200	73	14	8	7.3	190	48	25	16	79.4	64.6	2.5	3.6	4.8	2.3	1.2	.82	1.48	29.21
1300	12.6	185	43	16	8	7.3	186	30	24	16	78.6	64.9	1.4	2.5	3.2	1.8	.7	.71	1.35	29.21
1400	12.6	204	68	14	8	7.9	197	37	28	16	82.4	65.0	2.7	4.0	4.9	2.2	.9	.95	1.63	29.22
1500	10.4	221	76	18	8	8.3	218	47	23	14	81.7	65.2	2.7	3.5	4.0	1.3	.5	1.11	1.86	29.22
1600	12.4	219	90	16	6	9.5	231	67	27	12	83.8	65.5	2.6	3.3	4.5	1.9	1.2	1.26	2.06	29.19
1700	12.4	219	90	15	6	8.6	229	57	27	15	86.9	66.8	2.7	4.5	6.0	3.3	1.5	1.20	1.98	29.17
1800	10.2	223	82	11	6	8.1	226	56	21	12	85.9	65.7	2.2	3.2	4.0	1.8	.8	1.02	1.72	29.15
1900	9.1	215	81	14	8	6.2	233	40	27	15	86.3	65.4	1.7	2.4	3.5	1.8	1.1	.65	1.24	29.15
2000	9.8	213	95	16	6	5.1	210	44	24	17	84.2	64.2	.9	1.2	1.5	.6	.3	.42	.96	29.13
2100	10.7	197	64	14	5	5.0	196	49	22	15	81.9	64.0	.6	.4	.9	.3	.5	.13	.58	29.16
2200	14.2	189	95	11	6	6.2	187	58	22	15	****	****	***	***	***	.4	-.1	.03	.46	29.20
2300	17.0	191	99	13	6	8.1	185	45	23	15	78.9	64.0	.5	.7	1.2	.7	.5	***	.46	29.15
2400	17.8	200	92	13	7	9.4	210	43	23	15	77.0	63.7	.4	.5	1.2	.8	.7	***	.44	29.16

SEQUOYAH NUCLEAR PLANT JULY 25,1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	-----WIND 30 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	2.9	219	25	15	6	2.1	346	32	27	16	73.9	67.7	-.3	-1.2	-2.0	-1.5	-.8	***	.46	29.20
0200	5.2	161	47	13	7	2.4	145	37	20	18	73.0	66.2	-.9	-1.5	-2.6	-1.7	-1.1	***	.45	29.21
0300	5.2	179	64	13	7	2.4	311	23	30	11	72.9	66.7	-.8	-1.6	****	****	****	***	.47	29.20
0400	5.7	190	75	14	6	1.3	201	44	25	13	72.0	64.9	-1.0	-1.4	-1.0	.0	.4	***	.42	29.19
0500	4.6	158	42	12	6	1.9	148	39	22	12	70.1	64.0	-.9	-2.3	-3.4	-2.3	-1.1	***	.43	29.19
0600	2.9	174	38	13	5	1.8	6	27	31	17	69.4	63.4	-.8	-1.9	-2.0	-1.2	-.1	***	.43	29.19
0700	4.7	123	43	10	7	.9	93	35	11	15	69.0	62.8	-1.1	-2.1	-2.4	-1.3	-.3	***	.44	29.20
0800	5.9	172	68	14	9	.9	293	85	26	24	69.0	63.1	-1.1	-1.7	-1.4	-.3	.3	***	.45	29.21
0900	6.6	190	74	16	9	1.4	333	37	31	21	71.0	64.0	.5	.4	1.1	.6	.7	.03	.51	29.22
1000	8.3	187	87	14	8	5.0	192	48	23	15	72.2	64.7	.5	1.0	1.6	1.1	.6	.10	.65	29.24
1100	5.5	186	75	16	10	4.0	183	45	22	17	74.7	66.2	.7	1.6	2.2	1.5	.6	.30	.91	29.25
1200	5.5	218	62	18	11	4.9	226	47	28	17	75.8	65.9	.9	1.9	2.5	1.6	.6	.50	1.17	29.25
1300	6.1	224	77	16	8	5.1	223	53	22	17	76.6	68.0	.0	1.2	1.6	1.6	.4	.57	1.29	29.24
1400	5.3	212	50	23	17	5.2	229	45	30	17	81.5	70.2	2.5	2.9	3.9	1.4	1.0	.94	1.73	29.23
1500	6.5	189	53	19	13	5.2	207	28	25	18	81.9	71.2	1.6	2.3	3.1	1.5	.8	.93	1.70	29.20
1600	5.5	196	35	25	15	5.2	196	38	28	17	83.6	72.0	1.8	3.0	3.6	1.8	.6	1.10	1.94	29.18
1700	4.1	223	35	23	20	3.9	185	27	28	20	85.2	72.0	1.2	2.0	2.5	1.3	.5	.93	1.72	29.17
1800	4.1	146	30	23	21	3.5	166	22	33	23	86.4	71.5	.8	2.2	2.6	1.8	.4	.92	1.69	29.16
1900	4.6	141	37	17	13	3.4	138	21	29	21	86.5	71.3	.9	2.0	2.5	1.6	.5	.62	1.28	29.15
2000	8.6	171	61	13	8	4.9	165	45	24	18	84.0	70.1	.5	.9	1.3	.8	.4	.33	.90	29.15
2100	16.5	228	51	19	6	7.9	256	26	29	13	73.0	65.1	-1.0	-4.3	***	****	****	.07	.40	29.17
2200	5.9	232	66	13	5	1.1	10	43	18	18	73.3	66.8	.1	-1.0	-3.7	-3.8	-2.7	.02	.32	29.17
2300	7.1	225	76	11	6	2.8	196	40	19	13	73.0	66.2	-.3	-.7	-3.2	-2.9	-2.5	***	.45	29.17
2400	6.7	220	88	16	5	2.1	218	30	24	12	73.7	67.0	.4	-.3	-2.4	-2.8	-2.1	***	.49	29.18

SEQUOYAH NUCLEAR PLANT JULY 26,1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	-----WIND 30 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	9.7	202	95	12	5	2.7	226	35	22	12	73.9	67.4	.0	-.3	-1.4	-1.4	-1.1	***	.48	29.18
0200	8.9	194	98	10	4	2.0	197	56	25	17	73.9	66.5	.2	-.4	-.9	-1.1	-.5	***	.45	29.17
0300	9.4	200	75	12	5	2.7	182	35	21	16	73.4	66.7	.2	-.2	-.8	-1.0	-.6	***	.45	29.17
0400	8.7	203	80	12	8	3.1	215	40	17	14	73.5	66.7	.3	-.5	-.4	-.7	.1	***	.49	29.17
0500	8.2	195	78	16	7	3.4	197	35	23	19	73.2	66.0	-.1	-.5	-.1	.0	.4	***	.49	29.17
0600	6.5	207	60	15	8	2.5	173	30	27	16	73.3	65.4	.0	-.2	.2	.2	.4	***	.49	29.16
0700	7.8	180	87	12	6	3.2	178	55	22	14	73.0	65.1	.2	-.1	.1	-.1	.2	***	.48	29.17
0800	8.2	190	81	12	6	2.7	196	47	26	16	72.7	64.9	.2	-.1	.2	.0	.3	.01	.18	29.18
0900	7.3	187	27	20	8	3.4	158	17	25	16	72.4	66.5	.3	-.3	-.3	-.6	.0	.02	.47	29.20
1000	3.8	105	30	16	11	1.5	5	33	36	18	72.6	67.4	.3	-.2	.3	.0	.5	.01	.48	29.20
1100	6.3	166	22	23	11	3.4	279	20	33	15	73.5	68.3	.5	.2	.5	.0	.3	.06	.51	29.20
1200	6.1	143	60	11	8	2.6	138	35	24	20	74.9	69.4	.8	1.6	1.9	1.1	.3	.26	.55	29.20
1300	7.9	93	65	12	8	2.7	72	30	26	24	73.0	66.3	.7	1.0	1.5	.8	.5	.20	.75	29.20
1400	11.0	90	85	8	7	3.8	77	34	37	24	74.7	67.5	.8	1.5	1.9	1.1	.4	.27	1.00	29.20
1500	4.8	36	37	18	8	3.2	320	31	42	15	73.4	66.7	.4	-.1	.1	-.3	.2	.10	.59	29.19
1600	5.0	324	53	24	6	3.1	306	50	35	17	73.5	67.5	.6	.8	1.1	.5	.3	.10	.25	29.18
1700	10.4	325	35	20	5	4.8	322	21	36	15	72.0	65.5	.2	.4	.9	.7	.5	.05	.32	29.20
1800	9.5	204	53	14	7	5.4	164	29	22	14	70.0	64.2	.6	.0	-.2	-.8	-.2	.06	.70	29.19
1900	7.4	113	76	10	8	2.3	142	25	37	21	70.7	65.5	.6	.3	-.4	-1.0	-.7	.16	.52	29.17
2000	4.1	262	43	16	7	2.4	290	42	32	18	70.6	66.0	.0	-.5	-1.0	-1.0	-.5	.15	.54	29.15
2100	5.4	80	35	15	7	2.4	291	26	34	14	70.8	64.8	.2	.3	.8	.6	.5	.03	.48	29.17
2200	6.6	77	59	12	10	2.6	72	40	19	19	69.7	63.9	-.1	-.1	.5	.6	.6	***	.28	29.16
2300	3.4	80	62	10	8	1.4	70	66	13	20	69.2	63.7	-.7	-.7	-.2	.5	.5	***	.45	*****
2400	3.1	356	52	12	6	2.8	345	55	44	12	69.1	63.4	.1	-.9	-.4	-.5	.5	***	.48	*****

SEQUOYAH NUCLEAR PLANT JULY 27,1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	-----WIND 30 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	8.8	36	59	8	6	3.5	26	55	22	20	70.0	64.5	.0	.1	.6	.6	.5	***	.48	29.20
0200	6.6	14	50	20	7	3.0	19	28	35	15	69.8	64.2	.1	.3	.8	.7	.5	***	.42	29.20
0300	7.1	12	63	16	7	3.3	22	40	58	17	68.9	62.8	.3	-.6	-.5	-.8	.1	***	.26	29.19
0400	8.1	353	87	17	5	2.6	21	45	32	17	69.5	64.0	.0	-.1	-.5	-.5	-.4	***	.33	29.17
0500	6.8	11	60	18	5	2.1	18	48	24	17	69.7	64.2	.4	.2	.4	.0	.2	***	.37	29.17
0600	4.1	316	61	23	8	1.3	189	67	23	20	69.8	64.1	.2	.1	.1	-.1	.0	***	.37	29.17
0700	6.6	56	61	10	8	2.8	29	53	17	23	70.2	65.1	.2	.2	.3	.1	.1	***	.45	29.17
0800	8.0	4	46	18	5	3.0	343	43	51	16	70.1	64.9	.1	.0	.0	-.1	.0	.00	.43	29.19
0900	3.8	360	43	20	11	1.7	285	47	26	24	70.2	65.0	.3	.1	.3	.0	.2	.01	.34	29.20
1000	4.2	28	80	12	7	1.9	319	45	14	18	71.1	65.5	.5	.7	1.1	.6	.4	.05	.34	29.21
1100	5.5	11	81	47	6	2.2	12	48	37	18	71.6	66.2	.6	.6	1.0	.4	.4	.09	.39	29.22
1200	5.7	22	88	11	7	2.9	***	**	**	**	72.6	67.1	1.1	1.1	1.7	.6	.6	.13	.66	29.22
1300	7.1	***	50	35	7	3.8	13	52	53	15	73.6	67.4	.7	.9	1.6	.9	.7	.20	.77	29.23
1400	6.5	17	84	9	7	3.7	22	54	59	17	76.0	69.4	1.3	2.0	2.7	1.4	.7	.30	.92	29.23
1500	4.1	20	50	42	11	3.0	16	48	53	22	77.3	68.8	.7	1.1	1.9	1.2	.8	.53	1.23	29.22
1600	1.6	14	42	10	11	2.6	203	32	26	19	78.0	68.2	1.0	1.5	1.8	.5	.3	.34	.98	29.21
1700	2.7	220	39	24	14	3.1	178	25	28	19	81.4	70.7	1.3	2.1	2.5	1.2	.4	.76	1.52	29.19
1800	4.1	218	43	18	8	3.8	225	40	24	16	81.3	69.1	1.0	1.3	1.2	.2	-.1	.72	1.45	29.17
1900	6.9	210	79	14	6	5.7	228	57	26	15	82.0	68.8	1.0	2.0	2.0	1.0	.0	.86	1.30	29.17
2000	7.8	221	94	18	6	4.8	222	47	27	16	82.0	69.2	.7	1.1	1.4	.7	.3	.47	1.07	29.16
2100	5.5	254	71	15	6	2.8	228	40	23	14	78.1	69.6	-.9	-1.9	-1.5	-.6	.4	.10	.70	29.16
2200	5.6	233	40	15	5	2.9	192	51	17	9	74.8	68.3	-1.4	-3.5	-4.2	-2.8	-.7	.01	.45	29.17
2300	10.1	208	97	13	4	4.2	200	65	18	8	75.0	68.6	.0	-.4	-.6	-.6	-.2	***	.44	29.18
2400	9.2	221	82	11	5	3.6	203	56	16	9	73.8	68.2	-.2	-.8	-1.1	-.9	-.3	***	.44	29.19

SEQUOYAH NUCLEAR PLANT JULY 29, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	-----WIND 30 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	6.3	338	88	12	5	.8	24	55	4	21	72.5	66.2	-.8	-3.2	-4.4	-3.6	-1.2	***	.43	29.14
0200	6.1	340	84	19	6	1.3	129	37	13	19	72.5	65.6	-.3	-2.7	-3.5	-3.2	-.8	***	.43	29.14
0300	5.2	327	99	13	5	.9	163	99	7	**	71.1	65.7	-1.0	-3.6	-6.1	-5.1	-2.5	***	.43	29.13
0400	3.4	330	43	16	7	1.2	172	93	14	16	70.7	64.3	-.9	-1.8	-3.8	-2.9	-2.0	***	.43	29.11
0500	4.1	197	47	9	5	2.3	217	55	18	18	70.7	64.4	-.1	-1.0	-3.1	-3.0	-2.1	***	.42	29.11
0600	5.1	226	67	10	6	2.6	211	73	14	20	70.0	63.0	-.4	-1.1	-2.2	-1.8	-1.1	***	.43	29.10
0700	3.1	208	82	10	6	1.9	242	43	19	23	69.4	****	-.6	-1.2	-2.1	-1.5	-.9	***	.43	29.10
0800	3.3	272	37	13	8	1.6	297	45	20	15	69.3	62.6	-.5	-.7	-.8	-.3	-.1	.01	.43	20.11
0900	6.2	199	79	9	5	3.2	181	33	24	16	70.4	64.2	.4	.4	.6	.2	.2	.07	.55	29.12
1000	6.7	238	64	10	4	3.5	215	39	24	14	71.9	64.6	.9	.9	.3	-.6	-.6	.18	.72	29.14
1100	5.1	203	41	12	6	3.1	217	32	24	15	74.9	66.8	.9	1.4	2.1	1.2	.7	.32	.93	29.15
1200	5.6	29	59	13	7	3.6	34	42	26	18	76.4	68.5	1.4	1.9	2.6	1.2	.7	.33	.94	29.17
1300	6.0	179	34	11	7	3.3	162	27	30	20	78.0	68.4	.7	1.5	2.0	1.3	.5	.32	.87	29.13
1400	10.4	206	56	10	6	6.5	195	40	20	16	82.0	69.9	1.5	3.0	4.2	2.7	1.2	.61	1.26	29.10
1500	11.7	209	92	10	6	7.2	192	44	22	16	82.2	68.8	1.0	2.1	2.9	1.9	.8	1.02	1.77	29.09
1600	10.8	200	92	11	7	7.2	192	47	20	16	86.2	71.0	1.6	2.5	3.7	2.1	1.2	1.06	1.83	29.08
1700	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
1800	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
1900	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
2000	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
2100	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
2200	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
2300	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
2400	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****

SEQUOYAH NUCLEAR PLANT JULY 30,1974

	----WIND 3CC FEET----					-----WIND 30 FEET----														
PERD ENDG	SPEEC AV	DIR AV	PER RCGS	SIG Y	SIG Z	SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
C2C0	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
0300	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
0400	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
05C0	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
0600	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
0700	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
08C0	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
0900	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
1000	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
11C0	7.6	***	**	**	9	4.4	***	**	**	18	75.9	60.1	1.3	2.2	3.1	1.8	.9	.65	1.30	29.20
1200	9.9	11	67	65	11	5.6	11	40	59	18	78.4	58.2	1.6	2.4	3.3	1.7	.9	.92	1.64	29.20
13C0	10.3	27	50	30	11	6.1	28	41	62	17	81.3	57.1	2.1	3.2	4.2	2.1	1.0	1.13	1.93	29.20
1400	12.6	1	52	9	9	7.6	3	34	71	17	82.6	56.2	2.5	3.4	4.5	2.0	1.1	1.29	2.13	29.20
1500	9.7	21	61	26	11	6.0	31	43	57	18	84.0	57.7	2.6	3.8	4.5	1.9	.7	1.31	2.21	29.20
1600	7.4	53	48	15	14	4.8	51	33	40	23	84.5	58.6	1.8	2.8	3.7	1.9	.9	1.24	2.12	*****
17C0	6.C	297	14	38	19	4.3	353	12	50	25	85.7	55.0	.9	1.8	2.9	2.0	1.1	1.16	2.01	29.19
1800	9.7	318	53	25	12	6.1	316	37	56	17	85.7	55.6	1.1	1.7	2.7	1.6	1.0	1.02	1.78	29.17
1900	11.5	285	61	16	9	7.0	296	35	31	16	84.7	57.6	1.0	1.6	2.4	1.4	.8	.69	1.24	29.16
20C0	13.5	295	82	14	8	6.7	289	43	31	17	82.5	57.0	.5	.8	1.5	1.0	.7	.51	1.06	29.16
2100	13.2	305	94	11	6	5.4	299	55	27	16	****	****	***	***	***	-.5	.1	.25	.68	29.20
2200	12.0	313	72	13	5	3.7	284	30	28	13	75.4	54.0	-1.0	-2.6	-2.3	-1.5	.3	.04	.40	29.18
23C0	13.3	335	99	11	5	3.9	349	64	54	10	73.0	52.6	-1.0	-2.7	-3.1	-2.1	-.4	***	.37	29.21
2400	11.9	336	70	17	5	3.4	11	66	25	10	70.4	52.3	-1.3	-3.6	-3.6	-2.3	.0	***	.36	29.23

SEQUOYAH NUCLEAR PLANT JULY 31,1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	-----WIND 30 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	8.1	1	84	34	5	1.7	58	44	7	11	70.0	53.5	.0	-2.6	-3.0	-3.0	-.4	****	.37	29.24
0200	7.7	356	99	14	5	1.6	31	61	4	10	66.1	54.5	-1.6	-4.2	-5.1	-3.5	-.9	****	.37	29.25
0300	9.3	1	99	19	4	2.9	16	72	14	10	64.4	51.6	-1.8	-4.3	-6.4	-4.6	-2.1	****	.36	29.24
0400	10.9	4	100	7	4	3.1	12	73	51	10	64.8	51.1	-.4	-1.6	-3.9	-3.5	-2.3	****	.35	29.24
0500	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
0600	11.6	2	99	8	5	3.6	5	72	54	11	62.0	50.6	-.8	-3.4	-6.7	-5.9	-3.3	****	.35	29.25
0700	10.4	12	99	2	5	2.8	23	65	12	15	61.6	51.7	-1.1	-3.1	-4.6	-3.5	-1.5	****	.36	29.26
0800	9.5	7	99	2	4	2.1	335	45	30	13	61.6	51.1	-1.2	-2.8	-4.1	-2.9	-1.3	****	.37	29.28
0900	9.7	11	93	7	4	3.4	21	59	18	11	64.6	54.0	.5	-.1	-1.9	-2.4	-1.8	****	.51	29.29
1000	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
1100	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
1200	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
1300	12.4	31	62	17	10	6.8	24	43	57	18	81.8	59.7	3.1	4.2	5.0	1.9	.8	1.15	1.96	29.29
1400	10.3	51	58	13	12	5.5	41	41	36	22	82.0	58.8	1.0	2.9	3.8	2.0	.9	1.17	2.00	29.29
1500	9.6	32	58	23	14	5.7	26	34	56	19	81.2	57.7	1.2	1.4	2.2	1.0	.8	1.16	2.01	29.28
1600	8.4	59	56	12	11	4.7	51	36	22	19	83.9	60.8	2.3	3.2	3.9	1.6	.7	.97	1.77	29.27
1700	6.3	52	30	21	16	3.7	69	27	38	24	84.1	59.5	1.4	2.1	3.1	1.7	1.0	1.15	2.84	29.25
1800	6.9	65	37	24	15	3.9	30	30	46	23	84.1	58.9	.0	.7	1.5	1.5	.8	.99	1.77	29.23
1900	5.7	85	42	14	13	3.8	40	32	26	22	85.2	59.1	1.1	1.5	2.2	1.1	.7	.72	1.29	29.23
2000	3.9	72	27	23	12	1.8	11	27	36	25	84.0	59.4	.6	.7	1.5	.9	.8	.37	.95	29.22
2100	3.0	6	33	23	10	1.7	285	57	30	17	80.8	63.0	-.3	-1.2	-1.2	-.9	.0	.24	.72	29.22
2200	7.5	315	69	10	4	2.8	313	45	37	13	76.0	59.2	-.8	-2.0	-3.6	-3.0	-1.8	.05	.43	29.24
2300	11.2	330	98	14	5	2.9	33	63	19	16	71.8	56.8	-1.4	-4.7	-6.2	-4.8	-1.5	****	.36	29.26
2400	11.9	354	99	16	5	3.4	18	64	17	10	69.8	54.5	-2.6	-4.9	-6.8	-4.2	-1.9	****	.37	29.27

SEQUOYAH NUCLEAR PLANT AUGUST 1, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	-----WIND 30 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	9.1	2	100	3	5	3.4	26	67	7	8	68.8	53.3	-4.6	-4.6	-5.8	-1.2	-1.2	****	.36	29.27
0200	10.1	4	98	1	4	3.5	30	59	26	9	66.0	54.5	-1.6	-3.2	-8.2	-6.6	-5.0	****	.36	29.27
0300	10.6	7	99	1	5	2.6	22	92	6	8	64.9	53.4	-1.1	-3.4	-7.3	-6.2	-3.9	****	.36	*****
0400	10.7	7	100	1	4	2.6	11	85	22	8	64.0	51.8	-1.6	-3.5	-7.6	-6.0	-4.1	****	.37	29.26
0500	11.5	6	99	1	6	3.5	8	64	45	9	64.7	50.1	.0	-1.6	-5.2	-5.2	-3.6	****	.36	29.24
0600	9.8	13	94	2	5	2.2	23	56	33	11	63.2	53.2	-.6	-2.6	-4.7	-4.1	-2.1	.00	.36	29.24
0700	11.5	24	100	2	4	3.3	3	64	85	11	61.6	51.1	-.7	-3.3	-6.7	-6.0	-3.4	.03	.37	29.24
0800	12.6	28	99	3	5	3.0	340	75	79	11	61.7	51.8	-.4	-2.3	-5.5	-5.1	-3.2	.04	.39	29.24
0900	12.4	20	99	3	4	2.5	360	48	54	15	65.3	55.3	.3	.0	-1.7	-2.0	-1.7	.11	.55	29.26
1000	12.6	17	96	7	5	4.0	27	54	26	16	69.8	58.2	.8	1.6	1.8	1.0	.2	.28	.76	29.27
1100	9.4	21	80	14	10	4.6	27	55	49	17	73.7	61.2	1.7	2.5	3.4	1.7	.9	.55	1.17	29.27
1200	8.6	20	77	27	9	5.8	23	49	44	17	76.9	62.7	2.6	3.6	4.3	1.7	.7	.77	1.48	29.27
1300	6.6	20	73	30	12	4.6	31	52	37	19	79.0	64.2	2.8	2.8	3.5	.7	.7	1.04	1.86	29.27
1400	5.1	18	46	37	16	4.0	28	38	52	22	83.0	65.7	2.4	3.2	4.2	1.8	1.0	1.19	2.07	29.27
1500	3.6	190	23	29	21	3.3	170	27	35	25	86.3	66.5	2.6	3.4	4.3	1.7	.9	1.22	2.10	29.25
1600	4.6	209	35	21	16	4.6	188	47	26	18	86.8	65.7	2.4	3.0	4.0	1.6	1.0	1.21	2.07	29.23
1700	4.1	210	52	20	15	4.6	193	52	19	14	87.1	64.5	1.1	1.5	2.5	1.4	1.0	1.12	1.93	*****
1800	4.0	214	32	20	17	4.0	200	37	27	19	86.9	64.8	.9	1.6	2.2	1.3	.6	.93	1.69	29.17
1900	3.2	168	27	20	19	3.2	190	29	34	21	87.7	64.5	1.0	2.0	2.7	1.7	.7	.66	1.27	29.17
2000	3.5	143	54	12	12	2.7	132	30	21	20	85.7	65.4	.5	.7	1.2	.7	.5	.40	1.02	29.17
2100	3.6	123	67	8	6	1.7	139	58	17	23	82.5	67.2	-.6	-2.0	-1.4	-.8	.6	.18	.67	29.17
2200	6.7	97	100	7	6	1.1	149	31	18	25	79.0	64.4	-.7	-3.4	-4.2	-3.5	-.8	.03	.44	29.18
2300	7.6	92	99	6	5	2.2	31	38	14	14	76.6	63.0	-1.0	-3.7	-6.5	-5.5	-2.8	****	.43	29.18
2400	8.3	98	66	8	6	2.7	14	40	24	17	76.4	62.2	.0	-.7	-.5	-.5	.2	****	.45	29.19

SEQUOYAH NUCLEAR PLANT AUGUST 2, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	CIR AV	PER RDGS	SIG Y	SIG Z	-----WIND 30 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	16.6	160	66	10	7	6.2	175	34	27	20	77.2	62.8	.4	.2	.8	.4	.6	****	.45	29.20
0200	13.4	181	84	11	7	6.2	178	45	21	16	76.0	62.8	.2	.1	.8	.6	.7	****	.46	29.21
0300	12.2	194	58	10	6	5.4	186	40	24	14	74.0	62.3	-.1	-.8	-.2	-.1	.6	****	.41	29.20
0400	12.1	196	81	9	6	5.0	185	50	23	14	72.5	60.5	.1	-.2	.1	.0	.3	****	.41	29.19
0500	11.5	202	90	9	5	4.0	190	37	23	17	71.6	60.1	.0	-.4	-.3	-.3	.1	****	.42	29.19
0600	10.9	199	84	11	6	4.0	168	40	22	16	71.6	59.3	.1	-.4	.1	.0	.5	****	.43	29.20
0700	10.3	210	80	10	6	3.9	195	32	23	16	70.0	58.5	.0	-.3	.0	.0	.3	****	.42	29.20
0800	5.6	209	47	13	7	1.7	210	36	20	19	68.1	58.0	-1.4	-1.5	-1.1	.3	.4	.01	.45	29.22
0900	7.7	198	95	8	6	3.2	177	47	21	16	71.0	59.1	.6	.7	1.0	.4	.3	.06	.52	29.22
1000	7.7	207	87	11	7	4.2	197	40	25	16	73.6	61.7	.9	1.7	2.5	1.6	.8	.26	.79	29.23
1100	8.6	213	80	11	8	5.4	220	47	26	17	76.0	64.1	1.4	2.1	3.0	1.6	.9	.51	1.12	29.23
1200	8.6	217	72	14	8	6.5	224	44	24	14	78.7	65.0	1.8	2.8	4.0	2.2	1.2	.72	1.39	29.22
1300	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
1400	****	***	**	**	**	***	***	**	**	**	****	****	***	***	***	***	***	****	****	*****
1500	11.7	210	85	11	6	6.9	221	45	23	15	82.0	67.2	1.3	2.5	3.4	2.1	.9	.75	1.45	29.21
1600	12.0	214	95	10	6	7.0	228	46	24	17	81.3	67.1	1.3	1.9	2.6	1.3	.7	.72	1.41	29.19
1700	14.6	215	99	11	6	8.1	213	53	22	16	82.4	68.2	1.4	2.4	3.4	2.0	1.0	.67	1.34	29.17
1800	12.8	215	87	12	6	7.4	228	44	25	15	83.9	68.6	1.5	2.7	3.6	2.1	.9	.86	1.56	29.15
1900	11.9	216	92	9	6	6.5	231	42	23	16	83.3	67.6	1.2	2.6	2.6	1.4	.0	.62	1.20	29.14
2000	10.4	226	65	9	6	5.7	225	41	26	16	82.1	67.3	.5	.9	1.5	1.0	.6	.41	1.02	29.13
2100	11.3	193	50	14	7	4.4	138	22	27	16	73.0	65.9	-.9	-3.3	-5.5	-4.6	-2.2	.08	.26	29.15
2200	8.1	180	98	8	5	1.0	107	32	16	13	73.0	66.2	-.3	-2.0	-3.0	-2.7	-1.0	.03	.44	29.15
2300	15.1	183	53	8	6	4.6	183	26	20	17	74.7	65.5	.0	-.8	-.6	-.6	.2	****	.48	29.18
2400	17.1	205	81	9	5	8.0	210	43	23	15	72.2	63.8	.2	.0	.6	.4	.6	****	.37	29.22

SEQUOYAH NUCLEAR PLANT AUGUST 5, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	-----WIND 30 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	12.5	351	100	22	3	3.4	11	85	41	12	63.5	53.1	-3.2	-5.6	-6.2	-3.0	-.6	.00	.37	29.25
0200	11.0	5	86	13	5	3.1	26	63	35	10	65.1	51.4	-1.1	-2.5	-3.3	-2.2	-.8	****	.37	29.25
0300	12.0	13	97	3	5	3.3	11	45	19	12	64.0	51.5	-1.5	-4.0	-5.4	-3.9	-1.4	****	.40	29.25
0400	10.2	7	99	9	4	2.7	27	62	16	13	62.8	52.2	-2.0	-3.2	-3.8	-1.8	-.6	****	.37	29.25
0500	9.8	7	92	9	4	3.2	6	52	28	11	62.8	50.9	-.7	-1.8	-2.2	-1.5	-.4	****	.36	29.25
0600	11.4	17	98	3	4	3.3	17	56	25	12	60.3	50.1	-1.2	-4.1	-5.1	-3.9	-1.0	****	.36	29.25
0700	10.5	16	100	2	5	2.7	353	49	51	10	59.7	48.8	-1.3	-3.1	-4.0	-2.7	-.9	****	.36	29.25
0800	9.9	14	99	3	5	2.7	357	78	82	9	59.8	49.1	-.5	-2.5	-3.1	-2.6	-.6	.02	.36	29.26
0900	8.6	12	99	2	5	2.6	2	75	62	10	62.6	54.0	.6	.4	-.3	-.9	-.7	.09	.49	29.27
1000	7.9	14	92	13	6	3.1	16	55	64	15	65.2	56.7	.0	.7	.5	.8	.1	.26	.73	29.28
1100	8.8	16	80	49	8	4.9	15	52	27	15	69.4	56.0	1.1	1.9	2.9	1.8	1.0	.50	1.10	29.28
1200	8.7	17	82	24	10	5.3	18	46	61	18	73.1	58.7	1.4	2.6	3.7	2.3	1.1	.82	1.53	29.28
1300	9.9	21	67	21	10	5.9	24	45	70	18	76.0	58.5	2.0	3.2	4.1	2.1	.9	1.11	1.90	29.24
1400	11.6	33	62	13	11	6.7	32	43	50	18	77.7	57.1	2.1	2.9	3.9	1.8	1.0	1.26	2.10	29.26
1500	9.3	46	72	10	12	5.3	40	40	50	20	78.9	57.1	1.8	3.0	3.9	2.1	.9	1.32	2.21	29.24
1600	7.0	53	39	27	15	4.5	34	31	36	22	79.2	58.2	1.0	2.2	3.1	2.1	.9	1.21	2.08	29.23
1700	7.7	44	49	14	15	4.3	45	36	41	22	81.1	60.5	2.0	2.8	3.6	1.6	.8	1.18	2.01	29.19
1800	7.8	37	44	18	14	4.7	36	30	45	18	81.3	60.2	1.5	2.3	3.2	1.7	.9	1.01	1.76	29.19
1900	7.0	47	49	14	12	4.2	54	31	34	21	80.8	60.7	.9	1.4	2.3	1.4	.9	.74	1.26	29.17
2000	8.2	52	66	9	9	4.2	55	43	22	18	79.9	59.7	.2	.2	1.1	.9	.9	.41	1.04	29.17
2100	6.8	75	80	7	8	2.5	74	60	17	20	76.7	60.0	-1.2	-1.6	-1.0	.2	.6	.20	.64	29.18
2200	5.3	79	73	7	6	1.6	82	64	4	15	73.0	56.5	-1.0	-3.7	-4.0	-3.0	-.3	.02	.41	29.19
2300	5.2	5	66	5	6	2.7	25	73	8	11	69.2	57.2	-.7	-3.1	-4.8	-4.1	-1.7	****	.38	29.20
2400	11.7	6	97	8	5	3.1	11	59	70	11	67.2	56.7	-1.2	-3.6	-5.6	-4.4	-2.0	****	.39	29.20

SEQUOYAH NUCLEAR PLANT AUGUST 6, 1974

PERD ENDG	----WIND 300 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	-----WIND 30 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	12.0	12	100	2	4	2.4	23	56	26	11	66.3	55.6	-1.3	-4.2	-4.2	-2.9	.0	****	.39	29.20
0200	10.8	17	99	3	4	2.7	25	67	20	9	64.8	55.0	-1.4	-4.5	-5.2	-3.8	-.7	****	.38	29.21
0300	12.8	14	99	2	4	3.6	35	86	7	10	66.0	56.5	-1.4	-2.6	****	****	****	****	.40	29.21
0400	13.4	15	100	3	5	4.6	34	93	8	10	65.3	56.5	-1.1	-2.1	-3.2	-1.1	-1.1	****	.40	29.21
0500	11.4	12	98	2	4	2.6	35	52	9	10	63.8	55.1	-1.5	-3.2	-3.5	-2.0	-.3	****	.39	29.21
0600	11.2	12	99	3	5	2.5	20	75	23	9	62.8	54.0	-2.0	-3.5	-4.1	-2.1	-.6	****	.38	29.21
0700	11.5	15	99	3	5	2.9	29	91	7	12	62.5	54.2	-1.5	-2.8	-3.7	-2.2	-.9	****	.37	29.21
0800	10.8	22	94	4	5	2.9	31	74	19	15	61.9	53.1	-1.9	-3.1	-3.5	-1.6	-.4	.01	.38	29.22
0900	12.7	27	99	4	4	4.1	24	77	26	10	63.0	54.2	-.9	-2.1	-2.0	-1.1	.1	.03	.42	29.23
1000	8.9	22	85	15	6	3.7	14	56	47	14	68.6	58.7	1.0	1.6	2.5	1.5	.9	.29	.81	29.24
1100	7.7	24	74	16	10	5.2	26	49	31	16	70.1	59.4	1.2	1.8	2.7	1.5	.9	.49	1.14	29.26
1200	4.5	15	43	30	14	3.1	27	39	40	25	75.8	63.4	****	2.4	3.4	****	1.0	.54	1.24	29.26
1300	3.0	222	19	40	21	3.1	168	18	37	25	81.1	67.1	****	****	****	****	****	.97	1.76	29.26
1400	3.9	241	22	31	21	4.0	208	32	28	22	84.2	67.7	****	****	****	****	****	1.17	2.02	29.25
1500	3.8	207	25	30	21	4.2	197	39	28	19	87.9	69.6	****	****	****	****	****	1.24	2.12	29.23
1600	4.2	189	19	34	20	3.8	241	27	36	21	88.9	69.0	3.5	5.3	****	****	****	1.23	2.11	29.23
1700	4.3	224	56	20	14	4.5	210	41	21	18	83.9	65.8	1.3	2.2	2.9	1.6	.7	1.11	1.95	29.21
1800	5.5	244	58	14	11	4.3	235	39	28	17	83.3	66.5	1.0	1.7	2.4	1.4	.7	.88	1.65	29.20
1900	4.1	264	43	18	12	3.4	227	21	34	20	83.6	64.1	.8	1.4	2.2	1.4	.8	.67	1.27	29.20
2000	2.1	306	26	20	16	1.8	300	28	35	20	82.2	64.5	.1	.1	.9	.8	.8	.35	.99	29.20
2100	10.7	108	62	9	6	2.8	79	34	37	26	76.6	62.4	.0	.0	.7	.7	.7	.15	.63	29.20
2200	8.1	115	60	13	8	2.4	5	25	56	24	74.0	61.4	-1.3	-1.6	-1.0	.3	.6	.02	.47	29.22
2300	4.4	77	24	28	12	2.8	23	22	21	16	73.4	61.9	-.7	-.8	-.1	.6	.7	****	.46	29.25
2400	3.6	43	29	12	8	2.0	59	52	18	17	72.0	61.7	-.7	-1.4	-.9	-.2	.5	.00	.43	29.27

SEQUOYAH NUCLEAR PLANT AUGUST 7, 1974

	----WIND 300 FEET----					-----WIND 30 FEET----														
PERD ENDG	SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	3.2	164	33	9	9	1.7	286	42	25	10	72.7	62.9	.3	-.1	-.4	-.7	-.3	****	.48	29.28
0200	12.2	214	50	11	6	5.3	203	39	24	16	73.0	63.3	.3	.4	1.2	.9	.8	****	.46	29.29
0300	10.7	205	84	10	7	5.2	197	52	23	16	71.6	63.4	.4	.3	1.1	.7	.8	****	.39	29.29
0400	9.0	211	67	11	7	4.5	212	37	20	14	70.7	62.5	.5	.5	1.3	.6	.8	****	.46	29.29
0500	9.1	210	95	10	6	4.9	203	57	25	15	70.4	62.8	.4	.4	1.0	.6	.6	****	.46	29.29
0600	6.7	215	82	12	7	3.8	229	56	23	13	70.1	****	.3	.2	1.1	.8	.9	.01	.44	29.29
0700	****	***	**	**	**	***	***	**	**	**	****	****	****	****	****	****	****	****	****	*****
0800	2.3	73	33	13	9	.8	283	36	24	15	69.9	62.9	.1	.1	.9	.5	.8	.01	.50	29.31
0900	3.1	193	28	16	9	.9	73	29	22	21	70.5	62.9	.0	.2	1.0	1.0	.8	.02	.52	29.33
1000	2.6	164	35	17	13	1.3	190	37	21	18	71.5	63.0	.4	.5	1.5	1.1	1.0	.11	.65	29.34
1100	2.5	106	35	15	13	1.1	143	46	20	23	72.0	63.1	.7	2.0	2.0	1.3	.0	.12	.65	29.34
1200	2.9	217	32	16	13	1.4	80	43	31	21	72.1	64.2	.6	.9	1.8	1.2	.9	.23	.57	29.35
1300	****	***	**	**	**	***	***	**	**	**	****	****	****	****	****	****	****	****	****	*****
1400	2.9	160	32	23	14	2.1	71	27	25	19	73.6	64.8	.6	1.1	1.9	1.3	.8	.22	.81	29.35
1500	5.7	177	40	16	12	3.9	190	24	25	19	74.6	64.1	.8	1.1	2.2	1.4	1.1	.30	.88	29.34
1600	8.5	172	50	12	10	5.7	193	38	22	16	74.6	65.0	.9	1.5	2.3	1.4	.8	.32	.91	29.34
1700	6.9	187	67	11	8	4.7	191	42	22	14	72.8	65.0	.4	.6	1.5	1.1	.9	.21	.35	29.33
1800	4.2	192	55	18	13	3.1	233	34	28	16	72.5	65.0	.8	1.1	1.7	.9	.6	.22	.29	29.32
1900	7.6	207	57	14	9	4.5	213	54	20	14	71.3	63.9	.7	.7	1.4	.7	.7	.10	.07	29.33
2000	6.2	177	50	14	9	3.1	176	28	25	18	70.7	64.4	.5	.5	1.3	.8	.8	.07	.06	29.31
2100	6.4	146	41	18	12	2.5	165	31	23	20	70.5	63.4	.4	.1	.8	.4	.7	.02	.41	29.31
2200	8.0	152	83	10	12	2.8	159	38	21	16	69.6	62.8	-.1	-.3	.4	.5	.7	.01	.29	29.32
2300	6.1	156	75	12	9	1.8	209	36	22	17	69.9	63.0	.4	.3	.9	.5	.6	****	.45	29.33
2400	6.1	177	71	11	8	2.7	192	53	20	14	70.0	63.3	.5	.4	1.0	.5	.6	.01	.49	29.34

SEQUOYAH NUCLEAR PLANT AUGUST 8, 1974

PERD ENDG	----WIND 3CC FEET---- SPEEC AV	DIR AV	PER RDGS	SIG Y	SIG Z	-----WINC 30 FEET---- SPEED AV	DIR AV	PER RDGS	SIG Y	SIG Z	DRY BULB	DEW POINT	T4-T30	T4-T130	T4-T300	T30-T300	T150-T300	SOL RAD	TOT RAD	ATMS PRES
0100	8.5	175	88	11	7	3.5	185	50	26	14	70.2	62.9	.5	.3	.9	.4	.6	****	.49	29.34
02C0	7.8	183	90	11	6	3.8	181	54	19	14	70.2	62.9	.3	.2	.9	.6	.7	****	.49	29.34
03C0	8.2	184	8C	10	7	4.0	173	54	20	15	69.6	63.1	.4	.4	1.0	.6	.6	****	.21	29.33
0400	13.2	166	82	12	9	5.6	170	48	24	16	70.1	62.6	.3	.1	.9	.6	.8	.00	.14	29.32
0500	14.2	169	90	10	8	6.7	173	53	23	15	70.1	62.7	.4	.3	1.1	.7	.8	****	.45	29.31
06C0	12.1	171	9C	10	8	6.2	175	51	20	15	69.9	62.5	.4	.4	1.2	.8	.8	****	.46	29.31
0700	9.9	181	84	11	7	4.9	175	56	21	15	70.0	62.5	.5	.5	1.3	.8	.8	****	.51	29.33
C8C0	9.5	185	92	10	6	4.8	174	55	22	14	70.0	62.5	.4	.5	1.2	.8	.7	.02	.49	29.34
09C0	8.C	185	87	12	7	4.0	180	49	20	15	70.1	62.8	.3	.4	1.3	1.0	.9	.02	.51	29.34
1000	6.0	177	75	11	9	2.7	165	43	21	21	69.8	62.8	.5	.7	1.4	.9	.7	.03	.42	29.36
11C0	6.4	176	67	11	9	2.9	172	35	19	16	70.0	63.2	.4	.5	1.2	.8	.7	.09	.23	29.36
1200	9.4	165	75	11	9	4.3	166	50	24	17	70.4	64.5	.4	.5	1.3	.9	.8	.10	.31	29.36
1300	11.1	193	65	10	7	5.6	190	41	23	15	72.0	66.2	.9	1.0	1.8	.9	.8	.11	.35	29.36
14C0	7.2	187	64	13	8	4.6	184	42	24	16	74.6	67.3	1.2	1.5	2.1	.9	.6	.43	1.07	29.35
15C0	4.7	197	68	15	15	3.2	189	27	30	21	77.4	69.6	1.4	1.5	****	****	****	.74	1.50	29.33
1600	5.1	215	57	16	15	3.9	202	30	27	20	79.0	69.1	.9	1.8	2.2	1.3	.4	.92	1.74	29.32
17C0	9.9	210	58	12	7	6.5	229	42	21	20	75.4	67.4	.7	1.4	2.1	1.4	.7	.66	1.61	29.31
18C0	1C.2	170	78	8	7	5.4	172	46	21	17	76.0	69.3	.8	1.2	2.0	1.2	.8	.41	.66	29.31
1900	9.0	181	69	12	8	5.0	173	45	22	18	77.4	69.8	.9	1.7	****	****	***	.38	.91	29.31
2CC0	10.8	193	71	12	6	6.6	167	42	23	17	75.3	66.9	.4	.8	****	****	****	.33	.87	29.30
21C0	5.8	156	78	9	8	2.5	133	36	23	23	75.3	67.7	.4	.6	1.3	.9	.7	.13	.65	29.31
2200	10.8	168	95	8	7	3.8	180	46	22	17	74.1	66.3	.4	.3	1.0	.6	.7	.01	.49	29.31
2300	7.9	169	77	11	1C	2.7	185	45	24	18	73.3	66.1	.3	.3	1.1	.8	.8	****	.46	29.31
2400	9.2	173	77	10	7	3.8	178	45	22	17	71.9	64.9	.1	.1	.9	.8	.8	****	.45	29.31

HARTSVILLE STEAM PLANT JULY 16, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	1	77	79	1	347	58	72.6	71.3	-1.3
0200	1	344	41	2	285	63	72.3	69.9	-2.4
0300	2	16	28	2	52	25	70.9	68.5	-2.4
0400	1	210	71	1	122	81	68.9	67.9	-1.0
0500	0	92	**	1	261	34	68.7	67.6	-1.1
0600	1	139	41	2	142	38	66.4	66.8	.4
0700	2	52	28	2	24	46	66.1	66.5	.4
0800	1	48	28	1	77	44	66.4	66.8	.4
0900	1	294	21	1	153	19	67.8	68.5	.7
1000	3	107	38	3	125	33	71.2	71.6	.4
1100	3	182	46	3	178	48	73.4	74.1	.7
1200	3	190	38	3	197	48	75.1	76.0	.9
1300	3	59	21	3	274	18	75.9	76.9	1.0
1400	4	204	41	3	186	31	76.8	78.0	1.2
1500	3	214	38	3	162	28	77.6	78.6	1.0
1600	3	161	34	3	185	25	79.0	80.0	1.0
1700	3	155	48	3	147	41	78.5	79.1	.6
1800	3	160	34	2	170	46	79.0	79.7	.7
1900	4	163	71	4	161	59	77.9	78.6	.7
2000	4	163	79	3	159	75	77.3	77.7	.4
2100	4	182	86	2	202	43	76.8	76.3	-.5
2200	3	42	56	2	49	66	75.9	75.2	-.7
2300	2	34	91	1	65	64	74.3	72.7	-1.6
2400	4	37	98	2	42	46	73.7	71.0	-2.7

HARTSVILLE STEAM PLANT JULY 17, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	1	33	69	1	193	58	71.7	69.9	-1.8
0200	3	151	46	3	56	43	70.6	69.9	-.7
0300	3	47	63	2	52	59	69.5	68.8	-.7
0400	2	242	26	1	50	71	68.4	68.2	-.2
0500	2	22	51	2	320	43	68.1	68.5	.4
0600	2	61	68	1	80	38	67.3	67.1	-.2
0700	2	56	31	2	112	31	66.4	67.1	.7
0800	1	174	41	1	45	36	66.4	66.5	.1
0900	1	141	46	2	130	41	67.8	68.5	.7
1000	3	155	59	3	150	50	70.1	70.7	.6
1100	5	155	54	4	150	53	74.0	76.0	2.0
1200	5	157	31	4	172	36	76.8	77.7	.9
1300	5	122	51	4	118	39	79.9	80.8	.9
1400	7	98	66	5	98	59	81.0	82.2	1.2
1500	5	155	33	4	185	26	82.4	83.0	.6
1600	8	62	69	6	59	59	82.7	83.0	.3
1700	8	44	58	6	39	54	82.7	83.9	1.2
1800	8	33	69	6	33	63	83.5	84.2	.7
1900	8	63	89	5	77	71	83.8	84.4	.6
2000	7	50	96	3	50	88	82.9	82.8	-.1
2100	6	55	96	3	40	98	81.0	80.2	-.8
2200	4	46	84	1	58	56	79.3	76.9	-2.4
2300	4	42	94	2	48	50	78.7	76.9	-1.8
2400	6	51	88	2	185	44	78.5	76.6	-1.9

HARTSVILLE STEAM PLANT JULY 18, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	8	59	94	3	58	61	77.1	75.2	-1.9
0200	8	59	96	4	58	83	75.7	74.4	-1.3
0300	8	62	100	4	57	96	75.1	74.4	-.7
0400	7	56	96	3	48	79	74.5	74.1	-.4
0500	6	70	98	3	79	81	73.7	73.2	-.5
0600	4	71	91	3	78	39	73.1	72.1	-1.0
0700	6	77	91	3	68	79	72.3	70.4	-1.9
0800	5	73	94	3	88	64	72.3	71.6	-.7
0900	3	97	38	3	97	39	73.1	73.8	.7
1000	5	143	91	4	144	75	75.7	76.9	1.2
1100	4	151	43	3	152	41	77.3	78.3	1.0
1200	3	78	44	3	71	46	78.2	79.1	.9
1300	6	185	38	5	189	31	74.5	74.6	.1
1400	7	160	69	6	149	54	77.6	78.3	.7
1500	7	176	39	5	187	29	79.9	81.1	1.2
1600	7	172	26	5	222	31	80.1	80.8	.7
1700	7	181	63	5	181	56	81.5	82.5	1.0
1800	7	171	83	5	171	79	82.9	83.9	1.0
1900	4	156	75	3	149	75	83.5	83.9	.4
2000	4	144	68	3	134	58	82.9	83.6	.7
2100	6	169	94	3	165	58	81.0	81.1	.1
2200	3	154	68	2	95	34	79.3	79.7	.4
2300	4	238	43	2	268	56	78.5	77.4	-1.1
2400	3	99	28	2	46	61	75.1	75.2	.1

HARTSVILLE STEAM PLANT JULY 19, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	5	158	43	2	231	25	75.7	74.9	-.8
0200	3	150	79	1	14	31	74.5	74.6	.1
0300	4	160	73	2	158	44	74.8	74.9	.1
0400	4	182	76	2	177	34	74.5	74.9	.4
0500	3	204	75	2	257	38	74.3	74.9	.6
0600	3	184	68	1	191	61	74.3	74.9	.6
0700	3	198	83	2	202	61	74.0	74.4	.4
0800	4	209	75	2	202	43	74.0	74.1	.1
0900	3	170	39	2	136	48	74.3	74.6	.3
1000	4	172	66	3	165	71	75.9	76.6	.7
1100	6	161	44	4	166	39	77.6	78.0	.4
1200	6	221	58	4	220	50	79.6	80.0	.4
1300	7	215	61	5	211	46	82.1	83.0	.9
1400	6	276	43	4	273	33	82.9	83.3	.4
1500	6	269	46	4	274	36	83.8	85.0	1.2
1600	6	259	63	4	256	44	85.5	86.4	.9
1700	5	258	44	3	232	38	86.3	87.0	.7
1800	4	239	78	4	242	69	85.5	86.1	.6
1900	3	199	79	3	198	71	85.2	85.8	.6
2000	5	192	83	3	203	53	83.8	83.9	.1
2100	3	94	34	2	76	38	82.9	80.8	-2.1
2200	6	160	54	3	59	43	79.3	78.8	-.5
2300	5	108	46	3	53	71	77.6	77.2	-.4
2400	5	134	63	3	64	44	77.3	77.2	-.1

HARTSVILLE STEAM PLANT JULY 22, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	3	144	64	4	44	51	79.0	78.3	-.7
0200	5	140	54	3	59	59	78.5	76.9	-1.6
0300	4	191	43	3	54	41	79.3	78.0	-1.3
0400	4	148	61	3	55	86	78.5	76.0	-2.5
0500	4	122	56	3	58	86	76.8	76.9	.1
0600	4	138	58	3	63	48	77.1	75.5	-1.6
0700	4	157	86	1	162	38	75.1	75.5	.4
0800	6	81	58	4	50	68	75.7	75.5	-.2
0900	7	65	88	5	48	68	76.8	77.4	.6
1000	7	64	88	5	59	79	76.8	77.7	.9
1100	4	75	31	4	76	29	76.2	76.3	.1
1200	5	93	33	4	87	34	78.2	79.1	.9
1300	5	220	28	3	106	21	82.7	84.2	1.5
1400	7	166	44	6	189	34	85.5	86.4	.9
1500	7	171	61	5	172	51	88.0	88.6	.6
1600	12	276	64	8	280	48	78.5	76.3	-2.2
1700	5	271	46	3	296	36	79.3	79.7	.4
1800	6	333	39	3	313	36	79.0	79.1	.1
1900	5	343	36	4	343	26	78.7	79.1	.4
2000	5	271	44	3	286	29	77.9	78.3	.4
2100	4	304	34	3	306	36	77.3	77.4	.1
2200	6	121	44	4	97	61	77.1	76.3	-.8
2300	3	134	29	2	278	38	75.1	75.5	.4
2400	4	131	56	3	53	48	75.1	74.6	-.5

HARTSVILLE STEAM PLANT JULY 25, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	5	74	59	3	52	68	72.9	72.7	-.2
0200	4	133	86	2	66	76	72.3	72.4	.1
0300	3	143	76	2	11	39	72.6	73.2	.6
0400	4	113	79	2	82	61	72.3	72.7	.4
0500	3	122	48	2	43	23	72.6	73.2	.6
0600	4	155	44	3	53	54	72.9	73.2	.3
0700	3	140	51	1	301	63	72.9	72.4	-.5
0800	4	75	39	3	58	61	72.9	71.8	-1.1
0900	3	115	33	2	86	29	73.7	74.4	.7
1000	8	341	50	6	347	41	74.3	75.5	1.2
1100	7	52	44	5	50	39	73.4	74.1	.7
1200	7	29	39	5	44	25	73.4	74.6	1.2
1300	7	66	53	6	60	51	73.4	74.9	1.5
1400	8	118	51	7	122	44	75.4	76.9	1.5
1500	8	169	48	6	150	54	74.5	75.2	.7
1600	7	175	51	5	182	50	71.5	73.2	1.7
1700	3	217	31	3	226	31	72.0	73.5	1.5
1800	3	191	44	3	198	33	72.3	73.8	1.5
1900	5	141	51	4	146	41	73.1	74.6	1.5
2000	4	116	63	3	117	50	72.9	73.8	.9
2100	6	140	59	4	123	54	71.7	72.7	1.0
2200	4	144	33	3	175	25	70.9	71.8	.9
2300	5	91	50	4	55	41	71.2	70.7	-.5
2400	4	81	66	3	52	39	71.7	71.8	.1

HARTSVILLE STEAM PLANT JULY 26, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	2	127	56	2	64	41	70.9	70.4	-.5
0200	3	166	46	2	193	38	70.9	71.0	.1
0300	3	122	23	3	31	29	70.9	71.0	.1
0400	4	112	41	3	64	41	71.5	71.0	-.5
0500	4	134	75	2	64	53	71.2	71.0	-.2
0600	3	134	81	2	85	44	70.3	71.0	.7
0700	4	142	86	2	59	48	70.3	71.0	.7
0800	4	164	81	2	163	39	70.3	71.0	.7
0900	3	149	59	2	98	36	70.9	71.8	.9
1000	5	189	46	3	153	48	73.4	73.2	-.2
1100	7	252	68	4	254	64	73.7	74.1	.4
1200	9	237	83	6	238	68	74.3	76.0	1.7
1300	6	225	66	5	225	59	74.3	75.8	1.5
1400	9	230	88	7	230	75	77.3	79.1	1.8
1500	9	230	84	7	232	91	79.6	81.1	1.5
1600	12	232	83	9	232	68	82.1	83.3	1.2
1700	10	160	29	7	163	25	71.7	72.4	.7
1800	7	176	63	5	166	66	74.5	75.8	1.3
1900	7	172	78	5	166	63	76.5	78.0	1.5
2000	6	181	54	4	179	51	77.6	78.8	1.2
2100	6	171	69	4	176	50	75.9	76.3	.4
2200	3	86	34	2	52	25	74.5	75.5	1.0
2300	2	152	36	2	345	26	74.3	74.4	.1
2400	3	170	46	2	39	61	73.1	73.0	-.1

HARTSVILLE STEAM PLANT JULY 27, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	2	122	38	2	13	61	72.6	72.4	-.2
0200	2	137	50	3	51	50	71.5	70.4	-1.1
0300	2	116	59	2	41	53	70.6	68.8	-1.8
0400	3	150	69	2	80	36	69.5	68.8	-.7
0500	2	135	76	1	36	68	68.7	68.2	-.5
0600	3	104	46	2	96	53	67.0	67.6	.6
0700	2	69	43	2	58	58	67.3	68.2	.9
0800	2	31	56	2	42	50	67.5	68.5	1.0
0900	2	69	41	2	91	38	68.9	70.2	1.3
1000	3	177	50	3	177	44	70.3	71.6	1.3
1100	2	151	44	2	131	31	72.0	73.0	1.0
1200	3	150	31	3	128	29	76.8	78.8	2.0
1300	5	246	19	4	136	19	81.5	82.5	1.0
1400	8	253	66	6	245	41	84.6	85.6	1.0
1500	9	270	79	7	269	71	85.5	86.4	.9
1600	9	276	78	7	274	71	85.7	86.7	1.0
1700	9	278	69	7	273	66	86.3	87.2	.9
1800	7	283	94	5	284	84	84.9	86.4	1.5
1900	6	287	88	3	286	66	84.1	84.4	.3
2000	2	274	76	1	300	69	82.9	83.3	.4
2100	2	95	41	3	58	81	80.7	78.3	-2.4
2200	3	89	50	3	73	69	77.9	74.6	-3.3
2300	4	91	71	4	62	89	74.8	72.4	-2.4
2400	3	134	56	3	87	59	72.9	70.7	-2.2

HARTSVILLE STEAM PLANT JULY 29, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	1	228	89	1	60	61	73.4	73.0	-.4
0200	1	48	33	2	40	78	72.3	70.4	-1.9
0300	1	81	69	1	9	44	71.7	68.8	-2.9
0400	2	47	75	2	53	58	72.0	68.2	-3.8
0500	2	285	36	2	237	93	69.8	67.9	-1.9
0600	1	210	43	1	241	76	68.1	68.2	.1
0700	3	53	53	2	39	46	68.1	66.8	-1.3
0800	2	75	66	1	29	50	67.5	66.8	-.7
0900	1	279	21	1	234	46	69.2	70.2	1.0
1000	2	179	23	2	202	29	74.0	74.9	.9
1100	3	160	33	3	169	33	77.3	78.3	1.0
1200	4	157	29	3	131	23	81.0	82.8	1.8
1300	4	206	51	3	214	41	82.1	83.3	1.2
1400	3	203	28	3	216	18	82.7	83.9	1.2
1500	6	188	46	4	181	39	84.1	85.6	1.5
1600	5	297	44	4	282	31	84.1	85.6	1.5
1700	6	323	28	4	311	28	85.5	87.0	1.5
1800	7	23	69	5	30	56	85.5	86.7	1.2
1900	8	23	89	4	18	78	83.5	83.9	.4
2000	7	44	64	4	37	83	81.8	81.6	-.2
2100	4	37	81	2	47	59	79.9	78.8	-1.1
2200	2	41	51	2	240	54	76.8	76.0	-.8
2300	4	70	84	3	52	50	76.2	72.4	-3.8
2400	4	75	59	3	56	38	72.9	69.3	-3.6

HARTSVILLE STEAM PLANT JULY 30, 1974

PERD ENDG	WIND 150 FEET SPEED AV	WIND 150 FEET DIR AV	WIND 150 FEET PER RDGS	WIND 33 FEET SPEED AV	WIND 33 FEET DIR AV	WIND 33 FEET PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	4	87	98	3	61	76	72.0	69.9	-2.1
0200	4	43	71	2	63	46	73.4	68.5	-4.9
0300	3	76	54	2	146	46	68.9	67.9	-1.0
0400	3	81	38	3	66	75	68.4	67.9	-.5
0500	3	83	76	2	85	53	69.5	66.8	-2.7
0600	4	89	64	3	60	89	68.4	67.9	-.5
0700	5	83	76	4	61	63	68.7	67.4	-1.3
0800	4	71	98	3	93	56	68.9	67.6	-1.3
0900	5	88	78	3	76	64	69.2	69.3	.1
1000	4	94	56	3	79	39	71.2	71.8	.6
1100	4	93	46	3	79	36	71.5	72.7	1.2
1200	2	87	29	2	113	36	74.3	75.8	1.5
1300	5	112	64	4	92	48	75.9	77.4	1.5
1400	4	83	46	3	98	33	77.3	78.6	1.3
1500	3	135	59	2	140	56	79.3	80.5	1.2
1600	3	77	53	3	76	48	79.0	80.5	1.5
1700	7	70	96	4	68	88	79.6	80.2	.6
1800	5	70	78	3	59	61	79.0	80.2	1.2
1900	5	107	64	3	92	51	79.0	80.0	1.0
2000	4	72	48	3	69	54	78.5	79.4	.9
2100	5	66	76	2	38	68	77.3	78.0	.7
2200	6	224	43	4	252	34	76.5	77.2	.7
2300	9	186	59	5	178	58	73.7	74.6	.9
2400	3	145	38	2	108	41	71.7	72.1	.4

HARTSVILLE STEAM PLANT JULY 31, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	6	81	75	4	61	75	71.5	72.1	.6
0200	4	79	61	3	72	43	72.0	72.4	.4
0300	4	71	33	3	49	21	71.2	71.8	.6
0400	5	69	44	3	65	39	71.7	71.8	.1
0500	4	86	71	3	53	59	71.2	71.6	.4
0600	5	70	79	3	57	71	71.2	71.8	.6
0700	3	123	79	2	62	59	71.5	72.1	.6
0800	3	120	78	2	98	68	71.2	71.8	.6
0900	4	130	59	3	100	48	71.2	72.1	.9
1000	3	123	34	3	141	31	72.9	74.1	1.2
1100	7	185	89	5	184	86	74.0	75.8	1.8
1200	7	200	83	6	194	83	74.8	76.3	1.5
1300	8	203	89	6	201	75	75.9	77.2	1.3
1400	8	205	61	6	209	59	78.7	80.2	1.5
1500	8	209	58	6	204	46	81.3	83.0	1.7
1600	10	221	39	7	217	43	80.4	81.6	1.2
1700	6	279	48	5	279	48	72.9	73.5	.6
1800	3	339	23	3	318	38	75.7	76.9	1.2
1900	3	168	51	3	172	34	76.8	77.7	.9
2000	7	161	66	4	165	61	76.5	77.7	1.2
2100	2	162	96	2	16	59	75.1	76.0	.9
2200	2	144	39	2	25	33	74.3	73.8	-.5
2300	4	178	59	2	150	46	73.1	73.0	-.1
2400	3	152	56	2	52	44	72.3	72.4	.1

HARTSVILLE STEAM PLANT AUGUST 1, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	3	178	50	2	27	59	71.7	72.7	1.0
0200	2	226	33	1	49	46	72.4	71.8	-.6
0300	4	264	79	2	206	36	71.6	72.1	.5
0400	4	237	88	2	211	46	71.3	71.8	.5
0500	4	252	59	2	258	39	71.3	71.8	.5
0600	3	257	71	1	288	56	71.0	72.1	1.1
0700	4	273	78	2	286	46	70.7	71.8	1.1
0800	4	281	63	3	270	64	70.2	71.3	1.1
0900	4	274	71	3	282	81	70.4	71.6	1.2
1000	5	285	59	4	287	56	71.8	73.0	1.2
1100	6	294	76	4	290	59	71.8	73.5	1.7
1200	6	308	81	4	307	75	71.8	73.2	1.4
1300	5	303	50	4	297	43	73.0	74.6	1.6
1400	6	232	38	4	236	38	77.2	79.4	2.2
1500	7	285	34	5	346	38	79.1	80.2	1.1
1600	8	334	68	6	10	59	79.7	81.4	1.7
1700	8	321	48	6	345	44	80.5	81.6	1.1
1800	9	322	81	6	340	78	80.2	81.4	1.2
1900	10	333	94	7	339	89	78.8	80.5	1.7
2000	9	348	100	6	347	91	78.0	78.8	.8
2100	10	3	78	7	6	53	76.0	76.9	.9
2200	8	350	54	5	6	58	74.4	74.6	.2
2300	7	352	64	4	348	68	72.7	73.5	.8
2400	6	344	69	3	332	71	71.8	71.6	-.2

HARTSVILLE STEAM PLANT AUGUST 2, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	*	***	**	*	***	**	****	****	***
0200	*	***	**	*	***	**	****	****	***
0300	*	***	**	*	***	**	****	****	***
0400	*	***	**	*	***	**	****	****	***
0500	*	***	**	*	***	**	****	****	***
0600	*	***	**	*	***	**	****	****	***
0700	*	***	**	*	***	**	****	****	***
0800	*	***	**	*	***	**	****	****	***
0900	*	***	**	*	***	**	****	****	***
1000	*	***	**	*	***	**	****	****	***
1100	*	***	**	*	***	**	****	****	***
1200	*	***	**	*	***	**	****	****	***
1300	9	345	26	7	348	21	74.1	75.9	1.8
1400	10	10	50	*	***	**	75.0	76.8	1.8
1500	9	341	46	7	329	36	76.0	77.6	1.6
1600	8	9	50	6	23	59	76.9	78.1	1.2
1700	10	345	75	7	345	54	76.9	77.5	.6
1800	10	338	61	7	344	58	77.1	78.5	1.4
1900	9	345	91	6	350	56	76.4	77.6	1.2
2000	9	349	84	6	6	71	75.8	76.8	1.0
2100	8	352	71	5	7	71	74.4	74.9	.5
2200	7	347	93	3	345	43	73.1	73.0	-.1
2300	4	9	63	2	209	38	71.2	67.9	-3.3
2400	3	7	76	1	150	36	69.9	67.6	-2.3

HARTSVILLE STEAM PLANT AUGUST 5, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	1	240	100	1	121	56	67.6	65.8	-1.8
0200	1	232	96	1	49	100	65.6	64.7	-.9
0300	1	140	39	1	49	56	65.2	63.6	-1.6
0400	*	***	**	1	102	84	63.8	62.7	-1.1
0500	1	305	64	1	143	38	63.2	62.2	-1.0
0600	1	94	51	1	94	69	62.1	61.4	-.7
0700	3	103	83	3	66	53	61.8	60.5	-1.3
0800	2	103	83	1	13	48	61.4	60.6	-.8
0900	1	58	31	1	105	25	61.3	61.9	.6
1000	1	134	26	2	174	43	63.6	64.6	1.0
1100	2	212	21	2	158	26	69.4	70.5	1.1
1200	4	53	25	3	70	19	75.5	77.0	1.5
1300	8	35	43	5	38	38	78.9	80.3	1.4
1400	8	34	59	6	28	48	79.6	81.0	1.4
1500	7	59	43	5	69	44	80.4	81.9	1.5
1600	4	63	34	3	75	21	81.8	83.1	1.3
1700	5	104	33	4	76	26	82.1	83.3	1.2
1800	3	60	46	3	47	39	82.1	83.3	1.2
1900	1	98	26	1	41	56	82.1	83.1	1.0
2000	3	41	89	3	17	78	81.3	81.7	.4
2100	4	60	66	3	53	61	80.5	78.8	-1.7
2200	2	42	69	2	83	63	77.6	74.3	-3.3
2300	3	77	76	3	61	94	74.9	70.7	-4.2
2400	4	88	61	3	49	54	71.6	69.2	-2.4

HARTSVILLE STEAM PLANT AUGUST 6, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	2	74	63	2	70	50	71.3	66.9	-4.4
0200	3	7C	41	3	56	93	69.0	66.5	-2.5
0300	2	147	61	3	77	59	68.3	66.2	-2.1
0400	3	37	44	3	62	79	67.8	64.7	-3.1
0500	3	7C	81	1	100	94	66.4	63.9	-2.5
0600	1	61	96	1	1C1	73	65.4	63.2	-2.2
0700	1	103	61	1	5C	48	63.8	62.8	-1.C
0800	3	159	51	2	45	61	62.9	62.6	-.3
09C0	3	115	54	3	64	54	63.2	63.7	.5
1000	3	133	38	2	119	34	64.8	65.7	.9
11C0	3	139	53	2	151	36	68.3	69.2	.9
1200	3	161	51	3	173	33	74.7	75.9	1.2
1300	3	286	26	3	312	21	78.9	80.1	1.2
1400	3	302	23	3	43	26	80.7	82.0	1.3
15C0	4	174	25	3	183	28	81.7	82.9	1.2
1600	4	273	33	3	235	21	82.9	84.2	1.3
1700	2	198	43	2	194	39	82.8	83.8	1.C
18C0	3	222	50	3	236	36	83.3	84.3	1.C
19C0	3	184	46	3	189	53	83.7	84.5	.8
2000	2	109	36	2	170	46	83.1	83.6	.5
2100	5	72	100	3	51	93	81.1	80.7	-.4
22C0	4	79	96	3	59	66	78.0	77.2	-.8
2300	4	75	58	4	64	96	76.7	72.8	-3.9
2400	3	69	56	2	99	66	75.1	71.1	-4.C

HARTSVILLE STEAM PLANT AUGUST 7, 1974

PERD ENDG	WIND 150 FEET SPEED AV	WIND 150 FEET DIR AV	WIND 150 FEET PER RDGS	WIND 33 FEET SPEED AV	WIND 33 FEET DIR AV	WIND 33 FEET PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	3	109	89	4	61	93	73.1	71.0	-2.1
0200	5	87	75	4	69	76	71.3	69.6	-1.7
0300	2	127	78	2	79	58	70.5	68.9	-1.6
0400	3	123	69	3	64	81	70.4	68.2	-2.2
0500	2	65	59	1	49	71	69.7	66.6	-3.1
0600	2	47	58	1	64	50	68.4	65.7	-2.7
0700	3	61	51	2	97	46	66.3	65.4	-.9
0800	3	127	54	2	97	53	65.6	65.4	-.2
0900	3	124	58	2	104	64	65.8	66.7	.9
1000	3	114	44	3	97	38	67.7	68.6	.9
1100	4	112	48	3	100	34	71.0	72.0	1.0
1200	4	161	38	3	176	28	76.2	77.8	1.6
1300	4	161	34	3	177	28	80.8	82.1	1.3
1400	5	137	33	4	152	31	83.2	84.3	1.1
1500	6	155	44	5	150	39	85.5	86.7	1.2
1600	7	146	51	6	156	50	86.6	87.8	1.2
1700	7	144	73	5	133	50	86.8	87.9	1.1
1800	7	150	61	5	140	50	87.0	88.0	1.0
1900	7	150	100	5	149	93	86.8	87.7	.9
2000	5	138	96	3	128	86	85.5	85.8	.3
2100	5	113	73	3	63	93	83.2	82.7	-.5
2200	5	122	86	4	74	94	80.6	78.4	-2.2
2300	4	123	75	4	74	88	78.5	73.6	-4.9
2400	5	101	73	4	69	81	75.2	71.4	-3.8

HARTSVILLE STEAM PLANT AUGUST 8, 1974

PERD ENDG	WIND 150 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	----TEMPERATURE---- 150 FT (T1)	33.5 FT (T2)	DIFF (T2-T1)
0100	4	129	59	4	66	86	74.4	70.2	-4.2
0200	5	88	58	4	72	69	73.1	69.1	-4.0
0300	3	128	39	3	60	86	72.1	68.9	-3.2
0400	3	96	71	3	58	54	71.6	68.4	-3.2
0500	5	106	81	4	73	51	71.5	68.5	-3.0
0600	4	108	76	3	81	69	70.8	67.7	-3.1
0700	4	109	88	3	56	91	69.3	67.5	-1.8
0800	4	120	96	2	60	83	69.7	68.9	-.8
0900	2	139	66	1	41	33	70.3	69.7	-.6
1000	4	145	63	3	155	64	72.3	73.5	1.2
1100	5	155	63	4	145	50	76.3	77.7	1.4
1200	7	181	38	4	187	31	80.4	81.8	1.4
1300	8	215	58	5	231	43	83.2	84.7	1.5
1400	7	223	48	5	219	43	84.3	85.7	1.4
1500	7	195	43	6	189	41	85.7	87.0	1.3
1600	7	167	59	5	166	46	86.9	88.1	1.2
1700	7	173	59	5	177	54	87.8	88.8	1.0
1800	6	152	84	5	153	66	88.2	89.2	1.0
1900	7	150	84	5	151	81	88.2	89.0	.8
2000	7	159	81	4	154	58	86.6	87.2	.6
2100	3	174	48	2	228	36	84.3	84.3	.0
2200	3	144	46	3	47	53	82.3	80.0	-2.3
2300	2	108	34	2	72	73	80.2	76.7	-3.5
2400	1	5	34	2	220	48	77.9	74.8	-3.1

CLINCH RIVER BREEDER REACTOR JULY 16, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	3	300	**	1	314	29	0	**	**	64.6	62.8	-5.9
0200	2	31	33	1	92	31	1	93	36	68.6	67.9	-1.2
0300	2	52	28	2	313	26	1	3	21	67.4	66.8	-1.5
0400	3	341	44	2	348	16	1	247	21	67.0	66.5	-1.3
0500	2	313	44	1	255	43	1	21	46	66.6	66.3	-1.2
0600	2	289	28	1	119	34	1	145	39	65.9	65.4	-1.6
0700	2	328	46	2	75	28	1	101	25	64.7	64.1	-1.7
0800	2	343	53	1	230	34	1	149	50	63.6	63.4	-1.8
0900	3	326	71	1	341	34	1	267	50	64.0	63.9	-.9
1000	2	344	58	2	344	34	2	346	26	67.4	67.6	.3
1100	3	347	43	3	346	31	3	343	29	72.0	72.4	1.0
1200	6	2	54	5	2	51	4	2	50	76.3	76.8	1.2
1300	8	***	**	6	***	**	5	***	**	79.9	80.5	1.4
1400	8	72	48	7	60	43	6	94	34	81.6	82.1	1.5
1500	9	82	56	7	97	50	6	97	41	***	***	1.4
1600	8	***	48	7	102	36	6	103	38	***	***	1.5
1700	7	56	36	6	44	29	5	45	23	87.8	***	1.3
1800	6	35	50	5	33	36	4	27	39	86.9	***	1.0
1900	8	25	61	6	26	59	4	28	56	86.7	***	.9
2000	8	9	71	5	10	58	4	22	39	85.2	***	.7
2100	8	15	91	4	23	76	3	29	58	83.2	***	.4
2200	9	28	93	5	32	89	3	39	83	82.1	***	.1
2300	9	36	100	4	36	84	2	41	64	79.9	***	.2
2400	7	34	78	3	28	58	2	48	43	77.9	***	.0

CLINCH RIVER BREEDER REACTOR JULY 17, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	6	48	76	2	28	51	2	18	36	75.9	***	.0
0200	6	45	79	3	28	51	2	41	68	75.2	***	.1
0300	7	54	91	3	43	81	2	33	75	72.9	***	-.1
0400	7	62	83	3	36	50	2	13	53	71.9	***	-.1
0500	8	55	96	4	49	84	3	29	63	70.2	***	-.8
0600	5	59	83	2	24	53	1	205	53	68.2	***	-.7
0700	3	65	81	1	331	64	1	204	96	66.1	***	-2.1
0800	4	64	86	1	115	18	1	302	36	64.9	***	-2.1
0900	5	73	96	1	54	38	1	348	63	66.1	***	-.6
1000	4	65	76	2	60	50	2	61	28	69.0	***	.4
1100	6	69	75	5	71	43	4	70	38	73.8	***	1.0
1200	5	61	48	4	60	41	4	81	34	75.4	***	1.1
1300	3	226	19	3	259	33	3	255	46	78.0	***	***
1400	3	231	33	3	258	36	3	260	38	81.5	***	***
1500	4	202	25	4	217	23	3	230	25	84.5	***	***
1600	3	253	8	4	221	9	3	265	**	86.7	***	***
1700	5	280	**	3	278	28	4	270	**	87.0	***	***
1800	5	40	**	4	31	41	4	40	**	***	***	***
1900	2	10	**	3	11	34	3	360	**	***	***	***
2000	2	220	**	3	209	21	2	170	**	***	***	***
2100	2	190	**	2	207	34	2	190	**	***	***	***
2200	3	180	**	3	186	48	2	165	**	***	***	***
2300	2	100	**	1	171	69	2	165	**	***	***	***
2400	2	95	**	3	86	21	2	120	**	***	***	***

CLINCH RIVER BREEDER REACTOR JULY 18, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	2	210	**	2	146	21	2	95	**	***	***	***
0200	2	190	**	5	179	38	2	140	**	***	***	***
0300	2	230	**	2	348	33	2	330	**	***	***	***
0400	1	270	**	3	272	41	2	312	**	***	***	***
0500	2	220	**	1	169	29	2	120	**	***	***	***
0600	1	280	**	3	290	31	2	340	**	***	***	***
0700	1	310	**	2	108	38	2	110	**	***	***	***
0800	2	120	**	2	122	63	2	73	**	***	***	***
0900	1	70	**	1	165	51	2	112	**	***	***	***
1000	1	220	**	2	232	39	2	130	**	***	***	***
1100	1	200	**	4	217	41	5	220	**	***	***	***
1200	5	230	**	6	229	58	5	220	**	***	***	***
1300	5	210	**	6	244	33	5	235	**	***	***	***
1400	6	220	**	7	213	51	5	240	**	***	***	***
1500	8	200	**	7	232	33	6	230	**	***	***	***
1600	8	200	**	9	200	58	6	220	**	***	***	***
1700	8	200	**	7	206	48	6	230	**	***	***	***
1800	4	200	**	6	220	39	5	230	**	***	***	***
1900	6	210	**	6	214	58	4	220	**	***	***	***
2000	6	200	**	7	202	66	4	220	**	***	***	***
2100	4	260	**	3	267	43	3	278	**	***	***	***
2200	4	220	**	4	203	56	2	140	**	***	***	***
2300	4	210	**	0	***	**	1	160	**	***	***	***
2400	4	220	**	3	215	66	2	210	**	***	***	***

CLINCH RIVER BREEDER REACTOR JULY 19, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	2	230	**	1	222	38	2	128	**	***	***	***
0200	6	240	**	5	235	83	***	150	**	***	***	***
0300	6	220	**	1	187	54	***	160	**	***	***	***
0400	4	220	**	4	223	69	***	160	**	***	***	***
0500	2	270	**	0	***	**	***	160	**	***	***	***
0600	1	210	**	1	218	51	***	160	**	***	***	***
0700	2	230	**	0	***	**	***	290	**	***	***	***
0800	2	220	**	3	217	41	***	175	**	***	***	***
0900	1	240	**	1	10	38	***	210	**	***	***	***
1000	4	240	**	5	234	86	***	230	**	***	***	***
1100	4	200	**	3	209	54	***	220	**	***	***	***
1200	5	240	**	5	237	39	***	260	**	***	***	***
1300	6	240	**	5	243	46	***	240	**	***	***	***
1400	4	240	**	7	165	23	***	260	**	***	***	***
1500	2	320	**	6	237	18	***	275	**	***	***	***
1600	3	80	**	4	76	46	2	80	**	***	***	***
1700	6	120	**	5	108	46	4	110	**	***	***	***
1800	8	110	**	8	100	64	5	120	**	***	***	***
1900	3	140	**	3	151	25	3	155	**	***	***	***
2000	4	260	**	3	248	53	3	260	**	***	***	***
2100	5	260	**	4	260	75	4	260	**	***	***	***
2200	4	250	**	5	232	63	2	230	**	***	***	***
2300	2	300	**	1	12	50	2	250	**	***	***	***
2400	3	40	**	1	43	43	2	250	**	***	***	***

CLINCH RIVER BREEDER REACTOR JULY 22, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	3	227	43	1	255	34	1	243	48	70.6	69.8	-1.0
0200	2	350	**	2	342	61	1	285	**	***	***	***
0300	2	120	**	0	***	**	1	76	**	***	***	***
0400	1	210	**	2	205	31	1	128	**	***	***	***
0500	1	330	**	1	194	48	1	170	**	***	***	***
0600	2	250	**	1	232	39	1	167	**	***	***	***
0700	2	50	**	0	***	**	1	50	**	***	***	***
0800	1	110	**	1	107	48	1	353	**	60.3	***	-.8
0900	3	40	**	0	***	**	1	65	**	61.2	***	-.8
1000	2	80	**	2	82	44	1	231	**	63.2	***	***
1100	2	90	**	1	76	23	1	30	**	65.7	65.8	.1
1200	2	220	**	3	213	31	2	230	**	69.5	69.4	.7
1300	5	220	**	5	204	38	4	200	**	74.5	74.3	1.2
1400	5	200	**	5	204	34	4	280	**	76.9	76.8	1.2
1500	5	310	**	5	318	33	4	250	**	78.0	77.9	1.1
1600	6	200	**	7	198	56	4	220	**	80.5	80.3	1.4
1700	6	230	**	6	249	46	4	230	**	81.7	81.5	1.3
1800	6	240	**	7	230	36	5	230	**	82.6	82.5	1.1
1900	6	250	**	5	242	51	4	260	**	82.6	82.3	.8
2000	2	250	**	4	232	58	2	220	**	81.6	81.0	.4
2100	3	200	**	1	166	48	1	153	**	80.6	79.6	-.7
2200	3	190	**	5	193	86	1	330	**	76.8	75.0	-1.9
2300	8	190	**	5	189	69	3	180	**	76.9	75.2	-1.7
2400	9	200	**	10	204	100	4	220	**	78.1	77.5	.1

CLINCH RIVER BREEDER REACTOR JULY 25, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	2	100	**	0	**	**	1	230	**	***	***	***
0200	3	60	**	3	47	58	1	300	**	70.8	69.2	-3.7
0300	2	70	**	1	350	43	1	319	**	69.8	68.2	-3.2
0400	2	40	**	2	32	56	1	319	**	68.6	67.2	-2.7
0500	2	50	**	1	221	34	2	260	**	66.0	***	-2.5
0600	2	220	**	3	212	63	1	240	**	66.2	65.6	-2.3
0700	1	180	**	1	71	38	1	265	**	65.1	***	-1.2
0800	2	20	**	2	22	64	1	260	**	64.4	***	-1.7
0900	1	340	**	1	238	83	1	270	**	64.0	***	-1.8
1000	2	100	**	2	90	43	1	210	**	65.6	65.5	-1.2
1100	1	90	**	0	***	**	2	255	**	68.3	68.2	-.1
1200	2	200	**	4	226	48	2	250	**	72.4	72.3	.1
1300	6	240	**	6	247	51	4	250	**	76.7	76.6	1.2
1400	4	230	**	5	240	61	4	250	**	78.1	77.9	1.2
1500	5	210	**	6	232	38	5	230	**	79.6	79.4	1.3
1600	5	230	**	6	227	61	5	250	**	81.4	81.2	1.3
1700	5	260	**	4	257	41	4	270	**	82.6	82.4	1.2
1800	3	270	**	4	274	53	3	270	**	83.3	83.1	1.1
1900	4	240	**	3	259	39	3	260	**	84.0	83.7	.9
2000	5	250	**	5	246	88	3	270	**	84.1	83.6	.8
2100	5	270	**	3	267	51	2	240	**	82.0	81.1	.1
2200	2	210	**	2	213	78	1	10	**	80.1	79.2	-.5
2300	1	220	**	1	208	46	0	***	**	76.7	75.4	-1.8
2400	3	220	**	4	212	94	2	187	**	73.9	73.2	-3.4

CLINCH RIVER BREEDER REACTOR JULY 26, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	5	220	**	0	***	**	0	***	**	72.9	72.2	-3.6
0200	2	120	**	2	112	38	1	160	**	71.4	***	-2.1
0300	1	170	**	1	326	31	0	***	**	70.7	***	-1.5
0400	2	230	**	2	116	34	1	330	**	70.3	***	-1.6
0500	2	220	**	0	***	**	2	347	**	70.4	***	-1.1
0600	2	250	**	2	238	39	1	170	**	70.4	***	-1.1
0700	2	170	**	1	351	46	1	290	**	69.9	***	-.8
0800	3	180	**	2	157	29	1	320	**	69.5	***	-1.1
0900	3	140	**	1	101	68	0	***	**	69.9	***	-.6
1000	2	90	**	1	100	56	1	240	**	71.2	***	-.1
1100	2	110	**	1	64	25	2	110	**	73.6	73.3	.5
1200	2	170	**	4	126	29	2	180	**	74.3	74.0	.6
1300	3	120	**	2	89	34	2	100	**	72.2	72.0	.5
1400	4	150	**	3	160	33	2	150	**	74.7	74.4	.7
1500	6	200	**	5	188	63	4	190	**	76.9	76.6	1.2
1600	5	220	**	6	214	54	4	220	**	76.8	76.6	1.0
1700	5	260	**	4	270	41	3	260	**	76.0	75.8	.8
1800	4	270	**	4	266	68	2	270	**	75.6	75.3	.6
1900	5	230	**	5	215	38	3	230	**	75.2	74.9	.6
2000	4	270	**	4	301	34	2	310	**	74.6	74.2	.5
2100	5	220	**	4	210	56	2	255	**	73.0	72.5	.0
2200	6	230	**	8	224	94	3	230	**	71.5	71.0	.1
2300	3	90	**	2	73	23	2	70	**	70.8	70.2	-.2
2400	2	170	**	2	168	75	1	190	**	70.3	69.6	-.2

CLINCH RIVER BREEDER REACTOR JULY 27, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	3	220	**	2	192	33	1	163	**	70.3	69.5	-.2
0200	4	60	**	5	59	33	2	110	**	69.9	69.4	-.1
0300	2	230	**	2	348	26	1	360	**	69.4	***	-.1
0400	2	***	**	3	109	29	2	20	**	69.5	69.0	.0
0500	2	190	**	1	120	28	2	70	**	68.8	***	-.1
0600	1	80	**	1	57	100	0	***	**	69.0	68.4	-.1
0700	2	***	**	0	***	**	2	240	**	68.8	68.1	-.5
0800	1	10	**	1	17	83	1	315	**	68.6	67.8	-.5
0900	2	20	**	0	***	**	1	315	**	68.0	***	-.3
1000	3	90	**	3	88	61	2	260	**	68.9	***	.1
1100	4	90	**	4	90	41	4	100	**	72.4	72.1	.7
1200	4	80	**	5	61	39	4	***	**	74.6	74.3	1.0
1300	5	80	**	4	103	33	4	120	**	77.6	77.4	1.3
1400	4	160	**	4	138	41	4	170	**	80.9	80.6	1.4
1500	5	140	**	5	163	44	4	190	**	82.9	82.7	1.3
1600	4	40	**	4	42	19	4	250	**	84.3	84.1	1.3
1700	3	300	**	3	246	25	3	260	**	85.6	85.4	1.3
1800	3	240	**	3	232	19	3	250	**	86.8	86.5	1.2
1900	2	340	**	5	335	26	4	320	**	87.6	87.3	1.2
2000	5	350	**	5	340	58	3	330	**	82.4	82.1	.8
2100	1	270	**	1	259	66	1	263	**	81.0	80.1	-.1
2200	2	280	**	1	224	36	1	270	**	78.8	77.5	-.7
2300	3	240	**	0	***	**	1	265	**	75.0	74.1	-3.0
2400	2	340	**	1	326	29	1	262	**	72.9	71.7	-2.8

CLINCH RIVER BREEDER REACTOR JULY 29, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	4	80	**	1	248	50	1	120	**	72.3	70.8	-3.8
0200	1	240	**	1	82	33	1	220	**	69.7	68.8	-1.6
0300	4	240	**	0	***	**	1	170	**	67.6	***	-2.4
0400	3	140	**	1	119	54	0	***	**	67.6	66.5	-1.4
0500	2	90	**	0	***	**	1	130	**	65.9	***	-.9
0600	2	60	**	1	50	36	0	***	**	65.4	***	-1.4
0700	2	80	**	0	***	**	1	50	**	65.5	65.1	-1.3
0800	2	210	**	1	193	43	1	310	**	65.2	64.9	-1.1
0900	2	360	**	0	***	**	1	325	**	65.3	65.0	-.4
1000	2	270	**	2	317	31	2	139	**	66.4	66.2	-.1
1100	3	240	**	2	193	29	2	***	**	68.7	68.6	-.1
1200	10	220	**	11	217	68	6	230	**	70.7	70.4	-.3
1300	7	270	**	5	221	48	4	230	**	72.2	71.9	.5
1400	4	200	**	4	194	41	3	230	**	75.3	75.1	1.0
1500	5	220	**	6	205	51	6	220	**	79.7	79.7	1.2
1600	6	220	**	7	211	73	5	230	**	82.5	82.4	1.3
1700	6	210	**	6	205	53	5	230	**	84.6	84.6	1.3
1800	10	250	**	11	230	59	8	250	**	86.7	86.5	1.2
1900	12	250	**	10	252	73	8	250	**	87.5	87.1	.9
2000	10	240	**	10	227	75	6	250	**	87.1	86.5	.5
2100	8	230	**	4	226	68	3	220	**	85.3	84.5	.1
2200	8	240	**	8	228	100	2	230	**	82.8	80.7	-.5
2300	10	230	**	6	235	98	3	220	**	80.8	77.4	-1.3
2400	10	230	**	10	223	83	2	220	**	79.8	76.4	-1.4

CLINCH RIVER BREEDER REACTOR JULY 30, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	10	300	**	7	286	50	6	290	**	79.8	78.4	-.3
0200	10	300	**	10	295	79	5	280	**	78.2	***	.2
0300	4	310	**	4	297	36	3	290	**	74.7	***	-.4
0400	5	300	**	3	286	61	1	330	**	68.4	***	-2.2
0500	4	240	**	1	182	25	0	***	**	64.5	***	-4.0
0600	3	240	**	4	224	61	1	230	**	62.2	***	-4.8
0700	3	280	**	1	285	54	2	340	**	60.6	***	-4.8
0800	4	240	**	4	227	53	1	270	**	59.5	***	-4.7
0900	3	240	**	0	***	**	0	***	**	59.1	***	-4.9
1000	2	240	**	3	234	33	1	150	**	62.7	***	-2.1
1100	2	20	**	2	10	41	2	360	**	68.4	68.5	.8
1200	2	360	**	3	339	34	2	30	**	72.6	72.7	1.1
1300	5	10	**	4	333	33	4	320	**	76.5	76.5	1.4
1400	5	300	**	7	290	51	***	***	**	78.7	78.7	1.4
1500	4	270	**	4	259	43	4	250	**	79.0	79.0	1.1
1600	5	170	**	5	150	48	4	180	**	80.9	80.9	1.5
1700	4	180	**	5	169	46	4	180	**	82.2	82.0	1.5
1800	4	210	**	4	187	29	4	180	**	83.6	83.4	1.4
1900	5	280	**	5	279	38	5	220	**	84.3	84.1	1.1
2000	10	300	**	10	296	83	7	290	**	83.5	83.3	.9
2100	10	310	**	7	300	89	6	290	**	82.0	81.5	.6
2200	8	300	**	8	290	89	4	280	**	79.5	78.6	.2
2300	6	300	**	2	288	41	1	360	**	73.8	71.3	-3.1
2400	6	320	**	6	308	96	0	***	**	70.5	66.9	-4.9

CLINCH RIVER BREEDER REACTOR JULY 31, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	3	320	**	0	***	**	0	***	**	68.0	65.0	-5.7
0200	1	110	**	1	60	50	0	***	**	64.3	62.9	-5.6
0300	1	200	**	0	***	**	1	140	**	61.0	***	-4.6
0400	0	***	**	1	129	38	0	***	**	59.9	***	-3.0
0500	2	90	**	1	68	58	1	90	**	59.2	***	-2.0
0600	0	***	**	0	***	**	0	***	**	58.5	***	-1.2
0700	0	***	**	0	***	**	0	***	**	58.4	58.0	-2.2
0800	1	330	**	1	326	66	1	250	**	57.7	57.3	-2.2
0900	2	270	**	1	202	46	1	340	**	57.2	57.1	-1.8
1000	0	***	**	2	231	48	1	350	**	59.8	59.9	-1.8
1100	2	330	**	3	334	46	2	10	**	66.1	66.3	.3
1200	2	340	**	3	339	31	3	320	**	72.3	72.3	1.0
1300	5	20	**	4	348	38	4	340	**	76.4	76.4	1.2
1400	6	80	**	6	59	26	6	70	**	79.2	79.1	1.3
1500	5	310	**	5	285	19	5	270	**	81.1	81.0	1.5
1600	2	40	**	3	36	25	4	250	**	82.3	82.2	1.4
1700	4	260	**	4	242	46	4	240	**	83.4	83.3	1.3
1800	4	252	**	4	230	39	4	230	**	83.9	83.8	1.3
1900	4	180	**	3	176	26	3	230	**	84.4	84.1	1.1
2000	2	160	**	3	153	76	2	150	**	84.4	84.0	1.0
2100	3	200	**	2	230	48	1	230	**	82.4	81.1	-.2
2200	4	220	**	2	214	68	1	310	**	77.3	76.4	-1.8
2300	2	75	**	1	75	51	1	60	**	72.4	70.6	-4.3
2400	1	80	**	1	61	41	0	***	**	68.4	66.9	-5.3

CLINCH RIVER BREEDER REACTOR AUGUST 1, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	2	300	**	1	26	28	0	***	**	65.4	64.2	-4.1
0200	2	260	**	1	301	44	1	230	**	62.2	***	-5.1
0300	0	***	**	0	***	**	0	***	**	61.2	***	-4.7
0400	2	330	**	2	322	76	0	***	**	60.2	***	-3.3
0500	2	320	**	0	***	**	1	280	**	59.3	***	-3.2
0600	2	310	**	2	309	51	1	340	**	58.4	***	-3.1
0700	1	50	**	0	***	**	1	70	**	58.1	***	-3.1
0800	2	340	**	2	336	44	1	280	**	57.6	***	-3.0
0900	2	330	**	0	***	**	1	340	**	57.4	***	-3.5
1000	3	340	**	3	335	53	1	340	**	60.5	***	-1.5
1100	2	60	**	1	214	19	1	220	**	65.9	66.1	.2
1200	3	60	**	5	52	39	2	200	**	72.8	72.8	.9
1300	3	40	**	3	10	18	2	340	**	76.6	76.4	1.1
1400	5	30	**	5	28	46	3	20	**	80.2	80.2	1.3
1500	4	190	**	4	187	29	3	170	**	83.1	82.9	1.3
1600	4	210	**	4	205	38	3	220	**	84.3	84.2	1.3
1700	4	280	**	4	257	39	4	240	**	85.6	85.5	1.4
1800	4	260	**	4	256	33	3	270	**	86.5	86.3	1.3
1900	2	270	**	3	275	44	2	250	**	86.7	86.6	1.1
2000	2	270	**	3	261	76	1	250	**	86.3	85.8	.7
2100	1	210	**	2	206	73	1	170	**	83.5	82.3	-1.2
2200	1	210	**	2	163	48	0	***	**	77.2	76.3	-4.3
2300	2	210	**	2	206	41	1	200	**	72.4	71.4	-5.0
2400	5	100	**	4	90	63	1	210	**	70.9	69.3	-3.0

CLINCH RIVER BREEDER REACTOR AUGUST 2, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	6	180	**	2	129	19	2	90	**	69.6	68.0	-4.5
0200	3	220	**	3	214	25	2	250	**	69.3	***	-2.8
0300	3	280	**	2	291	28	1	260	**	68.2	***	-3.5
0400	3	220	**	3	215	38	1	150	**	68.7	66.9	-3.2
0500	2	220	**	1	336	23	1	110	**	65.7	***	-4.4
0600	2	90	**	2	87	53	0	***	**	65.6	64.8	-2.9
0700	2	230	**	0	***	**	0	***	**	65.0	64.5	-3.6
0800	2	220	**	2	219	69	0	***	**	64.0	***	-3.9
0900	2	220	**	0	***	**	0	***	**	63.9	***	-2.9
1000	2	260	**	1	5	36	1	130	**	65.4	***	-1.5
1100	3	240	**	1	284	23	1	300	**	69.6	69.6	.4
1200	3	340	**	3	346	29	1	340	**	73.2	73.0	.7
1300	4	350	**	3	347	51	3	350	**	74.3	74.2	.9
1400	4	360	**	4	346	76	3	340	**	77.6	77.4	1.1
1500	6	220	**	4	230	36	3	220	**	81.3	81.1	1.2
1600	8	230	**	8	222	44	4	220	**	83.9	83.8	1.3
1700	10	240	**	8	226	58	5	220	**	84.5	84.4	1.2
1800	15	320	**	13	313	25	10	180	**	77.9	77.4	.4
1900	2	60	**	2	10	28	2	330	**	66.8	66.4	-.6
2000	1	40	**	2	57	33	2	350	**	70.6	70.5	.4
2100	1	350	**	2	342	28	2	20	**	73.2	73.0	.6
2200	1	40	**	1	33	48	1	100	**	73.0	72.6	-.1
2300	2	80	**	1	322	43	1	260	**	71.7	71.2	-.3
2400	2	190	**	4	87	39	1	70	**	71.2	70.7	-.1

CLINCH RIVER BREEDER REACTOR AUGUST 5, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	0	**	**	0	**	**	0	**	**	71.1	70.2	-1.7
0200	1	280	**	3	284	76	1	120	**	61.0	***	-5.8
0300	2	200	**	1	283	86	0	***	**	59.8	***	-5.3
0400	2	280	**	1	281	78	0	***	**	59.0	58.5	-3.5
0500	2	220	**	1	300	54	0	***	**	58.0	57.7	-2.9
0600	1	170	**	1	198	58	0	***	**	56.9	***	-1.9
0700	1	160	**	1	149	36	0	***	**	56.3	56.2	-.7
0800	2	110	**	1	333	26	1	180	**	55.5	***	-1.1
0900	1	90	**	0	***	**	1	340	**	55.3	***	-.5
1000	2	270	**	1	246	63	1	340	**	56.1	56.5	-.6
1100	3	330	**	2	6	38	1	360	**	60.4	60.9	-.5
1200	3	340	**	3	344	48	3	320	**	66.4	66.8	.9
1300	5	340	**	4	75	21	4	340	**	70.8	70.7	1.2
1400	5	60	**	5	54	43	4	70	**	74.1	74.0	1.3
1500	5	200	**	3	232	19	2	250	**	75.8	75.7	1.1
1600	6	110	**	5	106	36	4	100	**	77.9	77.8	1.4
1700	6	120	**	5	132	31	3	160	**	79.0	78.9	1.3
1800	5	80	**	5	81	41	4	100	**	79.6	79.4	1.3
1900	5	100	**	5	94	43	4	100	**	80.4	80.2	1.3
2000	6	70	**	7	71	56	4	50	**	80.3	80.0	1.1
2100	6	60	**	4	49	68	3	40	**	78.9	78.5	.6
2200	8	30	**	8	33	81	2	20	**	76.3	75.5	-.1
2300	6	30	**	3	66	54	1	80	**	73.7	72.7	-.2
2400	5	40	**	6	47	98	0	***	**	71.8	68.7	-.3

CLINCH RIVER BREEDER REACTOR AUGUST 6, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	5	40	**	0	***	**	0	***	**	66.4	64.2	-4.0
0200	6	60	**	6	56	94	1	40	**	63.0	***	-3.1
0300	4	60	**	2	37	48	1	10	**	64.7	***	-.3
0400	6	60	**	7	54	100	0	***	**	66.4	62.6	-1.1
0500	5	60	**	3	33	53	1	40	**	65.7	63.5	-.9
0600	5	60	**	7	56	98	1	10	**	65.6	63.9	-.4
0700	4	60	**	1	156	31	0	***	**	64.9	63.2	-1.2
0800	5	80	**	5	65	79	0	***	**	64.4	62.8	-1.4
0900	5	70	**	2	39	61	1	30	**	63.9	***	-.6
1000	4	60	**	4	60	86	1	50	**	66.1	65.6	.1
1100	5	70	**	4	71	43	3	60	**	68.9	69.0	.9
1200	5	60	**	5	59	39	4	60	**	71.3	71.2	1.0
1300	4	90	**	4	107	51	3	100	**	72.7	72.5	1.0
1400	3	320	**	3	324	26	2	230	**	73.4	73.4	1.1
1500	3	70	**	3	252	39	2	250	**	74.9	74.6	1.0
1600	5	170	**	4	171	26	4	280	**	77.6	77.2	1.1
1700	4	80	**	5	101	41	4	110	**	79.7	79.5	1.3
1800	4	120	**	3	138	16	3	40	**	80.4	60.1	1.2
1900	4	110	**	4	120	26	3	90	**	81.5	81.1	1.1
2000	2	90	**	2	98	31	1	30	**	81.2	80.9	.9
2100	20	190	**	7	173	33	6	190	**	77.9	77.1	.2
2200	3	80	**	4	75	36	2	350	**	68.2	67.5	-.6
2300	3	80	**	2	72	29	3	180	**	66.1	65.4	-1.2
2400	2	80	**	2	81	64	1	230	**	66.0	65.2	-1.6

CLINCH RIVER BREEDER REACTOR AUGUST 7, 1974

PERC ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	3	190	**	2	206	66	1	180	**	65.5	65.0	-.9
0200	3	290	**	3	216	44	1	180	**	65.0	64.7	-1.4
0300	1	260	**	2	13	23	1	100	**	64.8	64.5	-1.3
0400	1	90	**	1	96	46	0	***	**	64.8	64.3	-1.6
0500	3	70	**	2	110	36	1	90	**	64.5	***	-.7
0600	2	70	**	2	61	53	0	***	**	64.3	***	-.4
0700	2	80	**	2	86	73	1	60	**	64.3	***	-.6
0800	0	***	**	1	110	46	0	***	**	64.3	***	-.4
0900	2	60	**	1	63	36	1	60	**	64.4	***	-.4
1000	1	40	**	3	53	66	0	***	**	65.2	***	-.1
1100	2	60	**	1	242	21	1	260	**	66.9	66.9	.8
1200	4	90	**	8	78	54	3	100	**	69.5	69.4	.6
1300	2	70	**	3	123	36	2	90	**	71.9	71.8	.9
1400	3	40	**	4	70	41	2	60	**	72.9	72.7	.9
1500	5	90	**	5	55	41	4	70	**	74.8	74.6	1.0
1600	5	100	**	5	94	64	3	90	**	75.5	75.3	1.0
1700	4	90	**	3	111	56	2	90	**	75.4	75.2	.9
1800	3	110	**	3	108	43	2	100	**	76.0	75.8	.9
1900	2	200	**	1	223	31	1	150	**	75.9	75.6	.8
2000	5	220	**	4	210	78	2	220	**	75.8	75.5	.7
2100	5	200	**	4	198	61	2	180	**	74.6	74.2	.5
2200	5	200	**	5	201	86	1	210	**	72.0	71.5	-.2
2300	5	220	**	2	216	50	1	220	**	70.3	69.9	-.5
2400	2	220	**	4	215	76	1	70	**	69.3	68.8	-.2

CLINCH RIVER BREEDER REACTOR AUGUST 8, 1974

PERD ENDG	WIND 200 FEET SPEED AV	DIR AV	PER RDGS	WIND 75 FEET SPEED AV	DIR AV	PER RDGS	WIND 33 FEET SPEED AV	DIR AV	PER RDGS	--- TEMPERATURE --- 75 FEET	33 FEET	DELTA T
0100	3	200	**	1	96	59	1	320	**	69.1	68.3	.2
0200	2	180	**	3	193	36	2	90	**	68.9	68.2	-.1
0300	2	100	**	2	96	34	2	360	**	68.1	***	-.2
0400	2	160	**	2	162	36	1	350	**	69.4	68.2	-.1
0500	0	***	**	1	86	63	0	***	**	67.9	***	-.3
0600	1	360	**	1	50	75	1	350	**	68.2	67.7	-.1
0700	2	100	**	1	62	76	1	80	**	67.5	***	-.7
0800	2	250	**	2	247	46	2	340	**	68.0	67.6	-.6
0900	2	220	**	1	311	38	1	60	**	67.7	***	.3
1000	3	110	**	3	113	61	1	120	**	67.8	***	.4
1100	1	100	**	1	73	54	1	330	**	68.4	68.2	.4
1200	2	190	**	2	189	48	1	180	**	69.6	69.5	.6
1300	4	180	**	3	171	44	1	180	**	71.0	70.8	.7
1400	4	160	**	4	127	34	2	130	**	71.8	71.0	.7
1500	5	160	**	4	145	44	3	120	**	70.4	70.1	.5
1600	5	120	**	6	133	34	3	130	**	72.7	72.4	.9
1700	5	200	**	4	151	31	2	140	**	74.6	74.3	1.0
1800	3	160	**	3	158	54	1	130	**	75.6	75.4	.9
1900	2	200	**	2	173	21	1	200	**	77.1	76.7	.9
2000	4	180	**	4	134	43	2	150	**	77.5	77.2	.9
2100	5	180	**	5	151	43	3	180	**	76.4	76.1	.7
2200	3	200	**	5	194	50	2	200	**	73.7	73.3	.4
2300	2	210	**	1	105	46	1	160	**	71.8	70.7	.2
2400	1	310	**	1	122	39	***	320	**	70.6	70.0	-.2

APPENDIX

Reprinted from JOURNAL OF APPLIED METEOROLOGY, Vol. 16, No. 11, November 1977

Mesoscale Flow over Complex Terrain during the Eastern Tennessee Trajectory Experiment (ETTEX)[1]

C. J. NAPPO, JR.

Air Resources Atmospheric Turbulence and Diffusion Laboratory, NOAA, Oak Ridge, Tenn. 37830

(Manuscript received 15 July 1977, in revised form 19 August 1977)

ABSTRACT

Time-averaged, mesoscale flow fields over complex terrain measured during the Eastern Tennessee Trajectory Experiment (ETTEX) are analyzed in terms of the horizontal means, standard deviations from the horizontal means, and the kinetic energies of the uniform and nonuniform flow components. The vertical profiles of horizontally averaged wind speed and direction shear over flat and complex terrain during different stability conditions are compared. It is shown that the horizontally averaged flow over the ETTEX region was similar to that over a rough but otherwise flat urban area, and that a surface layer of a few hundred meters thickness existed in which the influence of the large-scale topographic features was not felt.

Horizontal variability of the wind field is measured by forming 1) the standard deviations of the wind speed σ_s and direction σ_θ and 2) the ratios of horizontal eddy to mean kinetic energy, EKE/MKE. It is shown that while both methods represent the variability well, the analysis using kinetic energies offers the most quantitative information. During unstable conditions, horizontal variability was low and constant with height and tended to be independent of terrain, while during stable conditions the variability was high and nonuniform with height and was strongly dependent on terrain. It is hypothesized that during unstable conditions, horizontal uniformity of the wind resulted from the homogeneous action of the time-averaged, convective overturning, while during stable conditions, horizontal variability resulted from flow channeling and drainage. Further, above a surface layer of a few hundred meters, EKE/MKE tended to be constant for all stability classes.

1. Introduction

One of the main objectives of the Eastern Tennessee Trajectory Experiment (ETTEX) was the analysis of mesoscale wind fields over complex terrain. These wind observations have been made through the boundary layer during stable, unstable and neutral periods such that some general deductions concerning terrain-dominated flows can be made.

The study of mesoscale flow fields over complex terrain is an important topic in air pollution meteorology. For example, the development of oil shale in the West and the long-range transport and diffusion of sulfates in the East are problems which require a knowledge of terrain interactions on atmospheric dispersion. The details of these processes are not, however, well understood.

Start *et al.* (1974) demonstrate that over rough mountainous terrain, effluent plumes were, on the average, two to four times more dilute than would be predicted over flat terrain. In a study of diffusion in a steep-walled canyon in mountainous terrain, Start *et al.* (1975) report differences between the observed canyon diffusion and that predicted over flat terrain with the magnitude of the difference depending on the stability. Specifically, they found little difference during daytime lapse conditions, while neutral conditions resulted in five times greater dilution in the canyon than estimated over flat terrain. Strong inversions, however, resulted in canyon bottom concentrations 15 times greater than flat terrain predictions. On the other hand, Roffman *et al.* (1976) show that for plumes over complex terrain during stable conditions, measured concentrations are, on the average, a factor of 8.7 less than those predicted over flat terrain. These and other studies suggest that plume dilution over complex terrain is a complicated function of stability, topography, wind speed and direction. Because of the uncertainty involved in making dilution estimates, many modelers of long-range transport and diffusion presently choose to ignore the effects of complex terrain.

The decrease in plume concentrations over complex terrain is in part due to increased plume spreading caused by increased horizontal variability of the wind. Previous observations of horizontal wind variability are limited in that measurements were not made through the boundary layer on mesoscale distances. For example, Wendell (1972), Start and Wendell (1974) and Kao *et al.* (1974) used surface wind observations over mesoscale areas, while Ackerman (1974), Egami *et al.* (1974) and Connell (1976) used pilot balloon observations over areas of limited ex-

[1] ATDL Contribution File No. 77/10.

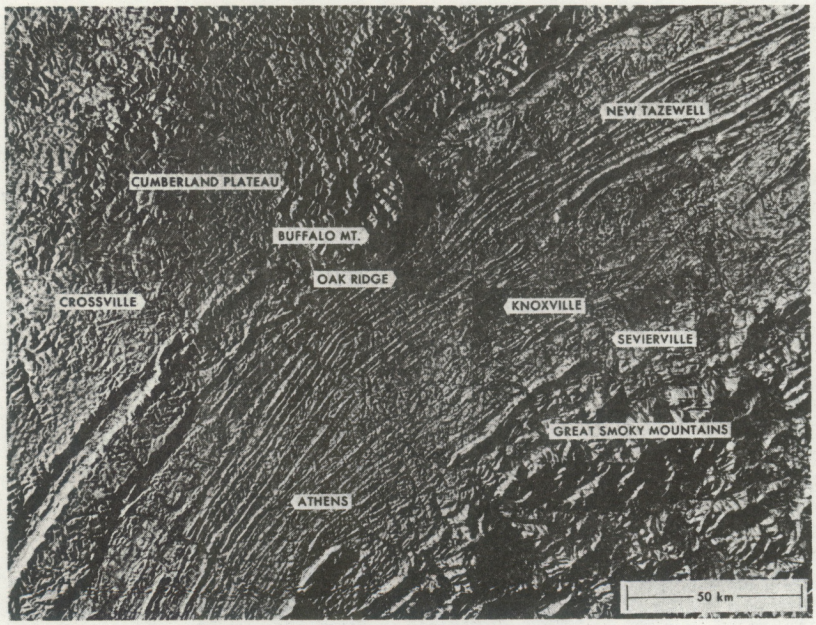


FIG. 1. The ETTEX region.

tent. The ETTEX program, however, was designed to analyze the three-dimensional mesoscale wind field.

In the following sections, after a discussion of the ETTEX region and data, the area-averaged profiles of wind speed and direction are analyzed and compared with profiles over flat terrain. Next, the horizontal variability of wind speed and direction is examined, and it is shown that horizontal variability was greatest during the stable periods and least during unstable periods. An attempt is made to typify the horizontal variability of wind speed and direction by introducing mesoscale eddy kinetic energy, which is the energy contained in the nonuniform components of the flow. Finally, the results are restated, and suggestions for further studies of flow over complex terrain are made. A previous report on this subject (Nappo, 1975) gives a preliminary analysis of the ETTEX data. The results presented here are based on a more detailed analysis of the data.

2. The ETTEX region and data

The ETTEX region is depicted in Fig. 1, which has been reproduced from a vertically exaggerated relief map. The Tennessee River Valley generally lies along a southwest-northwest line. The valley floor has a mean elevation of about 300 m MSL and is corrugated with broken ridges approximately 100–150 m in height. The floor descends from the northeast to the southwest and the valley boundaries rise rather steeply from this floor. The average height of the Cumberland Mountains immediately north of Oak Ridge is about 1000 m MSL, while that of the Great Smoky Mountains is about 2000 m MSL. The valley floor is rather homogeneous in its irregularity, i.e., deviations of terrain elevation from the area-averaged elevations are more or less uniformly distributed. This fact will be important when considering the area-averaged wind profiles in the next section.

Fig. 2 shows elevation contours, in meters above sea level, for roughly the same area. Elevations were estimated from topographic maps and represent average values over 10 km square areas. ETTEX observation stations were located at Crossville, New Tazewell, Sevierville, Athens, and the "0800" ecology site of the Oak Ridge National Laboratory. At these stations, single theodolite pilot balloon wind soundings were made using 30 g balloons. Readings were taken every 30 s for 10 min periods. Soundings were made at each station every hour during steady observation periods, and every half-hour during sunrise and sunset periods. Surface wind observations at 2 m height were also made at these stations. Complementary meteorological observations were obtained from the meteorological towers operated by the Tennessee Valley Authority (TVA) at the John Sevier, Bull Run, Watts Bar and Sequoyah power plants. Wind data were also obtained from the Federal Aviation Authority (FAA) station at McGhee-Tyson Airport. Table 1

TABLE 1. ETTEX observation periods.

Period	Date	Time (EDT)	Stability
1	7/16/74	1000–1400	Unstable
2	7/17/74	1100–1600	Unstable
3	7/18/74	1600–2100	Transition
4	7/19/74	1600–2100	Transition
5	8/06/74	0400–1000	Stable
6	8/07/74	0400–1000	Stable

summarizes the observation periods of the ETTEX study. A more complete description of the ETTEX experiment is given by Hanna *et al.* (1974).

In the following analysis, time-averaged winds are used in an attempt to separate the temporal variations from the spatial ones. In the analysis of horizontal variability, ETTEX periods 1, 4 and 6 of Table 1 are used as examples of unstable, transition and stable conditions. Heights at each station are referred to the local ground level, and the resulting levels can be considered to follow the terrain.

3. Average wind profiles over complex terrain

In this section, area-averaged (e.g., station-averaged) profiles of wind speed and direction shear over the ETTEX region are compared with similar profiles over flat terrain. These profiles represent the integrated effects of complex terrain in much the same way that profiles near the surface represent the integrated effects of individual aerodynamic surface roughness elements.

Examples of profiles over uniform terrain were taken from the O'Neill experiment (Lettau and Davidson, 1957) and the Wangara experiment (Clarke *et al.*, 1971). Periods 1, 2, 3, 5 and 6 of the O'Neill data and days 11, 12, 13, 14, 31, 33 and 34 of the Wangara data were used to form average wind profiles for these sites. Stable conditions were assumed to apply from 2400 to 0600 hours, unstable conditions from 1000 to 1600 hours and transition from 1800 to 2200 hours (all at local standard time). In the following discussion, all of the ETTEX observation periods are used for the analysis of wind speeds, but in the analysis of direction shear period 2 is not used because the direction measurements made at this time are uncertain due to low wind speeds.

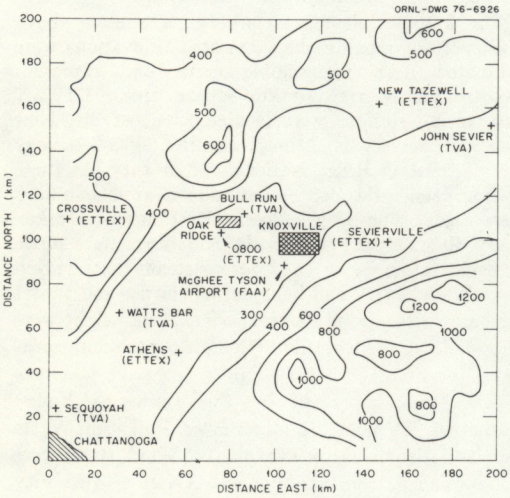


FIG. 2. ETTEX observation stations.

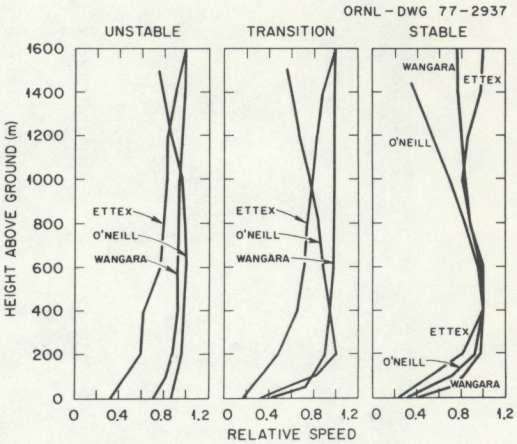


FIG. 3. Area-averaged normalized wind profiles over flat and complex terrain.

Profiles of area-averaged wind speed relative to the maximum averaged wind speed are shown in Fig. 3. The decrease of wind speed with height in the O'Neill data can be attributed to geostrophic wind shear due to synoptic-scale horizontal temperature gradients. In the absence of this effect, the profiles of the O'Neill and Wangara data should be similar for all stability classes. These can be considered as representative of the flow over uniform terrain. The ETTEX profiles are seen to be significantly different during unstable and transition periods but similar during stable conditions to the uniform terrain profiles. If the top of the boundary layer is associated with the height of the maximum wind speed, then the boundary layer thickness over complex terrain during ETTEX is considerably greater than that over uniform terrain for the unstable and transition cases. During stable conditions the heights are comparable.

The curvature of the ETTEX wind profiles below 800 m for the unstable and transition periods is consistent with that expected for flow over a surface with large aerodynamic surface roughness. Here, the hills and ridges that comprise the surface irregularity are considered as roughness elements. Their effect on

the area-averaged wind profile can be measured by assuming a logarithmic wind profile to hold through the boundary layer. An effective surface roughness can then be determined from the area-averaged wind observations. Using the transition period data, this effective surface roughness length was determined to be about 350 cm. By fitting these data to a power law of the form $u=u_1(z/z_1)^n$, where u_1 is the mean wind speed at $z_1=2$ m, it was determined that the exponent n has the value 0.38. These values of surface roughness and power law exponent agree with those derived by Davenport (1963) for neutrally stratified flow over urban areas. He gives values of 400 cm and 0.40 for the surface roughness and power law exponent, respectively, and suggested a boundary layer thickness of from 500–600 m based on these values. Fig. 3 for the transition period shows that the ETTEX area-averaged wind profile has minimum vertical shear at about 700 m. This also suggests a similarity between flow over complex terrain and flow over a flat urban area. However, above 800 m the ETTEX profiles reverse their curvature and wind speed again increases. During stable conditions this curvature occurs at a higher level. Panofsky and Petersen (1972) have demonstrated that changes or "kinks" in wind profiles are related to modifications as air flows from homogeneously smooth to homogeneously rough terrain. Applying this concept to the ETTEX profiles, two flow regimes can be identified. In the lower portion of the boundary layer, the flow is similar to that over an urban environment in otherwise flat terrain. This flow is localized within the Tennessee Valley region and extends up to about half the mean height of the Smoky Mountains above the valley floor, i.e., about 800 m. Above this layer, free atmospheric flow is encountered. This observation agrees with the results of a comprehensive survey of the meteorology and climatology of the Oak Ridge area by Holland (1953). He observed that wind speeds below 1000 m MSL or about 700 m above the valley floor are significantly lower over the Tennessee Valley region than over surrounding nonmountainous terrain, but beyond 1200 m above the valley floor, these differences disappear.

The area-averaged turning of the wind as a function of height is shown in Fig. 4. The area-average turning for the ETTEX data was computed by averaging at each level the turning measured at each station. An analysis of the geostrophic wind shears during the ETTEX observation periods was done using the National Weather Service radiosonde data from Nashville, Tenn., Athens, Ga., and Greensboro, N.C. The angular deviation of the geostrophic wind between the surface and 850 mb, about 1500 m MSL, was determined for the unstable, transition and stable cases shown in Fig. 4. These deviations were 20° for the unstable case, −67° for the transition case and

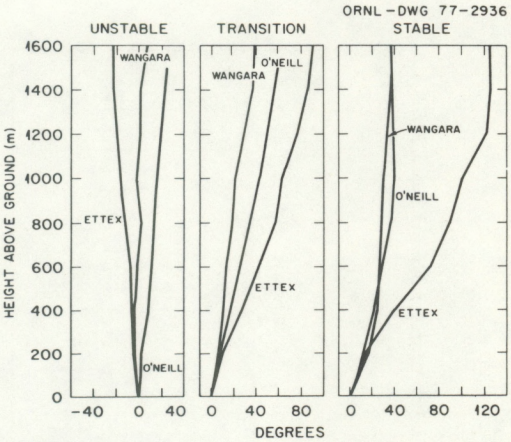


FIG. 4. Area-averaged profiles of wind direction shear over flat and complex terrain. Positive values indicate turning to right.

79° for the stable case. From Fig. 4 we see that the angular deviation of the geostrophic wind is opposite to that of the measured area-averaged wind for the unstable and transition cases and less than that for the stable case. These results indicate that during the ETTEX experiment, synoptic-scale temperature gradients, e.g., thermal winds, had little influence on the actual winds during unstable and transition periods and augmented the terrain effect during stable periods.

In the first 200 m from the surface, the differences in the area-averaged turning of the wind over smooth and complex terrain, as shown in Fig. 4, are small, approximately equal to zero. From this consistency, it may be inferred that the area-averaged low-level flow was unaffected by the large terrain features and was responding mainly to the local ground surface characteristics. In a theoretical analysis of boundary layer horizontal variability, Barr and Kreitzberg (1975) demonstrated that the depth through which the boundary layer can be considered horizontally homogeneous varies with the horizontal length scale of dominant terrain variability. As a specific example, Barr and Kreitzberg (1975) estimated that the depth through which the surface influence has diminished by 10%, i.e., the surface layer depth, is about 290 m for a terrain length scale of 100 km, a wind speed of 2 m s^{-1} and an eddy coefficient of 1 m^2 s^{-1}. From Figs. 3 and 4, it can be seen that this estimate agrees with the ETTEX observations, especially for the stable case.

Above the surface layer, the effects of large-scale terrain features begin to be felt. Holland (1953) showed that at elevations greater than 1700 m above the valley floor the wind direction is essentially unaffected by the terrain, but below this level channeling steadily increases as the surface is approached. On a

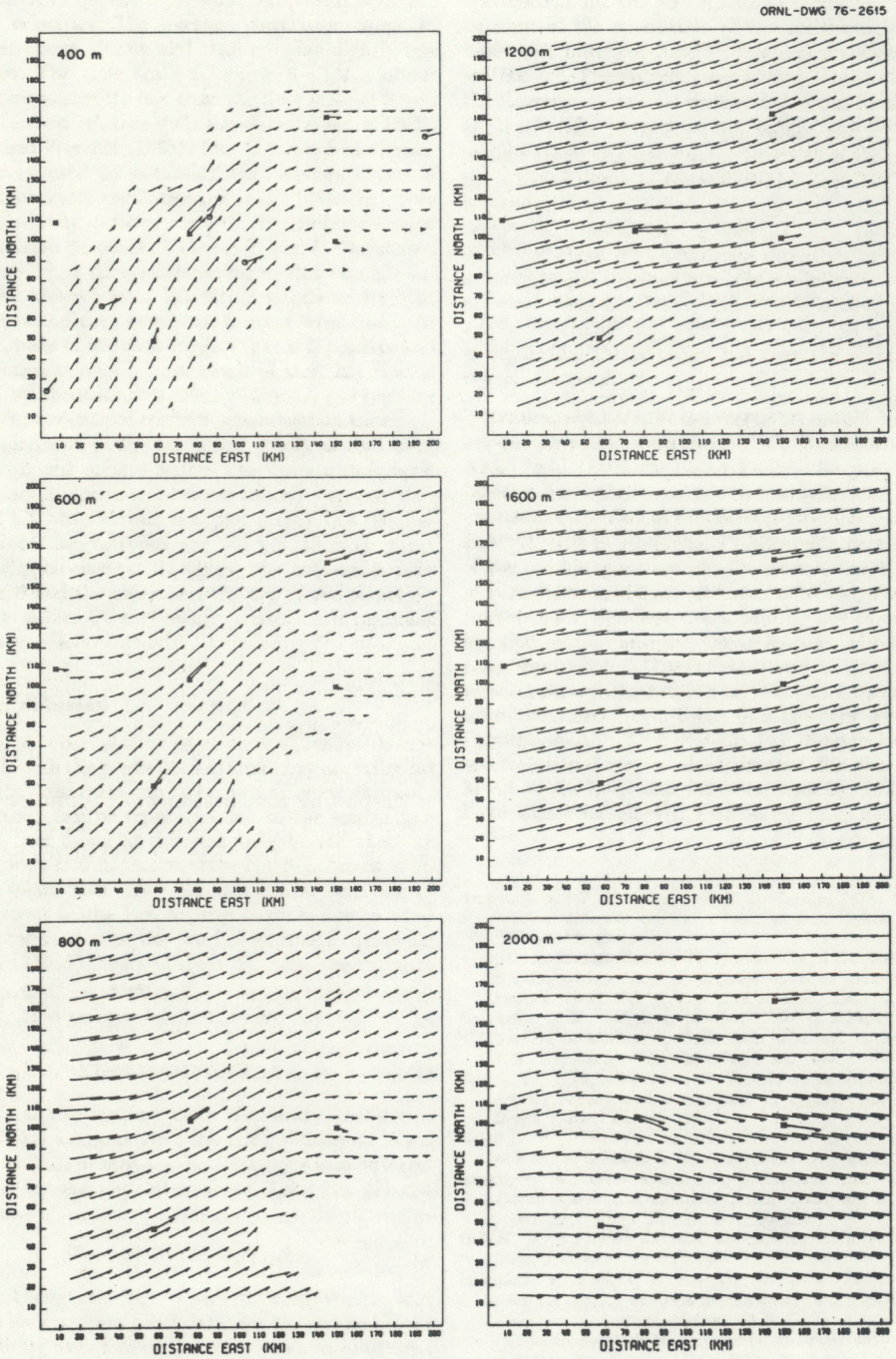


FIG. 5. ETTEX wind field for 18 July 1974 at 1600 EDT for various heights above sea level.

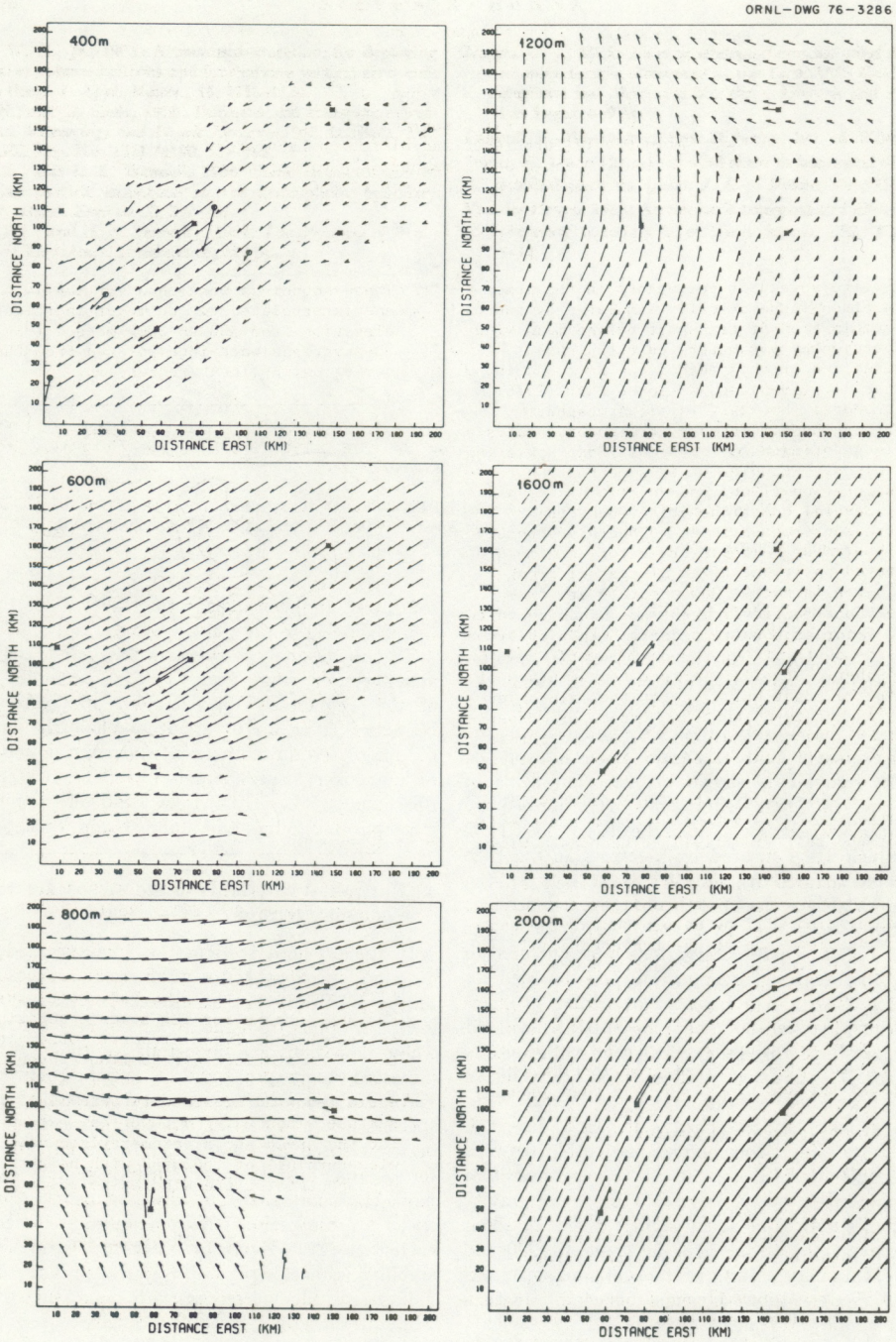


FIG. 6. As in Fig. 5 except for 6 August 1974 at 0500 EDT.

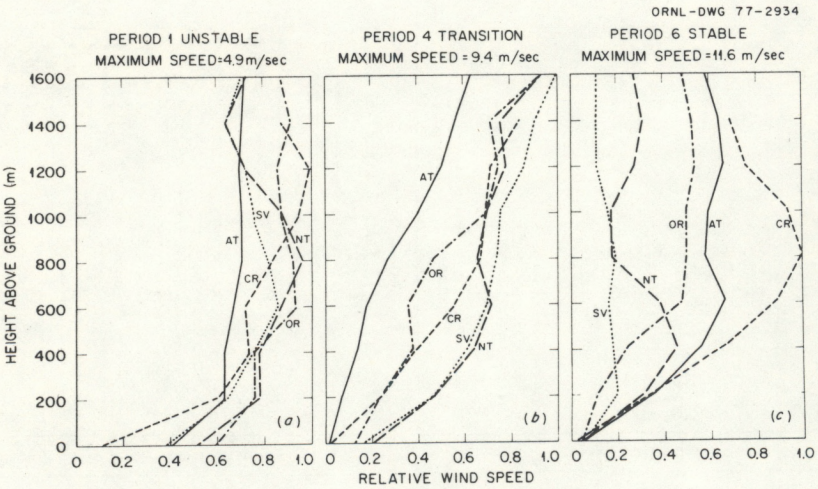


FIG. 7. Normalized wind speed profiles over the ETTEX stations during unstable (a) transition (b) and stable (c) periods. Stations are AT = Athens, CR = Crossville, SV = Sevierville, NT = New Tazewell, and OR = "0800" site.

climatological basis, the Knoxville upper level winds are from south-southwest to north-northwest about 75% of the time, while the flow at about 200 m is bimodal, primarily northeast or southwest along the valley axis. This bimodal flow regime is due to flow channeling of the westerly wind up the valley during the day and drainage winds down the valley during the night. An example is shown in the wind fields in Figs. 5 and 6. These wind fields were formed by interpolation and extrapolation of the observed ETTEX winds, which are indicated by asterisks at the base of the wind arrows. At the 400 m MSL level, the wind arrows with circles at their bases are independent observations from the TVA and FAA installations shown in Fig. 1. These observations were not used in the objective analysis program, and are included for verification. In Fig. 5 it is seen that significant channeling begins between 800 and 1200 m MSL or about 500–900 m above the valley floor, and continues to the surface. The drainage wind is dramatically shown in Fig. 6, where between the surface and 1600 m MSL, there is roughly a 180° change in wind direction. In Fig. 5, terrain effects become noticeable between 800 and 1200 m MSL, or at an average height of 700 m above the valley floor. In Fig. 6, the gravity flow becomes noticeable at an average height of about 1100 m above the valley floor or between 1200 and 1600 m MSL. The effects of terrain apparently extend to higher elevations during stable conditions than during unstable and transition conditions.

The backing of the wind above 600 m for the unstable case shown in Fig. 4 is also due to channeling. On this day, the free atmospheric flow was south-southwest and hence near the valley floor the wind was channeled to the right.

The above analysis suggests that when considering area-averaged wind fields over the complex terrain of the Tennessee Valley region, one can define a boundary layer up to about one-half the height of the major terrain features in which the flow is similar to that over a very rough but flat surface. Above this boundary layer, however, wind direction shear is a complicated function of stability and topography.

4. Horizontal variability of the mesoscale flow over complex terrain

In the previous section, the area-averaged profiles of wind speed and direction over complex terrain during ETTEX were examined. In this section, the local deviations from the area average are considered. These deviations are important for they can lead to increased plume spread and enhanced dispersion.

An example of the horizontal variability of wind speed is shown in Fig. 7. Here the time average profiles of wind speed at each ETTEX station are plotted for a stable, unstable and transition period. All values have been normalized by dividing by the maximum speed for the period; this maximum is indicated for each case. The degree of horizontal variability with stability is most striking. Near the surface, this variability steadily decreases with increasing stability, while at the upper levels the reverse is seen. During the stable period, all the ETTEX stations show a low-level wind speed maximum or jet; however, the vertical position and intensity is quite variable.

The simplest measure of horizontal variability is the standard deviation from the horizontal mean. In the following, σ_s represents the standard deviation of the horizontal wind speed from the area-average wind speed, and σ_θ the standard deviation of wind direction from the area-average wind direction. Note that the area-average of the wind direction is not the same as the area average of the wind turning shown in Fig. 4. The area average wind direction is defined as $\theta = \tan^{-1}(\bar{u}/\bar{v})$, where $\bar{u}$ and $\bar{v}$ are the area average values of the u (easterly) and the v (northerly) components of wind velocity.

The horizontal standard deviations σ_s of the wind speeds shown in Fig. 7 are shown in Fig. 8 as functions of height. During the unstable period, the horizontal variability as measured by σ_s tended to be low and roughly independent of height above the 200 m surface layer. With increasing stability, however, the variability increased with height as did the height of maximum variability. If it is assumed that the free atmosphere had no horizontal variability in speed over the ETTEX region, then Fig. 8 suggests that terrain effects extend much higher during the stable period than the unstable period. The transition case is intermediate. The standard deviation of wind direction σ_θ is shown in Fig. 9. Near the surface, σ_θ acts in the opposite sense to σ_s, i.e., it increases with increasing stability. During the unstable period the horizontal variability of the wind direction, like the speed, is relatively uniform with height. The stable period, however, shows a more complicated vertical variation.

The above observations can be accounted for in the following way. During the unstable period convective overturning above the surface layer dominated terrain-induced perturbations. Because these convective elements are uniformly distributed in space when sampled over several hours, it is reasonable to assume that their time-averaged effect will be the same throughout the mesoscale region. The result is horizontal homogeneity produced by the strong mixing action of the convective eddies; the small and near-constant values of σ_s and σ_θ support this hypothesis. Near the surface, however, the large convective eddies which scale with height, are not so dominant and the flow is driven primarily by mechanical turbulence. This surface layer flow, in the absence of large-scale convective mixing action, will then be controlled by the local terrain. It is expected, then, that local flow channeling will result in increases in the standard deviation of wind speed and wind direction. The above argument accounts for the large values of σ_s during the unstable period, as shown in Fig. 8. However, a correspondingly large value of σ_θ is not seen in Fig. 9. This is probably because the local terrain features, i.e. the ridges and valleys of the Tennessee valley region, are nearly parallel, as shown in Fig. 1, so that flow channeling would tend to result in almost parallel flow.

During the stable period the mesoscale flow was believed controlled by the small-scale terrain features, e.g., the hills and ridges, in the surface layer, and by

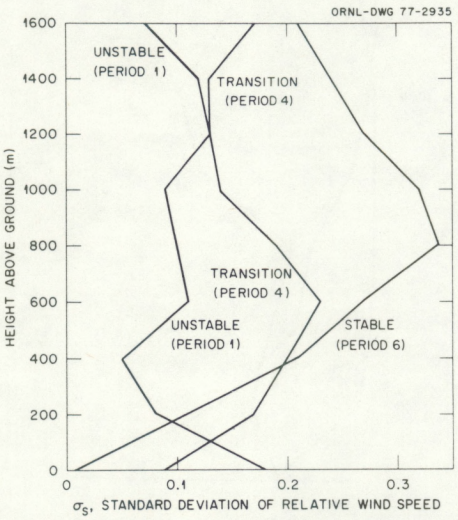


FIG. 8. Standard deviation of the normalized wind speed from the horizontal mean for stable, unstable and transition periods.

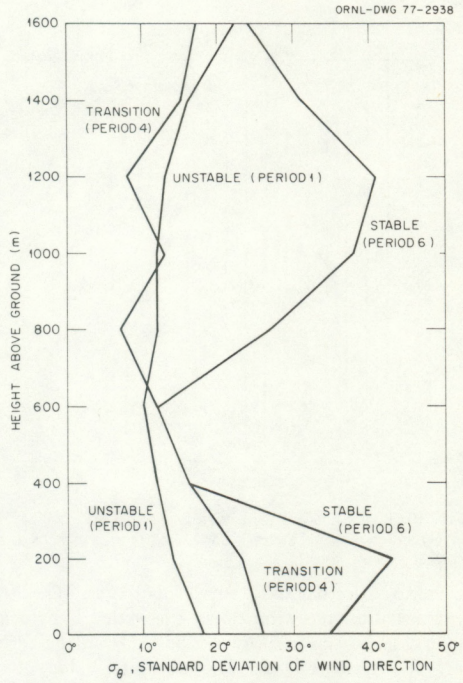


FIG. 9. As in Fig. 8 except for wind direction.

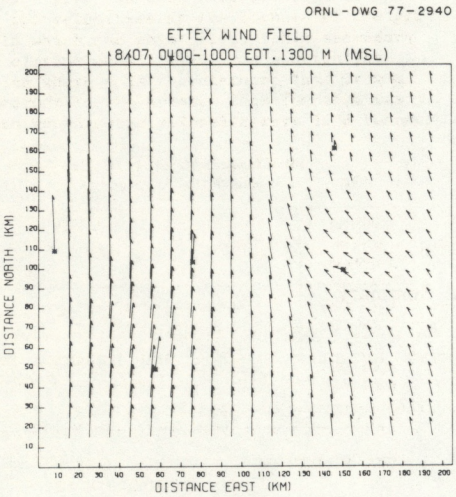


FIG. 10. ETTEX wind field during period 6 at 1300 m MSL or 1000 m above the valley floor. Length of arrows are proportional to wind speed.

the large-scale terrain above this layer. The well-organized drainage wind down the valley is evidently responsible for the very low values of σ_s in the surface layer shown in Fig. 8. The absolute value of the standard deviation of the wind speed at the surface is about 1.2 m s^{-1} for the stable case and about 0.9 m s^{-1} for the unstable case, i.e., they are nearly equal. Hence, the flow in the surface layer was rather similar for all stability classes and is controlled by local surface conditions. This appears to confirm the theoretical result of Barr and Kreitzberg (1975). The increase during the stable period in the wind direction variability σ_θ from the surface to 200 m, as shown in Fig. 9, is believed due to the fact that small-scale terrain features are ridges that parallel the valley drainage flow. Hence, just as in the unstable case, channeling produces horizontal uniformity of direction. Above the ridges, however, this channeling gives way to larger scale terrain effects, with a corresponding increase in variability. This low-altitude increase is perhaps not significantly large. Of greater significance are the elevated maxima of σ_θ and σ_s seen in Figs. 8 and 9. During this stable period (period 6) the free-atmospheric flow was strong and from the south. On the eastern side of the ETTEX region, the flow was perturbed by the Great Smoky Mountains while in the central and western portions the flow was relatively uniform, as shown in Fig. 10.

In Figs. 8 and 9, the transition period is seen to be characterized by a degree of horizontal variability intermediate between stable and unstable conditions. At the surface the absolute value of σ_s is 0.8 m s^{-1}, again approximately equal to the values for the stable and unstable cases.

5. Mesoscale mean and eddy kinetic energies

The preceding analysis of the horizontal variability of mesoscale flow is complicated by the need to examine wind speeds and directions separately. A less complicated analysis is afforded by considering the spatial mean and eddy components of the kinetic energy of the mesoscale flow. The partitioning of a flow field into a spatial mean and a deviation from the mean or eddy is widely used in studies of the general circulation [see, e.g., Saltzman (1957) and Smagorinsky *et al.* (1965)]. If the horizontal wind components u and v of each observation are each decomposed into a horizontal mean and a deviation from the horizontal mean, or eddy value, the mean and eddy contributions to the total kinetic energy may be expressed by

$$\text{Mean Kinetic Energy} = \text{MKE} = \tfrac{1}{2}(\bar{u}^2+\bar{v}^2), \quad (1)$$

$$\text{Eddy Kinetic Energy} = \text{EKE} = \tfrac{1}{2}(\overline{u^2+v^2}) - \text{MKE}, \quad (2)$$

where the overbar indicates a horizontal average. The term $\frac{1}{2}(\overline{u^2+v^2})$ in (2) is the horizontal average of the total kinetic energy.

The above definitions require that the deviations from MKE be due to horizontal variability of the flow. Since the observations are time averages, temporal variations are presumably absent, and the EKE

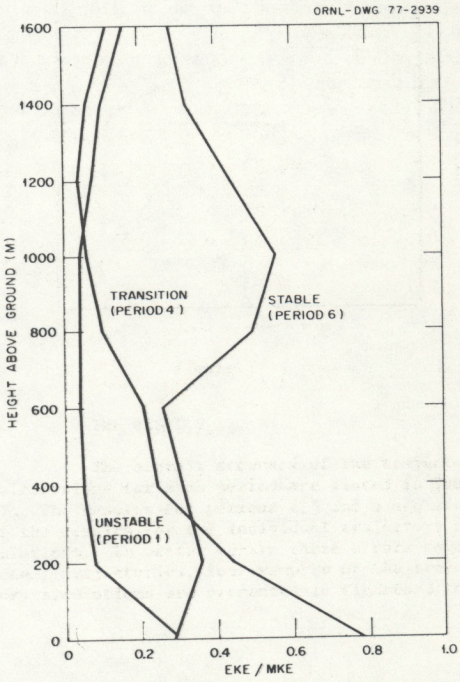


FIG. 11. Ratio of eddy kinetic energy EKE to horizontal mean kinetic energy MKE for unstable, stable and transition periods.

can be attributed to the effects of topography and stability. Near the ground surface, it is expected that the eddy kinetic energy should be large. Away from the surface, terrain effects should diminish, and the eddy component of the kinetic energy, should vanish as the free atmospheric flow is attained. At this level, the mesoscale flow should be horizontally uniform. In Section 4, it was argued that atmospheric stability can strongly influence horizontal variability through the homogenizing action of convective overturning. The eddy kinetic energy is then expected to diminish quite rapidly above the surface for unstable conditions and less so for stable conditions. These arguments tend to be borne out in Fig. 11 which shows the ratio of eddy to mean kinetic energy as a function of height for the three ETTEX observation periods under study.

Above the 200 m surface layer, the ratio EKE/MKE for the unstable period is nearly uniform with height with an average value of 0.07. For the stable period, the ratio is not as vertically uniform as for the unstable case. The maximum at 1000 m corresponds to the terrain induced perturbations to the flow field shown in Fig. 10. The vertical average of EKE/MKE for the stable period is 0.38. For the transition period, the value is 0.29.

The high value of EKE/MKE for the transition period near the surface illustrates that this analysis method is somewhat more sensitive to variations than the joint analysis of wind speed and direction variances performed in the previous section. Noting that EKE is produced not only by horizontal variations in wind speed but also in wind direction, it is seen from Figs. 8 and 9 that during the stable period the standard deviation σ_s of wind speed at the surface is small, while the standard deviation σ_θ of wind direction is large. Conversely, for the unstable period, σ_s is large and σ_θ is small. During the transition period, however, there is no compensating difference in the quantities. This implies that for this period, strong deviations in wind speed were correlated with large deviations from the horizontal average wind direction near the surface. During this transition period, period 4 of Table 1, a general area of thunderstorms developed eastward from an Oak Ridge to Athens line and this may account for the large values of EKE below 1000 m shown in Fig. 11. In an ensemble of observation periods, however, it is expected that such events would not be statistically significant.

Disregarding this particular transition period, it is expected that within the surface layer, and especially near the surface, the horizontal variability of the mesoscale flow tends to be independent of stability. This is borne out in Fig. 11 where the ratios of eddy to mean kinetic energy are essentially equal at the surface. As has already been pointed out, this is due to the parallel flow channeling produced by the small-scale ridges which parallel the valley floor. We can estimate then that the mesoscale flow near the surface has a horizontal variability of about 30% for all stability classes.

The above discussion shows that analyzing the mesoscale wind field in terms of eddy and mean kinetic energy enables one to quantitatively estimate its overall degree of horizontal variability. This degree of horizontal variability can be related to mesoscale atmospheric dispersion; however, a functional relationship is yet to be found.

6. Summary

An analysis of the mesoscale flow over complex terrain for stable, unstable and transition periods during the Eastern Tennessee Trajectory Experiment (ETTEX) has been performed.

The analysis suggests that mesoscale flow over the ETTEX region can be divided into several layers, each layer resulting from the effects of different terrain scales. Near the surface, a layer of about 200 m exists in which area-averaged profiles of wind speed and direction changes are similar to profiles over a rough but flat surface for all stability classes. Above this layer, the area-averaged wind speed profiles are still similar to those of a flow over a rough-flat area for all stability classes up to a height of about one-half the mean peak height of the Great Smoky Mountains. In this same layer, the turning of the wind with height is a complicated function of stability and local topography. Above about one-half the height of the major terrain features, free atmospheric flow is encountered. Wind speeds increase and directions tend to remain constant as the free flow region is entered.

The horizontal variability of the mesoscale flow is nearly independent of stability in the surface layer, but is strongly affected by stability in the upper layers. Above the surface layer, the horizontal variability is high during stable conditions and low during unstable conditions. It is believed that the mixing action of convective turbulence during the unstable conditions dominates the terrain influence and results in a more uniform flow. During stable conditions, the horizontal variability extends to higher elevations than during the unstable conditions.

An analysis of the mesoscale flow in terms of eddy and horizontal mean values of kinetic energy enables quantitative estimates to be made of the horizontal variability of the ETTEX flow fields. Above the surface layer, the ratio of eddy to horizontal mean kinetic energy tends to be uniform with height for all stability classes. The horizontal variability measured as the percent of eddy kinetic energy over mean kinetic energy is about five times greater during stable conditions than during unstable conditions.

The ETTEX experiment was a first attempt at sampling the vertical variation of the mesoscale flow over complex terrain. The above analysis has shown

the complex structure of this flow; the question of how to generalize these results remains. It is hoped that future experiments along the lines of ETTEX will be performed over both uniform and complex terrain and these observations will be complemented with physical and numerical modeling. Also, an attempt to relate atmospheric dispersion with flow over complex terrain either through field studies such as ETTEX or physical modeling must be made.

Acknowledgments. This research was performed under an agreement between the National Oceanic and Atmospheric Administration and the Energy Research and Development Administration.

REFERENCES

Ackerman, B., 1974: Wind profiles and their variability in the planetary boundary layer. *Preprints Symp. Atmos. Diffusion and Air Pollution*, Santa Barbara, Amer. Meteor. Soc., 19–22.

Barr, S., and C. W. Kreitzberg, 1975: Horizontal variability and boundary-layer modeling. *Bound.-Layer Meteor.*, **8**, 163–172.

Clarke, R. H., A. J. Dyer, R. R. Brook, D. G. Reid and A. J. Troup, 1971: The Wangara experiment: Boundary layer data. Div. Meteor. Phys. Tech. Pap. No. 19, CSIRO, Australia.

Connell, J., 1976: Atmospheric turbulence in the mountain-valley planetary boundary layer. *Preprints Third Symp. on Atmos. Turbulence Diffusion and Air Quality*, Raleigh, Amer. Meteor. Soc., 455–462.

Davenport, A. G., 1963: The relationship of wind structure to wind loading. National Physical Laboratory. Symposium 16, *Wind Effects on Buildings and Structures*, Her Majesty's Stationery Office, London, 54–100.

Egami, R. T., V. Sharma and R. L. Steele, 1974: Diffusion study in the vicinity of Mohave generating plant. *Preprints Symp. on Atmos. Diffusion and Air Pollution*, Santa Barbara, Amer. Meteor. Soc., 209–213.

Hanna, S. R., C. J. Nappo, R. P. Hosker and G. A. Briggs, 1974: Description of the eastern Tennessee Trajectory Experiment. ATDL Contrib. No. 103, Oak Ridge, Tenn.

Holland, J. Z., 1953: A meteorological survey of the Oak Ridge area. ORO-99, OTS, U.S. Dept. of Commerce, Washington, D.C.

Kao, S. K., H. N. Lee and K. I. Smidy, 1974: A preliminary analysis of the effect of mountain-valley terrain on turbulence and diffusion. *Preprints Symp. on Atmospheric Diffusion and Air Pollution*, Santa Barbara, Amer. Meteor. Soc., 59–63.

Letteau, H. H., and B. Davidson, 1957: *Exploring the Atmosphere's First Mile*, Vol. 2. Pergamon Press.

Nappo, C. J., 1975: Time dependent mesoscale wind fields over complex terrain. ATDL Contrib. No. 75/6, Oak Ridge, Tenn.

Panofsky, H. A., and E. L. Petersen, 1972: Wind profiles and changes of terrain roughness at Riso. *Quart. J. Roy. Meteor. Soc.*, **98**, 845–854.

Roffman, A., T. P. Kapsha, P. E. Kueser, G. L. Bethune and M. P. Sullivan, 1976: A field study on the behavior of a SO_2 plume from a power plant near complex terrain and under stable atmospheric conditions. *Preprints Third Symp. Atmospheric Turbulence, Diffusion and Air Quality*, Raleigh, Amer. Meteor. Soc., 421–429.

Saltzman, B., 1957: Equations governing the energetics of the larger scales of atmospheric turbulence in the domain of wave number. *J. Meteor.*, **14**, 513–523.

Smagovinsky, J., S. Manabe and J. L. Holloway, 1965: Numerical results from a nine-level general circulation model. *Mon. Wea. Rev.*, **93**, 727–768.

Start, G. E., and L. L. Wendell, 1974: Regional effluent dispersion calculations considering spatial and temporal meteorological variations. NOAA Tech. Memo. ERL-ARL-44.

——, N. R. Ricks and C. R. Dickson, 1974: Effluent dilutions over mountainous terrain. NOAA Tech. Memo. ERL-ARL-51.

——, C. R., Dickson and L. L. Wendell, 1975: Diffusion in a canyon within rough mountainous terrain. *J. Appl. Meteor.*, **14**, 333–346.

Wendell, L. L., 1972: Mesoscale wind fields and transport estimates determined from a network of wind towers. *Mon. Wea. Rev.*, **100**, 565–578.

Time Dependent Mesoscale Wind Fields Over Complex Terrain*

Carmen J. Nappo, Jr.

Air Resources
Atmospheric Turbulence and Diffusion Laboratory
National Oceanic and Atmospheric Administration
Oak Ridge, Tennessee

Abstract

Wind soundings simultaneously made at five stations over a mesoscale region of complex terrain during the Eastern Tennessee Trajectory Experiment (ETTEX) are objectively analyzed, vertically averaged and interpolated over a uniform grid. The temporal and spatial variability of the resulting mesoscale wind field are examined for several observation periods, each lasting about six hours. Finally, the observed trajectories of tetroons are compared with trajectories computed using wind fields measured during the tetroon flights.

A result of the analysis is that during stable night time conditions, the wind field has marked horizontal variability which diminishes with the development of convective boundary layer. Hence terrain effects may be more significant in their effect on the mesoscale flow at night than during the day.

*Presented at the First Conference on Regional and Mesoscale Modeling, Analysis, and Prediction of the American Meteorological Society, Las Vagas, Nevada, May 6-9, 1975 (ATDL Contribution Number 75/6).

Time Dependent Mesoscale Wind Fields Over
Complex Terrain

Carmen J. Nappo, Jr.

Air Resources
Atmospheric Turbulence and Diffusion Laboratory
National Oceanic and Atmospheric Administration
Oak Ridge, Tennessee

INTRODUCTION

The present stage of the ETTEX data analysis allows some qualitative judgements concerning large-scale topographic effects on stable and unstable mesoscale flows and the ability to predict observed trajectories of tetroons during these conditions. Large-scale topographic features are those features with horizontal dimensions comparable with the mesoscale and vertical dimensions comparable with the mixing depth. In the eastern Tennessee region, the large-scale topographic features are the Great Smoky Mountains, the Cumberland Plateau and the Tennessee Valley.

Our initial assumptions concerning mesoscale dynamics over complex terrain are:

(1) A strongly convective boundary layer with light winds will tend to obscure any large-scale topographic effects.

(2) Convective activity in the unstable boundary layer is more or less homogeneously distributed throughout the mesoscale area, and wind profiles taken at different locations will be similar and show little vertical shear.

(3) During stable conditions, large-scale topographic features should have a strong influence on the mesoscale flow through a depth of not more than about 1000 m.

(4) During stable conditions, wind profiles taken at different locations should be highly dependent on local topography; however, winds are expected to be uniform in the free atmosphere about 1000 m.

(5) Homogeniety of the convective boundary layer and similarity of the wind profiles throughout the mesoscale area suggest that trajectory calculations using interpolated winds from widely spaced stations should compare well with observed trajectories.

(6) Under stable conditions with highly localized winds, interpolated winds are not expected to agree well with the actual winds and hence trajectory calculations will agree poorly with observed results.

THE ETTEX REGION

The ETTEX area is shown in figure (1) where the observation stations are indicated. Single theodolite pibal observations were made at each station every hour or half hour during a trajectory experiment. Tetroons were released at or near the "0800" site. The contour lines represent surface elevations in meters above sea level (ASL). The Great Smoky Mts. are off to the south-east and the Cumberland Plateau is off to the north-west. The Tennessee Valley lies along the line joining New Tazewell, "0800," and Athens. For a more detailed description of the ETTEX region and experiment, see Hanna *et al*. (1974).

OBJECTIVE ANALYSIS PROGRAM

To objectively analyze the wind field, wind soundings are vertically smoothed, using a three point smoothing, and interpolated to 100 meter levels above sea level. Horizontal winds are then interpolated and extrapolated at each level to a 20 x 20 grid with a uniform grid spacing of 10 km. The weighting function used in the interpolation scheme is $a^2/(a^2 + r^2)$, where 'a' is a constant and r is the distance from an observation station to a grid point. The interpolation scheme is able to work around vertical boundaries by setting the velocity component normal to the boundaries equal to zero.

MESOSCALE WIND FIELDS DURING UNSTABLE CONDITIONS

The wind field at various elevations for a typical unstable period is shown in figure (2). This case is for July 16 at 1400 EDT. The arrows indicate the direction of the wind while the length of each arrow is proportional to the wind speed. The observation stations are also indicated and the observed wind for each station is given. Little change in wind direction is noted as we move downward through the mixing layer. At 1200 m (ASL) and again at 500 m (near the ground surface) we see what appears to be channeling of the wind by the valley. These channeling effects are not large and appear to be confined to low elevations; we can conclude then, that when the flow is along the valley topographic effects are slight. These observations would appear to justify assumption (1).

Another unstable case is shown in figure (3). This case is for July 18 at 1800 EDT. At 2000 m the flow is from the west, off the Cumberland Plateau. At this level, noticeable turning down the valley is seen over Athens. At 1200 m, this down-valley component has disappeared but an up-valley turning is seen over the north-eastern end of the valley. At 1000 m, a noticeable steering of the wind up the valley is seen, but east of the valley the original easterly flow is recovered. Continuing downward, we see ever increasing channeling of the wind along the valley. In view of these observations, assumption (1) is apparently not justified, and we must conclude that large-scale topographic effect are important during unstable conditions.

MESOSCALE WIND FIELDS DURING STABLE CONDITIONS

An example of a stable period is shown in figure (4). This case is for August 8 at 0500 EDT. At 2000 m, we have a uniform southerly flow east of the Smoky Mts. Just over and downwind of the Smokies, the winds are near calm; further north there appears to be valley channeling over New Tazewell. At 1500 m this channeling has increased, and the "wind shadow" over Sevierville is still present. Between 1200 and 900 m, a sharp change in wind direction and speed takes place. This change actually occurred between 1000 and 900 m suggesting a strong layering between a free atmosphere, with relatively slight terrain effects, and a surface layer, with strong terrain effects. Note that over New Tazewell a 90° change

in wind direction takes place. At 700 m, a cross-valley flow exists and this persists almost to the ground. This flow may be due to a large-scale drainage wind from the Smoky Mts. Over New Taxewell at 500 m (almost at the ground), the wind direction is down the valley. This is apparently a valley drainage wind. Analysis of surface winds verifies the existence of this drainage wind. Hence we conclude that assumption (3) is justified, and that topographic features may even dominate mesoscale flow during stable conditions.

WIND PROFILES DURING UNSTABLE CONDITIONS

Vertical wind profiles for each station are shown in figure (5), for the same time period as figure (2). The profiles are more or less similar. They show little shear and contain much vertical structure (kinks) which may reflect the turbulent structure of the mixing layer. From this and other observations, it is concluded that assumption (2) is valid.

WIND PROFILES DURING STABLE CONDITIONS

Figure (6) displays the wind profiles for the same time period as figure (4). The profiles show a linear shear layer the ground and smooth profiles above. The profiles are distinct from station to station, reflecting a highly local character. Wind speeds tend to be equal in the free atmosphere except for the stations down wind from the Smoky Mts., i.e. Sevierville and New Tazewell, Hence we conclude that assumption (4) is valid with topographic effects extending to elevations higher than expected.

TRAJECTORY CALCULATIONS DURING UNSTABLE CONDITIONS

A trajectory calculation was made for the July 18 period from 1400 to about 1700 EDT. The observed vertical positions of the tetroon were used to determine the averaging thickness of the winds for the calculations. The average elevation was 950 m (ASL) with a standard deviation of 250 m. Hence the averaging layer extends from 700 to 1200 m. The calculated and observed trajectories are shown in figure (7a). In an effort to improve the calculations, a frequency distribution of the vertical position of the tetroon was plotted. This revealed that the variance is not normally distributed about the mean, but is skewed, such that most of the time the tetroon is below the mean elevation. This is due to thermal updrafts intermittently carrying the tetroon to high elevations. As an extreme alternative, the averaging layer was decreased to 100 m between 900 and 1000 m (ASL). The resulting calculation is shown in figure (7b). While the result is much improved, the sudden departure of the calculated and observed trajectories at 120 minutes still persists. It is believed that the kink in the observed path is due to a large eddy which quickly blew the tetroon northward. From then on, the tetroon path is smooth and parallels the calculated trajectory. It appears that assumption (5) is valid, but more cases must be studied before a definite conclusion can be stated.

TRAJECTORY CALCULATIONS DURING NEAR STABLE CONDITIONS

Unfortunately, at this time a trajectory calculation has not been made for stable conditions; however, a calculation has been made for what is believed to be near-stable conditions. This was for July 19 from 1600 to 2100 EDT. Winds were averaged from 700 to 1000 m (ASL). The results are shown in figure (8). It is seen that the path of the tetroon is well simulated, but the speed of the tetroon is underpredicted. The tetroon was launched from the "0800" site. As it moved away from this site, it entered regions of different wind speeds but equal wind directions, so that the local "0800" winds no longer applied. Hence we conclude that assumption (6) may be valid, although more testing must be done.

CONCLUSION

From the above observations we may conclude the following: Large-scale topographic features always affect the mesoscale flow. The effect is very strong during stable conditions and extends to elevations and distances larger than originally anticipated, i.e. greater than 2000 m above the ground and further than 50 km. Convective turbulence is uniformly distributed throughout the region during unstable conditions, and trajectory calculations agree with observations for these cases. During stable conditions, wind profiles are local, and trajectory calculations are questionable. These conclusions are based on limited analyses of the data, and are, of course, subject to possible revision as additional cases are examined.

REFERENCE

Hanna, S. R., C. J. Nappo, R. P. Hosker, and G. A. Briggs, 1974, Description of the eastern Tennessee trajectory experiment (ETTEX). Air Resources, Atmospheric Turbulence and Diffusion Laboratory, ATDL Contribution No. 103.

Acknowledgement

This research was performed under an agreement between the U.S. Energy Research and Development Administration and the National Oceanic and Atmospheric Administration.

ORNL-DWG 75-5709

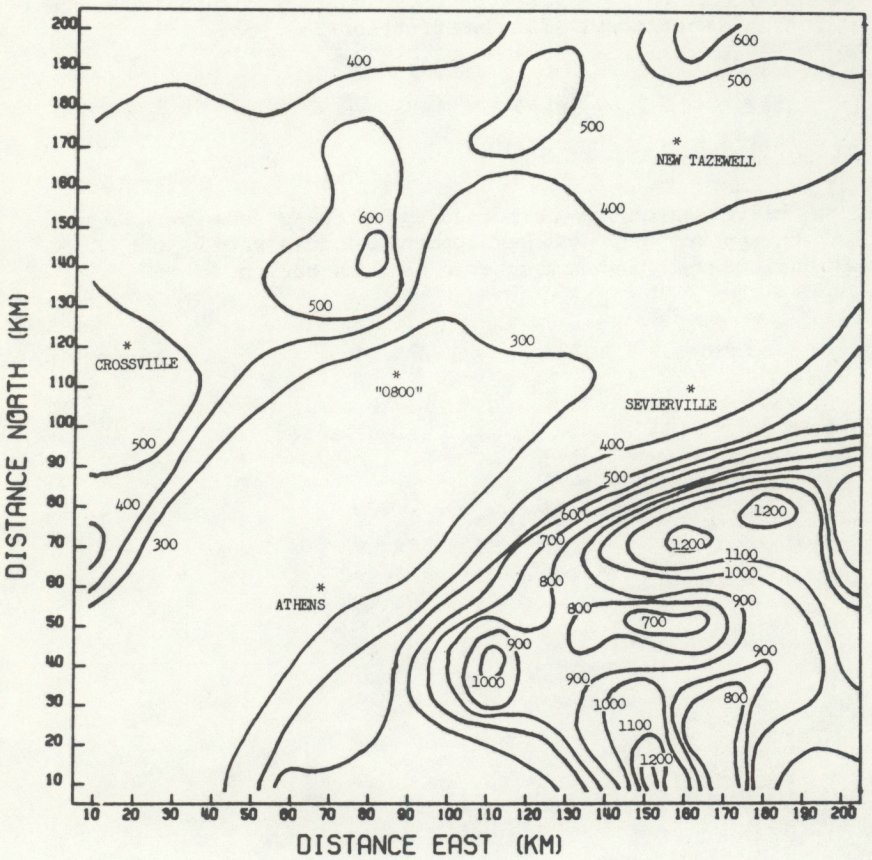


Fig. 1. The ETTEX region. Height contours are shown as solid lines, with the elevations shown in meters above sea level. Pilot balloon stations are indicated by asterisks.

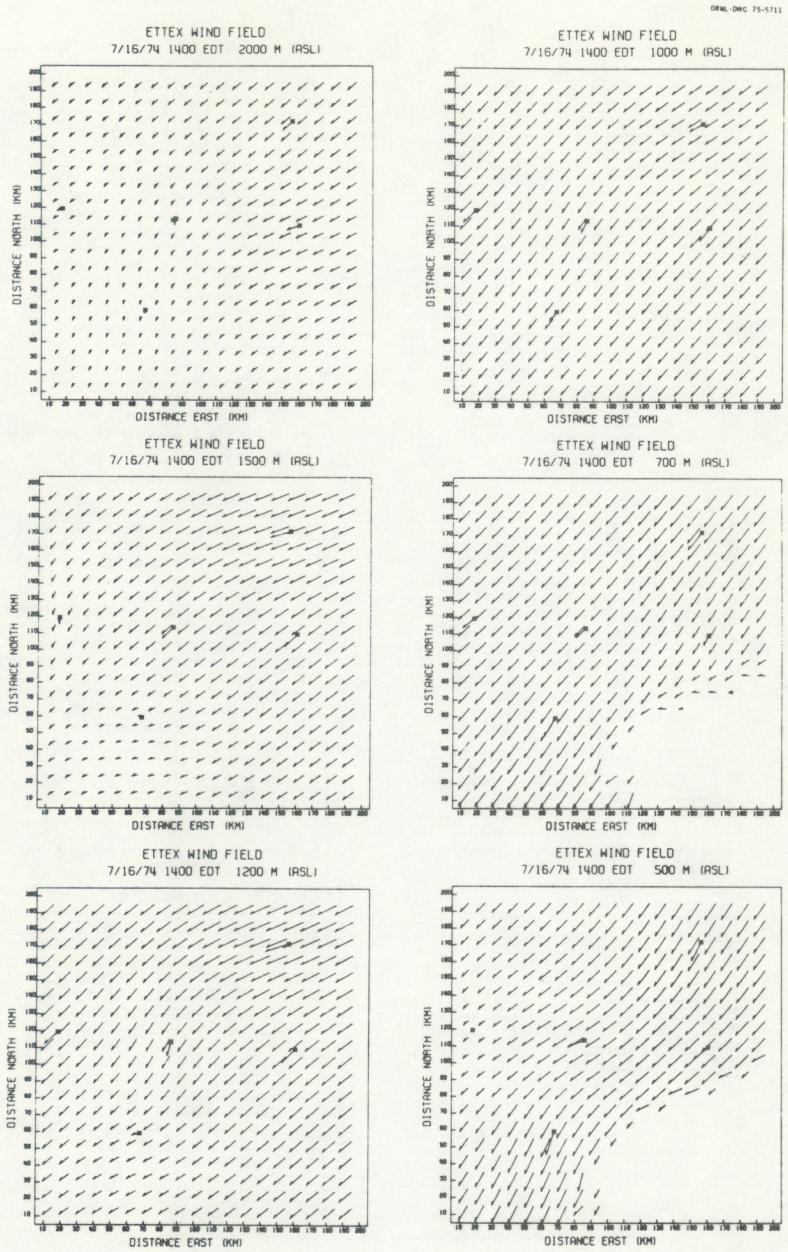


Fig. 2. Mesoscale wind fields for various altitudes, in unstable conditions (July 16, 1974; 1400 EDT).

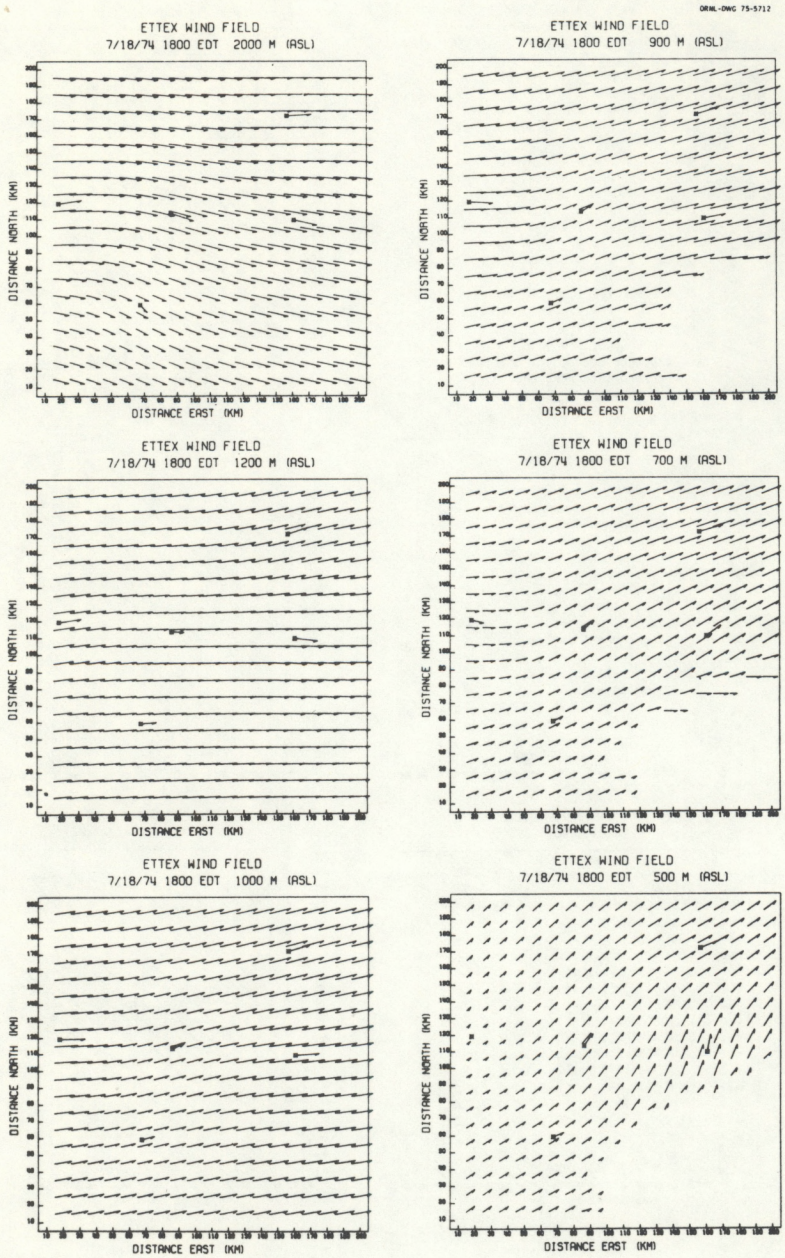


Fig. 3. Mesoscale wind fields for various altitudes, in unstable conditions (July 18, 1974, 1800 EDT).

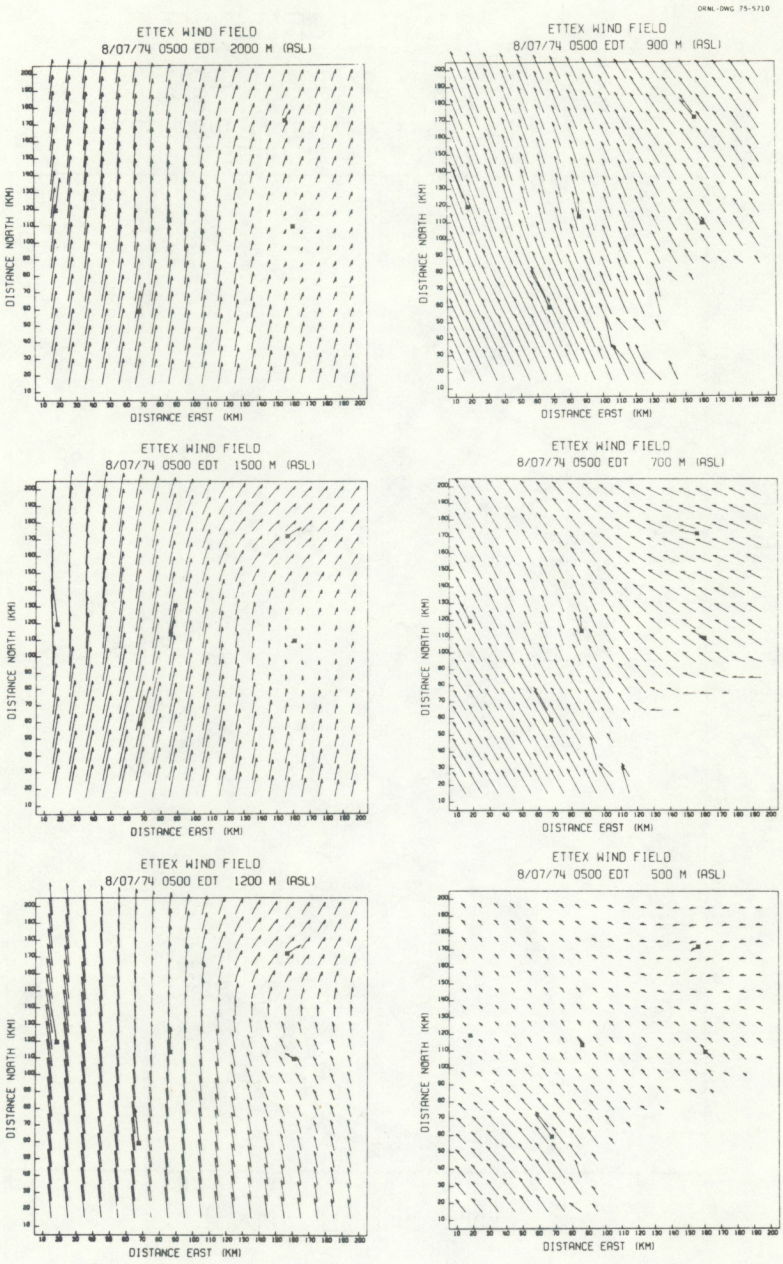


Fig. 4. Mesoscale wind fields for various altitudes, in stable conditions (August 7, 1974; 0500 EDT).

ORNL-DWG 75-7181

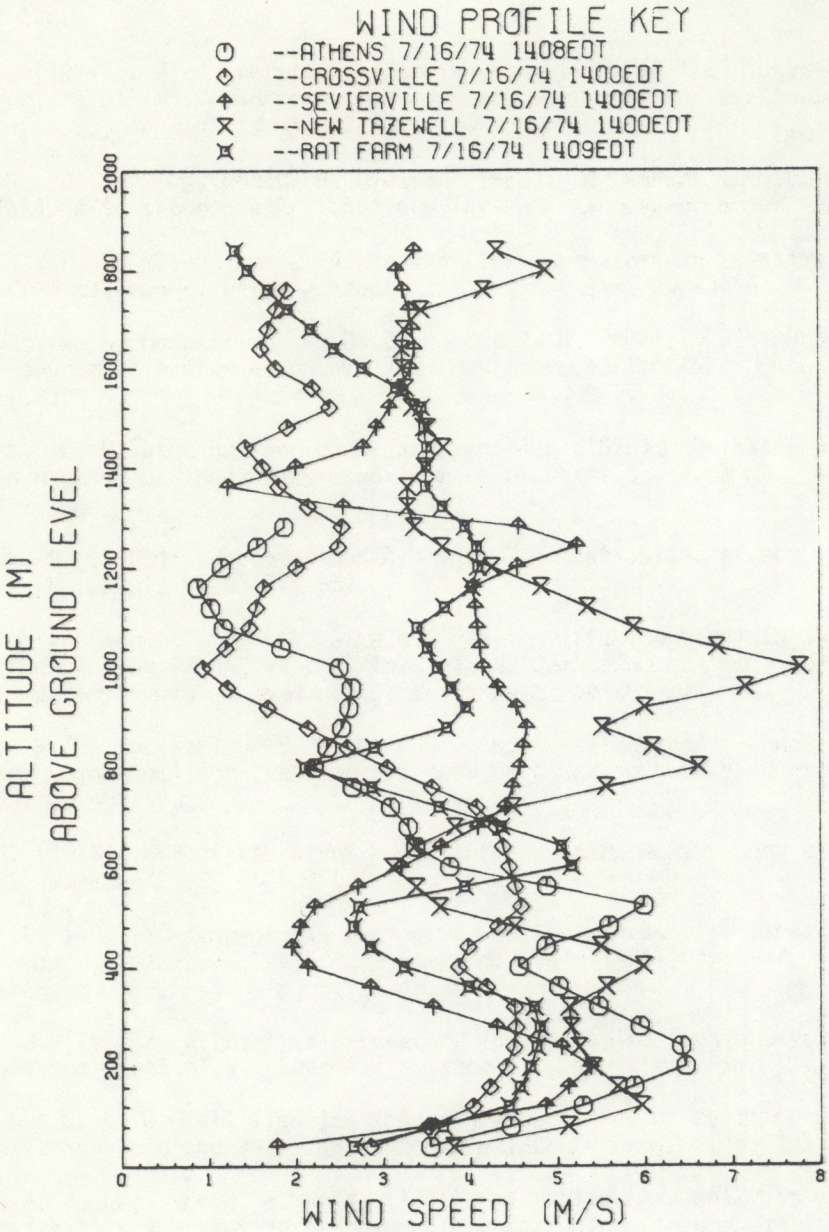


Fig. 5. Wind profiled in unstable conditions.

ORNL-DWG 75-7182

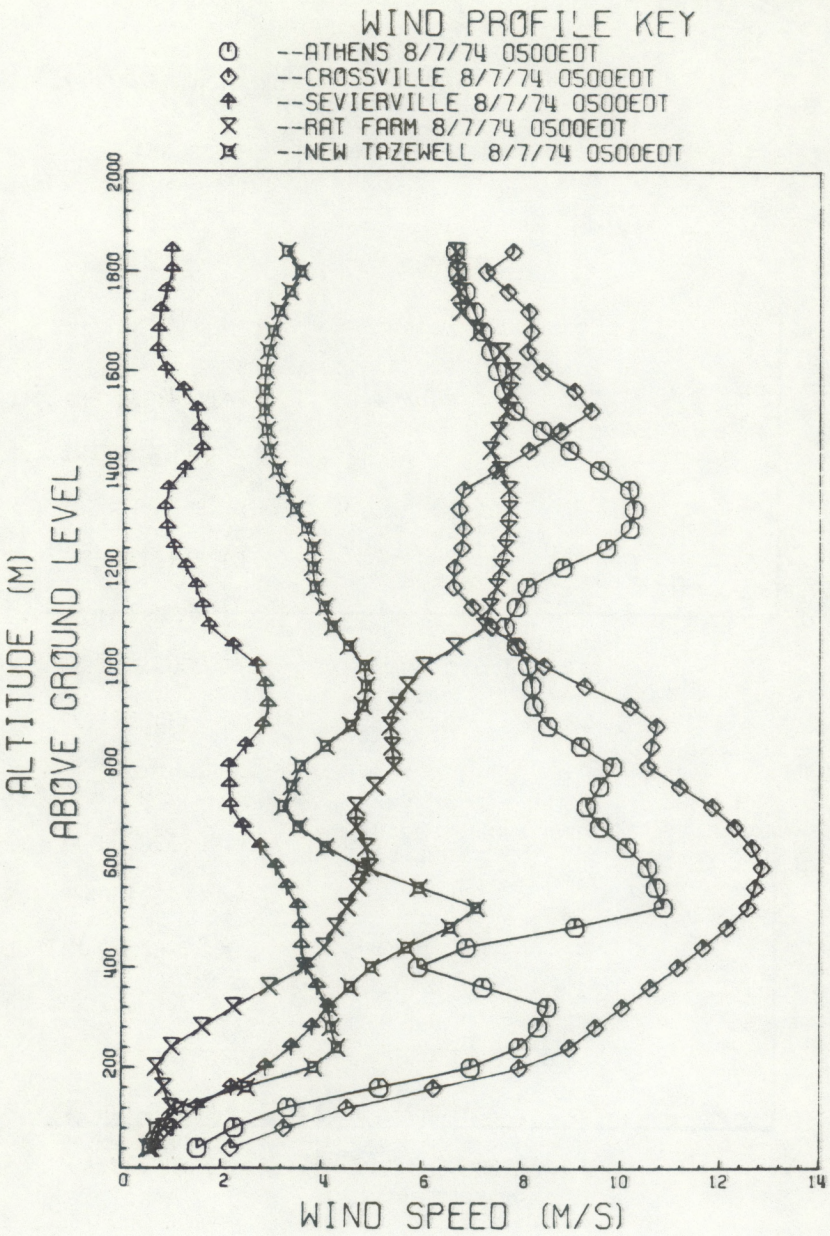


Fig. 6. Wind profiles in stable conditions.

ORNL-DWG 75-7179

COMPUTED AND OBSERVED

TETROON TRAJECTORY

7/18/74

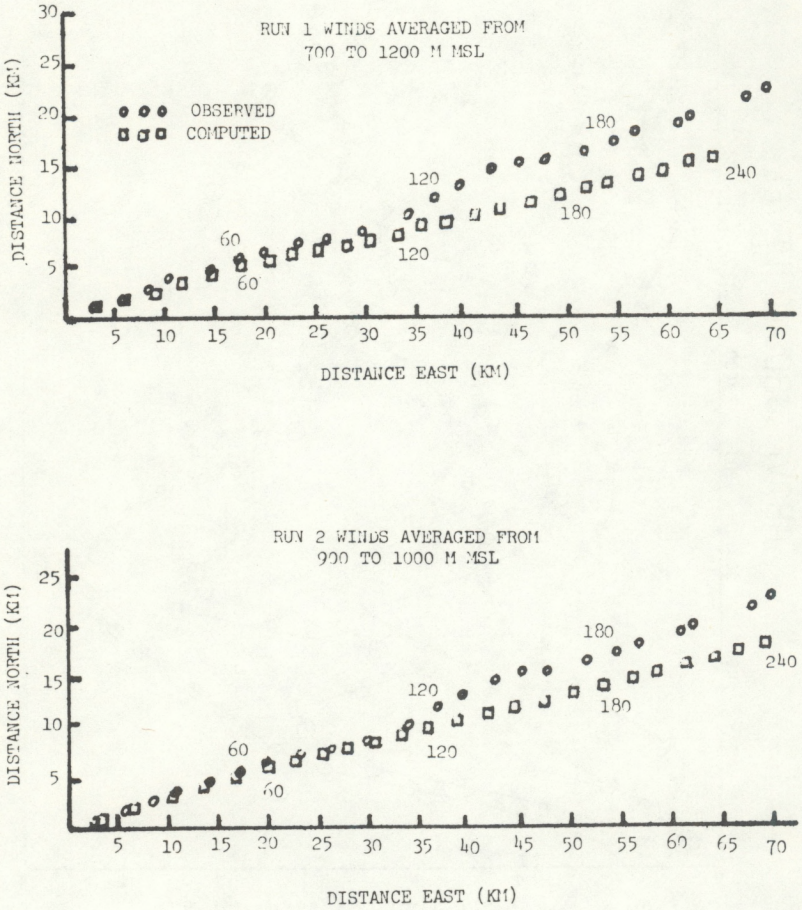


Fig. 7. Comparison of observed and predicted tetroon trajectories in unstable conditions (July 18, 1974; 1400 - 2100 EDT).

ORNL-DWG 75-7180

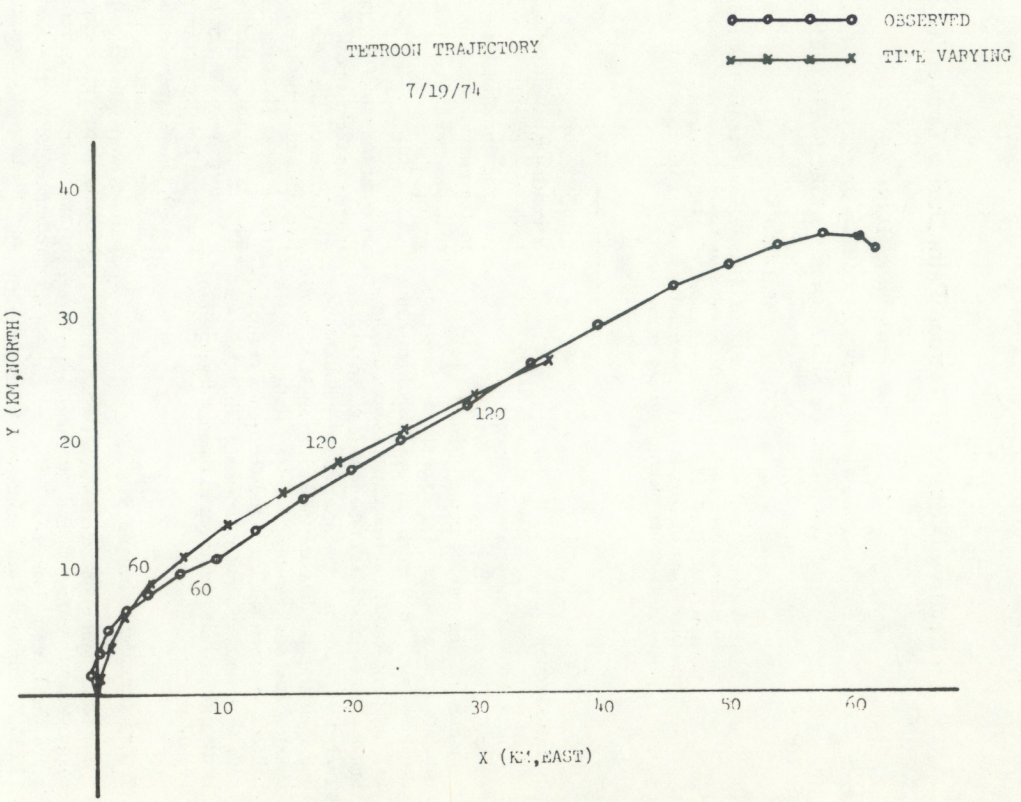


Fig. 8. Comparison of observed and predicted tetroon trajectories in stable conditions (July 19, 1974; 1600 - 2100 EDT).

Reprinted from JOURNAL OF APPLIED METEOROLOGY. Vol. 15, No. 6, June 1976

Relative Diffusion of Tetroon Pairs During Convective Conditions[1]

STEVEN R. HANNA

Atmospheric Turbulence & Diffusion Laboratory, NOAA, Oak Ridge, Tenn. 37830

(Manuscript received 25 August 1975, in revised form 15 April 1976)

ABSTRACT

Observations of the relative diffusion of 13 sets of tetroon pairs in the mixed layer during convective conditions in eastern Tennessee are reported. The root-mean-square separation S is proportional to time t raised to a power of 1 for times from 2 to 30 min and a power of 0.75 for times from 30 to 100 min. On the average, the observations are satisfied by the approximation $dS/dt \approx \sigma_v$, where σ_v is the standard deviation of the lateral wind speed fluctuations, as sensed by the tetroon.

1. Introduction

Observations of mesoscale or regional diffusion are currently important because of our need to make estimates of the environmental impact of various effluents at these scales. The data studied here cover distances from 100 m to 50 km and times from 2 min to 2 h. The observational technique has been developed and applied several times in the past (e.g., Angell *et al.*, 1971, 1974). Two tetroons are released simultaneously and their transponders are tracked by an M-33 radar system. The relative speeds and separations of the balloons are then analyzed, and the results compared with the results of similar experiments in other locations, and with the predictions of theories developed to explain relative diffusion.

2. Experimental technique

The relative diffusion experiment is a small part of a comprehensive transport and diffusion experiment called the Eastern Tennessee Trajectory Experiment (ETTEX), conducted during July and August of 1974. The comprehensive experiment, described by Hanna *et al.* (1974), had as its major goal the evaluation of transport models applied to hilly eastern Tennessee terrain. Nappo (1975) discusses preliminary results in which an observed tetroon trajectory compares favorably with a trajectory calculated using an interpolated wind field from a pibal grid. As another part of ETTEX the fluctuations of pollutant concentration and turbulence in the SO_2 plume from TVA's Bull Run steam plant were measured. The plume experiment was prompted by a theory developed by Briggs (1975) for estimating ground level pollutant concentration during fumigation conditions on convective afternoons, when subsiding air motions between thermals bring the plume to the ground. Most of the SO_2 plume experiments coincided with the relative diffusion experiments described here.

The M-33 radar used for tracking the tetroons was set up at the top of Buffalo Mountain (1030 m MSL), the second highest peak in the Cumberland Mountains. The location of the radar is shown in Fig. 1. In the relative diffusion experiments, instantaneous readings of tetroon range, elevation angle and azimuth angle were taken at the radar console every 2 min for each tetroon.

Tetroons were released from either the ATDL building or the Bull Run steam plant, depending on whether an SO_2 plume experiment was also taking place. These locations are marked on the map in Fig. 1. The two tetroons were inflated so they would fly at the same predetermined level, based on radiosonde observations of the vertical temperature profile. The techniques recommended by Hoecker (1975) were used to determine the necessary amount of inflation. It was planned that the tetroons would fly within the afternoon mixing layer, at heights between about 500 and 1500 m above the ground. Lower flights were not practical because of the presence of 200 m high linear ridges in the Tennessee valley which would interfere with the transponder signal.

The transponders were tuned to slightly different frequencies so that the radar could tell the difference between the two tetroons. Errors in recorded tetroon position are due mainly to the inherent inaccuracy of the radar and to observer errors (Van der Hoven, 1968). We estimate that the expected error in the indicated tetroon position is about 20 m.

Radiosonde observations of vertical profiles of wet and dry bulb temperature were taken during most of

[1] Presented at the First AMS Conference on Regional and Mesoscale Modeling, Analysis and Prediction, Las Vegas, Nev., 6–9 May 1975.

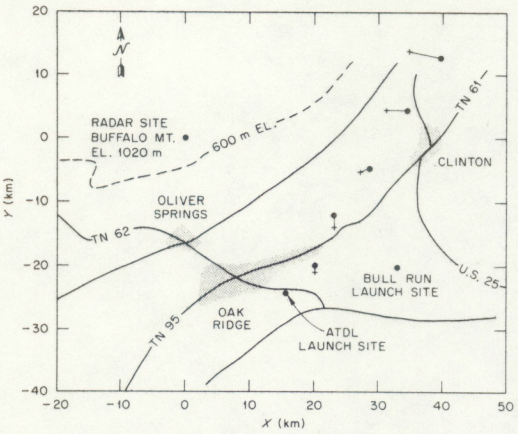


FIG. 1. Map of experiment area, showing radar and launch sites. The separations of tetroons 7293 and 7294 are shown, where the time interval between plotted separations is 15 min. Launch was from the ATDL site.

the experiments. Vertical wind profiles were obtained from either single or double theodolite pibal runs. When an SO_2 plume experiment was also taking place, vertical profiles of temperature, eddy dissipation rate, and SO_2 concentration were obtained from aircraft flights. All of the experiments took place during midday.

3. Observations

Some general characteristics of the data are summarized in Table 1. The month and day are given in the first three digits of the tetroon number. Potential temperature gradient $\partial\theta/\partial z$ is determined by analyzing the radiosonde and aircraft flights. Vertical shear of wind speed, $\partial V/\partial z$, and direction, $\partial\alpha/\partial z$, are obtained from pilot balloon observations, averaged over the layer in which the tetroon flew. Eddy dissipation rate ϵ is measured by an MRI universal turbulence indicator on the aircraft.

Mixing height h is estimated as the average height at which discontinuities in temperature lapse rate, eddy dissipation, SO_2 and haze occur. The average tetroon height and mixing height refer to height above ground level at the launch sites (250 m MSL).

After about 10 min, the tetroons generally reached their equilibrium height, which ranged from 320 to 1220 m above ground for the 26 tetroons. The standard deviation of the vertical tetroon position about the average height ranged from 60 to 430 m. Some tetroons bobbed up and down in convective eddies from nearly ground level to heights of 2000 m during their flight. Due to the buoyant restoring force on the tetroon during such wide excursions, it is not possible for the tetroon to follow the vertical air motions faithfully (Hanna and Hoecker, 1971). For this reason the statistical analysis of vertical motions is not carried very far. The

TABLE 1. General characteristics of tetroon flights.

Tetroon no.	Starting time (EDT)	Duration (min)	Average height $\bar{Z}$ (m)	σ_z (m)	Average speed $\bar{V}$ (m s^{-1})	Average direction	σ_w (m s^{-1})	$\partial\theta/\partial z$ (°C m^{-1})	ϵ (cm^2 s^{-3})	$\partial V/\partial z$ (s^{-1})	$\partial\alpha/\partial z$ (deg m^{-1})	Mixing height (m)
7221	1015	117	320	70	2.1	SW	0.24	—	—	—	—	—
7222	1015	117	370	120	1.9	SW	0.31	—	—	—	—	—
7223	1303	120	340	120	3.3	WSW	0.59	—	—	—	—	—
7224	1305	120	530	210	3.6	WSW	0.56	—	—	—	—	—
7253	1620	56	660	180	2.9	SSW	0.59	4×10^{-4}	15	0	0	1200
7254	1620	56	720	130	2.5	SSW	0.48	4×10^{-4}	15	0	0	1200
7271	1208	126	890	250	1.8	NE	0.45	2×10^{-4}	20	0	0	3000
7272	1208	126	740	150	1.4	ENE	0.45	2×10^{-4}	20	0	0	3000
7273	1428	94	730	420	2.3	NE	0.54	2×10^{-4}	20	0	−0.1	3000
7274	1428	94	510	250	1.4	NE	0.39	2×10^{-4}	20	0	−0.1	3000
7291	1201	102	380	80	3.3	SSW	0.24	—	—	0.007	0.1	3000
7292	1201	102	400	80	3.2	SSW	0.31	—	—	0.007	0.1	—
7293	1401	82	420	160	4.9	SSW	0.42	—	—	0.006	0	—
7294	1401	82	410	110	4.7	SSW	0.32	—	—	0.006	0	—
7301	1109	100	770	370	2.5	NNW	0.26	0	—	0.005	0	1600
7302	1109	100	710	240	2.2	NNW	0.35	0	—	0.005	0	1600
7303	1320	70	820	430	1.1	NE	1.0	0	—	0	0	1600
7304	1320	70	480	60	0.88	NNE	0.41	0	—	0	0	1600
7311	1307	92	650	380	2.2	NE	1.2	0	60	0	0.06	2200
7312	1307	92	660	270	2.0	NE	0.82	0	60	0	0.06	2200
7313	1511	108	950	350	1.0	E	0.75	0	40	0	0	2200
7314	1511	108	720	290	1.2	ENE	0.73	0	40	0	0	2200
8011	1258	100	1220	320	0.77	E	0.63	10^{-4}	25	0	0	2200
8012	1258	100	520	100	0.60	ESE	0.63	10^{-4}	25	0	0	2200
8021	1311	100	670	86	3.8	SW	0.35	10^{-4}	40	0	0	1000
8023	1311	100	480	152	3.4	SW	0.31	10^{-4}	40	0	0	1000

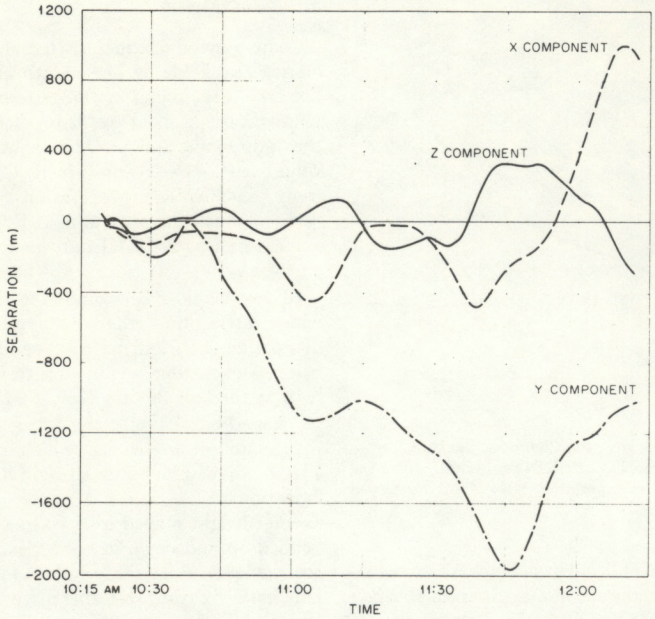


FIG. 2. Components of separation for tetroons 7221 and 7222.

average turbulence intensity $\bar{\sigma}_w/\bar{V}$ of 0.23 indicates a great deal of turbulent convection. The turbulent speed σ_w is not significantly correlated with wind speed, a condition known to be typical of sunny days, when turbulence production is due more to convection than to wind shear. The standard deviations of the turbulent fluctuations of longitudinal or alongwind speed, σ_u, and latitudinal or crosswind speed, σ_v, are also calculated. The average values of the ratios σ_v/σ_w and σ_u/σ_w are 1.3 and 1.9, in rough agreement with values of these ratios reported by Lumley and Panofsky (1964), based on many other independent sets of data.

Wind velocities in Table 1 generally have a SW or NE component, corresponding to the alignment of the ridges and valleys in eastern Tennessee. Average speed of the tetroons is 2.3 m s^{-1}, typical of light-wind summertime conditions in this area. Since all of the runs in Table 1 occur during similar climatic regimes, averages of parameters over all the runs can be confidently made.

4. Relative separation of tetroons

As an example of the results, the three components (latitudinal or cross-wind, longitudinal or along-wind, vertical) of tetroon separation for tetroons 7221 and 7222 are plotted as a function of time in Fig. 2. The along-wind direction is defined by the line connecting the tetroon launch position with the averaged position of the tetroons at the time the experiment is concluded. Oscillations with periods of 10–40 min are evident, in agreement with typical periods of convective elements. Clearly there is too much variability in this individual run to permit general conclusions regarding dispersion.

When the 13 runs are averaged together, this variability nearly disappears. For example, the rms total separation is plotted in Fig. 3. At times from 2 min through about 30 min the separation is proportional to time. At times from 30 min to 90 min, the separation S is proportional to time raised to a power somewhat less

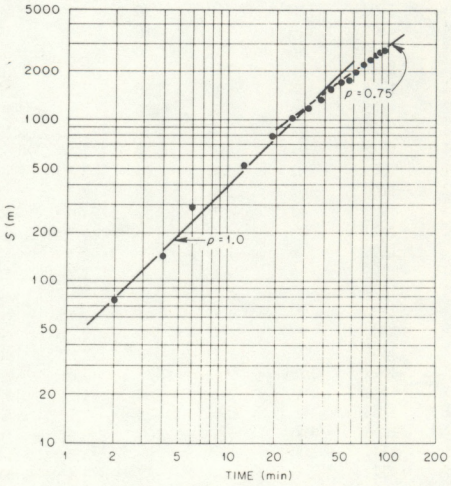


FIG. 3. Root-mean-square total separation S as a function of time.

than 1. From Fig. 3 it is seen that the average rate of separation dS/dt is roughly 0.5–0.7 m s^{-1}. Since the average value of σ_v for the 13 runs is 0.6 m s^{-1}, these observations are roughly satisfied by the relation $dS/dt \approx \sigma_v$.

The rate of change of total separation S with time for these data and for observations from others of the relative dispersion of tetroon pairs are plotted on Fig. 4. The power p for each set of observations is close to unity ($p=1\pm0.3$). It is seen that the magnitude of the separation S during ETTEX is slightly greater than the average magnitude of the separations during several experiments summarized by Islitzer and Slade (1968). This is expected, though, because our experiments were all conducted during highly dispersive summer days. However the dispersion of the tetroons released from Las Vegas (Angell *et al.*, 1971) is greater than the dispersion during ETTEX, presumably due to the greater dispersive power of the atmosphere over rugged desert terrain.

When observations of the relative dispersion of smoke puffs (e.g., Bauer, 1974) are studied, it is found that their cross-wind spread at small times is often proportional to time raised to the 1.5 power (Gifford, 1957). This power is predicted by Batchelor and Townsend's (1956) similarity theory for relative diffusion at length scales within the inertial subrange of atmospheric turbulence. But as Brier (1950) suggests, observed tetroon separations may not agree with the theoretical dependence of separation on time raised to the 1.5 power, because of the inability of the tetroons to respond to small-scale fluctuations in air motion. The small particles used in the smoke puff experiments respond well to all of the fluctuations in air motion that they encounter.

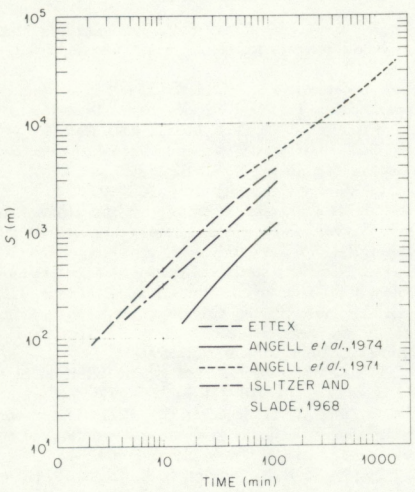


FIG. 4. Comparison of ETTEX root-mean-square total separations S with the results of other experiments.

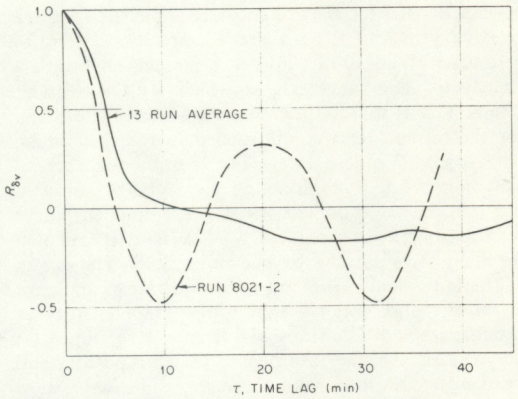


FIG. 5. Correlation coefficient $R_{\delta v}$ for the cross-wind component of the relative wind speeds.

At large times, when large scales of turbulence can take part in dispersion, the separation can be estimated from the relation

$$S=2(Kt)^{\frac{1}{2}}, \tag{1}$$

where K is the eddy diffusivity coefficient (Pasquill, 1974). This formula, however, is valid only at times much greater than the period at which peak energy occurs in the cross-wind turbulent velocity spectrum. It is seen in Fig. 2 that, during the highly convective conditions of ETTEX, significant turbulent fluctuations occur even at periods of 40 min. Consequently it is doubtful that the time regime during which Eq. (1) is valid is included in our observations.

5. Test of the statistical theory of diffusion

According to the statistical theory of relative diffusion, as reviewed by Pasquill (1974), the cross-wind separation Y of two diffusing tetroons is given by

$$\overline{Y^2}=\overline{Y_0^2}+2\sigma_{\delta v}^2\int_0^T\int_0^{t'}R_{\delta v}(\tau)d\tau dt', \tag{2}$$

where $\delta v(t)$ is the relative velocity of the balloons at time t after release, $\sigma_{\delta v}^2$ is the variance of the relative velocity fluctuations, and $R_{\delta v}(t)$ is the correlation coefficient of the relative velocities at time lag τ, i.e.,

$$R_v(\tau)=\overline{\delta v(t)\delta v(t+\tau)}/\sigma_{\delta v}^2. \tag{3}$$

Eq. (2) predicts that the rms separation $(\overline{Y^2})^{\frac{1}{2}}$ is proportional to time, as observed in our experiments, only when the correlation coefficient R is a constant. This can be seen by integrating (2) for R equal to a constant C:

$$\overline{Y^2}=\overline{Y_0^2}+\sigma_{\delta v}^2CT^2. \tag{4}$$

In order to determine if R is indeed a constant for the ETTEX data, values of R were calculated for all of the data. Fig. 5 presents the average correlation

coefficient $R(t)$ for the cross-wind component δv of the relative velocities. The average correlation drops to zero after about 10 min and then remains slightly less than zero. The time scale at which $R=1/e$ is about 5 min. This is slightly less than the time scale of 8 min for the tetroon relative diffusion data taken in Idaho by Kao and Wendell (1968). The 13 individual correlation curves used in obtaining the average curve in Fig. 5 have many oscillations. For example, the curve for the combined tetroon run 8021-2 (randomly chosen for illustrative purposes) is shown in Fig. 5. The shapes of the individual curves are similar to this example for all of the observations, exhibiting parabolic form at small times and then sinusoidal form at large times. At any rate, none of the data suggest that R is positive and nearly constant over a large range of time lag τ, as is required by the statistical theory [Eq. (2)] to produce a linear dependence of the rms separation on time.

A requirement of the statistical theory is that both tetroons should remain within the same atmospheric layer. Pasquill (private communication) suggests that the ETTEX observations may not satisfy this requirement, since the tetroons are subject to such great vertical displacements. At times, one tetroon is near the ground and the other near the top of the planetary boundary layer. Twenty minutes later their positions could be reversed.

6. Shear diffusion

Whenever observations of relative diffusion do not agree well with the predictions of similarity or statistical theory, the differences can be blamed on shear diffusion. The tetroons can be separated due to the simple fact that they are flying at different heights and that the wind velocity is different at these heights. Angell *et al.* (1974) explain that much of the erratic behavior of their tetroons in the Los Angeles basin is due to wind shears associated with the sea breeze front. According to Smith's (1965) theory of shear diffusion, the variance of longitudinal separation ($\overline{X^2}$) due to a wind speed shear $\partial V/\partial z$ in unbounded flow is given by

$$\overline{X^2}=0.17(\partial V/\partial z)^2K_z t^3, \tag{5}$$

where K_z is the vertical eddy diffusivity coefficient. Smith (1965) suggests that the eddy diffusivity K_z is equal to $\sigma_w^2 t_{wL}$, where t_{wL} is the Lagrangian integral time scale for the vertical motions. Thus Eq. (5) can be written

$$\overline{X^2}=0.17(\partial V/\partial z)^2\sigma_w^2 t_{wL}t^3. \tag{6}$$

Table 1 contains the observed wind speeds and direction shears, from pibal data, for the vertical layer $\bar{z}\pm\sigma_z$. During over half of the runs, no shear at all was observed in the layer in which the tetroons flew. At heights between 200 and 1200 m, the average wind speed shear for the 13 runs is about 0.005 s^{-1}. As an example of the application of the technique, the combined run 7301–2 is considered where the shear $\partial V/\partial z=0.005\ s^{-1}$. The observed variance σ_w^2 is 0.1 $m^2\ s^{-2}$ and the Lagrangian integral time scale t_{wL} can be estimated to equal about 10^2 s. For these values, the variance $\overline{X^2}$ at time $t=30$ min has a value from (6) of about 3×10^6 m^2, which is close to the observed separation. Thus it is possible for shear diffusion to account for the observed tetroon separations during some of these experiments. However, there is no significant difference between the observed separations of tetroons on days when there is no wind shear and days when there is wind shear. It can be concluded that wind shear probably plays a role in separating the tetroons, but that the extent of this role is uncertain.

Acknowledgments. This experiment would have been impossible without the help of C. R. Dickson of the ARL Field Office in Idaho Falls, who provided the M-33 radar unit, a mobile radiosonde unit, and an enormous collection of routine but essential equipment. E. White and D. Forsythe of Idaho Falls were in charge of the radar's operation. W. Hoecker of the ARL office in Silver Spring, Md., offered invaluable aid in launching the tetroons. The Coal Creek Mining and Manufacturing Corporation and the Oliver Springs Mining Company (specifically, C. H. Smith and C. Owens) were very cooperative in helping us select and travel to and from the radar site. T. L. Montgomery and J. H. Coleman of the TVA Air Quality Branch loaned us several crucial pieces of equipment for the aircraft. Much of the data analysis was done by S. Perry, J. Pollock and S. Yeh of this office.

REFERENCES

Angell, J. K., P. W. Allen and E. A. Jessup, 1971: Mesoscale relative diffusion estimates from tetroon flights. *J. Appl. Meteor.*, **19**, 43–46.

——, C. R. Dickson and W. H. Hoecker, Jr., 1974: Relative dispersion within the Los Angeles basin as estimated from tetroon triads. NOAA Tech. Memo. ERL ARL 46, 34 pp.

Batchelor, G. K., and A. A. Townsend, 1956: *Turbulent Diffusion. Surveys in Mechanics*, G. K. Batchelor and R. M. Davies, Eds., Cambridge University Press, 352–399.

Bauer, E., 1974: Dispersion of tracers in the atmosphere and ocean: Survey and comparison of experimental data. *J. Geophys. Res.*, **79**, 789–795.

Brier, G. W., 1950: The statistical theory of turbulence and the problem of diffusion in the atmosphere. *J. Meteor.*, **7**, 283.

Briggs, G. A., 1975: Plume rise predictions. *Lectures on Air Pollution and Environmental Impact Analyses*, D. Haugen, coordinator, Amer. Meteor. Soc., 59–111.

Gifford, F. A., 1957: Relative atmospheric diffusion of smoke puffs. *J. Meteor.*, **14**, 410–444.

Hanna, S. R., and W. H. Hoecker, Jr., 1971: The response of constant density balloons to sinusoidal variations of vertical wind speeds. *J. Appl. Meteor.*, **10**, 601–604.

——, C. J. Nappo, R. P. Hosker and G. A. Briggs, 1974: Description of the Eastern Tennessee Trajectory Experiment (ETTEX). ATDL Contrib. File. No. 103, 26 pp., [Available from ATDL, P. O. Box E, Oak Ridge, Tenn., 37830].

Hoecker, W. H., Jr., 1975: A universal procedure for deploying constant-volume balloons and for deriving vertical air speeds from them. *J. Appl. Meteor.*, **14**, 1118–1124.

Islitzer, N., and D. Slade, 1968: Diffusion and transport experiments. *Meteorology and Atomic Energy—1968*, D. Slade, Ed., USAEC Rep. No. TID-24190, 117–188.

Kao, S. K., and L. L. Wendell, 1968: Some characteristics of relative particle dispersion in the atmospheric boundary layer. *Atmos. Environ.*, **2**, 397–407.

Lumley, J. L., and H. A. Panofsky, 1964: *The Structure of Atmospheric Turbulence*. Interscience, 239 pp.

Nappo, C. J., 1975: Time-dependent mesoscale wind flows over complex terrain. Presented at the First AMS Conference on Regional and Mesoscale Modeling, Analysis and Prediction, Las Vegas, 6–9 May.

Pasquill, F., 1974: *Atmospheric Diffusion*, 2nd. ed. Wiley, 429 pp.

Smith, F., 1965: The role of wind shear in horizontal diffusion of ambient particles. *Quart. J. Roy. Meteor. Soc.*, **91**, 318–329.

Van der Hoven, 1968: Atmospheric transport and diffusion in the planetary boundary layer. Tech. Memo. ERL TM-ARL 5, 5–14.

Reprinted from: Third Symposium on Atmospheric Turbulence, Diffusion and Air Quality; Oct. 26-29, 1976; Raleigh, N.C. Published by American Meteorological Society, Boston, MA.

THE SIMULATION OF ATMOSPHERIC TRANSPORT USING OBSERVED AND ESTIMATED WINDS

Carmen J. Nappo, Jr.

Air Resources
Atmospheric Turbulence and Diffusion Laboratory
National Oceanic and Atmospheric Administration
Oak Ridge, Tennessee 37830

1. INTRODUCTION

The spread of pollutants in the atmosphere is often mathematically simulated by the linear combination of transport by the mean wind and dispersion by parameterized turbulence. Recent examples of this method can be found in Heffter et al. (1975) and Watson & Barr (1976). In the planetary boundary layer, atmospheric transport can be simulated by trajectory analysis using winds estimated by vertically extrapolating surface winds. Examples of this method can be found in Peterson (1966) and Joynt & Blackman (1976). Several questions arise when trajectories are constructed in the planetary boundary layer. How accurately can trajectories simulate the observed positions of an air parcel along the air parcel's path? How accurate are trajectories constructed from surface winds compared with trajectories constructed from winds observed through the depth of the boundary layer? How does atmospheric stability effect the accuracy of trajectory calculations? One of the main objectives of the Eastern Tennessee Trajectory Experiment (ETTEX), Hanna et al.(1974), was to obtain a data base sufficient to answer these questions.

In this study, the ETTEX pilot balloon wind observations are assumed to be a best realization of the real wind field. These data will be used to simulate the trajectories of tetroons released during stable, unstable and transition periods. For each class of stability, the error of the simulation will be determined at the end of each advection step of the trajectory calculation. The average and standard deviation of these errors form the overall accuracy of the trajectory simulation. These results will then be considered to be the "best possible" simulations. This procedure will then be repeated using estimated winds derived from vertically extrapolated surface winds. We can then judge the validity of atmospheric transport calculations using observed or estimated winds.

2. THE DATA

The ETTEX region is shown in Figure 1. The elevation contours are in meters and the observation stations are marked with a cross. Wind observations at the ETTEX stations were made with 30 gm pilot balloons tracked by single theodolite. Readings were recorded at 30 second intervals for 10 minutes. Soundings were made at hourly intervals during steady conditions and at half-hourly intervals during transition periods. These soundings were then vertically smoothed and interpolated to 100 meter increments in elevation from 300 to 2000 meters (MSL). Missing observations were interpolated from the time series using linear regression.

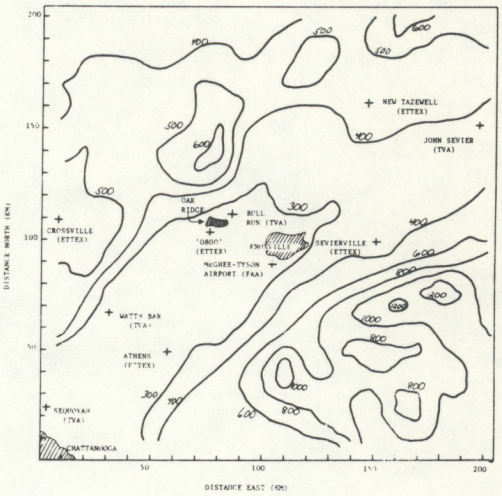


Figure 1. ETTEX Region

Surface winds were measured at the five ETTEX stations, the Sequoyah, Watts Bar, Bull Run and John Sevier TVA power generation plants, and the McGhee-Tyson airport. Observations at the ETTEX stations are 20 minute averages and the TVA observations are hourly averages. The estimated wind fields were determined from these surface winds using a power law extrapolation for the speed and a parameterized veering (clockwise turning) of the wind with height. The u and v components of the wind at height z are then given by

$$u = s_o(z/h)^n \sin(\phi_o + \beta z) \qquad (1)$$

$$v = s_o(z/h)^n \cos(\phi_o + \beta z) \qquad (2)$$

ATDL Contribution File No. 76/9

where s_o is the surface wind speed at height, h, above the ground surface; ϕ_o is the wind direction at height z_o in degrees from north, and β is the parameterized veering in degrees per meter. Table I lists the various forms of n and β as functions of stability used in this study. Case I tests the 1/7 power law with no turning of the wind with height. Case II has been used by Gudiksen et al. (1975). Case III tests case II in the absence of wind veering. Case IV tests extreme values of n and β for stable and unstable conditions.

Table I. Power law exponent, n, and wind veering parameter, β (°/100 m)

Stability	Case I		Case II		Case III		Case IV	
	n	β	n	β	n	β	n	β
Stable	1/7	0.0	0.10	1.0	0.10	0.0	0.075	1.0
Unstable	1/7	0.0	0.20	3.0	0.20	0.0	0.200	4.0
Transition	1/7	0.0	0.30	5.0	0.30	0.0	0.200	4.0

The tetroon trajectories that are simulated are summarized in Table II. The tetroons were tracked with a high resolution radar provided by the NOAA ARL Field Laboratory in Idaho Falls.

3. THE TRAJECTORY MODEL

The trajectory model first interpolates the wind observations at each vertical level over a 20 x 20 horizontal, uniform grid. The grid resolution is 10 km. The interpolating scheme uses a weighting function given by $a^2/(a^2+r^2)$ where r is the distance from an observation point to a point on the grid and 'a' is a constant of value 16 km because it gave, in general, the most accurate trajectory calculations using the observed pilot balloon winds. The interpolation scheme takes into account the presence of solid vertical boundaries i.e. mountains by setting to zero the velocity component normal to the boundary. In this way, horizontal wind fields are constructed for each observation time at 100 m intervals from 300 to 2000 m (MSL) and time dependence between observations is introduced by linear interpolation. There is no smoothing of the time series. Trajectories are calculated by first averaging the wind field through a prescribed depth, and then advecting an hypothetical air parcel a distance $|\vec{v}|\Delta t$ where $\vec{v}$ is the resultant velocity at the point in space where the advection begins and Δt is the

Table II. Tetroon flight data

Period	Date	Tetroon No.	Simulation start time (EDT)	Simulation duration (min)	Mean elevation M (MSL)	Standard deviation of elevation	Stability
1	7/16/74	N1	10:10	200	947	416	Unstable
2	7/17/74	N2	11:21	280	756	292	Very
	7/17/74	N3	12:00	250	836	274	unstable
	7/17/74	N4	13:00	190	759	236	
3	7/18/74	N5	16:00	180	1000	321	Transition
	7/18/74	N6	16:00	230	989	255	
	7/18/74	N7	16:00	260	1050	219	
4	7/19/74	N9	17:40	200	837	121	Transition
5	8/07/74	N13	05:10	100	1074	106	Stable
	8/07/74	N14	05:10	80	1079	95	
	8/07/74	N15	05:20	80	1117	137	

length of the advection step, 10 minutes. The layer thicknesses used for the trajectory calculations are summarized in Table III. The resultant velocity is determined by first locating the position of the starting point of the advection step and then interpolating to this point the velocities at the corners of the grid cell in which the point lies. This secondary interpolation uses $1/(1+d^2)$ as a weighting function where d is the distance (km) from a cell corner to the point. This function was used to avoid computational errors if d becomes small.

Table III. Layer depths used in the trajectory calculations

Period	Date	Stability	Elevation of layer M (MSL)
1	7/16/74	Unstable	500–1000
2	7/17/74	Very unstable	500–900
3	7/18/74	Transition	600–1000
4	7/19/74	Transition	700–1000
5	8/07/74	Stable	1000–1200

4. OVERALL ACCURACY. DEFINITION AND SIGNIFICANCE

At the end of each 10 minute advection step of a trajectory calculation, the errors in the range and azimuth between the observed and calculated tetroon position are determined. These errors are defined as

$$\text{Range Error (\%)} = 100(|\vec{r}_c|-|\vec{r}_t|)/|\vec{r}_t|$$

$$\text{Azimuth Error (deg)} = \phi_t - \phi_c$$

where $\vec{r}_c$ and $\vec{r}_t$ are respectively the calculated and observed tetroon positions relative to the release point and ϕ_t and ϕ_c are the azimuth angles measured clockwise from north for the observed and calculated tetroon positions, respectively. A sample of these errors as a function of distance is shown in Figure 2. The trajectories for this case are shown in Figure 3 (The numbers on the trajectories represent elapsed time in hours from release). The similarity in the shape of the range error and azimuth error curves in Figure 2 is due to the similarity in the trajectories shown in Figure 3. From these figures, we see that a negative range error indicates an underestimation of the transport and a negative azimuth error indicates that the calculated tetroon position is to the right of the observed tetroon position. Azimuth errors apparently tend to decrease with distance; however, this is generally true only when the calculated and observed tetroon trajectories are similar. On the other hand, range errors, in general, decrease with distance because they are expressed as a percent of travel distance and, except in cases of light and variable winds, the difference in range, $(|\vec{r}_c|-|\vec{r}_t|)$, tends to remain constant.

In order to quantify the accuracy of a trajectory calculation, the average and standard deviation of the range and azimuth errors are formed using the calculated positions along the trajectory. These quantaties are taken as a measure of the overall accuracy. Of these two quantaties, the overall accuracy in azimuth is the more important, since in practice one is more concerned about where an air parcel is going rather than its transport speed. This point is discussed further in Smith & Jeffrey (1975). In many cases, the standard deviation of the error is more meaningful than its average. This is because trajectory calculations using averaged wind data or single observations made at large time intervals cannot reproduce the turbulent fluctuations that act on real air parcels. A calculated trajectory may well represent the non-turbulent transport of an air parcel with the result that the average overall errors are small; however, in the presence of strong convective turbulence or terrain induced perturbations to the wind not realized by the observations, the standard deviation of these errors will be large. We can anticipate that the standard deviations will depend upon the intensity of the turbulence and on the smoothness of the topography. The measure of overall accuracy should be considered as the uncertainty in a trajectory calculation.

RANGE AND AZIMUTH ERROR AS A FUNCTION OF DISTANCE FROM RELEASE POINT

TETROON NO TRAJECTORY SIMULATION

OVERALL ACCURACY:	RANGE (%)	AZIMUTH (deg)
OBSERVED WINDS	-20.3±7.9	5.9±5.2
ESTIMATED WINDS	-46.6±6.5	-1.0±4.9

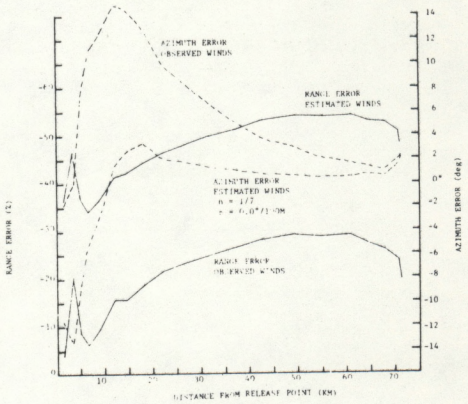


Figure 2

5. THE RESULTS

The overall accuracy of the trajectory calculations for each period are listed in Table IV. The results for periods 2,3 and 5 are averages of the results for the individual trajectory calculations. To better relate these errors to the actual trajectories, four samples of the trajectory simulations are presented in Figures 3 to 6.

Table IV. Overall accuracy – range error (%), azimuth error (deg)

Period		Observed Winds	Estimated Winds			
			Case I	Case II	Case III	Case IV
1	Range error	−5.3 ± 6.2	−0.4 ± 7.6	−15.2 ± 5.8	−15.4 ± 6.0	22.9 ± 5.0
	Azimuth error	−2.4 ± 4.6	−0.1 ± 3.4	−3.2 ± 3.2	0.9 ± 3.2	−2.5 ± 3.2
2	Range error	114.8 ± 217.8	55.3 ± 122.1	44.8 ± 117.1	43.9 ± 116.6	40.3 ± 116.6
	Azimuth error	−50.1 ± 67.6	79.6 ± 59.2	78.1 ± 59.3	75.2 ± 55.3	79.3 ± 59.9
3	Range error	−5.3 ± 5.2	−6.6 ± 8.1	17.1 ± 10.6	15.5 ± 10.1	17.2 ± 9.9
	Azimuth error	−3.1 ± 3.9	16.2 ± 4.8	4.7 ± 4.8	13.7 ± 5.1	−3.8 ± 4.7
4	Range error	−20.3 ± 7.9	−46.6 ± 6.5	−33.4 ± 7.6	−35.2 ± 7.4	−32.0 ± 7.4
	Azimuth error	5.9 ± 5.2	−1.0 ± 4.9	−20.2 ± 5.2	−5.3 ± 5.9	−25.8 ± 4.8
3+4	Range error	−12.8 ± 6.6	−26.6 ± 7.3	−8.2 ± 9.1	−9.9 ± 8.8	−7.4 ± 8.7
	Azimuth error	1.4 ± 4.6	7.6 ± 4.9	−7.8 ± 5.0	4.2 ± 5.5	−14.8 ± 4.8
5	Range error	61.1 ± 73.7	−87.4 ± 5.7	−67.1 ± 14.4	−76.6 ± 10.5	−80.4 ± 7.8
	Azimuth error	6.1 ± 8.4	172.5 ± 17.0	101.4 ± 11.8	150.3 ± 16.3	117.3 ± 8.6

For period 1, the estimated winds are as accurate as the observed winds. The introduction of veering, cases II and IV, results in larger azimuth error; however the increased error is not significant when compared to the azimuth error for the observed winds.

In period 2, a great difference exists between the trajectory calculations as can be seen, for example, in Figure 4. The overall accuracies in the estimated wind trajectory calculations are relatively insensitive to the value of the power law exponent and the degree of wind veering factor.

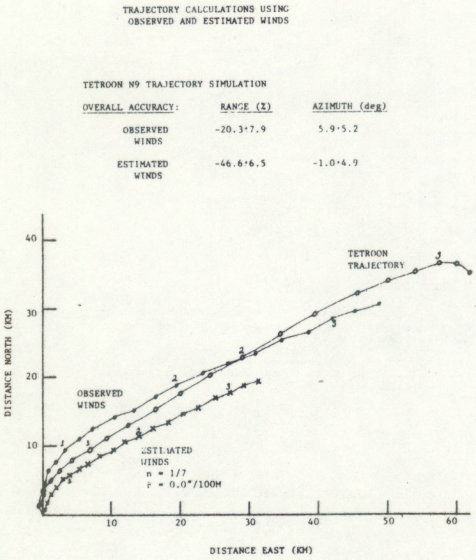


Figure 3

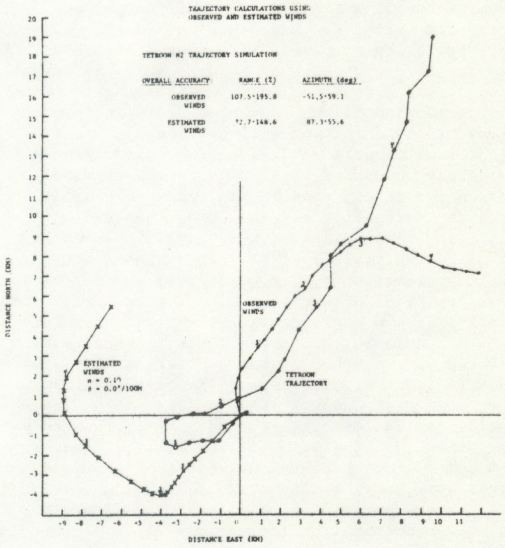


Figure 4

Because periods 3 and 4 are of the same stability type, their results can be averaged. These averages are shown in Table IV as period (3+4). From Figures 3 and 5, we see that the estimated wind and observed wind trajectories are in fair agreement with the actual tetroon trajectory.

In period 5, the estimated winds are extremely poor in predicting the direction of the tetroon path as is quite evident in Figure 6. Wind veering helps reduce the azimuth error, however a great deal more than 5°/100 m is necessary.

6. DISCUSSION OF RESULTS

From the above results, we see that the greatest overall errors occur for the strongly stable and unstable cases. These errors are equally as great for the observed as well as the estimated winds. During period 2, there were light winds with strong convective turbulence. The hourly ETTEX observations could not resolve the mean wind structure because of its extreme variability, and as a result large errors exist in the average range and azimuth calculations. The large variability of the winds also produces large standard deviations of these errors. The estimated winds, however, do produce less average error in range because these winds are time averages and thus more truely reflect the mean transport winds.

The results for period 5 are in contrast somewhat with those of period 2, i.e. large mean errors but with small standard deviations. From Figure 5, we see that during the first two hours of the trajectory the estimated winds produce a path directed approximately down the Tennessee Valley. An analysis of the surface winds throughout the Tennessee Valley for a six week period during the ETTEX experiment, shows the apparent existence of a large scale nocturnal wind directed down the valley. It is believed that this wind is the result of drainage from the Smoky Mts. and the Cumberland Plateau. Under night-time conditions, the surface winds are evidently uncoupled from the upper level winds and cannot be expected to produce a meaningful trajectory result. An example of this valley wind is seen in Figure 7 which shows the early morning wind field over the ETTEX region at various elevations. The wind field was derived from the ETTEX observations. The wind arrows with circles at 400 m are surface observations which were not used in the interpolation. Note that between 400 and 1600 m, there exists a 180° wind shear. In an earlier report (Nappo 1975) it was suggested that under stable conditions the large scale terrain features produce a strong horizontal variability of the wind field. In an attempt to compensate for this variability, the estimated winds were horizontally averaged at each level and the trajectories recalculated. The result of this procedure for tetroon N13 is shown in Figure 6. Horizontal averaging reduces the overall azimuth error by about 60°, and suggests a possible procedure to follow during stable conditions.

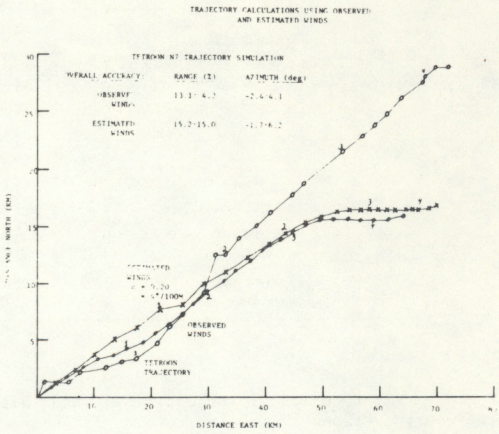


Figure 5

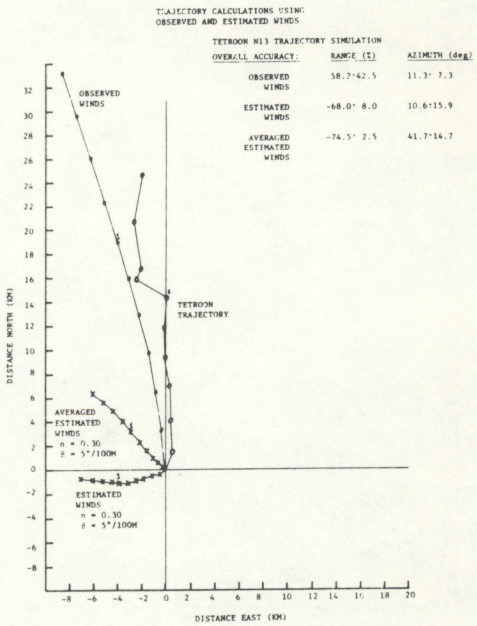
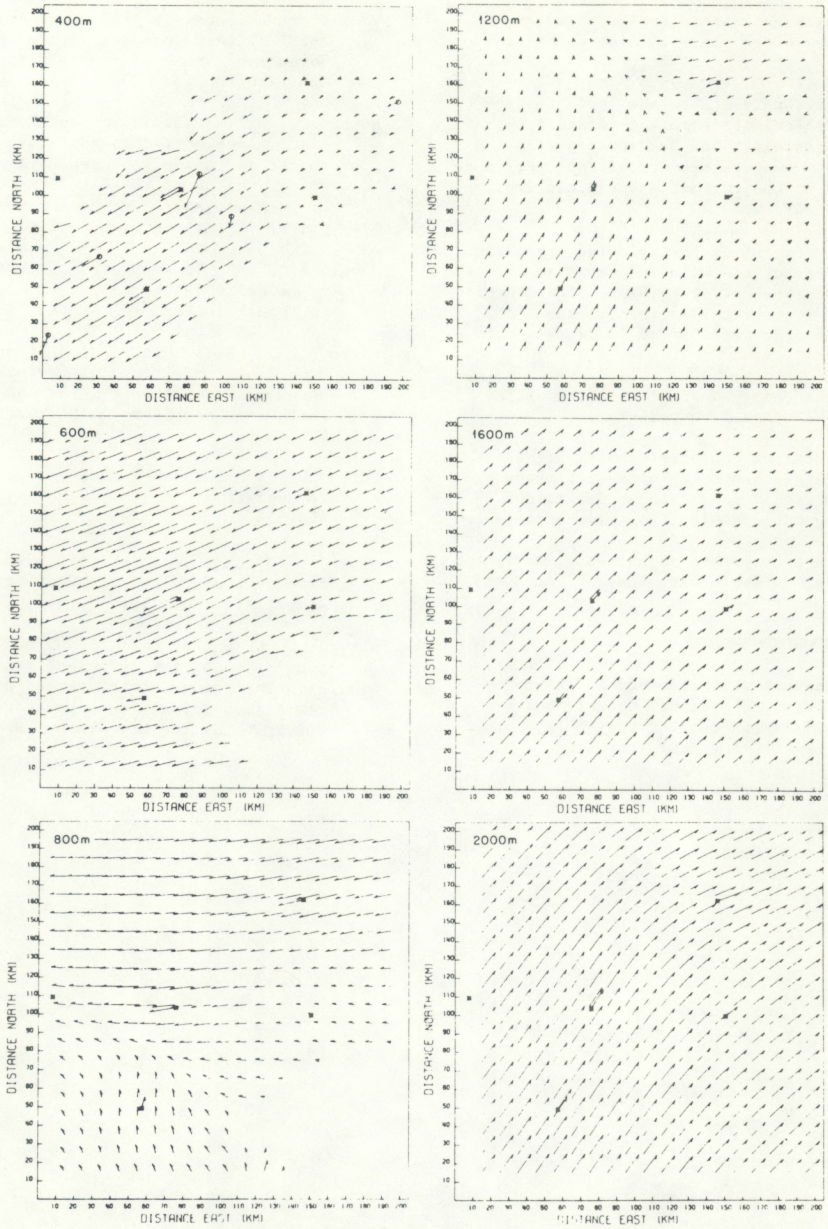


Figure 6



ETTEX Wind Field 8-06-74 at 0700 EDT for Various Heights Above Sea Level.

Figure 7

7. CONCLUSION

The results presented here have been derived from a limited number of observations for a particular geographic region; however, this study does offer the following generalizations:

7.1 In strongly stable and unstable conditions, air parcel trajectories formed from surface wind estimates can be expected to be in large error. Under these conditions, horizontal averaging of the estimated winds can improve the overall accuracy.

7.2 For moderately unstable and transition conditions, the surface winds adjusted in the manner used by Gudiksen et al. (1975) offer acceptable results, i.e. overall errors in range and azimuth on the order of 10% and 10 degrees respectively.

7.3 For strongly unstable conditions, a time average of winds is necessary.

7.4 Except for unstable conditions, the observed winds are better than the estimated winds; however, only under stable conditions are the observed winds significantly better.

7.5 With appropriate adjustments, surface winds can offer reliable estimates of atmospheric transport.

ACKNOWLEDGEMENT

This work was performed under an agreement between the National Oceanic and Atmospheric Administration and the Energy Research and Development Administration.

REFERENCES

Hanna, S. R., C. J. Nappo, R. P. Hosker, and G. A. Briggs, 1974: Description of the eastern Tennessee trajectory experiment (ETTEX). Air Resources Atmospheric Turbulence and Diffusion Laboratory, ATDL Contribution No. 103.

Heffter, J. L., A. D. Taylor and G. J. Ferber, 1975: A regional-continental scale transport, diffusion, and deposition model. NOAA Tech. Memo. ERL-ARL-50. U. S. Dept. of Commerce, Air Resources Laboratories, Silver Spring, Maryland.

Joynt, R. C. and D. R. Blackman, 1976: A numerical model of pollutant transport, to appear in Vol. 10, Atmos. Environ.

Nappo, C. J., 1975: Time dependent mesoscale wind fields over complex terrain, Air Resources Atmospheric Turbulence and Diffusion Laboratory, ATDL Contribution No. 75/6.

Peterson, K. R., 1966: Estimating low-level tetroon trajectories, J. Atmos. Sci. 5, 553-564.

Smith, F. B. an G. H. Jeffrey, 1975: Airborne transport of sulphur dioxide from the U.K. Atmos. Environ., Vol. 9, 643-660.

Watson, C. W. and S. Barr, 1976: Monte Carlo simulation of the turbulent transport of airborne contaminants, report no. LA-6103, Los Alamos Scientific Laboratory of the Univ. of Calif., Los Alamos, N.M.

☆ U.S. GOVERNMENT PRINTING OFFICE:1978—777-067 / 1271