AD

TECHNICAL REPORT ECOM-65-G10

ROUND HILL TURBULENCE MEASUREMENTS VOLUME I

EXPERIMENTAL TECHNIQUES, DATA-PROCESSING PROCEDURES, AND DATA TABULATIONS FOR RUNS 87A THROUGH 95A

By
H. E. CRAMER, F. A. RECORD, AND J. E. TILLMAN

DECEMBER 1966

ECOM

UNITED STATES ARMY ELECTRONICS COMMAND
ATMOSPHERIC SCIENCES LABORATORY, RESEARCH DIVISION
FORT HUACHUCA, ARIZONA

GRANT NO. DA-AMC-28-043-65-G10
METEOROLOGY DEPT, MASSACHUSETTS INSTITUTE OF TECHNOLOGY
CAMBRIDGE, MASSACHUSETTS

256

Technical Report ECOM-65-G10 1 December 1966

ROUND HILL TURBULENCE MEASUREMENTS

VOLUME I

Experimental Techniques, Data-Processing Procedures, And
Data Tabulations for Runs 87A through 95A

Grant No. DA-AMC-28-043-65-G10
DA Task No. IV0-14501-B53A-08

By

H. E. Cramer, F. A. Record, and J. E. Tillman
Meteorology Department
Massachusetts Institute of Technology
Cambridge, Massachusetts

For

U.S. Army Electronics Command
Atmospheric Sciences Laboratory, Research Division
Fort Huachuca, Arizona

This report was published by the Atmospheric Sciences Research Division at Fort Huachuca, Arizona under the direction of T. H. Pries.

ABSTRACT

This volume describes the experimental techniques and the data-processing procedures employed in a program of turbulent structure measurements carried out at the Round Hill Field Station. It also contains data summaries for 12 of the 76 field experiments selected for inclusion in this report. The field site and the experimental procedures are described in Section I. Sections II and III respectively contain descriptions of the data-acquisition system and the data-processing procedures. Section IV contains data summaries for Runs 87A through 95A; data summaries for the remaining field experiments are presented in Volumes II, III, IV, and V.

FOREWORD

In December 1958, the research team at the Round Hill Field Station began a program of field measurements and data analysis dealing with characteristic properties of the energy spectra and cospectra associated with turbulent energy exchange proces within the first 100 meters of the atmosphere. The early phases of the work were devoted to the development of suitable instrumentation and experimental techniques and were carried out under Contract No. DA-36-039-SC-80209 with the U. S. Army Electronic Proving Ground at Fort Huachuca, Arizona. The instrumentation comprised a fast-response system for the simultaneous measurement of fluctuations in wind-velocity components and air temperature, and a slow-response system for supporting meteorological measurements. Measurements of the fluctuations in refractive index were also made during several experiments. During the first phase of the field program, approximately 100 experiments were carried out on a 40-m tower located in relatively flat terrain. During the second phase of the program, 32 experiments were carried out on a 91-m tower located in a wooded area. Processing of the fast-response measurements was begun by the Meteorology Department at Fort Huachuca and continued by the Massachusetts Institute of Technology under Grant No. DA-AMC-28-043-65-G10.

The purpose of this series of five volumes is to furnish a comprehensive listing of spectral and cospectral calculations and of supporting meteorological data obtained from 76 selected field experiments. An analysis of much of the experimental data was carried out under Grant No. DA-AMC-36-039-64-G1 and will be published separately in a final report.

Publication of these volumes was carried out by the Atmospheric Sciences Research Division at Fort Huachuca under the direction of Mr. Thomas H. Pries. The authors wish to express their appreciation to Mr. Pries for his assistance in the preparation of this series. They also wish to acknowledge the valuable contributions and support of Mr. J. F. Appleby and Mr. W. D. Ohmstede of the Atmospheric Science Research Division throughout the research program.

The authors wish to acknowledge the important contributions of George Fontes, Harry V. Geary, John E. Luby and James H. Peers of the research team at the Round Hill Field Station to the work described in this volume.

The authors also express their appreciation to Mr. James H. Chisholm, Dr. Lee J. Sullivan and other members of M.I.T. Lincoln Laboratory for their assistance in various phases of the work. The paper-tape decoding program was written by Mr. John Avery with the assistance of Mr. James J. Fitzgerald, Mrs. Marion Andrews and Mr. Peter Hefferman. The latter also ran the decoding program. Mr. John A. Bauer arranged for the loan of the microwave refractometer and Mr. Roy H. Erickson aided in the installation and initial operation of the refractometer at Round Hill.

TABLE OF CONTENTS

		Page
ABSTRACT		ii
FOREWORD		iii
LIST OF ILLUSTRATIONS		v
LIST OF TABLES		vi
SECTION I	INTRODUCTION	1
	A. Site Description	2
	B. Summary of Field Experiments	11
	C. Selection of Data for Publication	12
	D. Organization of Volumes	13
SECTION II	DATA ACQUISITION SYSTEM	14
	A. Introduction	14
	B. Slow-Response Subsystem	14
	C. Fast-Response Subsystem	16
	D. Amplifier-Filter System	22
SECTION III	DATA PROCESSING	25
	A. Conversion of Raw Binary Data from Paper Tape to Magnetic Tape and Data Editing	25
	B. Scaling and Conversion of Raw Binary Data to Meteorological Units, and Generation of Master Data Files	27
	C. Frequency Distribution, Correlation and Spectral Analysis Programs	29
	D. Mathematical Formulas used in Constructing the Correlation and Spectral Programs	30
SECTION IV	DATA TABULATION FOR RUNS 87A THROUGH 95A	35
	A. Vertical Profiles of Mean Wind Speed and Air Temperature	35
	B. Turbulence Statistics	35
REFERENCES		246

LIST OF ILLUSTRATIONS

		Page
Figure 1	Map showing the location of the Round Hill Field Station	3
Figure 2	Roughness elements of the Round Hill Field Site	4
Figure 3	View from 40-m level of T_1. Camera pointed toward 216 deg	5
Figure 4	View from 40-m level of T_1. Camera pointed toward 254 deg	6
Figure 5	View from 40-m level of T_1. Camera pointed toward 294 deg	7
Figure 6	View from 40-m level of T_1. Camera pointed toward 329 deg	8
Figure 7	View from 40-m level of T_1. Camera pointed toward 2 deg	9
Figure 8	Aerial view of the Round Hill Field Station showing the location of the two meteorological towers	10
Figure 9	Block diagram of basic components of slow-response system at tower T_1	17
Figure 10	Basic components of fast response data-acquisition system for measurement at one tower level. Duplicate system for second level	18
Figure 11	Sketch of the revised M.I.T. bivane	19
Figure 12	Transmission curves for the amplifier-filter system	24
Figure 13	Block diagram of data-processing operations	26

LIST OF TABLES

		Page
Table 1	Summary of Transducer Characteristics	20
Table 2	Correction Factors Applied to Spectral and Co-spectral Estimates to Compensate for Running-Mean Filtering, Sequential Block Averaging, System Response, and Foldover	31
Table 3	Vertical Profiles of Mean Wind Speed	36
Table 4	Vertical Profiles of Mean Air Temperature	37
Table 5	Adjusted Frequency Bands for Spectral and Co-spectral Estimates	40

SECTION I

INTRODUCTION

Under the sponsorship of the Atmospheric Sciences Research Division at Fort Huachuca, the research team at the Round Hill Field Station engaged in a five-year program of field measurements and data analysis dealing with characteristic properties of the energy spectra and cospectra associated with turbulent energy exchange processes within the first 100 meters of the atmosphere. The early phases of this work were devoted to the development of suitable instrumentation and experimental techniques; these are described in two previous reports (Cramer, Record, Tillman, and Vaughan, 1961; Cramer, Record, and Tillman, 1962). The results of an analysis of some of the experiments, centered primarily on the general form of the spectra and cospectra of the characteristic air properties, are presented in the 1962 report; the results of an analysis of the bulk of the experimental data are presented in the Final Report (Cramer, Record, and Tillman, 1967). The purpose of this series of five volumes is to furnish a comprehensive listing of spectral and cospectral calculations and of associated meteorological measurements obtained during the field program.

The principal objectives of the experimental program were: the direct measurement of the turbulent fluctuations in wind velocity, air temperature, and water vapor density; calculation of the spectral and cospectral distributions of these quantities; and, an investigation of the relation of these distributions to height above ground, surface roughness, and such meteorological parameters as lapse rate, wind speed, and radiation. Attempts to develop new infrared and ultraviolet techniques for measuring humidity fluctuations were unsuccessful. Measurements of humidity fluctuations reported in these volumes are limited to a small number of field experiments in which a microwave refractometer system was used to measure changes in refractive index.

The instrumentation for the field measurement program comprised a fast-response system for the simultaneous measurement of the fluctuations in the orthogonal wind-velocity components, in air temperature, and refractive index at two heights above ground level; and a slow-response system for supporting measurements of radiation, vertical profiles of mean wind speed, wet- and dry-bulb temperature, soil temperature, and other quantities requisite for calculations of the boundary-layer heat budget. Outputs from the fast-response transducers were sampled at intervals of 1.2 sec for periods of one or more hours. Slow-response system outputs are available for similar periods of observation.

The remainder of Section I contains a description of the field site, a summary of the field experiments, a discussion of the basis for selecting data for publication, and a listing of the field experiments included in each volume of the report. A description of the data-acquisition system is presented in Section II. The procedures used in processing the data and in calculating power spectra and cospectra of the measured variable for the range of frequencies from 0.4 to 0.0014 cycles sec^{-1} are described in Section III. An explanation of the data presentation format precedes the tabulation of the results in each of the five volumes.

A. SITE DESCRIPTION

The field measurement program carried out at the Round Hill Field Station was divided into two phases. The first phase deals with measurements made on a 40-m tower located in a relatively smooth field; in the second phase, similar measurements were made on a 91-m tower located in a wooded area. The field station is situated on a flat point of land bordered by Buzzards Bay on the east and south. The location of the field station and of the meteorological towers used in the two phases of the field program are shown in Figure 1. The 40-m tower T_1 is located about 40 m from the shoreline at the southern edge of a cleared field. The field is about 20 acres in extent and the grass was mowed annually during the experimental program. The grass within a radius of about 100 m to the west and north of tower T_1 was kept trimmed to a length of 5 to 10 cm. At the western edge of the 20-acre field there is a wooded section which is approximately 335 m from T_1 at the nearest point. A ridge with a maximum elevation of 24 m and oriented along a north-south line is located about 1 km west of T_1. For the second phase of the field program, the instrumentation was moved to a 91-m tower T_2 located in the wooded area about 1 km northwest of T_1. The purposes of the relocation were to obtain measurements of turbulence structure above a rougher surface and to extend the measurements to greater heights.

A sketch showing the principal roughness elements in the vicinity of the two towers is presented in Figure 2. The series of overlapping photographs presented in Figures 3 and 7 were taken from the 40-m level of tower T_1 and show the features of the upwind terrain for the first phase of the field program. In these photographs, the camera is pointed successively along azimuth bearings of 216, 254, 294, 329, and 2 deg. The two points of land shown in Figure 3 extend into Buzzards Bay and are approximately 1.5 and 3 km from T_1 (see Figure 1). The extensive area of marshland west of T_1 extends from the shoreline, as shown in Figure 4, across the central region in Figure 5 and terminates in Figure 6. Salt water enters the marsh during normal high tides and completely floods the area during extremely high tides. A network of shallow drainage ditches appears as regular lines in Figure 5. The 91-m tower extends above the horizon just to the right of center in Figure 5. In Figure 7, which shows the view toward the north, a portion of the 20-acre field appears in the foreground, and Buzzards Bay is at the upper right. The location of both meteorological towers is shown in the aerial photograph presented in Figure 8.

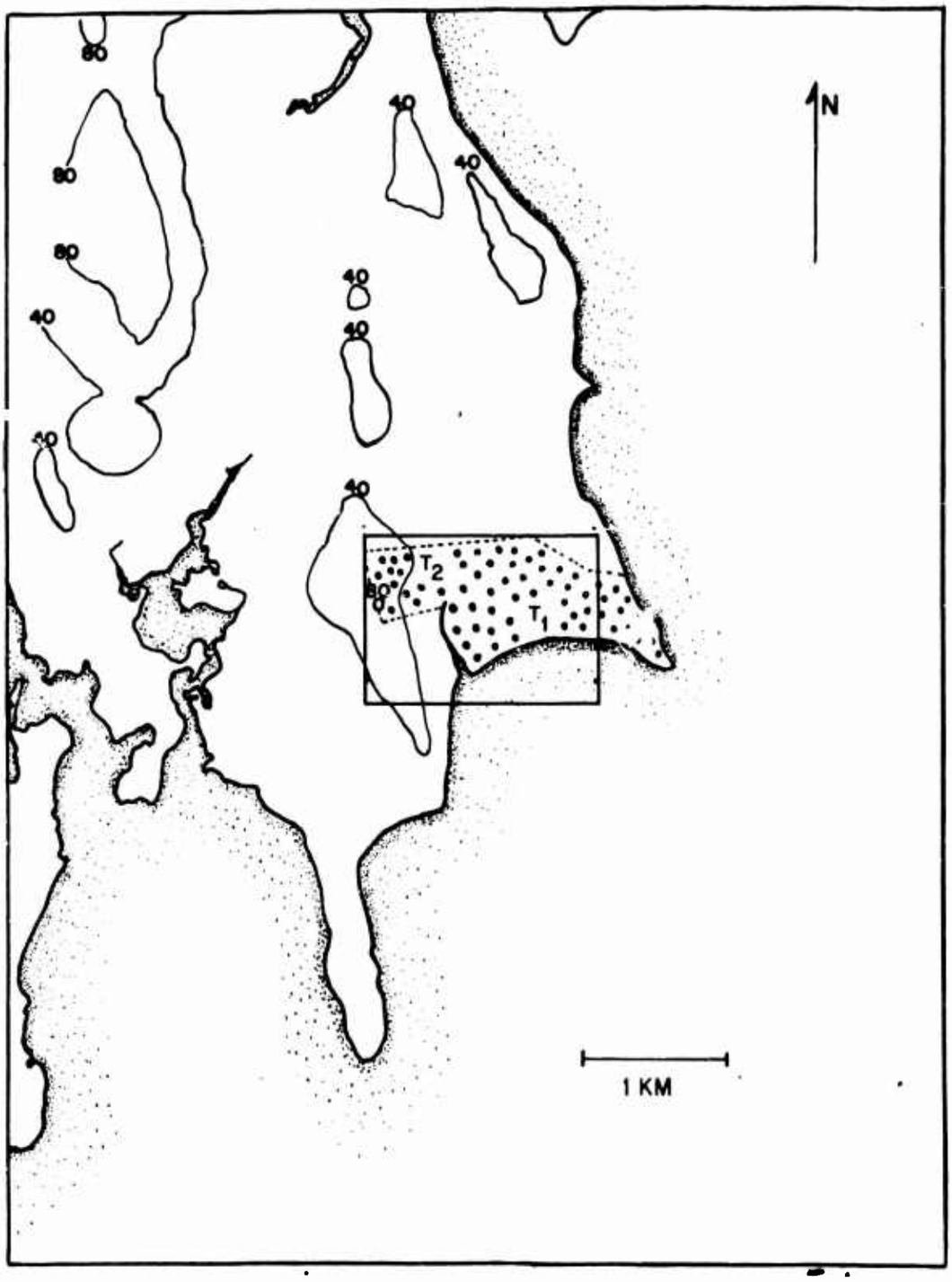


Figure 1. Map showing the location of the Round Hill Field Station. Stippled area marks the estate; the location of the meteorological towers are indicated by the symbols T_1 and T_2. Surface features of the rectangular area are presented in Figure 2.

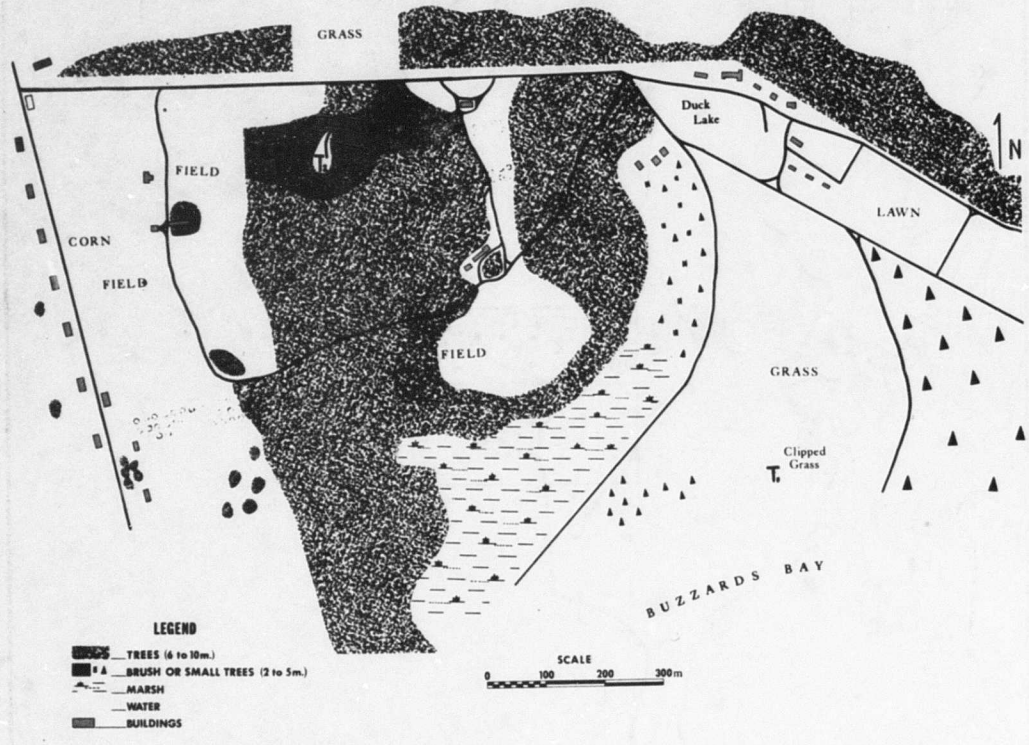


Figure 2. Roughness elements of the Round Hill Field Site.

Figure 3. View from 40-m level of T_1. Camera pointed toward 216 deg.

Figure 4. View from 40-m level of T_1. Camera pointed toward 254 deg.

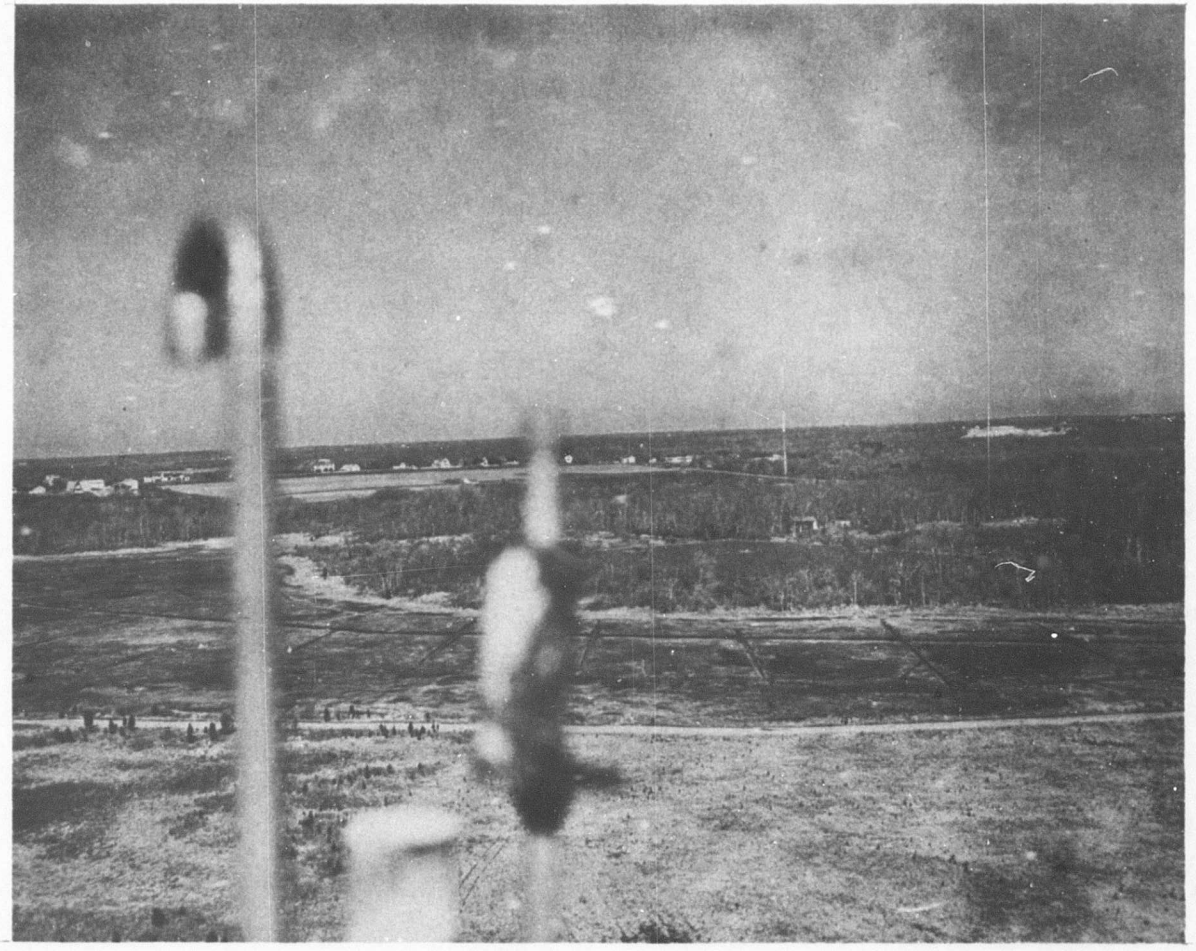


Figure 5. View from 40-m level of T_1. Camera pointed toward 294 deg.

Figure 6. View from 40-m level of T_1. Camera pointed toward 329 deg.

Figure 7. View from 40-m level of T_1. Camera pointed toward 2 deg.

Figure 8. Aerial view of the Round Hill Field Station showing the location of the two meteorological towers. Observer is looking toward the west.

B. SUMMARY OF FIELD EXPERIMENTS

1. Experiments at T_1

During the first phase of the field measurement program, fast-response instrumentation was installed on tower T_1 at heights of 16 m and 40 m above ground level. Seventy-five two-level experiments were successfully carried out during 1961 and 1962, providing a total of 87 hours of data. Fast-response measurements from the 16-m level are also available from 26 additional one-hour experiments. Also, the fast-response data for all experiments included simultaneous observations of the fluctuations in air temperature and the orthogonal components of wind velocity. Refractive index measurements were made at both levels in seven experiments and at the 16-m level alone during six additional experiments. Mean wind directions during the experiments ranged from south through west to north. It is evident from the site description that a wind direction of 245 deg is approximately parallel to the shoreline in the vicinity of T_1; more northerly flow has a land trajectory. Air flow in the sector from 205 to 245 deg passes over two points of land upwind from the tower and is thus influenced by both land and water surfaces. Of the total data set of 101 experiments, 22 were carried out in May, 1 in July, 37 in October, 35 in November, and 6 in December; 45 were carried out during unstable thermal stratification, 42 during stable conditions and 14 during transitional or near-neutral conditions; 12 experiments are associated with a water or mixed land-water trajectory, and the remaining 89 with a land trajectory.

The supporting slow-response meteorological observations for these experiments comprised: wind speed measurements made with cup anemometers at heights of 0.25, 0.5, 1, 2, 4, 8, 16, 32, and 40 m; wet- and dry-bulb temperature measurements at each anemometer level and also at 0.12 m; and solar and net radiation. Solar radiation was measured with an Eppley pyrheliometer and net radiation with both Beckman-Whitley and Fritschen* radiometers. In addition, soil temperature measurements needed for the calculation of the heat flux at the earth-air interface were made along a 40-m observation line with three Beckman-Whitley heat plates inserted at a depth of 5 cm beneath the soil surface, and five resistance elements positioned to yield a space-integrated temperature for the soil layer from 0 to -5 cm. The heat capacity of the soil within this layer was calculated from the density and specific heat of dried soil samples determined at the start of the field program, and from measurements during each experiment of the fraction of water present in soil samples from the layer. The temperature profile within the soil at each end of the observation line was also determined for most of the experiments

*Two net-radiometers, designed and fabricated by Dr. Leo Fritschen, were loaned to Round Hill by the U.S. Water Conservation Laboratory Agricultural Research Service, Tempe, Arizona.

by soil thermometers inserted at depths of 1.6, 3.1, 6.2, 12.5, 25, 50, and 100 cm.

2. Experiments at T_2

Provisions were made for the installation of fast-response sensors at three levels (15,2 m, 45.7 m, and 91.4 m) on the 91-m tower to facilitate studies of the height dependence of the turbulence parameters. Since the capacity of the data-acquisition system was limited to simultaneous observations at only two levels, information could be obtained at only two of the three levels during any particular experiment. Thirty two-level experiments comprising 35 hours of data were carried out during June and July 1963. Fast-response data were collected at the 45.7-m level in all of these experiments; during 13 of the experiments, fast-response data were also collected at the 15.2-m level; and during the remaining 17 experiments, at the 91.4-m level. These data consisted of simultaneous observations of the fluctuations in air temperature and wind velocity components at each level. No refractive index measurements were made. Fifteen of the observation periods were during unstable thermal stratification, eight were during stable conditions, and seven during transitional or near-neutral conditions. Data were collected only during periods in which the mean wind direction had a westerly component. For these directions, the surface upwind from the tower is characterized by open fields, bushes, wooded areas, and the N-S ridge which lies about 450-m west of the tower and rises to a height of about 15 m above the base of the tower. The air trajectory for all experiments was over land for distances of at least 1.5 km upwind from the tower. Features of the upwind surface for individual experiments can be determined by reference to Figures 1 and 2 and the mean wind directions listed in the data tabulations.

Slow-response measurements comprised wind speed and air temperature at seven tower levels (3.8, 7.6, 15.2, 30.5, 45.7, 68.6, 91.4 m) and solar radiation.

C. SELECTION OF DATA FOR PUBLICATION

Data from forty-nine experiments carried out at tower T_1 are included in the tabulation presented below. These experiments encompass a wide range of atmospheric stability conditions and also reflect some differences in surface roughness. Final selection was based on the quality of the data after checking and editing procedures had been completed. Due to limitations of time and money, about 25 percent of the 40-m tower data collected during the field program was not processed. Data from 27 of the 30 experiments carried out at T_2 were selected for publication following similar screening procedures.

To include as many experiments with humidity data as possible, Runs 76A, 76B, and 78A have been retained even though systematic errors in encoding the 40-m wind speed occurred during these runs. The principal effect of

these errors is an apparent increase in energy at the high-frequency end of the power spectrum for the u- component of wind velocity. Runs 82D and 82E also contain humidity data.

Runs 43 and 47 were carried out during southwesterly and south-southwesterly flow, respectively; Runs 82C, 82D, and 82E were carried out during a period when the wind direction was gradually veering from northwest to north-northeast. Irregularities found at the higher levels of the wind speed profiles during these runs may have been caused by the supporting tower structure, since the sensors were mounted on fixed booms extending toward the west. Runs 43 and 47 are associated with a water trajectory.

The resistance thermometers used to measure soil-temperature profiles proved to be unreliable, and many failures took place during the experimental program. Absolute calibration of the remaining thermometers is estimated to be within 0.3 C. The data have been included primarily to indicate the marked differences in the behavior of the profiles at the two ends of the 40-m sampling line presumed to be the result of differences in soil composition and vegetative cover. At the north end of the observation line, the ground is covered with thick grass with matted roots penetrating a 15-cm layer of topsoil. Below the topsoil, there is about 20 cm of hard-packed fill followed by 65 cm of moist sand. The ground cover at the south end of the observation line consists of scattered clumps of beach grass. The top 26 cm of soil is beach sand washed in by storms; beneath this layer there are 13 cm of loam, 24 cm of sandy fill, and 37 cm of sand.

D. ORGANIZATION OF VOLUMES

Data summaries for the selected experiments are presented in five volumes. Volumes 1 and 2 refer to the second phase of the measurement program at tower T_2 and contain Runs 87A through 95A and 96A through 104, respectively.

Summaries of the measurements made during the first phase of the field program at tower T_1 are contained in the remaining three volumes. Volume 3 contains Runs 32 through 66 D; Volume 4 contains Runs 66E through 76B; Volume 5 contains Runs 78A through 85C.

Each volume presents tabular summaries of the spectral and cospectral estimates and of the gross statistics for individual experiments. These summaries are preceded by tables of vertical profiles of mean wind speed and air temperature for each experiment. Volumes 3, 4, and 5 also contain tables of soil temperatures and calculated values of the terms in the heat-budget equation for the earth-air interface.

SECTION II

DATA ACQUISITION SYSTEM

A. INTRODUCTION

The meteorological data acquisition system used in the field program consisted of two subsystems: a fast-response installation for the simultaneous measurement of the fluctuations in air temperature, humidity, and the orthogonal components of wind velocity at two tower levels; and a slow-response system for measuring solar radiation, net radiation, vertical profiles of mean wind speed, dry- and wet-bulb air temperature, soil temperature, and other quantities required to calculate the heat budget at the air-earth interface. The complete slow-response installation was used for the first phase of the field program at tower T_1. During the second phase of the program at tower T_2, the slow-response measurements were limited to vertical profiles of mean wind speed and air temperature. Major features of the subsystems are summarized below.

B. SLOW-RESPONSE SUBSYSTEM

1. Wind Speed and Direction Measurements

Wind speeds were measured with cup anemometers. In the first phase of the measurement program, two types of sensors were employed. During the early experiments lightweight cup anemometers were installed at heights of 0.25, 0.5, 1, 2, and 4 m on a small tower located about 12 m northwest of tower T_1. To minimize interference from supporting structures these lightweight anemometers were relocated at the same heights on a pipe mast 10 m to the northwest before the 1962 field program was begun. Conventional 3-cup anemometers were installed at heights of 1, 2, 4, and 8 m on the small tower and at heights of 16, 32, and 40 m on the large tower. Starting and stopping speeds of the larger anemometers are approximately 1 m sec^{-1} and, for the smaller anemometers, are about 0.75 m sec^{-1}. Outputs from both types of sensor are in the form of counts of the number of revolutions of the cup wheels. The small cup anemometers employ a photocell, light source, and single-slot chopper or disc. Each rotation of the cup wheel produces an electrical pulse from the photocell that is amplified, shaped into a square wave form, and fed into a Sodeco counter. The output of the larger cup anemometers consist of electrical pulses produced by a single contact device activated once per revolution of the cup wheel. In the tabulations of mean wind speeds presented in Volumes 3, 4, and 5, values at heights of 0.25 and 0.50 m were obtained from the small cup anemometers; mean wind speeds at all

other heights were obtained from the large cup anemometers. During the second phase of the field measurement program, only the large cup anemometers were used. These were installed at heights of 3.8, 7.6, 15.2, 30.5, 45.7, 68.6, and 91.4 m on tower T_2.

Skeleton slow-response instrumentation was operated continuously to provide background information on fluctuations in wind speed and wind direction. This instrumentation comprised large cup anemometers and flat-plate azimuth vanes. During the first phase of the program these measurements were made at the top of the small tower near T_1; during the second phase of the program, they were made at heights of 16, 46, and 91 m on T_2.

2. Air Temperature Measurements

Air temperatures were measured with C. P. Nickel resistance elements manufactured by RdF Corporation. Each element was sealed in a stainless steel sheath and connected electrically to a 3-wire compensated Wheatstone-bridge. Radiation shielding was provided by housing the sheathed elements in cylindrical sections of phenolic linen tubing; the outer surface of the tubing was covered with gold foil. Each temperature element was ventilated at a uniform rate of about 5 m sec^{-1}. During the first phase of the experimental program at tower T_1, both dry- and wet-bulb temperature measurements were made. For the latter purpose, the sheathed resistance elements were encased in linen wicks connected to water reservoirs. Only dry-bulb temperature measurements were made at tower T_2.

Measurement heights for both the dry- and wet-bulb temperatures were the same as for wind speed at both tower sites (see Section 1 above).

3. Soil Temperature Measurements

Temperature profiles within the soil were measured with electrical resistance elements similar to those described above. Individual temperature probes were positioned at depths of 1.6, 3.1, 6.2, 12.5, 25, 50, and 100 m at both ends of a 40-m observation line. In addition, five elements were inserted vertically in the soil at equally-spaced intervals along the 40-m observation line to provide integrated temperatures for the 0 to 5 cm soil layer. Also, three Beckman-Whitley heat plates connected in series were used to measure the soil heat flux through the -5 cm level.

4. Radiation Measurements

Incoming solar radiation was measured with a 50-junction Eppley pyrheliometer during both phases of the field program. The net flux of long- and short-wave radiation was measured with a Gier and Dunkle type net radiometer, manufactured by Beckman and Whitley, during the first phase of the field program at tower T_1.

5. Data Acquisition

A block diagram of the components of the slow-response system at tower T_1 is shown in Figure 9. The cup anemometer outputs were registered on electro-mechanical counters and on an Esterline-Angus operations recorder. All temperature measurements were registered on a 20-channel Brown strip chart potentiometer. Wind direction, net radiation, solar radiation, and heat plate information were registered on Esterline-Angus recorders.

C. FAST-RESPONSE SUBSYSTEM

The fast-response subsystem provides for the simultaneous measurement of five meteorological variables at each of two fixed locations. Bivanes equipped with bead thermistor anemometers were used to measure wind elevation angle, azimuth angle, and wind speed. These data are later converted through the use of trigonometric relationships to orthogonal components of wind velocity. Air temperature was measured with platinum-wire resistance elements. In some of the experiments, microwave refractometers were used to measure changes in the refractive index of the air which are closely related to changes in atmospheric water vapor density.

The basic components of the fast-response subsystem are shown in Figure 10. The output of each transducer passes through an amplifier-filter system that controls the range of the variable being measured, removes undesirable electrical noise from the signal, and filters the high frequency components of the transducer output such that the response time of all transducers is effectively the same. The filtered output then passes through a servo-balancing recorder where it is registered on a chart by a pen trace. The output also is applied to an electro-mechanical shaft encoder that converts the signal to a binary digital form. The outputs of all shaft encoders are simultaneously sampled every 1.2 sec and stored in a relay memory. The maximum time required for encoder sampling and storage is 0.05 sec. During the remaining 1.15 sec of the sampling cycle, the data are sequentially removed from storage and punched on a paper tape.

The final steps in the preparation of the transducer output data for computer processing were performed off-line, i.e., after an experiment had been completed. These steps include the decoding and transfer of the information on the paper tape to a magnetic tape.

A description of transducer characteristics and the operation of various system components is provided below. Transducer characteristics are summarized in Table 1.

1. Transducers

a. Azimuth and Elevation Angle

The azimuth and elevation angles of the wind were measured by the revised M.I.T. bivane shown in Figure 11. The vane is constructed of

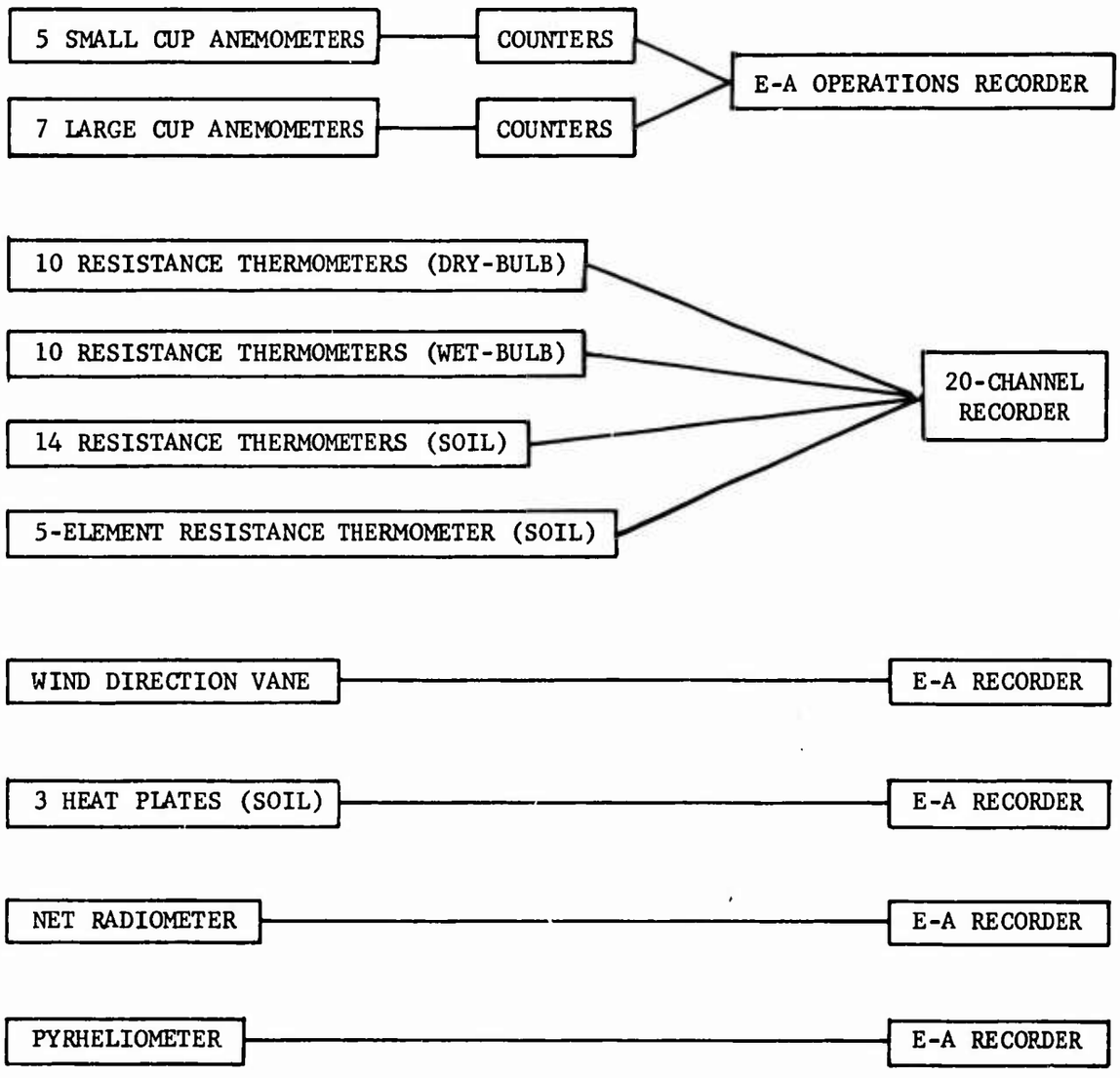


Figure 9. Block diagram of basic components of slow-response system at tower T_1.

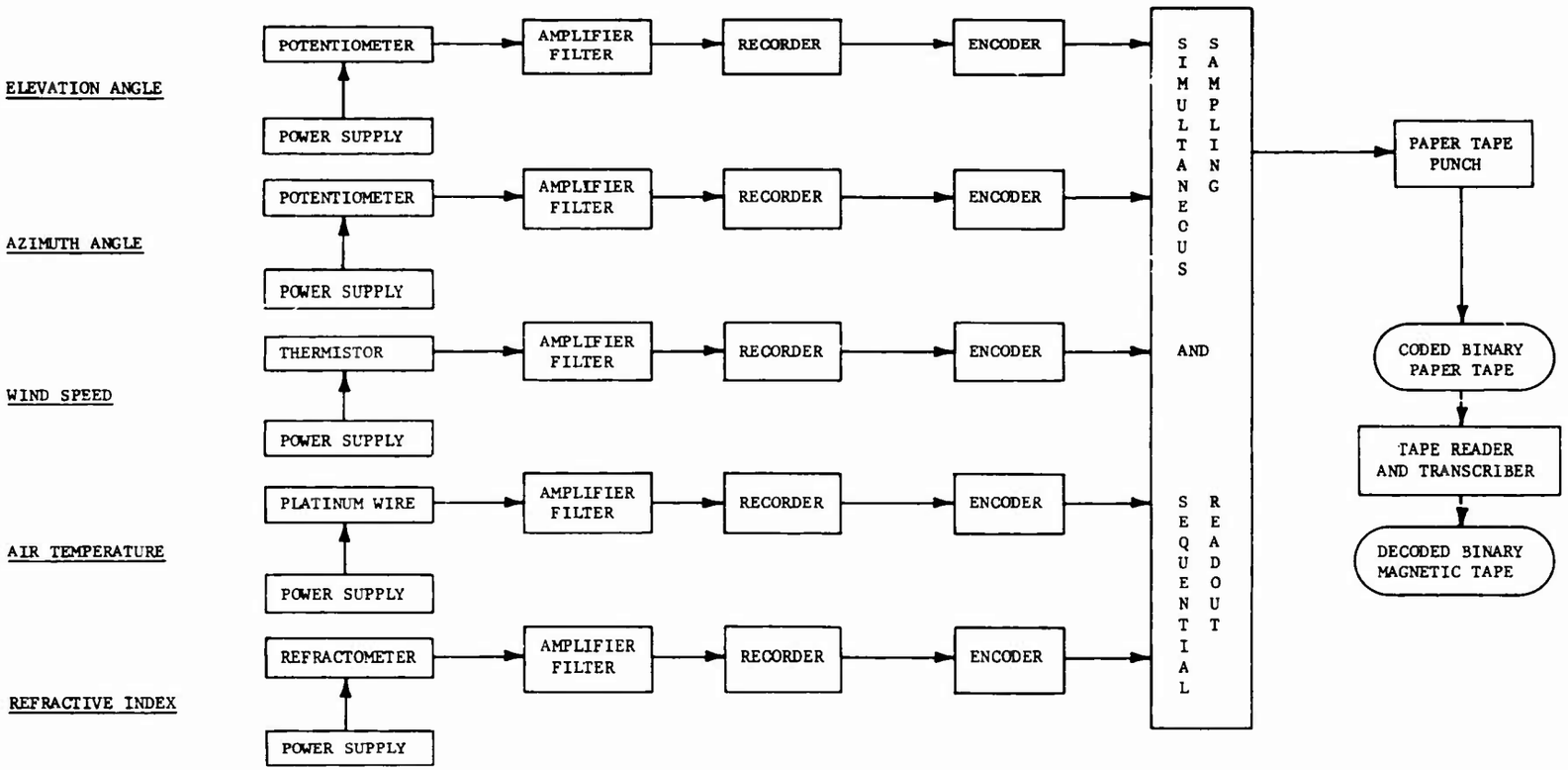


Figure 10. Basic components of fast-response data-acquisition system for measurement at one tower level. Duplicate system for second level. Dashed lines indicate off-line operation.

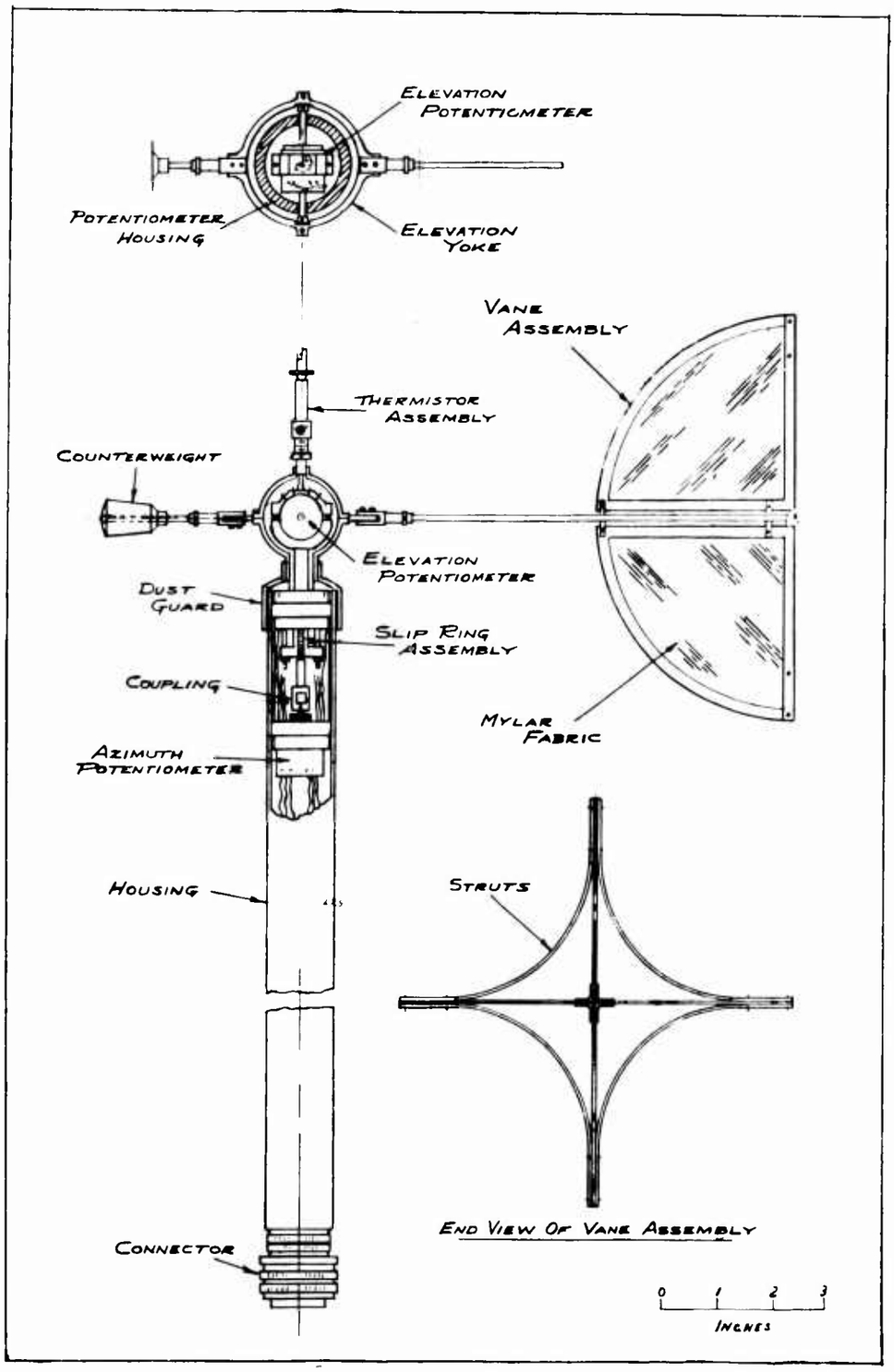


Figure 11. Sketch of the revised MIT bivane.

TABLE 1

SUMMARY OF TRANSDUCER CHARACTERISTICS

Elevation Angle, Bivane

Ranges: ±25, ±50, ±75 deg electrical; mechanically limited to ±55 deg
Distance Constant: 1.5 m
Accuracy: ±1 percent
Stability: ±0.1 percent per hour
Resolution: Limited by 8-bit digital encoder
Noise: << ±1 encoder bit

Azimuth Angle, Bivane

Ranges: ±50, ±100, ±150, ±178 deg electrical; continuous mechanical
Distance Constant: 1.5 m
Accuracy: ±1 percent
Stability: ±0.1 percent per hour
Resolution: Limited by 8-bit digital encoder
Noise: << ±1 encoder bit

Wind Speed, Thermistor

Range: 0 to 20 m sec^{-1}
Distance Constant: 1 to 2 m for wind speeds from 2 to 20 m sec^{-1}
Time Constant: <0.5 sec for wind speed >2 m sec^{-1}
Accuracy: ±15 percent absolute
Stability: ±1 percent per hour
Resolution: Limited by 8-bit digital encoder
Noise: << ±1 encoder bit

Temperature, Platinum Wire Resistance Element

Range: 5 or 10 C between -20 and +40 C
Distance Constant: <2 m for wind speed >2 m sec^{-1}
Accuracy: ±0.5 C
Stability: ±0.01 C per hour neglecting radiation errors
Resolution: Limited by 8-bit digital encoder
Noise: << ±1 encoder bit
Radiation Error: (See text).

Refractive Index, Microwave Refractometer

Range: 5 or 10 N unit segment of the range encountered in the atmosphere
Distance Constant: <1 m
Accuracy: Relative indications only; absolute value established by reference to wet and dry bulb temperature measurements
Stability: ±1 N per hour
Resolution: Limited by 8-bit digital encoder
Noise: << ±1 encoder bit

an aluminum frame with a very thin mylar covering. A potentiometer in the spherical top of the vane translates the elevation angle information into voltage while another potentiometer in the top of the vertical tube generates an azimuth signal. The distance constant of the vane is identical for both axes and is approximately 1.5 m.

b. Wind Speed

The wind speed was measured by a heated bead thermistor (Fenwal G-128) mounted on top of the bivane housing. The thermistor assembly is inclined in the vertical so that the response of the transducer is invariant for angles of attack of the wind of $\pm$ 25 degrees. This feature of the assembly compensates for an asymmetry in the shape of the bead. The response time of the thermistor for mean wind speeds greater than 2 m sec^{-1} is less than 0.5 sec.

The thermistors were checked and set to zero output at zero wind speed before and after each experiment. Thermistors that showed variations in resistance at zero velocity of more than a few percent were examined under a microscope for contamination or physical damage and either recalibrated or discarded.

c. Temperature

The temperature transducer consists of 0.001-inch platinum wire wound on four vertical supports. The small diameter of the wire ensures a short response time and acceptably small errors due to solar radiation. The response time of the transducer is less than 1 second for wind speeds greater than 2 m sec^{-1}. Tests indicated that under field use the error resulting from heating of the vertical supports might reach 0.2 or 0.3 C for certain sun angles and strong solar radiation. Since the spectral calculations use fluctuation data, these errors in absolute temperature would be of significance only during such periods of alternating clear and cloudy conditions as occasionally occur during days with fair weather cumulus. To minimize errors during these periods, small shades were used to shield the thermometers from direct solar radiation during most of the field program.

d. Humidity

A microwave refractometer was used to obtain fast response humidity measurements for a limited number of experiments at the 40-m tower. The instrument was obtained on loan from the M.I.T. Lincoln Laboratory. At frequencies of 10,000 mc and beyond, the atmospheric refractive index is a strong function of water vapor density due to the large dipole moment of the water vapor molecule. Although the water vapor pressure seldom exceeds 3 to 4 percent of the total atmospheric pressure, it can account for as much as 50 percent of the atmospheric refractive index. The refractive index is also a function of temperature and dry air density. The actual computation of water vapor density is described below.

The microwave refractive index of the air is determined by measuring the resonant frequency of a perforated cavity of fixed dimensions containing an air sample. The resonant frequency of the cavity is given by the expression

$$f = \frac{f_o}{n} = \frac{f_o}{1 + (N \times 10^{-6})}$$

where

f = resonant frequency with ambient gas density
f_o = resonant frequency with cavity evacuated
n = refractive index of ambient gas
$N = (n - 1) \times 10^{-6}$.

Since n rarely exceeds 1.004, the variable N is more often used for atmospheric applications. In terms of pressure, temperature and humidity (National Bureau of Standards Circular #6744):

$$N = \frac{77.6}{T} \left(P + 4.81 \times 10^3 \frac{e}{T}\right) \quad ,$$

where

P = total atmospheric pressure in millibars
e = water vapor pressure in millibars
T = temperature in degrees Kelvin.

Finally, the relationship between water vapor density and N is given by

$$\rho = \alpha NT - \beta P' \quad ,$$

where

ρ = water vapor density in g/m^{-3}
$\alpha = 5.8004 \times 10^{-4}$
$\beta = 4.5011 \times 10^{-2}$.

In practice, the cavity is used as the frequency determining component of a microwave oscillator. The difference in frequency between this oscillator and a reference oscillator in a sealed cavity is used to measure the refractive index. The device used at Round Hill is almost identical in operation to that described by Tuller, Galloway and Zaffarano (1948).

During the experiments, the cavities were ventilated at a rate that ensured a response time considerably less than 1 sec.

D. AMPLIFIER-FILTER SYSTEM

The output signal from each transducer is processed by an amplifier-filter system. The amplifiers control the measurement range of each variable

and the filter networks provide for the control of certain frequencies in the transducer outputs. Specifically, the filter networks perform the following functions. First, they eliminate the power-line frequency and its harmonics which otherwise would appear as dc signals since the recorders are chopper stabilized at the power-line frequency. Second, the filter networks prevent high frequency signals of large amplitude from reaching the recorders. This is essential since the response of the recorders to unfiltered signals of this type is nonlinear due to the finite slewing rates of the recorders. Third, the filter networks reduce the aliasing of spectral estimates inherent in the use of discrete data sample points and make it possible to correct for the aliasing that does occur.

Transmission curves for the amplifier-filter system are shown in Figure 12. The foldover frequency for a sampling rate of one data point every 1.2 sec is 0.416 cycles sec^{-1}. All the energy in the output signal above the foldover frequency appears at lower frequencies in the calculated power spectrum. However, if the amount of high frequency energy is small and if the transmission of the system at these frequencies is known, the power spectrum can be corrected for the aliasing effects. It should be pointed out that the transmission curves in Figure 12 apply to all transducer outputs when the mean wind speed exceeds 2 m sec^{-1}.

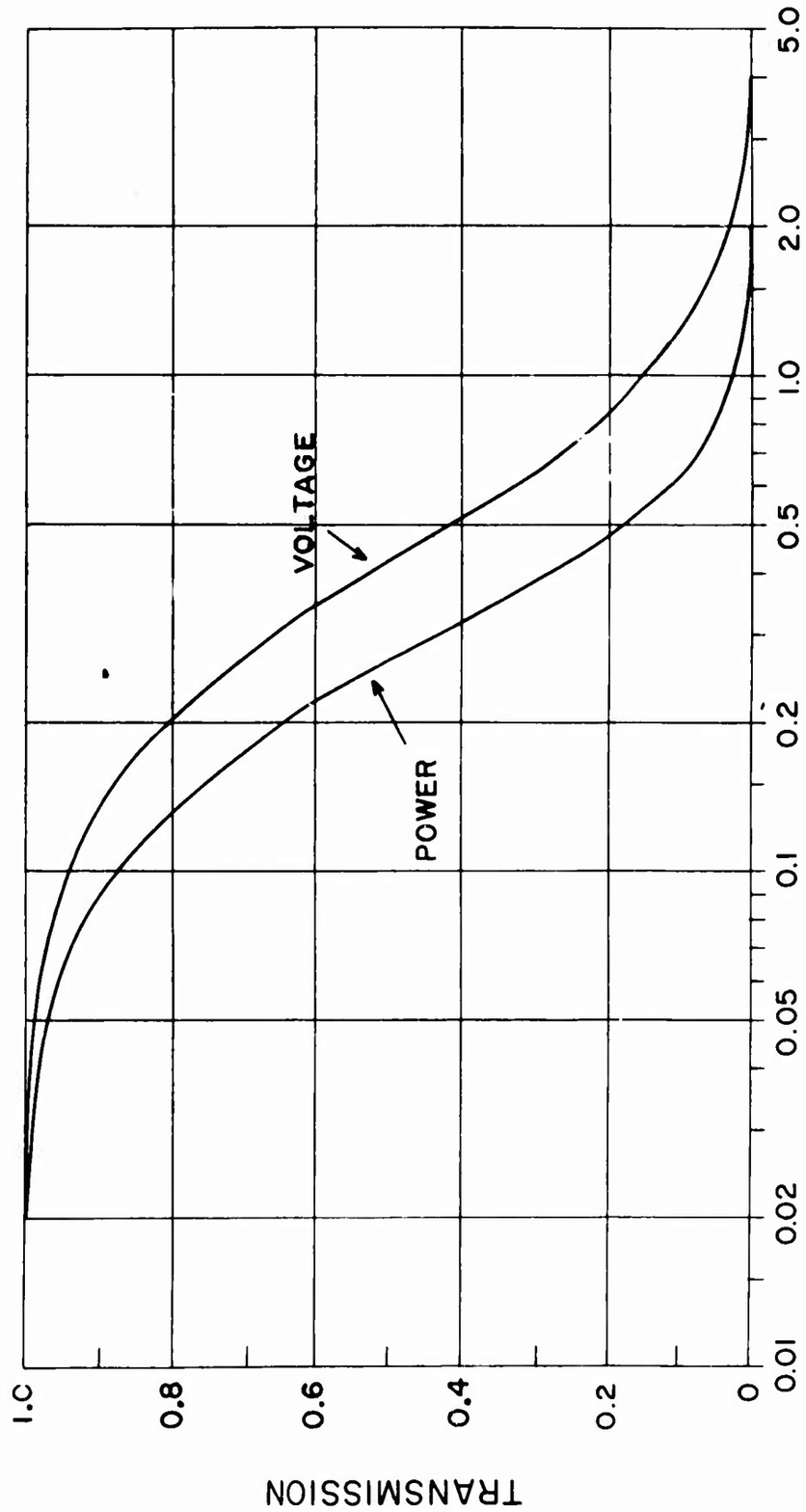


Figure 12. Transmission curves for the amplifier-filter system.

SECTION III

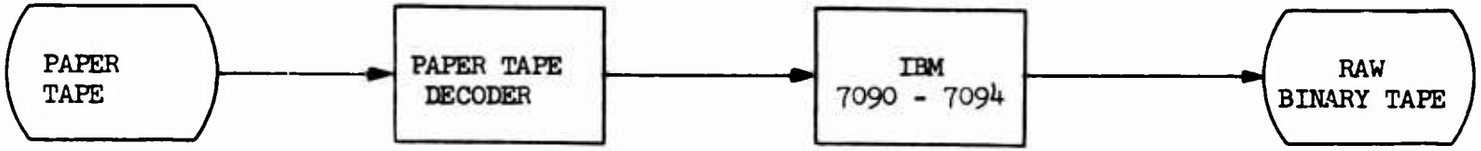
DATA PROCESSING

Processing of the data from the slow-response subsystem was accomplished manually and through the use of desk calculators to obtain the requisite average values of the wind speed, wind direction, dry- and wet-bulb air temperatures, soil temperature, solar and net radiation. The processing of the data from the fast-response subsystem was accomplished by automatic techniques that required a special set of computer programs written in Fortran II language (or Fortran II compatible language) for use with the IBM 7090 or 7094 computer. The sequence of computer operations by which the data were processed is shown schematically in Figure 13. More detailed information on the data-processing procedures may be found in several reports (Cramer, Record, Tillman, and Vaughan, 1961; Cramer, Record, and Tillman, 1962, 1967). A brief description of the computer programs and the mathematical operations used in the data processing is given below.

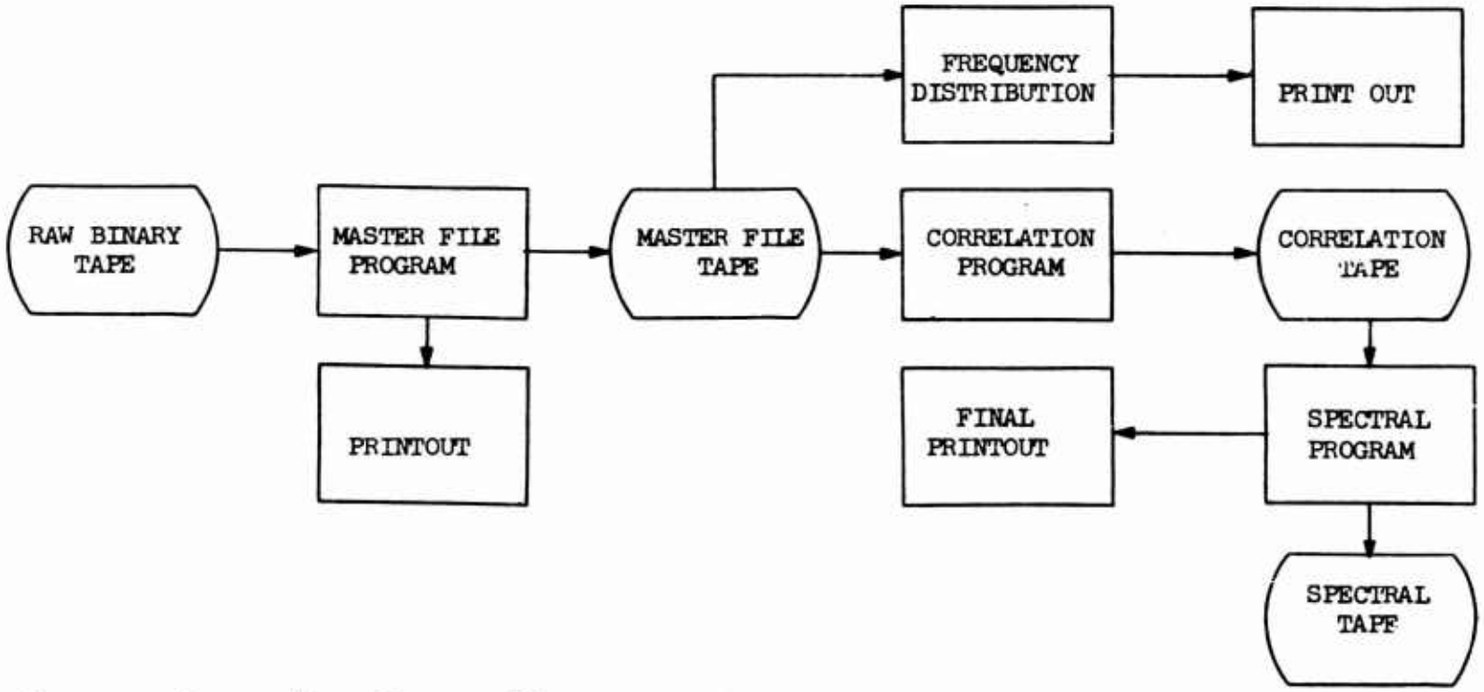
A. CONVERSION OF RAW BINARY DATA FROM PAPER TAPE TO MAGNETIC TAPE AND DATA EDITING

The first steps in processing the fast-response data were the decoding of the data on the punched-paper output tapes, checking for errors in format, and writing the decoded data in binary form on magnetic tape. This phase of the data reduction, which is shown schematically in Figure 13A was accomplished at the M.I.T. Lincoln Laboratory. The computer program for the conversion to magnetic tape provided for an error stop of the decoding process whenever a formatting error was detected in the paper tape. Since formatting errors had to be corrected before the decoding could proceed, errors due to malfunctions of the paper tape reader or punching mechanism were thus readily detected and eliminated. The two remaining sources of error were anomalous data points and faulty initial synchronization of the paper tape. Tape synchronization errors were checked by comparing a sample printout of the decoded data with the corresponding master paper tape records. Erroneous data points were isolated and checked by a special frequency counting program that produced from the raw binary data a table on magnetic tape showing the number of occurrences of the individual variables for each of the 256 segments of the encoding mechanisms. The output of this program was useful in spotting systematic and random errors as well as in checking extreme values in each meteorological variable against the original chart recordings and printouts of the raw data generated by the paper-tape conversion program.

Correction cards were prepared for any erroneous data points discovered by the above processes and the cards were used with the Master File Program described below.



A. Transfer of raw binary data from paper tape to magnetic tape.



B. Sequence of operations from raw binary magnetic tape to the final printout of gross turbulence statistics, correlations, and corrected spectral and cospectral estimates.

Figure 13. Block diagram of data-processing operations.

B. SCALING AND CONVERSION OF RAW BINARY DATA TO METEOROLOGICAL UNITS, AND GENERATION OF MASTER DATA FILES

The next steps in processing the fast-response data included the correction of errors previously detected in the raw binary data, conversion of the corrected data to meteorological units, and the writing of new magnetic tapes containing labeled files of the converted data as well as certain input and computed values in a format suitable for spectral and cospectral analysis. These steps were accomplished by the Master File Program which provided for the scaling of the binary sensor data to yield five meteorological variables: Elevation Angle E_i (deg), Azimuth Angle A_i (deg), Wind Speed V_i (m sec^{-1}), Air Temperature T_i (C), Refractive Index N_i (see Section II C), and Water Vapor Density P_i (g m^{-3}). The variances of the elevation and azimuth angles were also calculated from the expressions

$$\sigma_E^2 = \frac{1}{N} \sum_{i=1}^{N} E_i^2 - \left[\frac{1}{N} \sum_{i=1}^{N} E_i \right]^2 ,$$

and

$$\sigma_A^2 = \frac{1}{N} \sum_{i=1}^{N} A_i^2 - \left[\frac{1}{N} \sum_{i=1}^{N} A_i \right]^2 .$$

The quantity N refers to the total number of data points in a single field trial which was about 3000.

The Master File Program also provided for the calculation of the orthogonal velocity components u_i, v_i, and w_i through the use of the following trigonometric relationships:

$$E^* = \tan^{-1} \frac{\sum_{i=1}^{N} V_i \sin E_i}{\sum_{i=1}^{N} V_i \cos E_i} .$$

$$A^* = \tan^{-1} \frac{\sum_{i=1}^{N} V_i \cos (E_i - E^*) \sin A_i}{\sum_{i=1}^{N} V_i \cos (E_i - E^*) \cos A_i}$$

$$U_i = V_i \cos (E_i - E^*) \cos (A_i - A^*)$$

$$\bar{U} = \frac{1}{N} \sum_{i=1}^{N} U_i$$

$$u_i = U_i - \bar{U}$$

$$v_i = V_i \cos (E_i - E^*) \sin (A_i - A^*)$$

and

$$w_i = V_i \sin (E_i - E^*) \quad .$$

The quantities A^* and E^* are virtual mean values of the azimuth and elevation angles required to satisfy the condition that

$$\bar{u}_i \equiv \bar{v}_i \equiv \bar{w}_i \equiv 0 \quad .$$

The Master File Program additionally provided for calculations of the mean values $\bar{T}$, $\bar{N}$, and $\bar{P}$ and of the deviations from the mean t_i, n_i, and p_i through the use of the following expressions:

$$\bar{T} = \frac{1}{N} \sum_{i=1}^{N} N_i \qquad t_i = T_i - \bar{T}$$

$$\bar{N} = \frac{1}{N} \sum_{i=1}^{N} N_i \qquad n_i = N_i - \bar{N}$$

$$\bar{P} = \frac{1}{N} \sum_{i=1}^{N} P_i \qquad p_i = P_i - \bar{P}$$

As shown schematically in Figure 13 B, the output of the Master File Program was a magnetic tape containing labeled data files. The information in each file included: run identification and measurement height; means and variances of elevation angles and azimuth angles; mean wind velocity, air temperature, refractive index, and water vapor density; and, the time-series data sets for u_i, v_i, w_i, t_i, n_i, and p_i. This tape was used as the input to the Frequency Distribution Correlation, and Spectral Analysis Program described below.

C. FREQUENCY DISTRIBUTION, CORRELATION, AND SPECTRAL ANALYSIS PROGRAMS

The processing of the data files from the Master File Tape was accomplished through the use of three computer programs. One of these, the Frequency Distribution Program, was routinely used to calculate frequency distributions of the meteorological variables, second and third moments of the data, and various statistical functions for use in establishing the form of the distributions. This program is similar in many respects to the Frequency Count Program used in checking the raw binary tape data except that the maximum number of class intervals is 17 instead of 256. The Frequency Distribution Program printout was also used to check the quality of the data.

The spectral and cospectral analysis of the Master File data was performed through the use of a pair of programs. The first one, the Correlation Program, provides for statistical filtering of the various data sets, for the calculation of the autocovariance and covariance functions required for calculating the spectral and cospectral estimates, and for the calculation of gross statistics (means, variances, covariances, etc.). The second program (Spectral Program) read the output tape from the Correlation Program, formed the spectral, cospectral, and coherence estimates, and provided both an output tape and printout of the correlations, spectra, cospectra, covariances, and gross statistics in the desired final format. These two programs could have been combined in a single program but there was a significant gain in efficiency for mass production by separating the correlation calculations from the spectral calculations.

The mathematical specifications for the above pair of programs were based on methods of spectral and cospectral analysis for discrete time series described by Blackman and Tukey (1958). Gross statistics for various cross products of these variables as described in Section IV B were calculated for the unfiltered data sets and the filtered sets described below.

Spectral and cospectral analysis was performed in two steps and provided estimates within the time frequency range from 0.417 to 0.0014 cycles sec^{-1}. The first step comprised a 60-lag analysis that yielded spectral and cospectral estimates for the frequency range from 0.417 to 0.0069 cycles sec^{-1}. The original time series for u_i, v_i, w_i, t_i, n_i, and p_i were conditioned for this

analysis by smoothing each series with a 61-point running mean and differencing the original set with respect to appropriate values of this running mean to form a filtered set. This choice of the length of the running mean follows from a consideration of the half-power point of the transmission function for variances (see Pasquill, 1962, p. 14). The purpose of the filtering process is to remove low-frequency variations in the data that are outside the frequency resolution of the 60-lag spectral and cospectral analysis, i.e., frequencies < 0.0069 cycles sec^{-1}. As indicated in the formulas presented below, the filtered data sets contain (N-L) points — where L is the maximum number of lags — due to the removal of L/2 points at each end of the original records in the formation of the running mean.

The second step in the spectral and cospectral analysis comprised a 30-lag analysis that yielded estimates within the time frequency range from 0.0417 to 0.0014 cycles sec^{-1}. Undesirable low-frequency energy was removed from the original records by smoothing the data with a 301-point running mean and differencing, following the procedures described above for filtering the 60-lag analysis data. These filtered data sets, each containing N - 300 data points, were then reduced by taking 10-point sequential block averages to form new sets of (N - 300)/10 points. The reduced sets were used as inputs to the 30-lag spectral and cospectral programs.

One of the final steps in the spectral and cospectral analysis was the correction of the estimates for the effects of the statistical-filtering and block-averaging processes as well as for the effects of foldover and system-response limitations at high frequencies (see Figure 12). The correction factors are presented in Table 2 for the adjusted frequency bands shown in Table 5.

D. MATHEMATICAL FORMULAS USED IN CONSTRUCTING THE CORRELATION AND SPECTRAL PROGRAMS

The following mathematical expressions were used to specify the computer operations in the Correlation and Spectral Programs.

1. Average of $x_n = \bar{x}$

$$\bar{x} = \frac{1}{N} \sum_{n=1}^{N} x_n$$

where N is the total number of data points in the set.

TABLE 2

CORRECTION FACTORS APPLIED TO SPECTRAL AND COSPECTRAL ESTIMATES TO COMPENSATE FOR RUNNING-MEAN FILTERING, SEQUENTIAL BLOCK AVERAGING, SYSTEM RESPONSE, AND FOLDOVER*

60-LAG ANALYSIS

K	Correction Factor	K	Correction Factor
1	1.64	9-11	1.04
2	1.00	12-15	1.07
3	1.04	16-20	1.15
4	1.00	21-27	1.30
5	1.02	28-36	1.55
6	1.01	37-47	1.90
7-8	1.02	48-60	2.10

30-LAG ANALYSIS

K	Correction Factor	K	Correction Factor
1	1.64	7	1.05
2	1.00	8	1.06
3	1.06	9-11	1.10
4	1.02	12-14	1.17
5	1.04	15-21	1.37
6	1.03	22-30	1.98

*The k values refer to the adjusted frequency bands shown in Table 5.

2. Variance of $x_n = \sigma_x^2$

$$\sigma_x^2 = \frac{1}{N} \sum_{n=1}^{N} (x_n - \bar{x})^2$$

3. Covariance of x_n, $y_n = \sigma_{x,y}^2$

$$\sigma_{x,y}^2 = \frac{1}{N} \sum_{n=1}^{N} (x_n - \bar{x})\ (y_n - \bar{y})$$

4. High-Pass Statistical Filter (Running Mean and Differencing Procedure)

The filtered data set is defined by the expression

$$\hat{x}_n = x_n - \frac{1}{L+1} \sum_{j=-L/2}^{L/2} x_{n+j} \quad , \quad n = (L/2 + 1), (L/2 + 2), \ldots, (N - L/2)$$

where $\hat{x}_n$ is the filtered n^{th} value, x_n is the n^{th} value of the original set, L is the maximum number of lagged products used in the spectral analysis, and N is the total number of data points in the original set.

5. Sequential Block Averaging

The reduced set of sequential block-averaged data points is given by

$$\tilde{x}_n = \frac{1}{m} \sum_{j=m(n-1)+1}^{mn} x_j \quad , \quad n = 1, 2, \ldots, M; \text{ M the least integer} > \frac{N}{m} - 1$$

where $\tilde{x}_n$ is the reduced n^{th} value and m is the number of data points within each block to be included in the average.

6. Autocovariance of $x_n = R_\ell$

$$R_\ell = \frac{1}{N-\ell} \sum_{n=\ell+1}^{N} x_{n-\ell}\, x_n - \frac{1}{(N-\ell)^2} \sum_{n=\ell+1}^{N} x_{n-\ell} \sum_{n=\ell+1}^{N} x_n \quad , \quad \ell = 0, 1, \ldots, L$$

where L is the maximum number of lagged products.

7. Covariance of x_n, y_n = C_ℓ

$$C_\ell = \frac{1}{N-\ell} \sum_{n=\ell+1}^{N} x_{n-\ell}\, y_n - \frac{1}{(N-\ell)^2} \sum_{n=\ell+1}^{N} x_{n-\ell} \sum_{n=\ell+1}^{N} y_n \quad , \ \ell = 0, 1, \ldots, L$$

and

$$C_{-\ell} = \frac{1}{N-\ell} \sum_{n=\ell+1}^{N} y_{n-\ell}\, x_n - \frac{1}{(N-\ell)^2} \sum_{n=\ell+1}^{N} y_{n-\ell} \sum_{n=\ell+1}^{N} x_n \quad , \ \ell = 0, 1, \ldots, L$$

where L is the maximum number of lagged products.

8. Power Spectrum Estimates = G_k

$$G_o = \frac{1}{2L} \left\{ R_o + \sum_{\ell=1}^{L} R_\ell \left[1 + \cos\left(\frac{\ell\pi}{L} \right) \right] \right\} \quad , \ k = 0$$

$$G_k = \frac{1}{L} \left\{ R_o + \sum_{\ell=1}^{L} R_\ell \cos\left(\frac{k\ell\pi}{L} \right) \left[1 + \cos\left(\frac{\ell\pi}{L} \right) \right] \right\} , \ k = 1, 2, \ldots, L-1$$

$$G_L = \frac{1}{2L} \left\{ R_o + \sum_{\ell=1}^{L} R_\ell \cos\,(\ell\pi) \left[1 + \cos\left(\frac{\ell\pi}{L} \right) \right] \right\} , k = L$$

9. Cospectral Estimates = Z_k

$$Z_o = \frac{1}{2L} \left\{ C_o + \sum_{\ell=1}^{L} \left[\frac{C_\ell + C_{-\ell}}{2} \right] \left[1 + \cos\left(\frac{\ell\pi}{L} \right) \right] \right\} \quad , \ k = 0$$

$$Z_k = \frac{1}{L}\left\{ C_o + \sum_{\ell=1}^{L} \left[\frac{C_\ell + C_{-\ell}}{2} \right] \cos\left(\frac{k\ell\pi}{L} \right) \left[1 + \cos\left(\frac{\ell\pi}{L} \right) \right] \right\}, \quad k = 1, 2, \ldots, L-1$$

$$Z_L = \frac{1}{2L}\left\{ C_o + \sum_{\ell=1}^{L} \left[\frac{C_\ell + C_{-\ell}}{2} \right] \cos(\ell\pi) \left[1 + \cos\left(\frac{\ell\pi}{L} \right) \right] \right\}, \quad k = L$$

10. Quadrature Spectrum Estimates = Q_k

$$Q_o = \frac{1}{2L}\left\{ \sum_{\ell=1}^{L} \left[\frac{C_\ell - C_{-\ell}}{2} \right] \left[1 + \cos\left(\frac{\ell\pi}{L} \right) \right] \right\}, \quad k = 0$$

$$Q_k = \frac{1}{L}\left\{ \sum_{\ell=1}^{L} \left[\frac{C_\ell - C_{-\ell}}{2} \right] \cos\left(\frac{k\ell\pi}{L} \right) \left[1 + \cos\left(\frac{\ell\pi}{L} \right) \right] \right\}, \quad k = 1, 2, \ldots, L-1$$

$$Q_L = \frac{1}{2L}\left\{ \sum_{\ell=1}^{L} \left[\frac{C_\ell - C_{-\ell}}{2} \right] \cos(\ell\pi) \left[1 + \cos\left(\frac{\ell\pi}{L} \right) \right] \right\}, \quad k = L$$

11. Coherence Estimates = COH_k

$$COH_k = \frac{Z_k^2 + Q_k^2}{G_k(x)\, G_k(y)}, \quad k = 0, 1, \ldots, L$$

12. Total Turbulent Kinetic Energy = E

$$E = \frac{1}{2N} \sum_{i=1}^{N} (u_i^2 + v_i^2 + w_i^2)$$

13. Vertical Flux of Total Turbulent Kinetic Energy = WE

$$WE = \frac{1}{2N} \sum_{i=1}^{N} w_i (u_i^2 + v_i^2 + w_i^2)$$

SECTION IV

DATA TABULATION FOR RUNS 87A THROUGH 95A

A. VERTICAL PROFILES OF MEAN WIND SPEED AND AIR TEMPERATURE

Vertical profiles of mean wind speed and air temperature, based on measurements taken at seven heights within the layer from 3.8 m to 91.4 m, are presented in Tables 3 and 4, respectively. Run number, date, and time duration of the measurements are indicated by column headings in the body of each table.

B. TURBULENCE STATISTICS

Turbulence statistics are tabulated separately for each run and for each level at which data are available. Throughout the tabulation U, V, and W refer to the orthogonal components of the wind velocity and T refers to temperature. The letter E refers to the total kinetic energy defined by the expression $E = 1/2(U^2 + V^2 + W^2)$. Units of velocity are m sec^{-1} and the unit of temperature is deg C. Covariances and cospectra are identified by the appropriate symbols of the two variables separated by a comma, except that the covariance between the vertical component of the wind velocity and the total kinetic energy is identified simply by WE. The data presentation follows a standard format which is explained below.

1. Identification of Experiment

The run number, measurement height, date, and the time duration of each experiment are listed at the top of the first page of each data set

2. Gross Statistics

a. Summary Information

Summary information is presented in three vertical columns. The first column gives the amount of cloud cover in tenths followed by the cloud type, and the thermal stratification. The second vertical column lists the mean wind speed, the mean azimuth wind direction, and the solar radiation. The third column presents the standard deviations of azimuth angle and elevation angle.

TABLE 3

VERTICAL PROFILES OF MEAN WIND SPEED

Run No.	87A	88A	89A	90A
Date	6-14-63	6-18-63	6-18-63	6-18-63
Time (EST)	1401-1502	0936-1052	1336-1437	1501-1601
Height (m)		$\bar{U}$ (m sec^{-1})		
91.4	5.31	4.65	7.55	6.99
68.6	5.18	5.04	7.20	6.47
45.7	4.83	5.15	6.75	5.77
30.5	4.72	5.13	6.45	5.44
15.2	3.88	4.12	5.06	4.16
7.6	3.24	3.45	4.20	3.46
3.8	2.75	2.89	3.54	2.93

Run No.	90B	90C	90D	91A
Date	6-18-63	6-18-63	6-18-63	6-18-63
Time (EST)	1615-1714	1721-1836	1840-1956	2150-2300
Height (m)		$\bar{U}$ (m sec^{-1})		
91.4	8.60	9.42	8.75	8.76
68.6	7.78	8.18	7.66	7.48
45.7	6.75	6.72	6.14	5.83
30.5	6.36	6.03	5.43	4.90
15.2	5.24	4.84	4.13	3.58
7.6	4.36	3.94	3.35	2.72
3.8	3.57	3.21	2.67	2.12

Run No.	91B	92A	94A	95A
Date	6-18-63	6-19-63	6-19-63	6-19-63
Time (EST)	2306-0010	0030-0146	1306-1422	1446-1602
Height (m)		$\bar{U}$ (m sec^{-1})		
91.4	9.09	8.75	6.17	6.18
68.6	7.83	7.69	5.50	5.65
45.7	6.00	5.97	4.97	5.21
30.5	5.00	5.09	4.64	4.98
15.2	3.56	3.78	3.81	4.15
7.6	2.65	2.94	3.23	3.51
3.8	2.04	2.22	2.68	2.84

TABLE 4

VERTICAL PROFILES OF MEAN AIR TEMPERATURE

Run No.	87A	88A	89A	90A
Date	6-14-63	6-18-63	6-18-63	6-18-63
Time (EST)	1401-1502	0936-1052	1336-1437	1501-1601
Height (m)		T (C)		
91.4	19.4	21.4	18.6	19.0
68.6	19.7	21.2	18.9	19.3
45.7	20.0	21.2	19.1	19.5
30.5	20.3	21.5	19.5	19.9
15.2	20.7	21.9	19.9	20.1
7.6	21.0	22.2	20.2	20.4
3.8	21.2	22.5	20.5	20.6

Run No.	90B	90C	90D	91A
Date	6-18-63	6-18-63	6-18-63	6-18-63
Time (EST)	1615-1714	1721-1836	1840-1956	2150-2300
Height (m)		T (C)		
91.4	20.0	20.0	18.0	18.4
68.6	20.2	20.0	18.0	17.4
45.7	20.5	20.1	18.1	17.0
30.5	20.8	20.2	18.1	16.7
15.2	20.9	20.2	18.1	16.6
7.6	21.0	20.2	18.0	16.4
3.8	21.1	20.2	17.9	16.2

Run No.	91B	92A	94A	95A
Date	6-18-63	6-19-63	6-19-63	6-19-63
Time (EST)	2306-0010	0030-0146	1306-1422	1446-1602
Height (m)		T (C)		
91.4	18.4	18.4	18.9	17.6
68.6	17.5	17.2	19.3	17.9
45.7	16.6	16.4	19.6	18.2
30.5	16.4	16.2	20.0	18.5
15.2	16.1	16.1	20.4	18.8
7.6	15.9	15.9	20.7	19.1
3.8	15.8	15.8	21.0	19.3

b. Variances

Variances are presented for the three components of the wind velocity and for air temperature. Identification of the variables for which the variances and other gross statistics have been calculated appears in the column at the left. Variances identified by E are one-half the sum of the variances of the three velocity components.

The variances for U, V, W, and T are presented for the four conditions indicated by the column headings below the summary information. These are:

- With No Running Mean - refers to the complete data set.
- With 301 Point Running Mean - data have been differenced with respect to a 301-point running mean.
- With 61 Point Running Mean - data have been differenced with respect to a 61-point running mean.
- 301 Pt Run Mean 10 Pt Block Avg - the 301-point running mean data set described above has been reduced by 10-point sequential block averaging.

The variance for E is presented for the first three of these data sets only.

c. Gustiness Ratios

The gustiness ratios for the three orthogonal components of the wind velocity are defined as $\sigma_u/\overline{U}$, $\sigma_v/\overline{U}$, $\sigma_w/\overline{U}$ where σ is the standard deviation of the distribution and $\overline{U}$ is the mean wind speed. Gustiness ratios are presented for each of the four data sets described above.

d. Covariances

The covariances U,V; U,W; U,T; V,W; V,T; and W,T are presented for each of the four data sets. The covariance WE is presented for the first three data sets only.

e. Normalized Covariances

The normalized covariances for U,V; U,W; U,T; V,W; V,T; and W,T were calculated by dividing the covariances by the product of the standard deviations of the two variates.

3. Spectral and Cospectral Estimates

Spectral and cospectral calculations were carried out using the last two data sets described in Section 2b above for variables U, V, W, and T.

The results are presented in the following order:

a. 61 Point Running Mean, No Block Averaging

   Normalized cospectrum covariance
   Normalized quadrature covariance
   Normalized autocovariance
   Cospectrum
   Quadrature spectrum
   Power spectrum

b. 301 Point Running Mean, 10 Point Block Average

   Normalized cospectrum covariance
   Cospectrum
   Normalized quadrature covariance
   Quadrature spectrum
   Normalized autocovariance
   Power spectrum

c. Coherence

Estimates of the coherence between levels are presented for each of the three wind velocity components and for temperature. These estimates include quadrature and are presented for both the 61 Point Running Mean, No Block Averaging and the 301 Point Running Mean, 10 Point Block Average data sets. Tabulation of the coherence estimates follows the power spectrum estimates for the second level.

Cospectrum covariance, quadrature covariance, and autocovariance are tabulated against lag number M. Cospectrum covariance and quadrature covariance estimates have been normalized by dividing by the product of the standard deviations of the two variables; autocovariance estimates have been normalized by dividing by the variance of the data set. Normalization factors are listed at the head of each column.

Cospectrum, quadrature spectrum, power spectrum, and coherence estimates are tabulated against K number. Tabulated values should be multiplied by the power of 10 indicated in the column heading. Estimates have been combined within various frequency bands as indicated by K numbers at the left. Table 5 presents the relationship between these K numbers and the central frequencies of the individual bands.

It should be noted that the coherence estimate for W at K = 0 for Run 90A, 301 Point Running Mean, 10 Point Block Average is unreasonably large and should be disregarded.

TABLE 5

ADJUSTED FREQUENCY BANDS FOR SPECTRAL AND COSPECTRAL ESTIMATES

60-LAG ANALYSIS

K	f_k (cycles sec^{-1})	K	f_k (cycles sec^{-1})
1	0.0069	9-11	0.0694
2	0.0139	12-15	0.0937
3	0.0208	16-20	0.1250
4	0.0278	21-27	0.1667
5	0.0347	28-36	0.2222
6	0.0417	37-47	0.2917
7-8	0.0521	48-60	0.3750

30-LAG ANALYSIS

K	f_k (cycles sec^{-1})	K	f_k (cycles sec^{-1})
1	0.0014	7	0.0097
2	0.0028	8	0.0111
3	0.0042	9-11	0.0139
4	0.0056	12-14	0.0181
5	0.0069	15-21	0.0250
6	0.0083	22-30	0.0361

4. Data summaries for Runs 87A through 95A.

The turbulence statistics for Runs 87A through 95A appear on pages 42 through 245.

RUN NO 87A 46M 6-14-63 1401-1502(EST)

GROSS STATISTICS

4 AS CU
UNSTABLE

WIND SPEED 4.83 M/SEC
WIND DIRECTION 214 DEG
SOLAR RAD. 1.14 LY/MIN

SIGMA A 8.4 DEG
SIGMA E 7.90 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.10412E 01	0.52897E 00	0.33436E-00	0.38352E-00
V	0.39635E-00	0.36510E-00	0.28072E-00	0.21661E-00
W	0.32012E-00	0.26343E-00	0.20821E-00	0.14339E-00
T	0.23321E-00	0.25660E-01	0.14050E-01	0.20301E-01
E	0.87882E 00	0.57878E 00	0.41165E-00	
GUSTINESS RATIOS				
U	0.21126	0.15058	0.11972	0.12822
V	0.13034	0.12510	0.10970	0.09636
W	0.11714	0.10626	0.09447	0.07840
COVARIANCES				
U,V	0.17111E-00	0.35281E-01	0.36109E-01	0.27891E-01
U,W	-0.29183E-00	-0.14785E-00	-0.94944E-01	-0.11485E-00
U,T	-0.35768E-00	-0.77110E-01	-0.41148E-01	-0.63593E-01
V,W	-0.36989E-01	-0.64063E-02	-0.68512E-02	-0.13540E-02
V,T	-0.78532E-01	0.27765E-02	0.31255E-02	-0.30577E-03
W,T	0.97034E-01	0.20997E-01	0.11039E-01	0.19956E-01
WE	0.15302E-00	0.50527E-01	0.33294E-01	
NORMALIZED COVARIANCES				
U,V	0.26636	0.08028	0.11786	0.09677
U,W	-0.50548	-0.39608	-0.35984	-0.48974
U,T	-0.72587	-0.66186	-0.60035	-0.72071
V,W	-0.10384	-0.02066	-0.02834	-0.00768
V,T	-0.25831	0.02869	0.04977	-0.00461
W,T	0.35514	0.25539	0.20410	0.36987

RUN NO 87A 46M 6-14-63 1401-1502(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.30638 10E 00	0.26385 10E 00	0.68531 10E-01	0.24179 10E 00	0.62802 10E-01	0.54085 10E-01
0	.117684	-.359935	-.600185	-.028177	.050072	.204125
1	.120408	-.334507	-.541008	-.020412	.028231	.213389
2	.117621	-.289995	-.458577	-.008985	.006812	.211002
3	.104014	-.241658	-.394392	.002268	-.008837	.194215
4	.091452	-.192887	-.339385	.014228	-.020684	.171691
5	.077622	-.150995	-.288758	.019973	-.030644	.147393
6	.061044	-.120329	-.238804	.027227	-.035815	.125597
7	.044199	-.080510	-.193418	.032904	-.041650	.100198
8	.027395	-.038362	-.156205	.025623	-.042596	.071607
9	.011624	-.006730	-.111749	.011366	-.036638	.049129
10	.003534	.007900	-.065569	-.003338	-.031741	.035005
11	-.007179	.024479	.024169	-.010561	-.022469	.017387
12	-.016963	.051703	.020907	-.008256	-.013254	-.012683
13	-.030734	.084654	.069110	-.003618	-.003552	-.043314
14	-.048672	.101552	.098016	-.000923	.009878	-.064774
15	-.064431	.108128	.118673	.004380	.026341	-.078665
16	-.076987	.106775	.137475	.010607	.044519	-.087376
17	-.084990	.103949	.161411	.020336	.062519	-.093334
18	-.091617	.100676	.187519	.022172	.073595	-.093258
19	-.099772	.102114	.205630	.018181	.077387	-.096196
20	-.105143	.113744	.216849	.011658	.069531	-.099707
21	-.111760	.130091	.223348	-.001177	.062929	-.108550
22	-.112260	.139330	.223903	-.007230	.052587	-.114036
23	-.109307	.146824	.221420	-.012649	.040040	-.118341
24	-.102609	.151783	.222332	-.017065	.027249	-.117273
25	-.091528	.154466	.223811	-.017370	.018537	-.113176
26	-.081775	.154960	.221768	-.011881	.010317	-.105386
27	-.074235	.147949	.214887	-.008047	.005038	-.097882
28	-.060622	.139659	.204293	-.010554	.004265	-.095660
29	-.047515	.128459	.185569	-.007457	.008078	-.083193
30	-.032192	.099600	.166278	-.007232	.010589	-.066505
31	-.013863	.069615	.147165	-.011123	.009561	-.054037
32	.003026	.042127	.127527	-.020153	.009445	-.043574
33	.017363	.013970	.108563	-.024814	.007106	-.028747
34	.032473	-.008292	.089304	-.031165	.002957	-.012303
35	.044947	-.022708	.065675	-.040123	-.000448	.002475
36	.052102	-.041730	.040245	-.037206	-.004346	.016344
37	.055127	-.064756	.015[illegible]	-.028622	-.016124	.024841
38	.055280	-.081904	-.000281	-.021427	-.026490	.031886
39	.057543	-.087019	-.014696	-.015498	-.035997	.039280
40	.058851	-.091579	-.034482	-.013058	-.038051	.047417
41	.062920	-.090996	-.045488	-.009090	-.037827	.050800
42	.064942	-.083521	-.052590	-.006448	-.034997	.049669
43	.067651	-.077376	-.055531	-.004500	-.028520	.043553
44	.073507	-.076376	-.056775	-.002203	-.027528	.044666
45	.080996	-.071739	-.059754	-.004021	-.031078	.036750
46	.085346	-.064858	-.062914	.006341	-.040381	.031379
47	.081257	-.061757	-.059866	.019215	-.044910	.036239
48	.064482	-.061398	-.054519	.025229	-.043134	.044313
49	.044909	-.057468	-.046366	.022496	-.031260	.042682
50	.032566	-.059943	-.046361	.018006	-.026387	.032939
51	.023550	-.059463	-.053146	.020001	-.027972	.020977
52	.015570	-.051297	-.051490	.024472	-.027476	.009716
53	.006788	-.034338	-.042852	.023778	-.027713	-.000693
54	.003542	-.022532	-.038802	.025844	-.024199	-.006150
55	.000183	-.020441	-.035642	.027407	-.025081	-.005310
56	-.004118	-.021920	-.031880	.024349	-.025119	-.003625
57	-.020615	-.022240	-.029049	.015745	-.019917	.000080
58	-.033297	-.013038	-.027658	.002232	-.012826	.001742
59	-.042293	-.003088	-.028066	-.004070	-.014962	.002134
60	-.043462	.004264	-.029355	-.005278	-.018544	.010284

RUN NO 87A 46M 6-14-63 1401-1502(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.30638 10E 00	0.26385 10E 00	0.68531 10E-01	0.24179 10E 00	0.62802 10E-01	0.54085 10E-01
1	-.000091	-.022405	-.027873	-.002742	.019239	.004853
2	.001260	-.042651	-.042497	-.004590	.030825	.009614
3	.005088	-.059080	-.056208	-.013657	.037294	.016469
4	.009293	-.074166	-.065492	-.018314	.037766	.019500
5	.016546	-.077841	-.071974	-.017161	.035322	.021899
6	.022332	-.072848	-.076897	-.017800	.039114	.042730
7	.023077	-.056450	-.077003	-.023252	.049352	.044102
8	.018434	-.040388	-.080244	-.026691	.054794	.044814
9	.023338	-.031765	-.078679	-.021449	.060482	.046585
10	.037223	-.028521	-.075552	-.015271	.064055	.048841
11	.048285	-.026406	-.078321	-.012834	.058720	.049887
12	.056034	-.031359	-.083028	-.007887	.051924	.050039
13	.057502	-.037381	-.079343	-.002603	.046614	.052634
14	.056301	-.034897	-.070044	.000439	.040492	.057532
15	.053741	-.024642	-.068483	.002217	.034874	.057068
16	.050855	-.017548	-.072515	-.002258	.037200	.053176
17	.043058	-.013493	-.064571	-.008494	.038537	.049309
18	.036998	-.007745	-.052608	-.011401	.038916	.046157
19	.028934	-.007887	-.045235	-.011511	.039768	.040372
20	.025230	-.014192	-.038820	-.002203	.039519	.034412
21	.023379	-.018060	-.031143	.003107	.045201	.024711
22	.020704	-.025823	-.025901	.002854	.048510	.013671
23	.022207	-.030870	-.025433	-.000071	.052536	.004387
24	.029887	-.024898	-.018256	.000178	.054999	-.006789
25	.038645	-.016228	-.003640	-.001836	.056097	-.016126
26	.047872	-.010596	.011969	.002132	.054144	-.029799
27	.056617	.002207	.021948	.015173	.051183	-.036923
28	.053248	.019487	.022296	.027873	.045051	-.035002
29	.048915	.029809	.020674	.030947	.036217	-.029978
30	.045147	.030110	.022308	.028437	.027257	-.024769
31	.034052	.027912	.018741	.024381	.018302	-.021693
32	.022994	.028030	.018750	.023941	.011729	-.020721
33	.013004	.024282	.016514	.017718	.005632	-.017763
34	-.005832	.025659	.012542	.007464	.000283	-.018411
35	-.027427	.021906	.009798	-.011298	-.001760	-.018763
36	-.039917	.010309	.006446	-.026744	-.009240	-.022648
37	-.050457	-.003758	-.003875	-.035532	-.019424	-.029226
38	-.058842	-.010214	-.014024	-.040146	-.025919	-.032567
39	-.065504	-.010243	-.023522	-.047622	-.031150	-.027378
40	-.067716	-.007443	-.027507	-.050077	-.037464	-.025526
41	-.062256	-.010897	-.025657	-.051955	-.038636	-.026193
42	-.052251	-.011804	-.021835	-.054222	-.036427	-.026923
43	-.042740	-.006994	-.019476	-.052387	-.031851	-.024575
44	-.028800	.001663	-.013119	-.049401	-.028921	-.022225
45	-.016418	.001712	-.003534	-.045037	-.029672	-.023970
46	-.003674	-.006620	.007325	-.035334	-.025154	-.028636
47	-.002881	-.007464	.010236	-.023945	-.023391	-.036614
48	-.010663	-.004404	.006310	-.011544	-.025298	-.038448
49	-.011730	-.011248	-.000176	-.001743	-.027189	-.036053
50	-.011451	-.017622	-.004711	.007451	-.027102	-.029330
51	-.009864	-.022774	-.006208	.019089	-.029346	-.027370
52	-.006896	-.019806	-.007618	.030554	-.028093	-.025880
53	-.011778	-.007063	-.007004	.033374	-.027937	-.016949
54	-.021941	.003101	.001186	.033525	-.031672	-.002435
55	-.023109	.007710	.010763	.027588	-.036360	.020041
56	-.020247	.008901	.014727	.023386	-.038016	.037500
57	-.018456	.010231	.015362	.028413	-.037812	.044984
58	-.013631	.012744	.021504	.027716	-.035246	.042989
59	-.017954	.017324	.025671	.024171	-.032192	.047893
60	-.020910	.022723	.021659	.023130	-.028194	.050295

RUN NO 87A 46M 6-14-63 1401-1502(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.33433 10E 00	0.28076 10E 00	0.20823 10E 00	0.14048 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.847380	.837941	.805663	.867168
2	.661145	.624542	.573277	.724948
3	.531677	.460170	.402196	.614145
4	.431789	.330474	.269901	.524331
5	.350659	.228900	.168797	.445065
6	.282635	.158795	.094473	.368698
7	.218443	.104423	.036197	.301702
8	.162827	.060370	-.011047	.242638
9	.100506	.019033	-.040692	.182612
10	.041298	-.021164	-.070317	.115823
11	-.008311	-.056665	-.095960	.058724
12	-.065416	-.091843	-.118077	-.004094
13	-.116296	-.118583	-.124867	-.067146
14	-.154456	-.145056	-.123418	-.110458
15	-.185741	-.171558	-.129364	-.142834
16	-.219113	-.189686	-.134446	-.171593
17	-.251998	-.201997	-.141677	-.200043
18	-.276885	-.218992	-.150309	-.231043
19	-.296951	-.236107	-.171881	-.257448
20	-.317642	-.252949	-.186158	-.278512
21	-.332841	-.263629	-.198011	-.292044
22	-.336274	-.268971	-.213505	-.308066
23	-.335562	-.272124	-.227334	-.324039
24	-.339165	-.266807	-.233880	-.337264
25	-.338435	-.255669	-.240245	-.342203
26	-.318545	-.245884	-.241483	-.348693
27	-.290908	-.228696	-.231974	-.349100
28	-.265916	-.209184	-.215085	-.337487
29	-.232377	-.184348	-.179172	-.316967
30	-.192896	-.155808	-.127415	-.293742
31	-.154040	-.127440	-.074699	-.266007
32	-.119170	-.106178	-.035110	-.240207
33	-.089534	-.083102	-.007013	-.214733
34	-.060766	-.056043	.021032	-.196403
35	-.033487	-.029300	.041301	-.176531
36	-.005384	-.005294	.041170	-.142264
37	.023967	.002069	.034491	-.107227
38	.043821	.006686	.032929	-.084883
39	.059809	.019784	.036699	-.062624
40	.079800	.044219	.048953	-.039197
41	.088241	.074432	.047809	-.017631
42	.092534	.108385	.029686	.001424
43	.095628	.129953	.023861	.016208
44	.098387	.136468	.027551	.030277
45	.097767	.136758	.034006	.046583
46	.093445	.129021	.036208	.060292
47	.082674	.117547	.044192	.077226
48	.081226	.101660	.059044	.090630
49	.072756	.093111	.078149	.104925
50	.065717	.088576	.097140	.116631
51	.070648	.078810	.102644	.123851
52	.061946	.069814	.092182	.119255
53	.041623	.058317	.078403	.104604
54	.029533	.039678	.065018	.096776
55	.029229	.024788	.040749	.087919
56	.028950	.013700	.024672	.079044
57	.029671	.002251	.019789	.070133
58	.024560	-.018725	.016738	.073522
59	.018377	-.039879	.016115	.070655
60	.014075	-.053421	.009375	.067102

RUN NO 87A 46M 6-14-63 1401-1502(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-02	10E-02	10E-02
0	-.005779	-.007967	-.071109	-.004315	.016709	.025199
1	.018720	-.109002	-.750309	.132101	.030202	.237372
2	.109675	-.200007	-.973011	.130800	-.066597	.342150
3	.157175	-.233348	-.914823	-.046610	-.103008	.361927
4	.067383	-.115668	-.438502	-.100359	-.018601	.168989
5	.002433	-.056148	-.200397	-.004307	.054628	.053039
6	.002737	-.070954	-.159355	-.025289	.093033	.042339
7-8	.011381	-.038149	-.092958	-.053987	.068911	.010702
9-11	.004455	-.012952	-.066380	-.166607	.006118	.002734
12-15	-.001560	-.011793	-.051398	-.006685	.015628	.002623
16-20	-.000058	-.003966	-.022998	.007594	.006295	-.005300
21-27	-.000811	-.002445	-.019617	-.019918	.005984	-.002774
28-36	-.000925	-.000931	-.012227	.002846	.003201	-.002671
37-47	-.000707	-.000899	-.006452	-.007220	.003180	-.002091
48-60	.000041	-.000410	-.003226	-.000158	.002102	-.001124

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-02	10E-02	10E-02
1	.767451	-.367253	-.220037	-.120086	.211224	.063894
2	.684862	-.423450	-.209865	-.031568	.167865	.120265
3	.209706	-.470053	-.206974	-.191243	.067899	.111253
4	-.083389	-.283796	-.115661	-.177013	.019280	.039615
5	.119053	-.189103	-.021138	.040276	.050821	-.012024
6	-.021914	-.295569	-.018244	-.071058	.044835	-.022344
7-8	-.196940	-.208591	-.030012	-.072491	.000163	.008377
9-11	.066903	-.119488	-.013400	.020366	-.000535	-.003716
12-15	-.008581	.003594	-.004420	.008919	.011533	-.004079
16-20	-.031909	.021996	-.002445	.001829	.006071	-.000008
21-27	.014614	-.000185	-.003325	.010582	.000355	.002150
28-36	-.008274	-.001880	-.001811	-.002020	-.000392	-.001191
37-47	.001808	-.003696	-.001716	-.005107	.001301	-.000089
48-60	.001382	.003420	-.000270	-.001663	.000140	.000775

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-01	10E-02
0	.037170	.020472	.012836	.027342
1	.443569	.282601	.173801	.274483
2	.636609	.436845	.267493	.321084
3	.661074	.470698	.301515	.267341
4	.345596	.273297	.191972	.124818
5	.156440	.170607	.122596	.070842
6	.139474	.154166	.137530	.058633
7-8	.114853	.131548	.123486	.037775
9-11	.073489	.086375	.064741	.024005
12-15	.055847	.057720	.045095	.019066
16-20	.035158	.032821	.026526	.010024
21-27	.023554	.018791	.017898	.007824
28-36	.014869	.012667	.010997	.005238
37-47	.009456	.007531	.007260	.003559
48-60	.004977	.004306	.004589	.002663

RUN NO 87A 46M 6-14-63 1401-1502(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.28829 10E 00	0.23456 10E 00	0.88202 10E-01	0.17631 10E 00	0.66297 10E-01	0.53942 10E-01
0	.096746	-.489615	-.720998	-.007680	-.004612	.369948
1	.037317	-.234304	-.423498	.006751	-.039198	.206377
2	-.051307	-.071966	-.162770	.008108	.011266	.054718
3	.004699	-.012057	-.035365	-.050672	-.036622	-.012548
4	.073990	-.099863	-.028926	-.017423	-.061377	.030063
5	.064094	-.012692	.026661	.004240	-.070109	-.051208
6	-.000824	.065459	.054142	.008040	-.030287	-.058972
7	-.004930	.127211	.109482	.000255	.035859	-.123681
8	-.039192	.134894	.134629	-.008367	.074875	-.126540
9	-.052924	.087344	.143831	-.002500	.082308	-.057166
10	-.064784	-.023106	.086534	-.027557	.047577	.020622
11	.009724	-.029977	.050668	-.051625	-.038855	.053161
12	.015428	-.013743	.056603	-.009579	-.009738	.056284
13	-.016555	.112031	.162452	.067029	.032243	-.014326
14	-.057190	.062793	.067703	.064373	.008962	.000375
15	-.023800	-.013088	-.043912	.047222	-.026249	.026570
16	-.028398	-.058949	-.131502	.050774	-.038837	.050448
17	-.056286	-.005702	-.027522	.015087	.023951	-.022790
18	-.028422	.078527	.098530	-.011044	.048805	-.085529
19	.039733	.167339	.164658	.038877	.014048	-.141826
20	.167359	.107144	.136067	-.015244	-.074576	-.137436
21	.136749	.063100	.069072	-.054845	-.112451	-.074978
22	.036616	.082331	.042888	.001192	-.059208	-.079425
23	.004223	.164287	.082124	-.052652	.001386	-.126920
24	-.034515	.084436	.040677	-.034253	.044085	-.032669
25	-.016213	.033037	-.035296	-.019079	.054076	.036428
26	-.022496	-.095491	-.145678	-.041753	.007518	.155145
27	-.007761	-.117780	-.141787	-.022163	-.004488	.146507
28	-.006854	-.115812	-.158562	.012433	.026229	.092358
29	-.030416	-.125798	-.104881	-.029510	.066431	.063518
30	-.045102	-.130471	-.065522	-.016001	.011891	.047621

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-01	10E-02	10E-02	10E-02	10E-02
0	.041322	-.011269	-.085357	-.004940	-.016562	.012504
1	.156053	-.123871	-.664436	-.097606	-.049899	.171291
2	.381946	-.113703	-.699558	-.143460	-.068053	.150651
3	.476829	-.107133	-.756739	.006375	-.106944	.152980
4	-.029939	-.131949	-.756680	.159510	-.049540	.290958
5	-.079627	-.100592	-.503931	-.024124	.010569	.274011
6	-.005387	-.053718	-.284090	-.139290	.075151	.125713
7	-.443508	-.035822	-.383104	.004057	.143113	.078998
8	-.222488	-.008742	-.340750	.179747	.070915	.035235
9-11	.327720	-.044965	-.281890	.062702	-.044171	.092150
12-14	.306231	-.058029	-.179209	.049466	-.015270	.088527
15-21	.202444	-.029280	-.127676	-.091688	-.008918	.046736
22-30	-.037373	-.020800	-.075094	.014499	.034668	.016494

RUN NO 87A 46M 6-14-63 1401-1502(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.28829 10E 00	0.23456 10E 00	0.88202 10E-01	0.17631 10E 00	0.66297 10E-01	0.53942 10E-01
1	.072861	-.039297	-.125987	-.010356	.100808	.065536
2	.106635	-.045928	-.149796	-.033940	.131195	.058899
3	.081426	-.036826	-.131637	.011874	.111860	.006959
4	.020032	-.036043	-.146942	-.053944	.051289	.023071
5	.018645	-.034070	-.106474	.025900	.017692	.020968
6	-.005344	.007742	-.066179	.046644	-.011254	.078717
7	.015064	.021871	-.042156	.067268	.025144	.050363
8	-.017444	-.014768	-.016095	-.075059	.024464	.016768
9	-.037104	-.039642	-.002012	-.083096	.022978	-.022240
10	-.033506	-.032231	.029016	-.014273	-.010264	-.060868
11	.000557	-.016432	.031014	.021078	.000488	-.027086
12	.045811	-.018952	.040632	.074615	.057315	-.034651
13	.032989	-.041399	.033717	.045659	.020177	-.033115
14	-.005342	-.055127	.063910	-.042623	-.063153	-.061325
15	.036193	-.029785	.081946	-.045944	-.061966	-.039197
16	.044399	.047813	.032661	-.020904	.002254	.056690
17	.042204	.056004	-.051998	.016310	.048654	.106046
18	.077573	.059076	-.055897	.045631	.085790	.102148
19	.082540	.035446	-.005639	.059821	.117909	.044430
20	.007472	-.018615	.031292	.037868	.041805	-.037964
21	-.079974	-.054556	.040827	-.023837	-.071870	-.054581
22	-.093166	.010318	.031689	.013340	-.112089	-.003675
23	-.043151	.027417	.034388	-.013811	-.070593	-.000210
24	.001069	.017732	.063422	-.080871	-.007542	-.053408
25	-.069222	.021951	.046560	-.088043	-.058052	-.092677
26	-.097012	.014150	.025110	-.059172	-.044386	-.106451
27	-.022597	-.020240	-.016908	-.002857	-.043639	-.075943
28	-.013667	-.030701	-.031575	-.008971	-.006269	-.034645
29	-.046708	-.069351	-.051256	-.020748	-.035516	-.031710
30	-.056718	-.087090	-.013949	.005507	-.093610	-.076343

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-02	10E-02	10E-02
1	.430361	-.310294	-.097564	.012228	.121280	.024347
2	.194270	-.308704	-.240922	-.033966	.105582	.029659
3	.077759	-.162011	-.378950	-.055671	.107895	.068906
4	.560910	.000962	-.400487	.035420	.156195	.135958
5	.691208	-.156728	-.254555	-.018559	.108931	.051213
6	.402835	-.374211	-.126738	-.004064	.089367	-.054257
7	.428727	-.214059	-.160082	-.025838	.192728	-.014207
8	.307286	-.019249	-.125363	-.316925	.135982	.036339
9-11	.291623	-.039306	-.052020	-.012209	.081462	.047469
12-14	.058732	-.024684	-.025967	.096818	-.017510	.037007
15-21	-.018448	-.037187	-.043451	-.057442	.013422	.011950
22-30	.027013	-.008501	.006956	.112815	.007614	-.009871

RUN NO 87A 46M 6-14-63 1401-1502(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.38354 10F 00	0.21669 10E 00	0.14345 10E 00	0.20283 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.524003	.349745	.349740	.597201
2	.178449	.017115	.079508	.212778
3	.072631	-.030721	.002744	-.031909
4	.081926	-.021835	.013243	-.080798
5	-.007016	-.023372	.015125	-.094849
6	-.062265	-.113481	-.058189	-.117252
7	-.131883	-.149776	-.152724	-.152417
8	-.176658	-.124569	-.183708	-.175404
9	-.209267	-.194867	-.098668	-.142553
10	-.133451	-.226073	-.021674	-.060875
11	-.077888	-.197716	-.023896	-.047990
12	-.063399	-.123012	-.068067	-.077308
13	-.193859	-.102368	-.107301	-.185419
14	-.128677	-.080988	-.061643	-.089204
15	-.050666	-.010687	-.047005	.083387
16	.063707	.096513	-.071669	.199830
17	-.076705	.038999	-.076078	.117455
18	-.192199	.003843	-.102049	-.025818
19	-.209306	.156372	-.192143	-.124752
20	-.129706	.169025	-.059473	-.142702
21	-.070451	.188150	-.051839	-.104084
22	-.023709	.149573	-.052964	-.065532
23	-.097714	.120590	-.078561	-.051148
24	-.016636	.130632	.016494	-.003421
25	.075486	.049020	.070899	.078589
26	.164620	-.087324	.168123	.167284
27	.165621	-.090081	.163630	.178477
28	.262735	-.198253	.078249	.111090
29	.190647	-.155623	.045372	.009427
30	.131080	-.098425	.062387	-.065845

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-01	10E-02
0	.035528	.002527	.007615	.026664
1	.399427	.039997	.104807	.158955
2	.450311	.151047	.120522	.174617
3	.426801	.257162	.111798	.227959
4	.381535	.176511	.109798	.244935
5	.288862	.101520	.103094	.176024
6	.165404	.092136	.071324	.133169
7	.160877	.094871	.056152	.170093
8	.158151	.117401	.046948	.128460
9-11	.175588	.105837	.065244	.096555
12-14	.120943	.098336	.067581	.056654
15-21	.099364	.069720	.041639	.030698
22-30	.058634	.060325	.042259	.025038

RUN NO 87A 91M 6-14-63 1401-1502(EST)

GROSS STATISTICS

4 AS CU
UNSTABLE

WIND SPEED 5.31 M/SEC
WIND DIRECTION 217 DEG
SOLAR RAD. 1.14 LY/MIN

SIGMA A 5.8 DEG
SIGMA E 6.1 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.79301E 00	0.34089E-00	0.21153E-00	0.25132E-00
V	0.25804E-00	0.21217E-00	0.17502E-00	0.12921E-00
W	0.26006E-00	0.20558E-00	0.17510E-00	0.11800E-00
T	0.17380E-00	0.18931E-01	0.11119E-01	0.13245E-01
E	0.65806E 00	0.37934E-00	0.28083E-00	
GUSTINESS RATIOS				
U	0.16823	0.10995	0.08661	0.09441
V	0.09567	0.08675	0.07879	0.06769
W	0.09604	0.08539	0.07880	0.06469
COVARIANCES				
U,V	0.11824E-00	0.30554E-01	0.23851E-01	0.24872E-01
U,W	-0.20321E-00	-0.11981E-00	-0.73193E-01	-0.99439E-01
U,T	-0.24515E-00	-0.21281E-01	-0.69331E-02	-0.16274E-01
V,W	-0.53853E-01	-0.28404E-01	-0.29679E-01	-0.94360E-02
V,T	-0.62734E-01	0.93191E-02	0.87233E-02	0.34068E-02
W,T	0.37884E-01	-0.28348E-01	-0.27263E-01	-0.14324E-01
WE	0.14715E-00	0.11879E-00	0.51399E-01	
NORMALIZED COVARIANCES				
U,V	0.26056	0.11361	0.12396	0.13802
U,W	-0.44607	-0.45258	-0.38031	-0.57744
U,T	-0.65826	-0.26491	-0.14296	-0.28207
V,W	-0.20788	-0.13600	-0.16953	-0.07642
V,T	-0.29623	0.14704	0.19774	0.08235
W,T	0.17819	-0.45439	-0.61786	-0.36232

RUN NO 87A 91M 6-14-63 1401-1502(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.19245 10E 00	0.19249 10E 00	0.48516 10E-01	0.17506 10E 00	0.44124 10E-01	0.44133 10E-01
0	.124424	-.380488	-.142808	-.170117	.197898	-.617810
1	.125096	-.364364	-.106466	-.149855	.161384	-.516967
2	.123768	-.337586	-.060080	-.113544	.106012	-.376444
3	.116276	-.301546	-.033233	-.080017	.060576	-.264210
4	.105086	-.258984	-.016109	-.047727	.026674	-.184831
5	.085869	-.219525	-.004483	-.017315	-.001863	-.119126
6	.064958	-.177547	.001971	.008493	-.019707	-.065738
7	.042753	-.131351	.005067	.029212	-.035738	-.024924
8	.020802	-.090686	.002032	.045408	-.046507	.014763
9	.006649	-.054106	-.002622	.056454	-.052751	.052631
10	-.000618	-.024117	-.005619	.064500	-.060991	.087924
11	-.007875	.004170	-.007162	.065364	-.062015	.114838
12	-.020361	.031752	-.005614	.065613	-.056201	.128338
13	-.028179	.058252	-.002092	.066468	-.054777	.136438
14	-.033658	.081286	-.001147	.069095	-.055734	.145577
15	-.036525	.099628	.009207	.069127	-.057643	.153788
16	-.038880	.125491	.016633	.065891	-.051387	.154495
17	-.042156	.143327	.023379	.061711	-.038068	.152809
18	-.044741	.154351	.023952	.050161	-.024263	.144759
19	-.051623	.162347	.020200	.041874	-.016356	.135479
20	-.056352	.165148	.017974	.034027	-.012221	.137363
21	-.059473	.167816	.017574	.024423	-.006305	.133356
22	-.063915	.170787	.017368	.013838	-.003569	.121893
23	-.060139	.170855	.018061	-.002315	.001321	.111013
24	-.051185	.168906	.022078	-.020722	.009066	.101389
25	-.039422	.164233	.020673	-.028479	.004947	.094707
26	-.029008	.154807	.017656	-.026264	-.007347	.084004
27	-.020619	.143659	.013324	-.025462	-.018455	.076579
28	-.016852	.131237	.008209	-.025666	-.020861	.066374
29	-.010575	.116683	.004658	-.027314	-.018481	.053326
30	-.006340	.097187	-.001012	-.028317	-.016467	.031645
31	-.007661	.072558	-.004105	-.033053	-.011723	.005716
32	-.008014	.050982	-.005699	-.038746	-.008320	-.023481
33	-.010410	.032308	-.005924	-.039816	-.002001	-.049209
34	-.014386	.016209	-.008182	-.034448	-.001156	-.067627
35	-.020752	.005270	-.013104	-.028383	.000930	-.071542
36	-.027495	-.001325	-.017050	-.024991	.015271	-.072142
37	-.027657	-.008723	-.014536	-.027743	.031924	-.074597
38	-.021015	-.016696	-.009052	-.025253	.039312	-.073982
39	-.013198	-.027874	-.003482	-.020029	.041678	-.065440
40	-.008211	-.033609	-.002406	-.021868	.044991	-.056795
41	-.001854	-.038912	-.001221	-.024793	.046343	-.049043
42	.005538	-.041718	-.008936	-.019986	.040343	-.034498
43	.009862	-.044114	-.017411	-.013943	.039789	-.015024
44	.008150	-.045818	-.027671	-.012322	.040640	.009830
45	.004103	-.052138	-.030070	-.005961	.036019	.028186
46	.006933	-.056327	-.031548	-.007173	.023479	.038720
47	.014682	-.051778	-.029762	.021619	.014738	.045591
48	.014310	-.044912	-.029316	.031811	.008648	.047989
49	.007558	-.036579	-.028053	.034982	.006918	.051132
50	-.004495	-.028580	-.027927	.030853	.011079	.052744
51	-.011820	-.026646	-.021972	.026394	.016598	.042552
52	-.010530	-.027082	-.011593	.019651	.020554	.036271
53	-.008952	-.029500	.004640	.010188	.027047	.033308
54	-.009187	-.027149	.010816	.001418	.040398	.031227
55	-.012254	-.019216	.006468	-.008751	.055658	.025363
56	-.015291	-.008487	.012008	-.016906	.065172	.017835
57	-.017135	.001230	.022246	-.021126	.064029	.008542
58	-.020730	.007947	.027051	-.022518	.058339	-.002981
59	-.020830	.014940	.029929	-.016765	.047864	-.0 0339
60	-.015464	.014577	.034922	-.010388	.030220	-.015786

RUN NO 87A 91M 6-14-63 1401-1502(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

N	U,V	U,W	U,T	V,W	V,T	W,T
	0.19245 10E 00	0.19249 10E 00	0.48516 10E-01	0.17506 10E 00	0.44124 10E-01	0.44133 10E-01
1	-.027078	.002925	-.031948	-.056599	.055911	-.005658
2	-.047844	.006761	-.044444	-.095796	.083581	-.009650
3	-.065431	.005116	-.042589	-.124768	.104847	-.013147
4	-.077444	.000749	-.042000	-.144870	.121882	-.019462
5	-.083984	-.009263	-.041657	-.154610	.137303	-.025691
6	-.089289	-.021304	-.038205	-.156041	.145256	-.029125
7	-.098433	-.032262	-.031825	-.157775	.151716	-.031274
8	-.104732	-.039001	-.029592	-.157613	.153033	-.026781
9	-.106493	-.037768	-.033321	-.157665	.149347	-.022004
10	-.107443	-.033828	-.035625	-.162678	.146133	-.013721
11	-.104740	-.034061	-.031981	-.161737	.140927	-.004742
12	-.103823	-.042050	-.021648	-.154539	.134465	.000040
13	-.106874	-.049900	-.013654	-.144735	.125593	.003857
14	-.101794	-.045736	-.009979	-.134158	.118343	.013953
15	-.093438	-.031772	-.017760	-.125794	.111018	.030879
16	-.084664	-.016648	-.025958	-.112923	.094561	.040427
17	-.074855	-.001125	-.036592	-.092905	.074212	.046309
18	-.063500	.009722	-.043906	-.068489	.053951	.047958
19	-.052521	.014083	-.043196	-.048791	.038771	.041691
20	-.040835	.013650	-.041132	-.028476	.024843	.033846
21	-.027340	.012471	-.034438	-.002460	.011010	.030630
22	-.010171	.017241	-.026292	.023014	-.003227	.033446
23	.004000	.023344	-.022345	.046925	-.012765	.026513
24	.012914	.026108	-.019228	.067087	-.024734	.015185
25	.019118	.025652	-.009526	.077391	-.037888	.008608
26	.025598	.021805	.003317	.087862	-.046550	.000808
27	.030326	.016564	.017382	.097850	-.054018	-.003802
28	.031799	.012843	.025677	.103587	-.057045	-.008710
29	.037214	.005060	.033760	.110478	-.062379	-.015692
30	.042631	-.002045	.043913	.115038	-.067158	-.020413
31	.046352	-.008824	.049637	.111939	-.068697	-.022401
32	.048340	-.014132	.050317	.109239	-.065046	-.023771
33	.052023	-.016889	.046196	.098827	-.062281	-.023682
34	.055062	-.017456	.041084	.083073	-.065117	-.026348
35	.052015	-.012241	.031514	.062873	-.069564	-.023997
36	.043270	-.003287	.019050	.030894	-.063508	-.018536
37	.031934	.008049	.005403	-.001827	-.045518	-.012330
38	.022671	.013858	-.001364	-.019415	-.034755	-.011568
39	.012346	.012586	-.001221	-.023368	-.034135	-.014551
40	.005432	.005735	.003545	-.020862	-.038736	-.015983
41	.000863	.002050	.003399	-.020057	-.040017	-.014953
42	-.005884	.001857	-.002597	-.024411	-.036410	-.014464
43	-.011335	.003320	-.009318	-.025603	-.029368	-.016626
44	-.013436	.000672	-.012368	-.026649	-.029291	-.022165
45	-.012859	-.002704	-.016998	-.030397	-.026802	-.023048
46	-.009049	-.003659	-.018375	-.036892	-.023435	-.015809
47	-.009254	-.006466	-.018261	-.040803	-.021428	-.008400
48	-.008139	-.012139	-.014772	-.042672	-.016315	-.005362
49	-.004034	-.017420	-.010705	-.042340	-.011350	-.005003
50	-.000257	-.017078	-.010830	-.035752	-.005228	-.001615
51	.004091	-.014274	-.015362	-.027142	.001310	.004622
52	.010265	-.010540	-.020517	-.017271	.009238	.008400
53	.013268	-.001353	-.028647	-.009035	.014206	.009839
54	.011284	.001044	-.029446	-.005522	.018657	.015207
55	.012011	-.000299	-.022680	.000316	.025412	.017447
56	.008311	.000624	-.020218	.005068	.027555	.016686
57	.005978	.001033	-.020441	.012167	.024365	.016081
58	.007702	.003976	-.020338	.014838	.025682	.017631
59	.007641	.007302	-.017891	.017069	.024742	.019078
60	.005723	.015542	-.024604	.024124	.020571	.022250

RUN NO 87A 91M 6-14-63 1401-1502(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.21160 10E 00	0.17503 10E 00	0.17510 10E 00	0.11124 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.879243	.853455	.842678	.802394
2	.724093	.667646	.635770	.586687
3	.598075	.518991	.470085	.424346
4	.492327	.400825	.336041	.315574
5	.394354	.305480	.229602	.220057
6	.303367	.218970	.138997	.133712
7	.219606	.137859	.069	.067875
8	.150360	.070044	.009806	.017663
9	.092336	.015047	-.045260	-.028992
10	.030581	-.030691	-.093980	-.073411
11	-.025091	-.073319	-.136177	-.107624
12	-.076107	-.114753	-.170038	-.126341
13	-.121669	-.167663	-.203734	-.139962
14	-.163606	-.215248	-.240577	-.156269
15	-.204815	-.250596	-.268233	-.176964
16	-.246177	-.270890	-.284951	-.189822
17	-.282381	-.285448	-.291914	-.201794
18	-.309175	-.301828	-.279526	-.203638
19	-.323333	-.321514	-.262609	-.199416
20	-.331799	-.333860	-.255573	-.204711
21	-.341681	-.337095	-.250680	-.202216
22	-.350170	-.335160	-.235021	-.191117
23	-.350599	-.335306	-.215321	-.172721
24	-.342712	-.330090	-.200605	-.163655
25	-.326940	-.309493	-.186437	-.160896
26	-.306384	-.282404	-.167491	-.151938
27	-.279281	-.247176	-.149792	-.148811
28	-.248529	-.207970	-.124473	-.139584
29	-.217772	-.169348	-.090530	-.125504
30	-.173620	-.133618	-.049296	-.098387
31	-.119773	-.099126	-.003386	-.066642
32	-.067948	-.070705	.043713	-.036490
33	-.027983	-.043085	.085750	-.009446
34	.005314	-.014051	.111310	.012970
35	.026435	.014697	.115156	.023543
36	.043240	.040122	.107483	.036777
37	.048957	.059709	.100149	.052522
38	.044785	.070976	.098099	.060117
39	.041033	.076659	.100525	.057866
40	.039069	.089258	.098951	.056267
41	.042950	.099604	.091016	.056789
42	.051746	.110359	.076713	.061332
43	.062943	.129131	.059347	.047043
44	.069925	.156080	.038025	.020671
45	.076763	.170516	.018817	-.000034
46	.084503	.168178	-.001066	-.011445
47	.088954	.162561	-.017924	-.015098
48	.090216	.152137	-.027688	-.025415
49	.084711	.139927	-.036846	-.038597
50	.074831	.122456	-.046344	-.039334
51	.065478	.103448	-.042536	-.032492
52	.059022	.088101	-.036924	-.024612
53	.044363	.077883	-.040786	-.023392
54	.029162	.076988	-.050002	-.014069
55	.013490	.078742	-.053928	.000088
56	-.002819	.076062	-.056137	.008486
57	-.013875	.066109	-.053710	.018740
58	-.017172	.049543	-.045012	.026798
59	-.021436	.033739	-.038298	.028921
60	-.031336	.010811	-.030372	.026198

RUN NO 87A 91M 6-14-63 1401-1502(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-01	10E-03	10E-02	10E-02	10E-02
0	.053132	-.011905	-.149938	.003426	-.005422	-.010823
1	.498055	-.131148	-.504825	.053606	-.015453	-.167502
2	.608713	-.186301	-.583660	-.097845	.044127	-.298713
3	.638696	-.195473	-.739602	-.462597	.101047	-.447365
4	.442675	-.102925	-.461700	-.612424	.101312	-.368944
5	.234697	-.040838	-.270127	-.453070	.107388	-.217568
6	.084934	-.028946	-.240685	-.294957	.106178	-.191243
7-8	.096442	-.019896	-.376937	-.166487	.049440	-.131956
9-11	-.009697	-.008566	-.375582	-.126068	.039190	-.080720
12-15	-.013763	-.001385	-.182964	-.039659	.021290	-.055283
16-20	-.016380	-.001528	-.134636	-.025008	.014340	-.036459
21-27	.000590	-.000995	-.094710	-.011507	.005998	-.019509
28-36	.000046	.000027	-.053403	-.009603	.004243	-.011893
37-47	-.002556	-.000672	-.031561	-.004474	.002183	-.005861
48-60	.000298	-.000266	-.013283	-.000897	.001225	-.004395

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-03	10E-01	10E-02	10E-03
1	-.541661	-.094765	-.494737	-.043662	.116165	.155818
2	-.757675	-.141823	-.750131	-.088024	.224543	.276745
3	-.833896	-.227523	-.802053	-.129538	.264638	-.040470
4	-.413816	-.210039	-.162534	-.079559	.157183	-.558216
5	-.068896	-.074443	.070032	-.013649	.064502	-.592686
6	-.043646	.102623	-.345680	-.006600	.032191	-.286996
7-8	-.035303	.106040	-.395909	-.014774	.023523	.046015
9-11	-.043665	.028913	-.068438	-.010075	.016825	.044586
12-15	-.016376	.027566	-.126427	-.004039	.004640	.009434
16-20	-.013737	-.009350	-.036556	-.000969	.006852	.000778
21-27	.004551	.002753	-.053166	-.000678	.004051	-.001210
28-36	-.001906	-.002432	-.018807	-.000395	.002401	-.003449
37-47	-.001865	-.001667	-.000603	-.000234	.001152	-.003516
48-60	-.001387	-.001235	.000301	-.000165	.000963	.000753

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-01	10E-02
0	.030858	.006399	.010207	.011531
1	.297386	.159790	.125104	.102033
2	.412059	.297464	.218980	.138943
3	.446283	.352976	.314132	.166000
4	.255049	.209611	.240782	.122925
5	.109717	.107121	.129819	.077922
6	.086571	.083499	.103276	.069382
7-8	.079803	.073482	.076940	.049763
9-11	.045995	.044881	.054049	.034086
12-15	.024707	.027754	.031906	.020172
16-20	.016208	.017234	.019604	.014417
21-27	.011629	.011792	.011382	.009569
28-36	.006595	.006434	.007205	.006075
37-47	.004304	.004456	.004629	.003749
48-60	.002761	.002837	.002767	.003152

RUN NO 87A 91M 6-14-63 1401-1502(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.18023 10E 00	0.17223 10E 00	0.57727 10E-01	0.12345 10E 00	0.41378 10E-01	0.39540 10E-01
0	.137998	-.577372	-.281909	-.076435	.082333	-.362255
1	.034136	-.313595	-.242565	.071026	-.001267	-.025217
2	-.051753	-.059306	-.200613	.037113	.065594	.074907
3	-.051324	-.008242	-.158749	-.034575	.077795	.003271
4	-.057121	-.018103	-.097456	-.020900	.099544	.004048
5	-.078903	.032625	-.047107	.015677	.086023	.031551
6	-.078961	.097725	.014932	.031695	.031210	.022961
7	-.043473	.102639	.058834	.031061	-.044200	-.044831
8	-.031181	.132946	.074145	.040253	-.048453	.008066
9	-.050352	.127417	.061467	.000269	.002813	.053928
10	-.055593	.094240	.037572	-.011173	.016564	.079730
11	.002169	.009439	.055801	-.076405	.001701	.044177
12	.023894	.035327	.055421	.043934	.060723	.015615
13	.009275	.036925	.074787	.040918	-.029357	-.008610
14	.056529	.003885	.069680	-.015817	.000362	-.009424
15	.133044	-.035434	.105269	-.049841	-.051147	-.034647
16	.113085	.026664	.120961	.002584	-.085822	-.073019
17	.037662	.090464	.117045	.009086	-.081933	-.069381
18	.000309	.118901	.150067	.005193	-.066473	-.096058
19	.025781	.093551	.142500	-.012135	-.040712	-.097037
20	.071653	.041930	.113654	-.051211	-.063898	-.068890
21	.067987	.043143	.054713	-.061958	-.051423	-.021146
22	.089430	-.038879	.060293	-.083222	-.046778	.005655
23	.116062	-.058724	.039397	-.138516	-.030336	.035749
24	.041333	-.026616	-.019395	-.049508	-.014903	.095635
25	-.053247	-.122402	-.055019	.031330	-.021813	.097540
26	-.045942	-.125128	-.095898	-.002997	-.034615	.068403
27	-.014975	-.062313	-.095507	-.043794	.010708	.094849
28	-.007259	-.050535	-.093765	.012611	.019503	.060327
29	-.001138	-.074827	-.070812	.043685	-.033396	-.014361
30	.028354	-.040705	-.111316	-.030060	.020538	.029149

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-01	10E-02	10E-02	10E-02	10E-03
0	-.054133	-.003123	-.042675	.022583	.013033	-.141970
1	-.579136	-.065775	-.467200	.184922	.154969	-.088318
2	-.298232	-.095911	-.451698	.040280	.122114	-.098862
3	.264038	-.107014	-.286101	-.062691	.039214	-.966288
4	.459103	-.112090	-.198099	.005043	.004753	-.813675
5	.323654	-.102152	-.187663	-.021821	.002507	.009737
6	.131096	-.049356	-.073556	.006132	-.030305	-.288482
7	.157315	-.032506	-.003072	.067929	-.062379	-.648094
8	.358059	-.046578	.011896	.043276	-.062942	-.789369
9-11	.136529	-.047677	-.001487	.072318	-.022651	-.749143
12-14	.081733	-.040970	-.021045	-.071433	.038095	-.522870
15-19	.153385	-.026594	-.006250	-.133704	.004295	-.901941
20-30	.040331	-.010005	-.007391	-.106279	.034200	-.582949

RUN NO 87A 91M 6-14-63 1401-1502(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.1E023 10E 00	0.17223 10E 00	0.57727 10E-01	0.12345 10E 00	0.41378 10E-01	0.39540 10E-01
1	-.130816	-.034433	-.061613	-.165576	.087987	.008826
2	-.115450	.000775	-.093846	-.075582	.022765	.038923
3	-.054502	-.027697	-.059777	.040597	-.041433	-.001719
4	-.082126	-.002758	-.098510	-.034081	-.058481	.022446
5	-.066677	-.021169	-.095606	-.056394	-.020367	.028537
6	-.033143	-.019433	-.060377	.017732	.005087	.031787
7	-.026620	.007373	-.025581	-.003395	.017381	.016393
8	.003357	.000650	-.000598	-.061657	.040250	.004466
9	.024133	-.033276	.041611	-.016691	.089431	-.024249
10	.060007	-.011082	.048993	.035679	.059676	.005971
11	.049340	.042689	-.008968	.027085	.044004	.017267
12	.066617	-.008150	.023074	.064702	-.023575	-.031185
13	.078397	-.028036	.044273	.061736	-.021075	-.034746
14	.012139	-.039097	.060168	.006695	.011862	-.028408
15	-.013414	-.025111	.034805	-.006538	-.008541	-.045517
16	.006910	-.032046	.044496	-.015850	-.015961	-.066275
17	-.007906	-.047279	.071380	.044820	-.067925	-.049166
18	.000532	-.035517	.072643	.095421	-.105307	-.060852
19	-.011159	.000455	.031317	.016774	-.085948	-.048341
20	-.023057	-.005331	.030573	.029223	-.088840	-.027084
21	-.017503	.009635	.023908	.039509	-.071072	-.005947
22	-.033867	.033687	.005956	-.003948	-.059112	-.032226
23	-.022610	.021307	.018688	-.018122	-.052938	-.015046
24	-.052464	.031507	.028747	-.028231	-.041826	.015015
25	-.123616	.022121	.012628	-.079618	-.005777	.008395
26	-.092475	.017369	.002140	-.123544	.002140	.045993
27	-.070688	.006537	.000424	-.081646	-.012900	.063291
28	.013217	-.040582	.028772	.002618	-.000426	.016894
29	.019205	-.038362	.058091	-.005798	.021777	-.010712
30	-.021263	-.002084	.041315	-.095412	.084428	-.012034

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-02	10E-03	10E-03
1	-.000154	-.226164	.040778	.089250	-.137122	-.511333
2	-.121240	-.082676	-.106619	-.092323	.611040	.321204
3	-.516771	.016196	-.189994	-.226167	.109505	.629256
4	-.617598	-.097076	-.149586	-.147652	-.724549	.139744
5	-.430782	-.126779	-.106856	-.116558	-.459790	.011319
6	-.187910	.005762	-.081629	-.044109	-.116503	.138403
7	-.099307	.016309	-.029985	-.020946	.142082	.063354
8.	-.188732	-.039442	.014319	-.172527	.604983	-.088762
9-11	-.175259	-.031473	-.002175	-.165677	.446447	.002834
12-14	-.181737	-.019842	-.032166	-.173208	.550161	.199113
15-21	-.119000	-.033967	-.010530	-.174748	.175646	-.045698
22-30	.017891	-.070973	.014869	.007410	.123477	-.146445

RUN NO 87A 91M 6-14-63 1402-1502(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

N	U	V	W	T
	0.25145 10E 00	0.12919 10E 00	0.11797 10E 00	0.13253 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.562121	.312002	.226163	.604340
2	.177451	-.027999	-.080346	.404131
3	.086358	.002352	.063678	.315289
4	.029162	.092772	.049439	.219738
5	-.067998	.096438	-.087539	.086614
6	-.158753	-.043731	-.137403	-.018667
7	-.201351	-.168757	-.017883	-.071408
8	-.231677	-.145159	-.110827	-.167464
9	-.175810	-.158938	-.181625	-.229671
10	-.082506	-.115077	-.196503	-.265944
11	-.016763	-.202422	-.011387	-.261424
12	-.069783	-.311776	-.016400	-.221784
13	-.064807	-.161127	-.025684	-.175460
14	.033631	.004304	-.019582	-.140026
15	.050846	.091800	.020878	-.140081
16	-.031728	-.011077	-.020142	-.098356
17	-.138730	-.083812	-.059148	-.076301
18	-.246845	.023059	-.004832	-.073250
19	-.236231	.126797	-.006642	-.028785
20	-.151511	.139442	.010226	-.039720
21	-.088581	.020073	-.026770	-.043379
22	-.002140	-.010097	.015174	-.082662
23	.012022	.151378	.002900	-.097950
24	.025678	.163884	-.082964	-.115667
25	.092743	-.027827	.091250	-.088179
26	.131806	-.099742	.115524	-.030827
27	.118473	-.136876	-.004166	-.025168
28	.109041	-.082797	.018318	.018677
29	.109088	-.066328	.143938	.071647
30	.163462	.005701	.017360	.089534

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-02	10E-02
0	.021591	.005092	.032549	.032967
1	.232452	.058837	.435871	.232013
2	.259576	.106593	.662854	.231826
3	.265199	.142769	.883528	.218516
4	.302397	.088494	.859691	.140103
5	.277954	.035939	.645269	.063428
6	.135631	.027343	.401803	.037193
7	.090295	.043223	.326018	.033776
8	.111572	.059907	.421942	.036433
9-11	.092488	.051081	.513452	.032843
12-14	.094366	.088534	.424133	.027730
15-21	.061846	.043585	.641296	.027165
22-30	.027912	.036904	.356859	.022225

RUN NB 87A 44M 6-14-63 1401-1502(EST)
RUN NO 87A 91M 6-14-63 1401-1502(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.218766	.046398	.414098	.267979
1	.266410	.454596	.491974	.196026
2	.271381	.423996	.442103	.096176
3	.190186	.400923	.359306	.041977
4	.078310	.340556	.299845	.080279
5	.068944	.226439	.349999	.098636
6	.082180	.209929	.394924	.072113
7-8	.106230	.245336	.226286	.063204
9-11	.129985	.051351	.099697	.060630
12-15	.124639	.213486	.082763	.124643
16-20	.140594	.093236	.176301	.043589
21-27	.093453	.079595	.057269	.116931
28-36	.106036	.101985	.098552	.139491
37-47	.097160	.117130	.101468	.071373
48-60	.081355	.134468	.100556	.102458

301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.837585	.381822	.850300	.218261
1	.660434	.443057	.713002	.502647
2	.527267	.699051	.652125	.508714
3	.466568	.735712	.631490	.407283
4	.627702	.598372	.542865	.321340
5	.644772	.639934	.555826	.301240
6	.341943	.681079	.555171	.141355
7	.439320	.450509	.379133	.208596
8	.631043	.465264	.231737	.332415
9-11	.445760	.579598	.605226	.178195
12-14	.370066	.400379	.408370	.155989
15-21	.247589	.382733	.376097	.207934
22-30	.260565	.216522	.344393	.157173

RUN NO 88A 15M 6-18-63 0936-1052(EST)

GROSS STATISTICS

CLEAR
STABLE/UNSTABLE

WIND SPEED 4.12 M/SEC
WIND DIRECTION 216 DEG
SOLAR RAD. 1.36 LY/MIN

SIGMA A 13.3 DEG
SIGMA E 11.6 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.18156E 01	0.13952E 01	0.99116E 00	0.94096E 00
V	0.73342E 00	0.71740E 00	0.56400E 00	0.37002E-00
W	0.44009E-00	0.42522E-00	0.39476E-00	0.14447E-00
T	0.12421E 01	0.20322E-00	0.98641E-01	0.16029E-00
E	0.14945E 01	0.12689E 01	0.97496E 00	
GUSTINESS RATIOS				
U	0.32705	0.28669	0.24164	0.23544
V	0.20786	0.20558	0.18228	0.14764
W	0.16102	0.15828	0.15250	0.09225
COVARIANCES				
U,V	-0.52531E-01	-0.40191E-01	-0.25151E-01	-0.73142E-01
U,W	-0.36286E-00	-0.32245E-00	-0.23088E-00	-0.21958E-00
U,T	-0.99113E 00	-0.42436E-00	-0.24852E-00	-0.32475E-00
V,W	-0.69695E-02	-0.10973E-01	-0.19924E-02	-0.57209E-02
V,T	0.77773E-01	0.67103E-01	0.16206E-01	0.59086E-01
W,T	0.15418E-00	0.12230E-00	0.84783E-01	0.78670E-01
WE	0.15410E-00	0.15536E-00	0.11370E-00	
NORMALIZED COVARIANCES				
U,V	-0.04552	-0.08015	-0.03364	-0.12396
U,W	-0.40594	-0.41864	-0.36910	-0.59656
U,T	-0.65999	-0.79695	-0.79481	-0.83621
V,W	-0.01227	-0.01987	-0.00422	-0.02474
V,T	0.08148	0.17574	0.06871	0.24262
W,T	0.20853	0.41603	0.42965	0.51699

RUN NO 88A 15M 6-18-63 0936-1052(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.74775 10E 00	0.62567 10E 00	0.31268 10E 00	0.47202 10E 00	0.23589 10E 00	0.19738 10E 00
0	-.033618	-.369122	-.794839	-.004006	.068630	.429844
1	-.038434	-.333175	-.715078	-.010248	.056682	.368554
2	-.035409	-.265681	-.586453	-.010831	.040394	.274511
3	-.029391	-.196544	-.468185	.002845	.031054	.194427
4	-.026131	-.138487	-.369238	.007052	.027860	.127851
5	-.026186	-.090802	-.285517	-.001122	.030243	.081428
6	-.023491	-.054142	-.208186	-.011598	.027635	.050817
7	-.019167	-.025470	-.140568	-.016561	.019160	.026726
8	-.016511	-.000619	-.081961	-.001769	.012539	.004178
9	-.019276	.022293	-.031098	.009276	.012455	-.018944
10	-.017175	.040338	.015922	.023542	.014110	-.035170
11	-.012542	.055457	.063394	.029473	.011674	-.047835
12	-.012151	.060017	.100429	.031281	.008520	-.053686
13	-.010836	.061377	.126826	.024968	.000823	-.058002
14	-.014080	.060237	.143934	.026449	.000273	-.062511
15	-.013769	.051531	.154712	.024937	.005960	-.066443
16	-.017003	.041636	.163809	.017909	.010296	-.069280
17	-.015794	.035356	.174585	.005424	.007523	-.070628
18	-.007302	.049397	.190390	-.004276	.000988	-.075408
19	.000945	.069715	.211484	-.007068	-.000521	-.084232
20	.009096	.082898	.226252	-.003474	-.002398	-.091148
21	.014600	.087452	.229532	-.005247	-.003455	-.092398
22	.017344	.086965	.228489	-.003553	-.005823	-.089168
23	.019769	.092982	.228087	.003531	-.006102	-.086873
24	.020047	.103610	.229642	.006572	-.005925	-.092406
25	.020697	.113203	.227848	.000137	-.004931	-.109934
26	.021541	.115834	.221276	-.021771	-.004796	-.117083
27	.024087	.114577	.213965	-.040363	-.010823	-.112135
28	.028137	.104490	.198528	-.035905	-.016684	-.097105
29	.032460	.086851	.171036	-.030163	-.021413	-.081527
30	.031.10	.062761	.144924	-.020667	-.019633	-.060400
31	.024405	.038844	.115519	-.004623	-.014750	-.033604
32	.019410	.022812	.090285	.007780	-.009151	-.012712
33	.014970	.010511	.068133	.019401	-.007334	-.006345
34	.010905	.001161	.052898	.020851	-.012700	-.005222
35	.007451	-.003323	.039464	.017296	-.018638	.002710
36	.006664	-.011698	.017949	.016802	-.023601	.011563
37	.004380	-.022938	-.005198	.008203	-.028255	.025612
38	.007437	-.032701	-.027545	-.004458	-.033433	.034374
39	.016100	-.043006	-.049467	-.015114	-.041134	.038810
40	.021829	-.047075	-.070800	-.029446	-.042616	.048401
41	.021302	-.046851	-.085794	-.032143	-.036661	.054381
42	.022331	-.039177	-.089975	-.028738	-.033120	.051094
43	.025405	-.028578	-.087835	-.023919	-.032198	.045583
44	.029828	-.024607	-.081140	-.024930	-.031636	.042714
45	.029487	-.019042	-.076123	-.028804	-.030444	.040829
46	.022533	-.021064	-.076168	-.021422	-.028630	.039344
47	.018894	-.028077	-.079094	-.013371	-.028040	.039010
48	.020527	-.030908	-.079548	-.009076	-.027678	.033882
49	.016839	-.031452	-.073117	-.016766	-.023993	.023194
50	.011847	-.026159	-.061399	-.020084	-.019877	.007937
51	.008379	-.015571	-.047604	-.019593	-.021029	.000633
52	.011062	-.007053	-.039049	-.014773	-.021449	.004747
53	.018981	-.000372	-.035401	-.002077	-.019754	.009268
54	.018783	-.005803	-.032719	.002608	-.015147	.012095
55	.016528	-.012820	-.032942	.005026	-.013315	.014695
56	.009988	-.012524	-.030071	.014275	-.004198	.016270
57	-.002328	-.004393	-.022687	.024848	.010194	.009764
58	-.011292	.009775	-.010496	.024443	.016200	-.006135
59	-.015219	.015596	.000411	.019367	.018516	-.018534
60	-.017447	.012348	.008848	.015731	.019751	-.026965

RUN NO 88A 15M 6-18-63 0936-1052(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.74775 10E 00	0.62567 10E 00	0.31268 10E 00	0.47202 10E 00	0.23589 10E 00	0.19738 10E 00
1	.000110	-.043624	-.062634	.000333	.024984	-.025238
2	.008339	-.062922	-.089150	-.002100	.042431	-.034536
3	.014511	-.064810	-.105212	-.004209	.052795	-.026286
4	.017060	-.065077	-.118279	-.000403	.055018	-.016490
5	.024830	-.067763	-.127225	.007895	.053673	-.011692
6	.038238	-.070382	-.132249	.022743	.056872	-.005690
7	.056665	-.066218	-.135907	.031455	.064555	.001656
8	.071607	-.056138	-.138812	.029545	.072160	.007829
9	.083603	-.047393	-.138249	.027033	.078862	.011265
10	.082896	-.045450	-.136107	.027554	.076363	.014081
11	.070976	-.047977	-.136364	.025516	.066622	.010379
12	.064384	-.044530	-.128076	.019643	.063583	.008286
13	.054894	-.032749	-.118061	.014679	.057670	.015449
14	.051212	-.025046	-.109211	.013995	.051430	.018828
15	.048797	-.018012	-.098625	.012970	.048999	.023390
16	.043795	-.011295	-.084907	.016917	.042522	.021188
17	.047525	-.000203	-.074794	.017339	.038713	.027434
18	.048399	.009932	-.066328	.008006	.036207	.034707
19	.036153	.011386	-.059469	-.002872	.027068	.029678
20	.023382	.012984	-.052006	-.011443	.017479	.031228
21	.016099	.023227	-.044171	-.023570	.009497	.036421
22	.002736	.034835	-.038995	-.029276	.001084	.045729
23	-.009075	.035380	-.033510	-.034510	-.006076	.041260
24	-.014092	.030914	-.023392	-.034934	-.008694	.030659
25	-.022813	.023084	-.010132	-.035504	-.008000	.021493
26	-.027859	.018083	.003242	-.035030	-.009498	.020182
27	-.027122	.019266	.014771	-.040021	-.010261	.018108
28	-.031504	.024917	.025051	-.036730	-.012142	.017490
29	-.040592	.031245	.036018	-.026698	-.017018	.019524
30	-.045673	.033460	.046642	-.018375	-.025562	.019344
31	-.050930	.038784	.053894	-.014211	-.033741	.014049
32	-.054467	.041302	.056720	-.010372	-.037549	.009422
33	-.055125	.032006	.057077	-.001377	-.041434	-.000281
34	-.052298	.025851	.057060	.007048	-.045106	-.003741
35	-.049749	.022066	.054777	.015773	-.042987	-.002655
36	-.047796	.011994	.049767	.021463	-.035390	-.007775
37	-.042500	.002539	.047456	.018280	-.025309	-.013721
38	-.039207	-.003948	.046181	.021483	-.017150	-.020501
39	-.035603	-.004922	.043948	.027474	-.014976	-.018920
40	-.025645	.000397	.044006	.030633	-.011801	-.015190
41	-.019541	.005208	.038702	.025176	-.012296	-.010040
42	-.011665	-.000920	.031657	.025693	-.006473	-.011316
43	-.007896	-.012217	.023646	.019566	-.002691	-.017069
44	-.006155	-.016054	.014446	.009346	-.001312	-.017290
45	-.004117	-.013400	.005466	.001143	-.003539	-.012004
46	-.002170	-.011057	-.000532	.004340	-.003444	-.005945
47	.004918	-.011569	-.002919	.019292	.001790	-.005233
48	.013096	-.013719	-.005127	.031008	.005999	-.004244
49	.019684	-.018197	-.009186	.032408	.005152	-.005939
50	.024876	-.020160	-.006114	.029924	.012398	-.014802
51	.034605	-.024541	-.005336	.034242	.023430	-.024632
52	.047956	-.022238	-.010853	.032637	.033827	-.020255
53	.057713	-.016351	-.015155	.025134	.038586	-.011790
54	.057114	-.007811	-.017007	.019629	.041334	-.001108
55	.051882	-.003112	-.017097	.015708	.037663	.004659
56	.048276	-.008284	-.022851	.013867	.029871	-.002825
57	.052031	-.020681	-.027111	.005945	.027097	-.012802
58	.048447	-.024192	-.029995	-.005596	.025040	-.019508
59	.037903	-.014936	-.030048	-.013467	.015167	-.013990
60	.028005	-.014806	-.028330	-.023404	.008443	-.008420

RUN NO 88A 15M 6-18-63 0936-1052(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.99116 10E 00	0.56412 10E 00	0.39495 10E 00	0.98643 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.839100	.758177	.654688	.863137
2	.638951	.503935	.327696	.683704
3	.490032	.334235	.133133	.541461
4	.374835	.213548	.040177	.427507
5	.273287	.118145	-.011859	.340564
6	.189869	.048885	-.054075	.263494
7	.125017	-.001991	-.078517	.189665
8	.069278	-.040745	-.082545	.122036
9	.014904	-.066789	-.080874	.062006
10	-.038036	-.074004	-.078529	.008507
11	-.089061	-.080741	-.066009	-.043602
12	-.122545	-.098446	-.047244	-.090720
13	-.141329	-.111229	-.045175	-.128283
14	-.157101	-.135207	-.049985	-.156807
15	-.172892	-.160681	-.068176	-.177383
16	-.185059	-.176363	-.092426	-.194552
17	-.198623	-.180915	-.104342	-.209918
18	-.215028	-.180930	-.108133	-.227474
19	-.233583	-.168744	-.118982	-.246921
20	-.247651	-.154345	-.113003	-.260778
21	-.246942	-.147111	-.112141	-.260321
22	-.245158	-.148434	-.086844	-.256301
23	-.248219	-.141765	-.065696	-.254147
24	-.255892	-.124473	-.067982	-.253908
25	-.259528	-.119068	-.098872	-.257710
26	-.254952	-.128316	-.125695	-.257350
27	-.243527	-.133605	-.117785	-.251524
28	-.222801	-.135186	-.114272	-.239167
29	-.188927	-.137359	-.096943	-.210630
30	-.155020	-.126033	-.078703	-.172411
31	-.120483	-.101911	-.047715	-.132093
32	-.094338	-.076671	-.019714	-.099621
33	-.072220	-.049785	-.004817	-.077279
34	-.046569	-.028246	.014910	-.065155
35	-.025834	-.004155	.033400	-.055521
36	-.006990	.021797	.041470	-.036040
37	.012090	.031308	.056440	-.011375
38	.036295	.035181	.066078	.010564
39	.057120	.028552	.074374	.030907
40	.076018	.030435	.072929	.056228
41	.089396	.037025	.052239	.078250
42	.089914	.033475	.040715	.087131
43	.083866	.025304	.042220	.088279
44	.082965	.031402	.057575	.087482
45	.086644	.040349	.046522	.085911
46	.086685	.041265	.019178	.086675
47	.091441	.050832	.014107	.086630
48	.093460	.064441	.014301	.082748
49	.087371	.078530	.023316	.070278
50	.071104	.079848	.011026	.055704
51	.053773	.070551	-.006051	.045291
52	.042958	.058669	-.016278	.039678
53	.042997	.048188	-.017971	.038236
54	.045463	.022998	-.009414	.039358
55	.053792	.004152	-.001410	.038825
56	.052864	.013201	.015471	.033165
57	.044811	.028070	.016288	.023073
58	.030991	.041469	.011001	.006659
59	.020147	.042764	.017648	-.007240
60	.011607	.042298	.015968	-.016643

RUN NO 88A 15M 6-18-63 0936-1052(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-01	10E-02	10E-02	10E-01
0	-.015266	-.021718	-.033879	.015619	.063134	.007275
1	-.130468	-.237994	-.328335	.254447	.475089	.075211
2	-.098709	-.357886	-.457284	.107263	.301111	.116879
3	-.040541	-.399583	-.486338	-.117846	.114878	.136009
4	.003132	-.236047	-.286189	-.261507	.106767	.083660
5	.013505	-.160399	-.174248	-.365552	.089506	.055709
6	-.013106	-.201521	-.155383	-.118282	.058208	.062207
7-8	-.019087	-.155762	-.106437	.080157	.061225	.048121
9-11	-.000262	-.053716	-.051689	.164501	.026495	.027055
12-15	-.004275	-.043883	-.036584	-.086774	.029820	.017596
16-20	.001765	-.017228	-.017508	-.083335	.016517	.010711
21-27	-.001293	-.008796	-.012030	.029379	.027641	.004626
28-36	.003034	-.004459	-.005177	.036546	.003104	.002829
37-47	.001555	-.001399	-.002938	.017653	.006269	.001794
48-60	.000928	-.001361	-.001728	-.003710	.002120	.000793

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-01	10E-02	10E-02	10E-02
1	.064911	-.003886	-.123023	-.045282	.356541	.293779
2	.178198	-.072698	-.164257	.079519	.576916	.192492
3	.212348	-.149195	-.161840	.558525	.654369	-.024527
4	.072328	-.126929	-.081303	.531345	.338663	-.154571
5	-.006336	-.073648	-.041937	-.005719	.143070	-.098057
6	-.009526	-.052012	-.038385	-.240067	.106847	-.048860
7-8	-.017190	-.027807	-.019917	-.024921	.030060	-.051857
9-11	-.028418	-.029615	-.011136	-.090402	.034358	-.076833
12-15	.001347	-.013301	-.008926	-.068880	.042097	-.045420
16-20	.005834	-.006494	-.004889	.007185	.031228	-.021067
21-27	-.003451	-.009773	-.003891	.036074	-.005067	-.021337
28-36	-.001632	-.001521	-.002521	-.007801	.001251	-.003112
37-47	-.001599	-.000402	-.001195	.008766	.001618	.001062
48-60	.000211	-.000221	-.000372	-.004952	.000808	.001040

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E-01	10E-01	10E-01
0	.009452	.024468	.009805	.016228
1	.106942	.378973	.142195	.135320
2	.156807	.598727	.252327	.174036
3	.170311	.700421	.328278	.179215
4	.102742	.515803	.237204	.105403
5	.064574	.395575	.189047	.063420
6	.060431	.358694	.228059	.053952
7-8	.044619	.263492	.207922	.037208
9-11	.024795	.227680	.189279	.022307
12-15	.017691	.121052	.109607	.015789
16-20	.010604	.087019	.091770	.009524
21-27	.007059	.058000	.064154	.006221
28-36	.004641	.041453	.039212	.003309
37-47	.002637	.025949	.026372	.002325
48-60	.001723	.018005	.021145	.001326

RUN NO 88A 15M 6-18-63 0936-1052(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

N	U,V	U,W	U,T	V,W	V,T	W,T
	0.58994 10E 00	0.36871 10E 00	0.38839 10E 00	0.23117 10E 00	0.24351 10E 00	0.15219 10E 00
0	-.123981	-.595545	-.836147	-.024747	.242641	.516913
1	-.086355	-.264880	-.471592	-.010117	.189871	.249545
2	-.046186	-.134546	-.273552	-.014168	.150520	.139024
3	.009863	-.046379	-.139278	-.040951	.087364	.080846
4	.028197	-.029071	-.084845	-.041718	.025474	.046801
5	.058396	.037582	.005695	-.045267	-.023843	-.026014
6	.035973	.085258	.108060	.036454	-.024706	-.096609
7	.015361	.137378	.196003	.021313	-.046437	-.140633
8	.019088	.111768	.246833	-.009056	-.075161	-.131240
9	.053690	.092795	.205955	-.003844	-.134655	-.129825
10	.043286	.135256	.226520	.022570	-.151569	-.153812
11	.015302	.112235	.198930	.017708	-.138369	-.123021
12	.076726	.128860	.229236	.019405	-.151090	-.100608
13	.014014	.075841	.191204	.064315	-.082813	-.060258
14	.030139	.073630	.175380	-.001684	-.065798	-.055280
15	.013410	.049844	.080418	-.014504	-.034702	-.023841
16	-.065864	.027011	.029121	.041297	.035990	.004007
17	-.100230	.010518	.025317	.091172	.094318	.017434
18	-.090934	-.058550	-.015881	.088137	.120417	.078813
19	-.077457	-.064702	-.069850	.024584	.105320	.088910
20	-.057984	-.064237	-.117497	-.018077	.086999	.084523
21	-.079763	-.029955	-.106246	.009426	.095362	.033471
22	-.028290	-.052769	-.110508	.000264	.028063	.050014
23	.027617	-.075068	-.135484	.005563	-.003260	.051234
24	.044598	-.056432	-.137534	-.057453	-.029213	.021498
25	.063023	-.025918	-.039506	-.080576	-.056387	-.017233
26	.083549	.047990	.049383	-.099053	-.081806	-.088021
27	.078054	.060743	.084581	-.097099	-.097372	-.097917
28	.100875	.048049	.098599	-.060709	-.105363	-.077114
29	.095583	.066772	.109596	-.082502	-.095553	-.073561
30	.090242	.071688	.122466	-.119189	-.077530	-.074866

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-01	10E-02	10E-01	10E-01
0	-.002605	-.007340	-.015600	.020961	.004781	.003749
1	.022262	-.125183	-.263213	-.235528	.052540	.045929
2	-.041416	-.237394	-.474948	-.376950	.116139	.090350
3	-.176872	-.318449	-.591192	-.131899	.184710	.136097
4	-.122590	-.220809	-.367724	.023406	.100669	.098526
5	-.025434	-.139727	-.207374	-.059571	.004814	.050347
6	-.087237	-.124586	-.162291	.081590	.020481	.037177
7	-.107398	-.101654	-.118956	.138699	.037096	.025661
8	-.062137	-.076550	-.093806	.063201	.027577	.018919
9-11	-.031685	-.063895	-.093341	.155550	.012375	.019907
12-14	.010134	-.083954	-.099380	-.120548	-.005529	.026692
15-21	-.003628	-.050553	-.058391	-.029353	.004007	.018758
22-30	-.012356	-.059001	-.061642	-.031356	.006673	.019127

RUN NO 88A 15M 6-18-63 0936-1052(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.58994 10E 00	0.36871 10E 00	0.38839 10E 00	0.23117 10E 00	0.24351 10E 00	0.15219 10E 00
1	.045542	-.047004	-.164341	.036776	.067210	.069112
2	.010317	.041833	-.186979	-.024059	.047677	.131764
3	-.071122	.031849	-.179467	-.043068	.015589	.125760
4	-.086660	-.005930	-.181133	.020628	.002004	.108999
5	-.027276	-.005012	-.187687	.006140	.020305	.100128
6	-.039870	-.007775	-.180231	-.039684	.004222	.084210
7	-.068251	.012470	-.136517	-.102815	-.024227	.089316
8	-.100842	.002046	-.091507	-.032742	-.048333	.040442
9	-.114442	.015055	-.051101	-.026279	-.069516	.049951
10	-.030780	.014565	-.008290	-.011162	-.042533	-.003225
11	-.013958	.055749	-.018512	-.032102	-.044666	.040709
12	.013511	-.001708	-.001627	-.078848	-.044730	.007639
13	.023788	-.007038	.044986	-.018705	-.029339	-.023008
14	.032739	.014343	.088445	-.022147	-.019730	-.036525
15	.047137	-.040050	.090219	.005425	-.033148	-.064956
16	.027474	-.032508	.072484	.003292	-.027342	-.061159
17	.056050	-.008926	.069079	-.013108	.018326	-.058186
18	.018299	.007357	.077679	-.002938	.006377	-.047734
19	-.017690	.013548	.081736	.028332	.004808	-.040823
20	.000255	.004100	.039926	-.009076	.006017	.010079
21	-.039730	-.037694	.009901	-.042187	.006217	-.012071
22	-.011864	-.041964	-.008981	.052625	.031804	-.008835
23	.068226	.019748	-.010682	.115086	.096498	.033745
24	.038663	.024261	-.034722	.080229	.072056	.046084
25	-.019038	.043376	-.063296	-.013857	.011962	.054568
26	-.015052	-.011569	-.067580	-.011376	.016900	.025133
27	-.005353	-.010265	-.051301	-.036172	.005451	.017178
28	.029297	.021390	-.010370	.020078	.018228	.000228
29	.071350	.013730	-.002621	.061641	.045392	-.010889
30	-.002121	-.006975	.037269	.017569	-.036480	-.039091

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-02	10E-01	10E-02	10E-02	10E-02
1	-.121712	.131145	-.136502	-.517694	-.441844	.347464
2	-.157060	.193425	-.239417	-.403144	-.257386	.562580
3	-.151545	.124843	-.300066	-.101762	.198939	.694901
4	-.035736	-.090976	-.183118	.071419	.392093	.394121
5	.068719	-.077160	-.095286	.092315	.314970	.210612
6	.053661	.115931	-.073223	.091286	.229141	.238337
7	-.005551	.282555	-.048190	.023864	.091721	.187486
8	-.010297	.161362	-.031010	.010690	.069165	.092873
9-11	.026631	-.027791	-.036338	-.135524	.119031	.081648
12-14	.086509	-.132552	-.035436	.107391	.199478	.022633
15-21	.008201	-.308485	-.016485	.155956	.050557	-.021217
22-30	-.001929	-.071726	-.006186	-.008104	.028188	.000536

RUN NO 88A 15M 6-18-63 0936-1052(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.94092 10E 00	0.36989 10E 00	0.14448 10E 00	0.16031 10E 00
0	1.000000	1.000000	1.000000	1.000000
1	.457111	.365817	.204049	.665630
2	.210608	.158920	.015796	.441994
3	.073889	.111916	.017014	.273127
4	.038865	.053235	.052796	.158876
5	-.021447	.023387	-.011933	.021636
6	-.109087	-.046314	-.115400	-.127924
7	-.206075	-.149029	-.173997	-.253120
8	-.228003	-.262487	-.134818	-.344254
9	-.158350	-.178859	-.141937	-.342858
10	-.164918	-.211931	-.170355	-.366538
11	-.156437	-.244736	-.060170	-.321537
12	-.239342	-.245399	-.076850	-.322886
13	-.195533	-.212766	-.025268	-.278630
14	-.172216	-.142700	-.062074	-.236270
15	-.063551	-.016550	.021572	-.115836
16	-.043848	.007436	.029390	-.028049
17	-.048612	.016854	.022690	.000075
18	-.021704	.084308	.031865	.062407
19	.043432	.050622	.029964	.133374
20	.098147	.077311	.027640	.187512
21	.092901	.100498	-.011973	.161453
22	.092373	.093593	.057745	.151505
23	.143357	-.018449	-.026433	.151588
24	.169768	-.032014	-.060683	.126527
25	.075036	.073083	.038318	.011301
26	-.003882	.028669	.014392	-.093983
27	-.058719	.039228	-.062154	-.141535
28	-.097669	-.076043	-.093005	-.149401
29	-.093600	-.060591	.031180	-.164307
30	-.110062	-.046552	.063410	-.166061

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E-01	10E-01	10E-01
0	.002697	.009142	.003964	.013425
1	.059599	.218854	.049918	.166042
2	.108843	.405062	.084848	.284409
3	.131850	.523015	.128031	.357919
4	.085905	.327684	.115252	.213324
5	.060067	.131554	.072869	.094086
6	.052376	.115866	.048813	.067044
7	.043015	.141027	.041255	.045606
8	.034243	.130646	.040192	.035715
9-11	.031352	.133529	.055581	.038833
12-14	.036571	.145253	.068471	.034610
15-21	.021319	.112759	.056930	.022210
22-30	.023553	.110072	.059782	.021553

RUN NO 88A 46M 6-18-63 0936-1052(EST)

GROSS STATISTICS

CLEAR	WIND SPEED 5.15 M/SEC	SIGMA A 7.4 DEG
STABLE/UNSTABLE	WIND DIRECTION 218 DEG	SIGMA E 5.8 DEG
	SOLAR RAD. 1.36 LY/MIN	

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.94606E 00	0.32815E-00	0.23134E-00	0.21394E-00
V	0.35994E-00	0.29848E-00	0.23703E-00	0.17201E-00
W	0.20708E-00	0.19017E-00	0.15294E-00	0.10075E-00
T	0.10000E 01	0.53967E-01	0.44121E-01	0.42365E-01
E	0.75654E 00	0.40841E-00	0.31066E-00	
GUSTINESS RATIOS				
U	0.18887	0.11123	0.09339	0.08981
V	0.11649	0.10608	0.09454	0.08053
W	0.08836	0.08468	0.07594	0.06163
COVARIANCES				
U,V	0.26997E-01	0.46993E-01	0.29087E-01	0.38758E-01
U,W	-0.13367E-00	-0.72028E-01	-0.37751E-01	-0.50452E-01
U,T	-0.75500E 00	-0.44206E-01	-0.21088E-01	-0.36169E-01
V,W	-0.54152E-01	-0.61124E-01	-0.48687E-01	-0.29694E-01
V,T	0.29016E-01	0.53435E-01	0.35975E-01	0.33878E-01
W,T	0.24574E-01	-0.29264E-01	-0.21519E-01	-0.16244E-01
WE	0.11597E-00	0.87030E-01	0.42736E-01	
NORMALIZED COVARIANCES				
U,V	0.04626	0.15016	0.12421	0.20204
U,W	-0.30201	-0.28833	-0.20070	-0.34364
U,T	-0.77621	-0.33218	-0.28230	-0.37992
V,W	-0.19835	-0.25656	-0.25571	-0.22556
V,T	0.04836	0.42103	0.47578	0.39686
W,T	0.05400	-0.28887	-0.35430	-0.24864

RUN NO 88A 46M 6-18-63 0936-1052(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.23422 10E 00	0.18813 10E 00	0.74719 10E-01	0.19041 10E 00	0.75621 10E-01	0.60741 10E-01
0	.124567	-.200732	-.282022	-.255471	.475652	-.354301
1	.120970	-.177966	-.238229	-.210515	.398896	-.280218
2	.116455	-.135816	-.182196	-.136777	.283596	-.175644
3	.105633	-.091135	-.147663	-.074000	.195296	-.103817
4	.087914	-.058617	-.123470	-.023046	.127626	-.058041
5	.075602	-.040493	-.095414	.007256	.068638	-.029388
6	.065201	-.024414	-.068267	.018706	.025749	-.016587
7	.054076	-.011371	-.045218	.019845	-.001229	-.009749
8	.033449	-.004244	-.031656	.021436	-.016922	-.002292
9	.015236	-.000090	-.018102	.027944	-.035939	.010473
10	.004283	.008688	-.001987	.039282	-.058261	.026629
11	-.011950	.017558	.007481	.044008	-.075364	.040101
12	-.027041	.015735	.017869	.043023	-.080834	.048860
13	-.037954	.009731	.023697	.037069	-.077063	.054706
14	-.046321	.006868	.031585	.029422	-.064932	.051574
15	-.051329	.011968	.041712	.013578	-.057123	.040001
16	-.053662	.015113	.053475	-.001372	-.054715	.031937
17	-.053149	.020307	.061224	-.008162	-.053789	.027530
18	-.053717	.032065	.066243	-.006886	-.052594	.024783
19	-.054109	.032646	.074854	-.004213	-.056765	.027717
20	-.051127	.030535	.087758	.000918	-.063268	.038286
21	-.042752	.025174	.097927	.004848	-.067596	.045664
22	-.042808	.017023	.104434	.022687	-.073029	.052928
23	-.051765	.019879	.102600	.032533	-.070758	.049209
24	-.053047	.031905	.097823	.035265	-.069437	.047099
25	-.038829	.036857	.097870	.033518	-.069616	.049874
26	-.024982	.034734	.094920	.032193	-.070042	.060651
27	-.016921	.038609	.082313	.028065	-.070573	.064463
28	-.011452	.038663	.064028	.025055	-.069931	.060446
29	-.009887	.033769	.050908	.023048	-.061662	.047523
30	-.014152	.027104	.038648	.018202	-.044075	.031155
31	-.019317	.025717	.022549	.008064	-.023960	.010386
32	-.017911	.022161	.006596	-.002133	-.012781	-.000286
33	-.012396	.014805	-.002217	-.004485	-.009831	-.002927
34	-.009741	.008817	-.008552	.003156	-.010340	-.001647
35	-.011300	.007030	-.021203	.009351	-.008883	-.000415
36	-.008053	.005480	-.026965	.008027	-.006750	-.003154
37	-.002863	.001415	-.022175	-.000830	-.000604	-.010420
38	-.000361	-.004746	-.017493	-.006314	.004713	-.016749
39	.007000	-.006630	-.012636	-.012063	.011859	-.018071
40	.020268	-.008213	-.006821	-.023683	.017796	-.025776
41	.025439	-.010580	-.004139	-.033777	.017188	-.032116
42	.019116	-.010699	-.013478	-.035952	.013489	-.031710
43	.009659	-.001109	-.028695	-.024737	.007685	-.024293
44	-.001087	.013435	-.037965	-.008445	.001437	-.017531
45	-.007044	.020926	-.037699	-.000525	-.001816	-.017856
46	-.008378	.020414	-.032013	-.002611	-.003162	-.022216
47	-.011009	.021596	-.021677	.001526	-.003577	-.022852
48	-.010898	.020319	-.015640	.008541	-.002375	-.019740
49	-.009067	.009126	-.011932	.021411	-.008315	-.010210
50	-.006504	-.000841	-.003766	.025070	-.012277	-.002776
51	-.002884	-.003199	.002880	.026733	-.008875	.003167
52	.002113	-.006012	.008506	.028214	-.000805	.007897
53	.010408	-.007929	.012674	.024843	.003273	.008825
54	.016976	-.005586	.015499	.021954	.004384	.009305
55	.019171	-.001148	.016644	.017180	.012687	.006380
56	.023637	.006186	.017553	.003420	.030113	-.000361
57	.031466	.010556	.018382	-.004909	.038954	.006216
58	.033493	.003534	.022594	.002405	.042374	.020705
59	.037058	-.004429	.024880	.011982	.037902	.025982
60	.037628	-.008733	.025451	.020366	.026816	.027456

RUN NO 88A 46M 6-18-63 .0936-1052(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.23422 10E 00	0.18813 10E 00	0.74719 10E-01	0.19041 10E 00	0.75621 10E-01	0.60741 10E-01
1	-.002025	-.014497	-.014539	-.009423	.044069	-.031765
2	.001376	-.026958	-.013177	-.020993	.068649	-.044093
3	.002888	-.037709	-.014049	-.020603	.079947	-.050869
4	.008696	-.045059	-.014654	-.019171	.086935	-.054246
5	.014817	-.051258	-.007101	-.020053	.090538	-.049635
6	.013156	-.053053	.000342	-.024350	.092727	-.047873
7	.010857	-.047391	.001821	-.040372	.096130	-.042476
8	.007718	-.048017	.003729	-.054230	.098530	-.035732
9	.016793	-.053807	.014085	-.057534	.096650	-.034112
10	.022928	-.065020	.026201	-.066147	.099722	-.030334
11	.017521	-.069651	.033995	-.073935	.099039	-.031393
12	.009955	-.065330	.037313	-.072883	.096871	-.031450
13	.004238	-.059729	.037232	-.063449	.096537	-.032782
14	-.001067	-.055509	.038046	-.051510	.096663	-.036159
15	-.007557	-.052529	.037686	-.043619	.093433	-.038345
16	-.006879	-.048243	.039638	-.038903	.087410	-.040280
17	-.002603	-.048930	.041231	-.028248	.075117	-.042166
18	.006634	-.045609	.040757	-.018657	.067326	-.047801
19	.015805	-.031917	.032369	-.006137	.057881	-.049465
20	.024520	-.017155	.029625	.008454	.044899	-.051606
21	.027259	-.013068	.028812	.023346	.026811	-.054010
22	.021927	-.009454	.027439	.038144	.005788	-.051976
23	.020760	-.000498	.022967	.047163	-.014192	-.045290
24	.019675	.004949	.020301	.052614	-.025817	-.040979
25	.018683	.011836	.010990	.053694	-.030053	-.037692
26	.012369	.019586	-.000774	.054891	-.034717	-.024212
27	-.000900	.031455	-.008885	.043666	-.036468	-.002882
28	-.005964	.045315	-.015525	.029558	-.037495	.021216
29	-.003180	.053911	-.025924	.021480	-.040472	.037321
30	.008296	.056481	-.029249	.013808	-.042908	.047156
31	.015915	.059966	-.034526	-.001933	-.037607	.054738
32	.019514	.067834	-.038850	-.012697	-.030327	.056522
33	.017811	.069676	-.035720	-.013512	-.023480	.059850
34	.018905	.060743	-.025639	-.006749	-.017745	.057873
35	.023397	.056532	-.018466	-.008397	-.010709	.056763
36	.026650	.048997	-.012059	-.015502	-.005664	.056161
37	.033795	.037087	-.005228	-.016308	-.001599	.047207
38	.040465	.033839	-.002761	-.003789	.001774	.037412
39	.037746	.033753	-.000520	.006681	.002026	.033778
40	.028096	.036639	-.006041	.007092	.002196	.029625
41	.019757	.041140	-.011884	.001616	.003061	.025982
42	.015247	.042564	-.011194	-.003462	.006507	.026387
43	.007232	.036521	-.013050	-.005442	.005515	.024126
44	-.001006	.026063	-.014218	-.003705	-.001161	.020657
45	-.009460	.015642	-.015533	-.004507	-.003896	.021406
46	-.020071	.002581	-.008500	-.009656	-.003597	.021606
47	-.025155	-.015369	.001901	-.014618	-.001668	.018350
48	-.025412	-.028572	.013155	-.011543	.001636	.003119
49	-.026318	-.035310	.018792	-.004947	.003170	-.010353
50	-.029919	-.036476	.018048	-.002031	.005404	-.017125
51	-.034044	-.036815	.013840	.009376	-.003722	-.020467
52	-.039108	-.041093	.016171	.013167	-.011041	-.022548
53	-.039524	-.049354	.019768	.009795	-.010778	-.023064
54	-.043063	-.048783	.020200	.004572	-.007428	-.021689
55	-.047150	-.037396	.015429	.003022	-.001044	-.022549
56	-.043977	-.035143	.014002	.007705	.003473	-.023297
57	-.039204	-.036489	.015384	.010926	.002559	-.018046
58	-.036201	-.037379	.016711	.004240	-.003245	-.011638
59	-.038185	-.037157	.020227	-.000156	-.011307	-.006777
60	-.039037	-.032319	.017819	.003809	-.017219	-.005419

RUN NO 8dA 46M 6-18-63 0936-1052(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.23143 10E 00	0.23705 10E 00	0.15294 10E 00	0.24124 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.833440	.816396	.770076	.818165
2	.630693	.592359	.492045	.610507
3	.485722	.426390	.307118	.459181
4	.367178	.302759	.196656	.347821
5	.266028	.200645	.128440	.256473
6	.186476	.114484	.070537	.185131
7	.124524	.049120	.018566	.132722
8	.065899	.004056	-.018300	.088298
9	.010310	-.033393	-.050846	.042452
10	-.036533	-.076071	-.091899	-.006353
11	-.080472	-.116621	-.122577	-.049135
12	-.116797	-.144121	-.139261	-.084460
13	-.138437	-.164374	-.151972	-.105571
14	-.166536	-.174307	-.165584	-.113513
15	-.205998	-.186447	-.166383	-.119085
16	-.237626	-.192164	-.151537	-.126453
17	-.257645	-.195132	-.126910	-.137274
18	-.270326	-.195665	-.111371	-.148200
19	-.279341	-.191062	-.103571	-.163226
20	-.290709	-.190931	-.101169	-.182798
21	-.295671	-.195169	-.108954	-.192626
22	-.295134	-.202109	-.116749	-.204161
23	-.290738	-.197955	-.122061	-.207549
24	-.281669	-.190496	-.127734	-.207058
25	-.272976	-.179862	-.142102	-.211729
26	-.252137	-.172689	-.166920	-.210835
27	-.217496	-.161774	-.177606	-.200014
28	-.172005	-.144056	-.165056	-.179739
29	-.132156	-.118551	-.138912	-.156969
30	-.094595	-.092328	-.101616	-.130328
31	-.051791	-.061527	-.061021	-.095970
32	-.017282	-.041257	-.036448	-.072716
33	.009675	-.034086	-.025409	-.061697
34	.034593	-.028163	-.022149	-.054156
35	.057198	-.019202	-.007850	-.045507
36	.074339	-.011053	.013732	-.038087
37	.083663	-.001104	.042094	-.024004
38	.086290	.009823	.054099	-.016120
39	.086422	.026964	.048982	-.010357
40	.085311	.040746	.053022	.000085
41	.081738	.037638	.062302	.001697
42	.090127	.033732	.064159	.003588
43	.098522	.027837	.054778	.010005
44	.094377	.022798	.035736	.012552
45	.083516	.021138	.017465	.015789
46	.071407	.023414	.017115	.015879
47	.056314	.023081	.021828	.013104
48	.045630	.023637	.025693	.011654
49	.043278	.021708	.030096	.003651
50	.037857	.022705	.028154	-.002431
51	.030836	.026113	.016649	-.002472
52	.026694	.038677	.008661	.004560
53	.019087	.051128	.014927	.007390
54	.004051	.056813	.025919	.006596
55	-.001639	.067594	.038321	.011092
56	-.005489	.081356	.038693	.020452
57	-.007147	.090589	.024196	.018197
58	-.007164	.096054	.005409	.012630
59	-.001595	.090391	.003512	.011416
60	.004108	.072660	.003668	.013243

RUN NC 88A 46M 6-18-63 0936-1052(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-02	10E-02	10E-02
0	.058072	-.079063	-.028901	-.053355	.032493	-.022497
1	.524971	-.505629	-.264485	-.310007	.306330	-.157492
2	.688379	-.513028	-.369896	-.355422	.401496	-.212015
3	.786937	-.498375	-.409995	-.431917	.463158	-.250656
4	.551537	-.342407	-.221602	-.356793	.365402	-.175748
5	.278390	-.260519	-.082136	-.373690	.291304	-.138998
6	.123267	-.288469	-.086965	-.473395	.289914	-.154134
7-8	.015767	-.211951	-.107702	-.381715	.222813	-.118808
9-11	-.005332	-.148470	-.046260	-.169749	.112042	-.065911
12-15	.022296	-.070594	-.028296	-.186714	.085016	-.072540
16-20	.004060	-.049266	-.021389	-.075966	.042360	-.037435
21-27	-.005508	-.021849	-.017485	-.025604	.026038	-.020379
28-36	-.000580	-.000634	-.010811	-.023074	.017267	-.013315
37-47	.002669	-.004042	-.005392	-.012717	.007487	-.006824
48-60	.002063	-.003592	-.002541	-.003776	.003746	-.003192

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-03	10E-02	10E-02	10E-02
1	.289242	-.121490	.732937	-.141617	.228100	-.087959
2	.094094	-.465162	.978146	-.254420	.280499	-.148439
3	.000530	-.547048	.704548	-.427654	.313780	-.112529
4	.071744	-.166821	-.305658	-.364769	.186596	.006225
5	.022044	.002396	-.712693	-.060514	.035786	.004374
6	.038149	-.024544	-.418074	.172504	.001530	-.059823
7-8	.055003	-.035556	-.174108	.076306	.047836	-.048768
9-11	-.066020	-.031541	-.113771	.008041	.031224	-.019268
12-15	.022287	-.017759	-.040433	-.038315	.017013	-.009456
16-20	-.019031	.015514	-.076247	-.013506	.010341	-.005230
21-27	-.002581	-.005323	.010678	-.004729	.004611	-.002578
28-36	-.000781	-.001548	-.037360	.003302	.002271	-.002340
37-47	-.003315	.000726	-.025320	.007274	.000505	-.002305
48-60	-.000276	.000041	-.005430	.000737	-.000007	.000363

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-01	10E-02
0	.019529	.014573	.010350	.042270
1	.217708	.202810	.106210	.316219
2	.349837	.302611	.155181	.357794
3	.429140	.353240	.183730	.354854
4	.271117	.260565	.136210	.229115
5	.130477	.177770	.109480	.149201
6	.112322	.150713	.112325	.136979
7-8	.104676	.115625	.073377	.110743
9-11	.083337	.070776	.047167	.059884
12-15	.038908	.049602	.040837	.049619
16-20	.027466	.028146	.027233	.027976
21-27	.015980	.019795	.017092	.018791
28-36	.011577	.012015	.009638	.012632
37-47	.006766	.007412	.006173	.007769
48-60	.003998	.004957	.003796	.005480

RUN NO 88A 46M 6-18-63 0936-1052(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.19190 10E 00	0.14684 10E 00	0.95257 10E-01	0.13167 10E 00	0.85415 10E-01	0.65359 10E-01
0	.201973	-.343585	-.379701	-.225519	.396623	-.248543
1	.090469	-.219592	-.270496	-.070542	.171063	-.099984
2	.025640	-.159233	-.153076	-.058515	.125072	-.054471
3	.021019	-.063020	-.141515	-.031095	.077821	-.030949
4	-.001901	-.020167	-.124559	-.017018	.031929	.002492
5	-.031317	.015830	-.076459	.036953	-.011950	.044002
6	-.011066	.060578	-.027708	.075087	-.028030	.094365
7	-.083160	.084922	-.012659	.038969	-.058443	.078546
8	-.071547	.071102	.022247	.054106	-.052047	.074945
9	-.067250	.105470	.023369	.070752	-.078378	.057148
10	-.035870	.084467	.093076	.045952	-.053269	-.006505
11	-.033526	.041003	.148046	.058971	-.069715	.060514
12	-.048171	.034089	.171651	-.025813	-.042086	-.003026
13	-.038944	.097094	.185714	-.068380	-.011966	-.074767
14	.002799	.067784	.195567	-.016425	-.034280	-.022510
15	.042489	.014469	.180209	.033147	-.060230	.020657
16	.023957	-.007272	.155233	.064869	-.039062	.073442
17	-.042008	.020942	.110275	.050292	-.007620	.056662
18	-.092763	.056730	.036109	.045616	-.044637	.017873
19	-.035065	.029323	.031006	.065939	-.068934	.035207
20	.007940	.030471	-.008709	.038032	-.057429	.021362
21	.046472	.013410	-.017363	.014653	-.066550	.023021
22	.079114	.002196	-.008305	-.087296	.027273	-.028370
23	.088651	-.009397	-.026575	-.091908	.019021	-.028430
24	.051283	-.052747	-.036245	-.043463	-.014038	-.009642
25	.127122	-.082746	-.053567	-.079511	-.024510	-.043188
26	.148303	-.073426	-.045277	-.107318	-.012536	-.061935
27	.078399	-.054802	-.067762	-.102780	-.035102	-.048716
28	.032917	-.042539	-.083519	-.062835	-.043998	-.031540
29	.011159	.028077	-.078431	.020527	-.064011	-.002872
30	-.043022	.051223	-.090325	.079844	-.033103	.009302

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-02	10E-02	10E-02
0	-.039971	-.047574	-.072865	.012569	.042888	.011157
1	.021979	-.569305	-.805737	-.119940	.405221	-.058442
2	.414680	-.780964	-.925955	-.297552	.426909	-.137337
3	.563282	-.844541	-.644984	-.324031	.405556	-.176015
4	.475431	-.681190	-.112527	-.356430	.338237	-.222172
5	.412919	-.491315	-.042991	-.399092	.256232	-.234202
6	.097975	-.287318	-.182001	-.112094	.141730	-.114467
7	.060981	-.236724	-.178682	.040804	.104497	-.015938
8	.221953	-.159197	-.094467	-.077701	.109055	-.025026
9-11	.124777	-.134359	-.069059	-.069551	.089449	-.025970
12-14	.147429	-.042922	-.121328	-.070814	.074510	-.071904
15-21	.134786	-.053194	-.069345	-.088608	.080439	-.038119
22-30	.063686	-.105806	-.010116	-.128136	.110112	-.053032

RUN NO 88A 46M 6-18-63 0936-1052(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.19190 10E 00	0.14684 10E 00	0.95257 10E-01	0.13167 10E 00	0.85415 10E-01	0.65359 10E-01
1	.061659	-.062044	.051482	-.101376	.179325	-.037966
2	.094603	-.026002	.087750	-.014510	.204384	-.065064
3	.116515	.029943	.067398	-.020145	.206351	-.017659
4	.110822	.009323	.095878	-.038379	.249910	-.048133
5	.072649	-.104349	.128515	-.028181	.243262	-.102265
6	.062143	-.104541	.123097	-.003489	.221042	-.118720
7	.107120	-.116941	.116287	-.040917	.208895	-.124142
8	.137770	-.058272	.099935	.046044	.195304	-.119631
9	.111736	-.059434	.072221	.026289	.100221	-.088494
10	.088486	-.040227	.049818	.022256	.032160	-.046841
11	.011574	-.012752	.026467	-.014952	.013914	-.011508
12	.033879	-.026826	.018431	.035467	.022778	.006571
13	.056164	.015517	-.013285	.004371	.020876	.045710
14	.024323	-.028450	-.043774	.000383	-.008657	.029479
15	-.025309	-.005156	-.055194	-.000211	-.051861	.033576
16	-.105895	.042256	-.078068	-.042927	-.096032	.070728
17	-.087431	.033303	-.075142	-.043671	-.092445	.071284
18	-.043366	.062007	-.094238	.005521	-.091039	.072884
19	-.088316	.122686	-.130877	.010970	-.089651	.103402
20	-.092312	.115212	-.132277	-.025601	-.086793	.138512
21	-.077044	.067413	-.108771	-.040440	-.074251	.107050
22	-.059485	.031114	-.076368	-.053046	-.081024	.063743
23	.020762	.012888	-.020211	-.047445	.011546	.049575
24	.009913	.033626	.000929	.016817	.016093	.000835
25	-.010719	-.006243	.037787	.015003	-.019153	-.007886
26	.001058	-.034158	.050168	-.003052	-.015721	-.016621
27	.034763	-.084900	.101065	.025477	.007606	-.079662
28	.025518	-.075803	.107636	.026259	-.024443	-.095994
29	-.014011	-.056723	.089476	-.000571	-.002365	-.095290
30	.049429	-.084568	.091844	.035961	.038073	-.079117

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-02	10E-02	10E-02	10E-02	10E-02
1	.074186	-.287835	.207256	-.073211	.570806	-.114148
2	.100662	-.494171	.490503	-.012729	.779818	-.295021
3	.077268	-.333031	.452527	-.099005	.772379	-.259580
4	.014048	.030759	.112951	-.193861	.429942	-.039266
5	.009020	.050645	.049127	-.154742	.247706	.030427
6	.020033	.132308	.016366	-.092873	.148217	.069834
7	.015489	.222127	-.020867	-.026063	.035740	.059206
8	.018120	.079542	.016120	-.033945	.028597	-.016776
9-11	.018067	-.102331	.030454	-.044173	.120034	-.041610
12-14	-.012895	-.216350	.037291	-.114874	.027837	-.040500
15-21	.004050	-.042769	.007536	-.117395	.062407	-.000491
22-30	-.001514	-.019485	-.019204	-.066500	.000080	.018189

RUN NO 88A 46M 6-18-63 0936-1052(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.21401 10E 00	0.17207 10E 00	0.10075 10E 00	0.42399 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.486289	.307739	.283911	.707036
2	.146587	.085413	.139693	.515808
3	.145022	.052959	.032892	.375358
4	.123013	.029915	.029943	.233249
5	.017345	-.017144	-.026786	.080970
6	-.055397	.008756	-.111828	-.047063
7	-.125112	-.113323	-.147499	-.149477
8	-.168981	-.143716	-.168680	-.210350
9	-.104602	-.166964	-.103434	-.270264
10	-.146528	-.120093	-.042302	-.277998
11	-.236783	-.092321	-.120440	-.334580
12	-.215511	-.071940	-.087737	-.333278
13	-.197129	-.058209	-.042686	-.323876
14	-.199901	-.048658	-.080667	-.352513
15	-.104968	-.001033	-.042955	-.331991
16	-.074885	-.045600	-.051798	-.295103
17	-.091580	.004380	-.106035	-.226506
18	-.077512	-.087576	-.055780	-.158667
19	-.010715	-.052610	-.104180	-.121563
20	.026549	-.046448	-.087690	-.038043
21	.028854	-.150547	-.037274	.018343
22	.027529	.047601	.059645	.120056
23	.021800	.077843	.018344	.160714
24	.043674	-.032715	-.000476	.161575
25	.151809	-.023956	.096561	.180329
26	.125682	.027663	.139601	.170372
27	.081591	-.048515	.102070	.152756
28	.060976	-.056839	.071386	.144776
29	.051562	-.043314	-.040475	.111609
30	.009290	-.041904	-.056260	.118149

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-02	10E-02
0	.018933	.014506	.040856	.051119
1	.210989	.124448	.635104	.749890
2	.280800	.140839	.845337	.982049
3	.276128	.153344	.878295	.838246
4	.163786	.134774	.794964	.398708
5	.106302	.095980	.708010	.268085
6	.096564	.055170	.474443	.196279
7	.094970	.054961	.364963	.115552
8	.078764	.068859	.335022	.082191
9-11	.067553	.079316	.332766	.072966
12-14	.096522	.061991	.423775	.070574
15-21	.066430	.061628	.291673	.054340
22-30	.031654	.055088	.406958	.050621

RUN NO 88A 15M 6-18-63 0936-1052(EST)
RUN NO 88A 46M 6-18-63 0936-1052(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.340092	.202846	.310422	.010654
1	.197197	.472027	.355124	.214356
2	.130442	.454738	.314080	.170320
3	.054409	.345155	.268253	.089776
4	.067434	.159993	.265038	.108906
5	.025398	.092211	.249816	.161763
6	.127030	.115211	.193604	.203324
7-8	.091464	.121835	.156027	.121397
9-11	.085996	.130273	.136739	.081865
12-15	.134811	.094476	.060305	.088094
16-20	.137521	.146812	.080524	.099411
21-27	.115362	.115446	.133419	.133576
28-36	.112730	.113388	.082384	.088842
37-47	.077904	.094401	.061035	.115394
48-60	.108691	.121034	.078597	.100074

301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.157785	.945798	.072357	.650300
1	.319549	.497906	.154585	.263813
2	.317676	.380501	.185969	.329379
3	.356996	.455927	.345320	.381741
4	.355282	.611654	.500017	.281810
5	.481972	.662994	.422741	.184162
6	.427627	.312970	.265082	.035737
7	.220746	.270476	.256526	.254322
8	.174863	.348557	.402723	.305968
9-11	.205665	.574639	.411079	.341100
12-14	.296148	.440850	.301871	.081232
15-21	.331613	.321402	.338328	.259319
22-30	.231005	.124456	.301778	.243197

RUN NO 89A 46M 6-18-63 1336-1437(EST)

GROSS STATISTICS

CLEAR
UNSTABLE

WIND SPEED 6.75 M/SEC
WIND DIRECTION 222 DEG
SOLAR RAD. 1.17 LY/MIN

SIGMA A 8.80 DEG
SIGMA E 7.3 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.14138E 01	0.11438E 01	0.73126E 00	0.82235E 00
V	0.94921E 00	0.90907E 00	0.80081E 00	0.52361E 00
W	0.55719E 00	0.50859E 00	0.41600E-00	0.25222E-00
T	0.11721E-00	0.35034E-01	0.16796E-01	0.27346E-01
E	0.14601E 01	0.12809E 01	0.97405E 00	
GUSTINESS RATIOS				
U	0.17615	0.15844	0.12669	0.13435
V	0.14434	0.14125	0.13257	0.10720
W	0.11059	0.10565	0.09555	0.07440
COVARIANCES				
U,V	-0.59398E-01	-0.28605E-01	-0.14751E-01	-0.13199E-01
U,W	-0.38761E-00	-0.29872E-00	-0.16698E-00	-0.23144E-00
U,T	-0.18847E-00	-0.11123E-00	-0.46289E-01	-0.93964E-01
V,W	-0.95399E-01	-0.12869E-00	-0.12632E-00	-0.61616E-01
V,T	0.41650E-01	0.55718E-01	0.41739E-01	0.37514E-01
W,T	0.54786E-01	0.18430E-01	-0.18590E-02	0.24574E-01
WE	0.26429E-00	0.19075E-00	0.57109E-01	
NORMALIZED COVARIANCES				
U,V	-0.05127	-0.02805	-0.01928	-0.02011
U,W	-0.43672	-0.39166	-0.30275	-0.50818
U,T	-0.46300	-0.55563	-0.41769	-0.62659
V,W	-0.13118	-0.18927	-0.21885	-0.16955
V,T	0.12487	0.31221	0.35990	0.31350
W,T	0.21438	0.13807	-0.02224	0.29590

RUN NU 89A 46M 6-18-63 1336-1437(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.76528 10E 00	0.55166 10E 00	0.11085 10E 00	0.57733 10E 00	0.11601 10E 00	0.83626 10E-01
0	-.019390	-.302775	-.417376	-.218781	.359807	-.022143
1	-.009024	-.272095	-.385338	-.190341	.319488	.010534
2	-.002057	-.224116	-.333387	-.143162	.256287	.053643
3	-.001327	-.182603	-.289451	-.092376	.206741	.081914
4	-.002066	-.147566	-.247619	-.053324	.162962	.094332
5	-.002651	-.115297	-.204939	-.019641	.123951	.095421
6	-.006021	-.092995	-.161616	.009063	.088827	.099140
7	-.012443	-.070239	-.126602	.031343	.062332	.097455
8	-.019050	-.048521	-.100382	.044620	.041610	.086493
9	-.021266	-.032309	-.080850	.057480	.023338	.083332
10	-.022052	-.018860	-.056336	.069361	.005928	.074541
11	-.022955	-.001154	-.029045	.073385	-.003677	.058099
12	-.021010	.028626	-.004979	.073692	-.013308	.041399
13	-.020277	.055055	.016011	.068921	-.024623	.025027
14	-.021518	.075286	.040386	.058184	-.041180	.011051
15	-.020784	.088006	.061548	.043685	-.054151	-.004129
16	-.019262	.096673	.077322	.028371	-.062410	-.019903
17	-.011671	.099486	.096075	.022526	-.067190	-.037518
18	-.002485	.099335	.111416	.023947	-.077376	-.053447
19	.006338	.101736	.124696	.030274	-.089344	-.060466
20	.014186	.102994	.129498	.041971	-.103977	-.059365
21	.018676	.098679	.133514	.048103	-.116780	-.053836
22	.018553	.085512	.139104	.052148	-.128030	-.049767
23	.010162	.077817	.139166	.051402	-.137455	-.049512
24	.009852	.075291	.138505	.045682	-.146968	-.043246
25	.018332	.069887	.139232	.046762	-.152537	-.034380
26	.018878	.068595	.137680	.053442	-.151576	-.036407
27	.016582	.066791	.138082	.058176	-.141307	-.041318
28	.015129	.063634	.140514	.051752	-.123715	-.042660
29	.017689	.050990	.141386	.033410	-.107716	-.043227
30	.022379	.031857	.134813	.020119	-.091439	-.040761
31	.024322	.015799	.121509	.001512	-.071922	-.035431
32	.032033	.003591	.104856	-.024898	-.052730	-.030950
33	.037060	-.007875	.084583	-.044330	-.034694	-.028579
34	.036802	-.015872	.062705	-.060336	-.020536	-.029326
35	.036233	-.020896	.039375	-.077465	-.003101	-.033390
36	.035723	-.026556	.020660	-.091964	.011309	-.041840
37	.033128	-.029223	.004618	-.096345	.020634	-.045078
38	.028914	-.032376	-.008624	-.093044	.023155	-.039373
39	.017061	-.025718	-.020241	-.079515	.023405	-.029250
40	.007164	-.013220	-.030593	-.063506	.019238	-.024248
41	.000128	-.002838	-.040452	-.050843	.013361	-.020153
42	-.005121	.001908	-.044803	-.046105	.010542	-.010102
43	-.009300	.002455	-.041516	-.043095	.005162	-.002429
44	-.016319	-.005273	-.035865	-.036097	.005233	-.000277
45	-.020996	-.010374	-.031974	-.033358	.010976	-.001087
46	-.023709	-.014444	-.022486	-.021200	.011919	.001642
47	-.022574	-.012905	-.014866	-.008044	.013343	.011026
48	-.020939	-.003299	-.006739	.007274	.015672	.014839
49	-.018837	.001965	.005699	.009878	.020503	.006776
50	-.014964	.007288	.022179	.008762	.028942	.007972
51	-.012314	.008750	.039865	.009508	.036043	.012748
52	-.009152	.012825	.053301	.023175	.037291	.012911
53	-.008942	.019324	.060709	.032445	.033056	.006688
54	-.010279	.025666	.058350	.023234	.026956	-.006834
55	-.004832	.035255	.051474	.013198	.018903	-.013044
56	-.001157	.048009	.045281	.003366	.016491	-.014149
57	-.000556	.066209	.039820	-.008588	.022067	-.018007
58	-.001226	.079472	.033732	-.013327	.018844	-.024320
59	-.001670	.081610	.026878	-.005159	.013530	-.018669
60	-.005832	.074873	.022281	.001248	.007011	-.014699

RUN NO 89A 46M 6-18-63 1336-1437(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.76528 10E 00	0.55166 10E 00	0.11085 10E 00	0.57733 10E 00	0.11601 10E 00	0.83626 10E-01
1	.028379	-.037547	-.018809	-.004048	.042425	-.022244
2	.054058	-.066803	-.018272	.005971	.067094	-.033735
3	.077145	-.091672	-.011919	.017917	.081714	-.046809
4	.097306	-.112429	-.005862	.034941	.094517	-.062583
5	.111028	-.127853	-.004683	.043454	.103934	-.075309
6	.118805	-.128324	-.007987	.043881	.111231	-.081207
7	.119650	-.117837	-.015019	.043885	.118370	-.079362
8	.118602	-.106029	-.022398	.048994	.119505	-.074943
9	.118380	-.091007	-.027658	.057844	.121647	-.064395
10	.111551	-.086090	-.034232	.059207	.120422	-.056255
11	100544	-.084645	-.039864	.058682	.118568	-.047718
12	.089430	-.082417	-.042394	.060881	.112526	-.036319
13	.081935	-.077471	-.042960	.068657	.110175	-.037244
14	.073496	-.076175	-.043768	.070528	.107650	-.042738
15	.064398	-.069287	-.043687	.070170	.097887	-.045537
16	.059701	-.061672	-.039245	.070454	.085022	-.035876
17	.055026	-.053987	-.032183	.065750	.072984	-.026077
18	.045838	-.044940	-.026345	.052216	.070508	-.020174
19	.039348	-.042449	-.024796	.041286	.069920	-.024471
20	.030241	-.037707	-.021708	.028648	.060112	-.033456
21	.016670	-.034618	-.018282	.008566	.046785	-.032269
22	.007793	-.039164	-.013645	-.005101	.034777	-.021077
23	.003669	-.043432	-.010646	-.014385	.020516	-.009730
24	.003381	-.039818	-.015475	-.017677	.008352	.001007
25	.001166	-.031088	-.022261	-.024266	-.003519	.011926
26	-.006951	-.020721	-.028795	-.034625	-.015579	.025269
27	-.022349	-.015625	-.029417	-.036036	-.032377	.031227
28	-.035517	-.005619	-.028693	-.031089	-.047323	.031434
29	-.041807	.008097	-.028556	-.030420	-.059134	.034874
30	-.045370	.021253	-.026185	-.036192	-.066880	.046133
31	-.048960	.031604	-.029087	-.040484	-.071317	.059400
32	-.052642	.038409	-.023129	-.044452	-.077311	.064251
33	-.052747	.046067	-.009086	-.038693	-.086212	.073000
34	-.051943	.056196	.004115	-.027997	-.097511	.073265
35	-.044245	.065632	.013443	-.017762	-.097003	.061976
36	-.037541	.073410	.014695	-.012803	-.091662	.059315
37	-.037351	.078989	.017326	-.021759	-.086558	.059289
38	-.046031	.076209	.016120	-.033300	-.082317	.058080
39	-.051113	.065755	.019694	-.036330	-.079575	.056232
40	-.046008	.053543	.019867	-.033949	-.074867	.054346
41	-.041526	.044291	.017578	-.030965	-.071845	.048817
42	-.039263	.037340	.019029	-.033249	-.065885	.039920
43	-.035239	.034468	.014723	-.041305	-.050420	.025817
44	-.029962	.034833	.012550	-.039307	-.039120	.013499
45	-.025238	.025358	.011125	-.035322	-.024769	.000050
46	-.024964	.021824	.004038	-.030878	-.014781	-.013317
47	-.026981	.016620	.000522	-.020946	-.011311	-.027959
48	-.029760	.011074	-.006720	-.008519	-.013055	-.033724
49	-.038925	.004840	-.015940	-.002645	-.010943	-.034839
50	-.042129	.004466	-.023284	.005026	-.004233	-.040997
51	-.041245	.009801	-.022851	.018860	.000628	-.051169
52	-.039365	.008761	-.018800	.032514	.005555	-.060548
53	-.027657	.004796	-.019500	.039422	.009908	-.063163
54	-.011166	-.000022	-.017365	.033516	.019083	-.052746
55	.008791	.002101	-.010033	.034339	.029608	-.044191
56	.025759	.001585	-.003445	.031543	.035026	-.037155
57	.035416	-.001117	.000672	.025672	.035462	-.031444
58	.041582	-.006201	.004557	.020881	.036622	-.034299
59	.044460	-.015982	.003007	.018255	.033084	-.037444
60	.046663	-.024939	-.000152	.022719	.033099	-.044008

RUN NO 89A 46M 6-18-63 1336-1437(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.73125 10E 00	0.80089 10E 00	0.41618 10E 00	0.16804 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.866221	.826247	.750466	.848564
2	.694719	.614677	.465656	.686191
3	.558575	.459156	.278482	.560439
4	.442421	.337981	.165259	.455196
5	.347129	.231067	.103604	.360799
6	.271865	.146482	.070645	.269730
7	.212594	.080187	.037196	.193434
8	.150791	.026273	-.003939	.141158
9	.086132	-.035568	-.047906	.101887
10	.027721	-.086344	-.079[illegible]	.059021
11	-.026519	-.120186	-.093353	.021231
12	-.080572	-.145397	-.111643	-.011569
13	-.133449	-.167163	-.129479	-.040516
14	-.175141	.177705	-.139419	-.073802
15	-.207089	-.183224	-.150003	-.105347
16	-.232706	-.190505	-.150962	-.136379
17	-.252697	-.194836	-.141253	-.160259
18	-.266651	-.202920	-.136935	-.185880
19	-.276659	-.206410	-.146988	-.216660
20	-.280261	-.205821	-.161808	-.242713
21	-.281357	-.210972	-.171927	-.266611
22	-.288220	-.215373	-.166038	-.283876
23	-.290554	-.219666	-.158312	-.299953
24	-.288687	-.220103	-.154352	-.308315
25	-.284396	-.208407	-.161696	-.310478
26	-.273408	-.200422	-.166429	-.309105
27	-.256124	-.196892	-.163195	-.306661
28	-.241015	-.187052	-.160247	-.291840
29	-.215960	-.173131	-.143300	-.265682
30	-.178987	-.158490	-.104166	-.234287
31	-.139823	-.135563	-.057926	-.195843
32	-.112235	-.111888	-.025480	-.161600
33	-.081164	-.089998	-.003612	-.132956
34	-.048771	-.067298	.008551	-.098569
35	-.026641	-.036003	.023127	-.060912
36	-.011837	.001495	.055256	-.030418
37	.008441	.030955	.078559	-.011251
38	.031057	.050012	.087935	-.002776
39	.050737	.066061	.085879	-.003780
40	.065602	.071862	.081482	-.006879
41	.073697	.060594	.066641	-.009684
42	.076556	.054866	.051721	-.015164
43	.074758	.045260	.030440	-.020594
44	.075657	.038604	.034668	-.022016
45	.075148	.041361	.051152	-.017657
46	.069895	.039642	.060207	-.010181
47	.058361	.040258	.064190	-.011435
48	.042369	.044008	.053666	-.010970
49	.024159	.043460	.038934	-.008983
50	.008791	.038586	.019579	-.014363
51	-.002724	.038812	-.000215	-.023157
52	-.014638	.038757	-.009638	-.030838
53	-.030280	.045650	-.013015	-.030905
54	-.039463	.058291	-.014250	-.022851
55	-.044528	.070666	-.020596	-.018675
56	-.049662	.082067	-.026134	-.015429
57	-.051697	.087886	-.037448	-.007025
58	-.048391	.081963	-.036119	.006096
59	-.049259	.078803	-.025437	.011476
60	-.045389	.069171	-.026145	.013692

RUN NO 89A 46M 6-18-63 1336-1437(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-01	10E-01	10E-01	10E-02	10E-02
0	-.026555	-.031417	-.012520	.003294	.036392	.040085
1	-.688058	-.234683	-.097301	.010033	.592407	.299806
2	-.708884	-.300969	-.109081	-.096560	.842282	.231196
3	.000245	-.356344	-.098347	-.220733	.821470	.176168
4	.530282	-.237941	-.044965	-.158016	.385588	.022028
5	.247391	-.104837	-.021992	-.096879	.161785	-.067102
6	.213223	-.063886	-.022694	-.156490	.237486	-.124540
7-8	-.023769	-.040335	-.011825	-.113333	.221244	-.093291
9-11	-.093084	-.043597	-.010199	-.034714	.098604	-.036066
12-15	-.091377	-.026364	-.004038	-.028396	.058042	-.036431
16-20	-.023448	-.009247	-.001503	-.010946	.034134	-.026670
21-27	-.033720	-.008476	-.001900	-.006243	.020613	-.014545
28-36	-.035799	-.004126	-.000969	-.002863	.014183	-.007202
37-47	-.017601	-.002149	-.000490	-.001501	.006775	-.004344
48-60	-.011057	-.001091	-.000164	-.001677	.002224	-.002016

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-01	10E-02	10E-02
1	.169785	-.166490	-.229742	.065579	.283066	-.045845
2	.306316	-.234678	-.171560	.143956	.588694	-.205655
3	.319353	-.201588	-.078517	.150864	.582441	-.245062
4	.183917	-.092014	-.007568	.056355	.210234	-.083428
5	.101131	-.087916	-.020559	-.012520	.080011	-.053599
6	.078284	-.095877	.019987	-.037316	.100565	-.086057
7-8	.041882	-.040751	.042750	.002142	.057435	-.053513
9-11	.008823	-.027390	-.018172	.005720	.023775	-.003523
12-15	-.000945	.001631	-.017750	-.007405	.019469	.010382
16-20	-.001178	.003733	-.017160	-.007139	.014571	-.004190
21-27	-.000409	-.003445	-.007704	-.004283	.006289	-.002574
28-36	.000303	-.000983	-.003720	-.000036	.003267	-.002290
37-47	.000898	.000150	-.001987	-.000974	.002081	-.000943
48-60	-.000249	-.000238	-.000805	-.000852	.000123	-.000587

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E 00	10E-01	10E-02
0	.010450	.004005	.020213	.030969
1	.101270	.073538	.256208	.284517
2	.134219	.113906	.421016	.324249
3	.141231	.127114	.522179	.291619
4	.081929	.084979	.356193	.148606
5	.043252	.059725	.241576	.075770
6	.036012	.055903	.256730	.086785
7-8	.024199	.036769	.198983	.072710
9-11	.016990	.021692	.139695	.040550
12-15	.011989	.014999	.115619	.022073
16-20	.006664	.009503	.083195	.013449
21-27	.003730	.005678	.046026	.010946
28-36	.002882	.004324	.029365	.006674
37-47	.001618	.002366	.018761	.005084
48-60	.001013	.001525	.012206	.003535

RUN NO 89A 46M 6-18-63 1336-1437(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.65565 10E 00	0.45505 10E 00	0.14984 10E 00	0.36347 10E 00	0.11969 10E 00	0.83069 10E-01
0	-.020131	-.508599	-.627073	-.169520	.313429	.295828
1	-.037727	-.315953	-.471618	.039057	.144921	.286559
2	-.003547	-.163857	-.272434	.027141	.016888	.138067
3	.031962	-.118827	-.127388	-.027900	-.042757	.097636
4	.026926	-.024876	-.080882	-.113646	-.001817	.021678
5	.005783	.013574	.013275	.001692	-.009622	.012216
6	-.027438	.108080	.039767	.021631	.018268	-.013094
7	-.016519	.055569	.042910	.062010	.031067	-.010712
8	-.085778	.074680	.019407	.073195	.031333	-.015949
9	-.064229	.099517	.064666	.064023	-.029673	.010669
10	-.037940	.148264	.048506	-.029034	-.014756	-.072553
11	-.034063	.141773	.059046	-.036038	-.043840	-.055760
12	.014405	.123856	.098116	.002979	-.087880	-.053673
13	.087859	.063979	.128063	.101727	-.121469	.010368
14	.086690	.016155	.150525	.101758	-.106880	-.043129
15	.016433	.009322	.122489	.046008	-.077868	-.044963
16	-.029253	-.005025	.10150[illegible]	-.031884	-.043220	-.079550
17	-.002890	.010345	.083868	-.006788	-.018275	-.115249
18	-.017098	.030844	.08 048	-.031270	.029280	-.147532
19	.022058	-.000827	.096356	.014932	.041317	-.136680
20	.059334	.014734	.131306	-.026207	.014917	-.103566
21	.061912	.048372	.159127	-.154203	-.007998	-.139475
22	-.000944	.089226	.158725	-.110932	.021123	-.141853
23	.004416	.113931	.119856	.011317	.012715	-.117902
24	.057584	.049006	.097519	-.013960	-.033491	-.066607
25	-.018938	.055529	-.004171	.005396	.024231	-.008102
26	-.030897	.022616	-.064893	-.019880	.048489	.019156
27	-.050569	.019938	-.121462	.053868	.015841	.045996
28	-.010722	.000465	-.125032	-.016078	.049910	.069468
29	.029883	-.048764	-.165650	-.017111	.042993	.121660
30	.029133	-.126750	-.171671	-.007998	.009954	.172298

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-01	10E-02	10E-02	10E-02
0	-.014964	-.024533	-.024617	.058573	.018165	.064498
1	-.087536	-.275780	-.187173	.073272	.309928	.648853
2	-.030429	-.320626	-.162620	-.477199	.424956	.516552
3	.054980	-.366795	-.119483	-.691067	.341928	.294035
4	.076935	-.304568	-.093755	-.101116	.057210	.301117
5	.026733	-.155752	-.077811	-.050997	.047542	.277731
6	-.084155	-.102418	-.072277	-.191353	.294430	.153750
7	-.153659	-.124900	-.067842	.284151	.382130	.145925
8	-.062032	-.121511	-.036089	.651454	.266707	.165749
9-11	-.010585	-.044975	-.025559	-.073261	.232966	.063866
12-14	.003422	-.057458	-.016528	-.380475	.137614	.054015
15-21	.012055	-.046579	-.009454	-.514826	.090318	.014360
22-30	.012270	-.032033	-.004960	-.406532	.071936	-.045881

RUN NO 89A 46M 6-18-63 1336-1437(EST.
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.65565 10E 00	0.45505 10E 00	0.14984 10E 00	0.96347 10E 00	0.11969 10E 00	0.83069 10E-01
1	.107668	-.159011	-.066243	.098403	.085324	-.053602
2	.031095	-.121291	-.109435	.021301	.077773	-.021767
3	-.002681	-.092808	-.118216	-.023817	.005330	.003942
4	-.040414	-.029355	-.111188	-.012389	-.005529	.000572
5	.011201	-.065426	-.099780	.033706	.064515	-.060153
6	.079102	-.087851	-.081964	.052702	.103819	-.065638
7	.070770	-.091193	-.049817	.031057	.113868	-.033948
8	.019916	-.036103	-.029780	.005387	.071208	-.035485
9	.008301	-.007820	-.041150	.061155	.089933	-.064408
10	-.007583	-.021322	-.062343	.041631	.002426	-.049784
11	.031660	-.062346	-.035681	.000554	.038757	-.082608
12	.092740	-.049125	-.018463	.058354	.067779	-.070391
13	.130854	-.013423	.045128	.089325	.130268	-.110299
14	.088678	.035974	.082655	.061350	.105281	-.082059
15	.087793	.023189	.065317	.006566	.017518	-.009010
16	.072394	.016985	.039730	.037225	-.010135	.030831
17	-.012485	-.030712	.023679	-.028306	-.026028	.001469
18	-.095057	.011363	.020877	-.067646	-.040585	.017423
19	-.069243	.053029	.022988	-.034277	-.069545	.058395
20	-.076992	.053979	.011901	-.041420	-.057637	.067917
21	-.061579	-.003732	-.002015	-.018960	-.073880	.026913
22	-.068886	-.045468	-.016936	-.036936	-.083177	.026514
23	-.063907	-.058750	-.004219	-.010781	-.078711	.023552
24	-.069504	-.008990	.023402	-.134138	-.095866	.046094
25	-.078400	.040722	.035253	-.096032	-.085478	.027459
26	.013168	.045440	.026128	.029322	-.031457	-.004620
27	.019479	.050501	.021772	.071958	-.014642	-.021448
28	-.049912	.071737	-.021459	-.005034	.017360	.027927
29	-.093744	.067908	-.071418	-.048159	-.023108	.054390
30	.010323	.030232	-.031876	-.049898	-.019194	.036330

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-02	10E-02	10E-02
1	.201137	-.140994	-.327318	.824076	.513938	-.304336
2	.150335	-.143917	-.520696	.711833	.479935	-.232281
3	-.032612	-.135284	-.617964	.037609	.149610	-.032920
4	-.058146	-.083195	-.375528	-.248167	-.033798	.089460
5	.086575	-.061552	-.149170	.119191	.075104	-.008264
6	.054183	-.072510	-.198531	.198867	.037849	-.060498
7	-.064612	-.057379	-.266756	-.040369	-.081009	-.000229
8	-.046034	-.054910	-.154445	-.105827	-.075389	.044557
9-11	.110361	-.070453	.025954	.328879	.214915	-.033294
12-14	.085210	-.063760	-.056677	.459226	.113777	-.070482
15-21	.030509	-.017423	.000781	.261856	.019428	-.016221
22-30	.033915	-.026473	.008538	.087780	.013561	-.024460

RUN NO 89A 464 6-18-63 1336-1437(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.82084 10E 00	0.52371 10E 00	0.25227 10E 00	0.27354 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.559121	.176107	.327611	.708546
2	.227867	-.096189	.121434	.420545
3	.097158	-.153173	.030734	.212752
4	.055484	-.052291	.075265	.124156
5	-.057838	-.041372	.002139	.041376
6	-.141206	.046968	-.071432	.019245
7	-.126020	-.008966	-.081629	-.007864
8	-.123677	-.041037	-.133751	-.049018
9	-.146488	-.066372	-.224622	-.132164
10	-.096314	-.021612	-.157640	-.179666
11	-.107049	-.007518	-.136770	-.223698
12	-.200659	-.057524	-.008593	-.235836
13	-.203209	-.099331	-.138037	-.280569
14	-.094604	-.050799	-.107622	-.287330
15	-.037360	-.024243	-.056082	-.255728
16	-.013984	-.096841	.072125	-.206556
17	.010749	-.082444	-.030156	-.160047
18	-.011710	.000430	-.070036	-.118258
19	.012528	-.050450	-.024819	-.087792
20	-.019011	.015177	-.012656	-.113700
21	-.089989	.102896	.047781	-.121252
22	-.164462	.004014	.040884	-.103493
23	-.139093	-.109356	-.100875	-.063611
24	-.080720	-.023408	-.107325	-.022411
25	-.028102	.051285	-.140321	.085963
26	.013086	.104408	-.041674	.156176
27	.055176	.031079	-.058414	.185683
28	.076147	.022403	-.049022	.212814
29	.131332	-.023336	-.005738	.257083
30	.146872	.048973	-.017041	.234239

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E-01	10E-01	10E-02
0	.010127	.010167	.016823	.060748
1	.085740	.174375	.182231	.512538
2	.094029	.229339	.222340	.519650
3	.102959	.218122	.259922	.396770
4	.085792	.170142	.207743	.213501
5	.055199	.206562	.126398	.152444
6	.052392	.261498	.091105	.167249
7	.054955	.264197	.077561	.176725
8	.034842	.284193	.092716	.127220
9-11	.024883	.328292	.117146	.092583
12-14	.027444	.251336	.080589	.045653
15-21	.018229	.210042	.081205	.031923
22-30	.012495	.202258	.087256	.023652

RUN NO 89A 91M 6-18-63 1336-1437(EST)

GROSS STATISTICS

CLEAR
UNSTABLE

WIND SPEED 7.55 M/SEC
WIND DIRECTION 233 DEG
SOLAR RAD. 1.17 LY/MIN

SIGMA A 6.6 DEG
SIGMA E 6.0 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.12273E 01	0.80555E 00	0.58084E 00	0.56132E 00
V	0.70148E 00	0.63301E 00	0.53068E 00	0.35020E-00
W	0.51501E 00	0.48111E-00	0.41854E-00	0.23931E-00
T	0.11664E-00	0.25322E-01	0.13576E-01	0.18540E-01
E	0.12219E 01	0.95999E 00	0.76504E 00	
GUSTINESS RATIOS				
U	0.14673	0.11888	0.10094	0.09923
V	0.11093	0.10538	0.09649	0.07838
W	0.09505	0.09187	0.08569	0.06479
COVARIANCES				
U,V	-0.26775E-01	0.34342E-01	0.74042E-01	0.26080E-01
U,W	-0.36202E-00	-0.25495E-00	-0.17463E-00	-0.18818E-00
U,T	-0.17802E-00	-0.37933E-01	-0.62317E-02	-0.33760E-01
V,W	-0.45536E-01	-0.59834E-01	-0.83079E-01	-0.23796E-01
V,T	0.26033E-01	0.33939E-01	0.18008E-01	0.26198E-01
W,T	0.23433E-01	-0.10342E-01	-0.20291E-01	0.26238E-02
WE	0.26573E-00	0.17086E-00	0.92356E-01	
NORMALIZED COVARIANCES				
U,V	-0.02886	0.04809	0.13336	0.05882
U,W	-0.45535	-0.40953	-0.35418	-0.51343
U,T	-0.47052	-0.26559	-0.07018	-0.33094
V,W	-0.07576	-0.10842	-0.17628	-0.08220
V,T	0.09101	0.26806	0.21216	0.32514
W,T	0.09561	-0.09369	-0.26918	0.03939

RUN NC 89A 91M 6-18-63 1336-1437(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.55527 10E 00	0.49312 10E 00	0.88830 10E-01	0.47129 10E 00	0.84898 10E-01	0.75395 10E-01
0	.133401	-.354109	-.070054	-.176099	.212198	-.269003
1	.138087	-.325488	-.049485	-.160723	.196694	-.228054
2	.131859	-.272439	-.024968	-.135848	.169760	-.158715
3	.116195	-.216325	-.013695	-.096410	.135194	-.092620
4	.097666	-.163935	-.014436	-.059271	.093942	-.032062
5	.078244	-.115300	-.021436	-.031038	.060813	.013226
6	.056129	-.071795	-.031678	-.011749	.034362	.047186
7	.031431	-.028986	-.038477	.007725	.007868	.066864
8	.011348	.008995	-.038657	.025710	-.011112	.072705
9	-.003808	.032610	-.036469	.039285	-.029046	.073382
10	-.015060	.047818	-.026836	.051220	-.041979	.069989
11	-.024564	.062215	-.016541	.054194	-.048624	.066847
12	-.037489	.078376	-.009730	.046177	-.045151	.055829
13	-.045391	.087119	-.005746	.038795	-.035956	.040663
14	-.050837	.094604	-.006613	.035479	-.032728	.031635
15	-.050658	.100282	-.007929	.028463	-.038918	.032296
16	-.054570	.100336	-.007459	.026813	-.043738	.037175
17	-.059160	.104439	-.011834	.027547	-.041647	.041005
18	-.060251	.101093	-.016190	.030099	-.034213	.041210
19	-.063822	.099115	-.014363	.037356	-.031134	.043706
20	-.067805	.098582	-.010116	.042741	-.030903	.044530
21	-.072386	.095738	-.004929	.043397	-.030993	.042730
22	-.069753	.088588	.005319	.048522	-.036617	.034496
23	-.061962	.082883	.019594	.058477	-.046278	.025365
24	-.053350	.076551	.032960	.064251	-.053164	.013056
25	-.044509	.063183	.040340	.062798	-.058167	.004316
26	-.038917	.047045	.044729	.062158	-.060234	-.000434
27	-.035280	.038115	.042068	.055875	-.061843	-.000224
28	-.035320	.027404	.035484	.042043	-.054605	.001179
29	-.030170	.036996	.026981	.022908	-.040422	.000968
30	-.019873	.028959	.018798	.006699	-.029123	-.002265
31	-.013526	.014685	.014160	-.005772	-.024762	-.009896
32	-.013007	.003685	.013538	-.014759	-.020550	-.017361
33	-.011539	-.001874	.007482	-.025032	-.014014	-.029672
34	-.003512	-.005035	.001350	-.036668	-.008160	-.045367
35	.006201	-.007067	.004526	-.041089	-.004834	-.056615
36	.007700	-.019482	.013895	-.039339	-.000036	-.058683
37	.011192	-.032251	.027003	-.040650	.006805	-.057961
38	.015959	-.038500	.036543	-.043159	.010772	-.051935
39	.020709	-.037548	.035203	-.040672	.018379	-.043020
40	.025899	-.030580	.026289	-.032787	.028663	-.030382
41	.028744	-.023553	.020980	-.019118	.036120	-.017688
42	.023343	-.015121	.020249	-.007094	.039952	-.009851
43	.019195	-.006581	.018467	.003113	.037719	.001689
44	.019785	.002921	.018904	.007430	.027291	.006766
45	.019536	.011822	.013335	.007760	.014957	.007493
46	.013308	.017040	.004530	.002428	.012934	.004422
47	.006218	.020364	-.000492	-.006388	.015566	.004614
48	.001014	.027414	-.001502	-.017879	.019935	.005449
49	.005321	.029658	-.007600	-.024212	.022909	.005346
50	.017430	.025870	-.014020	-.029103	.022872	.007387
51	.024997	.015435	-.016416	-.035931	.023749	.014530
52	.027707	.004987	-.014014	-.038177	.024915	.019162
53	.018661	.001787	-.011382	-.041083	.027366	.025437
54	.012756	-.004132	-.005665	-.041848	.025156	.032973
55	.010707	-.011421	.002436	-.036485	.015879	.036945
56	.012240	-.018745	.012981	-.035006	.008850	.037849
57	.014738	-.027914	.023595	-.029037	-.000243	.031764
58	.011467	-.035694	.035354	-.022683	-.013212	.021871
59	.000083	-.039611	.042078	-.009512	-.025892	.012115
60	-.014232	-.038431	.039518	.007417	-.031173	.003434

RUN NO 89A 91M 6-18-63 1336-1437(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.55527 10E 00	0.49312 10E 00	0.88830 10E-01	0.47129 10E 00	0.84898 10E-01	0.75395 10E-01
1	-.009524	-.002048	.000493	-.020866	.029221	-.031366
2	-.016855	-.005440	.001399	-.037248	.045115	-.027662
3	-.020948	-.010049	-.006222	-.050945	.063117	-.016897
4	-.020210	-.014872	-.012387	-.060147	.074822	-.011149
5	-.017252	-.021852	-.013673	-.062362	.068177	-.003827
6	-.017189	-.030805	-.018376	-.054247	.058581	.002016
7	-.020380	-.033568	-.025960	-.046756	.055771	.006583
8	-.017075	-.028231	-.030804	-.038609	.052696	.015740
9	-.009950	-.019558	-.031394	-.022535	.043517	.023873
10	-.001320	-.017941	-.030195	-.005259	.026616	.030369
11	.006173	-.021186	-.030276	.008938	.012629	.032107
12	.015515	-.019865	-.033808	.015815	.007871	.034053
13	.019273	-.011938	-.038925	.013761	.007705	.034606
14	.021007	-.000014	-.050291	.016131	.006579	.039219
15	.018382	.010896	-.059162	.020931	.003870	.044870
16	.016866	.014767	-.064542	.028830	-.001449	.048962
17	.018726	.013461	-.063510	.033023	-.007481	.044588
18	.021444	.011361	-.059250	.037096	-.005651	.034117
19	.017793	.011730	-.051410	.037295	-.001749	.024655
20	.009771	.010884	-.045881	.034276	.005657	.019777
21	-.002857	.009500	-.039415	.024270	.011262	.016073
22	-.014789	.002853	-.031654	.006745	.017899	.011801
23	-.026357	-.002840	-.021462	-.005608	.017843	.004456
24	-.035608	.000489	-.013484	-.015811	.009271	-.003456
25	-.041946	.007202	-.014796	-.026124	.004800	-.011373
26	-.044737	.011087	-.020405	-.035577	.004698	-.008169
27	-.047895	.019012	-.021075	-.038905	.006145	-.000966
28	-.048649	.029771	-.015993	-.041709	.007982	.004805
29	-.039179	.032840	-.014885	-.042072	.013417	.013334
30	-.021925	.036850	-.014724	-.034473	.014898	.016506
31	-.008776	.030585	-.009532	-.023170	.012622	.011371
32	-.002551	.024524	-.005603	-.017341	.007362	.005109
33	.005459	.026349	.001024	-.009076	.001090	.000633
34	.017076	.022838	.012959	.001986	-.000085	-.002765
35	.023253	.010676	.027261	.016523	.000182	-.011769
36	.026893	-.005508	.038099	.027114	.001913	-.022323
37	.027783	-.015465	.041639	.033639	.003065	-.033184
38	.025113	-.018664	.045463	.034628	-.003561	-.037639
39	.017084	-.010967	.048171	.030795	-.006495	-.035246
40	.016134	-.003755	.052075	.030383	-.004235	-.030689
41	.016411	-.001059	.052071	.035093	-.002504	-.026516
42	.016417	-.006702	.056767	.038008	-.006589	-.028006
43	.017028	-.013344	.059415	.041728	-.013587	-.030519
44	.023011	-.014368	.060931	.050394	-.018496	-.033431
45	.031147	-.012120	.057468	.067963	-.027585	-.031670
46	.039201	-.012720	.052000	.076970	-.037358	-.029677
47	.041696	-.008910	.043300	.081048	-.039337	-.021968
48	.041557	-.003614	.036916	.078408	-.032316	-.013072
49	.037024	-.003554	.038314	.065812	-.026035	-.012287
50	.029015	-.011508	.043676	.049205	-.022714	-.019315
51	.021356	-.018755	.045554	.026864	-.015960	-.022898
52	.017855	-.022499	.039677	.007595	-.012055	-.017505
53	.012799	-.029813	.033218	-.003267	-.013503	-.012817
54	.008495	-.037764	.026520	-.007944	-.014072	-.009900
55	.003085	-.046816	.022725	-.014115	-.015150	-.007011
56	-.001685	-.048775	.017949	-.029697	-.011820	-.004344
57	-.001515	-.047100	.013006	-.042035	-.002411	-.004405
58	-.003138	-.048544	.008850	-.051177	.006234	-.000146
59	-.008966	-.047660	.001633	-.059059	.013331	.004322
60	-.019207	-.044101	-.009779	-.060442	.007610	.012302

RUN NO 89A 91M 6-18-63 1336-1437(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.58099 10E 00	0.53069 10E 00	0.41854 10E 00	0.13582 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.867250	.826716	.795652	.860844
2	694253	.613367	.537062	.667280
3	.550378	.453839	.336932	.502436
4	.431069	.317348	.183635	.365133
5	.321046	.203480	.074807	.256579
6	.232066	.118870	-.000315	.168038
7	.150093	.051577	-.060515	.097155
8	.075381	-.015021	-.105466	.040137
9	.017407	-.070357	-.131690	-.004389
10	-.036589	-.115796	-.141485	-.043113
11	-.083581	-.150001	-.143187	-.075036
12	-.122683	-.168834	-.157727	-.099581
13	-.153968	-.181645	-.167558	-.118100
14	-.178412	-.184249	-.176573	-.133752
15	-.194977	-.186673	-.172014	-.153282
16	-.217121	-.182593	-.162452	-.173921
17	-.241743	-.183542	-.155497	-.189883
18	-.264889	-.187063	-.152633	-.199738
19	-.282229	-.187697	-.154661	-.210681
20	-.294146	-.178157	-.163506	-.215010
21	-.295581	-.166719	-.167942	-.216611
22	-.295286	-.168306	-.165466	-.214323
23	-.298383	-.190120	-.150236	-.210668
24	-.297953	-.201219	-.129859	-.208313
25	-.287759	-.210732	-.118687	-.200631
26	-.270777	-.214866	-.120165	-.190647
27	-.252314	-.206398	-.118329	-.184124
28	-.234520	-.186494	-.115704	-.181523
29	-.213771	-.167888	-.100241	-.175775
30	-.182653	-.146685	-.061725	-.158604
31	-.136266	-.119531	-.007848	-.133693
32	-.098448	-.093764	.037926	-.103918
33	-.067675	-.072094	.073276	-.074856
34	-.037329	-.044538	.100393	-.046446
35	-.012968	-.014306	.122449	-.025622
36	.006830	.014037	.145497	-.014664
37	.019601	.041199	.152538	-.004537
38	.033596	.066826	.143593	.006341
39	.046751	.096064	.119669	.021093
40	.055051	.116224	.082006	.035650
41	.053787	.112485	.049449	.050588
42	.049298	.097129	.017405	.060745
43	.045211	.077105	.000211	.062008
44	.044446	.068379	-.002628	.062198
45	.052900	.060878	.000719	.060418
46	.067385	.057050	-.000118	.054408
47	.084510	.044425	-.005242	.049275
48	.091590	.038364	-.010045	.040719
49	.097394	.042337	-.013061	.029277
50	.094067	.053338	-.009366	.021604
51	.092937	.065055	-.013752	.008927
52	.089287	.071496	-.013187	-.002462
53	.081732	.079458	-.020845	-.003899
54	.071453	.078459	-.023660	.000969
55	.061914	.068152	-.020910	.010798
56	.051610	.054928	-.016405	.018592
57	.045737	.041159	-.020044	.025100
58	.036641	.030405	-.033690	.029644
59	.026890	.007563	-.033131	.028077
60	.022578	-.011229	-.032248	.020422

RUN NO 89A 91M 6-18-63 1336-1437(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-01	10E-02	10E-02
0	.001623	-.013265	-.027194	.001436	.019569	.000062
1	.089434	-.166828	-.177041	-.032709	.182587	-.006975
2	.173583	-.257178	-.132884	-.102716	.279075	-.089374
3	.218111	-.342270	-.047572	-.157341	.321196	-.234816
4	.143122	-.275692	.013285	-.111088	.215046	-.245582
5	.072647	-.169427	.016856	-.060405	.178270	-.181814
6	.048409	-.130514	-.006136	-.083839	.191577	-.193424
7-8	.0284 1	-.083497	-.016596	-.080062	.122762	-.178212
9-11	.005565	-.043551	.008776	-.019011	.041495	-.118007
12-15	-.000378	-.018136	-.032343	-.010934	.011842	-.043357
16-20	-.002899	-.009131	-.020501	-.008025	.014668	-.023291
21-27	-.000283	-.007071	-.010308	.000638	-.001211	-.011071
28-36	-.002528	-.001666	-.005086	.000485	.000419	-.005668
37-47	-.001046	-.001522	-.002781	-.001196	.003438	-.004382
48-60	-.001033	-.000652	-.001980	-.001379	.000494	-.001551

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-01	10E-02	10E-02
1	-.171591	.168772	-.175769	.004327	.094724	.078872
2	-.152513	-.107172	-.210214	-.020247	.097200	.104430
3	.259478	-.475533	-.082679	.000565	.084529	.052581
4	.077706	-.383328	.026987	-.042048	.105323	-.010151
5	-.578858	-.167446	.017659	-.101609	.122130	-.029570
6	-.671518	-.211867	.031451	-.075056	.104765	-.061114
7-8	-.033636	-.062215	.002373	-.018805	.068728	-.037762
9-11	-.051604	.082126	-.003891	-.018043	.021894	-.016355
12-15	.009344	.028706	.011813	.003458	.007414	-.015008
16-20	-.052601	.030771	-.003338	-.002390	.008486	-.010666
21-27	.001108	-.025723	.004962	.001852	-.006667	-.009611
28-36	.009458	.010587	-.000424	-.001555	.004585	-.006461
37-47	-.003122	-.002691	-.002114	.000175	.003236	-.003298
48-60	-.002760	.001038	-.000109	-.000423	.000164	-.000645

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E-01	10E-01	10E-02
0	.004329	.025604	.013852	.018198
1	.067017	.422393	.178850	.159644
2	.101722	.698540	.352876	.205430
3	.110541	.819638	.548546	.218347
4	.067237	.559233	.451206	.143080
5	.038086	.423540	.296277	.098096
6	.033191	.424635	.315686	.088088
7-8	.025810	.265447	.259538	.064883
9-11	.013886	.148482	.167632	.042390
12-15	.008234	.097607	.102446	.022602
16-20	.004960	.063145	.058853	.013534
21-27	.003388	.036690	.036811	.008018
28-36	.001995	.027463	.022225	.004484
37-47	.001245	.016453	.015106	.002958
48-60	.000852	.009912	.008811	.001801

RUN NO 89A 91M 6-18-63 1336-1437(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.44348 10E 00	0.36660 10E 00	0.10203 10E 00	0.28944 10E 00	0.80557 10E-01	0.66593 10E-01
0	.058807	-.513297	-.330880	-.082214	.325214	.039400
1	-.077011	-.213021	-.296975	.104260	.194876	.184482
2	-.104791	-.112250	-.231197	.136675	.130410	.146874
3	-.046554	-.135461	-.163143	.048306	.065466	.126486
4	-.039096	-.074643	-.1 1717	.027431	.064715	.082963
5	-.020745	-.021066	-.078801	.024396	.036424	.070111
6	-.017801	-.029461	-.027465	.050297	-.001497	.078742
7	-.000718	.037028	-.005352	.065818	-.033546	.041662
8	-.010425	.117792	.061785	.059310	-.034565	-.013908
9	-.060729	.110307	.121014	-.039023	-.008881	-.033111
10	-.034279	.119448	.194095	-.004557	-.051909	-.040493
11	.002859	.166146	.177339	-.069114	-.070829	-.078017
12	.050000	.142008	.151142	-.061397	-.143111	-.103510
13	.048433	.133649	.123149	-.069867	-.143202	-.106747
14	.058183	.103789	.159841	-.042036	-.151185	-.090558
15	.115355	.013487	.186432	-.087043	-.150077	-.106304
16	.112839	.007688	.148883	-.118218	-.124957	-.119081
17	.085064	.042462	.121739	-.090391	-.044764	-.125693
18	.066729	-.014671	.048390	-.054675	-.025748	-.085898
19	.031194	.021711	.033237	.027977	-.048505	-.043668
20	.029492	.015441	.027499	-.052577	.008510	-.078274
21	.014061	.020629	.006228	-.093429	.048470	-.046545
22	-.033445	.017289	-.004472	-.061346	.099081	-.069262
23	-.086189	-.017216	-.063598	.031899	.066298	-.036396
24	-.099643	.025914	-.111955	.061505	.044978	.000929
25	-.091369	.044030	-.103552	-.016906	.063119	.030493
26	-.030738	.025069	-.123604	.071047	.081704	.067041
27	-.006958	-.071909	-.155267	.028981	.039265	.135602
28	-.031645	-.006583	-.150611	.039769	.018285	.117265
29	-.035266	.049235	-.114228	.058079	.006763	.096639
30	.013420	-.056682	-.103567	.081651	.012468	.104542

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-01	10E-01	10E-02	10E-02
0	-.015693	-.016185	-.005939	.008273	.028213	.041069
1	-.137919	-.214242	-.083540	.114407	.413556	.453859
2	-.132901	-.275790	-.107291	.108018	.556488	.431388
3	-.023098	-.281305	-.083804	.034424	.420717	.208111
4	.052939	-.159207	-.028706	-.024580	.092931	.010781
5	-.026003	-.042397	-.010911	-.017337	.105167	-.017991
6	-.044687	-.024574	-.006099	-.000461	.194015	-.011717
7	-.005095	-.058669	-.005608	.010668	.153222	-.001772
8	.028252	-.067887	-.008757	.007739	.069352	-.004936
9-11	.042298	-.055397	-.009849	-.013570	.057049	-.008972
12-14	.016923	-.051216	-.000230	-.041655	.096310	-.042278
15-21	.043780	-.070154	-.000287	-.037088	.027776	-.041387
22-30	.028399	-.043636	-.000700	-.022154	.050166	-.071223

RUN NO 89A 91M 6-18-63 1336-1437(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.44348 10E 00	0.36660 10E 00	0.10203 10E 00	0.28944 10E 00	.80557 10E-01	0.66593 10E-01
1	.014633	.010811	-.050537	.002587	.054653	.064087
2	.061570	.035670	-.056183	.091089	.050944	.065651
3	.044396	.024885	-.018084	.035009	.073875	.052825
4	.103106	.053837	-.011174	.091905	.069536	.056350
5	.094756	.045550	-.007498	.090929	.055364	.049055
6	.063151	.053273	-.037055	-.051949	.081133	.083739
7	.016356	.123322	-.065872	-.059664	.071688	.107340
8	.056216	.116296	-.030616	.016513	.086294	.086493
9	.022128	.066778	.006522	.050506	.075173	.021916
10	.021380	.050815	-.031708	.044435	.011885	.077193
11	-.007061	.071809	-.031968	-.006706	.038605	.053635
12	.008623	.045604	.008534	.040702	.006413	.008659
13	.017150	.031419	.051024	.065948	.036946	-.059379
14	.104668	.032533	.105190	.051336	.086632	-.093360
15	.064081	.009599	.080676	-.011084	.055412	-.080521
16	.029096	-.013577	.060265	-.057757	.017660	-.021843
17	-.058139	.008349	.022996	-.005711	-.065947	-.028049
18	-.058644	-.060274	.038259	-.005230	-.061481	-.059980
19	-.056866	-.007479	.040373	-.044537	-.064750	-.060410
20	.058826	-.051110	.053802	.073918	-.059047	-.059929
21	.024451	-.055525	.016132	.063468	-.059789	-.051709
22	-.053299	-.099082	-.001255	.022559	-.067616	-.058844
23	-.072732	-.056338	.027028	-.050095	-.067603	-.052639
24	-.055903	-.090676	.018788	-.061398	-.087327	-.007871
25	-.015594	-.112486	-.040683	-.056278	-.075188	.010319
26	-.036871	-.049401	-.100002	-.081534	-.070828	.066523
27	-.078916	-.041232	-.079780	-.106314	-.064200	.045383
28	-.129397	.014681	-.073261	-.077435	-.071944	.037477
29	-.027835	-.007346	-.087017	-.017421	.035306	.043550
30	-.030190	.016623	-.121715	-.037372	.052257	.078648

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-02	10E-02	10E-02
1	.132381	.140364	.069495	.554097	.273120	.095104
2	.119819	.142067	-.146228	.423319	.308190	.234409
3	.078050	.061588	-.231049	.259248	.160409	.233572
4	.064681	-.004765	-.048776	.232237	.059530	.061486
5	.072729	-.015412	.053675	.323008	.091626	-.024678
6	.042636	-.021335	.009005	.641497	.041706	-.022061
7	-.021757	-.009384	-.091002	.501747	-.036307	.048252
8	-.034893	.000480	-.090688	.043831	.002299	.071932
9-11	-.009107	.019445	-.061367	-.152296	.056575	.029820
12-14	.001192	-.011242	-.062700	-.165884	.002586	.037533
15-21	.002055	.002768	-.010941	.034411	.007908	.013565
22-30	-.023176	-.007495	.016339	-.213713	.020602	-.008422

RUN NO 89A 914 6-18-63 1336-1437(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.56170 10E 00	0.35014 10E 00	0.23927 10E 00	0.18534 10F-01
0	1.000000	1.000000	1.000000	1.000000
1	.447773	.244280	.134937	.674432
2	.173943	.039937	.042166	.438382
3	.138001	-.052440	.087990	.285714
4	.137473	.026446	.119347	.194259
5	.106964	.008497	-.014387	.078901
6	-.021480	-.034583	-.031782	-.065336
7	-.101366	-.075901	.008304	-.167514
8	-.235356	.027749	-.058538	-.231101
9	-.296828	-.088473	.009866	-.299447
10	-.268815	-.052619	-.098626	-.402978
11	-.256719	-.054537	-.149178	-.403243
12	-.191266	-.148004	-.139686	-.365556
13	-.156428	-.089683	-.157637	-.342997
14	-.124030	-.192064	-.259819	-.316920
15	-.049088	-.072522	-.050663	-.231514
16	.005251	-.047102	-.005222	-.123903
17	-.004853	-.062927	-.100950	-.087715
18	-.041608	-.028322	-.002294	-.020840
19	-.022976	-.014720	-.124284	.075124
20	.096453	.015305	.044349	.152717
21	.052214	.042086	-.044998	.149000
22	-.075720	-.069629	-.036328	.136990
23	-.050186	-.110686	-.068066	.197860
24	-.021545	-.061259	-.008623	.227254
25	.027107	-.027922	.069132	.201661
26	-.026987	.056014	-.060275	.175726
27	.027486	.007764	.024727	.102578
28	-.054021	.082560	.069294	.094581
29	.005341	.036880	.011169	.055460
30	.106782	.042880	.049247	.022181

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-01	10E-02
0	.045618	.020072	.014011	.016925
1	.527651	.229994	.181078	.235064
2	.718998	.261242	.207356	.380775
3	.823602	.239206	.171433	.401801
4	.539401	.156918	.084574	.189764
5	.195692	.132702	.051939	.077907
6	.077588	.184167	.081998	.066280
7	.109530	.188602	.107550	.063805
8	.184856	.150802	.082146	.058357
9-11	.258538	.154627	.061039	.046854
12-14	.209224	.159008	.094214	.042347
15-21	.157781	.110164	.115799	.025769
22-30	.130397	.146536	.109581	.022862

RUN NO 89A 46M 6-18-63 1336-1437(EST)
RUN NO 89A 91M 6-18-63 1336-1437(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.220359	.375105	.429022	.284506
1	.260786	.695128	.574833	.273075
2	.207869	.665150	.528661	.225042
3	.187088	.608149	.435172	.161685
4	.190459	.536662	.335751	.116547
5	.206716	.474777	.263316	.168917
6	.222047	.469364	.183184	.158464
7-8	.119031	.357166	.216276	.185244
9-11	.109856	.132717	.183487	.123129
12-15	.180981	.076132	.145426	.080529
16-20	.101501	.100705	.211699	.081275
21-27	.118458	.078530	.137025	.105902
28-36	.107461	.065054	.150873	.183046
37-47	.119819	.127191	.089315	.115962
48-60	.088809	.091473	.079587	.100900

301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.628643	.748273	.849545	.935677
1	.744609	.552958	.910503	.738064
2	.679772	.530272	.798777	.650684
3	.426442	.380290	.684016	.522344
4	.367125	.338592	.629053	.174359
5	.327717	.563519	.391234	.045997
6	.149316	.694076	.398015	.419417
7	.212769	.629482	.512231	.353329
8	.249194	.636042	.492619	.270920
9-11	.204972	.769768	.646482	.459744
12-14	.155497	.634469	.596627	.138077
15-21	.237329	.505605	.416262	.286549
22-30	.285295	.410224	.376141	.285698

RUN NO 90A 15M 6-18-63 1501-1601(EST)

GROSS STATISTICS

1 CU
UNSTABLE

WIND SPEED 4.16 M/SEC
WIND DIRECTION 226 DEG
SOLAR RAD. 0.88 LY/MIN

SIGMA A 16.3 DEG
SIGMA E 12.7 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.22057E 01	0.19185E 01	0.14734E 01	0.12076E 01
V	0.11835E 01	0.10780E 01	0.93783E 00	0.54581E 00
W	0.58670E 00	0.58241E 00	0.52347E 00	0.20321E-00
T	0.13410E-00	0.68054E-01	0.37855E-01	0.49438E-01
E	0.19880E 01	0.17895E 01	0.14674E 01	
GUSTINESS RATIOS				
U	0.35701	0.33296	0.29179	0.26416
V	0.26151	0.24958	0.23279	0.17759
W	0.18413	0.18345	0.17392	0.10836
COVARIANCES				
U,V	0.94963E-01	0.15923E-00	0.10702E-00	0.15116E-00
U,W	-0.51538E 00	-0.44000E-00	-0.38261E-00	-0.24939E-00
U,T	-0.35819E-00	-0.26692E-00	-0.17653E-00	-0.18853E-00
V,W	0.59482E-01	0.52483E-01	0.51928E-01	0.21531E-01
V,T	0.53947E-01	-0.23134E-02	-0.18123E-02	-0.97265E-02
W,T	0.10274E-00	0.73412E-01	0.62156E-01	0.40185E-01
WE	0.48012E-01	0.10018E-00	0.12391E-00	
NORMALIZED COVARIANCES				
U,V	0.05878	0.11072	0.09104	0.18620
U,W	-0.45304	-0.41626	-0.43566	-0.50345
U,T	-0.65859	-0.73873	-0.74747	-0.77160
V,W	0.07138	0.06624	0.07411	0.06465
V,T	0.13542	0.00854	-0.00962	-0.05921
W,T	0.36628	0.36875	0.44155	0.40092

RUN NO 90A 15M 6-18-63 1501-1601(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.11754 10E 01	0.87824 10E 00	0.23617 10E 00	0.70067 10E 00	0.18842 10E 00	0.14079 10E 00
0	.091202	-.435749	-.747475	.074049	-.009549	.441527
1	.085842	-.399798	-.677322	.066325	-.023525	.389369
2	.078137	-.322940	-.553916	.050238	-.042035	.299665
3	.078691	-.240752	-.437[illegible]	.035167	-.059529	.214883
4	.085033	-.176835	-.341[illegible]	.033696	-.069708	.149570
5	.085605	-.127076	-.26[illegible]144	.027122	-.072803	.098967
6	.084315	-.076267	-.197981	.009265	-.070015	.053111
7	.073570	-.030436	-.135162	-.010115	-.057018	.016560
8	.056984	.010187	-.077064	-.012477	-.043370	-.015681
9	.039937	.031989	-.027910	-.014377	-.031222	-.029154
10	.026486	.047501	.011712	-.014651	-.019695	-.036254
11	.017476	.061225	.035577	-.021512	-.009257	-.042562
12	.014977	.067828	.053046	-.021561	.001050	-.044319
13	.011404	.077653	.071715	-.022852	.004696	-.043316
14	.001400	.078942	.091318	-.028949	.001515	-.044442
15	-.008856	.081352	.115440	-.040190	-.000113	-.053556
16	-.016540	.090213	.138020	-.056714	.005218	-.068277
17	-.025982	.093409	.158542	-.060508	.013269	-.081347
18	-.027396	.096552	.178328	-.059716	.017438	-.092544
19	-.029603	.101691	.197064	-.057965	.019562	-.100689
20	-.031059	.108854	.215229	-.053070	.017397	-.107656
21	-.033861	.118424	.226492	-.049512	.014410	-.114388
22	-.045509	.129395	.231665	-.047255	.027238	-.127290
23	-.057415	.136644	.234298	-.036426	.044557	-.140735
24	-.064446	.133908	.227285	-.019984	.059025	-.137143
25	-.071352	.118361	.215615	-.005987	.069171	-.116257
26	-.080685	.097616	.201325	-.004838	.073433	-.096045
27	-.084015	.081890	.184569	-.001798	.071445	-.079305
28	-.087569	.061068	.170294	.006553	.067614	-.062453
29	-.093940	.043215	.151108	.019126	.070281	-.044634
30	-.091602	.018642	.123986	.033517	.068083	-.028166
31	-.081870	-.000716	.097033	.042064	.059739	-.004848
32	-.075222	-.012549	.074847	.041550	.047341	.013382
33	-.070299	-.018885	.061559	.043030	.040311	.020204
34	-.065284	-.019858	.055337	.047719	.041050	.013446
35	-.066916	-.020183	.054375	.047383	.046054	.010090
36	-.069407	-.020047	.047101	.044476	.045383	.006971
37	-.059108	-.011985	.039937	.047531	.037167	.001818
38	-.042949	.002931	.038703	.050852	.023327	-.013667
39	-.033092	.022136	.042554	.051423	.014178	-.029631
40	-.032168	.036213	.044208	.054483	.009717	-.038557
41	-.027065	.038661	.042116	.052567	.007721	-.041513
42	-.020900	.032412	.033638	.047894	.002838	-.042304
43	-.001183	.021414	.028285	.035829	-.008448	-.030671
44	.025455	.001338	.018830	.023163	-.026334	-.007666
45	.037314	-.011834	.000978	.018609	-.036330	.012736
46	.040059	-.023072	-.024017	.014936	-.040986	.026411
47	.038301	-.027279	-.045826	.013978	-.039225	.042000
48	.031019	-.030596	-.062280	.015042	-.028683	.046815
49	.026552	-.030995	-.072233	.003171	-.022889	.045164
50	.032607	-.019752	-.075967	-.014629	-.026357	.039818
51	.049430	-.005264	-.069533	-.014884	-.033358	.030972
52	.066155	.004196	-.058997	-.016046	-.043246	.016777
53	.079308	.007214	-.047353	-.019633	-.050977	.003509
54	.085379	.008428	-.060320	-.016221	-.053630	-.001542
55	.082490	.003353	-.066310	-.017040	-.044179	.008584
56	.073638	-.005007	-.073348	-.020943	-.037713	.023113
57	.060351	-.021821	-.073331	-.019529	-.037278	.036017
58	.047275	-.024111	-.067070	-.016165	-.037052	.039922
59	.039839	-.025299	-.059555	-.014807	-.033945	.037832
60	.033806	-.025746	-.052371	-.009983	-.027590	.040228

RUN NO 90A 15M 6-18-63 1501-1601(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.11754 10E 01	0.87824 10E 00	0.23617 10E 00	0.70067 10E 00	0.18842 10E 00	0.14079 10E 00
1	.023248	-.033476	-.059056	.048543	.042804	-.001392
2	.046419	-.048183	-.089051	.075814	.070644	.005432
3	.055818	-.052761	-.103555	.088021	.081399	.012061
4	.053410	-.048967	-.112709	.081648	.076998	.023476
5	.046969	-.049225	-.124008	.062821	.069878	.032006
6	.037212	-.049077	-.136611	.045727	.059995	.040867
7	.027315	-.042647	-.150261	.024766	.043387	.054[illegible]
8	.024885	-.034406	-.158769	.000481	.023648	.066841
9	.022077	-.028470	-.156631	-.023883	.009052	.073545
10	.017808	-.014090	-.147574	-.038469	.003653	.073578
11	.010678	-.003605	-.136469	-.042346	.000096	.062332
12	-.003836	-.001849	-.129318	-.039421	-.008906	.048598
13	-.016593	.000994	-.123912	-.034460	-.014389	.046170
14	-.025642	-.000629	-.119805	-.030042	-.015392	.041964
15	-.022612	-.003644	-.110569	-.028308	-.017010	.043894
16	-.014936	-.010135	-.099630	-.030388	-.016058	.046515
17	-.003545	-.010112	-.082882	-.028914	-.011013	.046495
18	.004888	-.010177	-.068488	-.028975	-.005369	.041333
19	.001977	-.017940	-.057564	-.027634	-.005718	.027633
20	.003157	-.021458	-.047584	-.024876	-.003484	.011859
21	.006709	-.025525	-.036268	-.016846	-.002015	.001610
22	.007083	-.028282	-.022060	-.009789	-.002856	-.005906
23	.004096	-.020800	-.007996	-.015177	-.008294	-.001991
24	.002374	-.001052	.002992	-.025989	-.015054	-.003779
25	.000850	.012565	.011908	-.040891	-.025436	-.006341
26	-.003443	.022372	.018857	-.052534	-.033949	-.006279
27	-.005625	.030243	.021937	-.047489	-.037710	-.014355
28	-.014641	.029054	.023747	-.038879	-.043148	-.014213
29	-.021217	.020586	.023590	-.032230	-.047489	-.013671
30	-.022761	.013493	.023471	-.020381	-.043066	-.017191
31	-.024753	.009670	.025767	-.005472	-.033480	-.018727
32	-.019277	.009284	.026256	.009933	-.024901	-.015840
33	-.007634	.009333	.024651	.013073	-.015257	-.001960
34	.001350	.011267	.027962	.017544	-.005565	.012087
35	.006491	.013570	.032731	.018109	-.000874	.013446
36	.007662	.006596	.034817	.018096	.003092	.009388
37	.017992	.006035	.035354	.027506	.016039	-.000381
38	.029043	.002083	.034434	.038002	.034040	-.005253
39	.030170	.005022	.033455	.045537	.043256	-.004768
40	.021596	.012223	.031697	.045134	.045075	-.008273
41	.007150	.013960	.031639	.036479	.041687	-.010399
42	-.006557	.012586	.028587	.023812	.034225	-.010415
43	-.016804	.010657	.024750	.012902	.025441	-.011733
44	-.020842	.011341	.025523	.010031	.022197	-.013238
45	-.018560	.012427	.025345	.016855	.022995	-.012796
46	-.013336	.014106	.028613	.027045	.027744	-.007831
47	-.004978	.010569	.027889	.037019	.036886	.002647
48	.007029	.012826	.025083	.036153	.045546	.015611
49	.016151	.010867	.022045	.034620	.051026	.020989
50	.020405	.009994	.022898	.036008	.061859	.020991
51	.018743	.012142	.025635	.038220	.065802	.015732
52	.014252	.015579	.028242	.038743	.052974	.010469
53	.007464	.021430	.027526	.031524	.040327	.009761
54	.001421	.025611	.026453	.008584	.024250	.014962
55	-.005798	.031895	.025102	-.023321	.003617	.024214
56	-.010462	.025447	.018655	-.054785	-.008401	.024899
57	-.012543	.019370	.010533	-.060374	-.017054	.022966
58	-.014992	.014374	-.003474	-.045314	-.024144	.020068
59	-.013914	.008580	-.010965	-.040370	-.029000	.010306
60	-.014729	-.004281	-.017609	-.032944	-.037075	-.007370

RUN NO 90A 15M 6-18-63 1501-1601(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.14732 10E 01	0.93774 10E 00	0.52354 10E 00	0.37860 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.852826	.796973	.684727	.862219
2	.670459	.560746	.373155	.671848
3	.521442	.390781	.175695	.516078
4	.401498	.261393	.064455	.399931
5	.306466	.172080	.016968	.309597
6	.224010	.103733	-.031554	.232342
7	.144359	.036649	-.073394	.163243
8	.075905	-.024244	-.091261	.096056
9	.016413	-.065211	-.097369	.038359
10	-.035957	-.099118	-.084804	-.008314
11	-.070705	-.127136	-.077733	-.036275
12	-.091078	-.149013	-.077569	-.057054
13	-.108923	-.159388	-.058887	-.076242
14	-.134695	-.176079	-.034821	-.096840
15	-.166831	-.190686	-.020959	-.121491
16	-.195514	-.198247	-.037270	-.147938
17	-.217524	-.195039	-.070494	-.172215
18	-.236736	-.186079	-.090617	-.197613
19	-.253877	-.181078	-.096677	-.222682
20	-.271323	-.190896	-.093987	-.246749
21	-.285795	-.210929	-.107037	-.262325
22	-.295153	-.222049	-.137053	-.267164
23	-.293312	-.213675	-.162156	-.270050
24	-.282561	-.196374	-.168840	-.260727
25	-.264451	-.173755	-.158474	-.249139
26	-.248290	-.152795	-.131830	-.237798
27	-.229664	-.138669	-.107666	-.227497
28	-.207790	-.126728	-.103309	-.212654
29	-.175874	-.112197	-.077700	-.190600
30	-.132355	-.084992	-.047231	-.157143
31	-.089227	-.047667	-.003042	-.116917
32	-.059147	-.015177	.024724	-.091358
33	-.041560	.007384	.023506	-.077800
34	-.034189	.023997	.019244	-.074104
35	-.026450	.027239	.016800	-.073490
36	-.019081	.038220	.016821	-.067443
37	-.016478	.067932	.021012	-.062276
38	-.026203	.098552	.010189	-.060213
39	-.039624	.110204	-.018852	-.055642
40	-.049189	.104362	-.031652	-.050268
41	-.050247	.099741	-.049811	-.041463
42	-.048664	.081981	-.050525	-.035121
43	-.035988	.075837	-.038861	-.035467
44	-.015563	.072638	-.024363	-.029725
45	.005311	.054757	.012638	-.008393
46	.026966	.036311	.058049	.021120
47	.050049	.019489	.085127	.048693
48	.066735	.007547	.077147	.071888
49	.080661	-.004679	.055259	.081134
50	.088219	-.009415	.035835	.083149
51	.081520	-.011603	.018925	.074348
52	.070380	-.020956	.004682	.064602
53	.066370	-.031491	-.004229	.062427
54	.063248	-.038369	-.023491	.067698
55	.062190	-.036867	-.024608	.080579
56	.070701	-.031041	-.009218	.090582
57	.072319	-.027859	.005526	.089188
58	.072001	-.022912	.016079	.078532
59	.072949	-.021345	.017114	.072600
60	.070808	-.014887	.051875	.065816

RUN NO 90A 15M 6-18-63 1501-1601(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-01	10E-01	10E-02	10E-01
0	.007096	-.029211	-.023361	-.002474	.005010	.004593
1	.387293	-.398605	-.263440	-.047515	-.376406	.062506
2	.490723	-.579890	-.333682	.038256	-.536821	.089006
3	.271485	-.692052	-.325380	.172184	-.300024	.100482
4	.016288	-.519657	-.201776	.135018	.039051	.071719
5	.032700	-.295753	-.113760	.028821	.018415	.039593
6	.034546	-.234102	-.087785	.004654	-.023136	.032885
7-8	-.014320	-.261407	-.088299	.021948	.056215	.045427
9-11	-.023326	-.091880	-.042251	.025798	.114471	.020000
12-15	-.014237	-.051270	-.021934	-.002198	.059514	.009368
16-20	.018039	-.033653	-.016473	.005278	.020731	.006768
21-27	.005322	-.018562	-.006887	.008042	.002681	.003765
28-36	.003960	-.001192	-.003163	-.000270	.006662	.001206
37-47	.000544	-.000237	-.001757	-.001040	.002273	.000591
48-60	-.000193	-.001860	-.000891	.000539	.004389	.000582

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-02	10E-01	10E-01	10E-02	10E-02
1	.016348	-.393047	-.101213	-.082734	-.064383	.248605
2	.037490	-.872282	-.126496	-.071628	-.000259	.275234
3	.083723	-.969112	-.124516	.027404	.257902	.288016
4	.102143	-.656351	-.076546	.091707	.268544	.174936
5	.092871	-.489396	-.036974	.070952	.154485	.044692
6	.116228	-.731299	-.017508	.080704	.235451	-.036056
7-8	.114294	-.946444	-.012566	.120545	.274062	-.014835
9-11	.018572	-.131270	-.005986	.058332	.098605	-.037446
12-15	.032736	-.110062	-.004242	.017749	.054897	-.015736
16-20	.003032	-.159599	-.007078	.011194	.014521	.001880
21-27	-.000949	-.062135	-.001990	.003966	.016806	-.006461
28-36	-.000871	-.015263	-.001201	.000595	-.002100	-.000602
37-47	-.003330	-.021975	-.000487	.001972	.000325	-.001770
48-60	.000033	-.007950	-.000176	.000091	.001059	-.000936

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E 00	10E-01	10E-02
0	.013616	.004987	.015826	.057214
1	.182501	.063497	.254997	.544741
2	.247794	.107293	.382763	.652095
3	.257677	.140842	.446512	.620806
4	.167077	.101481	.338159	.385039
5	.091263	.065045	.250896	.229038
6	.071205	.061390	.288548	.186907
7-8	.072886	.047373	.355275	.185515
9-11	.036430	.028417	.208697	.096669
12-15	.020878	.020440	.144092	.058349
16-20	.016759	.013659	.113367	.043884
21-27	.008605	.008226	.081133	.022592
28-36	.005271	.004883	.043155	.013038
37-47	.003919	.003751	.033845	.007495
48-60	.002482	.002174	.023425	.005176

RUN NO 90A 15M 6-18-63 1501-1601(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.81234 10E 00	0.49575 10E 00	0.24448 10E 00	0.33337 10E 00	0.16440 10E 00	0.10033 10E 00
0	.186083	-.503067	-.771153	.064586	-.059163	.400530
1	.107396	-.124095	-.423552	-.009812	-.030050	.130777
2	-.026896	.057478	-.138826	-.038422	.042168	-.005566
3	-.098969	.044437	-.032423	.085441	.069229	-.002950
4	-.047229	.072858	.041936	.074785	.025650	-.035796
5	.050179	.054436	.040549	-.003871	-.022210	-.019178
6	.054347	.032165	.076768	-.058604	-.017713	-.032170
7	.012662	.025796	.129721	-.064445	.001900	-.053830
8	-.020145	.057984	.191998	-.041225	.043854	-.077427
9	-.084155	.099996	.208111	.085416	.070119	-.079488
10	-.030076	.071041	.182903	.026918	-.008881	-.060976
11	-.003915	.006780	.134877	-.020836	-.026131	-.003611
12	.017621	-.069463	.091886	-.015465	-.025789	.034177
13	.030036	-.067758	.098610	-.102060	-.060720	.032161
14	-.013940	.014645	.141305	-.017697	-.009907	.007336
15	-.038812	-.041440	.039398	.058051	.015705	.017686
16	.028052	-.102577	-.075605	-.048801	-.026078	.049651
17	-.001893	-.012195	-.069859	-.033313	-.019744	-.006315
18	.002387	-.035414	-.070933	-.010328	.007019	.014279
19	-.002764	.014699	-.029984	.009632	-.027758	-.029467
20	-.068801	.042290	.018621	.080696	.020051	-.039847
21	-.035630	.059537	.066552	-.007837	.001250	-.036273
22	.008716	.089236	.049622	-.104226	-.078428	-.062110
23	.003564	-.009434	-.048112	.004959	-.048224	.017985
24	.023175	-.028459	-.086440	.016277	-.039915	.030834
25	.004850	.017451	-.084343	.028554	-.025020	-.012792
26	.026604	-.018709	-.145905	.036685	-.033728	.029506
27	.044066	.004633	-.110893	.046455	-.002875	.004034
28	.094106	.024243	-.035777	-.079094	-.028221	-.034577
29	.050361	.028245	.048087	.004368	.021511	-.012540
30	-.030304	.083102	.107573	.062512	.057746	-.052594

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-01	10E-02	10E-02	10E-02
0	.007462	-.006667	-.003196	-.017126	.004793	.022207
1	.069102	-.030427	-.101691	.177006	.168289	.149256
2	.078026	-.042788	-.196497	.302175	.100105	.179876
3	.079313	-.134458	-.271209	.241677	-.019978	.305119
4	.093020	-.222739	-.223560	.082662	-.096004	.412200
5	.066493	-.166407	-.127267	.067439	-.118786	.313730
6	.028616	-.092060	-.091876	.163556	.004526	.146875
7	.075333	-.115470	-.112590	.005392	.052010	.135076
8	.142959	-.136848	-.084187	-.434554	-.060090	.166181
9-11	.250965	-.172180	-.101534	-.523257	-.290060	.241192
12-14	.076417	-.077998	-.049557	.464574	-.084181	.142227
15-21	-.009644	-.111247	-.040683	.421280	.020074	.150894
22-30	.018386	-.075865	-.027152	-.065334	-.009391	.107819

RUN NO 90A 15M 6-18-63 1501-1601(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.81234 10E 00	0.49575 10E 00	0.24448 10E 00	0.33337 10E 00	0.16440 10E 00	0.10033 10E 00
1	.012865	-.031047	-.179299	-.013586	.032322	.113557
2	.013894	.044878	-.156811	-.054533	.040881	.127672
3	-.008075	.093370	-.135335	-.022124	.035183	.142752
4	.025628	.086785	-.119181	.062599	.100671	.129251
5	.011357	.059754	-.090794	.018940	.083916	.094591
6	.016000	.018895	-.105698	.020015	.056628	.050633
7	.003843	-.048567	-.083620	-.004035	.023678	-.016442
8	-.010722	-.012092	-.073840	-.052742	.009801	.019578
9	-.036550	-.006055	-.044189	-.067339	.009848	-.003182
10	.009040	.027342	-.000999	-.041813	.028643	.002639
11	.037268	.027043	.020790	.005940	.038473	-.004246
12	.072141	.008926	.039113	.056534	.081297	-.018219
13	.026291	-.017788	.016931	.068512	.030735	-.016803
14	-.026433	-.031587	.055943	-.022375	-.051888	-.063439
15	-.042026	-.061295	.096315	.003247	-.032967	-.081995
16	-.021054	.015882	.080211	-.004713	-.038151	.003498
17	-.029153	.008116	.034255	-.053786	-.059876	.020700
18	-.022783	-.019088	.025437	.017801	-.056648	-.003290
19	-.013132	.013616	-.013508	.044635	-.050726	.019528
20	-.038287	.030191	-.023561	.006165	-.030132	.040573
21	-.088617	.037336	-.005516	-.031643	-.044634	.037390
22	-.071163	-.055705	.009856	-.010805	-.068194	-.056228
23	-.015147	-.050943	.015897	-.041818	-.034698	-.056962
24	-.033491	-.051362	-.002353	-.044717	-.014725	-.058588
25	.052304	-.047365	-.013514	.003299	.034359	-.057325
26	.081878	-.025509	-.022890	.035387	.074898	-.051221
27	.049386	-.028507	-.030909	.127482	.055203	-.045489
28	.121429	.029578	-.022810	.037160	.077640	-.025139
29	.080502	.020463	-.033672	.015863	.018443	.002366
30	.026671	-.000750	-.014086	-.020247	-.005167	.008668

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-01	10E-02	10E-02	10E-02
1	-.092923	.284111	-.049371	-.097304	.230965	.126528
2	.637489	.563258	-.092660	-.084920	.440255	.236435
3	.238925	.740479	-.131422	-.109119	.373338	.356971
4	-.358127	.800810	-.094857	.043993	.102197	.383803
5	.333574	.573017	-.042764	.251413	.149024	.251042
6	.581541	.621715	-.036153	.186750	.210759	.205382
7	.454191	.746034	-.046054	-.127700	.121077	.244271
8	-.330382	.093696	-.034418	-.690239	-.094098	.130565
9-11	-.143789	-.628086	-.039957	-.295037	-.099264	.012983
12-14	.143972	-.304237	-.018854	-.082455	.020060	.018012
15-21	.160189	-.242411	-.016622	.195762	.073432	.036072
22-30	-.256616	-.060896	-.006431	-.068836	-.057558	.018238

RUN NO 90A 15M 6-18-63 1501-1601(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.12080 10E 01	0.54626 10E 00	0.20344 10E 00	0.49477 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.430366	.193569	.182637	.652693
2	.028385	-.048745	.034508	.362453
3	-.050834	-.047132	-.031600	.192221
4	-.098605	-.009513	-.075434	.063316
5	-.044338	-.149573	-.023092	.002331
6	-.034759	-.038456	-.044004	-.091787
7	-.085671	-.084302	-.087753	-.177086
8	-.199490	-.004189	-.107417	-.244644
9	-.246026	.054937	-.197613	-.257979
10	-.185656	-.044653	-.164315	-.267930
11	-.100624	-.118967	-.152993	-.247550
12	-.021661	-.105861	-.088712	-.234455
13	-.057690	-.087873	-.092101	-.225500
14	-.195398	-.058331	-.056477	-.228287
15	-.049321	.012585	.068616	-.110146
16	.122165	-.032655	.076081	.004935
17	.105800	-.020829	-.014655	.007122
18	.128965	.042593	.065903	.014190
19	.076541	-.006453	.025560	-.026164
20	-.012472	.030462	.071659	-.056721
21	-.105242	-.092921	.107115	-.084486
22	-.055253	-.078659	-.032985	-.068839
23	.053811	.003393	.036828	.026378
24	.092772	.015262	.102036	.082304
25	.057728	-.094166	.048729	.107502
26	.075758	-.009925	.052335	.187262
27	.059250	.113116	.020308	.149475
28	.019270	-.004818	-.101651	.051553
29	-.051004	.086770	.006499	-.024780
30	-.145165	.016643	-.058292	-.067237

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E-01	10E-01	10E-02
0	.002689	.015025	.000003	.042443
1	.042209	.204438	.038875	.559228
2	.084341	.260336	.112551	.781622
3	.129446	.301935	.181809	.860316
4	.112803	.270366	.143905	.607056
5	.066359	.235027	.078727	.324456
6	.056816	.304545	.060772	.225204
7	.071119	.368239	.085287	.266378
8	.056952	.303899	.106219	.184032
9-11	.085078	.183071	.099322	.171194
12-14	.035566	.268845	.069847	.105126
15-21	.036339	.252529	.073971	.072025
22-30	.023300	.188357	.094942	.058784

RUN NO 90A 46M 6-18-63 1501-1601(EST)

GROSS STATISTICS

1 CU
UNSTABLE

WIND SPEED 5.77 M/SEC
WIND DIRECTION 226 DEG
SOLAR RAD. 0.88 LY/MIN

SIGMA A 10.3 DEG
SIGMA E 7.4 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.13254E 01	0.10943E 01	0.70889E 00	0.81207E 00
V	0.10604E 01	0.93780E 00	0.79081E 00	0.55145E 00
W	0.52416E 00	0.51855E 00	0.45776E-00	0.24172E-00
T	0.96785E-01	0.21320E-01	0.10491E-01	0.16323E-01
E	0.14550E 01	0.12765E 01	0.97874E 00	
GUSTINESS RATIOS				
U	0.19952	0.18130	0.14592	0.15618
V	0.17847	0.16801	0.15412	0.12870
W	0.12548	0.12480	0.11726	0.08521
COVARIANCES				
U,V	-0.41523E-01	0.45417E-01	0.76711E-01	0.46079E-01
U,W	-0.30259E-00	-0.26873E-00	-0.17659E-00	-0.21119E-00
U,T	-0.12399E-00	-0.68710E-01	-0.31340E-01	-0.58096E-01
V,W	-0.10492E-00	-0.11016E-00	-0.12461E-00	-0.38596E-01
V,T	0.12680E-00	0.39642E-01	0.26653E-01	0.23932E-01
W,T	-0.65413E-02	-0.66409E-02	-0.16375E-01	0.56727E-02
WE	0.29837E-01	0.79401E-02	-0.17879E-01	
NORMALIZED COVARIANCES				
U,V	-0.03502	0.04479	0.10245	0.06886
U,W	-0.36304	-0.35674	-0.31000	-0.47868
U,T	-0.34619	-0.44984	-0.36342	-0.50460
V,W	-0.14073	-0.15781	-0.20710	-0.10571
V,T	0.39578	0.28006	0.29262	0.25224
W,T	-0.02904	-0.06316	-0.23630	0.09031

RUN NO 90A 46M 6-18-63 1501-1601(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.74873 10E 00	0.56967 10E 00	0.86240 10E-01	0.60165 10E 00	0.91081 10E-01	0.69299 10E-01
0	.102243	-.309995	-.363320	-.207083	.292805	-.236332
1	.104006	-.283263	-.327238	-.176054	.250797	-.186821
2	.102789	-.241647	-.275169	-.122077	.179839	-.114617
3	.093663	-.203707	-.231479	-.073632	.123477	-.057954
4	.085911	-.178161	-.196110	-.040715	.080980	-.016686
5	.081459	-.159255	-.162292	-.021442	.046134	.020724
6	.070805	-.139503	-.137198	-.001364	.016467	.055532
7	.053656	-.114683	-.118145	.017743	-.005138	.077053
8	.033801	-.081464	-.098869	.022946	-.011433	.087498
9	.014746	-.053179	-.071916	.016324	-.011602	.090614
10	.001791	-.032029	-.044550	.007668	-.015367	.093920
11	-.009443	-.015420	-.020749	.012214	-.024853	.097594
12	-.015836	-.003937	.001570	.022002	-.030852	.097095
13	-.023015	.007507	.027232	.032981	-.032475	.090509
14	-.033077	.017417	.045553	.045483	-.037657	.085547
15	-.043256	.031958	.057885	.058328	-.040239	.075733
16	-.051402	.048444	.066904	.070662	-.042255	.059677
17	-.065427	.063995	.070203	.081628	-.041606	.043400
18	-.079283	.081006	.074781	.088460	-.040997	.032139
19	-.088480	.097507	.084626	.082160	-.042227	.027147
20	-.092643	.112684	.093682	.068438	-.038619	.017922
21	-.097625	.124164	.098284	.052478	-.033758	.006842
22	-.099460	.131585	.105814	.038192	-.022997	.000757
23	-.104201	.135176	.114339	.036509	-.017820	-.000594
24	-.107347	.133661	.120898	.039056	-.022588	-.003056
25	-.100518	.133520	.130721	.034581	-.025612	-.005719
26	-.087031	.137375	.137332	.023541	-.022503	-.013391
27	-.071952	.134959	.138154	.017328	-.014867	-.015278
28	-.055824	.126785	.131975	.012496	-.016760	-.014049
29	-.042387	.120238	.121981	.008753	-.028879	-.015702
30	-.031543	.110530	.104145	.000756	-.040362	-.022393
31	-.019866	.103000	.086951	-.006890	-.040492	-.033224
32	-.005824	.097013	.071768	-.016581	-.036605	-.047993
33	.011888	.086276	.057505	-.023556	-.036927	-.051783
34	.026723	.069028	.046744	-.026468	-.037123	-.048367
35	.035637	.048790	.039257	-.030551	-.033282	-.050823
36	.047577	.025273	.029207	-.034091	-.028735	-.055602
37	.063289	.013440	.021686	-.035582	-.027020	-.059687
38	.073495	.016203	.012026	-.034149	-.025960	-.058068
39	.074845	.017124	.007759	-.033114	-.023345	-.058438
40	.068703	.010661	.003101	-.033126	-.017239	-.054296
41	.064939	-.000059	-.004768	-.034446	-.009329	-.046925
42	.061432	-.007805	-.012022	-.030540	-.007206	-.034628
43	.061300	-.018720	-.013685	-.028175	-.009257	-.022844
44	.060433	-.025134	-.016618	-.029328	-.005671	-.013395
45	.054521	-.031069	-.020529	-.035756	.002533	-.003585
46	.047094	-.042340	-.018538	-.036361	.001673	.001980
47	.045781	-.055244	-.012173	-.031648	-.003190	.001096
48	.043343	-.064410	-.005974	-.027167	-.007959	-.002524
49	.039092	-.060582	-.006000	-.026223	-.008489	-.005863
50	.030668	-.053459	-.007128	-.018944	-.009363	-.003567
51	.021029	-.053929	-.004067	-.009556	-.007621	.001205
52	.011267	-.052412	.000794	.002769	-.012442	.002101
53	.011603	-.049468	.004714	.008508	-.017772	-.002224
54	.008217	-.044992	.004153	.009455	-.021926	-.001293
55	.000561	-.041056	.002756	.011765	-.025645	-.002950
56	-.002073	-.031182	.002605	.012022	-.026841	-.004398
57	-.006053	-.016069	-.000974	.011954	-.025905	-.006657
58	-.009868	-.009211	.003547	.016831	-.025647	-.006193
59	-.011433	-.005207	.008498	.021663	-.023348	-.001510
60	-.015195	-.004250	.011519	.029811	-.018691	.010271

RUN NO 90A 46M 6-18-63 1501-1601(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.74873 10E 00	0.56967 10E 00	0.86240 10E-01	0.60165 10E 00	0.91081 10E-01	0.69299 10E-01
1	.016822	-.033246	.000299	.030179	.026731	-.049763
2	.033842	-.051094	.006838	.041740	.032679	-.062497
3	.041893	-.055924	.009972	.037680	.036682	-.055481
4	.046585	-.056380	.010461	.026530	.043929	-.047919
5	.048174	-.060835	.013753	.014878	.050121	-.044003
6	.048055	-.069778	.018519	.014766	.058652	-.048462
7	.053502	-.075082	.019484	.028997	.059230	-.053500
8	.063647	-.070015	.021137	.041363	.053616	-.049204
9	.067659	-.061109	.020296	.038626	.051748	-.045262
10	.062931	-.055289	.017357	.030701	.051304	-.042733
11	.057124	-.043828	.008163	.019624	.060066	-.035690
12	.048656	-.033992	-.004685	.011871	.065037	-.027517
13	.040221	-.023190	-.017177	.001558	.066949	-.016749
14	.029767	-.011956	-.027164	-.010636	.069955	-.007202
15	.020447	-.003043	-.035342	-.019078	.070100	-.002701
16	.012266	.001697	-.044444	-.021339	.066295	.000571
17	.004520	-.004233	-.051247	-.022006	.059630	.011233
18	-.002662	-.005918	-.058897	-.017436	.048571	.022981
19	-.002498	-.001183	-.062723	-.016040	.037488	.036144
20	.002111	.003023	-.062805	-.010593	.028316	.048021
21	.011469	.000763	-.058900	-.001185	.027371	.053358
22	.022901	-.006613	-.053307	.005686	.029824	.046658
23	.026886	-.010653	-.050575	.011555	.028756	.038031
24	.029894	-.016018	-.050597	.016498	.020722	.033600
25	.033792	-.013166	-.048601	.016097	.009534	.035282
26	.033747	-.001336	-.044240	.017359	.001088	.035920
27	.030351	.004235	-.038227	.017553	.002030	.029762
28	.023970	.009603	-.031052	.010911	.005823	.029196
29	.011919	.013804	-.034079	.000262	.004682	.033283
30	-.000551	.017660	-.039686	-.017516	-.000436	.038846
31	-.008169	.011795	-.040366	-.027549	-.007349	.043804
32	-.009502	.001821	-.038820	-.026164	-.012504	.043289
33	-.006015	-.006234	-.036560	-.028413	-.021534	.042824
34	-.006085	-.004762	-.032984	-.024875	-.034382	.038804
35	-.013813	-.005030	-.028985	-.020049	-.040720	.036523
36	-.018353	-.000935	-.023409	-.011077	-.039233	.035704
37	-.014337	-.001682	-.010659	-.012943	-.027601	.028656
38	.001679	.002917	.001299	-.010498	-.014504	.020760
39	.016410	.002867	.008394	-.008462	-.002003	.010111
40	.023248	.002978	.021897	-.000338	.008800	-.003729
41	.026076	.002368	.034413	.007133	.017686	-.014457
42	.026955	-.002250	.046284	.012796	.029784	-.022702
43	.029254	-.009490	.062032	.015975	.036315	-.032119
44	.028456	-.006491	.077178	.021333	.035162	-.043132
45	.019610	-.001432	.085895	.028068	.032851	-.060659
46	.010287	-.000522	.088082	.040145	.029332	-.076693
47	.003854	.000201	.088008	.053012	.018519	-.087805
48	.004250	-.000124	.090942	.062177	.013834	-.094474
49	.009595	-.003936	.092047	.063100	.013821	-.100077
50	.013534	-.005329	.086098	.055432	.015462	-.098184
51	.008260	-.001137	.075686	.042458	.018425	-.088192
52	.004733	.005348	.067858	.037490	.015223	-.075056
53	.007706	.009774	.064459	.036600	.007452	-.064041
54	.006635	.013141	.057828	.031241	.001769	-.048390
55	-.001617	.010583	.047355	.025875	.000731	-.037420
56	-.008964	.009996	.034386	.010189	.003771	-.029501
57	-.016485	.009554	.018903	-.001886	.006496	-.020269
58	-.017630	.005460	.010349	-.009562	.009684	-.015224
59	-.017055	.002996	.007656	-.014384	.010772	-.017400
60	-.019007	.004004	.005190	-.015090	.006947	-.010810

RUN NO 90A 46M 6-18-63 1501-1601(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.70893 10E 00	0.79075 10E 00	0.45777 10E 00	0.10491 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.868341	.838005	.785606	.839520
2	.701691	.630611	.512177	.647090
3	.569455	.473036	.324925	.510779
4	.464387	.349993	.213018	.409094
5	.374269	.249388	.135076	.316842
6	.296486	.158089	.067823	.228670
7	.226561	.074295	.007262	.155942
8	.157175	.014538	-.041402	.100941
9	.095614	-.027384	-.073259	.054043
10	.038697	-.055192	-.101221	.005828
11	-.012762	-.088101	-.121259	-.037257
12	-.058694	-.128952	-.132811	-.076231
13	-.102583	-.156713	-.142257	-.105038
14	-.138012	-.175686	-.147561	-.122970
15	-.166268	-.195655	-.145955	-.141764
16	-.194905	-.207090	-.140496	-.150028
17	-.226025	-.217086	-.143633	-.153935
18	-.254517	-.233871	-.153947	-.158229
19	-.286177	-.250862	-.160110	-.170829
20	-.312917	-.260643	-.157657	-.181704
21	-.329303	-.264681	-.142208	-.192027
22	-.332111	-.258209	-.130810	-.203474
23	-.328573	-.246781	-.129729	-.213518
24	-.323765	-.242173	-.141202	-.219978
25	-.314305	-.232803	-.150425	-.225791
26	-.303044	-.213597	-.145377	-.226147
27	-.282116	-.183019	-.150666	-.224867
28	-.254564	-.149948	-.165399	-.220128
29	-.224155	-.125611	-.165748	-.208580
30	-.190639	-.099696	-.141021	-.183432
31	-.153867	-.062324	-.097062	-.147600
32	-.124783	-.035101	-.057842	-.110512
33	-.095615	-.010928	-.034707	-.079987
34	-.068336	.015360	-.017492	-.061108
35	-.037075	.043458	-.000742	-.043492
36	-.005318	.068792	.022841	-.032766
37	.015090	.083063	.036777	-.021792
38	.027005	.090008	.033090	-.018802
39	.025364	.101815	.032685	-.016292
40	.027907	.113747	.034387	-.009573
41	.038481	.120895	.040851	-.002384
42	.043201	.115349	.046049	-.003243
43	.042616	.093281	.040115	-.009199
44	.051572	.073894	.031479	-.017724
45	.057182	.058391	.037156	-.024820
46	.061451	.038017	.047742	-.035294
47	.063705	.021676	.058728	-.046533
48	.064876	.010867	.063543	-.048969
49	.060739	.007921	.060235	-.042649
50	.050860	.004956	.049939	-.039521
51	.044056	.002671	.049653	-.038699
52	.031131	-.010746	.052841	-.044260
53	.015952	-.029141	.052576	-.048470
54	.002162	-.043281	.042187	-.001566
55	-.007004	-.058194	.038688	.011074
56	-.012278	-.077168	.034287	.012367
57	-.017872	-.093005	.031991	.016244
58	-.026796	-.098499	.038229	.010577
59	-.035129	-.093523	.034320	.004232
60	-.033016	-.092249	.021188	-.002697

RUN NO 90A 46M 6-18-63 1501-1601(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-01	10E-02	10E-02
0	-.004681	-.030898	-.077773	.002217	.032251	.023419
1	.069367	-.363630	-.640458	-.022744	.291246	.127887
2	.255044	-.459867	-.715099	-.122462	.313622	.007958
3	.349346	-.383386	-.620489	-.219463	.307527	-.181902
4	.130901	-.147315	-.290258	-.166351	.268953	-.245882
5	-.017830	-.066571	-.148382	-.084741	.249403	-.209931
6	.010594	-.069621	-.150336	-.054655	.194683	-.198534
7-8	.024894	-.058893	-.084961	-.056004	.132704	-.127822
9-11	-.008392	-.022109	-.050015	-.076273	.113494	-.072337
12-15	-.007502	-.013722	-.048315	-.024020	.057059	-.045513
16-20	.005099	-.019989	-.021681	-.013913	.024710	-.019485
21-27	-.000242	-.006830	-.010665	-.014956	.024934	-.018967
28-36	-.002689	-.002784	-.010384	-.001217	.007893	-.009492
37-47	-.000437	-.001108	-.003609	-.002242	.004795	-.004062
48-60	.000102	-.001675	-.002813	-.001021	.001355	-.002868

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-02	10E-02	10E-02	10E-02	10E-02
1	.164537	-.751973	-.214031	.123002	.256318	.068582
2	.124602	-.817738	-.118998	.194296	.235753	-.019524
3	.116087	-.990746	.090180	.486235	.211505	-.157544
4	.088193	-.933776	.113123	.337542	.076581	-.125492
5	.078680	-.771436	.063811	.520889	.008114	-.078342
6	.080077	-.642465	.058197	.709776	.030134	-.064453
7-8	-.009027	-.309444	-.022553	.048947	.005504	-.009034
9-11	.001425	-.009094	-.011410	-.006073	.030026	-.028423
12-15	.011127	-.072516	.000761	.190606	-.001637	-.016988
16-20	.006771	-.076949	.001379	.170565	.005945	-.018925
21-27	-.003307	-.063423	-.000307	.015802	.011056	-.013777
28-36	.001101	-.000782	-.002491	.016784	.003282	-.002953
37-47	-.001495	-.003280	-.001507	.004407	.003628	-.002558
48-60	-.000370	-.002675	-.000301	-.001627	-.000112	-.000038

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E 00	10E-01	10E-02
0	.010729	.006955	.019392	.019309
1	.106036	.070995	.308895	.155360
2	.137802	.110456	.491427	.171558
3	.138737	.137649	.574123	.164426
4	.075755	.091149	.418492	.103834
5	.035990	.050986	.331763	.066693
6	.031282	.047310	.326876	.064245
7-8	.027067	.038408	.232233	.043470
9-11	.014928	.023214	.160652	.024392
12-15	.010264	.013773	.105205	.017239
16-20	.006458	.007944	.075609	.010073
21-27	.004051	.006652	.052685	.008246
28-36	.002488	.003243	.026525	.004899
37-47	.001537	.002190	.015539	.002847
48-60	.001048	.001249	.009951	.001884

RUN NO 90A 46M 6-18-63 1501-1601(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

K	U,V	U,W	U,T	V,W	V,T	W,T
	0.66931 10E 00	0.44309 10E 00	0.11512 10E 00	0.36518 10E 00	0.94876 10E-01	0.62809 10E-01
0	.068846	-.476636	-.504654	-.105692	.252240	.090316
1	-.004704	-.273731	-.344523	.063482	.114682	.213415
2	-.056230	-.042354	-.190291	.081083	.058164	.121296
3	-.036522	.065926	-.074093	.007912	.024386	.038279
4	.017230	.092376	-.027543	-.014794	.007311	-.017928
5	.002101	.096661	.023733	-.004750	.022904	-.048688
6	.007491	.089206	.060691	.002167	.004569	-.045219
7	.003512	.077427	.075487	.001488	.028733	-.062144
8	.026941	.050938	.085569	-.038359	.014119	-.059881
9	.011527	.032508	.094536	-.013231	-.048901	-.071871
10	-.003015	.049200	.099951	.018179	-.074552	-.040994
11	-.026302	.067146	.107250	-.024183	-.018261	-.038361
12	-.028947	.003673	.118561	-.041863	-.035156	.013122
13	-.061947	.007826	.129795	.023957	-.065281	.007295
14	-.033165	.014722	.109321	.046899	-.082437	.001597
15	.044609	-.059115	.105662	.003384	-.029615	.004463
16	.047123	-.037163	.084475	-.069819	.002190	-.034585
17	-.003554	.013260	.102749	-.010432	-.042[illegible]	-.065171
18	-.000576	-.020878	.115281	.045424	-.068973	-.048389
19	-.021539	-.007427	.098710	.072812	-.067371	.010255
20	-.049819	-.013115	.023879	.041570	-.058371	.031873
21	-.021533	.023595	-.001301	-.008043	-.021096	.003959
22	-.010992	.044487	-.008417	-.056041	.011401	-.009100
23	.057487	.003002	-.076719	-.104957	.048247	.022599
24	.077918	-.053512	-.129[illegible]3	-.077811	.030825	.014334
25	.078260	-.095522	-.116294	-.036576	.009311	-.003514
26	.112649	-.034896	-.046518	-.031455	-.014521	-.060070
27	.047425	.065128	-.036856	-.038954	.006463	-.109192
28	.007388	.082743	.001333	-.039600	.026488	-.079349
29	.022530	.105050	.056264	.048678	.001877	-.049091
30	-.008232	.122187	.008510	.063025	.030327	-.048288

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-01	10E-01	10E-02	10E-02	10E-02
0	-.120692	-.006749	-.002100	.033120	.029639	.012369
1	-.356606	-.060935	-.070951	.256710	.329345	.138693
2	.093584	-.114518	-.100219	.163918	.346381	.177873
3	-.059472	-.204316	-.089092	.316156	.237860	.223855
4	-.301666	-.241118	-.057131	.297495	.117041	.221536
5	-.379025	-.211516	-.052521	.022996	.098709	.199307
6	-.267340	-.178298	-.039032	.124466	.073331	.113394
7	.734215	-.190912	-.032050	-.068129	.127637	.027193
8	.710474	-.172076	-.029545	-.180357	.171903	.045164
9-11	.225690	-.109237	-.017597	-.160684	.122541	.022384
12-14	.582185	-.081026	-.013120	-.241089	.017817	-.030752
15-21	.378679	-.040860	-.006853	-.454206	.060216	-.039145
22-30	.093630	-.016668	-.005879	-.296792	.071896	-.066562

RUN NC 90A 46M 6-18-63 1501-1601(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.66931 10E 00	0.44309 10E 00	0.11512 10E 00	0.36518 10E 00	0.94876 10E-01	0.62809 10E-01
1	.125004	-.094449	-.003143	.071594	.130396	-.045290
2	.149068	-.059061	-.043611	.065113	.174276	.021401
3	.180281	-.069065	-.026725	.085545	.181348	.019882
4	.185144	-.049685	.028355	.101046	.182619	-.040217
5	.138778	-.046868	.079924	.136212	.160806	-.090660
6	.056103	-.036689	.043245	.013006	.095088	-.041313
7	.034335	-.008442	.009737	-.051729	.055730	.034004
8	-.025495	-.008201	.003354	-.059881	.038782	.053767
9	.020415	-.010166	-.021045	-.020306	.076891	.043932
10	.030997	.045712	-.026866	-.093637	.049147	.093270
11	.041832	.026963	.001919	-.060378	.023315	.038125
12	.034734	-.015364	.024914	.035474	.045531	-.024451
13	-.001275	-.016279	.038447	.063408	-.005910	-.049427
14	-.061858	-.025506	.002299	-.055087	-.015322	-.040459
15	-.123712	-.034414	.017321	-.108821	-.043816	-.033644
16	-.093731	-.007069	.010918	-.025547	-.079119	-.006585
17	-.041539	.013759	.024727	.010791	-.034737	.000752
18	-.077934	.021880	.045254	.020271	-.046837	-.012577
19	-.115920	.045949	-.006035	-.033805	-.040140	.011535
20	-.098011	.019602	-.078157	.036457	-.041988	-.007912
21	.023322	-.012851	-.095043	.028908	-.006864	.007843
22	.024703	.021887	-.109530	.071778	-.036986	.030297
23	.024905	.044432	-.099924	.090257	-.009768	.001295
24	.039229	-.005630	-.059774	-.018098	.039294	-.002626
25	.055134	-.029853	-.039995	.023608	.029786	-.044257
26	.061072	-.012264	-.042680	.052578	.000512	.006842
27	.032881	-.017557	-.002068	.051085	.004632	-.018528
28	.062712	.007776	.039096	.025647	.061060	-.044702
29	.067688	-.003130	.091048	-.005268	-.009127	-.040416
30	-.023680	.040703	.087895	-.063590	-.059836	-.033897

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-02	10E-02	10E-01	10E-02	10E-02
1	.097000	-.458531	.059955	-.011150	.374380	.004666
2	.272164	-.599158	.114354	.016713	.495327	.013994
3	.360507	-.655636	-.002339	.090125	.529654	-.005939
4	.215528	-.732417	.039311	.111106	.343972	-.077010
5	.197592	-.904348	.086207	.098369	.270684	-.121604
6	.252968	-.584509	-.083964	.093268	.278469	-.047823
7	.181693	-.113557	-.130326	.042133	.221381	.068658
8	.068643	-.107820	-.150535	-.026789	.116036	.118969
9-11	-.018189	-.338378	-.081776	-.015401	.020567	.025817
12-14	.013793	-.143345	.018535	-.007355	.031960	-.036968
15-21	.034845	-.206624	.043981	.021069	.032859	-.043119
22-30	.013072	-.188227	.018347	.014516	.005643	-.019289

RUN NC 90A 46M 6-18-63 1501-1601(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.81213 10E 00	0.55161 10E 00	0.24175 10E 00	0.16318 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.554101	.316218	.184323	.654262
2	.187538	-.044726	-.021244	.408416
3	.030703	-.053218	-.098207	.234077
4	-.055188	-.052496	-.112285	.128832
5	-.110010	-.115302	-.064515	.023663
6	-.128156	-.184514	-.108492	-.010031
7	-.115745	-.032567	-.120423	-.040868
8	-.127368	.044534	-.050490	-.077120
9	-.123362	-.090244	.004150	-.108759
10	-.142823	-.105156	-.064143	-.144933
11	-.169535	-.077938	-.050161	-.182632
12	-.139108	-.116590	-.035365	-.229838
13	-.160798	-.167913	-.037159	-.233948
14	-.154500	-.181013	-.064983	-.205916
15	-.079846	-.009792	.057206	-.212379
16	-.032450	.106184	.077675	-.161275
17	-.084234	.060952	.048777	-.162301
18	-.043767	.078792	.062648	-.158921
19	.000303	.071590	.015698	-.151049
20	.023968	.084525	-.044705	-.100494
21	-.001405	.009306	-.029867	-.037371
22	-.028634	-.046076	-.027481	.017282
23	.025293	.081911	-.020763	.050200
24	.117544	.036735	.056147	.102275
25	.196711	-.055633	.004817	.070887
26	.131834	-.041462	-.052116	-.005310
27	.018097	.035805	-.083534	.019347
28	-.045364	.001487	-.107941	-.014813
29	-.126386	-.095579	-.109142	-.070826
30	-.092049	-.097661	-.042957	.015280

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-01	10E-02
0	.033235	.011046	.006200	.040288
1	.578337	.151810	.048127	.290025
2	.882450	.301540	.075633	.287775
3	.983480	.446851	.137144	.228321
4	.755118	.335135	.156196	.131233
5	.631248	.242004	.130866	.108985
6	.587717	.368148	.132929	.095407
7	.581152	.455321	.156545	.087649
8	.472307	.339698	.129834	.075778
9-11	.329857	.222123	.103817	.042478
12-14	.243601	.212319	.112851	.031082
15-21	.180595	.222579	.085405	.024424
22-30	.110745	.154822	.105514	.021435

RUN NO 90A 15M 6-18-63 1501-1601(EST)
RUN NO 90A 46M 6-18-63 1501-1601(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.389065	.242417	.695524	.141680
1	.407322	.577664	.367978	.181762
2	.346700	.619324	.187711	.159098
3	.252736	.624378	.153507	.125588
4	.145480	.524253	.294672	.111645
5	.113959	.230890	.241284	.207428
6	.033469	.075281	.101191	.127401
7-8	.084099	.159116	.149900	.142622
9-11	.195002	.198467	.222945	.126478
12-15	.087542	.114444	.250464	.176295
16-20	.064411	.075463	.154725	.042750
21-27	.111525	.126975	.145640	.091104
28-36	.094826	.111755	.135549	.150958
37-47	.131385	.132448	.091395	.064640
48-60	.107173	.089916	.089051	.160088

301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 02	10E 00
0	.378715	.182030	.167270	.686565
1	.407485	.561422	.002415	.510449
2	.602267	.601138	.003329	.356537
3	.619428	.622270	.005033	.406936
4	.679173	.589034	.006242	.495138
5	.668433	.574629	.006453	.567317
6	.564013	.602306	.006052	.293370
7	.535844	.674885	.006349	.031241
8	.350973	.662555	.006047	.053043
9-11	.365968	.607736	.003503	.109853
12-14	.365355	.747671	.002403	.232782
15-21	.231971	.505256	.004137	.238802
22-30	.211600	.397127	.002904	.259322

RUN NO 908 46M 6-18-63 1615-17.4(EST)

GROSS STATISTICS

CLEAR
TRANSITIONAL

WIND SPEED 6.75 M/SEC
WIND DIRECTION 236 DEG
SOLAR RAD. 0.50 LY/MIN

SIGMA A 9.00 DEG
SIGMA E 6.8 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.18275E 01	0.15500E 01	0.84702E 00	0.11836E 01
V	0.10147E 01	0.95661E 00	0.84405E 00	0.49146E-00
W	0.51687E 00	0.51351E 00	0.45616E-00	0.24206E-00
T	0.93347E-01	0.63246E-02	0.28472E-02	0.47534E 02
E	0.16795E 01	0.15102E 01	0.10736E 01	
GUSTINESS RATIOS				
U	0.20027	0.18445	0.13635	0.16118
V	0.14923	0.14490	0.13611	0.10386
W	0.10651	0.10616	0.10006	0.07289
COVARIANCES				
U,V	0.87931E-01	0.51468E-01	0.13405E-01	0.24760E-01
U,W	-0.45066E-00	-0.43217E-00	-0.26657E-00	-0.34348E-00
U,T	-0.13208E-00	-0.51384E-01	-0.16229E-01	-0.43429E-01
V,W	-0.69375E-01	-0.59222E-01	-0.48840E-01	-0.15515E-01
V,T	0.44716E-01	0.34188E-02	-0.14687E-03	0.42966E-02
W,T	0.12281E-03	0.24260E-02	-0.87123E-02	0.93743E-02
WE	0.11195E-00	0.11586E-00	0.99586E-02	
NORMALIZED COVARIANCES				
U,V	0.06457	0.04227	0.01585	0.03246
U,W	-0.46369	-0.48441	-0.42885	-0.64169
U,T	-0.31979	-0.51896	-0.33046	-0.57899
V,W	-0.09580	-0.08450	-0.07871	-0.04498
V,T	0.14529	0.04395	-0.00300	0.08890
W,T	0.00056	0.04257	-0.24175	0.27636

RUN NO 908 46M 6-18-63 1615-1714(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.84567 10E 00	0.62173 10E 00	0.49110 10E-01	0.62073 10E 00	0.49031 10E-01	0.36047 10E-01
0	.015900	-.428838	-.310464	-.078494	-.003064	-.241664
1	.010390	-.396148	-.289554	-.062045	-.000329	-.147588
2	.001012	-.342095	-.232276	-.035844	.002097	-.038920
3	-.006896	-.283460	-.190137	-.011736	.009718	.019561
4	-.010898	-.229259	-.159621	.006840	.007702	.042687
5	-.014503	-.185898	-.132728	.014295	-.000310	.055360
6	-.017731	-.143836	-.110101	.021252	-.012980	.062460
7	-.012536	-.103437	-.087146	.017568	-.016935	.060705
8	-.005366	-.065457	-.062375	.009414	-.013536	.064695
9	-.001691	-.031418	-.038043	.003055	-.005810	.063417
10	.003474	-.008486	-.019013	-.003581	.000987	.054330
11	.013849	.008896	-.008548	-.005597	-.001146	.051637
12	.021552	.032736	-.002685	-.006959	-.009526	.040295
13	.024227	.056914	-.001180	-.006670	-.020748	.029677
14	.024173	.079735	-.002827	-.002670	-.026477	.024468
15	.027771	.092787	.010114	.001128	-.022892	.022154
16	.032528	.094993	.029247	.003751	-.016646	.030745
17	035818	.095435	.046084	.002920	-.007344	.033049
18	.027687	.095541	.053748	.002126	-.002383	.025935
19	.020020	.088867	.061354	-.000170	-.004228	.022949
20	.017298	.102043	.068378	-.012895	.006919	.012008
21	.012563	.106576	.082526	-.024115	.024933	.010087
22	.004726	.111512	.100246	-.028682	.041025	.011189
23	-.004623	.116208	.104736	-.028968	.051397	.007757
24	-.015521	.128619	.097033	-.021584	.053014	.012337
	-.024624	.140317	.080896	-.008357	.042601	.014119
	-.028565	.146039	.064136	-.000409	.030171	.011430
	-.026896	.140026	.056015	.004496	.021460	.009682
28	-.026727	.126980	.055012	.015176	.019917	.004153
29	-.035646	.114072	.052169	.025800	.022323	.002368
30	-.041588	.095104	.049526	.030595	.019178	-.004244
31	-.039776	.070448	.047526	.024717	.015426	-.015644
32	-.027830	.051695	.042872	.021029	.017693	-.031034
33	-.014183	.043377	.037168	.019183	.016303	-.039672
34	-.011078	.035065	.031986	.026692	.007586	-.030097
35	-.010730	.023687	.029195	.042301	-.000248	-.025733
36	-.005912	.013469	.026634	.049491	-.008062	-.020170
37	-.003820	.008333	.023422	.055367	-.014211	-.014370
38	.002047	.006111	.017477	.042356	-.024003	-.014209
39	.007299	.008504	.016884	.027265	-.037875	-.025841
40	.005425	.008218	.024768	.020037	-.044117	-.030204
41	.005514	.001217	.029688	.012988	-.042224	-.028515
42	.008329	-.009610	.032515	.007499	-.038994	-.035807
43	.009215	-.021775	.037740	-.001753	-.034489	-.053240
44	.011002	-.025430	.042568	-.006836	-.032266	-.061594
45	.010534	-.013564	.031454	-.000102	-.030628	-.066138
46	.006861	.002881	.015384	.005390	-.036786	-.073437
47	.000786	.011323	.002562	.002506	-.043357	-.063268
48	-.005516	.007469	.000829	-.000571	-.040712	-.042449
49	-.008756	.003295	.004405	-.005952	-.037020	-.024758
50	-.008163	.000654	.008275	-.013553	-.031955	-.009083
51	-.002138	.001357	.004698	-.020715	-.031066	.004362
52	.004792	.011056	-.004946	-.031077	-.025947	.011703
53	.013681	.022339	-.012153	-.033141	-.018595	.009887
54	.017699	.027011	-.010482	-.025980	-.008746	.014160
55	.010285	.018683	-.000290	-.020837	.001850	.020877
56	.001064	.005767	.012339	-.019482	.016635	.034125
57	.002641	.001924	.022675	-.017208	.023100	.038165
58	.007546	.002736	.028313	-.013372	.017323	.031277
59	.012908	-.005434	.033220	-.017894	.014204	.022536
60	.018661	-.018295	.037958	-.023579	.023561	.018187

RUN NO 90B 46M 6-18-63 1615-1714(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.84567 10E 00	0.62173 10E 00	0.49110 10E-01	0.62073 10E 00	0.49031 10E-01	0.36047 10E-01
1	.009475	-.020943	-.028240	.004681	.020626	-.022925
2	.024243	-.031304	-.044618	.013992	.024904	-.008945
3	.037781	-.035640	-.057233	.018268	.025090	.007133
4	.050410	-.040037	-.076471	.025323	.022423	.023448
5	.059359	-.045259	-.088485	.035011	.013436	.024893
6	.064735	-.049250	-.095562	.047999	.003408	.020747
7	.064012	-.054449	-.101413	.051524	-.001673	.015290
8	.055762	-.054127	-.108495	.052287	-.004808	.015117
9	.039841	-.047524	-.118796	.049057	-.007592	.022047
10	.022312	-.037052	-.125641	.046455	-.006620	.031679
11	.010802	-.026522	-.133493	.048978	-.009733	.042465
12	.001824	-.026167	-.128030	.042014	-.012903	.053821
13	-.003378	-.030488	-.113141	.018563	.001139	.062779
14	.000345	-.029186	-.103833	.002293	.016594	.063695
15	.005777	-.021210	-.097765	-.001992	.030010	.063096
16	.006861	-.005666	-.099394	.000805	.030161	.067848
17	.010349	.007299	-.100109	.006735	.027873	.067234
18	.017474	.009900	-.095779	.016775	.023420	.059008
19	.025375	.001376	-.083647	.023317	.027776	.049471
20	.033502	-.006384	-.080170	.023382	.030665	.043629
21	.037843	-.017691	-.080770	.019828	.021793	.042709
22	.039376	-.027941	-.073426	.023189	.011292	.037849
23	.036880	-.028443	-.064406	.025331	.008906	.036395
24	.029971	-.023878	-.049041	.026[illegible]	.012395	.038450
25	.027159	-.013044	-.039019	.025[illegible]	.011943	.041446
26	.022846	-.000143	-.030765	.022777	.006382	.040939
27	.023635	.010359	-.025617	.023452	-.000904	.033917
28	.031735	.013728	-.015694	.022452	.000274	.022153
29	.042796	.011510	-.003149	.023963	.009461	.006088
30	.051643	.003803	.009729	.022039	.016122	-.005004
31	.054479	-.004527	.023192	.020692	.019533	-.010113
32	.042747	-.011938	.029101	.012171	.023056	-.012666
33	.031489	-.021664	.028797	-.004618	.028721	-.021695
34	.021263	-.021750	.019563	-.016413	.034381	-.028541
35	.013110	-.017630	.013416	-.026438	.040791	-.040175
36	.006146	-.007415	.008518	-.025511	.038620	-.042974
37	-.001189	-.003281	.000207	-.012218	.028807	-.043384
38	-.005033	-.002355	-.006068	.007288	.009687	-.036841
39	-.004744	.008070	-.010045	.011749	-.005640	-.025929
40	-.003503	.011977	-.010227	.004730	-.009511	-.016064
41	-.008011	.011949	-.010290	-.001327	-.014766	-.015750
42	-.016165	.009999	-.013287	-.006649	-.024215	-.014742
43	-.029089	.012993	-.017633	-.014061	-.031417	-.013692
44	-.042742	.017837	-.017242	-.024684	-.030911	-.008277
45	-.055306	.021857	-.013094	-.033372	-.023710	-.006274
46	-.062687	.025218	-.009679	-.046329	-.014966	-.007839
47	-.069184	.025537	-.003717	-.062712	-.004803	-.017174
48	-.071689	.024921	.004785	-.062349	-.000444	-.012939
49	-.072134	.027173	.007746	-.054043	-.003763	-.004836
50	-.075367	.029749	.013612	-.048268	-.005959	.001656
51	-.074539	.031336	.018571	-.042022	-.005414	.001588
52	-.060320	.026915	.022870	-.027357	-.007993	.010350
53	-.034828	.016020	.028644	-.007920	-.008377	.015969
54	-.007357	.009107	.031917	.008427	-.005780	.011785
55	.011959	.008375	.035466	.008424	.003831	.003547
56	.024029	.010073	.034732	.009674	.014203	.008085
57	.025706	.008530	.032097	.004576	.021843	.011905
58	.023168	.006528	.028580	.006724	.015314	.007501
59	.021673	.007393	.023658	.014755	.006184	.005688
60	.025576	.007296	.024039	.014328	.008972	.008494

RUN NC 908 46M 6-18-63 1615-1714(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.84703 10E 00	0.84431 10E 00	0.45636 10E 00	0.28473 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.864488	.804108	.758765	.769743
2	.692093	.557344	.484276	.539448
3	.557320	.381238	.308507	.388038
4	.445701	.251640	.200005	.291624
5	.352144	.150892	.121201	.222706
6	.272037	.073126	.061108	.172808
7	.199929	.016651	.029105	.124776
8	.132458	-.030051	-.004073	.074977
9	.072725	-.071927	-.044926	.043902
10	.025402	-.106391	-.061018	.019861
11	-.011835	-.122607	-.068964	-.007436
12	-.048213	-.128750	-.085485	-.026930
13	-.081181	-.135952	-.109253	-.037975
14	-.109146	-.152294	-.131395	-.055417
15	-.139514	-.163742	-.152621	-.082467
16	-.169198	-.164023	-.160949	-.115244
17	-.189837	-.167550	-.156725	-.139236
18	-.200117	-.173688	-.149879	-.152604
19	-.208341	-.180894	-.158386	-.156300
20	-.218967	-.187561	-.151114	-.159799
21	-.234379	-.189645	-.155464	-.184737
22	-.257382	-.191673	-.157627	-.212156
23	-.274350	-.204353	-.164062	-.221750
24	-.279129	-.222917	-.182432	-.223361
25	-.272413	-.223465	-.187082	-.216304
26	-.260017	-.204319	-.189816	-.200464
27	-.243539	-.172837	-.182951	-.178786
28	-.226338	-.138982	-.163087	-.155716
29	-.204229	-.107022	-.142710	-.145433
30	-.175123	-.068456	-.106727	-.134132
31	-.136615	017723	-.070451	-.103316
32	-.104330	30868	-.047624	-.064423
33	-.082088	55772	-.027437	-.028816
34	-.067485	.068292	-.012670	-.030622
35	-.053768	.076386	-.003486	-.021812
36	-.042235	.073379	.002702	-.013637
37	-.030603	.048841	.010835	-.005978
38	-.013006	.015356	.024917	-.002954
39	.001559	.004175	.042931	-.003047
40	.010395	.005719	.042441	-.012023
41	.015993	.023612	.044783	-.023476
42	.021991	.044791	.061395	-.026552
43	.019937	.052841	.089866	-.030806
44	.013461	.061613	.092392	-.031774
45	.014679	.071783	.075579	-.016040
46	.013404	.068929	.067848	.010280
47	.014409	.063086	.061723	.013452
48	.013999	.055316	.055163	.001353
49	.010291	.047257	.051567	-.014096
50	.003568	.040882	.044757	-.039486
51	.000138	.030502	.031530	-.052181
52	-.008354	.021765	.010950	-.047031
53	-.015050	.008159	-.014895	-.027487
54	-.021285	-.001609	-.032176	-.027164
55	-.030856	.000643	-.038458	-.033363
56	-.038307	-.008802	-.039808	-.045478
57	-.045501	-.021949	-.037334	-.045764
58	-.048226	-.036912	-.026033	-.034081
59	-.041893	-.048954	.002770	-.032594
60	-.035178	-.065675	.022434	-.034272

RUN NO 90B 46M 6-18-63 1615-1714(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-01	10E-02	10E-02	10E-03	10E-03
0	.027960	-.052031	-.053365	-.028030	.016310	.149430
1	.391.97	-.464611	-.332161	-.526595	.042619	.657069
2	.276727	-.548494	-.309942	-.371721	-.316568	.055112
3	-.394623	-.532137	-.264586	.107801	-.257154	-.497143
4	-.912021	-.312526	-.156361	-.065888	.398260	-.516679
5	-.342067	-.183520	-.078302	-.581021	.407644	-.547716
6	.460930	-.168935	-.062091	-.446455	.049743	-.602640
7-8	.400651	-.101419	-.074058	-.203501	-.142127	-.623383
9-11	.184187	-.046595	-.029505	-.464511	.095981	-.489090
12-15	.084444	-.027100	-.018909	-.171105	-.032751	-.308531
16-20	.013893	-.015894	-.020522	-.065234	-.107377	-.280633
21-27	.021041	-.007540	-.008438	-.051755	.017485	-.181253
28-36	.032764	-.002963	-.006098	-.020878	.012036	-.109601
37-47	-.005722	-.002743	-.002644	-.011106	-.000094	-.051773
48-60	.004720	-.001528	-.001600	-.006933	-.007607	-.038125

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-02	10E-02	10E-01	10E-03	10E-03
1	.194827	-.857176	-.288869	.108711	.622312	.931016
2	.128852	-.831479	-.244563	.097347	.276746	.879901
3	.023908	-.699780	-.187148	.051990	-.062450	.433596
4	.060132	-.702529	-.077183	.042295	-.041937	-.174870
5	.112749	-.597032	-.014541	.056026	-.027309	-.194140
6	.089374	-.390825	-.026419	.048673	-.116816	-.049684
7-8	.066710	-.246920	-.009925	.001662	.319847	-.095244
9-11	-.009576	.022058	.000873	-.021364	.196832	.085804
12-15	-.013333	.008346	-.008392	.004095	.035327	-.047318
16-20	.001734	-.106878	.002962	-.004136	.068743	-.094366
21-27	-.001077	-.008332	-.002780	.004421	.005193	-.057086
28-36	-.000903	-.017048	-.002918	-.001515	.011751	-.022154
37-47	-.001228	-.001297	-.000454	-.001114	.011817	-.015432
48-60	-.000425	-.003686	.000592	-.001285	.005300	-.012483

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E 00	10E-01	10E-03
0	.017556	.004670	.022322	.049416
1	.134770	.057842	.319526	.362440
2	.152742	.095285	.502589	.394132
3	.147582	.121552	.578829	.383307
4	.086445	.087944	.382544	.234372
5	.049081	.054835	.274636	.130890
6	.044589	.052701	.274911	.131051
7-8	.035323	.051155	.223177	.131200
9-11	.018919	.027112	.162033	.083625
12-15	.011850	.017634	.111913	.056757
16-20	.008346	.012368	.080331	.045336
21-27	.004794	.007349	.049520	.029135
28-36	.003148	.004814	.035809	.018216
37-47	.001964	.002845	.018123	.012796
48-60	.001187	.001660	.012972	.009594

RUN NO 908 46M 6-18-63 1615-1714(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.76296 10E 00	0.53551 10E 00	0.75031 10E-01	0.34507 10E 00	0.48349 10E-01	0.33935 10E-01
0	.032453	-.641404	-.578811	-.044960	.088865	.276241
1	.084586	-.358121	-.452583	-.039845	.058290	.335009
2	.057606	-.156688	-.314584	-.026797	.082200	.259105
3	.001993	-.023321	-.193599	.043239	.049367	.152630
4	.008651	.062596	-.071654	.045104	.009014	.052671
5	-.020297	.122525	.007150	.020432	-.032151	-.014721
6	-.017608	.106723	.083838	-.007699	.008993	-.051766
7	-.039734	.125360	.116182	-.000865	-.008777	-.100108
8	-.001570	.121047	.137347	.040538	-.108205	-.149034
9	-.030200	.155649	.154373	-.005901	-.100495	-.167156
10	-.019847	.084275	.196402	-.064919	-.097053	-.161777
11	.030013	.048462	.193776	-.010129	-.100700	-.157649
12	.046434	.051437	.168261	-.050397	-.085503	-.153969
13	.029212	.056855	.114455	-.001402	-.047032	-.158681
14	-.005440	.053146	.098139	-.020986	.019309	-.135563
15	-.065583	.061047	.086201	-.003587	.048311	-.069667
16	-.039916	.081786	.042863	.033169	.030375	-.015523
17	.017211	.081581	.048020	.054305	.022841	-.000872
18	.034439	-.057940	.039815	-.003456	.035905	.035944
19	.006982	-.113871	.042082	-.004584	.058980	.048412
20	.002428	-.005889	.047486	-.038955	.088547	.033386
21	-.004133	.040018	.032674	-.026239	.087701	.012022
22	-.008265	.016183	-.002040	.034646	.039428	.040117
23	-.069221	-.032401	-.018077	.099612	.077888	.056152
24	-.081846	-.036902	-.024212	.111221	.073487	.046059
25	-.035626	-.032101	.004137	.035022	.038592	.012168
26	.026161	-.006600	.013420	-.005152	-.036541	.000500
27	.007125	-.019222	-.025457	-.077291	.016288	.024733
28	.016862	-.019197	-.055612	-.045869	.001986	.025866
29	.021144	-.086650	-.071639	.017766	-.083603	.031914
30	-.010438	-.058647	-.105018	.001082	-.105797	.026469

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-02	10E-02	10E-02
0	.019130	-.002189	-.062702	-.021094	-.005579	.003928
1	.099903	-.185816	-.681991	-.134244	-.020420	.162757
2	.067500	-.337282	-.852755	.068325	.098135	.288215
3	.080470	-.446488	-.888840	.091530	.206892	.340234
4	.108273	-.399805	-.625424	-.211813	.114361	.198673
5	.105218	-.343265	-.356878	-.421606	-.001615	.078036
6	.097785	-.300908	-.209423	-.514720	-.036768	.056712
7	.007384	-.208555	-.189338	-.154419	-.012579	.050265
8	-.048416	-.133775	-.173660	-.055992	.037099	.019170
9-11	.031430	-.149217	-.067957	-.260850	.007722	.007629
12-14	-.018207	-.066353	-.053122	-.008971	-.029512	-.020155
15-21	-.032104	-.068437	-.031323	.104348	.010813	-.013344
22-30	-.026448	-.058890	-.030460	-.018829	.010167	-.018493

RUN NO 908 46M 6-18-63 1615-1714(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.76296 10E 00	0.53551 10E 00	0.75031 10E-01	0.34507 10E 00	0.48349 10E-01	0.33935 10E-01
1	.041138	-.075457	-.158730	.064371	.002727	.069022
2	-.003546	-.052533	-.232858	.023812	-.013122	.120535
3	-.028136	-.074966	-.234841	.020262	-.035137	.100833
4	-.083106	-.058747	-.231617	-.044992	-.063385	.069907
5	-.125775	-.032881	-.192478	-.110707	-.074708	.053151
6	-.109059	-.045381	-.141073	-.049083	-.085127	.016915
7	-.110203	-.062661	-.095705	-.049693	-.110102	-.020889
8	-.146382	-.049204	-.074455	-.088051	-.094545	-.032244
9	-.069821	-.031503	-.033130	-.047034	.001241	-.038880
10	.024729	.021310	-.008734	.062341	.076517	.021328
11	.109049	-.018593	.064562	.088428	.078805	-.019756
12	.107954	-.028193	.105416	.063592	.065950	-.061108
13	.089109	-.003431	.101860	.080435	.046333	-.061609
14	.102628	.023708	.115123	.047058	.036865	-.042614
15	.097569	.093746	.076920	.082918	.002915	.024751
16	.065159	.059003	.068161	.043297	.017342	-.009336
17	.029232	.042477	.063752	.007494	.004683	-.007974
18	-.018568	.008815	.062237	-.049307	-.019822	-.038014
19	-.021257	-.019611	.029252	-.081338	-.027970	-.025780
20	-.001517	.002968	-.027715	-.042052	-.031267	.038181
21	.052734	-.009672	-.050853	-.014207	-.037402	.076590
22	.009954	-.015001	-.041634	-.004896	-.069175	.011736
23	-.033353	.009056	-.059996	-.044344	-.071343	-.000695
24	-.073412	.025763	-.089967	-.048721	-.087186	-.012442
25	-.041078	-.030623	-.088112	.015809	-.043025	-.027815
26	-.058951	-.027636	-.082805	-.070405	-.019855	-.012765
27	-.096682	-.027244	-.074669	-.039899	-.049508	.030909
28	-.062790	.002861	-.055378	.040178	.023822	.032406
29	-.071751	.011019	-.032556	.019339	.048520	.015745
30	.015230	-.029142	-.002321	.000665	.076350	-.038784

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-02	10E-02	10E-03
1	-.012367	-.064793	-.165392	.093531	-.046813	-.088794
2	-.194344	-.113336	-.376982	-.223680	-.061426	.241115
3	-.370517	-.142846	-.653938	-.910459	-.154968	.791472
4	-.211687	-.072598	-.513171	-.682416	-.131183	.967969
5	.082933	-.017328	-.259088	.389226	-.007518	.741014
6	.224618	-.042883	-.170697	.848667	.073564	.641674
7	.145451	-.057422	-.141885	.568336	.095038	.537261
8	.035203	-.013061	-.136829	.378318	.043064	.412556
9-11	.011703	-.044496	-.052696	.188026	-.026244	.031637
12-14	.067750	.008774	-.033923	.286127	.027331	.243882
15-21	.008167	-.019074	-.020021	.041685	-.002452	-.047105
22-30	.018751	-.019258	.009115	.083389	.002018	-.047121

RUN NC 908 46M 6-18-63 1615-1714(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.11840 10E 01	0.49164 10E 00	0.24220 10E 00	0.47548 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.626900	.189800	.262524	.747945
2	.326036	-.019734	-.018040	.524019
3	.119071	-.013927	-.052543	.349598
4	-.044532	-.040373	-.039777	.200759
5	-.140044	-.048026	-.104111	.069061
6	-.200088	-.122751	-.073532	-.050276
7	-.230259	-.090666	-.082458	-.117009
8	-.250973	-.029969	-.070014	-.175330
9	-.244651	-.016023	-.174849	-.258624
10	-.195249	-.011735	-.084055	-.338264
11	-.155698	-.140253	-.043033	-.362102
12	-.113955	-.190048	-.050693	-.351481
13	-.061711	-.086597	-.087999	-.272302
14	-.069077	-.121622	-.061309	-.198642
15	-.078213	-.076526	-.071773	-.147292
16	-.041983	-.035492	-.100203	-.091685
17	-.059644	.092205	-.061461	-.034952
18	.009012	.088599	.156172	-.011852
19	.067831	.038247	.175927	-.004538
20	.024754	.042362	-.012457	-.008859
21	-.011594	.084312	.013032	.012487
22	.018379	.038688	.044222	.020577
23	.055893	-.071894	-.004731	.053193
24	.058440	-.026179	.013358	.050643
25	.009661	.014448	.053016	.022315
26	-.015189	.043810	-.009720	-.034078
27	.020385	.101784	-.026024	-.065877
28	.025728	-.016388	-.001634	-.053276
29	.083324	.037516	.040912	-.042951
30	.081816	.012023	-.023716	.002995

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E-01	10E-01	10E-03
0	.006348	.007519	.001582	.115572
1	.087484	.146605	.064314	.845087
2	.138363	.273775	.134068	.971666
3	.183143	.360285	.190160	.984107
4	.161920	.243825	.152088	.569437
5	.122603	.179272	.128160	.238537
6	.088085	.288227	.146003	.165756
7	.059811	.322239	.122521	.201576
8	.046998	.219753	.092898	.191572
9-11	.040673	.157753	.126109	.084320
12-14	.023794	.253052	.092736	.073569
15-21	.018135	.186604	.094725	.047272
22-30	.016337	.208479	.081909	.042236

RUN NO 908 91M 6-18-63 1615-1714(EST)

GROSS STATISTICS

CLEAR
TRANSITIONAL

WIND SPEED 8.60 M/SEC
WIND DIRECTION 242 DEG
SOLAR RAD. 0.50 LY/MIN

SIGMA A 6.20 DEG
SIGMA E 4.9 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.15720E 01	0.11316E 01	0.70162E 00	0.78040E 00
V	0.78520E 00	0.75629E 00	0.68486E 00	0.36509E-00
W	0.45828E-00	0.44569E-00	0.39975E-00	0.17933E-00
T	0.72100E-01	0.11622E-01	0.10247E-01	0.71410E-02
E	0.14077E 01	0.11668E 01	0.89311E 00	
GUSTINESS RATIOS				
U	0.14579	0.12269	0.09740	0.10272
V	0.10304	0.10112	0.09623	0.07026
W	0.07872	0.07763	0.07352	0.04924
COVARIANCES				
U,V	0.10102E-00	0.49032E-01	0.41534E-01	0.42346E-01
U,W	-0.31044E-00	-0.30119E-00	-0.20316E-00	-0.20465E-00
U,T	-0.67920E-01	0.74513E-02	0.11081E-01	0.46083E-02
V,W	-0.95265E-01	-0.99220E-01	-0.90469E-01	-0.32846E-01
V,T	0.44199E-01	0.21110E-01	0.18521E-01	0.12247E-01
W,T	-0.16866E-01	-0.22743E-01	-0.24708E-01	-0.79055E-02
WE	0.23076E-00	0.15696E-00	0.79997E-01	
NORMALIZED COVARIANCES				
U,V	0.09093	0.05300	0.05992	0.07933
U,W	-0.36575	-0.42412	-0.38361	-0.54705
U,T	-0.20091	0.06497	0.13068	0.06173
V,W	-0.15881	-0.17090	-0.17290	-0.12837
V,T	0.18499	0.22516	0.22108	0.23985
W,T	-0.09240	-0.31600	-0.38605	-0.22092

RUN NO 908 91M 6-18-63 1615-1714(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.69329 10E 00	0.52964 10E 00	0.84805 10E-01	0.52333 10E 00	0.83795 10E-01	0.64015 10E-01
0	.060089	-.383482	.130992	-.172766	.220947	-.386048
1	.061343	-.343229	.131940	-.137550	.192009	-.314467
2	.053516	-.279829	.121514	-.074588	.144642	-.217725
3	.044411	-.217912	.104662	-.033623	.110666	-.147280
4	.036635	-.159421	.091807	-.010455	.083293	-.087903
5	.028181	-.115983	.078833	.012864	.054845	-.038339
6	.019573	-.083625	.038466	.029159	.029909	-.005371
7	.017014	-.060573	.021237	.042501	-.000493	.019479
8	.016473	-.038223	.006143	.049028	-.022130	.034100
9	.014990	-.016736	-.007168	.042027	-.031256	.049323
10	.011182	-.001723	-.018500	.028648	-.034520	.068241
11	.011263	.010987	-.031484	.014475	-.031765	.082114
12	.011216	.030126	-.045297	.009755	-.025092	.091825
13	.005079	.056986	-.054718	.004146	-.016574	.100208
14	-.007846	.079346	-.060444	.001864	-.007338	.096616
15	-.014503	.090798	-.064394	.002202	-.002922	.091097
16	-.018554	.096506	-.066256	.002290	.000465	.092822
17	-.019887	.103662	-.066963	.004817	-.003835	.098487
18	-.015889	.104209	-.065751	.005631	-.012107	.104054
19	-.013054	.104575	-.067774	.001157	-.018218	.102033
20	-.013127	.104860	-.070132	-.006395	-.026162	.093000
21	-.017155	.106072	-.068601	-.007691	-.036614	.084997
22	-.021953	.102715	-.063987	-.005064	-.044364	.079796
23	-.025556	.092499	-.055752	-.001593	-.050518	.074216
24	-.028175	.082976	-.050580	.006506	-.056665	.069101
25	-.025404	.076493	-.048632	.020208	-.064821	.064165
26	-.022213	.066010	-.041062	.028714	-.075363	.050012
27	-.020165	.058906	-.034100	.036394	-.083094	.036735
28	-.023856	.053123	-.030817	.041938	-.084148	.022297
29	-.030422	.043750	-.023130	.050352	-.077344	.005487
30	-.036684	.032029	-.013470	.044755	-.065856	-.011069
31	-.048456	.021583	-.007472	.032526	-.053468	-.026080
32	-.053111	.011802	-.001208	.017055	-.043604	-.035467
33	-.052075	-.000658	.008217	.012973	-.039526	-.040465
34	-.051779	-.008269	.019123	.014558	-.034485	-.046098
35	-.045822	-.006597	.029235	.004430	-.024208	-.057165
36	-.034400	.002525	.037713	-.006189	-.012435	-.069340
37	-.019211	.004208	.048888	-.009427	-.005717	-.078457
38	-.006521	-.001907	.062012	-.003251	-.005677	-.082229
39	.002834	-.004660	.065957	-.002630	-.008166	-.079171
40	.015293	-.009962	.065314	-.006429	-.010555	-.080364
41	.032002	-.014547	.069635	-.020574	-.013000	-.084637
42	.045471	-.016523	.073490	-.025062	-.016537	-.085427
43	.053457	-.018488	.073363	-.031761	-.015660	-.080789
44	.050204	-.012430	.070803	-.044509	-.009024	-.067042
45	.038430	-.003124	.065462	-.043301	.000180	-.053444
46	.029545	.001896	.054499	-.025199	.009417	-.034360
47	.020333	.008666	.040672	-.010323	.016666	-.018195
48	.005836	.020083	.029623	-.003524	.018292	-.007943
49	-.004619	.028066	.022632	.001833	.019915	.007884
50	-.007577	.028891	.015468	.010747	.026284	.020495
51	-.007067	.031793	.006915	.012048	.040975	.027215
52	-.007688	.029539	.000795	.003321	.053179	.030775
53	-.006315	.030362	-.003971	-.013895	.059577	.037306
54	-.005415	.036547	-.013502	-.034375	.059478	.042964
55	-.004045	.042257	-.025103	-.042947	.060503	.047573
56	.002623	.047121	-.036863	-.045660	.067563	.045888
57	.014311	.045211	-.039737	-.039250	.074635	.038102
58	.021547	.040262	-.035173	-.024279	.073785	.031901
59	.022246	.031846	-.026039	.000258	.070899	.036062
60	.021595	.023994	-.020302	.012464	.068331	.032202

RUN NO 90B 91M 6-18-63 1615-1714(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.69329 10E 00	0.52964 10E 00	0.84805 10E-01	0.52333 10E 00	0.83795 10E-01	0.64015 10E-01
1	.007139	-.014572	.011493	-.014559	.035648	-.035877
2	.005287	-.020715	.021656	-.029657	.046352	-.034966
3	.002603	-.015548	.027301	-.039613	.048617	-.027442
4	-.003173	-.016064	.029231	-.039986	.052149	-.025128
5	-.011159	-.019559	.028572	-.039382	.055515	-.016908
6	-.015652	-.025586	.028860	-.032528	.057502	-.004935
7	-.025595	-.033756	.032487	-.033484	.061473	-.002454
8	-.041534	-.038514	.031731	-.043575	.066152	-.003183
9	-.054075	-.042627	.031303	-.056969	.072999	-.002847
10	-.063333	-.040733	.027082	-.067509	.083097	.001828
11	-.069339	-.042385	.020876	-.065102	.087210	.006618
12	-.068206	-.050108	.017367	-.063281	.087004	.008045
13	-.068111	-.053602	.011976	-.068443	.088164	.014203
14	-.070354	-.047679	.002668	-.067812	.086163	.017250
15	-.075385	-.039930	-.007060	-.063496	.078197	.018077
16	-.074435	-.034968	-.014924	-.060886	.069117	.018961
17	-.065407	-.033113	-.016142	-.049342	.056636	.017038
18	-.051721	-.030359	-.017431	-.030334	.044299	.017453
19	-.034008	-.020411	-.021633	-.020552	.032135	.019067
20	-.014071	-.012330	-.022420	-.011350	.016008	.010945
21	.004976	-.006342	-.021839	.006131	-.005033	.007404
22	.020416	.001507	-.021320	.020297	-.025068	.008617
23	.028357	.005576	-.026665	.035114	-.047071	.016109
24	.038804	.007527	-.038475	.052871	-.059578	.017796
25	.048127	.007192	-.048355	.065685	-.066186	.017997
26	.054249	.006332	-.056545	.068447	-.070710	.020534
27	.056540	.003937	-.059659	.064924	-.070940	.019070
28	.057438	.003270	-.056345	.061779	-.065959	.015234
29	.056270	.000491	-.049550	.062076	-.059245	.008020
30	.050863	.001666	-.045444	.055816	-.048806	.000715
31	.051542	.004358	-.038160	.048712	-.043217	-.003360
32	.052814	.007052	-.030796	.047962	-.043530	-.002808
33	.050977	.002368	-.023098	.047799	-.037602	-.001963
34	.051133	.001487	-.015310	.050719	-.033853	.000501
35	.049564	.010857	-.007254	.055169	-.032006	.001544
36	.046817	.024939	-.001443	.057390	-.029939	.001479
37	.041615	.032579	.001264	.054491	-.024565	.004252
38	.036659	.031179	.003125	.049138	-.020467	.008354
39	.031951	.029732	.002329	.041022	-.018253	.012858
40	.035354	.021600	-.000019	.041822	-.015476	.012772
41	.034298	.013642	-.000857	.043218	-.012013	.006792
42	.022846	.008464	-.006590	.028004	-.001583	.005600
43	.000839	.009447	-.016116	.003724	.011912	.001645
44	-.022784	.017164	-.018187	-.020916	.028486	-.011839
45	-.042077	.019072	-.016810	-.044643	.041147	-.021527
46	-.055259	.021472	-.016586	-.072989	.049585	-.018694
47	-.068024	.017930	-.009370	-.091678	.050058	-.010560
48	-.077951	.011602	.000631	-.097701	.045375	-.001903
49	-.077649	.003289	.008284	-.083841	.033830	.003080
50	-.076326	-.007622	.017341	-.065069	.017627	.005204
51	-.070333	-.014949	.022986	-.046106	.002101	.005255
52	-.062899	-.020127	.025709	-.037835	-.007055	.002359
53	-.055772	-.023864	.032502	-.034643	-.010084	.000976
54	-.053379	-.020000	.038060	-.036191	-.008567	-.001588
55	-.046115	-.011341	.040222	-.039545	-.006689	-.005594
56	-.035452	-.000190	.038763	-.038581	-.005412	-.008451
57	-.024033	.008809	.038574	-.033397	-.002389	-.018103
58	-.010920	.013875	.038190	-.033378	.005050	-.025118
59	.002687	.010926	.041770	-.035483	.013833	-.027617
60	.016736	.005140	.045842	-.027851	.016338	-.028027

RUN NO 908 91M 6-18-63 1615-1714(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.70166 10E 00	0.68503 10E 00	0.39980 10E 00	0.10250 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.859545	.805974	.728707	.869731
2	.671734	.557650	.439697	.685685
3	.517137	.366456	.258829	.530975
4	.389639	.225802	.128286	.401767
5	.282912	.125560	.041562	.287241
6	.199677	.041915	-.003763	.192882
7	.143957	-.028050	-.014100	.113119
8	.093179	-.079957	-.026768	.048417
9	.039778	-.108057	-.045019	-.007875
10	-.007321	-.130561	-.067888	-.056858
11	-.046062	-.140311	-.089545	-.098515
12	-.077401	-.144769	-.117092	-.132840
13	-.102864	-.140610	-.140773	-.162035
14	-.124182	-.126813	-.153682	-.186343
15	-.144768	-.115693	-.164521	-.208486
16	-.168807	-.120320	-.166684	-.235677
17	-.198638	-.130605	-.161621	-.266189
18	-.215099	-.142390	-.152470	-.290268
19	-.222624	-.157996	-.138629	-.309468
20	-.223929	-.177038	-.118917	-.325357
21	-.225743	-.186056	-.115480	-.332745
22	-.224312	-.188201	-.123575	-.331631
23	-.216225	-.189717	-.122119	-.318971
24	-.203860	-.182396	-.127541	-.299831
25	-.196885	-.180288	-.125079	-.282910
26	-.188647	-.180940	-.105573	-.262810
27	-.177543	-.167533	-.085900	-.239833
28	-.171697	-.142188	-.075663	-.211031
29	-.166959	-.110437	-.058379	-.171100
30	-.150219	-.075322	-.033648	-.123991
31	-.132386	-.042087	-.014633	-.073027
32	-.126509	-.009247	-.008179	-.031780
33	-.121223	.018387	-.006671	.007094
34	-.105918	.036313	.001823	.046881
35	-.092991	.040703	.017363	.083381
36	-.086338	.042516	.019956	.114340
37	-.076466	.042181	.019457	.132082
38	-.065146	.031908	.035418	.133565
39	-.048957	.028327	.055231	.129261
40	-.035595	.018266	.080465	.125831
41	-.032576	.012738	.102633	.118324
42	-.036263	.013854	.100688	.109600
43	-.034286	.020016	.092378	.098330
44	-.026355	.023737	.070728	.084220
45	-.011125	.031292	.039017	.073013
46	-.001602	.031508	.016233	.065344
47	-.002953	.026016	.002496	.059007
48	-.011492	.030262	.007394	.046683
49	-.014306	.028907	-.001911	.031179
50	-.011368	.026881	-.020912	.019352
51	-.010370	.034210	-.035949	.010419
52	-.007965	.052668	-.035042	-.000655
53	-.007134	.066536	-.027662	-.013682
54	-.004097	.068727	-.017457	-.029936
55	.009530	.066391	-.019123	-.040095
56	.023086	.053134	-.026874	-.039681
57	.035324	.039748	-.031583	-.030457
58	.044355	.042782	-.037633	-.023388
59	.060616	.045758	-.044574	-.020462
60	.069990	.047494	-.042050	-.017666

RUN NO 908 91M 6-18-63 1615-1714(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-01	10E-02	10E-02
0	.004817	-.034325	.001704	-.000123	.006209	.000578
1	.092692	-.267844	.041773	-.028577	.218986	-.034375
2	.128063	-.327132	.212632	-.058702	.300788	-.207698
3	.090226	-.377390	.356055	-.058542	.243966	-.411918
4	.012683	-.268892	.214324	-.034226	.126633	-.327265
5	.034647	-.144309	.103360	-.068325	.133549	-.194315
6	.034220	-.096662	.087546	-.104335	.191460	-.178735
7-8	-.000298	-.077816	.036466	-.073303	.151462	-.139692
9-11	.016900	-.063132	.018410	-.058057	.046887	-.087527
12-15	.004804	-.035843	.008716	-.017640	.014809	-.057881
16-20	.001663	-.014052	-.003912	-.016346	.019967	-.030735
21-27	-.001258	-.005978	-.001420	-.013727	.015064	-.019753
28-36	.000243	-.005080	-.001176	-.005918	.006325	-.013892
37-47	-.001140	-.003287	-.000983	-.001183	.003684	-.008175
48-60	-.000916	-.001518	-.001497	-.000033	.000595	-.003527

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-02	10E-02	10E-01	10E-02	10E-03
1	-.020644	-.634777	-.119307	.005904	.071675	.522157
2	-.135135	-.880796	.009861	-.100567	.209254	.233381
3	-.204817	-.799584	.125983	-.172906	.323856	-.117812
4	-.050508	-.366309	.117400	-.066948	.179414	-.322013
5	.060689	-.114786	.042665	.012534	-.003772	-.350990
6	.074272	.130487	.009519	.025338	-.048141	-.289213
7-8	.033758	.108597	.029256	.001055	.007699	-.271624
9-11	.004956	-.041162	-.007142	-.013080	.025896	-.136095
12-15	.004686	-.049705	.009351	-.010438	.020595	-.189668
16-20	.000519	-.044442	.003550	-.003460	.009520	-.112417
21-27	.002704	-.028135	-.000528	.003475	.007331	-.047775
28-36	.000132	-.018694	-.000050	.000453	.004650	-.080853
37-47	.002008	.005019	-.000102	.000382	.002028	-.022157
48-60	-.000152	.004259	.000226	-.000791	.000464	-.005748

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E-01	10E-01	10E-02
0	.009785	.024248	.018344	.006748
1	.098520	.438451	.197138	.095071
2	.114785	.726661	.328862	.163373
3	.110519	.901889	.448818	.205011
4	.075067	.677066	.356147	.126753
5	.050021	.473972	.261681	.059445
6	.037943	.489827	.237038	.057519
7-8	.029508	.458457	.185683	.050201
9-11	.020600	.236381	.157668	.028509
12-15	.011936	.145697	.123038	.015460
16-20	.007021	.096634	.070680	.009307
21-27	.003755	.063388	.043825	.005662
28-36	.002827	.032334	.034576	.003506
37-47	.001473	.022560	.021134	.001997
48-60	.001001	.014235	.013442	.001187

RUN NO 908 91M 6-18-63 1615-1714(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.53383 10E 00	0.37403 10E 00	0.74672 10E-01	0.25572 10E 00	0.51051 10E-01	0.35769 10E-01
0	.079325	-.547142	.061714	-.128448	.239889	-.221013
1	.020582	-.297377	-.018984	.014112	.066052	.049454
2	-.006080	-.069502	-.069020	-.023047	.006888	.071632
3	-.033913	-.019465	-.019759	.034200	-.036702	-.016698
4	.017032	.037609	.031755	-.038923	-.054814	-.071588
5	.013062	.121233	-.022138	-.045113	-.002360	.011674
6	.041167	.111354	-.068762	-.008683	.021432	.041400
7	.017922	.057259	-.054374	.057053	-.075565	.022618
8	.028808	.032778	-.071681	.021651	-.117395	.080194
9	.073587	-.003910	-.025584	-.030606	-.047118	.037067
10	.008752	.047861	.028152	.002191	-.018557	.013077
11	-.018144	.002600	.069076	.063795	-.007866	-.044155
12	.006248	.029970	.032551	-.009434	.013322	.021626
13	-.013615	.061322	.030933	-.074531	-.011840	-.038653
14	.017288	.061193	.035704	.011196	.027668	-.049264
15	.030374	.111694	-.012383	-.006189	.093607	-.007356
16	-.033980	.185350	-.050100	.031488	.008145	.061330
17	-.097111	.165209	-.034001	.052439	-.018875	.057043
18	-.047560	.064367	.056008	-.027372	.042639	-.051914
19	-.058983	-.023789	.092240	.046521	.074987	-.062958
20	-.123975	.001759	.005634	.077156	.060467	.001993
21	-.156776	.049409	-.032982	.070646	.045168	-.000848
22	-.078225	-.029264	-.008977	.020436	.018079	-.073159
23	-.031432	-.015569	.019344	.059079	-.024311	-.015866
24	.065972	-.039373	.078316	-.012867	-.038479	.004011
25	.087374	-.118215	.055920	-.017807	-.013639	-.054247
26	.038669	-.031096	-.046816	-.049227	-.016493	.018499
27	.056705	-.053619	-.041352	-.065150	-.056526	.060297
28	.082331	-.100706	.022786	-.020323	-.003976	.024195
29	.089174	-.096969	.040695	-.026871	.022623	-.014503
30	.058971	-.112153	.006388	-.035590	-.066530	-.031357

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-02	10E-02	10E-03
0	.008499	.000225	-.028025	-.006197	.002603	.031994
1	.112509	-.149667	-.141422	-.288575	-.021427	.198306
2	.046832	-.211989	-.078506	-.207238	.019384	-.040348
3	-.066065	-.175045	-.004397	-.052399	.125211	-.323322
4	-.019483	-.147672	.065441	-.200491	.142311	-.363131
5	.020505	-.223665	.106815	-.151377	.087001	-.357333
6	-.011380	-.225950	.058415	.090325	.053944	-.047720
7	.047663	-.143220	-.060797	.074418	.021521	.401795
8	.061663	-.095707	-.119949	.010730	.042734	.302538
9-11	.019285	-.069208	.021142	-.107409	.094585	-.215350
12-14	.048256	-.065611	.085341	-.404796	.058254	-.605932
15-21	.010714	-.063152	.052646	.005016	.031410	-.646302
22-30	.008875	-.017683	.012746	-.299604	.040910	-.477424

RUN NO 90B 91M 6-18-63 1615-1714(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.53383 10E 00	0.37403 10E 00	0.74672 10E-01	0.25572 10E 00	0.51051 10E-01	0.35769 10E-01
1	-.045867	-.048685	.015034	-.068398	.111965	.017442
2	.009402	-.017543	-.032256	.047836	.055284	.020916
3	.065614	-.005772	-.027316	.082893	.019623	.029918
4	.032870	.038851	.032840	.013453	.066759	-.011287
5	.00374	.020914	.073178	-.057836	.068289	-.037318
6	.066022	.034750	.136851	-.008011	.046638	-.082007
7	.053709	.031859	.119336	.012884	.072697	-.053085
8	.076474	.005242	.049555	.067380	-.010210	-.022627
9	.006780	.004244	.009884	.029160	-.051623	-.021686
10	-.030126	.034069	.029538	.015107	.030643	-.008909
11	-.045548	.046314	-.049451	.073030	-.048842	.053206
12	-.043851	-.017909	-.029918	.068134	-.035122	.086880
13	.015577	-.012100	-.021399	-.003759	.005083	.011078
14	-.021478	-.052350	-.039351	.013786	-.063771	-.043454
15	-.047304	-.049461	-.053418	-.020675	-.065227	-.110239
16	-.041142	-.052093	.011070	-.072223	-.006046	-.083186
17	-.042584	-.007043	.001988	-.053350	-.050874	-.009318
18	-.007128	.017419	-.056626	.004718	-.018068	.004123
19	-.063872	-.013963	-.102242	-.037034	.075451	.069033
20	-.051634	-.033682	-.137484	.001931	.091590	.069925
21	-.004518	-.004485	-.154195	-.051410	.072799	.105573
22	.099008	-.025294	-.134888	-.042767	.033622	.067058
23	.047814	-.040410	-.025734	-.075130	.034432	-.043596
24	.057015	-.031715	.050386	-.010569	-.082317	-.057763
25	-.014417	.012853	.054350	-.040636	-.038754	-.052275
26	-.003557	.033136	-.014835	.013957	-.079144	-.034538
27	-.020698	.066880	-.024921	-.017930	-.076455	.032912
28	-.040247	.024248	-.000173	.037617	-.014820	.038236
29	-.030071	-.008429	-.032050	-.019066	.038522	.068024
30	.016571	-.047526	-.031052	-.045145	.022522	.042477

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-02	10E-02	10E-02	10E-02	10E-02
1	-.000245	-.004999	-.023015	.226299	.022201	-.034312
2	.065305	.355613	.185027	.382360	.052752	-.035037
3	.115237	.383049	.185114	.116204	.130713	-.016872
4	.049465	-.022064	.058976	-.213136	.130604	-.016722
5	-.007668	-.298666	.003286	-.102304	.031308	-.021787
6	-.022309	-.247377	-.161309	.196266	.032180	.064282
7	-.059349	.005375	-.208042	.351459	.034671	.100639
8	-.025013	-.168961	-.078383	.161823	-.019113	.010390
9-11	.021466	-.330379	.011355	.068875	.030613	.003515
12-14	-.060000	-.070523	.035781	-.375035	.057084	-.020305
15-21	-.031811	-.070347	.029152	-.277327	.049593	.002011
22-30	-.001349	-.127211	.000907	-.071168	-.007374	.008103

RUN NO 908 91M 6-18-63 [illegible] EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.78082 10E 00	0.36497 10E 00	0.17917 10E 00	0.71411 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.550244	.146554	.175338	.418210
2	.242927	-.047052	.011082	.013777
3	.073850	-.048936	-.049948	.017609
4	-.027714	-.093491	.014705	.021048
5	-.083080	-.084367	-.109027	-.019055
6	-.068942	-.022283	-.131194	-.040999
7	-.098429	-.139276	-.066339	-.032187
8	-.116347	-.066130	-.007769	-.028390
9	-.152299	.014651	.023093	-.043817
10	-.167573	-.127372	-.047664	-.001551
11	-.146961	-.215324	.041260	.002935
12	-.160336	-.073707	-.104426	-.113315
13	-.122810	-.045273	-.024700	-.198806
14	-.117385	.007014	-.039885	-.128881
15	-.130087	.050863	-.133979	-.077578
16	-.138037	.107376	-.183395	-.075768
17	-.123994	.065432	-.164347	.013171
18	-.036221	.133651	-.015186	.082939
19	.041930	.021669	.043419	.010705
20	.040893	-.003015	-.004466	-.067625
21	.050059	.030089	-.066418	-.040951
22	.054416	-.029840	.029201	.008621
23	.056393	-.079394	.005804	-.053516
24	.046844	-.018568	-.049182	-.091238
25	.016568	-.012878	.125657	-.041030
26	-.002649	.020599	.043550	-.042340
27	.028212	.044536	.048599	-.032495
28	.063496	-.082190	.013484	.086755
29	.050393	-.041164	.015451	.095324
30	-.009370	-.150575	.084600	.007851

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-01	10E-03
0	.074341	.002505	.003821	.114915
1	.712937	.047892	.081236	.644737
2	.932953	.125277	.101925	.582477
3	.984115	.250259	.086867	.550196
4	.686609	.238681	.076348	.395827
5	.580204	.126444	.112514	.342619
6	.551535	.135859	.124378	.480637
7	.439251	.217791	.089755	.492374
8	.412732	.217273	.063777	.313219
9-11	.327095	.144986	.058980	.328815
12-14	.194385	.183661	.083359	.315048
15-[illegible]	.159669	.153520	.070592	.250626
[illegible]	.132085	.152214	.079983	.124436

RUN NO 90B 46M 6-18-63 1615-1714(EST)
RUN NO 90B 91M 6-18-63 1615-1714(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.570848	.074211	.591739	.177834
1	.457791	.448953	.514427	.274398
2	.324759	.425709	.446046	.282753
3	.263623	.380970	.415259	.241443
4	.274131	.368464	.382321	.224304
5	.232085	.381643	.307228	.287934
6	.083705	.300576	.318368	.291743
7-8	.056070	.296147	.191076	.192496
9-11	.195457	.226280	.182347	.114290
12-15	.101269	.069358	.192093	.078484
16-20	.069806	.135710	.125896	.092311
21-27	.112335	.089584	.182605	.092926
28-36	.086165	.088653	.086040	.112717
37-47	.104680	.087164	.109515	.121645
48-60	.149613	.105502	.089910	.094837

301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.908775	.622954	.287857	.856502
1	.791956	.212805	.813458	.482192
2	.695776	.346254	.792060	.309132
3	.687253	.458740	.698241	.244251
4	.740343	.513700	.592116	.317892
5	.810708	.363319	.598281	.120589
6	.656261	.373413	.559697	.263759
7	.426185	.489022	.474798	.339065
8	.571139	.592481	.503909	.326002
9-11	.413724	.527861	.538382	.411994
12-14	.261482	.415280	.354186	.472089
15-21	.341864	.293313	.365270	.270823
22-30	.279991	.241192	.422115	.190432

RUN NO 90C 15M 6-18-63 1721-1836(EST)

GROSS STATISTICS

CLEAR
TRANSITIONAL

WIND SPEED 4.84 M/SEC
WIND DIRECTION 237 DEG
SOLAR RAD. 0.22 LY/MIN

SIGMA A 10.9 DEG
SIGMA E 7.5 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.13780E 01	0.11451E 01	0.80530E 00	0.75942E 00
V	0.73502E 00	0.70700E 00	0.65231E 00	0.30318E-00
W	0.31513E-00	0.30597E-00	0.29408E-00	0.95614E-01
T	0.23112E-00	0.32441E-02	0.25160E-02	0.17877E-02
E	0.12141E 01	0.10790E 01	0.87585E 00	
GUSTINESS RATIOS				
U	0.24254	0.22109	0.18541	0.18005
V	0.17714	0.17373	0.16687	0.11376
W	0.11598	0.11429	0.11204	0.06389
COVARIANCES				
U,V	0.11542E-00	0.96185E-01	0.50909E-01	0.89129E-01
U,W	-0.19347E-00	-0.18347E-00	-0.14724E-00	-0.10960E-00
U,T	0.10775E-00	-0.16091E-01	-0.13135E-01	-0.88734E-02
V,W	0.31281E-01	0.21148E-01	0.26541E-01	0.11829E-01
V,T	-0.23099E-01	0.19070E-01	0.17793E-01	0.82560E-02
W,T	-0.16180E-01	-0.23486E-02	-0.31500E-02	0.56873E-03
WE	0.69731E-01	0.74506E-01	0.56818E-01	
NORMALIZED COVARIANCES				
U,V	0.11469	0.10690	0.07024	0.18575
U,W	-0.29360	-0.30996	-0.30256	-0.40672
U,T	0.19093	-0.26401	-0.29182	-0.24083
V,W	0.06500	0.04547	0.06060	0.06947
V,T	-0.05604	0.39820	0.43922	0.35463
W,T	-0.05995	-0.07455	-0.11580	0.04350

RUN NO 90C 15M 6-18-63 1721-1836(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.72486 10E 00	0.48677 10E 00	0.45020 10E-01	0.43803 10E 00	0.40512 10E-01	0.27205 10E-01
0	.070092	-.302508	-.291749	.060387	.439393	-.115746
1	.066235	-.273188	-.230947	.051265	.359166	-.051516
2	.054095	-.213580	-.159363	.038684	.247127	.009087
3	.046226	-.149692	-.122115	.035313	.163493	.030126
4	.042899	-.101454	-.100835	.042829	.099732	.035826
5	.040940	-.063120	-.083779	.038967	.054189	.039821
6	.043986	-.035065	-.062462	.027955	.012612	.029174
7	.046672	-.009068	-.039378	.013069	-.023975	.018205
8	.044910	.005216	-.024356	.006507	-.042760	.016975
9	.043950	.015640	-.010562	.006652	-.053904	.029626
10	.039316	.025119	-.004275	.002070	-.052467	.033565
11	.025220	.032614	-.001555	-.001818	-.052730	.027933
12	.008966	.035794	.002712	-.013005	-.058116	.017144
13	-.002548	.043830	.009511	-.020326	-.069892	.005534
14	-.011971	.048055	.017434	-.021996	-.076278	.001237
15	-.024464	.059329	.016741	-.021103	-.072238	-.001784
16	-.040772	.068378	.019829	-.018990	-.072148	-.006034
17	-.054310	.070351	.028935	-.020526	-.073215	-.007155
18	-.050935	.071741	.043371	-.020748	-.078758	-.008806
19	-.039664	.072527	.063225	-.028522	-.085150	-.003757
20	-.029855	.071082	.079081	-.027184	-.086237	.004298
21	-.023906	.072941	.088225	-.024718	-.083279	.002489
22	-.024142	.072698	.092071	-.015730	-.084446	-.007149
23	-.026015	.074831	.090881	-.015367	-.084854	-.010882
24	-.025509	.081471	.091177	-.030476	-.082592	-.013861
25	-.022276	.080400	.085143	-.035750	-.074211	-.012392
26	-.013784	.071002	.081145	-.040192	-.068625	-.016530
27	-.007120	.053340	.079846	-.041489	-.060267	-.015545
28	-.003477	.038141	.074163	-.039602	-.056291	-.013175
29	-.004271	.024214	.067782	-.041606	-.055470	-.010304
30	-.004978	.018348	.059237	-.038388	-.045173	-.004477
31	-.004213	.018336	.043331	-.038167	-.020715	-.010299
32	-.008194	.016416	.033548	-.031655	.000422	-.016043
33	-.012943	.004446	.029827	-.015108	.017374	-.007009
34	-.020687	.001030	.020140	-.002565	.035402	-.008357
35	-.024983	-.000076	.012293	.000746	.040665	-.015981
36	-.031623	.002751	.006160	.007713	.043080	-.013148
37	-.036583	.002883	-.002076	.021603	.049799	-.005949
38	-.037566	-.002317	-.004974	.038715	.048897	.006733
39	-.038705	-.003823	-.004887	.049329	.049732	-.003733
40	-.041785	-.006389	-.005303	.050184	.050795	-.013195
41	-.039333	-.013971	-.006637	.044315	.048601	-.017499
42	-.032072	-.022736	-.012119	.025639	.052173	-.022762
43	-.024516	-.035892	-.017168	.013743	.051531	-.008481
44	-.022539	-.038647	-.017169	.022690	.052741	.010510
45	-.021704	-.037733	-.018660	.033193	.051201	.014361
46	-.020449	-.034091	-.017048	.036264	.051545	.005518
47	-.021670	-.032215	-.020780	.025391	.054452	.002284
48	-.019993	-.030016	-.020261	.014606	.056281	.000138
49	-.019787	-.021207	-.019542	.010845	.056274	.008546
50	-.020946	-.007737	-.024147	.008372	.050674	.003294
51	-.019024	.002461	-.022211	.010141	.038675	.006569
52	-.014878	.002243	-.015475	.004902	.027756	.013649
53	-.008945	-.001593	-.007201	-.004497	.011975	.014536
54	-.003752	-.006293	-.002123	-.000761	-.006270	.008025
55	-.002991	-.004862	-.001266	.003089	-.020319	-.003023
56	-.003678	-.001114	.000106	-.003754	-.028799	-.015642
57	-.009772	-.005408	.005322	-.008035	-.029456	-.019942
58	-.008729	-.005793	.012255	-.007861	-.029134	-.024220
59	.004111	-.004496	.021556	.001092	-.037599	-.023051
60	.015478	-.003088	.028921	.004921	-.046778	-.012295

RUN NO 90C 15M 6-18-63 1721-1836(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.72486 10E 00	0.48677 10E 00	0.45020 10E-01	0.43803 10E 00	0.40512 10E-01	0.27205 10E-01
1	.003888	-.039184	-.011525	.013220	.052502	-.046631
2	.003102	-.047577	-.013950	.013596	.066838	-.042052
3	-.008325	-.047182	-.024902	.001665	.067314	-.030812
4	-.011262	-.044027	-.035188	-.005486	.065334	-.020591
5	-.009128	-.033506	-.045037	-.010601	.063697	-.001509
6	-.011570	-.032912	-.051834	-.014125	.062746	.003795
7	-.018206	-.033408	-.056883	-.012066	.054473	.003172
8	-.021692	-.031651	-.057779	-.014356	.044260	.005726
9	-.026131	-.032998	-.055993	-.009989	.027113	.009676
10	-.025673	-.030150	-.055292	-.007395	.011278	.017423
11	-.017452	-.014256	-.059104	-.016006	.009342	.030420
12	-.011782	-.004203	-.063491	-.022701	.016699	.040662
13	-.010617	-.002167	-.061535	-.027245	.030781	.035682
14	-.010195	.002330	-.057341	-.033389	.036389	.034158
15	-.014245	.005156	-.056910	-.041075	.030679	.037725
16	-.016745	.012423	-.050112	-.038378	.029183	.037779
17	-.013870	.009276	-.042468	-.017562	.029403	.015924
18	-.011033	-.001685	-.031072	.001917	.028179	-.011319
19	-.015164	-.012034	-.022944	.004813	.023971	-.021825
20	-.027543	-.010411	-.019111	-.004681	.018259	-.012956
21	-.037935	-.015128	-.012375	-.012089	.011320	-.002055
22	-.043372	-.024602	-.006348	-.014788	.001861	-.005206
23	-.043938	-.023659	-.001727	-.011053	-.011034	-.011016
24	-.037002	-.022491	.004832	-.013595	-.019271	-.013893
25	-.034912	-.014588	.007538	-.010807	-.028427	-.007409
26	-.031228	-.004081	.006383	-.013880	-.039469	.000215
27	-.028251	.000114	.007584	-.007551	-.046483	.000715
28	-.022936	.002395	.010630	.003024	-.049488	-.009123
29	-.017964	.005763	.016650	.006558	-.056238	-.013690
30	-.018441	.002422	.026812	-.005038	-.054094	-.009687
31	-.016219	-.003509	.032161	-.013783	-.049828	-.005266
32	-.013247	-.001021	.031372	-.019314	-.049323	-.005777
33	-.011940	.005263	.022601	-.010887	-.053179	-.007408
34	-.015060	.008175	.018966	.003318	-.057956	.001244
35	-.010897	.005333	.020816	.014792	-.059510	.002805
36	-.002890	.000418	.021229	.016959	-.051816	.000305
37	.007037	-.003835	.021015	.017033	-.037899	.000265
38	.014958	-.007072	.023710	.007003	-.021653	.002324
39	.017515	-.014929	.024544	-.009848	-.010390	.004264
40	.014182	-.017057	.022009	-.020867	-.004171	.006805
41	.009995	-.008532	.018376	-.025542	.003491	.015548
42	.006366	.008690	.011543	-.024000	.013455	.026526
43	.013913	.017952	.010261	-.011491	.018365	.016649
44	.021364	.023820	.008184	-.004301	.024496	.004492
45	.027449	.021856	.003674	.000154	.033885	.002644
46	.031403	-.022116	.002467	-.002429	.043729	.009853
47	.035250	.015883	.002014	-.001031	.049715	.010493
48	.038274	.016500	-.003214	.006335	.055120	.007521
49	.039107	.022443	-.008204	.014559	.053004	.005060
50	.039602	.027310	-.008316	.019178	.051140	-.000246
51	.041293	.019985	-.001839	.029472	.049599	-.008721
52	.042750	.004434	.001487	.037981	.046826	-.013168
53	.044272	-.002021	.004135	.041011	.047168	-.010912
54	.046872	.011522	-.007125	.041615	.042511	.006007
55	.049107	.025274	-.012222	.042530	.036939	.016218
56	.046386	.031333	-.012247	.042739	.033568	.017296
57	.041195	.028952	-.008940	.035119	.035315	.017649
58	.031494	.020066	-.007191	.031353	.030857	.003046
59	.020841	.010224	-.004729	.038442	.018002	-.017432
60	.013040	.003488	-.003157	.036706	.009640	-.012342

RUN NO 90C 15M 6-18-63 1721-1836(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

N	U	V	W	T
	0.80553 10E 00	0.65228 10E 00	0.29415 10E 00	0.25162 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.838102	.776632	.625329	.760301
2	.643792	.510999	.291296	.504611
3	.495141	.326919	.114008	.354084
4	.393931	.198310	.041300	.256208
5	.317825	.108027	-.018028	.186204
6	.247983	.031925	-.035223	.127915
7	.180814	-.024839	-.061250	.069524
8	.119177	-.065532	-.066928	.029627
9	.058570	-.093008	-.091387	-.002825
10	.002528	-.094139	-.093451	-.023265
11	-.036152	-.102675	-.088133	-.035055
12	-.066982	-.115110	-.083225	-.050069
13	-.096489	-.128642	-.073535	-.073288
14	-.129427	-.133218	-.073105	-.100158
15	-.155052	-.127186	-.076842	-.115573
16	-.185910	-.127241	-.085720	-.129344
17	-.213972	-.138360	-.090426	-.148710
18	-.232960	-.158240	-.087350	-.176963
19	-.258846	-.169110	-.097225	-.208729
20	-.279106	-.166522	-.102857	-.231795
21	-.292641	-.160415	-.094875	-.238917
22	-.308077	-.157991	-.075528	-.231316
23	-.313234	-.164920	-.066091	-.225932
24	-.306470	-.169422	-.077718	-.224861
25	-.291002	-.163948	-.091579	-.207836
26	-.270568	-.163559	-.081322	-.191553
27	-.245139	-.148904	-.079284	-.170712
28	-.215148	-.136386	-.074708	-.148878
29	-.183032	-.127172	-.069041	-.135967
30	-.148219	-.100085	-.068258	-.115253
31	-.114640	-.052093	-.033131	-.076999
32	-.093161	-.019683	-.003202	-.050827
33	-.077463	.003159	.020348	-.030455
34	-.067512	.026515	.047457	-.009547
35	-.054881	.034703	.056114	.001205
36	-.041506	.041988	.045831	.004534
37	-.032957	.046145	.019639	.022273
38	-.020766	.046340	.003906	.027959
39	-.004501	.041181	.014450	.045070
40	.009979	.036954	.017605	.054262
41	.026129	.032903	.021238	.062288
42	.046310	.031158	.032359	.075621
43	.055269	.025692	.032393	.066123
44	.053699	.033494	.025848	.051340
45	.048968	.050228	.041840	.039626
46	.049009	.055776	.056634	.043203
47	.051234	.056678	.056603	.052878
48	.054742	.058140	.038458	.053531
49	.047200	.053952	.020951	.045879
50	.039269	.046026	.013284	.039950
51	.026541	.035984	-.008903	.026560
52	.017599	.018437	-.034713	-.000856
53	.012173	.002254	-.042616	-.023035
54	.004615	-.007763	-.031161	-.028576
55	.002391	-.012360	-.007334	-.033026
56	.001770	-.015989	.011988	-.036703
57	-.004398	-.014400	.024579	-.038289
58	-.007407	-.017946	.042723	-.039574
59	-.007523	-.019631	.054608	-.040630
60	-.009291	-.013067	.043731	-.051010

RUN NO 90C 15M 6-18-63 1721-1836(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-02	10E-02	10E-03
0	.011425	-.009804	-.016123	-.013176	.008155	.025502
1	.155452	-.131494	-.167889	.231134	.084313	.198158
2	.148356	-.210237	-.217189	.668123	.181312	.164221
3	.116381	-.251797	-.204268	.765501	.257829	.029723
4	.086950	-.174946	-.095117	.211437	.182604	-.106585
5	.021248	-.113018	-.045683	.116127	.126221	-.153289
6	-.045628	-.093131	-.059679	.290188	.129821	-.184967
7-8	-.027546	-.089210	-.068776	-.013906	.111049	-.188420
9-11	.016447	-.052305	-.032127	.012337	.070356	-.136403
12-15	.010409	-.025787	-.022491	.000864	.037708	-.146208
16-20	.006711	-.015111	-.018184	-.011688	.021006	-.145714
21-27	.003170	-.006934	-.015896	.077089	.017815	-.064713
28-36	.000288	-.001264	-.008859	.013327	.008320	-.070121
37-47	-.000348	-.000465	-.005468	-.000151	.005503	-.036880
48-60	-.000657	-.000813	-.002272	.002691	.002373	-.020491

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-02	10E-02	10E-02	10E-02	10E-03
1	-.126244	-.407715	-.069151	-.479613	-.001418	.108530
2	-.083862	-.398880	-.101464	-.343451	.055438	.117944
3	-.001358	-.321498	-.103765	-.209885	.100304	.174214
4	.011616	-.342355	-.048114	-.071859	.040934	.082030
5	-.017757	-.395496	-.011413	.068545	.007319	-.111532
6	-.025474	-.468893	-.000719	.067239	.034036	-.208874
7-8	-.002879	-.321039	.002128	.126237	.043820	-.225166
9-11	.015088	-.039288	-.003867	-.042730	.025351	-.043174
12-15	.001546	-.147833	.003701	.113540	.004822	-.109043
16-20	-.001388	-.111999	.001372	.013998	.010027	-.078409
21-27	.006340	-.033612	-.001107	.038427	.005326	-.032017
28-36	.002252	-.024906	-.000974	.014096	.003589	-.031653
37-47	-.002083	-.028006	-.001139	-.001326	.001648	-.023360
48-60	-.001054	.000763	-.000901	.000478	.000096	-.005285

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E-01	10E-01	10E-03
0	.008808	.024782	.006344	.023728
1	.104696	.396548	.094402	.229529
2	.140547	.660956	.167427	.320147
3	.143010	.819919	.227656	.354444
4	.082655	.597403	.187069	.215217
5	.042846	.426456	.152857	.120809
6	.035277	.434393	.160628	.118305
7-8	.034444	.384046	.151052	.121900
9-11	.018379	.247653	.120781	.081937
12-15	.013396	.148922	.085623	.053371
16-20	.010298	.096324	.071327	.038974
21-27	.005777	.072055	.050289	.029415
28-36	.003365	.041434	.034732	.018138
37-47	.002251	.025523	.022931	.012491
48-60	.001569	.016299	.016621	.007094

RUN NO 90C 15M 6-18-63 1721-1836(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.48009 10E 00	0.26954 10E 00	0.36873 10E-01	0.17029 10E 00	0.23296 10E-01	0.13079 10E-01
0	.185650	-.406613	-.240647	.069462	.354398	.043485
1	.125716	-.118320	-.105255	-.002613	.041369	.063762
2	.043694	-.022703	-.003402	-.054212	-.067866	.029903
3	.043802	-.023047	.068393	-.074002	-.059551	-.032620
4	-.011724	.012588	.044791	.054474	-.011195	-.014935
5	.004046	.046154	.041636	.049263	-.048631	.003483
6	.047297	.035279	.085020	-.028901	-.129800	-.055193
7	.086781	.095282	.056283	.009678	-.111208	-.038305
8	.018074	.055587	.003995	.023325	.015561	.021650
9	-.098473	.022805	.005204	-.046407	.048671	-.023255
10	-.079947	.152185	.063699	-.037512	-.018069	-.078546
11	-.056201	.166462	.080465	.079794	.007297	-.056428
12	-.085864	.090099	.035904	.101388	.045377	.006916
13	-.126922	.054225	-.024789	.097722	.033024	.006788
14	-.092480	-.034434	-.055729	-.051977	-.003339	.015144
15	-.039081	-.039656	-.060572	-.024791	.031196	.049643
16	.004565	-.041272	-.038652	.039854	.046094	.094371
17	.028810	-.065763	-.011804	.007581	.051720	-.006093
18	.033485	-.052175	.009406	-.040831	-.006057	-.069675
19	.029632	-.058087	.042132	.023882	-.032382	-.025598
20	.003077	-.110407	-.012424	-.096008	.008347	-.035939
21	-.034685	-.127713	-.050952	-.062481	-.025339	.047649
22	-.011471	-.055255	-.082961	-.042690	-.073257	.037291
23	.068756	-.047094	-.040583	-.010228	-.065182	.062806
24	.030070	.016147	-.017659	.030333	.020163	.064639
25	-.032080	.035891	-.016875	.010961	.027429	.026677
26	-.031423	.013530	-.037618	-.056230	-.010495	-.011195
27	-.019036	.090397	-.009560	-.000733	.025077	.018221
28	-.001898	.055373	.011219	-.036857	.023977	.000092
29	-.042078	.077156	-.001702	.057452	-.013602	-.033536
30	-.011685	.069498	.023613	.029082	-.009763	-.057146

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-02	10E-03	10E-03
0	.013154	.000996	.007582	.029000	-.047099	-.016291
1	.133245	-.001685	.032582	.069327	-.173166	-.063274
2	.173696	-.071785	-.022072	-.117328	-.094644	.058956
3	.162082	-.156162	-.087583	-.181269	.210752	.181349
4	.031773	-.106060	-.104828	.046565	.662796	.211094
5	-.041180	-.032735	-.084176	.107372	.687194	.131530
6	.018634	-.031963	-.049763	-.059808	.581700	-.032242
7	.097511	-.053412	-.069624	-.131756	.539341	.057293
8	.093844	-.077339	-.110307	-.100702	.299445	.217935
9-11	.069110	-.027924	-.034170	.257310	.197499	.016915
12-14	-.034647	-.054510	-.059516	.126795	.637324	.033114
15-21	.032281	-.043394	-.011422	.027877	.371714	-.060074
22-30	.001731	-.031010	-.021530	.080676	.338399	-.000828

RUN NO 90C 15M 6-18-63 1721-1836(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.48009 10E 00	0.26954 10E 00	0.36873 10E-01	0.17029 10E 00	0.23296 10E-01	0.13079 10E-01
1	-.037680	-.018244	-.085727	-.060059	.049216	.056893
2	-.070110	.000639	-.068419	-.078856	.005372	.042274
3	-.082271	-.025587	-.062537	-.068419	-.044799	.028171
4	-.008704	.011726	-.043693	-.009189	-.008674	.029419
5	.014061	.039493	-.028466	-.001352	.049314	-.002134
6	-.007551	.006053	-.020327	.031664	.005445	-.035168
7	-.017359	-.030447	.008109	.013598	-.041062	-.070858
8	-.078077	-.019408	-.002722	-.037239	-.051413	-.020834
9	-.066149	-.046509	-.027853	-.024269	-.035955	.001095
10	-.036981	-.061378	-.018135	.015518	-.046476	-.042209
11	-.058818	-.024608	-.014097	-.023260	-.004253	-.061051
12	-.012040	.025326	-.002241	.004913	.097287	-.016121
13	.021872	.058552	.044675	.077893	.049120	-.004581
14	.042618	.003364	.076971	.022004	.073175	-.022068
15	.084064	.038914	.082208	.046982	.044331	-.004739
16	.020419	.047198	.048295	.025223	.001942	.026126
17	.000656	.004940	.067378	-.012156	.031701	.066016
18	.036749	.004533	.077153	-.003262	.010262	.036636
19	.059100	.059494	.056696	-.027680	.023135	.079290
20	.005369	.050864	.006078	-.032399	-.019936	.065867
21	-.056877	.023166	-.029412	-.077246	-.084958	.058484
22	-.013678	-.034305	-.000337	-.053965	-.018203	.006705
23	-.021575	.002016	-.037757	.023281	-.026014	-.036759
24	.015777	-.044954	-.057964	.042410	-.035564	-.019015
25	-.065278	-.078356	-.070426	.009922	.033515	.024982
26	-.054078	-.098598	-.018663	-.004940	.002213	-.039284
27	.026509	-.058134	.003890	.023778	-.020134	-.043212
28	-.001377	-.055389	.006405	.045021	-.072374	-.084531
29	-.050997	-.045217	-.010037	-.042830	.033095	-.023435
30	-.015241	.024849	-.009229	-.048016	.084888	.010410

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-03	10E-02	10E-03	10E-03
1	-.590291	.049955	.263216	-.009545	.137615	-.059462
2	-.055200	-.170817	-.475632	-.056896	-.059425	-.148877
3	-.894544	-.206864	-.945262	-.219765	-.290447	-.013113
4	-.055718	.191139	-.351964	-.215390	-.038764	.222778
5	.261253	.251549	-.138375	-.040344	.345831	.159279
6	-.334188	.084579	-.554521	-.151471	.239756	.100661
7	-.831068	-.159216	-.612418	-.329779	-.055302	.163259
8	-.877214	-.369337	-.432778	-.285380	-.247232	.126318
9-11	-.348791	-.070000	-.113642	-.124725	.012373	.034489
12-14	.179169	-.015823	-.184000	.008187	.203012	-.015087
15-21	.144136	.011954	-.127444	.014368	.109776	.056962
22-30	-.137242	-.071334	-.078601	-.051917	.011584	.006119

RUN NO 90C 15M 6-18-63 1721-1836(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.75990 10E 00	0.30331 10E 00	0.95605 10E-01	0.17892 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.526370	.148347	.013810	.447216
2	.180007	-.124243	-.022589	.095599
3	.055854	-.114155	-.016368	-.008782
4	-.007576	-.050094	-.051839	-.013795
5	-.054302	-.015787	-.069081	-.093043
6	-.095330	-.085604	-.024799	-.147774
7	-.106752	.001923	-.130269	-.072254
8	-.131924	.045248	-.065352	.025364
9	-.204070	-.107333	.000585	-.028450
10	-.360152	-.140603	-.153240	-.137974
11	-.342390	-.024021	.002405	-.174170
12	-.210441	.089526	.027842	-.156806
13	-.112940	-.032948	-.111578	-.092344
14	-.053591	-.133939	-.000304	-.034694
15	-.008120	-.009776	-.059752	.012635
16	.011335	-.043421	.010159	.059054
17	.028021	.100797	.095299	.021438
18	.103572	.089747	-.005894	-.053238
19	.094011	.000794	.040754	-.078590
20	.111695	-.013947	.053174	.003097
21	.104511	-.088232	.042210	-.014074
22	.108490	-.089639	.018482	-.004037
23	.111550	-.027779	.063578	.018328
24	.043136	.084025	- 036063	.079496
25	-.019119	.055420	-.009419	.054844
26	-.040348	-.018302	.034902	.014823
27	-.123449	.086870	-.118044	-.026413
28	-.155931	-.033010	.040938	-.022837
29	-.137729	-.041833	-.053534	-.016678
30	-.108228	-.004011	-.036502	-.012088

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E-01	10E-02	10E-03
0	.003931	.009056	.018905	.020305
1	.043755	.074094	.150034	.125470
2	.082553	.097976	.304702	.143373
3	.117561	.133340	.507347	.167904
4	.079287	.135244	.458429	.143922
5	.035986	.112164	.382531	.110127
6	.029554	.130258	.399853	.102812
7	.040721	.162442	.365533	.136179
8	.053602	.138883	.309549	.135841
9-11	.032716	.182108	.370044	.057519
12-14	.025204	.127506	.365670	.075732
15-21	.018025	.136125	.467864	.050118
22-30	.011733	.126509	.539624	.037165

RUN NO 90C 46M 6-18-63 1721-1836(EST)

GROSS STATISTICS

CLEAR
TRANSITIONAL

WIND SPEED 6.72 M/SEC
WIND DIRECTION 239 DEG
SOLAR RAD. 0.22 LY/MIN

SIGMA A 8.10 DEG
SIGMA E 5.8 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.14405E 01	0.11907E 01	0.92004E 00	0.80321E 00
V	0.87833E 00	0.78064E 00	0.73780E 00	0.32535E-00
W	0.41025E-00	0.40541E-00	0.39466E-00	0.15134E-00
T	0.15386E-00	0.35726E-02	0.27923E-02	0.20753E-02
E	0.13646E 01	0.11884E 01	0.10263E 01	
GUSTINESS RATIOS				
U	0.17860	0.16238	0.14274	0.13337
V	0.13946	0.13148	0.12782	0.08488
W	0.09531	0.09475	0.09349	0.05789
COVARIANCES				
U,V	-0.91852E-02	0.16574E-01	0.22742E-01	0.20967E-01
U,W	-0.35372E-00	-0.36459E-00	-0.32062E-00	-0.22051E-00
U,T	0.81131E-01	0.20031E-01	0.16793E-01	0.14529E-01
V,W	-0.33002E-01	-0.37044E-01	-0.45118E-01	-0.91154E-02
V,T	-0.65599E-01	0.39312E-02	0.42400E-02	0.23837E-02
W,T	-0.10376E-01	-0.18178E-01	-0.18185E-01	-0.750215-02
WE	-0.10295E-01	0.24541E-01	-0.11705E-01	
NORMALIZED COVARIANCES				
U,V	-0.00817	0.01719	0.02760	0.04102
U,W	-0.46012	-0.52476	-0.53208	-0.63244
U,T	0.17233	0.30713	0.33131	0.35585
V,W	-0.05498	-0.06585	-0.08361	-0.04108
V,T	-0.17844	0.07444	0.09342	0.09174
W,T	-0.04130	-0.47766	-0.54780	-0.42331

RUN NO 90C 46M 6-18-63 1721-1836(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.82380 10E 00	0.60263 10E 00	J.50698 10E-01	0.53956 10E 00	0.45392 10E-01	0.33205 10E-01
0	.027458	-.532099	.331339	-.083608	.093634	-.547693
1	.033330	-.478260	.320147	-.066508	.096580	-.438388
2	.038607	-.392222	.283804	-.040537	.084318	-.300460
3	.034206	-.310567	.239685	-.018467	.066505	-.203916
4	.024599	-.238684	.194848	.001366	.052142	-.137990
5	.017330	-.177502	.151060	.009461	.043751	-.084337
6	.011830	-.126104	.114586	.005924	.036621	-.047144
7	.015686	-.074702	.080823	.001757	.033426	-.014080
8	.021898	-.026111	.050730	-.004162	.024909	.015086
9	.021901	.015773	.021448	-.011663	.010650	.038917
10	.022724	.050401	.000776	-.016548	-.000257	.047911
11	.018894	.080560	-.019538	-.015039	-.009317	.063326
12	.015891	.105246	-.042471	-.003105	-.018220	.086157
13	.010999	.120070	-.062215	.010461	-.026542	.100206
14	.005038	.125485	-.075629	.014315	-.029649	.101487
15	.000173	.123520	-.090607	.013838	-.031199	.099426
16	-.007659	.123283	-.099412	.004302	-.026161	.095189
17	-.016364	.124997	-.105869	.004776	-.020883	.091032
18	-.021526	.133560	-.111787	.015986	-.023834	.088680
19	-.028371	.146065	-.114740	.027753	-.032661	.086520
20	-.034924	.151481	-.123311	.030917	-.050968	.093827
21	-.037516	.162563	-.133423	.029408	-.064098	.102976
22	-.038707	.171000	-.142716	.032502	-.066773	.10736.
23	-.037610	.176769	-.150613	.035906	-.064985	.108968
24	-.036365	.180358	-.154639	.040878	-.066662	.111691
25	-.035896	.179054	-.157182	.039494	-.063312	.122565
26	-.030794	.169091	-.158517	.034053	-.061758	.140467
27	-.030736	.154382	-.147960	.030008	-.055332	.137097
28	-.031449	.129425	-.125512	.025377	-.047846	.114332
29	-.028013	.107436	-.103225	.012061	-.036621	.087132
30	-.020747	.087598	-.080858	-.000422	-.019377	.061647
31	-.014876	.068401	-.062168	-.004541	-.013136	.039731
32	-.011462	.044686	-.040088	-.008901	-.009553	.023003
33	-.011632	.016665	-.018728	-.010230	-.007046	.003991
34	-.010146	-.006997	-.001892	-.007508	-.007019	-.012988
35	-.009520	-.022869	.010674	-.006573	-.001965	-.026164
36	-.009343	-.037281	.020298	-.005258	.002881	-.029085
37	-.008436	-.056832	.027961	-.001260	.008204	-.027272
38	-.005307	-.073090	.034318	-.006001	.020103	-.031058
39	.002555	-.085490	.040189	-.011924	.024556	-.038548
40	.011823	-.096406	.049551	-.018983	.025527	-.047845
41	.016214	-.104942	.058911	-.020825	.032566	-.058857
42	.014078	-.103608	.068684	-.023837	.038502	-.070266
43	.010972	-.096408	.073865	-.016418	.035865	-.076877
44	.011254	-.090379	.075159	-.016326	.037914	-.077657
45	.009937	-.091166	.075174	-.018625	.043603	-.088197
46	.015417	-.089116	.078741	-.021166	.047384	-.096244
47	.023441	-.081575	.081216	-.028076	.046808	-.088130
48	.027883	-.070491	.079268	-.036840	.045202	-.071639
49	.029977	-.056020	.072715	-.050466	.052444	-.052813
50	.029381	-.037776	.059921	-.055382	.056405	-.032456
51	.023040	-.022437	.042202	-.045338	.054449	-.017923
52	.020944	-.016463	.031333	-.032152	.043541	-.014007
53	.016803	-.014771	.031313	-.019240	.030014	-.022288
54	.004962	-.008206	.033548	-.006687	.017515	-.020449
55	-.003960	.000213	.030653	.004768	.008630	-.013269
56	-.010709	.005483	.023391	.020060	.006090	-.009679
57	-.011474	.013846	.009329	.031714	.001753	-.005882
58	-.009405	.031321	-.001733	.041161	-.008350	-.003515
59	-.005222	.053001	-.015676	.037689	-.015422	.008282
60	-.004751	.076397	-.032514	.033899	-.018774	.022453

RUN NO 90C 46M 6-18-63 1721-1836(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.82380 10E 00	0.60263 10E 00	0.50698 10E-01	0.53956 10E 00	0.45392 10E-01	0.33205 10E-01
1	-.006492	.002210	.001290	-.006003	.022863	-.042103
2	-.006364	.000108	.003503	-.002109	.032615	-.048385
3	-.008784	.001178	.004372	.001157	.031184	-.056763
4	-.011173	.009953	-.001380	.002044	.033991	-.057580
5	-.016128	.016299	-.003973	.000367	.036839	-.064225
6	-.022896	.023243	-.001956	-.008176	.040037	-.067142
7	-.028114	.031458	-.003304	-.010330	.038184	-.060694
8	-.029132	.035855	-.010542	-.004790	.026337	-.053629
9	-.029198	.036579	-.008804	-.003212	.010645	-.049509
10	-.026043	.037006	-.007526	.000202	-.003596	-.049434
11	-.025174	.036519	-.005189	.012362	-.010838	-.051604
12	-.027886	.035455	-.002076	.023334	-.012535	-.049415
13	-.031382	.028249	.003156	.025105	-.009695	-.043762
14	-.026986	.019844	.005246	.028391	-.005955	-.030721
15	-.019307	.014797	.001903	.025163	.003273	-.017277
16	-.016830	.016235	.001752	.015040	.008263	-.012822
17	-.016634	.016554	.001808	.016163	.014794	-.012503
18	-.015870	.014973	-.000014	.025604	.013065	-.016845
19	-.018794	.011038	-.005024	.022576	.014674	-.016757
20	-.019607	.004740	-.004890	.011129	.016494	-.012641
21	-.016124	.002532	-.003645	-.002655	.023850	-.008378
22	-.013755	-.005144	.001204	-.006250	.021568	-.006553
23	-.017309	-.012250	.012603	-.006165	.019222	-.002817
24	-.013498	-.019877	.026497	-.006979	.010556	.003022
25	-.007469	-.029077	.039662	-.006983	.001893	.007097
26	.001512	-.030598	.042577	-.009474	.005935	.011402
27	.007665	-.027393	.040388	-.008529	.011045	.018190
28	.016181	-.024136	.043644	.001220	.003490	.022658
29	.029318	-.014959	.048108	.010517	-.007472	.019454
30	.035133	-.009772	.045907	.012206	-.018556	.021212
31	.040400	-.011242	.037501	.008730	-.021047	.030991
32	.042367	-.007745	.026790	.004908	-.024928	.039892
33	.039028	-.004465	.023298	-.000093	-.030168	.042292
34	.031308	-.010082	.024482	-.008316	-.038938	.035591
35	.023891	-.013510	.024766	-.018401	-.040181	.024580
36	.023896	-.021484	.022233	-.020286	-.036339	.015727
37	.026330	-.026324	.012230	-.023230	-.024057	.010464
38	.030030	-.023397	.005402	-.012196	-.019586	.004582
39	.036144	-.015975	.002440	-.002036	-.018089	.000179
40	.039308	-.007700	-.001053	.003874	-.013544	-.001141
41	.037745	-.001400	-.005170	.013327	-.015572	.001211
42	.028140	-.002192	-.007887	.026558	-.018971	.002553
43	.014688	-.002122	-.010098	.025453	-.015753	.000954
44	.010332	-.000494	-.017099	.017783	-.004396	-.001980
45	.010236	.000777	-.020692	.008959	.004200	-.005590
46	.008785	.006251	-.024913	-.002767	.009900	-.009819
47	.008495	.016926	-.030510	-.016604	.018673	-.017012
48	.001017	.021631	-.031383	-.013596	.014042	-.017530
49	-.010178	.024209	-.034198	-.007363	.013918	-.015425
50	-.019883	.031565	-.044217	-.001924	.016087	-.004521
51	-.030710	.040481	-.057181	-.017723	.027046	.000441
52	-.036230	.045577	-.068995	-.036448	.042823	.004104
53	-.037458	.044320	-.072105	-.036410	.045943	.005316
54	-.036479	.036734	-.069640	-.024774	.043358	.001012
55	-.038038	.031567	-.065629	-.010446	.036403	.003318
56	-.038188	.028023	-.058746	-.001323	.029569	.004579
57	-.040636	.019260	-.045441	.003160	.023284	.002127
58	-.040938	.007984	-.030093	.007315	.021552	-.001355
59	-.040492	-.003671	-.012996	-.001841	.021535	-.009339
60	-.040447	-.008393	-.002181	-.003790	.023636	-.015965

RUN NO 90C 46M 6-18-63 1721-1836(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.92010 10E 00	0.73758 10E 00	0.39470 10E 00	0.27935 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.870051	.754122	.736249	.794223
2	.701513	.472335	.457674	.579051
3	.568142	.293228	.278047	.429806
4	.460940	.173032	.158661	.318015
5	.367943	.087124	.084511	.221669
6	.283052	.020200	.038102	.148369
7	.201349	-.049281	-.017544	.089498
8	.123292	-.097175	-.062660	.041526
9	.051172	-.111504	-.091528	-.004843
10	-.011216	-.112602	-.105007	-.035594
11	-.064043	-.114789	-.131118	-.067704
12	-.119490	-.120721	-.160313	-.106164
13	-.165724	-.138015	-.173662	-.139985
14	-.203663	-.144585	-.159416	-.164471
15	-.230475	-.138382	-.141230	-.177535
16	-.250731	-.128648	-.130304	-.178909
17	-.261061	-.124978	-.125271	-.183426
18	-.277589	-.141392	-.132605	-.179760
19	-.297024	-.155496	-.142177	-.184388
20	-.309961	-.151708	-.147452	-.200885
21	-.321548	-.148840	-.148846	-.215139
22	-.327795	-.160038	-.151486	-.228808
23	-.331648	-.165253	-.153669	-.240822
24	-.328505	-.152331	-.157495	-.242281
25	-.315466	-.143488	-.170229	-.246708
26	-.294231	-.133500	-.180558	-.261055
27	-.271338	-.123912	-.173405	-.259032
28	-.241495	-.118886	-.132625	-.235283
29	-.214624	-.112960	-.088923	-.201879
30	-.186957	-.090326	-.052376	-.166183
31	-.153937	-.054856	-.016774	-.121491
32	-.115255	-.019683	-.000430	-.080565
33	-.074590	.018083	.026016	-.041957
34	-.033406	.052183	.038144	-.014550
35	.007192	.075982	.043470	.012385
36	.044687	.089131	.048691	.030678
37	.073935	.094582	.061531	.037786
38	.093616	.085121	.088822	.041087
39	.100554	.071400	.110794	.049113
40	.103481	.059953	.106177	.057484
41	.114920	.047858	.097057	.072271
42	.121717	.037147	.092450	.082201
43	.118841	.026678	.096882	.084520
44	.113935	.013461	.092232	.087005
45	.110847	.024887	.093018	.099351
46	.104597	.024286	.087855	.107942
47	.097327	.014757	.072656	.102229
48	.089123	.019922	.054005	.090410
49	.077284	.030905	.033243	.079039
50	.059431	.032190	.013192	.070390
51	.042016	.026590	.000410	.062714
52	.031756	.022769	.000398	.058469
53	.029615	.018654	.013141	.054349
54	.026192	.010516	.018525	.039510
55	.008581	.002017	.009152	.022355
56	-.008788	-.003610	-.008229	.018103
57	-.024212	-.002148	-.022182	.017253
58	-.039629	-.003531	-.035874	.022258
59	-.056937	-.010666	-.057208	.014893
60	-.069896	-.022474	-.068545	-.003774

RUN NO 90C 46M 6-18-63 1721-1836(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-02	10E-02	10E-02
0	.000542	-.021330	.014654	.012159	-.000601	-.005540
1	.071986	-.301895	.225311	-.123244	.045143	-.110210
2	.124463	-.552219	.389136	-.577010	.114738	-.217499
3	.102720	-.675942	.430444	-.721002	.129587	-.270494
4	.006368	-.395975	.211518	-.221071	.049224	-.171770
5	-.028673	-.231035	.095827	.034570	.015321	-.123754
6	-.021214	-.239561	.101015	-.046924	.021279	-.131821
7-8	.011405	-.162281	.075194	-.318118	.024686	-.098895
9-11	.015832	-.052886	.025157	-.241260	-.003178	-.053859
12-15	.004422	-.047581	.014972	-.268641	.012543	-.042714
16-20	-.008046	-.024273	.005117	-.025186	.002328	-.025209
21-27	-.005986	-.013967	.001175	-.040643	-.001526	-.017763
28-36	-.001983	-.006913	.000771	-.021833	-.000926	-.010733
37-47	-.001029	-.004228	-.000680	-.019024	-.001589	-.005632
48-60	-.000331	-.002365	-.000679	-.003799	-.000858	-.003637

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-02	10E-03	10E-02	10E-03	10E-03
1	-.025053	.149816	.557610	.254528	.097622	-.322994
2	-.105992	.536046	.060369	.251389	.342888	-.571949
3	-.103206	.831994	-.441115	.183672	.324186	-.741259
4	-.007819	.442805	-.101205	-.025610	.001954	-.470913
5	.003787	.093181	.198902	-.217341	.182226	-.256087
6	-.017059	-.109547	.059781	-.228532	.465112	-.285943
7-8	-.004589	-.064792	-.112181	-.129416	.348928	-.168181
9-11	.007211	-.163457	.124501	.097642	.094417	-.078089
12-15	.002140	.003850	-.010378	.050873	-.041464	-.077566
16-20	-.001631	-.019719	.000729	-.051314	.060980	-.009292
21-27	-.001913	.015452	.012491	-.027003	.037833	-.050557
28-36	-.000743	.018226	-.019260	.003360	.011608	-.021234
37-47	-.001748	.007339	.006900	-.022957	.001784	-.021302
48-60	-.000836	-.003255	.003006	.000154	-.002117	-.011625

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E-01	10E-01	10E-03
0	.009476	.017895	.010137	.019231
1	.111523	.352987	.169147	.257924
2	.170217	.656146	.350707	.401394
3	.190252	.888126	.486799	.442061
4	.108326	.673974	.350442	.260735
5	.055507	.472542	.252560	.166578
6	.049828	.510346	.271672	.174183
7-8	.033342	.434151	.219831	.129365
9-11	.017607	.279448	.124818	.076456
12-15	.013292	.173656	.106654	.056879
16-20	.008341	.117078	.067824	.033220
21-27	.005404	.092825	.049829	.023861
28-36	.003261	.052431	.028523	.017354
37-47	.001932	.034519	.021307	.011241
48-60	.001224	.020317	.013179	.007715

RUN NO 90C 16M 6-18-63 1721-1836(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.51106 10E 00	0.34883 10E 00	0.40829 10E-01	0.22187 10E 00	0.25969 10E-01	0.17725 10E-01
0	.041027	-.632128	.355842	-.041084	.091792	-.423240
1	.016774	-.148973	.135748	-.010298	.044415	-.022520
2	-.027729	.051288	.007845	.052048	.003353	.046280
3	-.010161	.099868	-.028927	.000486	.025982	.081830
4	.009514	-.016909	.025297	-.060895	.035572	-.004013
5	.037229	.042297	.010546	-.047720	.039964	-.005637
6	.004473	.118764	-.026875	.064743	-.012335	.039290
7	.014441	.095520	-.041782	-.008322	-.006093	.062970
8	.012464	-.024229	.012149	.005111	-.009656	-.032638
9	.014963	-.068769	.053027	-.018495	.032895	-.094174
10	-.010293	.077270	-.046731	.028528	.000210	.031318
11	-.007887	.136706	-.076413	.022211	-.001962	.085791
12	-.005059	.066192	-.056556	-.011543	.015523	.030637
13	-.045429	.009854	-.031747	-.009134	.025751	-.020290
14	-.061014	.064020	-.077184	.029911	-.027043	.012352
15	-.055580	-.019860	-.084947	.100074	-.083911	.036212
16	-.037508	-.042760	-.038883	.002708	-.029189	.036669
17	-.013154	-.045087	-.026600	.020078	-.001021	.009448
18	.000394	-.007530	-.034582	.001556	-.008352	.001828
19	.034968	-.022095	-.061771	-.020467	-.029762	-.021455
20	.004965	.006443	-.047339	-.007765	-.058775	.033136
21	.035044	-.029656	.004575	-.034576	.036928	-.011795
22	.034478	-.062756	.057772	.000338	.006457	.013649
23	.076910	-.030031	.052860	-.097263	.011978	.012783
24	.008620	.016002	.066344	.016815	-.028777	-.020020
25	.005228	.007653	.055334	.028060	-.052654	-.038920
26	.052058	.009841	.023106	-.079310	-.001069	-.033473
27	.081327	-.020390	.012034	-.078134	-.015518	.005861
28	-.051140	.035371	.019635	.056194	-.065828	.048587
29	-.016500	.065770	.028561	.010918	-.028093	-.021958
30	.000558	-.011473	.030894	.028542	-.002400	.012891

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-01	10E-02	10E-02	10E-03	10E-03
0	-.009346	-.001266	.006420	.022679	.105781	.003679
1	.154915	-.035449	.111035	-.009475	.554802	-.144037
2	.462827	-.088476	.145446	-.153778	.347428	-.208246
3	.152142	-.144743	.106782	-.083455	.126125	-.217723
4	-.539611	-.123872	.049154	.107590	.040585	-.179728
5	-.239551	-.097407	.072818	.027656	.163636	-.250190
6	.239544	-.120632	.086679	-.028543	.161240	-.359525
7	.159357	-.156097	.097481	.104969	-.026788	-.435564
8	-.007467	-.146034	.089897	.150526	-.091257	-.404137
9-11	.265526	-.071146	.054654	-.025113	.081674	-.253570
12-14	.280462	-.158359	.099840	-.263549	.223796	-.618512
15-21	.084860	-.075806	.036379	-.073118	.058942	-.259474
22-30	-.020274	-.075347	.034156	.017370	.027379	-.396933

RUN NO 90C 46M 6-18-63 1721-1836(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.51106 10E 00	0.34883 10E 00	0.40829 10E-01	0.22187 10E 00	0.25969 10E-01	0.17725 10E-01
1	-.028135	.031268	-.003109	.004714	.039099	-.061260
2	-.015869	.008287	-.013662	.017671	.048487	-.000108
3	.009420	.019438	.013347	.023238	.020613	-.018955
4	.015733	.020134	-.031105	-.044168	.040218	.005670
5	-.012093	.038092	-.062819	.006256	.050406	-.015486
6	-.062165	.016785	-.047010	-.057416	.075424	.006092
7	.025670	-.018591	.005279	.024228	-.001295	.008902
8	.001382	-.008839	.029906	-.010107	-.001937	-.014074
9	.007866	.022740	.012643	-.025948	.011816	-.013359
10	.053353	.021313	.027161	.040231	.021746	-.017785
11	.030914	.045600	.019806	.032174	.011723	.030495
12	-.046390	.021863	.012219	-.040161	.090109	.017957
13	-.080039	.012298	.019457	-.037602	.041550	.012311
14	.006118	.008685	.029853	.017661	.022374	-.000725
15	.003027	-.006806	.033191	.031099	.029542	.007892
16	.000115	-.036340	.013947	-.036471	-.000836	.046606
17	-.032167	.029208	-.058346	.028964	-.011219	.055986
18	-.034340	.027152	-.051651	.030431	.029966	.052823
19	-.031655	-.008840	-.044669	-.020690	.052783	.038458
20	-.029763	.007492	-.055821	-.081678	.060171	.047217
21	.031773	-.023690	-.077187	.002056	.002913	.090376
22	.030308	-.019375	-.029969	-.001215	.068615	-.001432
23	.011657	-.050187	.014933	.025080	.068623	-.032334
24	-.009741	-.054939	-.005046	-.010608	.103816	-.030542
25	-.038707	-.059151	-.004651	-.061966	.104653	-.009210
26	.002406	.025863	-.021916	.027031	.029244	-.031752
27	.044065	.006023	-.036305	.054141	-.064694	-.021387
28	.054463	.008868	-.029138	.015747	-.055113	-.011531
29	-.022429	.011095	-.034481	-.005260	-.002171	.053469
30	.039669	.033003	.034195	.031020	-.009065	.006690

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-03	10E-02	10E-03	10E-03
1	-.345620	.370388	-.121893	-.085732	.826286	.181834
2	-.001642	.324445	.078453	-.039624	.316431	-.092346
3	.101344	.107671	-.375429	-.065978	.253597	-.143100
4	-.225838	.069497	-.649603	-.051652	.188754	.020941
5	-.351672	.115335	-.131879	.014949	.202342	-.038309
6	-.105789	.181705	.112593	.018034	.305688	-.077915
7	.130065	.294971	.028937	.096190	.095719	-.025104
8	.382082	.034358	.297012	.215556	-.125826	-.095490
9-11	-.278155	-.119612	.208619	.041835	.013494	-.073905
12-14	-.159678	.131609	-.193730	.069794	.162557	-.066400
15-21	-.016697	.050468	-.028997	-.074753	.017552	-.071403
22-30	-.023788	.107794	.086727	.090096	-.067538	-.092370

RUN NO 90C 40M 6-18-63 1721-1836(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.80350 10E 00	0.32506 10E 00	0.15144 10E 00	0.20747 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.407191	.003984	.023711	.477927
2	.031785	-.071643	-.093939	.215467
3	-.063325	-.083879	-.127579	.149044
4	-.002909	.019215	.026947	.129195
5	-.074267	-.031106	-.045877	.068525
6	-.162016	.007737	-.105403	-.014608
7	-.142244	-.003515	-.130353	-.045147
8	-.070506	-.044825	.040773	-.053298
9	-.065341	-.017018	.124398	-.024827
10	-.168554	-.068251	-.032964	-.113400
11	-.149014	-.082609	-.187059	-.205281
12	-.066378	.021523	-.088593	-.158121
13	-.083674	.019296	-.007414	-.141298
14	-.119120	-.032297	-.035887	-.188707
15	-.044587	-.061517	.035070	-.217741
16	.025509	.078306	.007834	-.173973
17	.054149	-.005441	.046526	-.079014
18	-.004756	-.004018	.029338	-.016384
19	-.024278	.033010	.109466	.007976
20	.030930	-.022076	-.098492	.049726
21	.083031	-.006633	.025603	.073796
22	.103262	.039651	.045843	.027308
23	.084060	-.008691	.032072	.012552
24	.009516	.028563	-.040576	.036376
25	-.078563	-.090050	.003097	.012537
26	-.046111	-.085592	.033872	-.035695
27	.024811	-.073723	.016700	-.031280
28	.021674	.072644	-.071476	-.142882
29	-.009849	-.057717	-.119800	-.060785
30	-.029050	-.013466	-.028475	-.033912

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-01	10E-03
0	.021522	.020935	.002324	.048057
1	.320974	.097841	.019218	.282041
2	.571687	.093268	.037412	.276788
3	.786295	.122272	.061329	.238963
4	.641565	.113579	.054933	.116763
5	.508641	.091812	.045131	.091144
6	.496239	.094712	.063118	.116466
7	.485965	.110930	.086507	.095250
8	.461225	.136036	.077627	.073086
9-11	.350625	.153044	.041148	.066673
12-14	.392132	.147491	.105651	.085103
15-21	.239535	.153655	.063502	.051716
22-30	.170412	.186485	.083522	.044087

RUN NO 90C 15M 6-18-63 1721-1836(EST)
RUN NO 90C 46M 6-18-63 1721-1836(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0				
1	.189760	.143505	.073802	.231491
2	.236383	.462691	.165442	.418453
3	.268810	.495033	.342744	.462077
4	.269773	.510732	.336287	.432480
	.188702	.531583	.159301	.337706
5				
6	.114333	.490512	.057139	.278393
7-8	.091970	.435101	.195403	.287736
9-11	.154122	.259870	.125905	.250827
12-15	.075346	.100934	.190735	.223661
	.052654	.150588	.164700	.125090
16-20				
21-27	.130675	.119952	.069610	.039657
28-36	.113881	.101403	.083541	.059150
37-47	.107979	.114678	.130946	.118188
48-60	.097450	.126072	.060109	.078087
	.067654	.096765	.079790	.110456

301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0				
1	.490595	.647118	.070484	.757289
2	.477977	.408059	.488069	.699380
3	.580637	.172146	.452306	.603588
4	.641805	.073169	.359598	.550439
	.582948	.104567	.239698	.401980
5				
6	.383456	.381162	.416918	.266947
7	.308759	.591408	.416707	.368332
8	.272191	.622238	.111914	.397349
9-11	.346017	.545061	.229173	.308161
	.329704	.412060	.294109	.352769
12-14				
15-21	.398445	.525513	.559525	.552562
22-30	.262708	.444658	.282601	.362872
	.269022	.350798	.265166	.216910

RUN NO 900 46M 6-18-63 1840-1956(EST)

GROSS STATISTICS

CLEAR
STABLE

WIND SPEED 6.14 M/SEC
WIND DIRECTION 238 DEG
SOLAR RAD. 0.02 LY/MIN

SIGMA A 9.20 DEG
SIGMA E 4.6 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.10983E 01	0.69996E 00	0.54285E 00	0.44028E-00
V	0.96863E 00	0.54735E 00	0.47523E-00	0.26608E-00
W	0.23672E-00	0.23415E-00	0.21206E-00	0.79528E-01
T	0.43058E-00	0.40477E-02	0.25255E-02	0.26512E-02
E	0.11518E 01	0.74087E 00	0.61507E 00	
GUSTINESS RATIOS				
U	0.17069	0.13626	0.12000	0.10807
V	0.16029	0.12049	0.11228	0.08401
W	0.07924	0.07881	0.07500	0.04593
COVARIANCES				
U,V	0.22963E-00	-0.80825E-02	-0.40974E-02	0.44262E-02
U,W	-0.19553E-00	-0.19356E-00	-0.14862E-00	-0.11010E-00
U,T	-0.36521E-01	0.24867E-01	0.15680E-01	0.18796E-01
V,W	0.25394E-01	-0.11875E-02	-0.23593E-02	0.35920E-02
V,T	-0.13349E-00	-0.24508E-02	-0.28314E-02	-0.11538E-02
W,T	-0.22184E-01	-0.11529E-01	-0.94455E-02	-0.55912E-02
WE	-0.33772E-02	0.24893E-01	0.11263E-01	
NORMALIZED COVARIANCES				
U,V	0.22263	-0.01306	-0.00807	0.01293
U,W	-0.38348	-0.47811	-0.43803	-0.58836
U,T	-0.05311	0.46719	0.42348	0.55015
V,W	0.05303	-0.00332	-0.00743	0.02469
V,T	-0.20669	-0.05207	-0.08173	-0.04344
W,T	-0.06949	-0.37447	-0.40816	-0.38505

RUN NO 900 46M 6-18-63 1840-1956(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.50789 10E 00	0.33936 10E 00	0.37029 10E-01	0.31752 10E 00	0.34646 10E-01	0.23149 10E-01
0	-.008021	-.437970	.423151	-.007422	-.081588	-.408131
1	-.006308	-.368272	.400434	.001891	-.070875	-.327860
2	-.005315	-.264831	.346122	.020090	-.061438	-.203271
3	-.002586	-.177709	.281686	.036414	-.053123	-.110452
4	.001235	-.116936	.221767	.040818	-.039192	-.054415
5	.000461	-.075476	.167500	.039510	-.028226	-.020455
6	.006514	-.039053	.120069	.026692	-.022954	.001143
7	.012434	-.007646	.082012	.014634	-.020920	.017847
8	.007623	.015135	.042347	.008578	-.016600	.028226
9	.000938	.037231	.008061	.008599	-.014588	.034188
10	-.010026	.050740	-.019452	.013192	-.017365	.032033
11	-.013389	.064765	-.045029	.009279	-.012282	.032763
12	-.008456	.069813	-.067034	-.000182	-.003444	.034171
13	-.000147	.066063	-.080624	-.013018	.001978	.039665
14	.006174	.060866	-.086887	-.015636	.008836	.041922
15	.004618	.063669	-.098836	-.010593	.015895	.048178
16	.001685	.066814	-.109227	-.007983	.021627	.047721
17	-.002300	.062623	-.112052	-.007667	.022745	.040603
18	-.007680	.061455	-.114966	-.006973	.022664	.032392
19	-.013796	.060899	-.112718	-.007862	.025962	.028910
20	-.013974	.062139	-.104899	-.014853	.035764	.030909
21	-.007493	.060848	-.100315	-.023077	.043090	.026645
22	-.002765	.058135	-.099383	-.017672	.034325	.030549
23	-.009072	.054863	-.098697	-.011465	.029206	.033619
24	-.016540	.052211	-.093382	-.005828	.029314	.031671
25	-.019016	.044423	-.094429	-.003578	.032466	.029211
26	-.015095	.032250	-.095609	-.009608	.036395	.035727
27	-.007736	.021120	-.090716	-.013902	.035765	.044959
28	-.002737	.022098	-.087849	-.008751	.033183	.049698
29	-.000005	.032116	-.082355	-.009360	.029479	.049229
30	.005005	.035102	-.077998	-.012858	.025555	.043253
31	.011945	.032706	-.073520	-.022179	.031782	.030088
32	.025517	.032506	-.064298	-.035361	.037634	.024266
33	.035513	.028919	-.052976	-.038342	.034980	.027897
34	.040519	.024794	-.041226	-.026568	.024057	.023477
35	.042903	.019631	-.025184	-.012873	.015232	.012258
36	.043703	.010491	-.015343	.002095	.006392	.001095
37	.036755	.005024	-.011266	.016601	-.001381	-.008881
38	.026981	-.002364	.001899	.017080	-.007359	-.008027
39	.014694	.003961	.010699	.012081	-.012196	.001867
40	.006123	.020156	.009945	.010242	-.018262	.011586
41	.003395	.036859	.009286	.005504	-.021872	.019452
42	-.006540	.039824	.011532	-.001931	-.019119	.015197
43	-.013069	.035361	.011749	-.005215	-.013953	.011817
44	-.009660	.026001	.009372	-.001708	-.012276	.009688
45	-.002057	.015438	.008874	-.005888	-.011475	.010211
46	.004741	.003614	.007953	-.030293	-.010135	.008963
47	.009466	-.000280	.003523	-.047326	-.004169	.005013
48	.005369	-.000739	-.005042	-.041407	.000144	.007704
49	-.000130	-.001335	-.017130	-.033494	.001720	.008865
50	-.004902	.003966	-.024237	-.020906	-.001787	.002250
51	-.014118	.010186	-.023689	-.003587	-.004642	-.003166
52	-.018765	.019248	-.022443	.000888	-.005424	.003857
53	-.024288	.025532	-.020135	.006549	-.007617	.015922
54	-.038992	.024912	-.020214	.020198	-.012468	.018005
55	-.043463	.019310	-.017558	.031844	-.017566	.021618
56	-.033423	.010749	-.011886	.037138	-.017662	.022785
57	-.020185	.013686	-.008514	.032903	-.010174	.021960
58	-.018624	.018156	-.005750	.034701	-.002394	.020976
59	-.025254	.012160	.001412	.043142	.006823	.022019
60	-.031641	-.004493	.010289	.042275	.009799	.026804

RUN NO 90D 46M 6-18-63 1840-1956(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.50789 10E 00	0.33936 10E 00	0.37029 10E-01	0.31752 10E 00	0.34646 10E-01	0.23149 10E-01
1	.005609	-.018885	.048984	.005127	-.003817	-.043428
2	.015455	-.029103	.086060	.011110	-.003727	-.052158
3	.017535	-.029365	.107581	.006335	-.000547	-.057833
4	.013197	-.019536	.116576	.000782	.003806	-.060186
5	.015554	-.011247	.120078	.007752	.005974	-.063680
6	.023793	-.010913	.121159	.025041	.004463	-.064755
7	.027104	-.013160	.117436	.035794	.000255	-.059942
8	.019279	-.016767	.110969	.030552	-.000030	-.045578
9	.006774	-.019011	.104423	.020409	-.000683	-.037063
10	-.000944	-.016196	.101657	.009881	.008136	-.030431
11	-.001590	-.017909	.104934	.000038	.026368	-.031940
12	-.002380	-.022129	.106072	-.002597	.036456	-.030714
13	.001935	-.028129	.107942	-.000022	.038819	-.028083
14	.007999	-.031199	.103848	.000039	.038075	-.023788
15	.014674	-.025287	.098240	-.001608	.035257	-.017070
16	.018834	-.022848	.087603	.003542	.031169	-.013625
17	.025633	-.024343	.078630	.019566	.019745	-.016564
18	.025528	-.022837	.073812	.029712	.006220	-.016477
19	.021015	-.021174	.066834	.029413	-.005788	-.011075
20	.015510	-.015282	.063787	.023506	-.008929	-.020050
21	.015287	.002917	.058521	.007589	-.008256	-.029345
22	.016970	.021772	.053416	-.003619	-.007907	-.042105
23	.017110	.039737	.042784	-.008450	-.009238	-.052641
24	.011916	.042717	.029640	-.012979	-.007695	-.045263
25	-.004632	.038530	.017235	-.015732	-.011676	-.031985
26	-.021870	.038313	.012915	-.020426	-.018841	-.026515
27	-.028741	.037693	.008042	-.018752	-.017514	-.024274
28	-.030073	.036030	.003974	-.017865	-.011756	-.015408
29	-.033431	.032511	.004163	-.022442	-.008384	-.009441
30	-.033941	.024520	.002222	-.026727	-.006495	-.008436
31	-.037255	.016691	.000229	-.030452	-.008703	-.007630
32	-.033435	.009819	-.006273	-.027408	-.008911	-.007000
33	-.030910	.003709	-.017159	-.027231	-.007707	-.002658
34	-.027392	.002866	-.026559	-.025812	-.007628	-.001871
35	-.029414	.013550	-.038971	-.029641	-.004333	.001099
36	-.028493	.015742	-.047379	-.026408	.003155	.006121
37	-.024595	.010924	-.047007	-.017579	.006343	.009765
38	-.018550	.012292	-.041918	-.008727	.008775	.007440
39	-.015525	.015815	-.034729	-.005853	.003628	-.001064
40	-.006112	.016861	-.033288	.007682	-.002370	-.000710
41	.005044	.012962	-.030318	.015674	-.001233	-.001320
42	.013955	.008110	-.025205	.016852	.003691	-.009166
43	.017186	.006221	-.019703	.017088	.007923	-.023935
44	.019976	.002939	-.017772	.019345	.009492	-.026296
45	.025952	-.001345	-.020266	.021111	.010020	-.010540
46	.027847	-.003141	-.028713	.013820	.011720	.011662
47	.025725	-.008074	-.041200	.009626	.014736	.034441
48	.017459	-.014875	-.048490	.003345	.017300	.052470
49	.008108	-.020572	-.049634	.000385	.012588	.059686
50	-.002192	-.026307	-.048656	-.001045	.012654	.053757
51	-.002811	-.026865	-.049278	-.002026	.015884	.050031
52	.002719	-.020272	-.052991	.004170	.025551	.047229
53	.004069	-.014638	-.052521	.010668	.030522	.037249
54	.001772	-.012265	-.050267	.010046	.030389	.032898
55	-.002288	-.017335	-.045795	.003415	.026541	.036443
56	-.005516	-.024933	-.037722	.002238	.020047	.034827
57	-.009539	-.027673	-.033744	.007056	.006013	.038536
58	-.010079	-.029184	-.029481	.005737	.000184	.032793
59	-.010667	-.028284	-.024191	.008938	-.000425	.021935
60	-.013130	-.019873	-.010894	.011594	-.004596	.007784

RUN NO 90D 48M 6-18-63 1840-1956(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.54283 10E 00	0.47521 10E 00	0.21216 10E 00	0.25259 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.844740	.763700	.670106	.820905
2	.654794	.499718	.317864	.604199
3	.509088	.324439	.116707	.435835
4	.378977	.206927	.022774	.315188
5	.273209	.118118	-.017836	.230698
6	.186466	.051271	-.042038	.161939
7	.106433	-.012163	-.067669	.103640
8	.042026	-.062056	-.087437	.053736
9	-.016540	-.096722	-.094538	.008629
10	-.064055	-.111893	-.082777	-.027610
11	-.096694	-.117123	-.076163	-.059830
12	-.120723	-.117166	-.078880	-.084621
13	-.141491	-.113742	-.085587	-.105561
14	-.164215	-.113783	-.081562	-.132812
15	-.181741	-.123125	-.081578	-.153475
16	-.192510	-.135992	-.067649	-.164486
17	-.205058	-.146130	-.062065	-.163625
18	-.217024	-.160350	-.065780	-.167837
19	-.224103	-.180725	-.063857	-.175765
20	-.232802	-.187985	-.059923	-.177447
21	-.240335	-.192265	-.058271	-.169802
22	-.247410	-.195292	-.065900	-.163424
23	-.245089	-.196129	-.059768	-.165647
24	-.236490	-.181993	-.064884	-.173360
25	-.230062	-.158348	-.072746	-.184265
26	-.223531	-.134391	-.079043	-.193284
27	-.203738	-.115806	-.087468	-.197221
28	-.182017	-.105171	-.095780	-.193953
29	-.166530	-.090948	-.105869	-.183552
30	-.144281	-.072523	-.077366	-.174153
31	-.109138	-.043273	-.026198	-.157224
32	-.086835	-.015554	-.005798	-.146860
33	-.064859	.006849	-.000962	-.132221
34	-.046815	.020566	.002860	-.110846
35	-.028507	.035396	.000526	-.093673
36	-.008359	.046165	.010715	-.069172
37	.010355	.061736	.006168	-.040522
38	.027024	.067937	.001508	-.017484
39	.044011	.070752	-.015527	-.000465
40	.056119	.072994	-.035535	.008663
41	.058669	.064999	-.032657	.012008
42	.051273	.057485	-.014209	.009859
43	.047971	.050578	.011644	.008484
44	.044829	.039682	.022094	.002221
45	.040466	.020223	.026341	-.011270
46	.041883	.000053	.020359	-.016112
47	.044795	-.007574	.016647	-.013527
48	.046179	-.001856	.018545	-.006744
49	.044643	.001337	.025019	.001489
50	.035206	.000685	.026867	.011022
51	.027901	-.009322	.027386	.013815
52	.023313	-.011771	.010412	.009823
53	.020291	-.012799	.006921	.005030
54	.020892	-.006087	.013404	.006948
55	.030579	-.000351	.015752	.006942
56	.040982	.009097	.024647	.014309
57	.041147	.020942	.023045	.021968
58	.034966	.035775	.005635	.028956
59	.032382	.039650	-.009176	.041811
60	.029897	.034223	-.012423	.060285

RUN NO 90D 46M 6-18-63 1840-1956(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-01	10E-02	10E-02	10E-03	10E-03
0	.008485	-.014792	.024164	.005479	-.018161	-.077118
1	-.164114	-.139626	.236914	.258276	-.466323	-.715859
2	-.081913	-.164364	.294089	.297302	-.691498	-.834971
3	.212774	-.185027	.308910	.233017	-.616746	-.897257
4	.082863	-.166454	.213200	.096058	-.208735	-.768507
5	-.239568	-.133781	.144043	.020511	-.087022	-.703148
6	-.081251	-.107353	.113109	.033458	-.122327	-.703982
7-8	.049669	-.080983	.057743	-.112345	-.057490	-.527243
9-11	-.089513	-.048041	.034119	-.077316	-.105659	-.423128
12-15	-.035768	-.031536	.015751	-.066695	-.050496	-.270585
16-20	.040352	-.021283	.008466	-.075760	-.004729	-.177032
21-27	-.017333	-.012060	.002464	-.000392	-.005161	-.098469
28-36	.008856	-.004870	.001225	-.009192	-.008853	-.046728
37-47	-.008345	-.002916	-.000656	.001257	-.009950	-.021550
48-60	.000096	-.002005	.000340	-.001477	-.005575	-.011483

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-02	10E-03	10E-03
1	-.007715	.074387	.170764	-.038632	.125741	-.540248
2	.336446	-.235880	.183075	.159548	.179109	-.415348
3	.483876	-.457959	.145012	.292593	.280530	-.256261
4	-.007078	-.241080	.075745	.077314	.122798	-.202722
5	-.193861	.049912	.047056	-.065236	-.108059	-.230524
6	.186392	.161289	.040345	.086039	-.210933	-.299019
7-8	.275617	-.094380	.029501	.120616	-.116723	-.153203
9-11	.026827	-.081594	.021786	-.067762	.088359	-.076353
12-15	-.065636	-.079737	.008847	-.029608	-.017897	-.032309
16-20	.041577	-.050942	.003540	.035406	-.037954	-.022558
21-27	.031501	.000752	.001693	.027949	.005857	-.035212
28-36	-.027946	.002527	-.000051	-.016052	.000020	-.015059
37-47	-.008374	-.003649	.000038	-.004027	-.003405	-.013344
48-60	.000813	.000231	.000043	-.000792	-.001688	-.005767

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-01	10E-03
0	.050471	.019209	.005926	.026478
1	.588063	.283456	.086144	.300178
2	.833031	.473157	.126323	.368346
3	.917475	.614008	.150307	.356258
4	.602574	.451645	.131468	.235838
5	.386017	.294411	.122822	.179548
6	.343085	.298629	.129353	.163062
7-8	.257250	.277874	.115035	.102951
9-11	.141662	.168844	.090532	.078495
12-15	.085244	.101395	.067516	.050265
16-20	.056313	.079538	.051284	.033750
21-27	.033117	.052061	.035810	.019756
28-36	.023152	.032496	.020635	.011522
37-47	.017047	.020787	.013070	.007780
48-60	.008403	.013605	.008616	.005400

RUN NO 90D 46M 6-18-63 1840-1956(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.34229 10E 00	0.18718 10E 00	0.34151 10E-01	0.14550 10E 00	0.26545 10E-01	0.14516 10E-01
0	.012931	-.588168	.550385	.024688	-.043464	-.385160
1	-.004323	-.181110	.275684	.024221	-.002105	-.103285
2	-.045001	-.055666	.088730	.035037	.015633	-.035109
3	-.019950	.027454	.016693	-.000110	.039611	.032384
4	.016602	.085525	-.023601	.018989	.026518	.062104
5	-.005597	.123417	-.082064	-.014046	-.003698	.077579
6	-.029607	.074548	-.073600	.062037	-.026860	.065483
7	.064239	.008771	-.067560	-.037841	-.005680	-.002823
8	-.032523	-.016060	-.094857	.020582	-.102430	.004490
9	-.014512	.062934	-.100606	-.019309	-.023265	.023627
10	.070352	.036202	-.143135	-.030830	.017707	.064476
11	.098839	.069908	-.159390	-.052175	.013535	.081276
12	.025759	.004316	-.151886	-.013287	.010086	.016456
13	-.002818	.048371	-.131872	-.028098	-.024718	.035387
14	-.044481	.009814	-.077396	-.000293	-.043418	.001464
15	-.026980	.049253	-.058339	.003589	-.035947	.031573
16	-.031278	-.037037	.002532	.034079	-.006204	-.048946
17	-.002869	-.030590	.014316	.026576	-.003734	-.072984
18	-.007801	-.000169	.005586	-.015593	-.000286	-.032604
19	-.031346	.027910	.044956	-.059742	-.029295	-.036773
20	-.023605	.017042	.081982	.005819	.004372	-.033616
21	.070324	.004126	.087456	-.015787	.089309	-.021400
22	.042935	.021173	.097706	-.016025	.037072	.020456
23	.010157	.074162	.116593	-.054945	.021253	-.008402
24	-.050718	.005966	.126737	.027680	-.019298	-.022966
25	-.028709	-.084786	.158319	.021496	-.011964	-.082454
26	-.019437	-.044418	.115253	.052704	.015324	-.046755
27	.015310	.025798	.057720	-.009372	.055901	.055724
28	-.057640	.002541	.038544	.016846	.023772	.013667
29	-.089058	.022686	.003653	.049526	.012098	.074376
30	-.067508	-.021254	-.005442	.058404	.002362	.029368

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-02	10E-03	10E-03
0	.023435	-.040307	-.008952	.007204	-.082720	-.012049
1	.014798	-.432886	.051921	.117380	-.143794	-.061509
2	-.164662	-.584206	.210449	.137418	.149379	-.244781
3	-.364521	-.777682	.284753	.125834	.211375	-.487351
4	-.281714	-.825678	.169822	.076513	.074000	-.428052
5	.182892	-.744434	.108403	-.048931	.099619	-.289937
6	.327477	-.776533	.111750	-.089700	.020567	-.359153
7	-.060471	-.892854	.132621	.043121	-.289911	-.492061
8	-.230238	-.766721	.125937	.090684	-.394881	-.421638
9-11	.198185	-.455469	.070685	.018670	-.090285	-.224215
12-14	-.025925	-.215840	.056848	-.009010	-.112391	-.127637
15-21	.126277	-.368268	.050817	-.009673	.004410	-.182066
22-30	-.028547	-.397529	.030790	-.005041	-.081774	-.225779

RUN NO 90D 46M 6-18-63 1840-1956(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.34229 10E 00	0.18718 10E 00	0.34151 10E-01	0.14550 10E 00	0.26545 10E-01	0.14516 10E-01
1	-.047169	-.025422	.133899	.000187	.081258	-.008455
2	-.001615	.003673	.121074	.002626	.161961	-.034241
3	-.084783	.040911	.065797	-.053003	.162610	-.072421
4	-.057429	.014169	-.001755	-.001004	.211608	-.011697
5	-.008439	-.040746	-.049858	.085038	.196466	.066353
6	-.032560	-.084279	-.051295	.068537	.186239	.109338
7	-.043163	-.032744	-.047100	.010314	.227188	.063242
8	-.010815	-.032641	-.050536	.042166	.201340	.071103
9	-.047228	-.031959	-.041839	.021771	.142903	.043187
10	-.001595	.007272	-.054068	.092801	.116896	.020606
11	-.008545	-.021610	-.013665	.024325	.131927	.054573
12	.004417	-.016028	.016837	-.014869	.135620	.028424
13	.057098	-.020668	.000048	.025832	.046029	.017701
14	.081605	.044892	-.010712	.022006	-.036540	-.021463
15	.055630	.030100	-.002632	.039097	-.047283	-.021554
16	.085756	.047018	-.006546	.036561	-.068904	.021780
17	.090747	.049300	- 000689	-.025323	-.084009	-.008033
18	.113007	.045612	-.021675	-.044829	-.065118	-.024159
19	.095930	-.010130	-.010558	-.029165	-.056510	-.023556
20	.081707	.039535	.015527	-.033802	-.102634	-.056809
21	.056663	.034985	.011937	-.027585	-.084176	-.064936
22	.067467	.033904	.021400	-.024364	-.082290	-.063615
23	.057542	.049586	.040894	-.062806	.023430	-.040150
24	-.011629	-.009331	.004583	-.011942	.055028	-.011182
25	-.127368	-.022093	-.008670	-.066860	.106703	-.000741
26	-.127299	-.006109	-.004477	-.036272	.087443	-.041473
27	-.086369	-.020025	-.019518	-.031935	.065269	-.006348
28	-.057602	-.071198	.000874	.010592	.102337	.054402
29	-.045286	-.110622	-.013109	.001372	.103725	.081344
30	-.008759	-.080109	-.036110	.043396	.076133	.079175

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-03	10E-02	10E-02	10E-03
1	.504716	-.053187	-.450767	.285952	.233990	.246791
2	-.677846	-.264095	-.294395	.273228	.247795	.289314
3	-.955092	-.217595	.048775	.071708	.196368	.074284
4	-.121538	.065232	.430038	-.069594	.055910	-.187828
5	-.056731	.156436	.743459	-.063317	.021984	-.276929
6	-.185087	.133057	.941192	-.107127	.030700	-.360952
7	-.222520	.112136	.792538	-.142916	.025888	-.340172
8	-.220986	.155950	.623871	-.084328	.012618	-.273502
9-11	.003533	-.050942	.565304	-.075131	.012910	-.148221
12-14	.098237	-.153100	.218503	.172547	-.006502	.005117
15-21	-.114417	-.029273	.124756	.001544	.005348	-.047277
22-30	-.224977	-.007465	.060620	-.053156	-.011293	-.017909

RUN NO 90D 46M 6-18-63 1840-1956(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

H	U	V	W	T
	0.44036 10E 00	0.26606 10E 00	0.79566 10E-01	0.26485 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.387876	.298173	.105686	.573194
2	.045020	.106237	.072727	.315856
3	-.042838	.135431	-.025840	.196542
4	-.066167	.123808	-.048485	.104899
5	-.124980	.051104	-.029041	.082680
6	-.114534	-.013758	-.051493	.048085
7	-.115769	-.064836	-.022501	.034581
8	-.111623	-.029301	-.010526	-.062208
9	-.076021	-.067754	-.081366	-.149203
10	-.009775	-.134612	-.076980	-.214334
11	-.047645	-.071204	-.162912	-.214177
12	-.098411	-.096902	-.087182	-.213941
13	-.090142	-.164734	-.141918	-.243451
14	-.039149	-.128849	-.072196	-.207650
15	-.020659	-.129237	-.110780	-.187051
16	.029167	-.122883	.021284	-.085985
17	.003852	-.072452	-.058072	-.017819
18	-.051224	-.070668	.041081	-.045712
19	-.012448	-.033035	-.033463	.022849
20	-.002082	-.018739	.002082	.104620
21	.003428	.031638	.010914	.133141
22	.049790	.051768	-.011998	.141821
23	.035638	.051593	-.070598	.157714
24	.030932	.035372	.084185	.128417
25	.045035	-.011079	.099919	.110206
26	.013190	.083445	.090402	.081048
27	.028733	.028931	-.023410	.039394
28	.067502	.042367	.055432	.031540
29	-.007384	-.007185	-.021924	-.078045
30	-.050091	-.005136	.001574	-.090536

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-02	10E-03
0	.025562	.045253	.007914	.080942
1	.198184	.279162	.320331	.396056
2	.274817	.279758	.501952	.413096
3	.358840	.236298	.529154	.386190
4	.350394	.130854	.348529	.169720
5	.329175	.109653	.258902	.094907
6	.305686	.107993	.327256	.118873
7	.290339	.086624	.427344	.131075
8	.244779	.076508	.387434	.133485
9-11	.188569	.087212	.297187	.105502
12-14	.180213	.103992	.269446	.051294
15-21	.137923	.102696	.285742	.054379
22-30	.104622	.089520	.457689	.045726

RUN NO 90D 91M 6-18-63 1840-1950(EST)

GROSS STATISTICS

CLEAR
STABLE

WIND SPEED 8.75 M/SEC
WIND DIRECTION 243 DEG
SOLAR RAD. 0.02 LY/MIN

SIGMA A 5.70 DEG
SIGMA E 3.0 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.13551E 01	0.56336E 00	0.43827E-00	0.36575E-00
V	0.72747E 00	0.44036E-00	0.31497E-00	0.23909E-00
W	0.20176E-00	0.19169E-00	0.17914E-00	0.65746E-01
T	0.44232E-00	0.18417E-01	0.12177E-01	0.14374E-01
E	0.11422E 01	0.59773E 00	0.46620E-00	
GUSTINESS RATIOS				
U	0.13304	0.08578	0.07566	0.06912
V	0.09748	0.07584	0.06414	0.05588
W	0.05133	0.05004	0.04837	0.02930
COVARIANCES				
U,V	0.37231E-00	0.53733E-01	0.35882E-02	0.52284E-01
U,W	-0.19280E-00	-0.15013E-00	-0.12569E-00	-0.88059E-01
U,T	-0.19243E-00	0.52850E-01	0.34556E-01	0.42279E-01
V,W	-0.14764E-02	0.92207E-02	0.10375E-01	0.37390E-02
V,T	0.26991E-01	0.17193E-01	0.17800E-02	0.15862E-01
W,T	-0.18577E-01	-0.19927E-01	-0.18193E-01	-0.11823E-01
WE	-0.87444E-02	0.27451E-01	0.11687E-01	
NORMALIZED COVARIANCES				
U,V	0.37499	0.10788	0.00966	0.17681
U,W	-0.36873	-0.45685	-0.44856	-0.56786
U,T	-0.24856	0.51886	0.47301	0.58310
V,W	-0.00385	0.03174	0.04368	0.02982
V,T	0.04758	0.19091	0.02874	0.27058
W,T	-0.06219	-0.33537	-0.38952	-0.38461

RUN NO 900 91M 6-18-63 1840-1956(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.37158 10E 00	0.28021 10E 00	0.73035 10E-01	0.23756 10E 00	0.61918 10E-01	0.46692 10E-01
0	.009569	-.448443	.472934	.043699	.028830	-.389669
1	.015086	-.378023	.447273	.046735	.024049	-.332993
2	.015045	-.273195	.388959	.044894	.015311	-.247027
3	.018458	-.181825	.319154	.020690	.010672	-.176131
4	.017330	-.109305	.256847	-.006336	.003530	-.121882
5	.019128	-.055583	.202767	-.030156	-.005222	-.081408
6	.023651	-.016740	.153045	-.037608	-.006368	-.047800
7	.023431	.008261	.109286	-.035593	-.000268	-.017007
8	.025273	.022964	.067004	-.028858	.007226	.005272
9	.018441	.029818	.025432	-.027049	.013232	.025653
10	.011922	.036888	-.010476	-.031996	.015695	.043132
11	.008341	.040694	-.040355	-.038931	.013360	.055180
12	.006790	.055361	-.064780	-.031957	.007416	.060798
13	-.000749	.058515	-.077529	-.012268	-.000776	.055626
14	-.010186	.050824	-.082525	-.002740	-.000422	.049941
15	-.013595	.048931	-.084388	-.002827	.000274	.042511
16	-.007699	.055056	-.089414	-.002308	-.002140	.041522
17	-.001694	.056426	-.096324	.005003	-.004476	.050098
18	-.006572	.060390	-.106828	.014624	-.005917	.058378
19	-.013778	.054621	-.114710	.014580	-.009573	.064128
20	-.015834	.058195	-.118966	.014207	-.010533	.070070
21	-.012577	.064025	-.125764	.014036	-.004273	.076339
22	-.008073	.065833	-.132971	.020181	-.000978	.082050
23	-.002903	.076281	-.139902	.024822	-.000115	.091715
24	.001365	.085096	-.147387	.029137	.001894	.103737
25	.003647	.085115	-.152598	.021065	.002704	.114227
26	.004801	.087157	-.153104	.013141	-.000927	.107847
27	.006409	.070445	-.149777	.007066	-.005682	.090302
28	-.001249	.064161	-.146073	.003428	-.010552	.073516
29	-.010387	.060788	-.140907	-.002862	-.011881	.069085
30	-.018194	.054407	-.129401	-.009951	-.010831	.061342
31	-.027724	.046279	-.118637	-.006696	-.008597	.051256
32	-.038424	.039871	-.114853	.008498	-.003251	.047780
33	-.043573	.037762	-.105627	.019420	-.002294	.043532
34	-.040594	.039168	-.089972	.018807	-.003569	.033579
35	-.034024	.037792	-.074717	.015417	-.008916	.020700
36	-.024040	.028271	-.063424	.010691	-.015045	.003145
37	-.019134	.013608	-.053034	.010166	-.012874	-.011066
38	-.017474	.003125	-.040864	.019183	-.013366	-.015305
39	-.013664	-.004841	-.025622	.019295	-.019995	-.009785
40	-.011205	-.011404	-.009244	.017983	-.025067	-.007248
41	-.004186	-.016309	.003302	.014903	-.028802	-.014133
42	.002591	-.021104	.008357	.024804	-.026180	-.017610
43	.005134	-.011378	.011098	.024359	-.016047	-.015861
44	.007189	.000809	.015312	.014687	-.006237	-.012151
45	.012043	.012317	.020851	.000159	.001473	-.011805
46	.017168	.018567	.028275	-.015454	.011602	-.010947
47	.022278	.019070	.037306	-.032745	.023431	-.009298
48	.029021	.012682	.048647	-.054266	.028112	-.011218
49	.032885	.003304	.056403	-.053128	.022220	-.020070
50	.026228	-.008447	.058805	-.048207	.012493	-.026083
51	.012246	-.021320	.057142	-.029985	.006435	-.029490
52	.001825	-.026093	.056374	-.014612	-.001085	-.029619
53	-.009727	-.032294	.056643	-.004744	-.003792	-.025905
54	-.015586	-.040700	.052963	.008357	-.006402	-.023061
55	-.017177	-.036867	.048455	.010322	-.007347	-.024610
56	-.016341	-.034056	.047735	.008256	-.005903	-.023908
57	-.014291	-.030272	.047437	.003997	-.004385	-.020263
58	-.010370	-.031946	.044622	-.007126	.003728	-.015930
59	-.003547	-.032503	.040564	-.023318	.012640	-.015411
60	-.002249	-.029537	.035763	-.019253	.018716	-.019351

RUN NO 90D 91M 6-18-63 1840-1956(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.37158 10E 00	0.28021 10E 00	0.73035 10E-01	0.23756 10E 00	0.61918 10E-01	0.46692 10E-01
1	-.006171	-.002772	.041853	.001345	.019925	-.065058
2	-.016556	-.000211	.064145	.017862	.022206	-.087693
3	-.026604	.010148	.074966	.019808	.020232	-.095443
4	-.031476	.010774	.083498	.014296	.018996	-.088654
5	-.034058	-.003468	.089590	.010688	.021925	-.079487
6	-.038785	-.022832	.097668	-.001485	.027980	-.069215
7	-.040024	-.028741	.100903	-.016938	.036356	-.058320
8	-.037371	-.017192	.102175	-.026702	.042743	-.056479
9	-.034751	-.000898	.103207	-.020398	.043035	-.058557
10	-.029358	.005659	.102971	-.017742	.038012	-.057571
11	-.025275	.006946	.103308	-.014004	.034239	-.054311
12	-.024245	.000140	.103203	-.003445	.027471	-.046087
13	-.015057	-.009774	.097597	.006278	.017020	-.039475
14	-.009403	-.021548	.089591	.003678	.014679	-.031220
15	-.011126	-.021500	.080691	-.000633	.021413	-.024774
16	-.017639	-.008018	.072962	-.011213	.031766	-.026344
17	-.020628	-.000112	.064298	-.014299	.037782	-.032793
18	-.017130	-.002364	.054734	.000178	.033173	-.034927
19	-.019663	-.011699	.046513	.010091	.028761	-.031222
20	-.024364	-.014516	.041235	.010545	.030250	-.031914
21	-.027225	-.014737	.036213	.002997	.035949	-.031078
22	-.029644	-.016544	.034780	-.006487	.037592	-.023840
23	-.030928	-.022852	.031453	-.007630	.031896	-.011576
24	-.023217	-.026353	.023936	-.008719	.023311	.006520
25	-.009420	-.023540	.012488	-.000194	.016304	.024102
26	.006012	-.016679	.000221	.019192	.009602	.032596
27	.011384	-.004562	-.011516	.037096	.003947	.035172
28	.009882	.003681	-.021040	.037768	.003349	.032943
29	.009034	.009653	-.028271	.022543	.010099	.031542
30	.016409	.023345	-.034236	.012525	.008045	.030972
31	.023239	.031889	-.037850	.008129	.000394	.030667
32	.040594	.033351	-.041607	.019483	-.009124	.023464
33	.055112	.027461	-.048810	.031109	-.014144	.018590
34	.060194	.031127	-.058228	.036839	-.019958	.022335
35	.059487	.033955	-.066376	.034713	-.026070	.030489
36	.060134	.031164	-.069834	.029931	-.032719	.034002
37	.056389	.022526	-.073916	.025592	-.036971	.029218
38	.047795	.014803	-.073936	.025114	-.037895	.026898
39	.033583	.009485	-.067066	.022189	-.038868	.021623
40	.020214	.010582	-.056831	.014072	-.037883	.012479
41	.011175	.008651	-.047727	-.001926	-.033749	.007200
42	.005130	-.001229	-.037201	-.023213	-.029291	.000726
43	-.007688	-.017064	-.023905	-.038296	-.026967	-.003232
44	-.023730	-.020308	-.011780	-.047513	-.025373	.001501
45	-.033688	-.025071	-.004968	-.051150	-.022448	.009616
46	-.032377	-.027112	-.004999	-.049818	-.020834	.010214
47	-.025998	-.022824	-.008432	-.041342	-.019960	.011758
48	-.018989	-.010317	-.012665	-.023285	-.016463	.012367
49	-.014341	-.004783	-.013296	-.005214	-.012687	.010808
50	-.012940	-.007127	-.008826	.004538	-.012912	.008255
51	-.014531	.003788	-.002618	.006166	-.010655	.004950
52	-.009836	.007428	.002116	.002552	-.006570	-.006709
53	-.003731	.010315	.004499	.001943	-.006459	-.016273
54	.003410	.011370	.010388	.001666	-.012934	-.019718
55	.007760	.006073	.018352	-.002106	-.014686	-.020957
56	.002731	-.004540	.027800	-.003280	-.011041	-.020515
57	-.014575	-.004758	.034669	.006249	-.007534	-.018728
58	-.025645	.001479	.039212	.012127	-.004224	-.016789
59	-.033995	.000220	.046957	.010554	.000879	-.021030
60	-.034974	-.002674	.050575	.005810	.008937	-.026226

RUN NO 90D 91M 6-18-63 1840-1956(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.43830 10E 00	0.31502 10E 00	0.17914 10E 00	0.12170 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.844355	.746183	.648470	.898200
2	.648125	.452887	.327868	.747695
3	.493318	.256688	.161585	.621002
4	.373077	.133892	.068450	.513595
5	.270878	.047940	-.002855	.422291
6	.173357	-.011164	-.070440	.342032
7	.090325	-.056466	-.113878	.265581
8	.024077	-.103431	-.122821	.190053
9	-.027607	-.132748	-.117586	.117615
10	-.069084	-.138073	-.103053	.047797
11	-.106710	-.122802	-.098806	-.015222
12	-.139155	-.099786	-.108743	-.066008
13	-.157585	-.082837	-.098405	-.104435
14	-.162354	-.078198	-.062915	-.133719
15	-.165280	-.096441	-.041349	-.157968
16	-.178980	-.106951	-.035470	-.191304
17	-.198681	-.109484	-.035536	-.231171
18	-.211865	-.115785	-.038323	-.268363
19	-.215008	-.131952	-.030071	-.297914
20	-.220517	-.144736	-.031661	-.320021
21	-.228539	-.146994	-.047344	-.341996
22	-.231686	-.152028	-.054237	-.363789
23	-.232452	-.149014	-.097759	-.383619
24	-.235984	-.140692	-.125417	-.401182
25	-.229592	-.116868	-.125122	-.408005
26	-.209460	-.088112	-.107966	-.400580
27	-.195558	-.067690	-.071855	-.386960
28	-.181757	-.071858	-.052579	-.363912
29	-.168239	-.065664	-.048606	-.333682
30	-.142464	-.039971	-.040755	-.297473
31	-.107612	-.011391	-.019123	-.259216
32	-.085576	.001727	-.008968	-.224600
33	-.066862	.003572	-.012902	-.195997
34	-.048413	.014692	-.024051	-.167665
35	-.029621	.035162	-.011630	-.136688
36	-.015575	.046320	.015212	-.102304
37	-.001573	.049575	.034038	-.068832
38	.017730	.043028	.035728	-.036745
39	.032403	.042923	.027652	-.009860
40	.045364	.043657	.009226	.013015
41	.055976	.041169	.009791	.038841
42	.063388	.037578	.014146	.062490
43	.066158	.042461	.002573	.079052
44	.051587	.052994	-.029743	.092748
45	.033724	.057259	-.025226	.109393
46	.019646	.057514	-.025707	.123499
47	.015839	.051475	-.023843	.133793
48	.021849	.041181	-.007108	.140654
49	.026930	.022007	.008565	.147150
50	.028673	-.008281	.011720	.152460
51	.024525	-.036328	.018577	.160447
52	.022387	-.051894	.021463	.164625
53	.022984	-.063706	.012266	.161921
54	.019959	-.060028	.012753	.151699
55	.016912	-.052882	.000205	.137951
56	.014238	-.035006	-.016745	.124121
57	.012979	-.022060	-.026122	.111388
58	.012083	.000799	-.014094	.100445
59	.014006	.004863	-.008103	.089812
60	.014015	.003171	-.003062	.079449

RUN NO 90D 91M 6-18-63 1840-1956(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-01	10E-02	10E-02	10E-03	10E-02
0	.020890	-.007692	.042064	.007804	.018587	-.007372
1	.323618	-.112315	.583709	-.086285	.334094	-.172235
2	.345859	-.151385	.751728	-.119489	.304585	-.260451
3	.144618	-.157785	.677424	.010861	.101213	-.272247
4	.025811	-.115340	.389466	.144079	.067036	-.171698
5	.121302	-.095481	.288884	.226492	.084660	-.128778
6	-.055264	-.097183	.248875	.313492	-.059095	-.143691
7-8	-.153068	-.077744	.144299	.158672	.045472	-.115645
9-11	-.024193	-.047886	.050325	.109180	.185503	-.046608
12-15	.022460	-.030050	.038879	.045009	.108397	-.034556
16-20	-.002315	-.013948	.018484	-.007646	-.035230	-.023254
21-27	-.015578	-.009286	.006603	-.030920	.008259	-.013527
28-36	.000647	-.004324	.001698	-.012719	.024171	-.005733
37-47	.000385	-.002543	-.000290	-.004430	.001824	-.004081
48-60	-.011502	-.001735	.000733	.002497	-.001267	-.001658

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-02	10E-02	10E-02
1	-.204845	-.073619	.205833	.110795	.089360	-.058854
2	-.528484	-.161217	.314061	-.038332	.112009	-.105461
3	-.535350	-.128859	.291312	-.163257	.063998	-.122469
4	-.037913	.095556	.118588	-.004690	.004986	-.072463
5	-.066305	.070159	.066002	.070407	.018651	-.039304
6	-.359219	-.125940	.066064	-.031363	.028221	-.046391
7-8	-.104341	-.001375	.021487	.060963	.013794	-.053976
9-11	.029229	.006539	.019901	.097818	-.009155	-.021708
12-15	.002301	.090936	.013768	.051274	.005040	-.028129
16-20	.003110	-.032886	.008533	-.026664	.009298	-.009283
21-27	-.002009	-.040452	.006597	-.009670	.004621	-.005538
28-36	.010950	.008185	.002135	-.011489	.002653	-.003567
37-47	-.001561	.002460	.001624	-.012935	.001089	-.002420
48-60	.001000	.001920	-.000505	-.000029	.000474	-.001017

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-01	10E-02
0	.036502	.014289	.006299	.011359
1	.460531	.149853	.072127	.198171
2	.655122	.246312	.101733	.278508
3	.722213	.335188	.125787	.252545
4	.483344	.268385	.111095	.116493
5	.321997	.202438	.104265	.063913
6	.291234	.204541	.123537	.061337
7-8	.215396	.203619	.114779	.046031
9-11	.113390	.127903	.067026	.020032
12-15	.069728	.074096	.050831	.015823
16-20	.044165	.063923	.034291	.009928
21-27	.033445	.035801	.031857	.005475
28-36	.017221	.023480	.019411	.003078
37-47	.011251	.013366	.013167	.001867
48-60	.007580	.009635	.009275	.000952

RUN NC 900 91M 6-18-63 1840-1956(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.29571 10E 00	0.15502 10E 00	0.72507 10E-01	0.12533 10E 00	0.58619 10E-01	0.30731 10E-01
0	.176811	-.568030	.583102	.029833	.270595	-.384733
1	.183760	-.123152	.251719	-.053442	.265067	-.027529
2	.146786	-.056187	.107657	.009650	.213904	.037240
3	.126067	.058059	-.016016	-.026637	.201881	.086879
4	.088753	.035106	-.024173	-.005273	.155501	.040456
5	.103918	.059898	.010603	-.019997	.119420	-.000096
6	.041366	-.025577	.020583	-.036701	.051622	-.050798
7	.019106	.002173	-.003444	.000488	-.008918	-.033498
8	-.058373	.021243	-.075276	.044895	-.106705	.006890
9	-.117543	.036530	-.077607	.047754	-.181032	.043101
10	-.131259	.013359	-.083322	.015412	-.194530	.038961
11	-.087832	.050360	-.115519	-.004970	-.172717	-.002454
12	-.157524	.074853	-.138917	.051124	-.198343	.030615
13	-.109636	.115004	-.198381	.016016	-.217011	.062122
14	-.052553	.066330	-.211486	-.060225	-.209689	.043442
15	-.057168	-.028951	-.143085	.012514	-.189028	.026143
16	-.100846	.050315	-.067866	.019578	-.143403	.003044
17	-.072[illegible]3	.007278	-.093684	-.009776	-.109039	.011271
18	-.066663	.086895	-.121652	-.002114	-.092451	.072714
19	-.070559	-.060655	-.017235	.054522	-.043958	.000410
20	-.051394	-.026841	.055044	.057479	.023065	.007753
21	-.032831	-.056261	.133296	.088715	.030039	-.043387
22	.016282	-.027456	.140770	.039511	.085528	-.066233
23	.057043	.032540	.087691	-.008722	.147492	-.023262
24	.046222	.060982	.050450	-.049303	.173352	.021780
25	.076759	.026616	.087319	-.044074	.187196	.028565
26	.075180	.038986	.153599	-.017235	.144834	-.044585
27	.093328	.031502	.180503	-.055861	.167520	-.074867
28	.072496	-.045815	.209102	-.021187	.149728	-.096917
29	.127552	.008519	.103033	-.057633	.166402	-.023794
30	.108920	.013368	.051647	-.059412	.101915	-.018940

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-02	10E-02	10E-02	10E-02	10E-03
0	.013338	-.057595	-.011116	.015259	.013704	.037445
1	.174115	-.442890	.301432	-.081385	.433135	-.221866
2	.209927	-.538025	.578055	-.112752	.667945	-.502856
3	.157271	-.615158	.495726	-.067871	.531872	-.406519
4	.053562	-.410760	.150312	-.083778	.113532	-.121656
5	.000127	-.316365	.170594	.006554	-.005194	-.222458
6	-.033665	-.491597	.272644	.135377	-.036264	-.420447
7	-.014419	-.595616	.258878	.048037	-.038674	-.574470
8	.018717	-.589058	.254431	-.000525	-.013047	-.832379
9-11	.016528	-.411355	.235505	-.043158	.039497	-.907253
12-14	-.000663	-.244757	.114554	.003035	-.010143	-.418287
15-21	-.004316	-.282284	.084932	.017669	.009855	-.460263
22-30	-.001650	-.401773	.121099	.111515	-.008821	-.625574

RUN NO 900 91M 6-18-63 1840-1956(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.29571 10E 00	0.15502 10E 00	0.72507 10E-01	0.12533 10E 00	0.58619 10E-01	0.30731 10E-01
1	-.054047	-.024105	.092396	.003822	.087008	-.072788
2	-.040720	-.026693	.084473	.070204	.110472	-.060558
3	-.032251	.013605	.026764	.065061	.144765	-.001515
4	-.018818	.026886	-.019059	.032724	.136988	-.002376
5	-.047300	-.046605	-.008887	.032762	.152249	.017017
6	-.055338	-.001930	.013623	.008403	.191665	-.020365
7	-.025034	.015766	-.009855	.009676	.210820	.006779
8	.026390	-.011946	-.017858	.029132	.140102	-.002414
9	.041756	-.031691	-.023101	.032720	.072982	.041157
10	.066576	.060835	.029225	.088404	.004163	-.023361
11	.027894	.022360	.045866	.056621	.045666	-.016980
12	.042368	-.030707	.044275	.024379	.051247	-.014325
13	.070050	-.028908	.000122	.027825	.004098	.014164
14	.064447	-.019541	-.010368	.028600	-.069410	.024107
15	.096786	.014044	-.008355	.017173	-.103182	.022188
16	.146181	.035319	.031915	.051375	-.102499	-.041937
17	.127518	.029953	.038281	.065530	-.101902	-.045219
18	.137864	.036954	.032341	.059156	-.128114	-.055840
19	.139615	-.002335	.035854	.020491	-.152354	-.041642
20	.120086	-.011347	.039310	.030783	-.134304	.006486
21	.082609	.005306	-.003856	.000556	-.112277	.029217
22	.022100	.005222	-.002676	-.014087	-.068092	.019951
23	-.002420	.025949	.013746	-.007679	-.023286	-.027729
24	-.052374	-.002721	-.034378	-.056981	.048225	.030638
25	-.078274	.014973	-.064521	-.041960	.085237	.030270
26	-.094622	-.021508	-.049452	-.020592	.089149	.050353
27	-.078172	-.017987	-.045812	-.053380	.103946	.048386
28	-.152849	-.008281	-.044884	-.042557	.158715	.050988
29	-.150261	-.013193	-.043745	-.049537	.138180	.055298
30	-.110486	.024565	-.023115	-.049970	.121776	-.029184

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-03	10E-02	10E-02	10E-02	10E-03
1	.126238	.324699	.093533	.457004	.202958	-.178350
2	-.027410	-.369556	.026177	.218083	.414473	-.033642
3	-.091834	-.417744	.000233	.052375	.412696	-.028520
4	-.025883	-.039532	.047930	.080662	.134596	-.252005
5	-.024026	-.363716	.057555	.078094	.058575	-.193121
6	-.028738	-.626417	.089054	.081590	.031384	-.124009
7	.006775	.153897	.128768	.168923	-.022462	-.329362
8	.014672	.859756	.090239	.149664	-.018706	-.346734
9-11	-.013222	-.880376	.064182	-.018772	.060496	-.205779
12-14	-.021382	-.312522	.085577	-.002785	.000727	-.272982
15-21	-.001307	-.024508	.005326	-.054834	.006936	-.076358
22-30	-.008094	-.333917	.003170	-.021914	.016726	.090778

RUN NO 90D 91M 6-18-63 1840-1956(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.36577 10E 00	0.23907 10E 00	0.65705 10E-01	0.14373 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.362695	.521696	.055130	.492856
2	.106159	.440196	.048060	.140881
3	.007799	.336974	-.070539	-.021111
4	.001266	.344350	-.088138	.040551
5	-.055543	.164249	-.142629	.100073
6	-.000573	.068082	-.022670	.052013
7	-.016454	-.019712	-.058434	-.038207
8	-.044198	-.080797	.030990	-.171505
9	-.017951	-.235534	-.052708	-.211615
10	-.072315	-.305111	-.052468	-.204807
11	-.156314	-.351041	.000970	-.186766
12	-.130511	-.363881	-.098844	-.210196
13	-.251125	-.393079	-.110054	-.293371
14	-.172165	-.395875	-.071414	-.301438
15	-.051100	-.365384	-.023641	-.201884
16	.007501	-.258899	.023170	-.066284
17	-.122397	-.238069	.065774	-.038355
18	-.111719	-.171334	-.057450	-.096818
19	.012943	-.124427	.128748	-.059417
20	.038727	.006608	.029155	.042004
21	.077139	.007955	.087722	.219722
22	.063179	.137209	.057209	.273511
23	-.008229	.213258	-.000418	.172639
24	-.047546	.223723	-.068695	.069389
25	-.011265	.188303	-.022132	.081874
26	.049971	.202055	-.027180	.218755
27	.001438	.219200	-.020823	.270944
28	.148675	.240202	-.067585	.195841
29	.089562	.118553	-.064390	.042725
30	.047408	.078064	-.045669	.002130

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-02	10E-02
0	.035317	.040049	.018988	.006497
1	.296822	.442913	.141498	.114955
2	.347329	.547390	.237122	.193777
3	.321690	.417039	.350380	.187827
4	.180511	.215646	.273900	.075542
5	.155366	.044959	.255374	.050024
6	.218045	.047103	.376451	.063260
7	.240580	.049878	.399771	.066322
8	.224609	.053259	.338081	.076329
9-11	.144604	.046573	.244837	.093864
12-14	.126463	.049340	.178710	.052541
15-21	.120638	.052602	.268247	.028011
22-30	.100865	.065348	.396130	.028040

RUN NO 90D 46M 6-18-63 1840-1956(EST)
RUN NO 90D 91M 6-18-63 1840-1956(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.119492	.137645	.058966	.340101
1	.350191	.302129	.229146	.436897
2	.340319	.257462	.222719	.476912
3	.245882	.196743	.218358	.455221
4	.096057	.242569	.247089	.347652
5	.100199	.321475	.198030	.347173
6	.200862	.213660	.163996	.250595
7-8	.106039	.073130	.156086	.065023
9-11	.125596	.059445	.183703	.041887
12-15	.052622	.158931	.136975	.066296
16-20	.117365	.113354	.117103	.080586
21-27	.129602	.134514	.070520	.072443
28-36	.123053	.102487	.141424	.082432
37-47	.107710	.090333	.079717	.079843
48-60	.096285	.109717	.088989	.091865

301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.856614	.967468	.733044	.578185
1	.613472	.939654	.502915	.674305
2	.509824	.904982	.276889	.769211
3	.468185	.758964	.118205	.779665
4	.409083	.310640	.134187	.680688
5	.193817	.116573	.245928	.314522
6	.161945	.135493	.298382	.229645
7	.093250	.255290	.181688	.209039
8	.488190	.374304	.253464	.432504
9-11	.485280	.256557	.272766	.548214
12-14	.468317	.210216	.176243	.495603
15-21	.282242	.246504	.241963	.360820
22-30	.320488	.369501	.356485	.302230

RUN NO 91A 15M 6-18-63 2150-2300(EST)

GROSS STATISTICS

CLEAR
STABLE

WIND SPEED 3.58 M/SEC
WIND DIRECTION 235 DEG
SOLAR RAD. 0 LY/MIN

SIGMA A 7.40 DEG
SIGMA E 4.7 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.33563E-00	0.28544E-00	0.24434E-00	0.15147E-00
V	0.19807E-00	0.16804E-00	0.15823E-00	0.59804E-01
W	0.79509E-01	0.74046E-01	0.73718E-01	0.19132E-01
T	0.20319E-01	0.36271E-02	0.28923E-02	0.19993E-02
E	0.30660E-00	0.26377E-00	0.23815E-00	
GUSTINESS RATIOS				
U	0.16183	0.14924	0.13808	0.10871
V	0.12431	0.11451	0.11111	0.06831
W	0.07876	0.07601	0.07584	0.03864
COVARIANCES				
U,V	0.29995E-01	0.20341E-01	0.14923E-01	0.83634E-02
U,W	-0.55770E-01	-0.52205E-01	-0.47889E-01	-0.24988E-01
U,T	0.17022E-01	0.13766E-01	0.99378E-02	0.95614E-02
V,W	0.30114E-02	-0.11286E-02	-0.19446E-03	0.18613E-02
V,T	-0.28236E-02	0.59148E-02	0.49408E-02	0.28114E-02
W,T	-0.72918E-02	-0.58418E-02	-0.54158E-02	-0.22365E-02
WE	0.18882E-02	0.31134E-02	0.39129E-02	
NORMALIZED COVARIANCES				
U,V	0.11624	0.09288	0.07589	0.08787
U,W	-0.34140	-0.35909	-0.35682	-0.46416
U,T	0.20612	0.42782	0.37382	0.54943
V,W	0.02400	-0.01012	-0.00180	0.05502
V,T	-0.04451	0.23958	0.23095	0.25711
W,T	-0.18141	-0.35646	-0.37090	-0.36162

RUN NO 91A 15M 6-18-63 2150-2300(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.19668 10E 00	0.13423 10E 00	0.26590 10E-01	0.10801 10E 00	0.21395 10E-01	0.14602 10E-01
0	.075856	-.356788	.373518	-.001755	.230834	-.370905
1	.068552	-.303249	.356267	.011750	.190530	-.284431
2	.054763	-.216808	.307809	.023288	.129658	-.166723
3	.030954	-.145134	.241971	.024571	.081336	-.089349
4	-.000700	-.085453	.173618	.030003	.044796	-.050814
5	-.018904	-.044524	.116197	.029493	.012454	-.014269
6	-.025742	-.011114	.071941	.031070	-.014097	.023114
7	-.024762	.018481	.036362	.031396	-.028686	.038870
8	-.021026	.032057	.007330	.025943	-.039825	.039978
9	-.015664	.032027	-.014573	.017125	-.049430	.049535
10	-.009797	.031169	-.030223	.007105	-.060013	.055936
11	-.007160	.035793	-.043445	.002035	-.061058	.051330
12	-.005357	.033490	-.058580	-.010546	-.050518	.045723
13	-.000225	.030238	-.069839	-.027749	-.037191	.037232
14	.005482	.039115	-.076879	-.044196	-.027957	.035331
15	.019913	.045069	-.077762	-.047219	-.018161	.033591
16	.030652	.044938	-.077820	-.040617	-.015403	.029966
17	.025484	.055290	-.080138	-.033113	-.014110	.028870
18	.010889	.068572	-.088402	-.025680	-.013628	.029198
19	.010687	.074716	-.100134	-.025564	-.020816	.027408
20	.001076	.076414	-.103015	-.030744	-.039333	.017831
21	-.001118	.075053	-.099908	-.030052	-.050653	.011083
22	.007249	.067313	-.097772	-.028342	-.047715	.020915
23	.009916	.063647	-.092399	-.025768	-.037832	.031049
24	.007972	.069443	-.087682	-.022576	-.035887	.036941
25	-.000820	.070847	-.085164	-.025984	-.028387	.032583
26	-.019346	.054661	-.079754	-.018725	-.026479	.030785
27	-.026060	.032720	-.068795	.001055	-.028565	.028410
28	-.030840	.028684	-.057255	.003799	-.026058	.021694
29	-.026737	.023064	-.050217	.000713	-.020515	.021285
30	-.022287	.010984	-.044665	-.001720	-.011436	.020228
31	-.025184	-.004425	-.042099	.002948	-.007811	.012826
32	-.021108	-.016418	-.038689	.018737	-.011241	.011786
33	-.009094	-.012979	-.029765	.028974	-.005250	.015506
34	-.001987	-.017158	-.019695	.033214	.007258	.012243
35	-.004781	-.013399	-.015885	.032508	.017737	.011024
36	-.008102	-.007906	-.010807	.035013	.021194	.005341
37	-.011918	.000781	-.008856	.032633	.017361	-.005130
38	-.003742	-.003695	-.004385	.028116	.008938	-.018112
39	.003341	-.002399	-.001971	.016695	.005092	-.016784
40	.003703	.000560	-.003229	.020540	.011891	-.002151
41	.002874	.005345	-.006765	.020511	.023520	.007540
42	.004313	.012695	-.008575	.019572	.029033	.010218
43	.014388	.015111	-.010403	.007813	.030243	.007867
44	.016192	.007721	-.012583	.010584	.021519	.001211
45	.003155	.005379	-.016154	.014740	.010614	.000100
46	.001297	.000436	-.015735	.004950	.011442	-.000573
47	.010407	-.003176	-.002825	-.011530	.016796	-.009929
48	.004609	-.006527	.006523	-.014022	.015228	-.015345
49	-.005789	-.010776	.005684	-.002221	.003997	-.008276
50	-.013048	-.002247	.004794	.001714	.001061	.008934
51	-.017241	.012579	.003601	.001746	.003026	.026464
52	-.015237	.013495	.006998	-.008734	.004887	.027585
53	-.012520	.003863	.018207	-.017286	.009427	.019391
54	-.014085	.001544	.025530	-.014003	.013819	.009317
55	-.015238	.001421	.027676	-.008788	.024940	-.005116
56	-.024287	.002835	.029585	-.004319	.028917	-.009530
57	-.030876	.002364	.025414	.007968	.022557	-.003087
58	-.035017	.009323	.019899	.014665	.014150	.003757
59	-.027747	.015205	.015821	.019502	.013968	.008456
60	-.028997	.017970	.012793	.022044	.011435	.015387

RUN NO 91A 15M 6-18-63 2150-2300(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.19668 10E 00	0.13423 10E 00	0.26590 10E-01	[illegible]	0.21395 10E-01	0.14602 10E-01
1	.010854	-.017603	.063809	.029295	.034246	-.073331
2	.023103	-.025010	.107900	.026362	.036979	-.082326
3	.029770	-.023728	.129287	.030088	.018830	-.074764
4	.034667	-.022621	.134016	.025868	.001999	-.067853
5	.038204	-.022067	.124247	.022537	-.009909	-.059735
6	.031586	-.030933	.111180	.009848	-.013932	-.049369
7	.029172	-.030742	.101215	-.006126	-.010522	-.041384
8	.014992	-.027991	.093672	-.002825	-.003652	-.039630
9	.003506	-.028763	.086746	.010278	-.003084	-.034881
10	-.009109	-.022896	.079917	.007213	-.003242	-.021265
11	-.014589	-.017811	.075785	.005556	-.005753	-.011018
12	-.015640	-.012038	.065595	.014040	-.004244	-.006615
13	-.012846	-.004836	.055646	.016316	-.000602	-.000915
14	-.010966	.007077	.041013	.019979	-.000677	.000446
15	-.004326	.008672	.035352	.016291	.000874	.001337
16	.010903	.003468	.036387	.005252	.002863	.001919
17	.018040	-.003192	.036255	.007549	.000704	-.001201
18	.015051	-.003512	.035736	.012408	-.000808	-.005125
19	.003205	-.004310	.037744	.011566	.005635	-.008412
20	-.004571	.005250	.032803	.010396	.015570	-.017595
21	-.006824	.008743	.024909	.005810	.023878	-.036350
22	-.004375	.005240	.026145	.007386	.022396	-.047513
23	-.000579	.001135	.026769	.014281	.019343	-.045868
24	-.005895	-.001792	.025417	.010709	.019314	-.034135
25	-.020882	.005576	.021906	-.012272	.025661	-.020094
26	-.023089	.000988	.011063	-.012115	.025427	-.008536
27	-.021524	-.007405	-.000657	-.013902	.015571	.002550
28	-.022610	.000504	-.012612	-.013053	-.001599	.005585
29	-.019378	.000089	-.017510	-.014102	-.010666	.013912
30	-.019394	-.003101	-.016373	-.015043	-.007593	.028755
31	-.017556	-.002715	-.011788	-.019189	.000254	.032770
32	-.003566	-.013291	.002176	-.030484	.006091	.031636
33	.003315	-.016168	.014200	-.038079	.006847	.031301
34	.004543	-.011368	.021110	-.049449	.010269	.029155
35	.007395	-.015116	.028745	-.053322	.013517	.027174
36	.004080	-.007546	.024478	-.034005	.014004	.020451
37	.000592	-.004727	.020780	-.020672	.015626	.018526
38	.002110	.000781	.012265	-.016255	.010520	.019480
39	.002163	-.001039	-.000579	-.004122	.001871	.009256
40	.002062	-.004548	-.011226	.009131	.003881	.002417
41	.004148	-.003396	-.021237	.014325	.000239	.008731
42	-.003817	.000420	-.026668	.001821	.000527	.014317
43	-.010254	-.001310	-.031995	-.010897	.006271	.014173
44	-.017328	-.006215	-.036466	-.015585	.011714	.008273
45	-.027661	.003218	-.038853	-.017441	.018800	.005846
46	-.026748	.009725	-.037211	-.018018	.023867	.002856
47	-.012559	.010708	-.033657	-.018439	.034740	.001270
48	-.001559	.013634	-.035682	-.009865	.046403	-.000234
49	.003865	.020137	-.037614	.006480	.045644	-.001207
50	.000305	.015003	-.044427	.006173	.035025	.003063
51	-.007061	.013635	-.057232	.015707	.026117	.011324
52	-.015346	.017060	-.070869	.022749	.016837	.012147
53	-.018378	.017296	-.074373	.008648	.011300	.014128
54	-.017202	.016106	-.060777	.006172	.006091	.010781
55	-.014905	.006214	-.039669	.008328	-.009238	-.000979
56	-.003636	.001513	-.023054	.014470	-.022185	-.017350
57	-.000968	.007018	-.017384	.022657	-.029981	-.031477
58	.005818	.007016	-.007740	.032506	-.029688	-.034447
59	.015396	-.000277	.001632	.027938	-.027533	-.030617
60	.023248	-.008618	.006517	.024774	-.030265	-.020889

RUN NO 91A 15M 6-18-63 2150-2300.EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.24442 10E 00	0.15826 10E 00	0.73716 10E-01	0.28925 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.811823	.687317	.584549	.834706
2	.587939	.385012	.241003	.590984
3	.424414	.211742	.084643	.396178
4	.291984	.091784	.026641	.257486
5	.179860	.015846	-.015614	.154469
6	.086723	-.035634	-.060489	.076102
7	.012720	-.054860	-.061100	.017332
8	-.023940	-.059195	-.066557	-.036122
9	-.053607	-.076617	-.073820	-.092511
10	-.081859	-.099971	-.081591	-.132351
11	-.101858	-.116449	-.092377	-.148546
12	-.120440	-.124286	-.094157	-.152482
13	-.141245	-.127966	-.085350	-.147890
14	-.155196	-.127289	-.080272	-.136302
15	-.163352	-.126688	-.076607	-.127990
16	-.168736	-.121247	-.063883	-.119355
17	-.170780	-.102421	-.050797	-.110066
18	-.180488	-.095697	-.062144	-.104942
19	-.188084	-.098247	-.083817	-.113741
20	-.188101	-.110813	-.077978	-.130484
21	-.193708	-.116024	-.052800	-.150667
22	-.194857	-.113204	-.058785	-.170760
23	-.182667	-.107787	-.079913	-.180343
24	-.167823	-.116112	-.080695	-.181041
25	-.155114	-.102370	-.074285	-.176289
26	-.144254	-.085038	-.060101	-.178305
27	-.133784	-.078714	-.042881	-.178872
28	-.114554	-.063995	-.037054	-.163417
29	-.081417	-.039116	-.055012	-.139424
30	-.042570	-.008933	-.069715	-.107779
31	-.007494	.009917	-.039050	-.076317
32	.017541	.015387	-.005121	-.056602
33	.024270	.016102	.017609	-.047041
34	.021504	.019632	.033729	-.032567
35	.007090	.027630	.024971	-.017759
36	-.008658	.031676	.021444	-.001382
37	-.025620	.025479	.032714	.010219
38	-.035216	.036682	.045259	.013663
39	-.044894	.030669	.042848	.006092
40	-.041773	.026900	.018213	-.000631
41	-.043632	.007391	.003665	-.005375
42	-.053154	.004566	.015215	-.004593
43	-.052223	.021585	.019361	-.006615
44	-.048386	.031354	.030251	-.009868
45	-.045290	.018164	.015769	-.009339
46	-.036679	.026261	.003722	.003139
47	-.031924	.020201	.016714	.010424
48	-.032046	.012234	.019343	.011952
49	-.018760	.007035	.024615	.010705
50	-.011468	-.002368	.016222	.007008
51	.000834	.011573	.015271	.008188
52	.018303	.006837	.004523	.020709
53	.030121	.002954	.012908	.038834
54	.028566	-.006348	.018007	.063693
55	.020248	-.012044	-.009493	.088561
56	.013252	-.008048	-.029034	.098566
57	.015589	-.000162	-.027296	.088031
58	.023200	.012868	-.026919	.073480
59	.024896	.010416	-.033535	.065587
60	.022673	.008132	-.046880	.055563

RUN NO 91A 15M 6-18-63 2150-2300(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-02	10E-03	10E-03
0	.023355	-.035881	.010595	-.001928	-.006612	-.030374
1	.143880	-.372742	.128536	-.003696	.155866	-.292671
2	.113435	-.520204	.169471	.073929	.408260	-.383669
3	.046605	-.651251	.184838	.172281	.592315	-.472104
4	.004985	-.522097	.137104	.110114	.483158	-.440994
5	.121724	-.324889	.090185	-.009813	.418094	-.421260
6	.235372	-.286786	.071354	-.036581	.472318	-.430826
7-8	.186107	-.336686	.055634	-.051207	.426239	-.351161
9-11	.113849	-.208124	.027987	-.031911	.170088	-.223902
12-15	.056721	-.094084	.013314	.002797	.111547	-.138180
16-20	-.007606	-.052162	.002436	-.010613	.071832	-.099709
21-27	-.008019	-.041376	.000523	-.006405	.033650	-.068624
28-36	-.001769	-.011893	-.000021	-.004139	.024031	-.044910
37-47	.005695	-.012712	-.000017	-.005594	.010885	-.014002
48-60	.001451	-.003055	-.000133	-.000926	.006609	-.010702

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10F-02	10E-03	10E-03	10E-03	10E-03
1	-.055056	-.073032	.864635	-.138530	.153784	-.122672
2	.037594	-.061076	.856590	.728677	.012032	-.193513
3	.102408	-.073521	.765193	.861558	-.039867	-.176654
4	.112361	-.110745	.679502	.042545	-.070565	-.086417
5	.064139	-.095854	.516363	-.130403	-.021517	-.131154
6	.072224	-.057440	.407e05	.340882	.057695	-.243601
7-8	.169312	-.033849	.399833	.298072	.062074	-.171232
9-11	.046717	.003409	.174878	.395903	.045058	-.063107
12-15	-.024928	-.015024	.128962	.289164	.069669	-.063807
16-20	-.001301	-.008251	.031044	.074155	.071024	-.053272
21-27	.004217	-.011362	.011511	.035872	.019842	-.027273
28-36	.000064	.000725	.004211	.108186	.014929	-.025883
37-47	-.002625	-.004090	.002648	.063086	.002485	-.009794
48-60	.001987	.002103	-.000804	.034369	-.000353	-.002282

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-02	10E-03
0	.018087	.004603	.017762	.018297
1	.217975	.062705	.212964	.245667
2	.287677	.107091	.361343	.339590
3	.338136	.150064	.498189	.375107
4	.278659	.130757	.433065	.282958
5	.179436	.099650	.372391	.223025
6	.142490	.093958	.397539	.229365
7-8	.138697	.086710	.357429	.182009
9-11	.081556	.059073	.276331	.084524
12-15	.048139	.049027	.232678	.065337
16-20	.025909	.030140	.171028	.043339
21-27	.020391	.020567	.143173	.020250
28-36	.013256	.015457	.104892	.013023
37-47	.008721	.010705	.061911	.006062
48-60	.004992	.006706	.050553	.003766

RUN NO 91A 15M 6-18-63 2150-2300(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.95167 10E-01	0.53829 10E-01	0.17400 10E-01	0.33827 10E-01	0.10935 10E-01	0.61851 10E-02
0	.087881	-.464205	.549491	.055022	.257101	-.361603
1	.044423	-.101926	.210438	.035551	.025326	-.020832
2	.016457	-.001285	.086428	-.061079	-.010375	-.037525
3	-.005981	.004628	.042658	.027873	.047696	.032130
4	-.020270	.095527	-.008448	.025510	.043449	.053037
5	-.020797	.053666	.024834	.034493	.072290	.012901
6	-.068662	.017502	.003754	-.024394	.025457	.050054
7	.047951	-.043954	-.007697	-.044232	.011431	-.037676
8	-.019291	-.030012	-.064092	-.003404	-.041482	-.059220
9	-.013200	-.073786	-.072873	.030651	-.081974	.012548
10	.025495	.029300	-.116728	-.084661	.011258	-.012587
11	.032586	.171051	-.194832	-.024060	-.004008	.125682
12	-.044561	.105198	-.145155	.004921	-.074779	.061485
13	.010785	.039814	-.085990	-.015288	-.027845	.015840
14	-.007544	.047118	-.090420	.015475	-.037353	.039937
15	-.053378	.054198	-.086592	.059452	-.026996	.033497
16	.020410	.059369	-.096352	.018233	.022357	.066367
17	.003443	.003459	-.048053	.052083	-.038380	.017057
18	-.079555	.057018	-.037337	.104041	-.078606	.032294
19	.049775	.022618	.024611	-.078488	-.013008	.010061
20	.009318	-.063735	.053557	-.009992	-.019846	-.035946
21	.004649	-.064887	.080792	-.056814	.044147	-.089336
22	.057360	-.097112	.097021	.007619	.020887	-.051767
23	-.004136	-.083070	.088269	-.031815	.043988	-.062837
24	-.041948	.019836	.028406	-.031142	-.001916	.029934
25	-.071839	.024157	-.026024	.047398	-.082652	.019256
26	-.074412	-.034786	.063271	.054573	-.031927	-.046410
27	.033884	-.090764	.107415	-.011644	.034794	-.075422
28	.057203	-.008228	.055678	-.043185	-.039880	.006966
29	.006866	-.028160	.007655	-.010907	.024475	-.045919
30	.014721	-.059666	.001918	-.056373	-.041806	-.045412

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-03	10E-03	10E-03
0	.000331	-.001636	.002158	.028466	.039562	.000579
1	.042721	-.092979	.069336	.032380	.286497	-.067704
2	.052985	-.172043	.119355	.044429	.281688	-.135448
3	.059189	-.157098	.120472	.295609	.213502	-.121106
4	.056239	-.045806	.051479	.373066	.072014	-.030359
5	.101370	-.076442	.029555	-.092632	.016329	-.063955
6	.140296	-.166933	.038553	-.274087	-.026290	-.133515
7	.082318	-.217778	.042515	.074082	-.038541	-.152901
8	.062140	-.248724	.058422	.067107	.048427	-.183255
9-11	.024316	-.079683	.041011	.022060	.133458	-.065347
12-14	-.005339	-.098073	.034709	.412354	.125664	-.076551
15-21	.008720	-.096514	.024858	.218911	.129461	-.060574
22-30	.038157	-.093926	.029202	-.198606	.150992	-.157494

RUN NO 91A 15M 6-18-63 2150-2300(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.95167 10E-01	0.53829 10E-01	0.17400 10E-01	0.33827 10E-01	0.10935 10E-01	0.61851 10E-02
1	.021860	-.036603	.136633	.031735	.017168	-.072727
2	-.027934	-.000093	.114261	-.019046	.083591	-.062715
3	-.016843	.023120	.128047	-.036885	.086526	-.064487
4	-.033713	-.015882	.062425	-.058355	.075561	.008072
5	.014470	.054697	.008081	.021889	.061144	-.043954
6	.051916	.041423	.048119	.085708	-.077592	-.064238
7	.065392	.022174	.041911	.045089	-.055608	-.025947
8	.079342	.058715	.029463	.046826	-.033032	-.015695
9	-.011021	.013339	.078005	.009832	.024452	-.028690
10	.024373	.038859	.064450	-.030354	.076929	-.024944
11	.020444	.027163	.020326	-.004214	.027031	-.026160
12	-.039572	-.018834	-.018751	-.031409	.004030	-.003069
13	-.000347	.000543	-.076619	-.022395	-.053522	.007641
14	.004515	-.046788	-.009509	-.029214	-.007845	.040893
15	-.056911	-.031156	-.007691	-.125725	.004287	.061314
16	-.001193	-.045706	.007983	.099716	-.083795	.000384
17	.029324	-.009049	-.012327	.027401	-.032534	-.011477
18	.014615	-.044285	-.057829	.017894	-.029491	.097410
19	-.003166	-.010006	-.054463	.043352	.001143	.038492
20	-.003221	.041099	-.039942	.037930	.013947	.039782
21	.006895	-.036607	.001498	.027224	-.004479	.001137
22	-.042381	-.023630	-.023306	-.012726	.014292	.005045
23	-.048173	.004426	.035764	-.054073	.061214	-.070132
24	-.038994	-.028530	.061555	.013031	.030080	-.061987
25	-.017895	-.018641	-.007864	-.006813	.036879	.035673
26	.085977	.008551	-.026772	.003201	-.026558	.015490
27	.091411	.050596	-.019718	.080766	-.064981	-.044577
28	.021090	.041654	-.048490	.007649	-.022635	.023727
29	.000972	.060604	.029461	.011234	-.004199	-.013553
30	-.009857	-.013852	.060946	-.032936	.023156	-.023391

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-03	10E-03	10E-03	10E-03	10E-03
1	.079543	.296491	.329323	.108206	.014912	-.049201
2	.093870	.717521	.484933	.082716	.088308	-.110318
3	.066985	.701990	.534058	.247175	.158044	-.129350
4	-.008887	-.003422	.316558	.187807	.099281	-.046161
5	-.102147	-.488167	.225173	-.384659	.117804	-.023286
6	-.154236	-.360041	.262507	-.676704	.263640	-.049123
7	-.072129	-.065281	.334844	-.308332	.278374	-.041695
8	-.022937	-.170077	.497289	-.102031	.170587	-.054303
9-11	.052484	-.170098	.207848	.214316	-.094842	-.038460
12-14	.037565	-.035704	.159266	.277274	-.020065	-.052802
15-21	.008116	-.325335	.077933	.008281	-.013931	.009589
22-30	.038073	.143060	.095591	.141968	-.013489	-.037444

RUN NO 91A 15M 6-18-63 2150-2300(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.15144 10E 00	0.59806 10E-01	0.19134 10E-01	0.19994 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.268302	.073937	-.027076	.311124
2	.001760	-.069351	-.023286	.172428
3	.002315	-.010796	-.106973	.059685
4	-.103366	-.076845	-.084922	-.002448
5	-.066161	-.005527	-.066560	.063412
6	.037274	-.071054	-.132091	-.007182
7	.048304	-.076905	.063163	-.055486
8	-.027660	-.030226	.043703	-.059339
9	-.036435	.026119	.002207	-.159929
10	-.183171	.001671	-.038624	-.175892
11	-.281417	.004693	-.109385	-.215325
12	-.161258	-.087872	-.090117	-.210691
13	-.122849	-.125495	.013179	-.098006
14	-.038799	-.100280	.021692	-.135835
15	-.086360	-.051037	-.048996	-.117947
16	-.072619	.009519	.003682	-.087577
17	-.017914	.020706	-.012460	-.101358
18	-.021344	.115092	-.014862	-.076661
19	-.011593	.040905	-.057790	-.014606
20	.030553	.055934	.091364	.029691
21	.081276	.037363	.039589	.104258
22	.120831	-.109074	.086396	.042891
23	.134414	.025125	-.017411	.052399
24	.004803	-.103736	-.060826	.013141
25	-.019245	-.065488	-.029804	-.062864
26	.106852	.109148	-.049480	.041216
27	.114191	-.010045	.106374	.092574
28	.045847	-.062823	-.010136	.087097
29	.046782	.055796	.098666	.044441
30	-.013321	.031148	.090041	-.007487

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-02	10E-02	10E-03
0	.003711	.026187	.001079	.012316
1	.068664	.175095	.025729	.160600
2	.116648	.219001	.046848	.217040
3	.124593	.283478	.064323	.212332
4	.063878	.219342	.057833	.116831
5	.042366	.192970	.064312	.073614
6	.060581	.331106	.085854	.072810
7	.092913	.344332	.100798	.076346
8	.121907	.196316	.117729	.102504
9-11	.073371	.220670	.066730	.083974
12-14	.053393	.285967	.076811	.067570
15-21	.060929	.270886	.078678	.049506
22-30	.047076	.305793	.130888	.083561

RUN NO 91A 46M 6-18-63 2150-2300(EST)

GROSS STATISTICS

CLEAR
STABLE

WIND SPEED 5.83 M/SEC
WIND DIRECTION 242 DEG
SOLAR RAD. 0 LY/MIN

SIGMA A 3.90 DEG
SIGMA E 2.2 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.19007E-00	0.16132E-00	0.14204E-00	0.78549E-01
V	0.15718E-00	0.11372E-00	0.10989E-00	0.34543E-01
W	0.49979E-01	0.48872E-01	0.49102E-01	0.12408E-01
T	0.15489E-01	0.53164E-02	0.43012E-02	0.29690E-02
E	0.19862E-00	0.16196E-00	0.15051E-00	
GUSTINESS RATIOS				
U	0.07478	0.06889	0.06464	0.04807
V	0.06800	0.05784	0.05686	0.03188
W	0.03835	0.03792	0.03801	0.01911
COVARIANCES				
U,V	0.24866E-01	0.19770E-01	0.19865E-01	0.20509E-02
U,W	-0.38510E-01	-0.37073E-01	-0.37825E-01	-0.11776E-01
U,T	0.11667E-01	0.13868E-01	0.10003E-01	0.85660E-02
V,W	-0.98286E-02	-0.94669E-02	-0.95214E-02	0.17592E-02
V,T	0.72258E-02	0.27957E-02	0.33098E-02	0.44645E-04
W,T	-0.46640E-02	-0.54365E-02	-0.51513E-02	-0.20581E-02
WE	0.35350E-02	0.47576E-02	0.26185E-02	
NORMALIZED COVARIANCES				
U,V	0.14386	0.14597	0.15900	0.03937
U,W	-0.39511	-0.41753	-0.45293	-0.37720
U,T	0.21503	0.47356	0.40469	0.56092
V,W	-0.11089	-0.12699	-0.12962	0.08497
V,T	0.14644	0.11370	0.15224	0.00441
W,T	-0.16763	-0.33727	-0.35447	-0.33909

RUN NO 91A 46M 6-18-63 2150-2300(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.12495 10E 00	0.83523 10E-01	0.24716 10E-01	0.73455 10E-01	0.21736 10E-01	0.14529 10E-01
0	.158962	-.452850	.404693	-.129606	.152098	-.354303
1	.123708	-.346519	.365938	-.061067	.127037	-.284524
2	.064065	-.205744	.278403	.014897	.069924	-.174018
3	.019965	-.091790	.189565	.050279	.016671	-.098786
4	-.014133	-.015908	.119451	.068203	-.012964	-.042189
5	-.039964	.024002	.062231	.072605	-.017958	.001859
6	-.055851	.051349	.016064	.072598	-.022640	.042340
7	-.060407	.071493	-.021943	.058717	-.023203	.065011
8	-.055127	.076753	-.044110	.043643	-.020296	.075790
9	-.042471	.069726	-.051476	.018034	-.010831	.079582
10	-.034987	.058149	-.054620	-.004369	-.001494	.065698
11	-.035411	.040673	-.059718	-.018637	.005527	.045005
12	-.030704	.014120	-.060705	-.024483	.001170	.037280
13	-.024713	.001166	-.062083	-.015786	-.002194	.032943
14	-.019472	-.002660	-.059201	-.021456	-.000448	.018435
15	-.012527	.005812	-.055590	-.031030	-.002593	.002833
16	-.012426	.031982	-.057469	-.037331	-.009201	.000605
17	-.010350	.045445	-.058850	-.041052	-.019103	.002483
18	-.004687	.043439	-.053306	-.042231	-.014320	.001215
19	.011659	.038428	-.047739	-.051148	-.002207	.002139
20	.036349	.037319	-.047569	-.059841	.005157	.001335
21	.043839	.046906	-.049121	-.052815	.005777	.010850
22	.034816	.060529	-.059044	-.041637	-.000149	.025828
23	.023578	.071042	-.074375	-.023234	-.007657	.043953
24	.003117	.083719	-.080406	-.001514	-.017103	.058148
25	-.018724	.099439	-.084173	.019172	-.028175	.070028
26	-.032108	.109739	-.084385	.036771	-.034051	.081286
27	-.036408	.107251	-.078778	.038190	-.031471	.085511
28	-.021000	.087776	-.068012	.026171	-.026898	.072699
29	.009669	.064186	-.053357	.012516	-.021441	.050950
30	.034626	.037488	-.040505	.000992	-.016818	.026136
31	.049542	.008660	-.028886	-.013486	-.001955	.003062
32	.054698	-.024202	-.010063	-.021208	.012423	-.015575
33	.058579	-.042477	.006005	-.014312	.015140	-.024006
34	.062967	-.049409	.016100	.005572	.001748	-.021575
35	.057514	-.052815	.022141	.020696	-.009011	-.020498
36	.047656	-.050350	.027976	.021679	-.013693	-.017144
37	.033254	-.037865	.024886	.021847	-.021843	-.003602
38	.011418	-.018694	.018559	.029001	-.025861	.007753
39	-.004062	-.011185	.015544	.028525	-.025923	.010229
40	-.019551	-.006165	.021094	.022697	-.023377	.012448
41	-.026045	-.013001	.023645	.017959	-.024078	.023139
42	-.025241	-.020673	.021418	.003532	-.012487	.020814
43	-.029896	-.031557	.018356	-.004169	-.000730	.012635
44	-.036771	-.032426	.012234	-.007640	-.006671	.002566
45	-.039591	-.028571	.008889	-.015090	-.013149	-.009175
46	-.038809	-.030399	.007324	-.016818	-.007253	-.020587
47	-.038687	-.035738	.007892	-.015453	.000177	-.030682
48	-.036034	-.046866	.011725	-.014384	.006159	-.031171
49	-.032339	-.051257	.018520	-.005470	.007746	-.036424
50	-.016577	-.048732	.019587	.009988	.022467	-.042028
51	-.003110	-.043544	.019134	.004297	.042949	-.037492
52	.000405	-.032675	.015545	-.001973	.047278	-.027251
53	.004608	-.016914	.004446	-.011748	.041380	-.012107
54	.010878	-.011384	-.009704	-.007207	.029151	-.001797
55	.017606	-.017232	-.023836	-.002215	.021303	-.003108
56	.015172	-.019598	-.032657	.000701	.017135	-.013329
57	.003848	-.011979	-.037325	-.002535	.009783	-.011479
58	-.009048	.002523	-.040419	.003927	-.002088	-.012198
59	-.017733	.014258	-.040926	.016956	-.005732	-.009343
60	-.013901	.020578	-.041812	.012230	-.002061	-.006381

RUN NO 91A 46M 6-18-63 2150-2300(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.12495 10E 00	0.83523 10E-01	0.24716 10E-01	0.73455 10E-01	0.21736 10E-01	0.14529 10E-01
1	.001974	-.028218	.086688	-.010417	.047968	-.032231
2	.009049	-.041319	.118168	-.020695	.050949	-.022024
3	.011201	-.045218	.119807	-.023839	.034615	-.003573
4	.007803	-.048558	.117315	-.018346	.028018	-.000787
5	-.004928	-.043268	.104431	-.019203	.022284	-.004512
6	-.020408	-.035716	.087290	-.023163	.014651	-.007415
7	-.018743	-.024408	.071413	-.018175	-.007786	-.009989
8	-.003171	-.011040	.060782	.000817	-.030262	-.015568
9	.005485	-.002150	.049424	.029106	-.048841	-.015224
10	.010745	-.000051	.043423	.040052	-.05[illegible]34	-.009464
11	.010822	-.003362	.043014	.038957	-.051365	-.002841
12	.009334	-.012777	.043189	.029974	-.045287	-.006285
13	.013618	-.017516	.044087	.[illegible]15220	-.032382	-.008776
14	.011698	-.012918	.057690	.010237	-.021858	-.022333
15	.019580	-.007924	.071230	.033031	-.023252	-.034378
16	.033387	-.009123	.072430	.046255	-.027082	-.030288
17	.030863	-.009442	.063717	.032629	-.020076	-.018382
18	.010192	-.015894	.054492	.004082	-.002179	-.011276
19	-.010896	-.015343	.045935	-.017041	.013323	.001965
20	-.027293	-.016183	.042308	-.026310	.023338	.014669
21	-.025734	-.013597	.041168	-.019009	.038194	.025113
22	-.012663	-.002468	.035626	-.010877	.052770	.029439
23	.002165	-.001523	.030202	-.009680	.064782	.029145
24	.003442	-.001240	.023085	-.016291	.070907	.027420
25	-.003547	-.001398	.011533	-.015449	.069326	.021383
26	-.007927	-.000919	.001832	-.017347	.057251	.017907
27	-.001819	-.004101	-.008735	-.020680	.034714	.019701
28	.003855	.000420	-.025441	-.002647	.008453	.020661
29	.003814	.010007	-.046512	.017136	-.013504	.017668
30	-.000682	.016502	-.071096	.020210	-.026766	.024535
31	-.007173	.015026	-.087079	.006254	-.024936	.051693
32	.000020	.007119	-.088597	.005475	-.015702	.066799
33	.009540	-.006750	-.079504	-.000119	-.005171	.056557
34	.008570	-.016259	-.064690	-.003920	.001423	.039812
35	-.004115	-.012231	-.055929	-.000898	.005696	.027110
36	-.019538	-.005271	-.055296	-.013776	.018721	.015378
37	-.03[illegible]512	.000551	-.053824	-.033539	.031032	.008617
38	-.037429	.002876	-.046432	-.041951	.032960	-.000182
39	-.024938	.006077	-.041790	-.032024	.024258	-.011345
40	-.015166	.007367	-.037075	-.017032	.013574	-.017863
41	-.020108	.012904	-.026084	-.015110	.000970	-.023356
42	-.026193	.018315	-.013582	-.017639	-.004103	-.033266
43	-.017133	.012246	.000907	-.016928	-.007876	-.030066
44	.003930	.001515	.008305	-.002298	-.019481	-.022697
45	.022658	-.005107	.009476	.015575	-.036567	-.012419
46	.032840	-.002921	.009986	.034505	-.045100	-.005340
47	.037315	-.001390	.014681	.049061	-.051293	-.015512
48	.037418	.001541	.021794	.053698	-.049485	-.040079
49	.037021	.005709	.025836	.048198	-.043444	-.052446
50	.016840	.016491	.023981	.025297	-.033636	-.050173
51	.007379	.013032	.026289	.017787	-.020214	-.053535
52	.011601	.009444	.022605	.026993	-.013155	-.055621
53	.011396	.008822	.016109	.022305	-.001290	-.049779
54	-.000459	.013474	.012265	.001987	.011229	-.035332
55	-.013623	.014057	.017563	-.020921	.017076	-.020718
56	-.010476	.000678	.029553	-.028356	.018488	-.021152
57	-.012417	-.002160	.041804	-.022338	.022931	-.022827
58	-.009129	-.004172	.042003	-.024399	.034344	-.017268
59	-.001119	-.002370	.041560	-.022218	.037618	-.020782
60	.005805	.005442	.034999	-.009797	.028506	-.020903

RUN NO 91A 46M 6-18-63 2150-2300(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.14208 10E 00	0.10989 10E 00	0.49100 10E-01	0.42995 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.789256	.665051	.633787	.814485
2	.532336	.314015	.282842	.574378
3	.344603	.136620	.105107	.387063
4	.207360	.054686	.011445	.262833
5	.105838	.029479	-.041803	.163927
6	.023075	-.008167	-.099045	.084411
7	-.041120	-.042125	-.124825	.029497
8	-.070701	-.074157	-.122878	-.016901
9	-.079065	-.093421	-.094364	-.048755
10	-.082361	-.100690	-.074688	-.070710
11	-.086827	-.102573	-.053876	-.086554
12	-.101299	-.106563	-.029579	-.109975
13	-.108272	-.113038	-.021174	-.124721
14	-.107903	-.128222	-.008611	-.129194
15	-.110083	-.148409	-.028131	-.138329
16	-.128065	-.138287	-.073778	-.150006
17	-.147621	-.119482	-.094395	-.159171
18	-.148237	-.117775	-.093915	-.161650
19	-.143501	-.126945	-.079865	-.159537
20	-.139189	-.122478	-.064312	-.157900
21	-.151463	-.102525	-.084294	-.156879
22	-.159088	-.095720	-.101738	-.164401
23	-.161469	-.087132	-.110673	-.176245
24	-.166168	-.099732	-.123996	-.184247
25	-.177834	-.101661	-.146672	-.185361
26	-.186491	-.103380	-.156710	-.186222
27	-.180960	-.099956	-.133017	-.189691
28	-.162846	-.079985	-.098561	-.183074
29	-.146256	-.061290	-.076811	-.158231
30	-.114306	-.017978	-.044604	-.125793
31	-.070512	.053019	.005382	-.087641
32	-.031286	.091443	.055764	-.052262
33	.007413	.107901	.054390	-.027496
34	.030053	.097465	.036152	-.007241
35	.036698	.086592	.040387	.010397
36	.037239	.086596	.054426	.025805
37	.032206	.094264	.039450	.033624
38	.027365	.093860	.022954	.034962
39	.028682	.071598	.012051	.036191
40	.029197	.053170	.014447	.049381
41	.038395	.053104	.019796	.053590
42	.052992	.047924	.018327	.051507
43	.061145	.013304	.030747	.045158
44	.046524	-.031821	.042240	.037318
45	.031706	-.054347	.050619	.038381
46	.024689	-.059051	.038551	.037422
47	.023229	-.052662	.036193	.030465
48	.020855	-.053145	.045380	.019337
49	.023741	-.043122	.040492	.014845
50	.024326	-.024316	.040963	.020736
51	.034950	-.014769	.044103	.025017
52	.031702	-.013214	.043396	.012999
53	.028288	.001132	.021363	-.001799
54	.026635	.018156	.010089	-.012071
55	.020825	.018380	.018603	-.014522
56	.009188	.009427	.030227	-.017160
57	-.004703	.009111	.021721	-.022057
58	-.015422	.019423	.008511	-.022360
59	-.022107	.011869	-.000637	-.024982
60	-.024300	.006206	.011820	-.032965

RUN NO 91A 46M 6-18-63 2150-2300(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-02	10E-03	10E-03
0	.006470	-.002529	.009467	-.000955	.008243	-.012768
1	-.029373	-.119906	.082224	.011839	.194553	-.239256
2	-.045412	-.276446	.117322	.049713	.240163	-.379029
3	.077579	-.359755	.143521	.101517	.193723	-.431937
4	.190024	-.222988	.107740	.076942	.167369	-.343411
5	.150716	-.163186	.083440	-.009528	.177572	-.350471
6	.219600	-.273460	.091864	-.076928	.206185	-.492015
7-8	.207395	-.325856	.073850	-.101552	.253251	-.498562
9-11	.128576	-.210362	.037556	-.076337	.226649	-.227453
12-15	.062604	-.091633	.018250	-.057262	.126306	-.115169
16-20	.035681	-.083521	.008999	-.029700	.079552	-.076837
21-27	.023414	-.039961	.005600	-.027891	.042920	-.057373
28-36	.013068	-.017311	.000900	-.017029	-.001219	-.033905
37-47	.005321	-.014771	.000246	-.009162	.001314	-.012540
48-60	.001247	-.009735	.000059	-.005761	-.000592	-.003199

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-03	10E-03	10E-03	10E-03	10E-03	10E-03
1	-.013170	-.575157	.426155	.080398	.098202	.090489
2	.336169	-.632910	.796043	.304590	-.043115	-.032494
3	.414507	-.594346	.833432	.424565	-.257872	-.175083
4	-.066257	-.460908	.262301	.056820	-.212312	-.062972
5	-.088607	-.375270	.127687	-.165016	.011133	.053235
6	-.403038	-.419079	.396080	-.615236	.288009	.020600
7-8	-.379775	-.621589	.386297	-.651164	.279731	.009836
9-11	.430953	-.414150	.299528	-.117549	.135772	-.050911
12-15	.119317	-.147638	.105946	.000545	.033960	.005836
16-20	.077290	.017485	.081588	-.005389	.036186	-.038073
21-27	-.110471	-.052052	.045684	-.030617	.050134	-.023602
28-36	.018482	-.029230	.030999	.031790	.023462	-.019927
37-47	-.021711	-.013514	.008218	.006267	.008103	-.004454
48-60	-.000112	.007835	-.001450	-.000357	-.003051	-.000174

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-02	10E-03
0	.007408	.002259	.004521	.036330
1	.097137	.030624	.135057	.371276
2	.149814	.062379	.272542	.521277
3	.177220	.104419	.359339	.592088
4	.124318	.091020	.257580	.404858
5	.090338	.056197	.192350	.288963
6	.099507	.059962	.259664	.298600
7-8	.087111	.054592	.316793	.230496
9-11	.058025	.042019	.239238	.150594
12-15	.031059	.032181	.133435	.091417
16-20	.019307	.026973	.115810	.058910
21-27	.014762	.019307	.089999	.038087
28-36	.007714	.011285	.054279	.021623
37-47	.005435	.007340	.036790	.010690
48-60	.003197	.004285	.025224	.009168

RUN NO 91A 46M 6-18-63 2150-2300(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.52091 10E-01	0.31205 10E-01	0.15274 10E-01	0.20696 10E-01	0.10130 10E-01	0.60684 10E-02
0	.039371	-.377378	.560829	.085000	.004407	-.339157
1	-.063996	.000839	.218478	.004914	-.018380	-.032094
2	.013816	.053527	.099115	-.056675	.001584	.003608
3	.009283	.067028	.019170	.057695	-.041406	.059695
4	-.021501	-.047844	.032006	.073919	-.010885	.017002
5	-.019666	-.014532	-.060942	-.012489	.036759	-.001973
6	-.016526	.061255	-.113721	.001995	.014074	.020754
7	.036891	.040798	-.062441	.028961	.045618	.029519
8	.040844	.024101	-.114780	-.093536	.059543	.103683
9	.037311	-.051917	-.091227	-.032232	.039812	-.002377
10	-.013291	.073155	-.126775	.067919	.024287	.066078
11	.045629	.088127	-.127594	-.080290	.047437	.067578
12	.032274	.002369	-.101768	-.076118	-.013343	.093601
13	.026591	-.009087	-.074725	.011509	-.013127	.054829
14	.017344	-.094775	-.047070	-.025194	-.015744	-.041120
15	.004045	.024121	-.023157	.027485	-.062272	-.070485
16	-.047584	.037975	.042118	.001585	-.083755	-.081119
17	-.059103	-.000026	.067011	.052103	-.034385	-.061209
18	-.080333	-.084190	.120485	-.044906	-.052314	-.062934
19	-.018634	-.041282	.078555	-.069772	-.040056	-.037183
20	.011769	-.055351	.108598	.035725	-.028600	-.049521
21	-.063320	-.066556	.110571	.072471	-.081153	-.076668
22	-.004032	-.030409	.052280	-.038031	-.015503	-.031412
23	.043982	.016313	.021305	-.058294	.064739	.050144
24	-.024597	.168091	-.081038	.031771	.031340	.131280
25	-.017914	.025627	-.055135	.038998	.005625	.040177
26	.011812	.034536	-.101944	-.036130	.046506	.003203
27	.048392	.042677	-.053747	.008495	.118763	.004895
28	-.032277	.014390	-.112656	.025530	.104772	.053584
29	-.017244	.039558	-.099874	.024834	.034389	.054581
30	.032563	-.004327	-.060148	.064557	.004200	.005516

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-03	10E-02	10E-02	10E-03	10E-03	10E-03
0	.010614	-.002145	.004182	-.012843	.001428	.006726
1	.208295	-.002919	.032404	.095438	.099919	.033280
2	-.167682	-.017399	.071489	.204005	.042692	-.047916
3	-.726236	-.060415	.123630	.232582	-.166771	-.196954
4	-.349668	-.051837	.087160	.101879	-.181570	-.163191
5	.332082	-.024582	.040776	-.084366	-.013269	-.019687
6	.189364	-.034844	.047448	-.161307	.046994	-.038124
7	-.080681	-.025500	.045370	-.089726	.052014	-.106508
8	.144835	-.044706	.036146	-.028351	.032830	-.132529
9-11	-.147357	-.041450	.026376	-.032173	.037396	-.092391
12-14	-.247281	-.104355	.029659	.197647	.015544	-.126007
15-21	.240277	-.049388	.024622	.250784	-.035597	-.065189
22-30	.523999	-.063420	.025429	-.037234	.046121	-.108088

RUN NC 91A 46M 6-18-63 2150-2300(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.52091 10E-01	0.31205 10E-01	0.15274 10E-01	0.20696 10E-01	0.10130 10E-01	0.60684 10E-02
1	-.008854	-.075004	.108150	.063033	-.003834	-.004263
2	.011970	-.023307	.087837	.023285	.039762	.031564
3	-.074088	-.058120	.008929	-.052786	.069623	.081542
4	-.021329	-.040438	-.003701	.029207	.039745	.029840
5	.001874	.011575	-.002607	.064754	.040001	-.020133
6	-.038852	-.028058	.021849	-.026339	.048717	.033690
7	-.029800	-.011932	-.043548	.034115	.002243	.105969
8	.000256	-.050971	-.001730	-.031088	.072390	.061147
9	-.015267	.001717	.002499	.012252	.079538	-.001467
10	-.014839	.049942	.022615	.014494	.033928	-.060935
11	.065414	-.004747	-.025254	.001609	-.040432	-.005510
12	.034201	-.000144	-.052707	-.027536	.031672	.047946
13	-.017365	.052369	-.040547	-.015896	.072025	.013978
14	.038391	.107903	-.031554	.037487	-.034682	-.062454
15	.050053	.065517	.013376	-.004379	-.036723	-.070529
16	-.001370	.056269	.048989	-.000995	-.003425	-.066561
17	.008975	-.013677	-.012024	-.006480	-.006597	-.016587
18	.011828	-.028726	-.046882	-.017542	-.038777	.034565
19	.045643	.034844	.023668	-.001009	-.079472	-.004608
20	.016732	-.040659	.026228	-.037310	-.062148	.017008
21	-.103745	-.018549	.017258	.017782	-.007602	-.012367
22	-.068028	-.044443	.033647	.029109	-.003529	.008812
23	.014878	-.087824	.029907	.017624	.011564	.064304
24	-.065769	-.032101	.017100	-.015279	.093991	.040786
25	-.088974	-.044014	-.001969	.041900	.094956	.006089
26	-.025151	-.001232	-.027232	-.007439	.077307	.008523
27	-.025624	.023812	-.041516	.014718	.051418	.005228
28	.017862	-.018791	-.026457	.087500	-.051363	-.004681
29	.016380	-.033557	-.037488	-.067591	-.010252	-.000622
30	.076467	.024313	-.010224	.009453	-.007762	-.012857

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-03	10E-03	10E-03	10E-03	10E-03	10E-03
1	.026951	.174297	-.049033	.057731	.182257	.039745
2	-.213297	-.138616	-.009467	.078352	.223053	.078406
3	-.799480	-.665541	.129640	.214016	.194214	.124801
4	-.499795	-.457353	.188669	.077711	.022454	.061260
5	-.059742	.011316	.124744	.074499	.030978	-.009551
6	-.037738	-.092935	.122744	.047277	.045538	.001794
7	.103747	-.301762	.158955	-.025344	.008002	.011893
8	-.025901	-.295670	.252577	.002937	.054732	-.008765
9-11	-.054468	-.204845	.139637	.007135	.015330	.064084
12-14	.254641	.080116	.218387	.215229	-.084012	-.076908
15-21	-.000231	-.154764	.047975	.174386	-.020631	-.015003
22-30	-.259886	-.136975	-.020553	-.049966	.000416	.009057

RUN NO 91A 46M 6-18-63 2150-2300(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.78541 10E-01	0.34549 10E-01	0.12398 10E-01	0.29703 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.278314	.049391	-.046069	.403515
2	.024428	-.100390	-.138235	.128026
3	-.073967	.076729	-.063608	.009905
4	-.025735	.060336	-.016022	.012486
5	-.096589	-.080777	.096441	-.106416
6	-.106817	-.064682	-.013839	-.148248
7	-.058958	-.063118	-.058825	-.119009
8	-.067377	-.015934	-.094871	-.191526
9	-.078813	.102515	.031502	-.142438
10	-.147933	-.099747	-.040120	-.220517
11	-.109982	-.077311	-.068524	-.181649
12	-.107289	.020933	-.072459	-.211085
13	-.060565	-.064471	-.065168	-.096849
14	.022352	-.118543	.010164	-.064379
15	-.121672	-.033369	-.042827	.072957
16	-.100535	-.051448	.045770	.154462
17	.006762	.051739	.080593	.145097
18	.190537	.032974	-.038889	.118341
19	.091299	.025940	-.152661	.124499
20	.092844	.048392	.094843	.145074
21	.074203	.113604	.117198	.082349
22	.087586	-.024318	.023963	.054126
23	-.010628	-.029674	-.003107	.011556
24	-.153423	.000859	-.111550	-.098027
25	-.063968	-.072080	.035308	-.132546
26	-.069458	-.112718	.027919	-.142267
27	.029227	-.019521	-.011530	-.065026
28	-.028787	.006455	-.010681	-.119688
29	-.024003	.023592	-.115681	-.154226
30	-.033569	.057083	.051457	-.116003

POWER SPECTRUM

K	U	V	W	T
	10E-02	10E-02	10E-03	10E-03
0	.022257	.029877	.022467	.019025
1	.245853	.142448	.227585	.113020
2	.446960	.142953	.349791	.215859
3	.671214	.168122	.455409	.392621
4	.509739	.119178	.335853	.314876
5	.373615	.108700	.225350	.142808
6	.482055	.158906	.255625	.141177
7	.428212	.140453	.362879	.176364
8	.387036	.097441	.480110	.164492
9-11	.365072	.087467	.542397	.106982
12-14	.346756	.166676	.777794	.108761
15-21	.264323	.209809	.583774	.088614
22-30	.270385	.151230	.744176	.075992

RUN NO 91A 15M 6-18-63 2150-2300(EST)
RUN NO 91A 46M 6-18-63 2150-2300(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.228117	.156445	.066822	.130381
1	.191228	.164118	.218592	.172631
2	.078920	.051612	.221347	.262339
3	.082991	.162476	.247704	.315480
4	.071006	.191426	.222293	.214992
5	.063932	.108974	.245804	.028472
6	.052838	.046555	.286635	.074116
7-8	.112845	.100558	.102781	.159042
9-11	.159465	.133772	.061915	.048275
12-15	.106439	.054613	.031287	.086740
16-20	.078999	.080356	.123578	.074421
21-27	.162743	.102558	.114215	.139901
28-36	.099353	.099046	.076374	.120097
37-47	.096628	.083429	.103648	.123858
48-60	.101151	.104429	.123348	.102538

301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.533800	.843850	.157589	.070843
1	.255563	.745111	.183985	.070285
2	.135079	.592045	.095100	.101989
3	.033311	.376123	.261731	.277696
4	.270599	.122267	.304583	.425678
5	.119112	.215511	.412584	.072709
6	.381563	.302792	.378367	.285958
7	.091800	.303139	.298969	.086204
8	.577235	.184595	.273835	.490308
9-11	.388156	.131763	.339233	.420453
12-14	.254353	.213675	.234756	.544732
15-21	.214018	.263513	.256909	.228465
22-30	.272303	.277497	.367498	.173109

RUN NO 918 46M 6-18-63 2306-0010(EST)

GROSS STATISTICS

CLEAR
STABLE

WIND SPEED 6.00 M/SEC
WIND DIRECTION 238 DEG
SOLAR RAD. 0 LY/MIN

SIGMA A 3.70 DEG
SIGMA E 1.4 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.18508E-00	0.83749E-01	0.79184E-01	0.37133E-01
V	0.14439E-00	0.71072E-01	0.62722E-01	0.28790E-01
W	0.21782E-01	0.20196E-01	0.20597E-01	0.44192E-02
T	0.19164E-01	0.72531E-02	0.61527E-02	0.47555E-02
E	0.17563E-00	0.87525E-01	0.81252E-01	
GUSTINESS RATIOS				
U	0.07170	0.04823	0.04690	0.03212
V	0.06333	0.04443	0.04174	0.02828
W	0.02460	0.02369	0.02392	0.01108
COVARIANCES				
U,V	0.28489E-01	0.18489E-01	0.15459E-01	0.78746E-02
U,W	-0.17750E-01	-0.15448E-01	-0.16864E-01	-0.40732E-02
U,T	0.76361E-02	0.12076E-01	0.10705E-01	0.78369E-02
V,W	-0.36005E-02	-0.71182E-02	-0.72028E-02	-0.10612E-02
V,T	0.56739E-02	0.62839E-02	0.42555E-02	0.34186E-02
W,T	-0.44889E-02	-0.33374E-02	-0.38690E-02	-0.10908E-02
WE	0.33843E-03	0.12856E-02	0.20764E-02	
NORMALIZED COVARIANCES				
U,V	0.17427	0.23965	0.21935	0.24084
U,W	-0.27955	-0.37562	-0.41757	-0.31796
U,T	0.12822	0.48997	0.48498	0.58975
V,W	-0.06420	-0.18788	-0.20040	-0.09408
V,T	0.10786	0.27677	0.21662	0.29216
W,T	-0.21971	-0.27575	-0.34369	-0.23794

RUN NO 918 46M 6-18-63 2306-0010(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.70480 10E-01	0.40380 10E-01	0.22071 10E-01	0.35947 10E-01	0.19647 10E-01	0.11257 10E-01
0	.219109	-.417626	.485026	-.200518	.216408	-.343815
1	.162895	-.277873	.434724	-.093267	.169405	-.265036
2	.078583	-.122041	.342188	.023227	.094693	-.149808
3	.028187	-.036932	.254474	.041151	.045864	-.072113
4	.003203	-.001580	.184833	.025943	.019207	-.032924
5	-.007924	.012081	.137905	.020101	.003154	-.008661
6	-.015335	.016745	.102415	.011993	-.004926	-.006961
7	-.021463	.023919	.074558	.016546	-.008573	-.005922
8	-.022462	.025918	.049682	.040335	-.010469	.000232
9	-.014338	.027094	.027185	.026317	-.003136	.007071
10	-.0149 6	.021113	.004800	.012147	.006543	.015706
11	-.005047	.016806	-.012588	.001121	.010268	.020856
12	.010174	.023981	-.029304	-.011790	.007158	.030081
13	.006974	.032046	-.049529	-.014926	.004599	.038920
14	-.003346	.031365	-.070367	-.006433	.005119	.038611
15	-.006555	.018978	-.090634	-.012492	.002605	.042299
16	-.003924	.008668	-.108127	-.025237	.001190	.038080
17	-.006607	.011434	-.121494	-.012033	-.009583	.037540
18	-.021428	.010262	-.125687	.005733	-.012651	.032965
19	-.015595	.013869	-.128329	- 009139	-.005533	.036537
20	-.010091	.033350	-.132927	-.022698	.000266	.039240
21	-.004573	.048396	-.137741	-.029993	-.004969	.043853
22	-.004415	.065239	-.148613	-.020998	-.021011	.058812
23	-.016368	.076564	-.159538	-.002098	-.037368	.077949
24	-.030738	.071340	-.161200	.010707	-.053843	.087293
25	-.044254	.060872	-.156612	.025497	-.060619	.095184
26	-.046955	.061930	-.148299	.022326	-.058623	.090950
27	-.038288	.054236	-.131563	.017645	-.045005	.070777
28	-.038737	.045051	-.1[illegible]	[illegible]	-.030949	.055425
29	-.043756	.040421	-.097221	.034513	-.026253	.047155
30	-.042346	.023125	-.083623	.027648	-.026698	.043501
31	-.033598	.012659	-.070106	.009946	-.030942	.026449
32	-.035002	.009504	-.058176	.005042	-.040755	.006989
	-.039138	.005777	-.044074	.014425	-.055640	.001652
	-.028163	-.002661	-.026488	.014854	-.056779	-.009307
35	-.021101	-.016453	-.012231	.017713	-.053682	-.013107
36	-.023200	-.021756	.002983	.026635	-.052859	-.011222
37	-.011910	-.033741	.017185	.012753	-.042643	-.025543
38	-.001926	-.032157	.021761	.002209	-.034261	-.042574
39	.014973	-.022294	.029141	.003383	-.030094	-.044750
40	.031876	-.013081	.037974	.005438	-.022984	-.041152
41	.039072	-.003631	.037627	-.011785	-.003840	-.035824
42	.043223	-.005665	.040392	-.040530	.012009	-.037554
43	.042335	-.008139	.049609	-.039108	.018519	-.030758
44	.029221	-.014388	.049513	-.012322	.019980	-.023997
45	.017101	-.010479	.031101	.016605	.020307	-.012022
46	.003365	.007056	.012053	.029231	.021030	.004512
47	-.003895	.015201	-.004173	.027212	.018049	.014308
48	-.004950	.009712	-.012948	.014770	.018134	.013418
49	-.002054	.001441	-.009542	.002170	.028002	.008439
50	.001851	.001467	.003546	.006008	.039605	.004531
51	.010154	.006975	.010850	-.000701	.040050	.006234
52	.013493	.008175	.009880	-.004495	.032094	.011126
53	.020418	.004989	.007519	-.006561	.031411	.013481
54	.025837	.007302	.007692	-.007836	.043028	.011243
55	.031211	.009041	.009734	-.040081	.055248	.008911
56	.027858	.001102	.012931	-.043610	.059681	.002718
57	.019609	.005967	.016507	-.019550	.050744	-.000965
58	.021780	.001951	.025902	-.014045	.046837	-.015066
59	.034345	-.027851	.037562	-.028725	.046411	-.037981
60	.034815	-.040836	.036161	-.035640	.036867	-.042470

RUN NC 918 46M 6-18-63 2306-0010(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.70480 10E-01	0.40380 10E-01	0.22071 10E-01	0.35947 10E-01	0.19647 10E-01	0.11257 10E-01
1	-.031179	-.024197	.068714	-.083204	.057171	-.008490
2	-.041353	-.034776	.093379	-.103501	.065122	.019624
3	-.037183	-.022298	.098562	-.094551	.056513	.034053
4	-.027224	-.018425	.093917	-.078477	.054657	.035123
5	-.020513	-.019716	.089169	-.061200	.047396	.035294
6	-.024666	-.011834	.080683	-.046431	.044353	.035784
7	-.045882	.002005	.068314	-.050836	.045146	.035368
8	-.063872	.018752	.057097	-.058060	.053755	.032671
9	-.076179	.020143	.050090	-.066163	.064852	.034777
10	-.079192	.013289	.047557	-.070674	.071170	.040828
11	-.060416	.001752	.050586	-.061549	.066981	.046411
12	-.034400	-.009334	.060336	-.044947	.058811	.047183
13	-.014254	-.020625	.076249	-.041368	.048272	.037139
14	-.006516	-.025937	.084605	-.036879	.035996	.032643
15	-.007552	-.018628	.081765	-.023429	.029142	.021211
16	.004041	-.016615	.075259	-.013936	.032070	.010894
17	.012669	-.025364	.060852	-.023266	.038842	.010080
18	.009669	-.026732	.041072	-.031809	.040079	.007674
19	-.001278	-.017784	.024286	-.030017	.032064	.002316
20	-.017661	-.000796	.013559	-.019613	.022669	-.002105
21	-.025463	.009126	.005858	-.014944	.008023	.001683
22	-.010977	-.003221	.007336	-.006120	-.007336	.009281
23	.009329	-.014355	.012686	-.003158	-.015660	.009682
24	.025899	-.013801	.013640	.003404	-.021457	-.004950
25	.035079	.002418	.011910	.022945	-.028263	-.020792
26	.035881	.007875	.007745	.036323	-.032729	-.037794
27	.043727	.004398	.003322	.047437	-.041858	-.043607
28	.054025	-.003836	-.001123	.064434	-.054386	-.037640
29	.065257	-.003676	-.006371	.065101	-.067182	-.028235
30	.079776	.000885	-.015250	.068545	-.079004	-.017322
31	.081644	.010284	-.025430	.069437	-.081303	-.012843
32	.076139	.018870	-.036052	.068109	-.080628	-.021801
33	.080351	.018294	-.040777	.060603	-.082238	-.028599
34	.068664	.024074	-.042003	.044665	-.080046	-.029407
35	.041098	.028958	-.043640	.023557	-.064548	-.023278
36	.018453	.025407	-.039190	.012405	-.048143	-.017448
37	.013454	.014212	-.032876	.025402	-.037946	-.015139
38	.008272	.000980	-.029648	.021210	-.021649	-.011759
39	-.004434	.008752	-.032199	.012145	-.009506	-.011924
40	-.027466	.017210	-.035626	-.006309	.008769	-.006973
41	-.039425	.021766	-.035350	-.021271	.022466	.003431
42	-.028072	.012680	-.030379	-.026982	.031620	.008646
43	-.017239	-.007954	-.019419	-.040853	.038855	.013508
44	-.020915	-.021441	-.008961	-.039903	.046708	.011812
45	-.033968	-.026205	-.006383	-.030814	.051263	.010428
46	-.037584	-.025528	-.008124	-.019041	.050592	.010686
47	-.027820	-.020360	-.010957	-.013379	.047883	.005795
48	-.027569	-.014277	-.013848	-.009515	.035823	.002441
49	-.037625	-.012268	-.022626	-.012678	.020648	.012140
50	-.041087	-.004635	-.029053	-.010488	.012557	.015558
51	-.037319	.003653	-.029017	-.001935	.011851	.014114
52	-.035106	.009831	-.024238	.004858	.009331	.000649
53	-.041721	.014120	-.013786	.006976	.006423	-.008771
54	-.045482	.007549	-.006566	.005174	.007277	.000031
55	-.040013	-.012255	.002303	-.010746	.014323	.010323
56	-.023434	-.022172	.012808	-.025300	.015751	.014115
57	-.013688	-.016037	.022950	-.030985	.009203	.014416
58	-.007660	-.012812	.029471	-.019436	.015638	.017158
59	-.005534	-.008966	.034255	-.019235	.029858	.013058
60	-.011995	-.006573	.033069	-.028815	.033391	.005191

RUN NC 91B 46M 6-18-63 2306-0010(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.79173 10E-01	0.62742 10E-01	0.20595 10E-01	0.61526 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.760638	.605327	.513880	.866085
2	.483119	.233422	.133197	.684893
3	.299993	.083792	-.007330	.532920
4	.180050	.052726	-.042657	.408818
5	.096160	.026296	-.040600	.310209
6	.046871	-.011160	-.033499	.244598
7	.014376	-.041666	-.027065	.195204
8	-.012192	-.047864	-.035165	.146617
9	-.038075	-.040212	-.043141	.096933
10	-.045432	-.058125	-.035546	.044497
11	-.046413	-.071994	-.035926	-.012380
12	-.053966	-.070940	-.047250	-.070327
13	-.064045	-.062379	-.073878	-.125016
14	-.078945	-.060549	-.082196	-.171674
15	-.100583	-.067565	-.088509	-.211364
16	-.137940	-.080629	-.086518	-.244352
17	-.172686	-.115436	-.077862	-.272647
18	-.180902	-.115382	-.067245	-.285651
19	-.180174	-.076546	-.073686	-.295003
20	-.180735	-.079616	-.068754	-.307706
21	-.175943	-.111436	-.057180	-.322387
22	-.178682	-.106453	-.047436	-.332968
23	-.179659	-.098514	-.063744	-.338578
24	-.175654	-.086793	-.055839	-.341578
25	-.175746	-.097461	-.051343	-.333005
2	-.174455	-.097050	-.060197	-.314503
	-.164915	-.074201	-.055064	-.282767
	-.150765	-.052885	-.049757	-.246586
	-.140354	-.050938	-.054995	-.210043
30	-.115013	-.032341	-.018663	-.175375
31	-.086421	.004209	.002006	-.138811
32	-.063159	.016187	.015116	-.106623
33	-.044900	.017032	.023592	-.079001
34	-.026631	.021454	.033258	-.049800
35	-.010257	.024140	.037808	-.029031
36	.007476	.008517	.023830	-.005682
37	.025380	-.018231	.034554	.018961
38	.031258	-.009645	.050576	.041128
39	.039058	.028313	.027672	.056735
40	.047102	.044733	.000928	.073449
41	.044655	.045034	-.001699	.085120
42	.038521	.035230	.020502	.094857
43	.043817	.020545	.008188	.103130
44	.049289	-.006192	.002493	.105609
45	.041685	-.010943	.001687	.098958
46	.027061	-.001724	-.004590	.083899
47	.011741	-.015096	-.003830	.065584
48	.011442	-.010068	.011129	.053941
49	.012535	-.008832	.013615	.048439
50	.017608	-.013661	.003820	.047169
51	.031463	-.000989	.002582	.044161
52	.044706	.005858	.008931	.041847
53	.048244	.005038	.021832	.038557
54	.036382	.018028	.008661	.037443
55	.020473	.031582	.013781	.036150
56	.014582	.017812	.054766	.039577
57	.009736	-.000785	.021168	.040548
58	.012327	.013090	.005357	.039398
59	.024506	.017704	.049930	.037995
60	.025011	.011612	.053811	.028422

RUN NO 91B 46M 6-18-63 2306-0010(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-03	10E-03	10E-03
0	.003914	-.003040	.009884	.007689	.025569	-.006861
1	.086310	-.067457	.133253	-.117743	.418853	-.214502
2	.130879	-.110121	.190682	-.129130	.499921	-.382703
3	.111698	-.131543	.202063	.013777	.309208	-.460290
4	.044830	-.084349	.112999	.070363	.125481	-.259800
5	.073781	-.059707	.056754	-.166524	.220357	-.155479
6	.117682	-.094130	.056997	-.408746	.255903	-.247203
7-8	.090761	-.102525	.047894	-.339935	.283265	-.218326
9-11	.086027	-.063582	.033069	-.300395	.197308	-.138545
12-15	.045122	-.063476	.019875	-.192503	.131849	-.140366
16-20	.038766	-.041636	.012029	-.296686	.088701	-.085539
21-27	.024296	-.029987	.004452	-.261913	.059620	-.046498
28-36	.011662	-.017081	.001930	-.162889	.026787	-.027134
37-47	.005751	-.010552	.001096	-.074029	.010245	-.010071
48-60	.002389	-.006208	.000481	-.032287	.003793	-.006296

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-03	10E-03	10E	10E-0	10E-03
1	.034098	-.110217	.484331	-.021065	.045940	.038266
2	-.074596	-.207310	.685310	-.069594	.380977	.130411
3	-.178381	-.180636	.635096	-.109638	.634733	.199201
4	-.091227	.072521	.318753	-.060607	.263366	.115662
5	-.008627	.090546	.194504	-.014127	-.025329	.028117
6	-.051123	-.052810	.183614	-.035477	.121182	.021453
7-8	-.016786	-.111919	.151083	-.035856	.084706	.011419
9-11	.031522	-.263067	.270705	-.017199	.051044	-.000541
12-15	-.032122	-.048884	.049480	-.029607	.105517	.011934
16-20	-.024227	.002461	.060033	-.015012	.041268	-.012639
21-27	-.001183	-.073870	.034897	-.006280	.031225	-.007375
28-36	-.000900	-.013325	.016715	-.004998	.025565	-.013645
37-47	-.000536	.010286	.009948	-.001902	.011276	-.008918
48-60	-.000952	.005588	.003921	-.000914	-.001544	-.002195

POWER SPECTRUM

K	U	V	W	T
	10E-02	10E-02	10E-02	10E-02
0	.037444	.019860	.002755	.005559
1.	.579626	.241282	.044317	.076977
2	.876069	.370611	.081389	.114295
3	.976126	.479607	.117640	.121727
4	.630042	.386750	.101900	.066458
5	.415359	.276358	.076021	.030775
6	.431211	.277705	.077743	.026435
7-8	.403998	.288000	.074750	.022367
9-11	.336422	.232145	.077592	.016290
12-15	.186350	.183249	.071642	.011955
16-20	.145266	.160962	.060042	.005921
21-27	.083982	.135866	.046431	.003144
28-36	.056932	.080349	.033428	.002147
37-47	.033885	.050621	.022555	.001296
48-60	.021148	.033450	.016293	.000826

RUN NO 918 46M 6-18-63 2306-0010(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.32690 10E-01	0.12813 10E-01	0.13288 10E-01	0.11281 10E-01	0.11699 10E-01	0.45856 10E-02
0	.240804	-.317886	.589755	-.094069	.292205	-.237873
1	.088474	.000496	.241054	.035192	.160568	-.010336
2	.054126	.068538	-.008338	-.012503	.073715	.045516
3	.032875	.059169	-.037336	.032993	.039574	.061421
4	.036711	.008193	-.037790	.018284	.008869	-.000684
5	-.001015	.066398	-.066231	.010687	.008710	.017510
6	.015791	-.073770	-.001139	-.023524	-.002546	-.061060
7	-.046361	-.090383	-.004097	-.038349	-.031892	-.071347
8	-.059394	-.046842	.001260	.042168	-.051432	-.017027
9	-.029757	.049527	-.007644	.089593	-.023358	.071984
10	-.018801	.014628	.004175	.027338	-.067860	.026113
11	-.041744	-.005698	.001760	.041186	-.071275	-.030104
12	-.044163	.016330	-.020576	.045785	-.062574	.007723
13	-.076016	.057320	-.053158	.057544	-.085007	.078177
14	-.079399	.048464	-.066215	.024804	-.079953	.057538
15	.000000	.061433	-.032931	-.035187	-.034494	.046328
16	-.055774	-.002510	-.104272	-.036291	-.050283	.029713
17	-.057641	.003866	-.090833	.035398	.003215	.036961
18	.039672	.001372	-.005869	-.038037	.090273	.014147
19	.030325	-.039305	-.043173	.011842	.036859	-.063023
20	-.000970	-.071283	-.020827	-.035659	.012936	-.068843
21	-.014307	-.033090	.014526	-.052030	.021271	-.003093
22	-.040003	.025878	.042397	-.054058	.035469	-.032986
23	.016498	.037830	.042118	-.040003	.030080	-.079068
24	.069617	-.053609	.065734	-.059216	.105324	-.097625
25	.051859	.017537	-.066587	-.037835	.053565	-.036691
26	.067452	-.009531	-.088184	-.051724	.008915	.092787
27	.074450	.022834	.013696	-.004066	.039639	.028031
28	.066923	-.021205	.077561	-.072168	.040298	.009314
29	.078272	-.015936	.084005	.022851	.003023	-.003359
30	.001001	.020713	.087531	-.006359	.017120	.000576

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-03	10E-03	10E-03	10E-03	10E-03
0	.006894	-.012397	.089000	.052807	.055278	-.000580
1	.070177	-.085142	.576750	.155220	.327847	-.019276
2	.106579	-.113935	.547252	-.063286	.474102	-.054669
3	.102699	-.069233	.436159	-.151958	.530575	-.037532
4	.049472	.084838	.346839	-.019508	.258565	.037904
5	.034654	.042112	.538106	.067249	.134225	.009313
6	.037379	-.182173	.621231	.066604	.200581	-.044084
7	.028918	-.272204	.520647	-.020490	.224444	-.049568
8	.007537	-.280110	.495465	-.114172	.127974	-.064718
9-11	.024640	-.313561	.431540	-.102908	.134517	-.106377
12-14	.029105	-.068702	.307812	.040603	.111982	-.015622
15-21	.025540	-.265361	.282479	-.044309	.073346	-.061829
22-30	.022603	-.189923	.126185	-.126768	.048599	-.051870

RUN NO 91B 46M 6-18-63 2306-0010(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.32690 10E-01	0.12813 10E-01	0.13288 10E-01	0.11281 10E-01	0.11699 10E-01	0.45856 10E-02
1	-.016658	-.006227	.114113	-.126895	.059145	.055455
2	.068806	-.041663	.103718	-.021361	.017728	.014862
3	.084706	-.013335	.055367	.088582	-.025213	-.038673
4	-.000402	.007351	.011202	.027695	.039169	-.028087
5	-.035962	-.038732	.025940	.013818	.059131	.027525
6	-.025839	.026657	.068721	.042018	.073467	-.012520
7	.041610	.061705	.029686	.061304	.018507	-.056253
8	.029024	.064464	.018753	.043658	-.021435	-.088333
9	.075637	-.015366	.024064	.070794	-.065679	-.017022
10	.044225	-.036543	-.017541	-.012512	-.038710	.068505
11	-.006326	.006156	-.033708	-.116069	-.021205	.014534
12	-.038567	.004277	-.03)38	-.096664	-.005864	-.025795
13	-.029535	.056461	-.0(102	-.045442	.000658	-.057553
14	.007741	.028879	.014858	-.061299	-.048829	-.047977
15	.011961	.025390	-.020478	.043727	-.034646	-.010844
16	-.025729	-.005250	-.018934	-.022397	-.024060	.008855
17	.017400	.000978	-.070367	.012344	-.039231	-.003652
18	-.079308	.014058	-.043796	-.026245	-.019717	.045303
19	-.025950	.007194	.001728	.070520	.021828	.032222
20	-.035797	-.068261	-.019366	-.000991	.031177	.042571
21	.022851	-.043383	-.006626	.040586	-.016049	.043954
22	-.014874	.050958	.011255	-.000194	.025061	-.020865
23	.031526	-.020042	.020185	.050429	-.021598	-.020294
24	.081448	.031091	.065462	.071596	-.009774	-.043505
25	.094555	-.040214	.048034	.051481	.006454	.010943
26	.045059	-.042830	.028425	.067555	-.007348	-.011094
27	.032282	-.011279	-.074019	.017742	-.046393	.017927
28	.007541	.027961	-.073432	.018801	-.004343	.038799
29	-.015298	-.007920	-.000492	-.024082	.050641	.011564
30	-.011957	-.018019	.037033	-.007319	.036776	-.033428

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-03	10E-03	10E-03	10E-03	10E-03	10E-04
1	.212599	.116808	.064210	-.001635	-.087930	-.490068
2	.329076	.067606	.193685	.049094	.041095	-.460754
3	.377963	-.028831	.306113	.224095	.174022	-.173701
4	.011689	-.063382	.214391	.179241	.176282	.119458
5	-.005737	-.041917	.159857	-.058065	.083266	-.051573
6	.114175	-.101280	.145041	-.217953	.031472	.134069
7	.242343	-.173625	.063964	-.179017	-.045826	.620157
8	.617171	-.098102	.107432	-.010905	-.146268	.332738
9-11	.215443	.086774	.210390	-.056950	.010329	-.276566
12-14	-.229288	-.081896	.142575	-.201337	.123396	.804994
15-21	-.240276	.030870	.016682	-.128769	.066178	.148330
22-30	.014377	.005721	.023713	.014673	-.025387	.002078

RUN NC 918 46M 6-18-63 2306-0010(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.37130 10E-01	0.28781 10E-01	0.44217 10E-02	0.47556 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.284350	.380440	-.030940	.449099
2	-.067950	.264399	-.087015	.032159
3	-.042933	.224377	-.032000	-.071286
4	-.062488	.167947	-.046954	-.068847
5	-.065072	.047673	-.050536	-.064666
6	.019586	.066212	-.025027	-.079583
7	.034452	-.039347	-.069722	-.116749
8	-.001953	-.145541	-.012745	-.111939
9	-.001059	.145354	-.069471	-.080861
10	-.009856	-.221993	.057987	-.060239
11	-.069749	-.259204	.021151	-.062607
12	-.066142	-.260993	-.054242	-.062461
13	-.116364	-.248891	-.061331	-.061823
14	-.037604	-.241512	-.068548	-.083229
15	.014964	-.172887	-.044492	-.091027
16	-.083077	-.065272	.017847	-.131306
17	-.103701	-.026761	-.019961	-.054163
18	-.026829	.063154	.051948	.087003
19	-.086349	.028815	-.055557	.043887
20	.011761	.031601	.077756	.016132
21	.050213	.125945	.109099	.006071
22	.016082	.158478	-.058225	.089299
23	.045683	.086949	-.035306	.123460
24	.071265	.053892	.000195	.138501
25	-.036116	.116050	-.050711	-.019555
26	-.106788	.051801	-.017865	-.137915
27	-.071442	-.006248	.042011	-.056369
28	-.011437	.044310	.028341	.005692
29	.078824	.031160	-.037980	.038612
30	.107988	-.020879	-.137833	.120161

POWER SPECTRUM

K	U	V	W	T
	10E-02	10E-02	10E-03	10E-03
0	.033907	.051929	.009372	.031253
1	.210492	.340389	.081060	.242709
2	.203126	.419539	.113762	.343466
3	.178682	.414606	.149797	.417696
4	.134855	.174321	.134194	.338362
5	.172615	.056414	.149986	.347178
6	.209673	.081335	.202616	.356481
7	.233259	.101917	.181466	.284669
8	.264651	.089448	.135910	.241013
9-11	.200959	.083745	.173615	.264102
12-14	.168238	.073862	.187451	.220475
15-21	.149084	.092866	.222465	.126722
22-30	.099600	.090130	.271405	.081315

RUN NO 918 91M 6-18-63 2306-0010(EST)

GROSS STATISTICS

CLEAR
STABLE

WIND SPEED 9.09 M/SEC
WIND DIRECTION 255 DEG
SOLAR RAD. 0 LY/MIN

SIGMA A 1.60 DEG
SIGMA E .36 DBC

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.14873E-00	0.14211E-01	0.82727E-02	0.96085E-02
V	0.60809E-01	0.15621E-01	0.71383E-02	0.11594E-01
W	0.31084E-02	0.27529E-02	0.20550E-02	0.15405E-02
T	0.20837E-01	0.58039E-02	0.22820E-02	0.48780E-02
E	0.10633E-00	0.16296E-01	0.87331E-02	
GUSTINESS RATIOS				
U	0.04243	0.01311	0.01001	0.01067
V	0.02713	0.01375	0.00929	0.01185
W	0.00613	0.00577	0.00499	0.00432
COVARIANCES				
U,V	-0.16466E-01	0.45145E-02	0.17212E-02	0.39063E-02
U,W	-0.15072E-02	-0.90407E-03	-0.70750E-03	-0.35667E-03
U,T	0.10628E-01	0.44886E-02	0.20411E-02	0.35517E-02
V,W	0.86053E-03	-0.98193E-03	-0.30180E-03	-0.65853E-03
V,T	0.90917E-02	0.50539E-02	0.17970E-02	0.44514E-02
W,T	-0.44882E-03	0.48817E-04	-0.21054E-03	0.23088E-03
WE	-0.20845E-03	0.29141E-04	0.93244E-05	
NORMALIZED COVARIANCES				
U,V	-0.17314	0.30300	0.22398	0.37402
U,W	-0.07010	-0.14454	-0.17159	-0.09368
U,T	0.19091	0.49424	0.46976	0.52427
V,W	0.06259	-0.14974	-0.07880	-0.15582
V,T	0.25541	0.53078	0.44524	0.59193
W,T	-0.05577	0.01221	-0.09722	0.08422

RUN NO 91B 91M 6-18-63 2306-0010(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.76858 10E-02	0.41246 10E-02	0.43458 10E-02	0.38313 10E-02	0.40367 10E-02	0.21663 10E-02
0	.224535	-.171615	.469774	-.078545	.445012	-.097312
1	.182532	-.088803	.401913	-.025795	.396458	-.049669
2	.147325	-.035896	.302806	-.008854	.338836	-.016580
3	.125401	-.024518	.232221	-.017155	.298083	-.006103
4	.109233	-.005217	.193139	.000863	.261616	-.002990
5	.106690	.004694	.163648	.003498	.217722	-.007562
6	.090777	.002142	.135825	-.009365	.175740	-.013901
7	.064870	.006347	.104784	-.014767	.136594	-.014017
8	.028905	.011057	.071884	-.018561	.096931	-.007345
9	-.005732	.028711	.037209	-.014990	.057338	-.002642
10	-.015270	.036387	.014209	-.021444	.029220	-.005197
11	-.011712	.021547	-.005722	-.018823	.001488	-.004323
12	-.015067	.014476	-.023055	-.017739	-.014094	-.006771
13	-.018851	.009461	-.040969	-.009654	-.029625	.000593
14	-.022387	.033506	-.059109	-.004043	-.043554	.004129
15	-.043405	.032066	-.081949	-.004907	-.047724	-.003645
16	-.060221	.014603	-.094702	-.017612	-.050131	-.019832
17	-.077367	-.010156	-.100577	-.019867	-.056522	-.028280
18	-.079240	-.011414	-.104890	-.014387	-.075833	-.027086
19	-.070215	-.001225	-.114705	-.025338	-.096853	-.014771
20	-.075938	.011051	-.125634	-.022576	-.128215	-.003661
21	-.089993	.022729	-.135267	-.003310	-.151159	.004626
22	-.084993	.011894	-.139090	-.013240	-.161438	.003611
23	-.076823	-.003080	-.137328	-.019027	-.170039	-.004863
24	-.077793	-.010976	-.133661	-.027587	-.172237	-.013814
25	-.081520	-.005208	-.144183	-.014097	-.171938	-.008504
26	-.082716	.010289	-.152046	-.002802	-.168284	.003126
27	-.078346	.000785	-.142813	.002720	-.162245	.004613
28	-.083807	-.004854	-.132876	.030345	-.154554	.009953
29	-.080420	-.006708	-.123176	.032529	-.139780	.021458
30	-.060432	-.019628	-.110087	.032438	-.128271	.028377
31	-.043615	-.036784	-.086640	.041017	-.108143	.032893
32	-.029075	-.029665	-.078911	.038355	-.085334	.036824
33	-.019561	-.015189	-.070300	.043437	-.071983	.041135
34	.007573	-.013546	-.055846	.040769	-.048978	.038995
35	.005350	-.010207	-.048453	.034664	-.033220	.038792
36	-.000759	-.011970	-.038088	.029379	-.028010	.034456
37	.017916	-.026378	-.022776	.013691	-.020310	.032124
38	.040547	-.041026	.003751	.000691	-.007549	.023781
39	.045537	-.034581	.023567	-.003961	-.000176	.016444
40	.043195	-.020913	.036555	-.006066	.002252	.009284
41	.047340	-.012633	.047927	-.023031	.008794	.001692
42	.058990	-.011023	.059272	-.037719	.008271	-.005559
43	.064363	-.001512	.061283	-.032170	.007606	.001196
44	.065744	.025565	.056410	-.017614	.019536	.011948
45	.062062	.042553	.044997	.001051	.026124	.024824
46	.056267	.028006	.039859	.012181	.028526	.025853
47	.042742	.021933	.034307	.032326	.033941	.021064
48	.037944	.028959	.029437	.040871	.042151	.018129
49	.039498	.038479	.027686	.041768	.048506	.021603
50	.041786	.040930	.029807	.023397	.054154	.024076
51	.039447	.046489	.037056	.007067	.054057	.030315
52	.035332	.053958	.040216	.004223	.047758	.038908
53	.036161	.056142	.032798	.014756	.030092	.043750
54	.021577	.046812	.019697	.014863	.009631	.039401
55	-.005039	.040944	.007117	.024044	-.009086	.035767
56	-.013043	.024074	.000370	.026613	-.023989	.024809
57	-.000573	.012085	-.002605	.018745	-.026989	.007554
58	.004571	.010606	-.000439	.015513	-.027263	-.007473
59	.016697	-.008269	-.002961	.001664	-.034662	-.023734
60	.026111	-.020458	-.000381	-.005071	-.035042	-.038256

RUN NO 91B 91M 6-18-63 2306-0010(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.76858 10E-02	0.41246 10E-02	0.43458 10E-02	0.38313 10E-02	0.40367 10E-02	0.21663 10E-02
1	-.006767	.004968	.036746	.008562	.010371	.039089
2	-.011215	.015217	.053468	.006973	.016732	.072273
3	-.012999	.018839	.069390	-.016137	.025883	.087207
4	.005045	.025867	.077203	.000202	.035231	.085674
5	.017758	.022879	.084500	.011317	.044084	.093876
6	.028354	.038566	.084632	.008279	.040022	.113234
7	.039273	.037485	.083972	.008627	.036336	.122107
8	.046796	.020046	.083676	.005413	.033468	.129212
9	.049536	.016599	.072489	.000440	.021727	.130861
10	.051876	.025327	.064616	-.001947	.017048	.129127
11	.051203	.034832	.059274	.010950	.017145	.123514
12	.055693	.031152	.057656	.018113	.015118	.113205
13	.065601	.016014	.057050	.016796	.014646	.109675
14	.053806	.011485	.053488	.012830	.018608	.109930
15	.049974	.001352	.049829	.020173	.015009	.112236
16	.044151	-.009861	.046525	.022015	.010257	.112174
17	.041683	-.021842	.041809	.023151	.003633	.112000
18	.036972	-.041562	.041193	.020855	.004525	.108950
19	.026629	-.047860	.037619	.002535	.012686	.102755
20	.026705	-.051544	.029905	-.018944	.022670	.090212
21	.019123	-.039310	.030929	-.017513	.026588	.068067
22	.026440	-.035829	.041557	-.016689	.023731	.049383
23	.028541	-.042670	.051677	-.024434	.022794	.042873
24	.023672	-.050614	.050245	-.030358	.025226	.037635
25	.006184	-.060757	.037458	-.024595	.016747	.029369
26	.003558	-.053997	.027541	-.011261	.002379	.010085
27	.013102	-.041247	.031008	.015893	-.005415	-.023313
28	.009598	-.037309	.029483	.017121	-.007590	-.039842
29	-.015749	-.026314	.026331	.000360	.003420	-.050415
30	-.027777	-.031278	.023884	-.007821	.014133	-.048838
31	-.035424	-.032848	.017331	-.002456	.026589	-.053422
32	-.032740	-.043712	.010305	-.009195	.027590	-.055237
33	-.027114	-.060334	.000902	-.006794	.020424	-.052455
34	-.015155	-.056088	-.002950	.007357	.014937	-.052069
35	-.000946	-.043388	-.002272	.012863	.008648	-.064393
36	-.003471	-.015697	-.008662	.010096	.005991	.067181
37	-.005939	.009264	-.013639	.006965	.008744	-.070748
38	-.006969	.022092	-.019618	-.000785	.010691	-.075591
39	-.010021	.022409	-.028182	-.011379	.013495	-.073705
40	-.004534	.020012	-.027674	-.006891	.008949	-.071943
41	-.004391	.017876	-.022209	-.004267	.002366	-.068090
42	-.002048	.014144	-.022881	-.010990	.008199	-.062694
43	-.004819	.039571	-.029066	-.012065	.007443	-.062113
44	-.007316	.051008	-.027415	-.013337	.005754	-.065700
45	-.001756	.061166	-.029016	-.014747	.012834	-.062684
46	.002548	.058733	-.025681	-.016828	.022705	-.052678
47	.007065	.035463	-.025446	-.017980	.019471	-.033957
48	.003852	.023664	-.026465	-.019098	.013601	-.014061
49	.001835	.019451	-.023454	-.019097	.010984	-.001281
50	.010690	.010926	-.019640	-.007384	.004346	.011204
51	.012365	.019342	-.019376	-.008398	-.005884	.021291
52	.016172	.023476	-.012061	-.005275	-.012260	.016914
53	.025203	.022471	-.007512	.003435	-.016355	.011985
54	.028698	.023874	-.011915	.012114	-.021298	.012930
55	.039632	.026892	-.011103	.016549	-.026562	.013594
56	.036211	.039125	-.005851	.017047	-.030470	.015941
57	.027512	.036776	.001105	.020627	-.031853	.014509
58	.025958	.027709	.003572	.011708	-.027789	.010270
59	.025679	.024170	-.001150	.025875	-.024220	.008727
60	.013238	.028962	.000117	.031489	-.012042	.008375

RUN NO 91B 91M 6-18-63 2306-0010(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.82742 10E-02	0.71393 10E-02	0.20560 10E-02	0.22825 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.705950	.748234	.666973	.862985
2	.480946	.526656	.440590	.704110
3	.343172	.413064	.351090	.590570
4	.266620	.326142	.259816	.499876
5	.215375	.244879	.206998	.423407
6	.163731	.182868	.178083	.346969
7	.113009	.134846	.133701	.270068
8	.070375	.096967	.097165	.200713
9	.013236	.074888	.043152	.138763
10	-.017839	.029516	-.003802	.085949
11	-.033695	-.014439	-.038431	.035980
12	-.055980	-.037136	-.069435	-.008463
13	-.084098	-.056667	-.104317	-.045630
14	-.096935	-.087350	-.109891	-.081809
15	-.122328	-.099791	-.120140	-.108948
16	-.145815	-.093111	-.132864	-.132317
17	-.150049	-.117822	-.162150	-.153094
18	-.164543	-.158704	-.195228	-.182912
19	-.172564	-.181867	-.197190	-.219809
20	-.204301	-.201881	-.219593	-.254810
21	-.234353	-.219985	-.248505	-.275171
22	-.244599	-.224042	-.236503	-.283201
23	-.245897	-.240504	-.225437	-.289320
24	-.247832	-.259686	-.213611	-.302192
25	-.236244	-.250598	-.223348	-.322189
26	-.223323	-.232762	-.234195	-.336320
27	-.201956	-.246372	-.202357	-.333920
28	-.175505	-.256241	-.175065	-.325304
29	-.153348	-.218964	-.161698	-.309455
30	-.125583	-.189316	-.131598	-.283921
31	-.086623	-.154911	-.120394	-.251565
32	-.056735	-.126721	-.084187	-.222969
33	-.040641	-.110602	-.066602	-.196710
34	-.031704	-.077138	-.026898	-.170882
35	-.028534	-.067052	-.000722	-.151958
36	-.024956	-.058245	.011255	-.133755
37	-.000567	-.031247	.027867	-.115728
38	.031503	-.011783	.060305	-.093987
39	.040465	-.009858	.065940	-.068459
40	.040937	.009328	.063414	-.039485
41	.040916	.042782	.085797	-.006944
42	.064767	.060025	.114195	.019237
43	.074065	.061852	.110158	.026370
44	.071068	.072580	.098026	.027390
45	.069420	.098881	.072787	.026116
46	.058278	.113928	.068224	.026693
47	.059522	.119243	.064642	.036701
48	.060142	.119399	.062087	.047741
49	.049810	.106027	.048729	.057314
50	.040681	.109394	.039876	.070804
51	.040426	.105288	.031089	.074667
52	.049460	.090506	.008427	.072431
53	.046749	.080951	.015585	.061058
54	.027782	.076723	.011972	.049977
55	.008966	.061762	-.007417	.047295
56	-.003276	.050027	-.027349	.046602
57	-.002174	.044440	-.041662	.047245
58	-.014452	.024027	-.042764	.042492
59	-.017983	-.003091	-.026237	.035092
60	-.004249	-.018109	-.016468	.037393

RUN NO 918 91M 6-18-63 2306-0010(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-03	10E-04	10E-03	10E-04	10E-03	10E-04
0	.018585	-.055629	.025189	-.128656	.044251	-.034507
1	.202443	-.135606	.286240	-.568502	.359747	-.316243
2	.349538	-.105574	.386720	-.269489	.413754	-.187626
3	.387818	-.475141	.372160	.062799	.363388	.001350
4	.175752	-.603956	.185611	.185835	.166097	.015921
5	.080213	-.411398	.107982	-.112384	.083304	-.115069
6	.089115	-.463959	.103493	-.240061	.094422	-.141483
7-8	.052632	-.335932	.067950	.062642	.077207	-.048288
9-11	.025924	-.145482	.045455	-.113500	.012552	-.034468
12-15	-.004597	-.244611	.034092	-.125293	.017249	-.089302
16-20	.035244	-.160605	.029598	-.050084	.009741	-.054387
21-27	.012899	-.091895	.016043	-.022692	.008300	-.042782
28-36	.007417	-.135152	.008304	-.072703	.006847	-.033442
37-47	.007434	-.098365	.003111	-.085975	.003444	-.026413
48-60	.005204	-.055169	.002214	-.036654	.002229	-.018103

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-03	10E-04	10E-03	10E-04	10E-04	10E-03
1	.149083	-.656220	.154910	.017195	.658567	.089689
2	.153374	-.104910	.135253	.120509	.371538	.124845
3	.126717	.892279	.087904	.155535	.268275	.103894
4	.029474	.649704	.054905	.143338	.252698	.032776
5	-.021789	.203762	.060246	-.002450	.223669	.010632
6	-.019756	.111796	.049053	-.187281	.222749	.012741
7-8	-.029809	-.099238	.024166	-.060590	.191097	.015824
9-11	-.018228	.059363	.013483	.084501	.005980	.002162
12-15	-.015979	-.008931	.001667	-.040272	-.024930	.003454
16-20	-.006243	-.023686	.003788	-.026686	-.000859	.004653
21-27	.000668	.039145	.002574	.054716	.000171	.001630
28-36	.003454	-.033865	.002083	.058045	.012276	-.001493
37-47	-.000797	.016238	.000790	-.028546	-.004446	-.000109
48-60	-.001286	-.023449	.001078	-.017644	.004541	-.000005

POWER SPECTRUM

K	U	V	W	T
	10E-02	10E-02	10E-03	10E-03
0	.007195	.009743	.017462	.047590
1	.078180	.087268	.[illegible]310	.438458
2	.110139	.110547	.270945	.492291
3	.116306	.102316	.293246	.405564
4	.066210	.051201	.159799	.191773
5	.036635	.033211	.085265	.117278
6	.036485	.034572	.086213	.112254
7-8	.035580	.030040	.070831	.078591
9-11	.020312	.018134	.047571	.040434
12-15	.017053	.014373	.043714	.028587
16-20	.014325	.008731	.034132	.019650
21-27	.009790	.007584	.024542	.014899
28-36	.007020	.005920	.021743	.008483
37-47	.005329	.004266	.019422	.005979
48-60	.004542	.002672	.011548	.003572

RUN NC 91B 91M 6-18-65 2306-0010(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.10446 10E-01	0.38092 10E-02	0.67773 10E-02	0.42272 10E-02	0.75211 10E-02	0.27426 10E-02
0	.373959	-.093634	.524065	-.155783	.591855	.084183
1	.267536	-.044669	.369192	-.167003	.445817	.086430
2	.202667	-.022169	.272805	-.138797	.307112	.088573
3	.173359	-.014780	.208789	-.069997	.222032	.104860
4	.138351	.003600	.187406	-.051685	.148151	.066224
5	.102761	.075062	.136350	-.009434	.093988	.045978
6	.024344	.034202	.090657	.031036	.023704	-.018639
7	-.044733	.040219	.049932	.056932	-.029804	-.062894
8	-.068174	.064680	.046093	.071594	-.053114	-.083802
9	-.098467	.047557	-.007394	.101547	-.101782	-.102476
10	-.119073	.048453	-.033839	.158183	-.174907	-.085054
11	-.158734	.052914	-.106123	.172975	-.238484	-.051469
12	-.183495	.078875	-.136914	.131603	-.241067	-.031519
13	-.157437	.057597	-.145291	.070139	-.219122	-.025450
14	-.186261	.064913	-.171346	.054153	-.246465	-.009308
15	-.164807	.022246	-.148666	.038137	-.256301	.008316
16	-.136105	.050454	-.124634	.073243	-.221807	.043197
17	-.097388	-.001195	-.125250	.034167	-.176686	.021876
18	-.031672	-.038289	-.078278	.037314	-.138838	.026905
19	-.016528	-.049399	-.094605	.084880	-.125544	.074006
20	.008375	-.038983	-.067200	.047369	-.116274	.081447
21	.038569	-.088648	-.023746	-.027051	-.035885	.037450
22	.043447	-.104368	.006617	-.065959	.062936	.032066
23	.042932	-.065506	-.025155	-.069247	.122970	.038313
24	.060827	-.051055	-.030644	-.075689	.137715	.031826
25	.032176	-.092227	-.084177	-.063742	.138181	-.019803
26	-.000712	-.077899	-.095635	-.086889	.107777	-.035614
27	-.016173	-.076611	-.058692	-.087211	.068802	-.089659
28	-.023874	-.070243	-.016871	-.109414	.034719	-.107709
29	-.028741	-.014057	-.020414	-.110100	-.004052	-.108380
30	-.027014	.029157	-.020112	-.137663	.009505	-.079601

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-03	10E-03	10E-02	10E-03	10E-02	10E-03
0	.007408	.029695	.020858	.025300	.006812	.014405
1	.086755	.068007	.106953	-.089646	.096491	.049833
2	.106489	-.063606	.079929	-.242184	.115278	.072721
3	.086233	-.110744	.048501	-.244047	.082652	.120010
4	.025810	-.040107	.014789	-.124771	.028392	.073892
5	.007690	-.027053	.009467	-.043323	.020720	.008294
6	.011281	-.042709	.014968	.017816	.018155	-.020378
7	.005958	-.028413	.013984	-.006331	.018000	-.035449
8	.001974	-.011020	.011196	-.054327	.016957	-.028137
9-11	.006074	-.000709	.006312	-.001040	.008675	-.004826
12-14	.010814	-.000287	.007974	-.008187	.009261	-.001954
15-21	.003937	-.019070	.004009	.012750	.003949	.001953
22-30	.005007	-.002134	.004579	.003984	.003495	.000497

RUN NO 918 91M 6-18-63 2306-0010(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.10446 10E-01	0.38092 10E-02	0.67773 10E-02	0.42272 10E-02	0.75211 10E-02	0.27426 10E-02
1	.081236	.019597	.133712	.053825	.046132	.058471
2	.103526	-.024121	.188133	.066496	.071023	.036925
3	.102943	.010849	.233998	.097926	.090727	-.054602
4	.126478	.068857	.256308	.103147	.087336	-.095130
5	.129833	.100245	.269558	.090767	.077680	-.097521
6	.104908	.103981	.271472	.114614	.052580	-.095910
7	.082204	.105322	.254323	.088676	.050570	-.096595
8	.071921	.092830	.202561	.041140	.029140	-.064544
9	.063571	.083792	.186091	-.002407	.018649	-.047044
10	.088252	.081338	.160684	-.057135	.016154	-.017244
11	.061999	.003218	.112184	-.061639	.019325	.018710
12	-.005836	-.051536	.049407	-.087930	.031293	.032389
13	.024519	-.040799	.032039	-.059814	.021304	.009021
14	.010342	-.023278	-.015041	-.058923	.016789	.001669
15	-.008241	-.046223	-.064912	-.043883	-.005856	.004701
16	-.050231	-.085274	-.091332	-.025493	.008370	.034009
17	-.027831	-.103921	-.084351	-.009452	.003900	.045120
18	-.048642	-.059540	-.099410	-.023762	-.011845	.054950
19	-.072076	-.010990	-.118158	-.019995	.018301	.046473
20	-.131881	.012703	-.133160	-.040711	.038641	.053246
21	-.177286	-.010995	-.133466	-.042170	.059625	.066355
22	-.145170	-.014364	-.087047	-.005740	.064124	.049842
23	-.098609	-.026443	-.038802	.019511	.051671	.058069
24	-.052662	-.021079	-.010316	.111406	.058471	.024670
25	-.034508	.012768	.014767	.131668	.055209	-.029722
26	.018711	.088742	.025377	.129405	.044645	-.078892
27	.038718	.119837	.029123	.069302	.030136	-.072913
28	.050611	.114547	.009185	.054629	.009603	-.069826
29	.016574	.066688	-.012273	.049340	.027595	-.060543
30	-.005428	.031831	-.005941	.039492	.033878	-.024833

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-03	10E-03	10E-03	10E-03	10E-03	10E-04
1	.357277	.067854	.644157	.007998	.254274	-.413870
2	.568492	.130521	.781557	.092829	.166276	-.843315
3	.410175	.139678	.655680	.189702	.186782	-.800234
4	.173174	.023842	.256742	.149977	.142490	-.287029
5	.188039	-.056315	.117237	.072176	.097175	-.014054
6	.094265	-.055138	.082362	-.011051	.099619	.338035
7	.080026	-.031842	.055049	-.034586	.046747	.483627
8	.089179	-.028993	.050656	.005209	.002880	.373327
9-11	.003152	-.013893	.026451	.017129	.009280	.263366
12-14	.061447	.014650	.033615	.002139	-.004242	.229830
15-21	.019445	.015465	.012139	.003168	.005568	.047874
22-30	-.001763	.005763	.010467	.006749	.005422	-.029378

RUN NO 91B 91M 6-18-63 2306-0010(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.94128 10E-02	0.11592 10E-01	0.15415 10E-02	0.48797 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.631903	.720802	.519145	.747017
2	.428572	.513687	.175788	.509905
3	.344101	.375686	.051896	.326171
4	.261283	.273174	.061781	.228025
5	.156877	.206184	-.041772	.148150
6	.061576	.070569	-.122375	.064162
7	-.045621	-.047155	-.169781	-.025372
8	-.062762	-.099021	-.153519	-.081219
9	-.124215	-.133480	-.130365	-.161698
10	-.145511	-.253667	-.173594	-.239533
11	-.210035	-.327231	-.227873	-.314663
12	-.249094	-.373518	-.298536	-.322177
13	-.227707	-.352288	-.278717	-.312280
14	-.240312	-.383142	-.182196	-.283392
15	-.199983	-.389781	-.061686	-.235742
16	-.155549	-.322824	.002956	-.199402
17	-.128036	-.281623	.045243	-.181210
18	-.047004	-.237328	.072040	-.144212
19	-.070462	-.230952	.098525	-.130578
20	-.020731	-.175490	.004848	-.096997
21	.059382	-.071619	.019011	-.038701
22	.090875	.042694	.087498	.039532
23	-.014183	.109229	.105480	.076327
24	-.075733	.134181	.016229	.088906
25	-.095986	.169356	.007700	.070354
26	-.101590	.153643	.045456	.025563
27	-.127083	.109022	.060024	.001767
28	-.159004	.073974	.026319	.002251
29	-.189372	.078404	.039385	-.012561
30	-.165486	.076845	.012987	.010780

POWER SPECTRUM

K	U	V	W	T
	10E-02	10E-02	10E-03	10E-02
0	.037659	.026565	.005077	.015252
1	.202673	.268164	.104442	.107425
2	.177653	.288622	.182902	.107870
3	.145682	.200924	.223909	.085345
4	.069209	.073138	.139764	.039233
5	.037623	.050178	.073557	.021793
6	.039194	.042688	.087836	.018862
7	.029829	.040395	.107272	.021603
8	.024314	.035381	.076642	.021575
9-11	.019911	.023514	.048734	.012014
12-14	.024009	.027651	.067487	.009116
15-21	.016125	.010602	.035265	.004066
22-30	.014465	.012805	.024887	.004149

RUN NO 918 46M 6-18-63 2306-0010(EST)
RUN NO 918 91M 6-18-63 2306-0010(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.102385	.053614	.098253	.222365
1	.140816	.156824	.230245	.277373
2	.168958	.154068	.265859	.359135
3	.125063	.116913	.309335	.338093
4	.049432	.045432	.322777	.174108
5	.143638	.163108	.204846	.059554
6	.203864	.091436	.118658	.175522
7-8	.124350	.119794	.184008	.107018
9-11	.097030	.069918	.108861	.126415
12-15	.092308	.082685	.131882	.139371
16-20	.128997	.090430	.167640	.120067
21-27	.103039	.132623	.072065	.129427
28-36	.131336	.075689	.091253	.093107
37-47	.158983	.077588	.098605	.054692
48-60	.094240	.095168	.100930	.133625

301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.336323	.688883	.632164	.289514
1	.242783	.735300	.492798	.282528
2	.190675	.719987	.488718	.335114
3	.131871	.612917	.419139	.292339
4	.224683	.232295	.217953	.092113
5	.215614	.223265	.263839	.280165
6	.187069	.246771	.513224	.430734
7	.040226	.179123	.234005	.450781
8	.181807	.167878	.293352	.309190
9-11	.326147	.367070	.393984	.521658
12-14	.310711	.239996	.300203	.516975
15-21	.197880	.228698	.355491	.284690
22-30	.202703	.274349	.293679	.312265

RUN NO 92A 15M 6-19-63 0030-0146(EST)

GROSS STATISTICS

CLEAR
STABLE

WIND SPEED 3.78 M/SEC
WIND DIRECTION 240 DEG
SOLAR RAD. 0 LY/MIN

SIGMA A 12.1 DEG
SIGMA E 4.7 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.81775E 00	0.33650E-00	0.28840E-00	0.19345E-00
V	0.55700E 00	0.18917E-00	0.16824E-00	0.71850E-01
W	0.95439E-01	0.94446E-01	0.87311E-01	0.26161E-01
T	0.55241E-02	0.24860E-02	0.19262E-02	0.15458E-02
E	0.73509E 00	0.31006E-00	0.27198E-00	
GUSTINESS RATIOS				
U	0.23923	0.15346	0.14207	0.11636
V	0.19744	0.11506	0.10851	0.07091
W	0.08173	0.08130	0.07817	0.04279
COVARIANCES				
U,V	-0.27438E-00	0.11170E-01	0.54861E-02	0.93641E-02
U,W	-0.88904E-01	-0.65118E-01	-0.60304E-01	-0.34136E-01
U,T	0.18023E-01	0.12787E-01	0.10286E-01	0.93814E-02
V,W	0.40612E-01	0.10604E-01	0.10621E-01	0.45541E-02
V,T	-0.36024E-03	0.23957E-02	0.18709E-02	0.14650E-02
W,T	-0.46267E-02	-0.47005E-02	-0.44092E-02	-0.20431E-02
WE	-0.19994E-01	0.76135E-02	0.75148E-02	
NORMALIZED COVARIANCES				
U,V	-0.40655	0.04427	0.02491	0.07943
U,W	-0.31824	-0.36528	-0.38003	-0.47984
U,T	0.26815	0.44209	0.43642	0.54251
V,W	0.17614	0.07933	0.08763	0.10504
V,T	-0.00649	0.11047	0.10393	0.13901
W,T	-0.20150	-0.30676	-0.34000	-0.32128

RUN NO 92A 15M 6-19-63 0030-0146(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.22031 10E 00	0.15869 10E 00	0.23572 10E-01	0.12121 10E 00	0.18005 10E-01	0.12969 10E-01
0	.025087	-.379998	.436607	.087511	.103877	-.340220
1	.029884	-.328228	.415379	.061113	.094464	-.279873
2	.034655	-.243767	.364419	.035540	.069151	-.195207
3	.023520	-.170658	.301709	.020742	.043181	-.130646
4	.005450	-.117452	.237293	.011001	.029097	-.080854
5	.000410	-.081187	.175439	.017639	.021410	-.044370
6	-.003439	-.041644	.119077	.026256	.016056	-.011712
7	-.010856	-.005169	.070151	.034622	.010577	.008827
8	-.002942	.013393	.031491	.025119	.005808	.027307
9	-.000531	.025140	.003176	.021062	.000870	.037546
10	-.000688	.029119	-.016140	.010521	-.002360	.043682
11	.000784	.038934	-.034771	-.001439	-.001084	.055894
12	.003500	.051433	-.052023	-.007478	.000467	.060389
13	.004410	.062039	-.070881	-.007196	-.005618	.058050
14	.000249	.072741	-.089652	-.011929	-.017701	.055825
15	-.004493	.080412	-.102037	-.020324	-.026222	.060698
16	-.007899	.086199	-.112217	-.014599	-.027921	.059766
17	-.002218	.091378	-.126230	-.010187	-.028070	.048147
18	.002043	.097080	-.141774	-.019812	-.032452	.044896
19	.001044	.105084	-.154604	-.026292	-.041064	.043108
20	-.007482	.105608	-.163039	-.025465	-.042661	.050696
21	-.023963	.105407	-.167095	-.028053	-.040791	.056692
22	-.020661	.097343	-.170160	-.029855	-.034319	.060364
23	-.012382	.091773	-.170859	-.018098	-.026310	.056911
24	-.004184	.094000	-.171865	-.007653	-.020493	.051571
25	.002829	.091051	-.170869	-.001431	-.019982	.049409
26	.014031	.071798	-.161625	-.013579	-.015858	.046676
27	.021523	.057501	-.146931	-.039148	-.009705	.040593
28	.026998	.051719	-.130742	-.039637	.002526	.034317
29	.021072	.046553	-.110852	-.034955	.001751	.031762
30	.008379	.037427	-.086292	-.022892	.004645	.030950
31	-.004896	.025821	-.063024	-.006447	.004671	.036054
32	-.015346	.004804	-.037337	-.002865	.004035	.035764
33	-.023959	-.012563	-.016471	.000686	-.005296	.032665
34	-.029093	-.021051	.001835	.002586	-.012833	.018232
35	-.035611	-.025625	.015988	.005104	-.017126	.006494
36	-.031610	-.038015	.027543	.008697	-.018138	-.003253
37	-.018105	-.052052	.036861	.005642	-.004557	-.014219
38	-.005968	-.060269	.043330	.001021	.015768	-.022822
39	.006030	-.059493	.047033	.007592	.029873	-.027641
40	.012555	-.042316	.046376	.011137	.034416	-.026794
41	.012213	-.020845	.045326	.001464	.035531	-.019555
42	.005208	.000439	.040292	-.005330	.033258	-.011015
43	-.002817	.002807	.036297	-.007259	.025651	-.002697
44	-.009291	.002901	.032001	.002243	.012274	.004784
45	-.009823	-.002427	.034471	-.000660	.005429	.006590
46	-.014086	-.005416	.042906	-.000942	.003524	-.003390
47	-.014628	-.007803	.049696	.000257	-.001307	-.010888
48	-.018659	-.018962	.052996	.000937	-.008951	-.018124
49	-.012176	-.028115	.047236	-.007729	-.011262	-.017515
50	-.000207	-.028369	.041899	-.021412	-.012508	-.019163
51	.007100	-.026247	.037340	-.022168	-.004865	-.020462
52	.006616	-.024514	.033332	-.019847	-.000464	-.023303
53	.001329	-.016898	.027781	-.018294	-.003714	-.023483
54	.004526	-.010044	.024634	-.029666	-.007189	-.022404
55	.008294	-.003345	.026304	-.033350	-.008552	-.025600
56	.006680	-.000314	.028245	-.025162	-.010512	-.026698
57	.002610	-.007451	.029659	-.009969	-.015305	-.027904
58	.000678	-.006416	.030619	.012025	-.019576	-.029222
59	.000726	-.006040	.028888	.014329	-.019360	-.036056
60	-.004715	-.016058	.033388	.021911	-.013407	-.034894

RUN NO 92A 15M 6-19-63 0030-0146(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.22031 10E 00	0.15869 10E 00	0.23572 10E-01	0.12121 10E 00	0.18005 10E-01	0.12969 10E-01
1	-.008270	-.023832	.082198	.006744	.006565	-.057982
2	-.006269	-.028018	.140161	.007256	.012373	-.070572
3	-.006838	-.020341	.169198	.000412	.021514	-.067500
4	-.003235	-.009199	.180991	.004132	.028377	-.063699
5	.006011	.000576	.185148	.005486	.028640	-.056461
6	.012987	-.001462	.182704	.000717	.018275	-.051573
7	.017015	-.000265	.177215	-.010089	.009395	-.046167
8	.011714	-.011823	.170840	-.012365	.000511	-.045452
9	.010768	-.014364	.161545	-.009390	-.001616	-.055570
10	.016439	-.011040	.149121	-.009040	-.001589	-.061714
11	.022489	-.007874	.136058	-.015215	.003403	-.055176
12	.013265	-.003570	.125592	-.023937	.009413	-.038809
13	.004768	-.002799	.121403	-.038496	.019509	-.022459
14	-.005751	-.007822	.112067	-.042006	.030699	-.015416
15	-.011715	-.007224	.098535	-.020710	.036315	-.015972
16	-.013036	.002898	.083064	-.005158	.031883	-.017074
17	-.012946	.004487	.069292	.002198	.022045	-.013291
18	-.017745	-.005204	.058395	-.001466	.015714	-.003005
19	-.023878	-.011329	.042847	-.016018	.014109	.006521
20	-.030459	-.009547	.028176	-.032858	.015926	.020194
21	-.036859	-.010814	.011469	-.043571	.009427	.025498
22	-.037698	-.017200	-.000343	-.032028	-.004626	.024169
23	-.030174	-.019324	-.008765	-.021790	-.013776	.016431
24	-.018261	-.019813	-.019528	-.016611	-.007969	.018022
25	-.015735	-.017596	-.033841	-.013183	-.001937	.020862
26	-.019372	-.015778	-.049787	-.009694	.005631	.020652
27	-.024926	-.017601	-.058381	-.003878	.015169	.024782
28	-.021288	-.014345	-.058614	-.009765	.025610	.020948
29	-.019026	-.014538	-.056182	-.015118	.033551	.021275
30	-.016113	-.013825	-.054719	-.010711	.040176	.017524
31	-.014088	-.015264	-.054278	.003884	.040380	.010436
32	-.013707	-.015761	-.054509	.001574	.040358	.013609
33	-.008317	-.001754	-.059943	.003252	.036456	.018009
34	-.008941	.004353	-.066833	.002550	.032947	.027191
35	-.012079	.019838	-.065687	.008524	.029319	.034399
36	-.008232	.029050	-.063001	.011121	.019815	.030822
37	-.008308	.026882	-.053664	.003300	.011648	.008784
38	.000516	.019668	-.039772	.002704	.008064	.001481
39	.016096	.012786	-.025080	.027617	.004191	-.003789
40	.020296	.012926	-.011701	.045661	-.003249	-.011056
41	.020470	.021755	-.003450	.048945	-.014272	-.016185
42	.022625	.022451	.003253	.036411	-.024648	-.023200
43	.032220	.017100	.011102	.024268	-.036878	-.024865
44	.033630	-.001087	.015420	.007387	-.040999	-.020934
45	.028679	-.014973	.015[illegible].5	-.015690	-.041645	-.011210
46	.028001	-.018131	.007615	-.004218	-.043862	-.006930
47	.029930	-.008267	.002066	.019006	-.044841	-.003771
48	.033342	-.001025	-.000320	.022094	-.037531	.000185
49	.038888	.010588	-.000880	.013917	-.028435	.004836
50	.044104	.011935	-.002290	.003676	-.021210	.001291
51	.043859	.018609	-.005007	.005413	-.014910	-.003925
52	.037398	.023903	-.004329	.016858	-.010985	-.010582
53	.039298	.019926	-.002184	.028474	-.018865	-.017989
54	.036009	.003353	.002415	.036368	-.032265	-.019034
55	.028036	-.002003	.005955	.025886	-.036767	-.006842
56	.024362	.012235	.009781	.014810	-.034006	.002080
57	.025332	.020480	.011243	.014388	-.032248	.002102
58	.023769	.011578	.014450	.019744	-.031082	-.007142
59	.020292	.003760	.016596	.018277	-.025564	-.016944
60	.017567	-.001801	.019423	.013578	-.016364	-.013253

RUN NO 92A 15M 6-19-63 0030-0146(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.28843 10E 00	0.16828 10E 00	0.87310 10E-01	0.19264 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.816757	.686686	.571147	.860194
2	.605275	.372340	.229562	.665000
3	.448416	.192110	.074147	.488428
4	.322214	.089628	.014205	.346415
5	.216194	.020252	.000717	.232171
6	.124811	-.015275	-.015607	.141529
7	.044958	-.042773	-.038793	.067038
8	-.013000	-.078165	-.065022	.008142
9	-.056406	-.090141	-.057880	-.039743
10	-.080710	-.094144	-.053604	-.074258
11	-.095622	-.094118	-.070296	-.096295
12	-.105874	-.095891	-.090100	-.119433
13	-.121357	-.094189	-.099966	-.138573
14	-.132133	-.098924	-.101266	-.152068
15	-.148418	-.103434	-.100275	-.172639
16	-.170074	-.112280	-.082200	-.193060
17	-.197973	-.128876	-.072532	-.207458
18	-.220849	-.139883	-.066876	-.215327
19	-.239338	-.135730	-.067949	-.215754
20	-.252759	-.131121	-.078000	-.215219
21	-.258633	-.140874	-.088748	-.219520
22	-.258697	-.125317	-.078535	-.221630
23	-.268811	-.094070	-.070185	-.227861
24	-.271496	-.088631	-.063530	-.235420
25	-.260909	-.088358	-.048741	-.237193
26	-.239996	-.089805	-.037051	-.234008
27	-.223198	-.094828	-.043599	-.226588
28	-.195350	-.088197	-.053335	-.209134
29	-.168833	-.059997	-.058537	-.186204
30	-.134161	-.011795	-.037782	-.157859
31	-.086203	.018297	-.024194	-.124064
32	-.041969	.039537	-.013034	-.090893
33	-.008379	.042115	-.020826	-.062189
34	.021973	.027278	-.025703	-.027357
35	.039874	.017006	.007965	.002779
36	.057926	.010341	.055983	.029298
37	.094263	.017574	.054222	.048980
38	.108408	.024591	.049671	.062806
39	.108260	.030416	.043316	.074557
40	.099119	.030417	.027933	.078054
41	.071906	.026110	.019180	.075854
42	.044892	.022372	.014668	.073481
43	.032076	.023144	-.014052	.065699
44	.032645	.024276	-.033055	.053906
45	.031172	.015418	-.031934	.053501
46	.032044	.011065	-.019839	.067451
47	.036338	.003253	-.000756	.076928
48	.053915	-.013400	.011296	.080335
49	.069548	-.038414	.012887	.076758
50	.069407	-.043777	.010713	.067131
51	.068194	-.028365	.008566	.057210
52	.076661	-.007289	-.006042	.042151
53	.082097	.014087	-.004858	.026855
54	.074225	.015797	-.019154	.017405
55	.064385	.013795	-.017070	.011310
56	.050749	.012229	-.014948	.008746
57	.044440	.007837	-.007178	.006584
58	.037159	.019883	-.001082	.009142
59	.027954	.025446	.010057	.004763
60	.023789	.033478	.033979	.000511

RUN NO 92A 15M 6-19-63 0030-0146(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-01	10E-02	10E-02	10E-03	10E-03
0	.010349	-.002086	.007490	.008613	.022258	-.009837
1	.108970	-.042621	.129538	.123684	.166379	-.278920
2	.090814	-.078764	.211756	.159227	.261064	-.473328
3	.065468	-.104645	.239454	.163150	.348731	-.576303
4	.088396	-.073970	.136250	.077833	.230510	-.454793
5	.091943	-.039756	.064280	.016879	.110137	-.371310
6	.023424	-.036819	.063176	.022433	.059301	-.357241
7-8	.056083	-.032709	.054430	.000293	.073549	-.257058
9-11	.044576	-.022062	.024186	.023973	.085300	-.147704
12-15	.028705	-.011193	.007667	.045213	.045068	-.105636
16-20	-.012190	-.005944	.002127	.031939	.030186	-.057707
21-27	-.016526	-.005499	.001869	.007262	.009521	-.037567
28-36	-.019240	-.001257	.000475	.008541	.001486	-.020541
37-47	.005082	-.001072	.000161	.007251	-.001798	-.010818
48-60	-.000941	-.000440	.000037	.004673	-.000338	-.006863

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-02	10E-03	10E-03
1	-.192303	-.102415	.077322	-.120314	.248668	-.052068
2	-.094113	-.087166	.124801	-.120289	.138490	-.152749
3	.151531	-.010422	.154485	-.032259	.005750	-.276347
4	.168710	.023204	.102946	.037442	.071362	-.237752
5	.059521	-.051187	.053741	.016458	.071749	-.138584
6	.003887	-.071023	.043805	.013684	-.064085	-.100329
7-8	-.076403	-.005954	.032590	.025680	.042827	-.046616
9-11	-.033458	-.016424	.019944	.016334	.082654	-.057180
12-15	-.014624	-.039208	.009056	-.001208	-.006758	-.059671
16-20	-.024766	-.040037	.005728	-.005143	-.009995	-.029792
21-27	.014037	-.006737	.001708	.009567	-.007134	-.022553
28-36	-.009818	-.006033	.000597	.005536	.002400	-.010669
37-47	-.005244	-.002327	-.000124	-.002022	.000184	-.007795
48-60	-.000023	.002804	.000085	-.001798	.001833	-.000523

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-02	10E-03
0	.013530	.004318	.019262	.015027
1	.235978	.068710	.275856	.186801
2	.399200	.116087	.441905	.283577
3	.476405	.161047	.600686	.320168
4	.298315	.136518	.531347	.204557
5	.163643	.097117	.432110	.136410
6	.178981	.091282	.433010	.135792
7-8	.164429	.090537	.358841	.100140
9-11	.091869	.069974	.312273	.062007
12-15	.045312	.045867	.287808	.031936
16-20	.033473	.036117	.216241	.020550
21-27	.023695	.023836	.179714	.010914
28-36	.014498	.016236	.108744	.006148
37-47	.010140	.010334	.086058	.003824
48-60	.006291	.007229	.062605	.002841

RUN NO 92A 15M 6-19-63 0030-0146(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.11795 10E 00	0.71174 10E-01	0.17289 10E-01	0.43388 10E-01	0.10539 10E-01	0.63595 10E-02
0	.079387	-.479611	.542621	.104963	.138999	-.321270
1	.046939	-.082972	.222890	.011402	.059861	-.027043
2	.025366	.102351	-.011167	-.077095	.004941	.029256
3	.022813	.038691	-.014463	-.061653	-.016157	.031303
4	-.016470	.010736	.000151	-.023244	-.023373	.010420
5	.012378	.021969	.001263	-.059032	-.039535	-.013823
6	.002583	.000592	-.010999	.024672	-.039155	-.044150
7	.058114	.049183	-.063461	.071745	-.021049	.036816
8	.003572	.003557	-.019151	.050560	.022989	.017788
9	.056159	-.004579	-.004947	-.046427	.029969	.012802
10	.017090	-.041556	.014326	-.021722	.014631	-.016004
11	-.010598	.038589	-.027322	.016178	-.063088	.024777
12	-.088803	.062542	-.113340	.080253	-.061202	.058196
13	-.009307	.108402	-.141788	.011682	-.061603	.077426
14	-.030531	.058266	-.051247	.000686	-.029693	-.014756
15	-.073822	.047831	.049293	.043311	-.029677	.046223
16	.000545	.046630	-.063285	.049999	-.008929	.088743
17	-.012826	-.050616	-.036029	-.066018	-.010439	.042860
18	.007297	.016025	.001726	-.002537	-.017169	-.015162
19	-.007242	-.016384	.075424	-.017376	.000846	-.010680
20	.017411	-.042602	.073673	-.031412	.032277	.005654
21	.009416	-.027461	-.018221	.009885	-.000830	.018627
22	.010216	.002235	-.059350	.062250	-.004276	-.004395
23	-.034909	-.020565	-.034584	.010306	-.029780	-.015934
24	-.035401	-.104428	.049986	.062423	-.023506	-.090841
25	-.062141	-.038691	.030064	.016471	-.094014	-.058750
26	.003734	.002045	.040048	-.008853	-.021661	-.036108
27	.050953	-.043620	.055510	-.015761	.027288	.004257
28	.005471	-.033550	.017056	.021735	.043854	-.011350
29	-.015198	-.036043	.007091	-.023462	-.004665	-.019854
30	.013463	.027436	-.032130	-.032383	.080600	.014497

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-03	10E-03	10E-03	10E-03
0	.043627	.004109	.088869	-.000001	-.039489	.005910
1	.235712	-.061088	.665085	-.351826	.029795	-.067306
2	.169922	-.155742	.786933	-.440983	.133476	-.126972
3	.069418	-.161306	.760505	-.423377	.130500	-.091732
4	-.053010	-.066999	.440395	-.102928	.058548	-.024072
5	-.029678	-.098887	.405754	.235033	.064685	-.050679
6	.125392	-.202757	.671716	.128912	.189270	-.080595
7	.161437	-.230160	.678934	.341512	.218578	-.088520
8	.100263	-.153073	.410156	.886738	.152261	-.078343
9-11	.008442	-.158554	.412738	.759662	.003397	-.107399
12-14	.024973	-.223876	.553575	-.039039	.090406	-.128159
15-21	.005677	-.172330	.305207	.398332	.038101	-.081502
22-30	.023172	-.100078	.160002	.045179	.028923	-.097348

RUN NO 92A 15M 6-19-63 0030-0146(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

K	U,V	U,W	U,T	V,W	V,T	W,T
	0.11795 10E 00	0.71174 10E-01	0.17289 10E-01	0.43388 10E-01	0.10539 10E-01	0.63595 10E-02
1	.022762	-.022286	.215803	-.028164	.059056	-.079003
2	-.006360	-.027267	.129380	-.045800	.042427	-.032220
3	.034823	-.044836	.074768	-.000267	.086162	-.027873
4	.087199	.059307	.047532	.100108	.008581	-.066330
5	.131528	.024711	.040490	.069418	-.064250	-.056097
6	.089878	.015123	.024123	.072660	-.041875	-.069503
7	-.014291	.019817	-.031892	-.039120	-.005576	-.026752
8	.005479	-.005279	-.050206	-.010837	.004795	.045580
9	.013160	-.012128	-.045684	-.093863	.009360	.000428
10	.046934	-.007766	.004765	-.022142	.033810	-.038507
11	.052615	.006013	.045336	.001650	.054655	-.023032
12	.039116	-.002584	.017030	-.023368	.018731	-.011028
13	.022932	-.054854	.027347	.016282	.013061	.039188
14	.002661	-.010952	-.004825	-.038497	-.015803	.039777
15	.005773	-.015680	-.046770	.027523	-.003692	.022327
16	.058861	-.029373	-.091592	.020543	-.047090	.071954
17	-.046084	-.022975	-.062427	-.108860	-.015643	.062254
18	-.074863	.017263	-.058296	-.069240	.071031	.045870
19	-.040186	-.064056	.026267	.012961	.066242	.055379
20	-.002366	-.004668	.103761	.042136	.046435	-.012106
21	.035629	.063019	.106333	.038583	-.009522	-.146974
22	-.022539	.044515	.048563	.011853	.029325	-.069908
23	.000766	.008635	-.002619	-.001935	.035969	-.034728
24	-.013739	.034390	-.058817	-.000525	-.038454	-.017560
25	-.064989	-.026635	-.078605	-.040597	-.031348	.015592
26	-.071183	.028421	-.079746	-.028946	.012254	.015390
27	-.006940	-.007904	-.021408	.006106	.025296	.005664
28	-.008277	-.022446	.023017	.038623	-.027049	-.017524
29	-.055830	.033280	-.029657	-.051953	-.034298	-.013509
30	-.018582	-.029751	.076468	.064157	-.038079	-.010238

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-03	10E-03	10E-02	10E-03	10E-03
1	.304351	-.341394	.070310	-.026143	.103907	-.029505
2	.298353	.070425	.171716	.011626	.019104	-.084970
3	.209696	.546922	.355999	.050494	.009836	-.154407
4	.106911	.168257	.367606	.053876	.021830	-.077018
5	.110880	-.314507	.341774	.041040	.018499	-.018845
6	.111876	-.276694	.645815	.026303	.147027	-.087101
7	-.028703	-.501013	.554221	-.045097	.261344	-.047190
8	-.139029	-.606823	.109849	-.103004	.169977	.027697
9-11	-.166404	-.560217	.232652	-.067026	.077352	.017023
12-14	.074934	-.008219	.341033	.001080	-.031255	-.078176
15-21	.036897	.303663	.169045	.012948	.003348	-.037383
22-30	.027022	-.439569	.091110	-.014141	.050108	-.001719

RUN NO 92A 15M 6-19-63 0030-0146(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.19349 10E 00	0.71905 10E-01	0.26180 10E-01	0.15448 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.260958	.164162	.049817	.413891
2	-.043420	.052203	-.042424	.130197
3	-.048902	.036198	-.056497	.012068
4	.005073	.058834	-.044264	.017485
5	-.000987	.014322	-.088709	-.010804
6	-.032209	.113194	-.017699	-.077084
7	-.105742	.089361	-.024196	-.119017
8	-.068178	.104457	.012282	-.068346
9	.007912	-.037703	-.120058	-.044060
10	.054236	-.011734	-.051848	-.029136
11	-.034748	-.057343	-.115462	-.074941
12	-.133787	-.057193	-.012574	-.138282
13	-.137035	-.211544	-.092400	-.194424
14	-.138413	-.122888	.012864	-.088989
15	-.095124	.000466	.007767	-.079048
16	-.049675	-.018141	-.024048	-.027141
17	.006297	-.085564	.026852	.027570
18	.039200	-.083259	.024819	.107424
19	.075066	-.228362	.001492	.131635
20	.068065	-.091823	.061051	.127423
21	-.009211	-.092647	.002555	-.048292
22	-.085383	-.035056	-.016761	-.062433
23	-.057010	-.112304	-.005357	-.066558
24	-.036527	-.059242	.091889	-.008159
25	-.036910	-.072463	-.038901	-.009544
26	-.018772	-.105688	-.065427	-.022846
27	.123635	.010796	-.050759	.043823
28	.013528	-.042371	-.013521	.008605
29	.034560	-.050072	.081321	.006337
30	-.001855	.045358	-.014315	-.046812

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-02	10E-02	10E-03
0	.014818	.134147	.004849	.025749
1	.106925	.802081	.054749	.126318
2	.118149	.566171	.091173	.130646
3	.122276	.302727	.131950	.153773
4	.084652	.163364	.112975	.110641
5	.077553	.145827	.086137	.076920
6	.124271	.220197	.095114	.106800
7	.118958	.378420	.119093	.104753
8	.065090	.411057	.133642	.057276
9-11	.084983	.294110	.113788	.057612
12-14	.111643	.209011	.094630	.069000
15-21	.070502	.315457	.124149	.039163
22-30	.062274	.327015	.141593	.040396

RUN NO 92A 46M 6-19-63 0030-0146(EST)

GROSS STATISTICS

CLEAR
STABLE

WIND SPEED 5.97 M/SEC
WIND DIRECTION 243 DEG
SOLAR RAD. 0 LY/MIN

SIGMA A 8.00 DEG
SIGMA E 2.0 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.68803E 00	0.16146E-00	0.13058E-00	0.84831E-01
V	0.63809E 00	0.10284E-00	0.87080E-01	0.36360E-01
W	0.42033E-01	0.41016E-01	0.38547E-01	0.11425E-01
T	0.19185E-01	0.78907E-02	0.61201E-02	0.50164E-02
E	0.68408E 00	0.15270E-00	0.12810E-00	
GUSTINESS RATIOS				
U	0.13894	0.06731	0.06053	0.04879
V	0.13380	0.05372	0.04943	0.03194
W	0.03434	0.03392	0.03289	0.01790
COVARIANCES				
U,V	-0.33265E-00	0.17247E-01	0.14170E-01	0.48359E-02
U,W	-0.39109E-01	-0.33012E-01	-0.31494E-01	-0.12071E-01
U,T	0.79377E-03	0.17308E-01	0.13599E-01	0.11226E-01
V,W	-0.66256E-02	-0.91308E-02	-0.90572E-02	-0.14950E-02
V,T	0.41142E-01	0.12945E-02	0.26730E-02	-0.12745E-02
W,T	-0.37292E-02	-0.59307E-02	-0.53387E-02	-0.25991E-02
WE	0.12403E-02	0.49309E-02	0.45850E-02	
NORMALIZED COVARIANCES				
U,V	-0.50204	0.13385	0.13288	0.08707
U,W	-0.22997	-0.40566	-0.44391	-0.38775
U,T	0.00691	0.48489	0.48105	0.54421
V,W	-0.04046	-0.14059	-0.15633	-0.07335
V,T	0.37184	0.04544	0.11579	-0.09437
W,T	-0.13132	-0.32966	-0.34759	-0.34332

RUN NO 92A 46M 6-19-63 0030-0146(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.10664 10E 00	0.70943 10E-01	0.28270 10E-01	0.57929 10E-01	0.23084 10E-01	0.15357 10E-01
0	.133125	-.444059	.480941	-.156420	.115735	-.347619
1	.108980	-.342600	.447076	-.084439	.092285	-.285035
2	.062909	-.202302	.375020	-.014771	.043967	-.189066
3	.026687	-.094103	.296632	.018329	.001112	-.116775
4	-.000554	-.033816	.225427	.029485	-.025901	-.065286
5	-.019369	.001257	.161503	.031867	-.041760	-.024819
6	-.042406	.034503	.104727	.045969	-.053437	.010090
7	-.062024	.060998	.056933	.066358	-.060242	.039324
8	-.068085	.073694	.024183	.065121	-.060785	.054477
9	-.066505	.061084	-.000119	.040746	-.050086	.054808
10	-.062468	.047092	-.017648	.024672	-.041715	.047773
11	-.049508	.044271	-.033987	.019816	-.038657	.042695
12	-.034905	.052142	-.052510	.015838	-.033123	.045631
13	-.022316	.053207	-.063962	.003856	-.018769	.047212
14	-.015319	.047452	-.071144	-.010501	-.000374	.041632
15	-.013479	.041886	-.076416	-.010804	.010178	.031457
16	-.001294	.040606	-.080879	-.018188	.019744	.021322
17	.010338	.037376	-.087123	-.019883	.025449	.014346
18	.025479	.026060	-.091037	-.039164	.032027	.007786
19	.030720	.026020	-.092418	-.034763	.037537	.006051
20	.035020	.036333	-.095725	-.019393	.041304	.012287
21	.036194	.044662	-.105484	-.001877	.035777	.023800
22	.033052	.048696	-.118387	.004121	.025430	.038327
23	.029745	.040373	-.129775	-.013179	.018028	.050210
24	.023608	.028883	-.136789	-.020136	.012038	.054971
25	.014367	.020930	-.136377	-.007485	.000777	.057951
26	.003180	.022261	-.128530	.010743	-.008114	.061387
27	-.006138	.024969	-.120852	.020325	-.010444	.058210
28	-.018177	.020600	-.119900	.007279	-.006169	.048980
29	-.020305	.025500	-.115526	-.007303	.002111	.037549
30	-.011858	.029655	-.100051	-.011492	.010089	.022553
31	-.000901	.029957	-.087437	-.018638	.010346	.020317
32	.011751	.024738	-.080004	-.020590	.008589	.016798
33	.015033	.021382	-.075857	-.012060	.006271	.018303
34	.011256	.020525	-.071426	-.005236	.010353	.014457
35	-.001010	.020043	-.059344	.002874	.018567	.003081
36	-.011707	.016928	-.050176	-.007126	.022804	-.005858
37	-.013202	.004059	-.044467	-.014193	.017885	-.013781
38	-.007854	-.010062	-.040545	-.012160	.007272	-.015757
39	-.006666	.000381	-.037580	-.007219	-.005315	-.015099
40	-.005579	.015427	-.035700	.008435	-.012728	-.011856
41	.006058	.023286	-.025916	.008303	-.021443	-.008372
42	.019450	.012931	-.016803	.009328	-.032576	-.004675
43	.010422	.002281	-.012683	.010504	-.043138	.002183
44	-.005073	-.013724	-.009032	.018121	-.047931	.004075
45	-.003056	-.023620	-.003682	.011381	-.042450	.002416
46	.008000	-.032926	.004178	.005389	-.035995	-.000986
47	.014148	-.038520	.009431	-.006072	-.030379	.000301
48	.006382	-.038523	.014617	-.001364	-.021520	.007890
49	.000787	-.035376	.018520	.000267	-.009801	.011608
50	.001019	-.031659	.027300	.000537	.000642	.008648
51	.001979	-.032015	.041042	.005423	.006764	.000841
52	.001391	-.047188	.050812	.012643	.010311	-.009007
53	-.001921	-.046981	.051289	.015306	.013349	-.011392
54	-.004890	-.036250	.046890	.014641	.014594	-.011078
55	-.008132	-.029434	.044102	.005920	.018990	-.015299
56	-.015838	-.017238	.040630	.004831	.016623	-.015637
57	-.025313	-.007710	.040064	.006559	.008757	-.008185
58	-.029883	-.003144	.040212	.015991	.001503	.003163
59	-.026444	-.005073	.041954	.014409	.000238	.007905
60	-.018210	-.003987	.040948	.001323	.006113	.003708

RUN NO 92A 46M 6-19-63 0030-0146(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.10664 10E 00	0.70943 10E-01	0.28270 10E-01	0.57929 10E-01	0.23084 10E-01	0.15357 10E-01
1	-.005513	-.000984	.074281	-.019163	.049257	-.040787
2	-.006548	-.010469	.109458	-.031581	.073284	-.037254
3	-.003735	-.017814	.122337	-.023661	.079690	-.028344
4	.004272	-.029987	.126562	-.024854	.080577	-.020182
5	.000014	-.043684	.129960	-.022401	.083334	-.015461
6	-.010556	-.048020	.129078	-.023438	.085210	-.014671
7	-.012723	-.045063	.123358	-.005891	.080909	-.011281
8	-.014413	-.037124	.117839	.007554	.069554	-.003367
9	-.013364	-.040168	.114835	.016200	.059778	.000122
10	-.010218	-.043731	.110630	.023814	.049160	.005806
11	-.003710	-.037674	.103513	.014206	.047768	.003506
12	.001216	-.031004	.097232	-.001993	.055431	-.002284
13	-.001168	-.022192	.090372	-.008890	.050480	-.002890
14	-.007711	-.009590	.083445	.002896	.037697	.000817
15	-.009675	.000450	.073543	.010745	.025828	.006370
16	-.004671	.008794	.063973	.019317	.019448	.006423
17	-.001310	.006133	.053909	.014513	.012798	.011174
18	-.005099	.011307	.046856	.003121	.011096	.013146
19	-.009799	.006765	.042614	.005648	.003706	.011095
20	-.015646	-.008435	.038420	.000587	-.000438	.009475
21	-.012901	-.013898	.028128	-.003685	-.005115	.007041
22	-.008748	-.008459	.017207	-.000479	-.002665	.007449
23	-.005993	-.007516	.009603	-.009319	-.002009	.012318
24	-.013335	-.007445	.002306	-.024268	-.001668	.015105
25	-.015678	-.006388	-.003129	-.030019	.002343	.015093
26	-.011355	.001595	-.007776	-.027345	.004999	.010829
27	-.005650	.012082	-.011725	-.006473	.001581	.004177
28	-.000336	.022833	-.019311	-.004297	-.002335	-.004059
29	-.008948	.031049	-.027517	-.008023	-.008441	-.013050
30	-.011713	.032391	-.028416	-.005133	-.011146	-.020365
31	-.010682	.029325	-.029819	.001722	-.015746	-.016840
32	-.005450	.029264	-.038658	-.005452	-.018615	-.007811
33	.002430	.028946	-.052510	-.007727	-.020248	.011627
34	.012634	.018714	-.058273	-.003503	-.023987	.025156
35	.022796	.004441	-.056701	.000056	-.025290	.025174
36	.026250	-.007374	-.057896	-.007880	-.024393	.020426
37	.030124	-.019451	-.061937	-.016082	-.028224	.019583
38	.029005	-.030081	-.059820	-.011371	-.026686	.013317
39	.025584	-.031047	-.055679	.003824	-.028507	.010800
40	.026999	-.022093	-.053870	.024443	-.032333	.018985
41	.026430	-.014794	-.050918	.028135	-.035324	.025733
42	.018216	-.010842	-.047122	.016509	-.032324	.025654
43	.011284	-.009256	-.040934	.004261	-.020517	.021198
44	.005735	-.016433	-.031016	-.013320	-.007134	.019985
45	-.001123	-.020565	-.020568	-.023143	.005230	.017041
46	-.011107	-.023019	-.011871	-.027738	.014943	.011928
47	-.017819	-.025529	-.003033	-.025076	.017668	.007550
48	-.021895	-.021038	.008251	-.010101	.015134	-.004658
49	-.023247	-.015528	.021283	.000725	.014053	-.020038
50	-.017404	-.006567	.025634	.008272	.020550	-.027841
51	-.012932	-.002451	.024850	.020615	.029987	-.027798
52	-.008462	-.002087	.024677	.019470	.030777	-.025231
53	-.004722	-.004697	.024993	.026751	.021743	-.023084
54	-.000841	-.006234	.025324	.026495	.014720	-.023000
55	-.000148	-.008835	.028543	.024220	.015889	-.027214
56	-.012080	-.008748	.034835	.018451	.016946	-.033775
57	-.020905	-.003817	.039732	.006638	.011385	-.025455
58	-.026852	.000243	.042857	-.002179	.007987	-.019020
59	-.024352	.013441	.040486	-.009688	.008138	-.024441
60	-.012514	.015289	.034040	-.012985	.015907	-.028010

RUN NC 92A 46M 6-19-63 0030-0146(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.13059 10E 00	0.87074 10E-01	0.38539 10E-01	0.61195 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.806685	.643355	.596134	.870985
2	.567182	.284387	.244348	.690576
3	.391119	.076511	.075598	.531712
4	.262044	-.018801	.010859	.405423
5	.166472	-.038145	-.025432	.303061
6	.090188	-.050469	-.067344	.214334
7	.024185	-.070263	-.097773	.138277
8	-.035274	-.081655	-.101990	.076518
9	-.079428	-.080991	-.084477	.026278
10	-.108348	-.074042	-.071598	-.012032
11	-.120950	-.078390	-.060458	-.051313
12	-.136651	-.080540	-.080170	-.089101
13	-.149790	-.089034	-.076837	-.122888
14	-.156945	-.094535	-.065229	-.145787
15	-.167485	-.098558	-.051927	-.158754
16	-.174204	-.110614	-.046058	-.173930
17	-.176212	-.105059	-.052653	-.194907
18	-.172936	-.075330	-.037340	-.210075
19	-.166205	-.063358	-.032241	-.228037
20	-.161567	-.052165	-.039294	-.242343
21	-.158788	-.041344	-.041868	-.255957
22	-.149907	-.020947	-.060898	-.270608
23	-.135787	-.001991	-.070543	-.285573
24	-.115207	-.007882	-.072070	-.294319
25	-.100403	-.039088	-.063359	-.299292
26	-.092630	-.074378	-.062391	-.306182
27	-.089409	-.090380	-.083996	-.300366
28	-.086412	-.071144	-.067937	-.281673
29	-.079293	-.031815	-.060468	-.256201
30	-.074101	-.006187	-.059664	-.220999
31	-.071967	.019710	-.046240	-.180515
32	-.066900	.039626	-.040142	-.143607
33	-.056962	.041386	-.040912	-.112472
34	-.053193	.012730	-.018955	-.087489
35	-.046300	-.037669	-.018584	-.067108
36	-.044023	-.055315	-.008547	-.048355
37	-.034287	-.033432	.013373	-.028963
38	-.018531	-.026987	.033738	-.011007
39	-.020855	-.016172	.029817	.011751
40	-.032938	-.019345	.017362	.034854
41	-.041925	.000158	.011088	.053195
42	-.032640	.013756	.018178	.066655
43	-.019086	.025161	.018033	.073824
44	-.017429	.010653	.006651	.080069
45	-.019922	-.004022	-.006435	.087141
46	-.017184	-.003978	-.010379	.096619
47	-.008236	.005070	.018412	.103484
48	-.001411	.012945	.027010	.103434
49	.005516	.016778	.014815	.102120
50	.015127	.011567	.007487	.097181
51	.028659	.019003	.005010	.090539
52	.043112	.016420	.019358	.079254
53	.051564	.007453	.022422	.069549
54	.053950	.012529	.020835	.061046
55	.051905	.028240	.031186	.054110
56	.052221	.032790	.027504	.044985
57	.055732	.022729	.014411	.034242
58	.055302	.004682	-.003279	.018857
59	.054311	-.014953	-.002441	.009468
60	.048121	-.032471	.014394	.001540

RUN NO 92A 46M 6-19-63 0030-0146(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-03	10E-03	10E-03
0	-.001867	-.006175	.014883	.012573	-.011611	-.032823
1	-.023081	-.131762	.204422	.197237	-.062128	-.354998
2	-.018778	-.216815	.254374	.266988	-.127468	-.478646
3	.018080	-.261057	.233609	.135699	-.084175	-.545426
4	.107575	-.246857	.150170	-.181355	.141717	-.436026
5	.210818	-.249843	.111623	-.464055	.273077	-.412511
6	.244589	-.232956	.099384	-.805295	.427432	-.504249
7-8	.158841	-.209391	.074400	-.893942	.362816	-.413121
9-11	.078518	-.150475	.034008	-.571437	.158306	-.197094
12-15	.026864	-.096357	.017182	-.317421	.111980	-.130961
16-20	.023631	-.053173	.006512	-.220148	.058693	-.067148
21-27	.016478	-.044625	.004554	-.281435	.038779	-.057105
28-36	.005046	-.014061	.001210	-.084084	.005307	-.024183
37-47	.003420	-.009482	.000494	-.100207	.001098	-.012700
48-60	-.000526	-.007319	.000154	-.050562	.001116	-.005705

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-03	10E-03	10E-02	10E-03	10E-03	10E-03
1	-.419311	-.437991	.078515	-.158260	.297655	.071499
2	-.555969	-.556992	.123869	.000297	.480386	-.011531
3	-.207734	-.977539	.127740	.106239	.560902	-.040188
4	.232518	-.758380	.071463	-.016629	.405005	-.050315
5	-.218325	-.345478	.051675	-.275310	.364375	-.103501
6	-.303347	-.483745	.042602	-.390047	.281209	-.062362
7-8	.039417	-.147099	.026746	-.235580	.133560	-.036772
9-11	.096385	.155752	.018424	-.251678	.127095	-.054393
12-15	.032426	.018495	.011699	-.048014	.046323	-.035513
16-20	-.154951	.087802	.006546	.012915	.029816	-.031470
21-27	-.047660	-.007594	.004062	-.065502	.030691	-.025207
28-36	.032410	.011321	.001881	-.015369	.009285	-.014140
37-47	.000037	.015924	.000787	.010166	.003172	-.011412
48-60	-.006419	-.001900	.000266	.026880	.000532	-.002241

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-02	10E-02	10E-02
0	.008370	.023356	.007039	.005414
1	.109507	.280642	.124258	.077353
2	.146386	.414682	.191709	.109696
3	.166601	.555074	.228533	.108166
4	.143174	.571351	.196080	.059386
5	.111271	.530248	.199269	.038764
6	.085793	.474069	.228294	.038700
7-8	.064655	.414301	.199684	.029169
9-11	.044340	.389166	.155671	.015857
12-15	.026211	.292089	.122413	.009938
16-20	.019095	.231038	.089165	.005379
21-27	.011187	.154191	.078780	.003609
28-36	.006980	.082427	.047803	.001802
37-47	.004308	.063544	.033874	.001151
48-60	.002727	.042245	.023377	.000801

RUN NO 92A 46M 6-19-63 0030-0146(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.55520 10E-01	0.31100 10E-01	0.20623 10E-01	0.20357 10E-01	0.13499 10E-01	0.75615 10E-02
0	.087102	-.388146	.544376	-.073439	-.094417	-.343730
1	.008437	.033759	.211137	.071584	-.112963	-.047302
2	.091519	.024652	-.007680	-.026025	-.072314	.019928
3	.027750	.059763	-.107348	-.037325	-.065225	.075040
4	.038700	.071611	-.119123	-.013151	-.060304	.073198
5	.048362	-.021587	-.054067	-.014151	-.047031	.051297
6	.021244	.016070	.020649	-.015205	.006953	.049245
7	.044909	.090297	.026544	-.040047	-.022466	.045 53
8	.060086	.056191	.019378	-.054890	.042499	.011078
9	.000462	-.007133	.027837	.009514	-.024259	-.046472
10	-.020089	-.013043	-.000342	-.016740	-.031713	.008863
11	-.042414	.033850	-.036192	.031593	-.045282	.039559
12	-.014287	-.048722	.011293	-.029937	-.024190	-.013035
13	-.079167	.055744	.003891	.021461	-.021330	.010431
14	-.070954	-.089240	.060143	.051131	-.064231	-.021026
15	-.061399	-.057753	.009489	-.032668	-.042498	-.000189
16	-.030326	.044055	.002379	-.055871	.015807	.016675
17	.006825	-.048227	.020798	-.012571	.047836	.020573
18	-.002475	-.055895	.013014	-.018513	.028778	-.036954
19	-.066524	-.012088	-.016390	.073367	-.030511	-.038041
20	-.077453	-.068504	-.007103	-.030104	-.009678	-.032431
21	-.035498	.021091	-.058912	.022236	.031537	.040070
22	-.019608	.043635	-.075989	-.031043	.073714	.013254
23	-.033059	.008817	-.038873	.012430	.045712	.013188
24	.002111	-.033012	-.021141	-.023371	.057769	-.012079
25	-.005249	.098219	-.096539	-.043878	.053095	.076352
26	-.048896	.036402	-.107525	.115335	.005768	.047485
27	.051368	-.057881	-.026255	-.020551	.063145	-.011428
28	.016884	-.015373	.058431	-.049737	.054627	-.048643
29	.039197	-.048163	.090043	-.003392	.063611	-.084422
30	.088092	.033941	-.003724	-.082498	.105266	.029940

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-03	10E-02	10E-03	10E-03	10E-03
0	.022630	.020057	.018742	-.100152	-.213301	.016805
1	.188154	.223284	.069620	-.241430	-.653524	.027786
2	.145264	.081744	.033861	-.045127	-.216842	-.022486
3	.044752	-.403803	.041809	.037869	-.138997	-.093001
4	-.032163	-.676699	.066837	.115235	-.229896	-.142405
5	-.044538	-.510828	.067358	.166808	-.189396	-.163722
6	-.004298	-.462304	.078943	.115506	-.068417	-.207221
7	.043790	-.411820	.098847	-.042952	.055449	-.198635
8	.020230	-.377061	.104843	-.066131	.056505	-.166862
9-11	-.003173	-.552170	.076460	.058992	.000619	-.115064
12-14	-.019157	-.747108	.044954	.096791	-.051910	-.142544
15-21	-.007321	-.453156	.028871	-.131840	.002282	-.087395
22-30	.059493	-.838536	.025000	-.277372	.040233	-.119798

RUN NC 92A 46K 6-19-63 0030-0146(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.55520 10E-01	0.31100 10E-01	0.20623 10E-01	0.20357 10E-01	0.13499 10E-01	0.75615 10E-02
1	-.018970	-.078511	.175638	-.047242	.104634	-.004401
2	-.021886	-.066790	.118083	-.047464	.048592	.029681
3	-.020860	-.025468	.078846	-.075822	.032574	-.009559
4	.055308	-.066310	.029926	-.028447	-.025036	.019117
5	.015371	-.062132	.069694	-.062958	-.001574	-.052408
6	.046574	.038430	.037915	-.010212	-.020102	-.062650
7	.062322	.021933	.019541	-.050384	-.059111	-.021446
8	.089472	.036159	-.039277	-.026533	-.073684	.008231
9	.081228	-.028488	-.031881	-.052099	-.025325	.008314
10	.068995	-.025802	-.038307	-.088729	.037106	.002416
11	.101801	-.015445	-.059906	-.044965	-.071372	.014131
12	.084415	-.013741	-.025339	-.065859	-.014778	-.030135
13	.072497	.004183	-.000035	-.052635	.045760	-.022331
14	.076765	-.014592	-.027207	-.042710	.018289	.050419
15	.084544	-.016139	-.081361	-.015006	-.012022	.040626
16	.105767	-.004273	-.111259	.026957	-.033310	.007493
17	.058476	.010938	-.034465	-.057442	.024854	-.019895
18	.028863	-.014813	-.031284	.031619	.020466	-.010027
19	-.047299	-.038184	.029926	-.131587	.054341	-.019654
20	.008457	.000246	.013517	-.015759	.022422	.001462
21	.004169	-.039408	.027771	-.000958	-.015817	-.020003
22	.066984	-.027985	.009485	.061418	-.047563	-.035000
23	.011968	-.019591	-.041061	.014934	-.043282	-.023532
24	-.018386	-.045307	.022565	.053276	-.016178	-.050700
25	-.009357	-.020001	-.020773	.021087	.000990	-.001121
26	-.038439	.047152	-.081533	.012646	-.001400	.016755
27	-.007026	.025830	-.081445	.070171	-.025305	.035541
28	-.020521	.004347	-.120653	.042191	-.027145	.022583
29	-.057213	-.026161	-.046833	.067391	.051869	.020546
30	-.049060	-.026018	.003058	.067624	.043429	-.008991

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-03	10E-03	10E-03	10E-03	10E-04
1	.334341	-.416848	-.223645	-.841262	-.116617	-.392789
2	.143469	-.201264	.199379	-.499926	-.105323	-.303283
3	-.021169	-.262320	.596615	-.188395	-.053874	-.594030
4	-.065640	-.352551	.606210	-.102062	.114731	-.332179
5	-.032938	-.398769	.408999	-.087446	.194496	.242438
6	-.031369	-.530567	.450380	-.182902	.199399	.288642
7	-.049008	-.471824	.356448	-.293448	.217324	.411871
8	-.012125	-.285418	.105443	-.106988	.120737	.698708
9-11	-.019675	.047463	.323564	-.037167	.098330	.184472
12-14	-.019556	-.178728	.292084	-.027948	.143361	-.260519
15-21	.016183	-.209678	.140496	-.001986	.055482	.025948
22-30	-.022404	.035535	.123719	-.105059	.060029	-.411615

RUN NO 92A 46M 6-19-63 0030-0146(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.84820 10E-01	0.36341 10E-01	0.11403 10E-01	0.50141 10E-02
0	1.000000	1.000000	1.000000	1.000000
1	.282129	.253597	.031905	.411185
2	.070507	.240386	-.001455	.036719
3	.001888	.195099	-.076596	-.110112
4	-.096016	.142293	-.068689	-.045383
5	-.010922	.100237	.041118	.008495
6	.037675	.122443	.020999	-.025803
7	.005678	.075503	-.045020	.017501
8	-.024873	.023907	-.079278	.021682
9	.008274	.055312	-.031580	.034527
10	.012638	.064412	-.069102	-.029599
11	-.104918	-.092212	-.109205	-.037424
12	-.031887	-.057587	-.001067	.078932
13	-.070552	-.104906	-.055864	.051104
14	-.011246	-.153346	.061823	.016964
15	-.048837	-.120976	.002493	-.042178
16	-.063274	-.080232	-.060399	.004169
17	.033875	-.182828	-.018319	.025396
18	-.000139	-.170560	.000388	-.003784
19	-.040881	-.124861	-.003601	-.059165
20	-.020001	-.112422	.043891	-.048140
21	-.070833	-.098193	-.050216	-.100082
22	-.127211	-.090229	-.029413	-.107903
23	-.108190	-.117538	-.003554	-.060617
24	-.059375	-.167722	.032171	.010520
25	-.166471	-.079869	-.060144	-.112382
26	-.117113	-.145458	-.071228	-.183279
27	.024129	-.094823	-.028003	-.137133
28	.023302	-.099335	.009807	.039378
29	.116702	-.079784	.020667	.141830
30	.020604	-.034940	.000146	-.010057

POWER SPECTRUM

K	U	V	W	T
	10E-02	10E-02	10E-03	10E-03
0	.145591	.130144	.054981	.130525
1	.737594	.650933	.388943	.486290
2	.530210	.414752	.428288	.261228
3	.480199	.209917	.521893	.245391
4	.451984	.110834	.482889	.316868
5	.380694	.120180	.371796	.315581
6	.465229	.140382	.325307	.304807
7	.530243	.130231	.376157	.320904
8	.478834	.115405	.511427	.323901
9-11	.401908	.091726	.552931	.297901
12-14	.304667	.101640	.519943	.230875
15-21	.274224	.122161	.434476	.122791
22-30	.303120	.165839	.684277	.115244

RUN NO 92A 15M 6-19-63 0030-0146(EST)
RUN NO 92A 46M 6-19-63 0030-0146(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.281139	.261768	.054757	.171512
1	.129183	.057682	.161798	.181221
2	.086592	.093511	.140865	.163859
3	.140019	.070304	.124695	.160034
4	.158606	.124888	.146259	.125107
5	.125758	.263457	.188734	.205446
6	.139445	.184430	.212970	.103375
7-8	.168916	.104689	.151951	.184532
9-11	.125986	.139157	.108293	.073712
12-15	.073289	.100364	.139978	.105243
16-20	.075797	.095499	.112767	.082425
21-27	.110376	.077847	.071179	.125058
28-36	.070196	.079177	.091399	.113874
37-47	.115957	.098186	.127778	.112944
48-60	.093501	.111183	.096061	.081702

301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.787614	.898197	.379136	.665654
1	.672022	.875908	.342711	.603433
2	.466978	.728553	.050520	.338628
3	.285961	.462210	.101860	.128421
4	.390257	.523062	.180696	.288452
5	.498002	.148673	.232144	.380594
6	.410308	.136715	.480569	.345538
7	.321871	.254304	.186404	.225823
8	.232178	.161430	.128460	.255993
9-11	.124523	.347263	.287764	.241558
12-14	.164766	.159913	.265873	.220261
15-21	.255489	.187007	.308412	.251759
22-30	.162047	.391944	.189085	.315619

RUN NO 94A 46M 6-19-63 1306-1422(EST)

GROSS STATISTICS

CLEAR
UNSTABLE

WIND SPEED 4.97 M/SEC
WIND DIRECTION 203 DEG
SOLAR RAD. 1.27 LY/MIN

SIGMA A 12.0 DEG
SIGMA E 10.9 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.16498E 01	0.12598E 01	0.73778E 00	0.91344E 00
V	0.98723E 00	0.77059E 00	0.70188E 00	0.42433E-00
W	0.65828E 00	0.61879E 00	0.48072E-00	0.35656E-00
T	0.28169E-00	0.66095E-01	0.34261E-01	0.51646E-01
E	0.16476E 01	0.13250E 01	0.96020E 00	
GUSTINESS RATIOS				
U	0.25844	0.22583	0.17283	0.19230
V	0.19992	0.17663	0.16857	0.13107
W	0.16325	0.15828	0.13950	0.12015
COVARIANCES				
U,V	-0.22794E-00	-0.13621E-00	-0.87528E-01	-0.10415E-00
U,W	-0.49076E-00	-0.38242E-00	-0.17461E-00	-0.31572E-00
U,T	-0.36216E-00	-0.20199E-00	-0.91992E-01	-0.16652E-00
V,W	0.16190E-01	0.29940E-01	0.15289E-01	0.25935E-01
V,T	0.22441E-00	0.48392E-01	0.38391E-01	0.32891E-01
W,T	0.78202E-01	0.62822E-01	0.19442E-01	0.56334E-01
WE	0.11735E-00	0.77237E-01	0.71373E-02	
NORMALIZED COVARIANCES				
U,V	-0.17861	-0.13825	-0.12163	-0.16729
U,W	-0.47093	-0.43314	-0.29320	-0.55322
U,T	-0.53126	-0.70000	-0.57861	-0.76665
V,W	0.02008	0.04336	0.02632	0.06667
V,T	0.42555	0.21443	0.24757	0.22218
W,T	0.18160	0.31064	0.15149	0.41513

RUN NO 94A 46M 6-19-63 1306-1422(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.71960 10E 00	0.59563 10E 00	0.15903 10E 00	0.58090 10E 00	0.15510 10E 00	0.12838 10E 00
0	-.121531	-.293347	-.578657	.026342	.247424	.151632
1	-.118251	-.270749	-.532522	.027354	.223507	.146303
2	-.098602	-.230832	-.451659	.024863	.180795	.131120
3	-.076032	-.187310	-.374523	.023484	.140318	.112117
4	-.056717	-.145008	-.305062	.020535	.109564	.098485
5	-.041376	-.112411	-.245330	.013772	.083170	.084460
6	-.024977	-.086724	-.195282	.011012	.060107	.073508
7	-.012558	-.070583	-.152249	.013637	.042069	.070029
8	-.002588	-.054854	-.111682	.012944	.030709	.067658
9	.002329	-.035019	-.076616	.008828	.019291	.062378
10	.003018	-.016765	-.045675	.005632	.006036	.051837
11	.000018	-.006431	-.015087	.004354	-.003659	.036362
12	-.009265	.000630	.012938	.000640	-.013068	.019609
13	-.024209	.008349	.030028	-.002274	-.017826	.003617
14	-.034812	.024663	.069681	.000433	-.020770	-.010411
15	-.037898	.044143	.097041	.006544	-.026924	-.021235
16	-.033419	.057806	.125595	.010935	-.033700	-.029466
17	-.024629	.064490	.153356	.012851	-.044552	-.037504
18	-.012946	.067690	.179344	.014414	-.058703	-.041496
19	.003983	.070858	.198867	.007378	-.073145	-.045849
20	.022424	.079223	.209452	.000016	-.084796	-.049346
21	.032761	.083700	.209836	-.007683	-.091625	-.051780
22	.040043	.084459	.207613	-.016694	-.094939	-.054883
23	.040912	.091166	.204564	-.018442	-.089913	-.053626
24	.035644	.095321	.196818	-.014056	-.078728	-.056988
25	.036134	.095628	.196228	-.009911	-.068635	-.061976
26	.040075	.094299	.201275	-.010570	-.063215	-.063554
27	.051320	.090978	.202140	-.017513	-.060478	-.061294
28	.062619	.076503	.191382	-.028946	-.059207	-.058116
29	.073748	.061739	.171906	-.035397	-.057389	-.056393
30	.077136	.050045	.142366	-.037510	-.051199	-.059207
31	.070836	.035910	.111971	-.036903	-.039809	-.055183
32	.062305	.018650	.083958	-.034909	-.027220	-.047282
33	.055727	.004954	.055390	-.027222	-.019460	-.044020
34	.046385	-.011815	.028503	-.015139	-.013963	-.038249
35	.037084	-.017788	.003870	-.007272	-.012633	-.033113
36	.027398	-.014351	-.017280	-.002741	-.012419	-.029657
37	.020754	-.008791	-.033419	-.004882	-.010631	-.020097
38	.017505	-.009346	-.042669	-.006704	-.006908	-.007958
39	.019430	-.006904	-.049719	-.006795	-.006624	.000485
40	.024232	-.003701	-.050575	-.008156	-.006641	.003239
41	.030677	.002437	-.068791	-.011024	-.007166	.002962
42	.031920	.010162	-.077194	-.014929	-.010249	.004181
43	.028446	.011552	-.085107	-.018341	-.012439	.005517
44	.021161	.005361	-.089924	-.019212	-.009688	.009139
45	.010424	.002678	-.092295	-.009917	-.005012	.011233
46	-.002280	.000119	-.091181	-.003189	-.000849	.013190
47	-.012310	-.004025	-.085368	-.001532	.001420	.016675
48	-.018874	-.004813	-.075546	.004741	.007112	.017925
49	-.020392	-.002253	-.059954	.006426	.012121	.009452
50	-.020714	.000955	-.039978	.004063	.017024	.002350
51	-.019793	.004348	-.024173	.002248	.019751	-.005157
52	-.017920	.013804	-.012403	.000230	.019990	-.012736
53	-.021809	.027383	-.005749	.002164	.024463	-.027043
54	-.024960	.037052	-.001101	.005925	.030291	-.036290
55	-.027400	.037000	.004583	.007046	.032420	-.037319
56	-.030257	.037263	.011645	.004928	.030584	-.037725
57	-.027777	.041697	.021804	.004119	.027125	-.036116
58	-.025634	.047215	.032028	.010209	.023363	-.030433
59	-.028639	.048765	.043887	.016310	.023827	-.026665
60	-.030493	.046099	.053197	.021096	.029922	-.024406

RUN NO 94A 46M 6-19-63 1306-1422(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.71960 10E 00	0.59563 10E 00	0.15903 10E 00	0.58090 10E 00	0.15510 10E 00	0.12838 10E 00
1	-.000134	-.037068	-.041645	.003338	.011347	-.006580
2	.002475	-.062859	-.059484	.002799	.016680	-.005650
3	.004251	-.075493	-.071527	.001842	.012101	-.002491
4	-.000164	-.084212	-.083923	-.001810	.003759	-.004285
5	-.009156	-.092544	-.093787	-.002047	-.005418	-.010712
6	-.023164	-.100003	-.103263	-.005673	-.015371	-.021024
7	-.035489	-.106356	-.116523	-.006763	-.029895	-.030512
8	-.041206	-.109683	-.123349	-.006960	-.038996	-.035643
9	-.042131	-.107141	-.123997	-.003565	-.043405	-.040903
10	-.033116	-.102859	-.121409	.003128	-.043550	-.048881
11	-.025007	-.094036	-.117906	.014567	-.042279	-.055931
12	-.020940	-.080707	-.115807	.034759	-.041426	-.058756
13	-.017332	-.073071	-.111741	.045206	-.036314	-.057797
14	-.014062	-.065451	-.108170	.047156	-.027472	-.047925
15	-.014473	-.053694	-.102755	.049561	-.017666	-.035916
16	-.015164	-.043052	-.095495	.052324	-.010591	-.025813
17	-.012483	-.029655	-.087339	.045377	-.007602	-.012678
18	-.011495	-.014008	-.075206	.034010	-.002576	-.002354
19	-.010569	-.006751	-.059212	.022532	.000585	.003607
20	-.012930	.000958	-.044137	.009294	-.000559	.009809
21	-.014890	.008769	-.029045	.004050	-.006666	.015342
22	-.015882	.008925	-.018731	.007229	-.013922	.021913
23	-.017492	.006155	-.008904	.006643	-.018469	.023690
24	-.017545	.000336	-.002307	.006875	-.015628	.019020
25	-.013495	.000471	.002985	.006438	-.007581	.013887
26	-.006719	.002509	.012088	.006800	.002049	.008993
27	.003477	.007841	.024372	.007202	.008402	.010062
28	.009671	.020237	.035838	.002197	.012837	.017221
29	.014758	.031527	.044635	-.003396	.014647	.025844
30	.026919	.036681	.049313	-.003608	.017279	.029449
31	.039905	.035685	.054865	-.000131	.023058	.029651
32	.044461	.032274	.057545	-.001764	.028243	.027294
33	.043426	.029191	.057278	-.000402	.029798	.027202
34	.036240	.027085	.053254	.001331	.027350	.034881
35	.025844	.024547	.049428	-.001245	.027041	.043494
36	.021861	.017311	.047578	-.005154	.028663	.046364
37	.022284	.009653	.041240	-.016627	.031921	.041897
38	.021788	.012194	.035345	-.025199	.032602	.039191
39	.017978	.012408	.027774	-.026597	.029010	.038247
40	.013043	.010318	.019648	-.021910	.021671	.033355
41	.006601	.003978	.016749	-.018742	.011589	.026445
42	-.004676	-.002364	.017759	-.021245	.002003	.014870
43	-.012796	-.006076	.013482	-.029988	-.006859	.000458
44	-.019020	.001703	.002610	-.034761	-.010675	-.003468
45	-.019646	.010324	-.008552	-.036295	-.007356	-.001256
46	-.015360	.016252	-.022718	-.033802	-.001123	.007490
47	-.006186	.019013	-.036818	-.029738	.006304	.015105
48	.003066	.021985	-.046436	-.026878	.009436	.020126
49	.007018	.026310	-.050347	-.026109	.011815	.016155
50	.006679	.027473	-.053298	-.014220	.011822	.010362
51	.003893	.025380	-.057578	-.011186	.010017	.012771
52	.000324	.022304	-.058920	-.013058	.001162	.013176
53	-.005523	.019836	-.055910	-.016175	-.006634	.012829
54	-.010026	.019471	-.050008	-.017483	-.008611	.013127
55	-.013123	.018917	-.043406	-.017588	-.010757	.008869
56	-.011694	.016959	-.038219	-.013962	-.006902	.006358
57	-.008550	.011671	-.038027	-.007345	.000424	.007417
58	-.004543	.010576	-.034322	-.000279	.005829	.006787
59	-.001075	.014712	-.028362	.004837	.012994	.006726
60	.003397	.016061	-.018285	.010497	.018885	.007520

RUN NC 94A 46M 6-19-63 1306-1422(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.73784 10E 00	0.70180 10E 00	0.48092 10E 00	0.34276 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.851903	.839604	.804731	.882313
2	.663349	.625410	.567334	.729753
3	.509953	.460771	.388973	.600158
4	.388749	.336576	.267625	.492928
5	.291940	.244658	.179645	.399264
6	.213519	.171477	.112170	.317896
7	.149672	.113249	.048955	.246346
8	.088332	.063510	-.006477	.177541
9	.036845	.014989	-.042021	.111500
10	-.003388	-.033884	-.060208	.050577
11	-.044155	-.080427	-.066421	-.004964
12	-.083105	-.115628	-.073090	-.056698
13	-.121645	-.140498	-.084788	-.106463
14	-.154410	-.162317	-.108275	-.151733
15	-.184428	-.186122	-.131389	-.187154
16	-.210814	-.208109	-.147490	-.227646
17	-.231537	-.224742	-.152556	-.269224
18	-.250795	-.239314	-.161335	-.306840
19	-.259779	-.252764	-.174070	-.336738
20	-.262108	-.264558	-.197511	-.357834
21	-.255222	-.276111	-.205580	-.369333
22	-.247399	-.283976	-.200442	-.369691
23	-.241762	-.281132	-.200139	-.365431
24	-.234804	-.273973	-.210287	-.359830
25	-.234608	-.262291	-.225502	-.353089
26	-.232890	-.248482	-.225582	-.344744
27	-.229091	-.230257	-.208379	-.333086
28	-.214512	-.211571	-.176784	-.306016
29	-.186561	-.188024	-.136939	-.273869
30	-.145637	-.147985	-.091246	-.231429
31	-.098288	-.099753	-.053343	-.186241
32	-.052440	-.057800	-.032277	-.139487
33	-.014717	-.023716	-.015945	-.095058
34	.016259	-.003138	-.003479	-.052724
35	.040867	.009810	.007904	-.012421
36	.052699	.021078	.011256	.025384
37	.060518	.029801	.020916	.056434
38	.060716	.036327	.026044	.080738
39	.058152	.039326	.018825	.106611
40	.060887	.045669	.012849	.129447
41	.064383	.054656	.016997	.149363
42	.062810	.059853	.019779	.168177
43	.062997	.060427	.020951	.186972
44	.064029	.061155	.012137	.199277
45	.069939	.063627	-.002782	.205171
46	.076038	.058780	-.007043	.199248
47	.077671	.053242	-.001748	.181546
48	.070863	.050035	.005308	.162062
49	.057359	.049487	.012952	.137631
50	.037656	.051987	.016012	.111831
51	.015869	.058675	.015652	.086550
52	-.001272	.067249	.016882	.064840
53	-.007779	.070810	.019670	.048521
54	-.013786	.070462	.024869	.038367
55	-.022873	.066044	.029439	.027420
56	-.037475	.066704	.027336	.011539
57	-.056062	.074891	.024876	-.010752
58	-.076583	.079980	.019957	-.033221
59	-.091479	.080628	.012415	-.051349
60	-.098323	.077045	.006521	-.067424

RUN NO 94A 46M 6-19-63 1306-1422(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-01	10E-02	10E-02	10E-02
0	-.019180	-.048208	-.019491	.027553	.049593	.078121
1	-.215160	-.318367	-.153042	.607419	.584229	.549473
2	-.208479	-.345472	-.200138	.592837	.740569	.554571
3	-.097580	-.345067	-.203438	.209125	.712608	.434224
4	-.005998	-.194066	-.097864	-.077766	.407053	.158328
5	-.039015	-.078691	-.041760	.046927	.189423	.057710
6	-.089804	-.079758	-.041006	.234781	.162516	.041151
7-8	-.086432	-.079108	-.031846	.083156	.200504	.009591
9-11	-.028046	-.045733	-.023719	-.031974	.105882	.042318
12-15	-.004489	-.020845	-.009468	.067245	.063362	.033930
16-20	-.006274	-.014006	-.005920	-.026812	.026210	.000908
21-27	-.001876	-.001085	-.002785	-.016979	.018203	.003640
28-36	.001111	-.002606	-.001664	.016358	.007899	.000968
37-47	.001189	-.001807	-.000790	-.008367	.002709	-.001974
48-60	.001122	-.000859	-.000382	-.005095	.001963	.000397

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-01	10E-02	10E-02	10E-02	10E-02
1	-.338822	-.119962	-.539323	.560078	-.069143	.005167
2	-.771198	-.179190	-.719676	.688798	-.180382	-.175890
3	-.816029	-.212732	-.770968	.282615	-.184990	-.229594
4	-.133955	-.159462	-.348983	-.150497	-.051089	-.108263
5	.034688	-.090515	-.095922	-.319297	-.006252	-.019913
6	-.302956	-.057778	-.069556	-.457671	-.014096	.032737
7-8	.057852	-.013473	-.044010	-.142179	.084896	.089952
9-11	.233913	-.013860	-.034256	.235917	.064778	.000075
12-15	.112683	-.005690	-.011089	-.006217	.018627	-.006125
16-20	-.058219	-.008796	-.024997	-.010428	.006185	-.003615
21-27	-.018833	-.002711	-.010361	.013675	.005206	-.007338
28-36	-.006076	-.000274	-.009946	.007953	-.000526	-.000802
37-47	-.006310	-.000105	-.004102	.000094	-.000726	-.001466
48-60	.003311	.000201	-.001291	.007074	-.001138	.000177

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E 00	10E-01	10E-02
0	.011304	.003792	.040713	.052676
1	.088200	.067945	.448207	.486321
2	.117602	.107989	.611563	.711478
3	.132355	.121912	.676549	.749685
4	.082016	.075468	.451004	.360692
5	.044140	.041182	.276075	.160823
6	.038914	.037471	.284306	.152606
7-8	.029939	.032617	.270601	.116907
9-11	.021637	.020003	.162225	.075659
12-15	.011908	.014181	.093309	.043510
16-20	.007623	.008535	.073541	.027347
21-27	.004601	.005009	.042858	.016348
28-36	.002882	.002950	.023948	.010563
37-47	.001718	.001799	.015787	.006563
48-60	.001261	.001061	.011094	.004508

RUN NC 94A 46M 6-19-63 1306-1422(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.62232 10E 00	0.57055 10E 00	0.21719 10E 00	0.38878 10E 00	0.14799 10E 00	0.13568 10E 00
0	-.167358	-.553371	-.766702	.066707	.222246	.415190
1	-.091004	-.365444	-.530262	.011071	.086812	.329709
2	-.027378	-.190934	-.286085	-.025034	-.024201	.197649
3	.065457	-.064695	-.145399	-.068317	-.057514	.083323
4	.057646	.026347	-.075039	-.066441	-.059418	.025302
5	.039527	.090839	.043862	-.027335	-.052835	-.031063
6	.012885	.157534	.155846	.013829	-.024330	-.082646
7	.001060	.128923	.214095	.051329	-.028924	-.080163
8	-.040662	.110428	.185679	.038008	-.005746	-.104171
9	-.077918	.096363	.188309	.082828	.067827	-.113210
10	-.016657	.107519	.168605	.041751	.034224	-.130944
11	.028562	.120817	.145705	.013459	-.001230	-.153536
12	.061682	.104592	.114815	.005632	-.039318	-.138217
13	.024534	.055610	.088426	-.030544	.003114	-.086960
14	.043978	.040803	.029562	-.070046	-.016553	-.084617
15	.034852	-.035780	-.035853	-.060478	.008808	.001747
16	.015341	-.117878	-.065433	.041669	.012763	.087217
17	-.062172	-.132426	-.105012	.031458	.052730	.099595
18	-.040460	-.108934	-.110040	.013384	.024888	.070650
19	-.003998	-.073002	-.063136	.017662	.005979	.060298
20	.004760	.005632	-.034786	-.005808	.000692	.013039
21	-.011524	.017203	.024842	-.025663	-.030665	.005403
22	.021746	.060208	.058081	-.036737	-.070313	-.009802
23	-.023703	.081628	.052816	.006315	-.017488	-.023059
24	-.065739	.046125	.038475	.033393	.067994	.014178
25	-.058647	-.013918	.052777	-.019974	.048636	.043470
26	-.031367	.013229	.020822	.010940	.034612	.010277
27	.013137	.019507	.018736	.023070	-.038991	-.025099
28	.044759	.016696	.024327	.033719	-.054991	-.042378
29	.071451	.010793	.057127	-.016169	-.030376	-.034182
30	.010799	.053233	.060599	.018635	.006430	-.062261

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-01	10E-02	10E-02	10E-01
0	-.011483	-.042161	-.035166	.010259	.017814	.009771
1	-.043312	-.225179	-.178717	-.046456	.030085	.060964
2	-.060398	-.311063	-.206110	-.194972	.024607	.087036
3	-.062137	-.531985	-.297830	-.425965	.103949	.123107
4	-.021963	-.504250	-.263506	-.452134	.201383	.090827
5	-.051008	-.267921	-.140891	-.050895	.247970	.035586
6	-.149526	-.229042	-.092595	.682646	.354655	.029705
7	-.215025	-.275303	-.084690	.991958	.456789	.045380
8	-.138896	-.163558	-.049918	.498320	.276597	.030627
9-11	-.040659	-.065720	-.039458	.313044	.147209	.012587
12-14	-.058401	-.073162	-.048476	.054262	.216825	.009213
15-21	.006799	-.039414	-.022196	.040385	.090943	.002563
22-30	-.022717	-.038693	-.013332	.097805	.048948	.002539

RUN NC 94A 46M 6-19-63 1306-1422(EST)
301 PCINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.62232 10E 00	0.57055 10E 00	0.21719 10E 00	0.38878 10E 00	0.14799 10E 00	0.13568 10E 00
1	-.023379	-.120194	-.126774	.052467	-.016397	-.022788
2	.004208	-.066489	-.141052	.075974	.003197	.020798
3	.047276	-.068898	-.121514	.034831	.035765	.046348
4	.051455	-.060309	-.112746	.015773	.040867	.025363
5	.035149	-.035372	-.117666	.012711	.001592	-.006057
6	.021150	-.058563	-.073616	.052532	-.014350	-.045744
7	.032884	-.069366	-.013232	.087729	-.019009	-.078203
8	.013059	-.047483	.008238	.049555	-.011254	-.086506
9	.055738	-.009089	.002994	-.005769	.033973	-.023005
10	.044534	.031507	-.006228	.033480	.070193	.019293
11	.018833	.076091	.005264	.013939	.052603	.056362
12	-.001934	.040313	.047955	-.033290	.013660	.007660
13	-.011070	.051223	.045931	.014874	-.005210	.012414
14	-.008455	.126514	.020326	.005141	-.006397	.061284
15	.015586	.096706	.021162	.016536	-.014343	.048049
16	.000792	.058766	.036335	-.063677	-.026747	.045839
17	-.025284	.023135	.003369	-.048479	-.037438	.028263
18	-.089277	-.014488	-.023265	-.016445	-.057896	.044433
19	-.101422	-.007927	-.068730	-.004809	-.042942	.065866
20	-.062888	-.018851	-.048314	-.057946	-.043887	.048398
21	-.028988	-.016884	-.007259	-.062783	-.043273	.030743
22	-.000113	-.001208	-.012972	-.083964	-.007998	.036639
23	.024666	-.025706	-.005960	-.056620	.052760	-.001129
24	.060351	-.040156	.014374	.035608	.084312	-.063691
25	.060709	-.066376	.005801	.107277	.080462	-.046206
26	.093516	-.068724	.018809	.168716	.021323	-.041291
27	.029021	-.047119	-.011438	.103538	.003216	-.037141
28	.001527	.014113	-.048675	-.025578	.037316	.014597
29	.020065	.020591	-.030248	-.051041	.039565	.046520
30	.019781	.023818	-.006456	-.033682	-.008141	.046543

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-02	10E-02	10E-02
1	.057524	.038486	-.381861	.411740	.055526	.119916
2	.112476	-.076029	-.483589	.801380	.139723	-.128845
3	.093119	-.214756	-.828425	.741111	.092121	-.192207
4	-.011108	-.160614	-.889694	.217310	-.118536	.050182
5	.012097	-.026987	-.557988	.219489	-.013738	.182003
6	.017844	.001475	-.402159	.028159	.144779	.228986
7	-.021390	-.045718	-.406170	.051571	.127753	.197193
8	.018860	-.057784	-.217188	.208770	.101749	.037695
9-11	-.039537	-.070147	-.074782	.454321	-.120306	-.132409
12-14	-.023966	-.015891	-.236433	.232217	-.040342	-.006683
15-21	-.008991	-.045157	-.049694	-.034928	-.015894	-.059958
22-30	.002269	-.015432	-.033042	-.080108	-.006853	.004000

RUN NO 94A 46M 6-19-63 1306-1422(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.91326 10E 00	0.42406 10E 00	0.35644 10E 00	0.51649 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.580211	.212602	.390094	.654577
2	.281996	-.176348	.109065	.337021
3	.145762	-.218330	.015428	.178569
4	.019325	-.067273	-.052788	.132736
5	-.112486	-.050453	-.098317	-.000315
6	-.235738	-.024326	-.093124	-.155501
7	-.251951	-.066389	-.127478	-.248937
8	-.212513	-.028215	-.092927	-.212363
9	-.193781	.080868	-.111245	-.178381
10	-.172936	.101254	-.213477	-.192191
11	-.175762	-.009192	-.151907	-.204428
12	-.124054	-.127917	-.113863	-.187646
13	-.064884	-.098822	-.216439	-.148912
14	-.008908	-.127570	-.116354	-.076789
15	.059517	-.009959	.063050	-.019548
16	.103375	-.020487	.098694	.018370
17	.149012	.055407	.124806	.064934
18	.135863	.048706	.110052	.088881
19	.070320	.093730	.071570	.077281
20	.020444	-.078781	.000525	.026496
21	-.040496	-.060373	-.040238	-.043464
22	-.041133	-.060667	-.026962	-.083645
23	-.069885	.020794	.035237	-.043268
24	-.089909	.149162	-.006957	.003147
25	-.058058	.114435	-.026231	-.014883
26	-.005863	.084807	-.021022	-.002367
27	-.009535	-.023016	-.047035	.013161
28	-.015357	-.112626	-.007233	.003699
29	-.048396	-.096611	.013991	-.031955
30	-.042677	-.002967	-.057770	-.053140

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E-01	10E-01	10E-02
0	.013431	.009331	.017088	.107262
1	.069932	.079406	.163429	.609301
2	.087704	.119299	.270743	.686712
3	.140115	.138752	.406327	.860863
4	.134700	.124922	.327633	.691730
5	.078243	.170235	.169666	.377511
6	.055101	.279618	.182657	.273344
7	.052828	.351483	.260104	.255758
8	.034196	.238298	.208141	.147840
9-11	.020932	.235237	.140775	.123427
12-14	.027919	.289140	.109910	.195761
15-21	.018437	.159253	.116224	.074492
22-30	.013870	.134014	.089331	.050866

RUN NO 94A 91M 6-19-63 1306-1422(EST)

GROSS STATISTICS

CLEAR
UNSTABLE

WIND SPEED 6.17 M/SEC
WIND DIRECTION 207 DEG
SOLAR RAD. 1.27 LY/MIN

SIGMA A 8.80 DEG
SIGMA E 7.9 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.12122E 01	0.10285E 01	0.74186E 00	0.75910E 00
V	0.79107E 00	0.63404E 00	0.57915E 00	0.35026E-00
W	0.57224E 00	0.56873E 00	0.51055E 00	0.29462E-00
T	0.16856E-00	0.33094E-01	0.21880E-01	0.21615E-01
E	0.12877E 01	0.11156E 01	0.91578E 00	
GUSTINESS RATIOS				
U	0.17844	0.16437	0.13960	0.14121
V	0.14415	0.12905	0.12334	0.09592
W	0.12260	0.12223	0.11581	0.08797
COVARIANCES				
U,V	-0.21759E-00	-0.14694E-00	-0.17613E-00	-0.91401E-01
U,W	-0.39297E-00	-0.38853E-00	-0.29544E-00	-0.29531E-00
U,T	-0.13969E-00	-0.49503E-01	-0.20528E-01	-0.39678E-01
V,W	0.71690E-01	0.94417E-01	0.10282E-00	0.48888E-01
V,T	0.10213E-00	-0.87299E-02	-0.55873E-02	-0.36643E-02
W,T	-0.12004E-01	-0.13840E-01	-0.20709E-01	-0.76308E-03
WE	0.21527E-00	0.16618E-00	0.75490E-01	
NORMALIZED COVARIANCES				
U,V	-0.22221	-0.18196	-0.26870	-0.17726
U,W	-0.47183	-0.50802	-0.48006	-0.62445
U,T	-0.30904	-0.26832	-0.16112	-0.30975
V,W	0.10655	0.15723	0.18909	0.15219
V,T	0.27968	-0.06027	-0.04963	-0.04211
W,T	-0.03865	-0.10088	-0.19593	-0.00956

RUN NC 94A 91M 6-19-63 1306-1422(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.65548 10E 00	0.61550 10E 00	0.12743 10E 00	0.54369 10F 00	0.11256 10E 00	0.10570 10E 00
0	-.268697	-.479972	-.160904	.189151	-.049835	-.195883
1	-.259758	-.449889	-.136568	.177079	-.044044	-.171625
2	-.232585	-.393932	-.103086	.148039	-.032306	-.124665
3	-.195939	-.338748	-.082505	.116970	-.020323	-.079328
4	-.161940	-.286026	-.069674	.088192	-.009478	-.045768
5	-.130119	-.231265	-.057990	.057307	.003084	-.022417
6	-.095175	-.175982	-.048785	.022420	.016011	-.000846
7	-.060214	-.121065	-.043707	-.010579	.027313	.026100
8	-.025158	-.074778	-.042410	-.037214	.038925	.053528
9	.006429	-.034453	-.038678	-.061083	.048570	.075491
10	.028617	.002856	-.028210	-.080510	.051372	.090345
11	.043749	.034084	-.014454	-.091368	.054871	.095133
12	.052923	.062454	-.005581	-.092833	.059309	.089441
13	.060906	.092080	-.000411	-.083313	.054755	.080173
14	.068282	.122345	.002647	-.070556	.045015	.064621
15	.074978	.148370	.005908	-.061399	.032251	.051661
16	.079950	.165606	.011853	-.055150	.019576	.046529
17	.080820	.177413	.017401	-.042551	.010051	.046609
18	.078183	.186066	.023561	-.028795	.001376	.040386
19	.077452	.188893	.025526	-.022798	-.003585	.032914
20	.077610	.187641	.024265	-.017312	-.004318	.028912
21	.075503	.181327	.023497	-.008146	-.003113	.027048
22	.077042	.179045	.023270	.001936	-.003574	.022130
23	.079320	.178178	.023722	.010097	-.008634	.016231
24	.082425	.175972	.025637	.010266	-.018845	.006421
25	.083873	.167073	.029436	.008728	-.029287	-.000696
26	.084591	.155655	.032892	.005416	-.037096	-.007460
27	.084976	.140512	.038392	-.000894	-.039202	-.012518
28	.085198	.121641	.045459	-.012286	-.041067	-.022724
29	.081465	.105077	.049224	-.019663	-.037476	-.040376
30	.072314	.086387	.048595	-.017443	-.028700	-.051080
31	.061270	.061336	.047347	-.009064	-.019518	-.048174
32	.051624	.038432	.049738	-.002226	-.014271	-.045732
33	.046265	.021526	.050181	-.002038	-.011250	-.040951
34	.040975	.006966	.045214	-.005160	-.007826	-.030643
35	.031654	-.002479	.040980	-.009527	-.004642	-.025174
36	.022694	-.010300	.040307	-.016477	-.007704	-.025188
37	.017331	-.015217	.038640	-.024208	-.010502	-.022513
38	.017277	-.022925	.031194	-.029451	-.008822	-.015232
39	.018833	-.030641	.018534	-.033096	-.006393	-.010322
40	.021679	-.031916	.007943	-.034012	-.007137	-.007351
41	.023102	-.032923	.002638	-.032131	-.010503	-.002054
42	.018805	-.033891	-.000768	-.024155	-.012194	.004 73
43	.011616	-.033792	-.008472	-.015968	-.013321	.012764
44	.004371	-.033258	-.015602	-.014530	-.014262	.017500
45	-.003804	-.033132	-.021034	-.019626	-.006900	.018259
46	-.012502	-.033536	-.027113	-.023516	-.002245	.018377
47	-.018273	-.025860	-.031246	-.024076	-.004723	.018621
48	-.027545	-.016458	-.030553	-.013983	-.005639	.007128
49	-.045498	-.012808	-.026653	.007263	-.003400	-.003557
50	-.062073	-.015190	-.021591	.030198	-.002999	-.009072
51	-.072126	-.019045	-.014820	.043332	-.008814	-.014259
52	-.082673	-.028648	-.004390	.051800	-.011958	-.013727
53	-.091397	-.037472	.001804	.061750	-.010060	-.016661
54	-.095736	-.041242	.005808	.068346	-.003443	-.016867
55	-.092435	-.041599	.005999	.072947	.005810	-.008686
56	-.084304	-.040356	.006397	.076265	.011017	-.002320
57	-.074876	-.042093	.010375	.074983	.013410	-.000919
58	-.068973	-.044793	.017376	.069782	.013951	.001003
59	-.064871	-.046010	.023010	.063817	.015521	.008874
60	-.057987	-.041305	.025493	.052647	.018363	.016909

RUN NO 94A 91M 6-19-63 1306-1422(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.65548 10E 00	0.61550 10E 00	0.12743 10E 00	0.54369 10E 00	0.11256 10E 00	0.10570 10E 00
1	.007241	-.013884	-.012511	.027494	-.030337	.017822
2	.014321	-.022794	-.018264	.049143	-.050132	.054426
3	.017493	-.024154	-.028125	.061487	-.062503	.091010
4	.022470	-.021562	-.038584	.074191	-.068294	.116528
5	.032322	-.021655	-.046902	.087902	-.068244	.126607
6	.038348	-.020498	-.052691	.098875	-.068170	.129604
7	.042270	-.017005	-.058509	.104881	-.066541	.131189
8	.046484	-.016133	-.059724	.106484	-.064876	.121846
9	.050234	-.024512	-.057095	.106414	-.060361	.108357
10	.050417	-.029027	-.059099	.109041	-.052152	.094964
11	.046937	-.028003	-.064294	.108723	-.042742	.088109
12	.046966	-.024556	-.068507	.109148	-.037303	.081353
13	.050066	-.022560	-.067914	.107104	-.035136	.070175
14	.052734	-.025595	-.062903	.102734	-.034829	.056659
15	.055347	-.029298	-.055393	.095161	-.031284	.045333
16	.055982	-.030715	-.046064	.086565	-.028501	.040786
17	.053278	-.025745	-.041356	.074841	-.025196	.041427
18	.047243	-.016750	-.039656	.057806	-.021251	.041449
19	.042132	-.009845	-.037249	.042723	-.015307	.034534
20	.042055	-.005795	-.036690	.030605	-.005680	.024009
21	.045756	-.004823	-.038226	.017676	.007026	.013966
22	.050779	-.007769	-.039864	.003607	.021805	.007906
23	.053165	-.012720	-.039534	-.007203	.034808	.001533
24	.050677	-.013604	-.035892	-.013427	.046362	-.000864
25	.047398	-.013773	-.032226	-.019515	.053988	-.005058
26	.040052	-.019194	-.028927	-.031719	.057888	-.016330
27	.031181	-.023225	-.021025	-.042395	.059151	-.030177
28	.021190	-.021385	-.007824	-.049361	.062921	-.040250
29	.009698	-.017562	.003180	-.053001	.065228	-.048585
30	-.002832	-.016822	.010566	-.049548	.061469	-.054966
31	-.015695	-.016711	.021006	-.042130	.051396	-.058887
32	-.025058	-.017754	.032029	-.033801	.041774	-.063525
33	-.028078	-.020287	.042137	-.027637	.029380	-.067502
34	-.033324	-.023099	.051524	-.023222	.018305	-.069075
35	-.040070	-.022292	.061219	-.019841	.004570	-.062821
36	-.042145	-.017101	.065214	-.016060	-.005899	-.050595
37	-.044477	-.010102	.066080	-.015162	-.010799	-.041804
38	-.046016	-.005654	.066782	-.006643	-.021336	-.040060
39	-.045907	-.004353	.068038	.001593	-.032985	-.039408
40	-.045110	-.002207	.067352	.005047	-.041583	-.039404
41	-.049454	.002948	.062135	.004824	-.049894	-.042419
42	-.054132	.009509	.056416	-.001528	-.052351	-.038078
43	-.052006	.018577	.047566	-.011350	-.045380	-.027900
44	-.047267	.026768	.035780	-.014407	-.038067	-.018333
45	-.041108	.032959	.024570	-.011500	-.032935	-.014531
46	-.035896	.045047	.015651	-.012446	-.030807	-.008575
47	-.031710	.057842	.009029	-.017822	-.026495	-.001190
48	-.029640	.065098	.004582	-.025513	-.022382	.003261
49	-.030497	.068116	.001501	-.032947	-.023176	.012280
50	-.029919	.069629	-.004408	-.036988	-.026810	.019430
51	-.024969	.070678	-.011072	-.036659	-.033190	.025566
52	-.019386	.071124	-.015793	-.031310	-.030732	.028414
53	-.015541	.065385	-.020450	-.025744	-.025917	.027254
54	-.010903	.055243	-.019162	-.019403	-.019624	.024256
55	-.007333	.041585	-.016931	-.011140	-.009459	.018181
56	-.005113	.027173	-.017721	-.008658	.000564	.016541
57	-.001879	.017587	-.020144	-.013451	.012313	.021155
58	.003312	.009951	-.019382	-.020759	.023351	.027704
59	.003455	.004033	-.014646	-.025303	.029140	.027966
60	.001125	-.002796	-.011253	-.027795	.035570	.025737

RUN NO 94A 91M 6-19-63 1306-1422(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.74205 10E 00	0.57900 10E 00	0.51053 10E 00	0.21883 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.907563	.847022	.821568	.851091
2	.778850	.630814	.582221	.647236
3	.666435	.460647	.396926	.484654
4	.564156	.326364	.261061	.351952
5	.465605	.214836	.154821	.236281
6	.373181	.126733	.063497	.137122
7	.289503	.052333	-.014756	.054124
8	.209707	-.011957	-.074289	-.016730
9	.134282	-.075169	-.116731	-.070276
10	.065256	-.131944	-.147142	-.111944
11	-.000313	-.176037	-.167580	-.136790
12	-.062996	-.205411	-.177475	-.150250
13	-.126287	-.216384	-.180578	-.161593
14	-.189855	-.214336	-.182647	-.170985
15	-.246696	-.211825	-.186316	-.178744
16	-.293495	-.216974	-.180148	-.189988
17	-.330549	-.222361	-.173709	-.198004
18	-.358731	-.218355	-.170912	-.207356
19	-.378489	-.211335	-.169961	-.216258
20	-.389798	-.199942	-.170788	-.222087
21	-.397528	-.189458	-.166287	-.228035
22	-.402369	-.180070	-.163477	-.225281
23	-.399024	-.168404	-.164900	-.216607
24	-.388250	-.160347	-.161784	-.204216
25	-.367782	-.155296	-.153740	-.191762
26	-.345181	-.152698	-.142409	.173346
27	-.320693	-.151315	-.120835	-.158388
28	-.288126	-.147836	-.091521	-.144424
29	-.250725	-.139725	-.054652	-.122400
30	-.211146	-.123199	-.010188	-.093640
31	-.169881	-.094928	.026517	-.059448
32	-.132147	-.059670	.046978	-.028111
33	-.098924	-.021869	.048934	-.007142
34	-.069488	.010215	.039148	.010110
35	-.048646	.033442	.026969	.026902
36	-.030429	.049965	.025034	.037228
37	-.017984	.060131	.029771	.039113
38	-.004658	.057648	.030749	.037017
39	.015213	.040823	.023399	.029208
40	.037234	.022413	.004447	.019451
41	.057596	.011143	-.013532	.014941
42	.076143	.009848	-.027799	.026745
43	.093612	.014294	-.036522	.045973
44	.108054	.021992	-.025544	.060742
45	.116607	.030943	-.009297	.074148
46	.120141	.036295	.002185	.088379
47	.116875	.042676	.005037	.100615
48	.106024	.053962	.010097	.102376
49	.094574	.060285	.010751	.098995
50	.083129	.062739	.011308	.088555
51	.075001	.068429	.012103	.069598
52	.071901	.067266	.021190	.044254
53	.071898	.051111	.029977	.027880
54	.070920	.035444	.033411	.020299
55	.070293	.028107	.033479	.010705
56	.066792	.022747	.032737	-.005227
57	.059731	.023880	.037151	-.023536
58	.046361	.024039	.040915	-.038168
59	.037071	.028486	.034722	-.050531
60	.030353	.035327	.026086	-.061299

RUN NO 94A 91M 6-19-63 1306-1422(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-01	10E-02	10E-02
0	-.007288	-.028914	-.069786	-.003788	.016941	.012050
1	-.260721	-.419749	-.443167	.059658	.127409	.035118
2	-.387873	-.635807	-.414837	.105184	.074500	-.077505
3	-.379246	-.717473	-.281488	.144952	-.056529	-.291071
4	-.252846	-.443652	-.119292	.193841	-.177007	-.394191
5	-.179741	-.206432	-.127327	.191108	-.187892	-.295633
6	-.135479	-.138403	-.093015	.136578	-.117964	-.210461
7-8	-.070867	-.090575	-.039001	.061624	-.055816	-.171193
9-11	-.020703	-.050337	-.055046	.013733	.004717	-.041033
12-15	-.004749	-.016985	-.042999	.004052	-.015018	-.032010
16-20	-.010227	-.012591	-.019909	.006100	-.001827	-.038042
21-27	-.001696	-.009172	-.017629	.004120	-.003956	-.011882
28-36	.000713	-.003957	-.010055	.000508	-.002057	-.002352
37-47	.000816	-.002054	-.004369	-.000134	.000272	-.002349
48-60	.000007	-.000598	-.002267	-.000162	-.000047	-.001087

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-02	10E-02	10E-01	10E-02	10E-02
1	.160977	-.991865	-.262457	.152923	-.039802	.173785
2	.186323	-.725562	-.390932	.211041	-.139679	.383597
3	.091975	-.243023	-.273280	.233419	-.331517	.453644
4	-.011358	-.354409	-.030784	.139839	-.251252	.259112
5	.008439	-.250267	-.058473	.026334	-.040336	.163664
6	.026933	.021506	-.076968	-.003434	-.037301	.160134
7-8	-.002621	-.017135	.015830	.014320	-.094468	.093494
9-11	.001449	-.157543	-.006754	.010566	-.027015	.015597
12-15	-.006228	-.059830	.002414	.000238	-.014343	-.008093
16-20	.003354	-.031664	.002912	.002906	-.010834	-.015277
21-27	.000976	-.021737	-.002219	.003079	-.000187	-.009779
28-36	.000425	.005333	-.003127	.000241	-.001772	-.005052
37-47	-.000995	-.000801	-.001669	-.000489	-.001610	-.001975
48-60	.000253	-.001391	-.001157	-.000246	.000331	-.000724

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E-01	10E-01	10E-02
0	.009415	.024783	.022633	.019342
1	.118012	.444207	.328221	.193725
2	.167564	.732570	.521828	.293102
3	.172466	.914971	.704378	.354943
4	.093345	.715893	.613516	.259027
5	.040029	.512763	.421385	.173412
6	.025347	.433556	.356248	.145973
7-8	.021135	.276827	.314489	.122102
9-11	.013636	.163844	.159860	.062705
12-15	.007011	.106825	.102497	.033783
16-20	.004486	.069147	.068791	.023628
21-27	.002721	.039136	.043807	.014288
28-36	.001893	.024287	.023412	.008894
37-47	.001025	.013334	.014133	.004955
48-60	.000658	.007136	.008808	.003075

RUN NO 94A 91M 6-19-63 1306-1422(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.51568 10E 00	0.47339 10E 00	0.12814 10E 00	0.32136 10E 00	0.86985 10E-01	0.79851 10E-01
0	-.177245	-.623820	-.309650	.152131	-.042125	-.009556
1	.039709	-.222593	-.245070	-.129196	.052205	.139288
2	.097068	.056363	-.151075	-.045330	-.017127	.075041
3	.114794	.065769	-.049480	-.036879	-.032431	-.007402
4	.060803	.036858	-.003429	-.042487	-.025019	.017995
5	-.049920	.052046	.018518	.065813	-.034993	-.016996
6	-.061043	.040102	.093480	.106449	-.002480	-.025161
7	.024127	.068389	.088215	-.018028	.005183	-.036371
8	.032603	.053369	.095767	-.034194	-.006974	-.044098
9	-.016452	.052673	.064083	-.019005	.056622	-.023305
10	-.038369	.055124	.025831	.007165	.037900	-.006846
11	-.065466	-.002935	.007087	-.004219	.066551	.026830
12	-.056247	.051954	.005635	.000108	.038949	-.005154
13	-.084647	.066035	.041786	.057043	.039781	-.010136
14	-.095557	.042619	.058839	.040680	.028331	.010064
15	-.025549	-.017962	.091356	.009638	-.026462	-.051757
16	.044877	-.084161	.095820	-.007224	-.049357	-.045518
17	.068063	-.012234	.047712	-.044798	-.042340	.024805
18	.047759	.022239	.041599	-.002383	-.085753	-.031180
19	.065477	.004232	.034293	.038816	-.050298	-.005244
20	.043013	.080047	-.021793	-.049243	.065716	.028860
21	-.058278	.007748	-.021448	.077139	-.003719	.000827
22	-.070836	-.042621	-.026708	.047517	.028669	-.005723
23	-.038090	-.027007	-.057779	.008895	.042787	-.027271
24	-.019572	.023701	-.020609	.006688	-.019947	-.021119
25	.074768	.001845	-.020568	-.028635	.002547	-.044806
26	.114185	-.022275	-.045659	-.119504	-.036883	.073477
27	.022956	-.040774	-.007088	.014544	-.079372	.033753
28	.001682	-.029489	.012870	.022626	-.009906	.030332
29	.027780	-.032978	.013808	-.048129	-.008921	-.017542
30	.027558	-.000656	.018117	-.044949	-.008631	-.029839

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-02	10E-02	10E-02
0	-.000678	-.006737	-.042672	-.016434	.009131	.014897
1	.039087	-.090594	-.484989	-.242841	.015757	.114233
2	.086174	-.142874	-.637189	-.280119	-.050748	.123654
3	.101619	-.204107	-.643504	-.257764	-.114033	.131624
4	.015110	-.212507	-.527501	-.254000	-.034803	.129965
5	-.073898	-.176106	-.575932	-.224295	.136321	.129114
6	-.015786	-.158966	-.449823	-.350650	.119781	.102976
7	.037132	-.192689	-.160317	-.405312	-.000062	.019485
8	-.066043	-.184044	-.035244	.108949	.022050	-.026907
9-11	-.125844	-.167233	-.121529	.505732	.020123	.017518
12-14	-.100628	-.143735	-.079367	.331392	.000758	-.013607
15-21	-.028032	-.110401	.002946	.239706	-.023744	-.073309
22-30	-.061510	-.058291	-.028753	.710049	-.086588	-.088066

RUN NO 94A 91M 6-19-63 1306-1422(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.51568 10E 00	0.47339 10E 00	0.12814 10E 00	0.32136 10E 00	0.86985 10E-01	0.79851 10E-01
1	.077405	-.037516	-.089398	.193338	-.057994	.146213
2	.090387	-.053522	-.090966	.120649	-.025418	.037987
3	.032449	-.037690	-.077515	-.016590	.029623	.008562
4	-.026614	-.002553	-.026539	.013883	-.057359	-.019083
5	-.041623	.066332	-.077766	-.090050	-.048597	.031434
6	-.014435	.005056	-.100125	-.070121	.000264	.068866
7	.030574	-.047371	-.079390	.005780	-.002232	.041396
8	-.010471	-.015502	-.081155	-.025504	-.053287	.009527
9	-.037077	.056712	-.073181	-.002838	-.099097	.053854
10	-.051015	.013989	-.005068	-.011101	-.027624	-.017903
11	.016945	.005506	.022728	.027027	-.002984	.023275
12	-.004795	.011837	.010003	.003357	-.025543	.023941
13	-.021231	.020396	.000090	.004109	.013819	-.023202
14	-.072196	.006215	.061056	-.060652	.023675	-.081074
15	-.035978	.015628	.075723	-.055085	.014580	-.040087
16	.004653	-.015288	.065693	.023543	-.060190	-.041095
17	.060413	-.007024	.014987	.047221	-.030621	.018178
18	.016845	-.000586	-.009391	.006952	.012100	.030483
19	-.028579	-.045382	.010103	.045619	.004465	.014930
20	-.001167	-.021475	.034026	.011116	-.027545	-.054707
21	.023422	.005683	-.016507	-.066488	.055106	-.006986
22	.038051	-.001728	-.032275	-.025292	.088858	.024526
23	.013603	-.029519	-.067532	.042062	.011783	-.005792
24	-.008502	-.023723	-.008859	.010914	-.069837	-.056099
25	-.013472	-.022351	.026872	-.002083	-.033436	-.042577
26	-.009225	-.009599	-.009636	-.013224	-.008370	-.007547
27	-.024573	.030226	-.044028	-.000368	-.056479	.056610
28	-.019571	.035427	-.061650	-.062473	-.010046	.086280
29	-.034044	-.013549	-.018227	-.021228	-.037846	-.001012
30	-.049703	-.008023	-.041783	-.019429	-.023715	.048664

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-02	10E-02	10E-02	10E-02	10E-02
1	-.436780	.095232	-.247369	-.207182	-.167818	.054394
2	-.209985	.125564	-.374115	-.154574	-.135537	.111107
3	.278061	-.176786	-.483712	-.015425	-.081292	.134817
4	.552876	-.381407	-.254323	.189181	-.019226	.072399
5	.363303	-.240660	-.010326	.297977	.009486	-.011582
6	.383878	-.173896	-.006344	.506980	.040942	-.006362
7	.638944	-.282994	-.066291	.913144	-.036603	.071590
8	.767983	-.408148	-.097584	.973838	-.102469	.073031
9-11	.757592	-.566677	-.164726	.689386	.005886	.095565
12-14	.251679	.041464	-.065203	.377761	-.015515	.123433
15-21	.011140	.029037	-.003804	.453002	-.080290	.063570
22-30	.027591	.099305	-.050171	-.124205	.029753	.063642

RUN NO 94A 91M 6-19-63 1306-1422(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.75965 10E 00	0.35006 10E 00	0.29500 10E 00	0.21614 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.471965	.048748	.080739	.463560
2	.002667	-.095201	-.103369	.265968
3	-.092785	-.102787	-.014516	.188345
4	-.070600	-.083524	-.115735	.093085
5	-.078009	-.002007	-.053025	.067182
6	-.124305	.021851	-.043323	-.091398
7	-.146663	-.039101	-.061434	-.140874
8	-.149554	-.067901	-.011168	-.127192
9	-.106989	.022939	-.044322	-.176014
10	-.062968	-.008571	-.052614	-.174645
11	-.041411	-.029270	-.035007	-.162660
12	-.068994	.017251	-.081883	-.202136
13	-.061440	-.074273	-.111862	-.232186
14	-.037607	-.026174	-.037745	-.285804
15	.017079	.085942	.055568	-.169843
16	.043146	-.008275	.139997	-.144485
17	-.006130	-.091770	.043647	-.164526
18	-.062060	-.006023	.021906	-.111216
19	-.069174	.008859	.038189	-.036821
20	-.057437	-.054408	-.166479	.047613
21	.022787	-.032022	-.044016	.180544
22	.108496	.074958	.028588	.126053
23	.101698	.001059	.032306	.133207
24	.024994	-.024773	-.060789	.076733
25	.025612	-.092072	.048212	.103521
26	.019042	-.102454	-.014977	.093074
27	.008747	.007163	.007202	.061547
28	-.001544	-.022972	.027589	-.031745
29	-.028532	-.023846	.047733	-.043424
30	-.069676	.015907	.068427	.004073

POWER SPECTRUM

K	U	V	W	T
	10E-01	10E-01	10E-01	10E-02
0	.031127	.014853	.004210	.019886
1	.309821	.096455	.053656	.232335
2	.479245	.090136	.085705	.319464
3	.658524	.105108	.136796	.299440
4	.678326	.119711	.144633	.152215
5	.629296	.132201	.100892	.124854
6	.492183	.138105	.108720	.117608
7	.459011	.149113	.177231	.072958
8	.468176	.174849	.163214	.058735
9-11	.416302	.178198	.120570	.062052
12-14	.370874	.171766	.120249	.065779
15-21	.204757	.155825	.144004	.050905
22-30	.104274	.180870	.142997	.060547

RUN NO 94A 46M 6-19-63 1306-1422(EST)
RUN NO 94A 91M 6-19-63 1306-1422(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.411878	.040557	.602783	.343427
1	.209842	.476185	.565861	.058425
2	.157488	.498746	.480032	.054437
3	.138641	.491358	.418507	.053003
4	.106769	.474121	.399986	.092762
5	.144735	.372599	.383665	.129002
6	.132188	.198616	.422368	.071421
7-8	.074166	.208508	.302777	.140708
9-11	.064879	.124586	.123231	.103133
12-15	.108545	.118455	.069742	.088737
16-20	.065532	.088940	.114255	.072769
21-27	.098437	.095441	.068222	.089228
28-36	.077449	.100895	.069387	.068275
37-47	.078256	.094910	.098814	.108155
48-60	.108315	.101013	.084998	.109445

301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.674608	.422949	.501001	.240039
1	.587960	.537650	.593138	.257569
2	.689220	.402821	.692734	.440978
3	.721359	.247982	.766711	.568867
4	.612033	.069816	.765989	.565180
5	.514775	.167643	.587336	.516063
6	.350216	.395903	.439463	.472596
	.097539	.498114	.567900	.136163
8	.161948	.441057	.677446	.345405
9-11	.283935	.446836	.634283	.339296
12-14	.106799	.550829	.351336	.117150
15-21	.244446	.474900	.437985	.220524
22-30	.196972	.289401	.347035	.234290

RUN NO 95A 15M 6-19-63 1446-1602(EST)

GROSS STATISTICS

CLEAR
UNSTABLE

WIND SPEED 4.15 M/SEC
WIND DIRECTION 211 DEG
SOLAR RAD. 0.91 LY/MIN

SIGMA A 14.9 DEG
SIGMA E 12.0 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.19035E 01	0.16123E 01	0.10623E 01	0.11184E 01
V	0.97734E 00	0.81390E 00	0.68547E 00	0.46227E-00
W	0.50011E 00	0.47916E-00	0.43752E-00	0.18859E-00
T	0.24797E-00	0.99174E-01	0.43266E-01	0.81213E-01
E	0.16905E 01	0.14528E 01	0.10927E 01	
GUSTINESS RATIOS				
U	0.33245	0.30597	0.24836	0.25483
V	0.23822	0.21739	0.19950	0.16383
W	0.17041	0.16680	0.15939	0.10464
COVARIANCES				
U,V	-0.79183E-01	0.18317E-01	0.33315E-01	-0.84905E-02
U,W	-0.39790E-00	-0.34648E-00	-0.25208E-00	-0.24392E-00
U,T	-0.40883E-00	-0.30259E-00	-0.15487E-00	-0.24356E-00
V,W	0.90410E-01	0.60340E-01	0.44375E-01	0.29135E-01
V,T	-0.58506E-01	-0.15083E-01	-0.14740E-01	-0.99527E-02
W,T	0.98864E-01	0.84165E-01	0.56382E-01	0.58843E-01
WE	0.14364E-00	0.14142E-00	0.12515E-00	
NORMALIZED COVARIANCES				
U,V	-0.05805	0.01599	0.03904	-0.01181
U,W	-0.40782	-0.39420	-0.36974	-0.53111
U,T	-0.59507	-0.75672	-0.72237	-0.80815
V,W	0.12932	0.09662	0.08103	0.09867
V,T	-0.11884	-0.05309	-0.08559	-0.05137
W,T	0.28074	0.38609	0.40980	0.47546

RUN NO 95A 15M 6-19-63 1446-1602(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.85362 10E 00	0.68192 10E 00	0.21443 10E 00	0.54774 10E 00	0.17224 10E 00	0.13759 10E 00
0	.039168	-.369616	-.722282	.081151	-.085615	.409685
1	.031351	-.352583	-.666952	.052656	-.078189	.371497
2	.015914	-.297347	-.566338	.013760	-.065619	.295342
3	.004025	-.233437	-.466001	-.009466	-.054486	.220859
4	-.003245	-.176814	-.377683	-.017747	-.044614	.159119
5	-.012779	-.128992	-.301769	-.017974	-.036956	.114634
6	-.016276	-.093692	-.241010	-.006843	-.030446	.082376
7	-.007963	-.061319	-.187691	.005315	-.026719	.055509
8	-.001173	-.024127	-.129336	.013561	-.019772	.025395
9	-.000394	.014440	-.070326	.011051	-.008516	-.005196
10	-.001830	.042961	-.020873	.006907	-.003842	-.036324
11	-.009201	.062777	.020821	.010994	.000044	-.059880
12	-.013425	.072136	.055045	.019002	.008257	-.078717
13	-.018547	.087408	.086161	.020123	.018904	-.094190
14	-.023585	.099239	.113531	.022304	.023549	-.108486
15	-.023930	.099828	.135415	.024954	.027628	-.112577
16	-.020789	.100592	.150582	.026101	.031603	-.109528
17	-.023762	.099939	.165425	.021797	.035256	-.104490
18	-.033063	.097608	.176142	.015065	.041386	-.098692
19	-.032465	.101255	.185507	.009016	.043619	-.097885
20	-.024402	.103336	.195239	.005645	.042043	-.100637
21	-.015596	.102005	.206696	.004244	.039707	-.097852
22	-.011056	.101759	.212788	.009186	.042069	-.093146
23	-.007901	.100239	.221981	.009140	.043643	-.084846
24	-.002558	.097556	.230496	.002568	.042530	-.083215
25	.003575	.091080	.236131	-.005019	.037139	-.089247
26	.009980	.085735	.232712	-.015411	.027404	-.094694
27	.020497	.081184	.216602	-.032441	.010952	-.094524
28	.034267	.078944	.197009	-.041809	-.004415	-.089561
29	.046866	.068616	.178538	-.041302	-.013951	-.078769
30	.052407	.063235	.161869	-.036847	-.020949	-.064335
31	.051036	.060756	.145486	-.032345	-.025850	-.047838
32	.051085	.055592	.128504	-.023782	-.027992	-.034685
33	.052826	.042479	.112528	-.025930	-.028679	-.021490
34	.054919	.022365	.094635	-.035335	-.033425	-.013873
35	.049355	.003034	.075427	-.047639	-.039866	-.008910
36	.035066	-.007908	.055388	-.043514	-.039976	-.003917
37	.018912	-.013442	.037355	-.034515	-.027743	.002654
38	.008943	-.017518	.020891	-.021036	-.013011	.009287
39	.005594	-.025526	.007059	-.019139	-.003708	.022450
40	.005474	-.028770	-.003909	-.013308	-.001706	.040761
41	.012078	-.032798	-.010447	-.003152	-.006094	.054046
42	.017056	-.038307	-.014644	-.006682	-.016564	.064020
43	.016776	-.046789	-.019900	-.019571	-.026816	.074016
44	.010523	-.049995	-.023996	-.013157	-.028861	.073165
45	-.001006	-.050669	-.030303	-.001197	-.025343	.067906
46	-.010882	-.049027	-.041889	.002826	-.013805	.062207
47	-.017581	-.044519	-.054097	.003153	-.001276	.062938
48	-.017691	-.040607	-.064138	.005319	.007944	.060605
49	-.018538	-.043720	-.071392	.006992	.015795	.062150
50	-.017272	-.049952	-.078235	.008179	.024386	.068432
51	-.018111	-.059427	-.085353	.007717	.031814	.076705
52	-.018975	-.066740	-.087599	.006276	.034353	.082527
53	-.016561	-.067849	-.088661	-.001567	.031150	.082658
54	-.014986	-.061170	-.087994	-.005004	.028836	.071948
55	-.015769	-.048880	-.079301	.003513	.028830	.054926
56	-.020193	-.035789	-.059437	.008492	.032557	.029343
57	-.029125	-.021596	-.038103	.017112	.036652	.002631
58	-.035578	-.011680	-.027825	.016408	.039049	-.015995
59	-.038190	.000114	-.021413	.018872	.042843	-.035265
60	-.039535	.013902	-.011900	.016477	.046924	-.056378

RUN NO 95A 15M 6-19-63 1446-1602(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.85362 10E 00	0.68192 10E 00	0.21443 10E 00	0.54774 10E 00	0.17224 10E 00	0.13759 10E 00
1	.007784	-.030246	-.077512	.008094	.007819	.000777
2	.014798	-.040938	-.113731	.021077	.015156	.002562
3	.022160	-.046187	-.130394	.034615	.026849	.002769
4	.027923	-.054568	-.138506	.037654	.034774	.004085
5	.025151	-.059559	-.144898	.042399	.034850	.005966
6	.026624	-.054278	-.147302	.040234	.036544	.011987
7	.031085	-.052926	-.147695	.032744	.035802	.019298
8	.030307	-.058728	-.150726	.026259	.029112	.019168
9	.021538	-.059491	-.146343	.018107	.018513	.013884
10	.011468	-.052291	-.135795	.003478	.007419	.008578
11	.003424	-.036958	-.123735	-.000748	.002253	.012512
12	-.003605	-.026175	-.115922	.002215	-.000927	.014920
13	-.005438	-.028676	-.107439	-.002700	-.002360	.013681
14	-.004142	-.025452	-.100827	-.006242	.000725	.013443
15	.000022	-.019865	-.096631	-.007531	.002741	.019337
16	.003989	-.013060	-.090585	-.005057	.004521	.023422
17	.003150	-.004158	-.084290	-.008625	.008002	.026907
18	.005485	.007864	-.078279	-.010290	.016761	.035724
19	.006709	.010967	-.072730	-.006039	.026226	.045289
20	.010031	.008304	-.072526	.001711	.031378	.041212
21	.016087	.001180	-.072120	.011164	.034642	.030951
22	.022689	-.004509	-.071847	.012869	.034853	.015435
23	.025553	-.005996	-.068266	.011064	.030447	.007778
24	.029904	-.005473	-.059434	.013624	.028485	.003752
25	.032942	.004030	-.047574	.020479	.033205	.005503
26	.039949	.011074	-.033497	.025029	.043016	.009737
27	.039965	.008090	-.017745	.029355	.050754	.011778
28	.033828	.002488	-.002331	.032169	.046622	.003107
29	.020593	.002931	.011862	.025175	.031936	-.004322
30	.006129	.005673	.023431	.009429	.019453	-.005420
31	.001817	.006454	.031886	-.005844	.012493	-.008673
32	.004851	.005066	.037683	-.016103	.012531	-.017502
33	.003578	.000467	.041552	-.028154	.010145	-.023379
34	-.001333	.004755	.044787	-.035015	.002670	-.020016
35	-.004852	.015241	.047554	-.038285	-.008035	-.014964
36	-.008474	.019408	.048338	-.045772	-.020413	-.012264
37	-.015552	.017168	.046451	-.041437	-.031069	-.015420
38	-.020541	.019581	.042102	-.032972	-.033392	-.013986
39	-.026634	.021509	.034482	-.024042	-.033539	-.011513
40	-.033161	.014862	.025946	-.020022	-.036209	-.012186
41	-.035889	.006473	.017403	-.011984	-.039728	-.008021
42	-.031081	.010876	.012410	-.001831	-.042942	.001181
43	-.023958	.015883	.008782	.010498	-.044929	.005925
44	-.009516	.021219	.006737	.023868	-.043072	.012389
45	.001242	.025775	.005494	.020113	-.037279	.019394
46	.008661	.026014	.007612	.007403	-.032374	.021265
47	.010932	.021367	.011922	.006245	-.030366	.021429
48	.009257	.012073	.010870	.001509	-.028151	.019375
49	.004869	.003779	.005556	-.005784	-.024196	.017835
50	.004503	.000157	-.000572	-.004895	-.018777	.013517
51	.008204	-.001602	-.005154	.000737	-.015718	.011645
52	.010611	-.004713	-.011344	-.004620	-.013581	.012078
53	.010825	-.009885	-.015012	-.010367	-.013264	.008495
54	.013687	-.014024	-.013483	.000368	-.012347	.000598
55	.013943	-.026463	-.007979	.014337	-.010922	-.006406
56	.015221	-.031519	-.005350	.024396	-.005421	-.011229
57	.012141	-.031526	-.002945	.025095	-.000516	-.013110
58	.002704	-.030481	-.000619	.019494	.003170	-.012609
59	-.000123	-.027371	-.000916	.010905	.006763	-.007083
60	-.000536	-.019945	.000079	.004392	.008649	-.004273

RUN NO 95A 15M 6-19-63 1446-1602(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.10627 10E 01	0.68565 10E 00	0.43757 10E 00	0.43267 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.853854	.792386	.696270	.894536
2	.667088	.566994	.398457	.729548
3	.523903	.409795	.225360	.583360
4	.413089	.289303	.100463	.465774
5	.322839	.199814	.017608	.370818
6	.249853	.133298	-.030017	.294488
7	.187888	.090274	-.061996	.228128
8	.121101	.058848	-.088834	.159425
9	.053407	.0 ^229	-.110086	.090506
10	-.004183	-.018625	-.120177	.033006
11	-.048594	-.046994	-.118344	-.013387
12	-.086366	-.073948	-.116812	-.054733
13	-.118470	-.097305	-.129082	-.091242
14	-.144634	-.123313	-.136023	-.120602
15	-.168349	-.146405	-.127560	-.141392
16	-.183154	-.170134	-.103831	-.159420
17	-.198920	-.186842	-.100141	-.174195
18	-.212562	-.196714	-.092994	-.187690
19	-.221045	-.204293	-.075465	-.200181
20	-.229025	-.210049	-.078509	-.214468
21	-.241970	-.218466	-.086483	-.231225
22	-.249368	-.229899	-.080938	-.245964
23	-.263208	-.237129	-.069774	-.260695
24	-.276681	-.242736	-.064040	-.275049
25	-.277336	-.245153	-.070263	-.289625
26	-.266974	-.243752	-.086954	-.294741
27	-.246239	-.231459	-.099254	-.285147
28	-.226586	-.205323	-.095558	-.263574
29	-.208498	-.176677	-.080549	-.236770
30	-.185973	-.158269	-.044562	-.210652
31	-.159260	-.127965	-.012314	-.184331
32	-.140394	-.100298	-.000233	-.160663
33	-.124178	-.093036	.007721	-.143182
34	-.103035	-.082852	.011859	-.122520
35	-.083746	-.057260	.007603	-.095383
36	-.066861	-.035163	.007586	-.067776
37	-.049203	-.022700	.005408	-.046549
38	-.029746	-.012855	.001986	-.029338
39	-.011108	-.002413	.002318	-.015156
40	.006711	.011645	.020969	-.001906
41	.015846	.027186	.042232	.009366
42	.013168	.038990	.057998	.018173
43	.017983	.047515	.059027	.022862
44	.020788	.059293	.057015	.026837
45	.026875	.065915	.036502	.030439
46	.034260	.065565	.013826	.037015
47	.043421	.054908	-.001152	.045659
48	.060649	.032259	-.000815	.053763
49	.073763	.021733	.004059	.058970
50	.084573	.026420	.015503	.064729
51	.091973	.033655	.019805	.070405
52	.090505	.036064	.022914	.075916
53	.092177	.046281	.029625	.080238
54	.093272	.062527	.029995	.074793
55	.086457	.080531	.021422	.058520
56	.075393	.091103	.008999	.038682
57	.061982	.088372	-.000645	.019953
58	.051977	.086500	-.020391	.007974
59	.047652	.086267	-.028665	-.005239
60	.041854	.078832	-.031635	-.020247

RUN NO 95A 15M 6-19-63 1446-1602(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-01	10E-02	10E-02	10E-01
0	.005757	-.021513	-.028113	.043643	-.042137	.004608
1	-.054578	-.279202	-.266039	.656156	-.168277	.052660
2	-.040746	-.451443	-.328237	.473189	-.242377	.089793
3	.075079	-.519268	-.308676	-.158558	-.410568	.105803
4	.107941	-.348537	-.173732	-.358958	-.279918	.070811
5	.012288	-.242238	-.104235	.058191	-.037582	.051475
6	-.028366	-.195488	-.085496	.271504	.011965	.041219
7-8	.020467	-.109237	-.056571	.219228	-.064223	.022341
9-11	.025184	-.050154	-.027278	.271581	-.019016	.013797
12-15	.020570	-.033881	-.019575	.244179	-.017963	.011300
16-20	.002110	-.020656	-.011622	.175998	-.014631	.005618
21-27	.001819	-.000796	-.003806	.053784	-.003802	.001750
28-36	.005247	-.001441	-.002651	.056050	-.005935	.000934
37-47	-.001109	.001325	-.000965	.023914	-.000044	.000435
48-60	.000442	.001068	-.000664	.011869	-.000711	.000106

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-01	10E-01	10E-02	10E-02	10E-02
1	.918582	-.056881	-.117647	.187054	.251988	.142300
2	.692406	-.097516	-.122579	.345752	.215812	.135265
3	.127919	-.111717	-.103913	.259880	.006504	.089262
4	-.023302	-.096056	-.051456	.108251	-.029367	-.035284
5	.679261	-.084342	-.036656	.497096	.148855	-.050091
6	.792174	-.053712	-.042930	.725098	.166998	.012060
7-8	.237724	-.020370	-.023716	.142466	.081081	.024763
9-11	.032697	-.009718	-.010514	.117416	.008006	-.012523
12-15	-.069970	-.005757	-.007357	-.023592	-.009698	-.002842
16-20	.058098	-.010443	-.006313	-.014741	-.002449	.001018
21-27	-.034387	-.000570	-.002586	-.020198	-.006256	.001579
28-36	-.001100	-.005613	-.001938	-.005723	-.000910	-.001486
37-47	.011595	-.000617	-.000592	-.006836	.003533	-.000355
48-60	-.009596	-.000707	-.000279	.006205	-.000681	-.000347

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E 00	10E-01	10E-02
0	.013498	.003635	.015821	.093549
1	.147287	.068832	.183324	.738776
2	.188568	.100046	.295968	.839279
3	.182263	.101838	.395060	.765156
4	.108694	.060700	.350864	.427267
5	.068892	.038932	.310444	.273135
6	.058605	.036828	.302983	.251757
7-8	.042217	.031198	.239889	.171292
9-11	.022990	.021831	.171516	.088134
12-15	.017697	.014614	.122863	.065459
16-20	.012069	.009454	.082864	.040809
21-27	.006451	.005616	.053613	.018186
28-36	.004459	.004205	.041718	.011252
37-47	.002474	.002828	.029373	.005409
48-60	.001650	.001785	.017636	.003484

RUN NO 95A 15M 6-19-63 1446-1602(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.71900 10E 00	0.45920 10E 00	0.30136 10E 00	0.29522 10E 00	0.19374 10E 00	0.12374 10E 00
0	-.011809	-.531181	-.808182	.096690	-.051370	.475542
1	-.022941	-.197139	-.509153	.053979	-.005178	.207128
2	-.030978	-.040367	-.258988	.036029	.026933	.093049
3	.007309	-.001668	-.113979	-.052705	.041195	.046086
4	-.011794	-.007550	-.039740	-.027666	.047916	.040162
5	-.064436	.010570	.011797	.004661	.089937	.002700
6	-.053057	.081611	.063641	.035523	.080253	-.088438
7	-.040659	.143709	.139825	.036227	.053777	-.153538
8	-.005271	.105442	.142249	-.004644	-.010023	-.112150
9	.039696	.017070	.124569	.029576	-.005644	-.055984
10	.079050	.033489	.128838	-.028803	-.054931	-.047740
11	.045101	.024084	.134217	-.070899	-.041981	-.056349
12	.006648	.032887	.121414	-.072058	-.021925	-.045323
13	-.043581	.025054	.130728	-.004625	.024405	-.019506
14	.000629	.015651	.093656	-.031112	-.029744	-.031987
15	.053989	.010451	.029991	-.002603	-.052289	-.012026
16	.059495	-.001892	-.014564	-.019482	-.059052	-.001774
17	.022132	-.033740	-.008573	.013444	-.039195	.058034
18	-.007725	-.008045	.046476	.001127	-.019979	.028825
19	-.025225	.006760	.107240	.011699	.017339	-.002024
20	.007744	.030742	.135842	-.021081	-.027738	-.048682
21	.006258	.018570	.112123	-.009171	-.019376	-.054707
22	.024079	.013581	.100240	.062685	-.009329	-.048107
23	-.012141	.084297	.143924	.037241	.033100	-.096470
24	-.031514	.113512	.191175	.048536	.045830	-.125219
25	.019908	.120459	.165383	-.004172	.018543	-.129176
26	-.006189	.074721	.086676	-.005673	.009680	-.066755
27	-.041615	.037929	.027698	.014995	.037348	-.015586
28	-.027532	-.050607	-.040754	.032042	-.023416	.023923
29	.013200	-.076214	-.081610	-.066718	-.040753	.062698
30	.042227	-.105381	-.115624	-.073380	-.065147	.107004

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-01	10E-01	10E-02	10E-02	10E-02
0	-.134094	-.011632	-.033132	.021427	.073675	.038838
1	-.994938	-.141352	-.323713	.222027	.427578	.476643
2	-.977626	-.159947	-.322597	.377909	.334778	.532816
3	-.535329	-.224250	-.332751	.331541	.052995	.716031
4	.213188	-.244875	-.297811	-.002307	-.249089	.732080
5	.598633	-.181499	-.180552	-.068005	-.310952	.441148
6	.737381	-.150896	-.130670	.118171	-.343806	.315334
7	.612218	-.109145	-.139206	.442019	-.294129	.225270
8	-.156511	-.064606	-.110958	.587928	-.114833	.075609
9-11	-.710309	-.086981	-.082934	.258673	.054056	.155687
12-14	.078975	-.139111	-.068745	.126954	-.045814	.305028
15-21	.322603	-.066341	-.036360	-.091622	-.068601	.127875
22-30	-.101526	-.065355	-.028962	.102576	-.027510	.156349

RUN NO 95A 15M 6-19-63 1445-1602(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.71900 10E 00	0.45920 10E 00	0.30136 10E 00	0.29522 10E 00	0.19374 10E 00	0.12374 10E 00
1	.043544	-.065418	-.166291	.047692	.033893	.042112
2	.048373	-.036142	-.205795	.034159	.027002	.066953
3	.061073	-.027657	-.189813	.057459	.041396	.050973
4	.003358	-.028914	-.165492	.006790	-.014531	.038241
5	.004342	-.019033	-.141278	.033005	-.019442	.044167
6	-.010791	-.033872	-.104540	.059524	.012749	.018497
7	-.052315	-.031848	-.075757	.022919	.005952	-.012689
8	-.012521	-.027215	-.056869	.022420	.024694	-.036216
9	-.002558	-.007825	-.055978	-.005531	.016671	-.017755
10	-.022633	-.010369	-.050749	.043556	.001359	-.015297
11	.015729	-.013767	-.053269	.038779	.010389	.009422
12	.023533	.069165	-.030706	.005762	.004801	.048860
13	-.020119	.011920	-.018263	-.050925	-.002123	.026123
14	.015512	.070721	.003202	-.001797	.031499	.039697
15	-.006729	.047537	.010057	-.035576	.035906	.044973
16	-.006196	.008199	-.003796	.000790	.028160	.019028
17	-.016249	-.009651	-.009273	-.014931	.000692	.016200
18	.004251	-.028376	-.007298	-.013336	-.003649	-.009993
19	-.005738	-.086535	-.008455	-.053739	-.018643	-.043081
20	.002894	-.007434	.000736	.000449	.004840	.011190
21	.027506	.017749	.004632	.000279	.027712	.029740
22	-.011746	.024284	-.005091	-.005342	-.013742	.042143
23	-.044230	.009753	.017346	-.031032	-.039524	.028314
24	.012470	-.007117	.025300	.021685	-.002162	.013525
25	.044009	.008344	.074697	.075287	.003734	-.014749
26	.012345	.029410	.094864	.022065	-.024027	-.020730
27	-.042739	.029019	.123618	-.046063	-.041191	-.067067
28	-.088571	.029365	.103725	-.042938	-.055034	-.056822
29	.013401	.012529	.083136	.020784	-.008792	-.041623
30	.089815	.036993	.064289	.119494	.065018	.005167

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-02	10E-01	10E-02	10E-02	10E-02
1	-.010606	-.156046	-.167995	.280118	.198987	.186525
2	.001906	-.380311	-.158506	.446779	.104092	.085675
3	.020911	-.756251	-.150085	.480962	.007439	.062748
4	.046816	-.694274	-.128042	.202339	.035533	.136367
5	.079261	-.001660	-.096208	.084568	.082630	.234930
6	.103765	.168584	-.086090	.117279	.063696	.232179
7	.094350	-.366898	-.076946	.160714	.052092	.062296
8	.054457	-.422411	-.053835	.171579	.129046	-.006878
9-11	.018121	-.204294	-.027825	.041564	.131057	.015428
12-14	.007598	-.224458	-.022738	.208180	.021381	.049208
15-21	-.010608	-.151452	-.009679	-.051227	-.025895	-.003117
22-30	.027838	-.086849	-.003180	.120441	.065252	-.002654

RUN NC 95A 15M 6-19-63 1446-1602(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.11184 10E 01	0.46224 10E 00	0.18854 10E 00	0.81207 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.518850	.340064	.106767	.700908
2	.175827	-.017910	.008936	.443576
3	.016188	-.102146	-.018815	.245512
4	-.054134	-.030278	-.036398	.133732
5	-.072347	-.004825	-.099963	.027507
6	-.077719	.080833	-.136671	-.063275
7	-.143672	-.014834	-.152088	-.150705
8	-.147399	-.114277	-.023264	-.156533
9	-.100824	-.119667	-.000735	-.170402
10	-.086712	-.067611	-.026406	-.188620
11	-.108011	-.075976	-.106979	-.218018
12	-.104581	-.160869	-.091813	-.205110
13	-.132225	-.127978	-.022739	-.210245
14	-.090865	-.121716	-.024097	-.169574
15	.022396	.006250	.025207	-.112992
16	.077329	.036303	.000005	-.063211
17	.019756	-.025666	.126008	-.042890
18	-.063543	-.053402	.101402	-.082235
19	-.120231	-.051650	.027063	-.135042
20	-.140024	.047483	.059307	-.160527
21	-.095283	.043654	-.079167	-.154882
22	-.059560	.035537	-.030492	-.165203
23	-.108989	-.045772	-.122915	-.219624
24	-.187972	-.001700	-.117505	-.253132
25	-.142543	.005827	-.132176	-.241032
26	-.079732	-.002725	-.054539	-.150687
27	-.021155	-.026893	.038118	-.069112
28	.082275	.040301	.056270	.007115
29	.099673	-.036181	.023384	.080097
30	.120428	-.031760	.068382	.138860

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E-01	10E-01	10E-01
0	.008836	.030857	.004584	.015716
1	.097283	.264685	.045244	.143835
2	.102405	.327219	.063919	.137979
3	.116021	.354039	.116647	.127678
4	.117089	.243655	.124546	.099211
5	.083597	.168418	.084617	.055913
6	.068189	.193481	.101020	.042514
7	.076354	.256729	.110120	.042227
8	.066573	.294735	.074014	.030282
9-11	.048275	.299534	.047743	.019899
12-14	.037170	.202402	.090904	.017660
15-21	.023929	.150079	.076950	.008690
22-30	.018750	.117764	.096700	.008395

RUN NO 95A 46M 6-19-63 1446-1602(EST)

GROSS STATISTICS

CLEAR
UNSTABLE

WIND SPEED 5.21 M/SEC
WIND DIRECTION 206 DEG
SOLAR RAD. 0.91 LY/MIN

SIGMA A 11.1 DEG
SIGMA E 9.8 DEG

	WITH NO RUNNING MEAN	WITH 301 POINT RUNNING MEAN	WITH 61 POINT RUNNING MEAN	301 PT RUN MEAN 10 PT BLOCK AVG
VARIANCES				
U	0.15302E 01	0.10412E 01	0.61476E 00	0.78171E 00
V	0.91754E 00	0.68834E 00	0.59033E 00	0.37946E-00
W	0.58483E 00	0.49041E-00	0.40471E-00	0.27227E-00
T	0.15485E-00	0.31187E-01	0.14120E-01	0.26106E-01
E	0.15163E 01	0.11101E 01	0.80490E 00	
GUSTINESS RATIOS				
U	0.23743	0.19586	0.15049	0.16970
V	0.18385	0.15924	0.14747	0.11823
W	0.14678	0.13441	0.12211	0.10015
COVARIANCES				
U,V	0.11982E-00	0.12257E-00	0.54726E-01	0.93607E-01
U,W	-0.42017E-00	-0.25570E-00	-0.13032E-00	-0.20660E-00
U,T	-0.22267E-00	-0.12040E-00	-0.51583E-01	-0.10324E-00
V,W	0.61978E-02	-0.12489E-01	-0.11662E-01	0.30065E-02
V,T	-0.14515E-00	-0.21541E-01	-0.90848E-02	-0.18576E-01
W,T	0.51983E-01	0.17195E-01	-0.92913E-03	0.18471E-01
WE	0.19793E-00	0.85943E-01	0.10894E-01	
NORMALIZED COVARIANCES				
U,V	0.10112	0.14478	0.09084	0.17187
U,W	-0.44416	-0.35783	-0.26126	-0.44782
U,T	-0.45744	-0.66813	-0.55365	-0.72267
V,W	0.00846	-0.02150	-0.02386	0.00935
V,T	-0.38509	-0.14702	-0.10827	-0.18644
W,T	0.17274	0.13904	-0.01229	0.21909

RUN NO 95A 46M 6-19-63 1446-1602(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.60239 10E 00	0.49874 10E 00	0.93154 10E-01	0.48870 10E 00	0.91278 10E-01	0.75573 10E-01
0	.090809	-.261121	-.553830	-.023690	-.107917	-.012174
1	.086247	-.242249	-.513533	-.010496	-.108234	-.007568
2	.074882	-.203093	-.444878	.004094	-.104661	-.004509
3	.057932	-.164702	-.374945	.011084	-.096805	-.003796
4	.039047	-.126770	-.309547	.016565	-.084850	-.003991
5	.020494	-.091628	-.255853	.017513	-.068734	-.004485
6	.009693	-.063600	-.207797	.013487	-.056444	-.004098
7	.007415	-.047171	-.163107	.012588	-.052470	-.005166
8	.011997	-.033979	-.119320	.006981	-.049441	-.005741
9	.017114	-.024481	-.078640	-.002919	-.044324	-.002244
10	.018731	-.014361	-.045555	-.012410	-.034427	.003248
11	.014004	-.001973	-.013458	-.020846	-.023200	.008134
12	.006032	.015095	.016196	-.027586	-.009367	.008784
13	-.006180	.031458	.044700	-.028193	.002170	.008885
14	-.016309	.044822	.073575	-.029250	.010736	.007995
15	-.022859	.053880	.104004	-.025494	.022589	.002792
16	-.028866	.063253	.134218	-.018883	.032497	-.005383
17	-.037902	.069791	.159387	-.011288	.039654	-.012323
18	-.043740	.076795	.175995	-.006394	.049742	-.014396
19	-.041555	.082985	.185532	-.003416	.058041	-.013683
20	-.036068	.082871	.191439	.002254	.060369	-.014449
21	-.033641	.082040	.195112	.009378	.061943	-.010414
22	-.031080	.082207	.194623	.010854	.064201	.000138
23	-.029789	.076755	.191718	.012751	.067961	.016766
24	-.021723	.067940	.188692	.014986	.069995	.033297
25	-.013283	.063684	.183474	.010841	.070175	.041440
26	-.007337	.060911	.172351	.003130	.069106	.047404
27	-.002986	.055313	.158489	-.000741	.064306	.048913
28	.005219	.046945	.136898	-.004923	.054759	.051710
29	.018547	.033870	.109446	-.000542	.043679	.057894
30	.028754	.015743	.082659	.005589	.034127	.058884
31	.031138	.003358	.056357	.003303	.032042	.058185
32	.019300	-.004505	.028617	.003740	.037632	.058971
33	.006233	-.010504	.005164	.003469	.038572	.060064
34	-.002005	-.014610	-.012513	.004450	.037486	.052012
35	-.006171	-.018202	-.021065	.006544	.035366	.044276
36	-.007544	-.023455	-.023814	.005560	.030560	.044964
37	-.012595	-.028295	-.022181	.004424	.024994	.046692
38	-.019273	-.028390	-.017585	.003235	.020133	.041001
39	-.021999	-.028853	-.011192	.003392	.014247	.032904
40	-.019077	-.030221	-.008148	-.004369	.012300	.026584
41	-.015756	-.026056	-.004618	-.017011	.010535	.022176
42	-.008319	-.017002	.003909	-.028058	.003739	.011709
43	.004921	-.009393	.014872	-.037727	-.008283	-.001991
44	.017146	-.000751	.020795	-.039271	-.022789	-.010799
45	.026078	.006434	.020156	-.030378	-.036102	-.016992
46	.030729	.014172	.014836	-.016639	-.041694	-.021031
47	.031286	.019241	.010248	-.005012	-.042524	-.021969
48	.028173	.022829	.007824	.006575	-.046235	-.024007
49	.019531	.025215	.007346	.013328	-.048673	-.027504
50	.004908	.024627	.005939	.017791	-.047793	-.034369
51	-.016153	.021632	.001134	.027270	-.042853	-.039695
52	-.029126	.022079	-.002470	.035355	-.036237	-.046853
53	-.031564	.025325	-.002310	.033356	-.035882	-.056177
54	-.028749	.029764	.001017	.028403	-.042247	-.065352
55	-.023390	.036002	.007149	.021953	-.046107	-.074614
56	-.023997	.043089	.012533	.013765	-.044499	-.082689
57	-.019239	.041794	.016647	.012198	-.044183	-.083492
58	-.014393	.039374	.017130	.011577	-.043863	-.078659
59	-.012646	.036995	.014904	.005527	-.040813	-.077666
60	-.007440	.037760	.011478	-.001416	-.039556	-.078061

RUN NC 95A 46M 6-19-63 1446-1602(EST)
61 PCINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.60239 10E 00	0.49874 10E 00	0.93154 10E-01	0.48870 10E 00	0.91278 10E-01	0.75573 10E-01
1	-.000049	-.014544	-.025437	.020702	.001234	-.023478
2	-.000288	-.030008	-.029445	.033006	-.003684	-.034869
3	.002574	-.041994	-.035975	.039685	-.009512	-.034679
4	.006861	-.058140	-.043845	.044232	-.017116	-.029302
5	.014482	-.066759	-.053564	.047656	-.022502	-.023752
6	.019236	-.068882	-.066086	.049331	-.026374	-.017749
7	.021201	-.071124	-.073996	.046269	-.029042	-.015171
8	.022717	-.067672	-.078781	.042345	-.030659	-.013405
9	.026147	-.063977	-.080956	.030090	-.030369	-.013120
10	.029985	-.065849	-.082774	.014515	-.027432	-.015168
11	.034967	-.069913	-.083722	-.001500	-.022042	-.017789
12	.042970	-.073942	-.077835	-.009407	-.011471	-.018713
13	.053056	-.077966	-.069534	-.004995	.000531	-.018156
14	.061083	-.076354	-.061030	.001006	.014248	-.018839
15	.065285	-.068140	-.052312	.002195	.023454	-.013514
16	.061618	-.053670	-.041641	.003115	.027128	-.001090
17	.053345	-.039917	-.027510	.007403	.028227	.010836
18	.043102	-.028443	-.015084	.012616	.031248	.015236
19	.036170	-.019596	-.007258	.017299	.033843	.016143
20	.032347	-.009854	-.003498	.016591	.035646	.019786
21	.031986	.002482	.000739	.016141	.032689	.026554
22	.034057	.010993	.002711	.018583	.028461	.028033
23	.034381	.013046	-.002436	.021009	.020756	.029898
24	.027506	.018261	-.008471	.020639	.013796	.032459
25	.022661	.029795	-.013933	.016940	.010986	.037650
26	.015997	.042217	-.020263	.011213	.007894	.042104
27	.003707	.051459	-.020025	.004613	.001332	.045546
28	-.008692	.060458	-.015412	-.002012	-.007949	.046707
29	-.020359	.064017	-.008378	-.007496	-.009782	.043505
30	-.032294	.063612	-.005018	-.009984	-.008091	.043192
31	-.041291	.059408	-.003530	-.019951	-.012251	.045467
32	-.046810	.051593	-.000119	-.031052	-.015536	.044389
33	-.053757	.045656	.002315	-.035532	-.018015	.043776
34	-.058734	.038342	.004498	-.033303	-.025811	.043369
35	-.056698	.034384	.001932	-.034663	-.034322	.042827
36	-.054121	.030302	-.004907	-.040729	-.039787	.038794
37	-.055790	.026601	-.010297	-.047417	-.037915	.033584
38	-.059850	.021011	-.012970	-.048487	-.038691	.023625
39	-.060470	.012264	-.013711	-.042216	-.046142	.009836
40	-.056257	.001093	-.011946	-.030355	-.056652	-.005802
41	-.051149	-.009154	-.008370	-.016045	-.064246	-.020210
42	-.048266	-.016593	-.006684	-.007321	-.069381	-.029986
43	-.045616	-.017604	-.010597	-.003863	-.072416	-.031179
44	-.043803	-.024772	-.011735	-.000659	-.066237	-.032984
45	-.036090	-.030069	-.011267	.003439	-.054379	-.034980
46	-.024763	-.031921	-.009748	.002785	-.041681	-.037609
47	-.013977	-.036757	-.010538	-.002222	-.034842	-.037019
48	-.005799	-.040473	-.008924	-.004601	-.029947	-.031366
49	-.004245	-.043795	-.009686	-.004239	-.022999	-.031996
50	-.004946	-.047308	-.010934	-.005346	-.014824	-.034785
51	-.003603	-.048703	-.012444	-.004565	-.005240	-.036768
52	-.003232	-.050543	-.011975	.000472	.003767	-.038652
53	.000981	-.052284	-.010783	.009718	.013524	-.039634
54	.011655	-.052793	-.012716	.014525	.022177	-.043301
55	.023526	-.046127	-.014640	.016772	.029117	-.041508
56	.031515	-.034764	-.014674	.017935	.031188	-.036901
57	.041821	-.026400	-.015099	.015357	.036938	-.033644
58	.053903	-.019115	-.015307	.011537	.042844	-.032716
59	.066299	-.013216	-.011174	.016807	.052580	-.033533
60	.073883	-.001812	-.004897	.023523	.065315	-.034211

RUN NO 95A 46M 6-19-63 1446-1602(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.61477 10E 00	0.59026 10E 00	0.40462 10E 00	0.14115 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.868843	.829794	.804130	.893097
2	.699242	.610748	.565890	.748537
3	.553781	.442486	.404835	.626179
4	.432031	.311588	.287744	.519946
5	.335789	.219571	.185122	.427010
6	.255010	.145611	.093297	.348694
7	.183415	.079383	.016257	.279046
8	.127467	.029099	-.044329	.213216
9	.072581	-.011952	-.081376	.153066
10	.022524	-.046526	-.106841	.099823
11	-.030312	-.073293	-.127711	.047716
12	-.073488	-.097565	-.143522	-.005571
13	-.107406	-.125192	-.154738	-.060997
14	-.136533	-.155331	-.161582	-.117011
15	-.167915	-.182090	-.177841	-.166801
16	-.203597	-.195794	-.188498	-.211216
17	-.231544	-.209608	-.190386	-.247321
18	-.250985	-.220753	-.192080	-.269930
19	-.261641	-.221153	-.183365	-.288922
20	-.268200	-.224359	-.178465	-.307881
21	-.272367	-.228163	-.178306	-.325450
22	-.273923	-.224912	-.187046	-.334588
23	-.273407	-.223636	-.200605	-.340853
24	-.269846	-.220667	-.205901	-.348151
25	-.259215	-.215584	-.197046	-.345603
26	-.246126	-.215168	-.188823	-.335460
27	-.234452	-.217123	-.183366	-.320476
28	-.213939	-.212882	-.171037	-.294726
29	-.181139	-.201917	-.145123	-.261751
30	-.141963	-.170707	-.108278	-.223121
31	-.103627	-.126569	-.058505	-.180853
32	-.062726	-.085267	-.023255	-.140516
33	-.021993	-.052511	-.002839	-.110870
34	.007142	-.033358	.021350	-.084667
35	.023960	-.018371	.041971	-.056726
36	.032289	.001970	.056643	-.035683
37	.032706	.019648	.076763	-.019865
38	.031365	.029527	.098987	-.006390
39	.029866	.031953	.117483	.005618
40	.027911	.027677	.124560	.014551
41	.019113	.025883	.118103	.018000
42	.004767	.026520	.108786	.019900
43	-.010887	.036381	.104089	.021987
44	-.022412	.050449	.108818	.022415
45	-.023744	.052780	.112770	.026503
46	-.020757	.048775	.102505	.036721
47	-.023645	.049024	.078794	.042949
48	-.030535	.042401	.053650	.044011
49	-.036758	.035590	.027623	.046736
50	-.042344	.039941	.010181	.052240
51	-.037895	.047680	-.005644	.058113
52	-.030453	.051444	-.029562	.061921
53	-.026214	.058923	-.046598	.064965
54	-.020254	.058207	-.056732	.060050
55	-.018753	.054739	-.061517	.047518
56	-.018664	.052495	-.057328	.035780
57	-.021309	.050703	-.048637	.029702
58	-.024392	.042622	-.042505	.028547
59	-.024785	.040533	-.040821	.028144
60	-.021330	.041767	-.045209	.025652

RUN NO 95A 46M 6-19-63 1446-1602(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-01	10E-02	10E-02	10E-03
0	.015638	-.032299	-.013301	-.058069	-.015989	.369648
1	.079732	-.196252	-.095527	-.117481	-.251380	-.147650
2	.087429	-.227445	-.109630	-.018063	-.344813	-.921006
3	.109278	-.269782	-.113740	.092809	-.282613	.053566
4	.088885	-.176125	-.067028	.311282	-.099738	.579514
5	.036817	-.070799	-.024073	.234096	-.025164	-.184622
6	-.013311	-.057049	-.017270	.057053	.007191	-.464039
7-8	.025639	-.053366	-.017825	-.197868	-.020132	-.056545
9-11	.031366	-.040593	-.010782	-.181194	-.014709	.153620
12-15	.011717	-.019894	-.004581	-.049965	-.007649	-.070967
16-20	-.002691	-.003809	-.003339	-.045792	.005711	-.018101
21-27	-.000797	-.003341	-.001310	-.035537	.002702	-.013376
28-36	.000624	-.002942	-.000647	-.012111	-.001518	-.016300
37-47	.000016	-.000263	-.000476	-.020407	.001501	-.007900
48-60	.000206	-.000068	-.000244	-.004582	.000102	-.006798

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-02	10E-02	10E-02	10E-02
1	.064708	-.047170	-.257859	.163875	-.029559	.101894
2	.141229	-.114770	-.216551	.539710	.056283	-.008387
3	.091967	-.174358	-.218203	.484073	-.038734	-.120790
4	-.030202	-.088956	-.169917	.128050	-.134328	-.069444
5	-.034982	-.006480	-.098783	.347693	-.081881	-.007801
6	-.008741	-.002164	-.034158	.634213	-.044002	-.020366
7-8	-.011851	-.009249	.032030	.345410	.018097	-.009250
9-11	.009171	-.012421	-.006833	.061939	.017396	-.027801
12-15	-.009904	.002946	-.002365	-.032834	.000188	-.017066
16-20	.000366	.002212	-.007573	.056913	.006641	-.008296
21-27	.000392	-.000379	-.007764	.005664	.000665	-.003723
28-36	.000115	-.000356	-.003366	.011078	.000606	-.000592
37-47	.000096	.000459	-.004079	.002374	.000764	.000056
48-60	.000539	.000414	-.000897	-.000893	.000524	-.000164

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E-01	10E-01	10E-02
0	.010872	.031858	.023837	.030087
1	.088625	.566626	.273002	.256351
2	.106468	.856935	.474533	.305231
3	.113302	.934715	.613813	.287948
4	.071141	.600240	.417274	.148477
5	.034057	.385464	.285219	.063772
6	.029636	.357994	.294115	.053879
7-8	.024833	.270624	.216362	.045855
9-11	.015865	.196549	.127817	.030687
12-15	.009260	.112589	.072248	.017043
16-20	.005546	.074202	.053395	.010491
21-27	.003321	.044155	.039392	.006045
28-36	.001866	.025173	.023458	.003863
37-47	.001411	.018472	.013372	.002474
48-60	.000875	.009835	.008478	.001485

RUN NO 95A 46M 6-19-63 1446-1602(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED COSPECTRUM COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.54478 10E 00	0.46118 10E 00	0.14282 10E 00	0.32143 10E 00	0.99545 10E-01	0.84270 10E-01
0	.171825	-.447971	-.722818	.009353	-.186613	.219193
1	.115286	-.290470	-.535504	-.043404	-.139525	.214264
2	.038905	-.174760	-.345612	.007712	-.043600	.188529
3	.046497	-.092516	-.277907	.027414	-.027435	.174243
4	.001780	-.051007	-.189929	.015533	-.025798	.090474
5	-.008161	.039183	-.105078	.056831	-.043839	.019293
6	-.025842	.068568	-.041486	.055779	-.032294	-.067340
7	-.008767	.046096	.015115	.015483	-.000718	-.030452
8	-.014072	.050318	.089200	-.013578	.058102	-.032835
9	-.010083	.038351	.102423	-.045112	.046335	-.024044
10	.038559	.075178	.106307	-.030969	-.001483	-.029475
11	.046352	.124267	.126695	-.022216	-.025593	-.057960
12	-.003543	.117285	.188485	-.016183	.017600	-.111933
13	-.046938	.121153	.177969	-.004454	.058614	-.085760
14	-.041400	.062484	.163498	-.059738	.022234	-.056999
15	-.045196	.081024	.175001	-.093751	.006512	-.046097
16	-.029890	.063381	.199845	-.061514	.025704	-.100313
17	-.016141	.047108	.184207	.012927	.063697	-.104865
18	-.004034	.027769	.179799	.007951	.082050	-.097556
19	-.031410	.044819	.223563	.053961	.040222	-.081492
20	-.041940	.055167	.220802	-.023492	.032867	-.109363
21	-.038612	.019769	.190046	.020168	.024890	-.092132
22	-.043961	.005831	.184845	.014844	.032144	-.039050
23	-.074184	.033312	.148130	.079718	.057624	.003082
24	-.044484	.008529	.098230	.032622	.040961	.014046
25	.009714	-.001972	.074275	.059607	.018389	.014221
26	-.005338	.008473	.045788	.085077	.033157	.013904
27	-.051169	-.019763	.019774	.029226	.063915	.040835
28	-.033195	-.059719	.002272	-.002537	.041018	.071922
29	.009531	-.102699	-.041344	-.011720	.002777	.098643
30	-.026188	-.053969	-.060075	.016287	.019103	.086174

COSPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-01	10E-01	10E-01	10E-02	10E-02	10E-02
0	.025839	-.023515	-.029841	-.035144	-.052250	.060708
1	.173314	-.290146	-.262613	.093908	-.399115	.604339
2	.120210	-.339140	-.227038	.399923	-.307598	.577514
3	.073519	-.312433	-.147677	.185305	-.194716	.388799
4	.078657	-.210098	-.093138	-.377023	-.157201	.255266
5	.097104	-.149835	-.064106	-.391620	-.139298	.213215
6	.108675	-.141298	-.039749	-.272948	-.075601	.111042
7	.074639	-.140909	-.035048	-.313149	-.028938	.069470
8	.002502	-.103578	-.027176	-.319650	-.053135	.015185
9-11	.027249	-.026605	-.023184	.173729	-.133710	-.098722
12-14	.016661	-.052163	-.020527	-.064751	-.057745	.009945
15-21	.026757	-.034987	-.015013	.025303	-.029842	.010644
22-30	.001436	-.024202	-.005457	.192816	.009974	-.000607

RUN NO 95A 46M 6-19-63 1446-1602(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED QUADRATURE COVARIANCE

M	U,V	U,W	U,T	V,W	V,T	W,T
	0.54478 10E 00	0.46118 10E 00	0.14282 10E 00	0.32143 10E 00	0.99545 10E-01	0.84270 10E-01
1	.026290	-.095475	-.094669	.013000	-.045453	-.002234
2	.038166	-.062565	-.129006	.002764	-.030419	.051079
3	-.016480	-.028153	-.170012	-.016318	-.060748	.060140
4	-.038112	-.066057	-.183332	-.015450	-.073465	.037763
5	-.004703	-.083550	-.177226	-.022782	-.036400	.006312
6	.045811	-.036212	-.158931	.038208	.015354	.012829
7	.001380	-.000198	-.139052	.009641	.018706	.029976
8	-.017677	.006173	-.137265	-.027247	-.019844	.059059
9	-.041354	.013579	-.151926	.008035	-.045058	.035877
10	-.012270	.070454	-.163335	.005405	-.047904	.084817
11	-.021535	-.005004	-.159479	-.064882	-.007260	.062865
12	-.000100	-.041722	-.150822	-.068381	-.002327	.040124
13	-.026465	-.058484	-.132465	-.046597	-.019464	.021742
14	-.038789	-.013674	-.068089	-.049776	-.033792	-.030053
15	-.000071	-.035791	-.014616	-.033164	.012619	-.062651
16	.025250	-.024900	.020083	.021388	.034065	-.051370
17	.085910	-.001382	.038996	.030145	.052317	-.020833
18	.077208	.031573	.052599	.000575	.057271	-.035612
19	.001978	.055041	.012021	.016842	.007831	.015747
20	.018210	.036353	-.003189	.025064	.030112	.034343
21	.012123	.015151	.032257	.024417	.001891	-.003573
22	.026760	.034895	.042939	.060684	-.017559	.010166
23	.020475	.055745	.096625	.135031	-.026316	.032320
24	.037243	.011350	.121302	.132976	.017792	-.004773
25	.017925	.046952	.123476	.053344	.033884	.010456
26	-.032789	.060642	.128914	-.027074	.007280	-.018744
27	-.076569	.029730	.132787	-.018417	-.005453	-.049603
28	-.041324	.021157	.104533	-.027094	.000118	-.045452
29	-.023212	-.052027	.069853	-.091170	.000669	-.048803
30	-.016209	-.063045	.059783	-.068157	-.023996	-.043124

QUADRATURE SPECTRUM

K	U,V	U,W	U,T	V,W	V,T	W,T
	10E-02	10E-01	10E-01	10E-02	10E-02	10E-02
1	.001584	-.055218	-.146481	-.332338	-.105588	.172511
2	-.373228	-.069570	-.122596	-.313122	-.154632	.171719
3	-.034340	-.050655	-.067129	.230660	-.130885	.130899
4	.504048	-.072301	-.021635	.250872	-.040653	-.012793
5	.155277	-.111829	-.018134	-.158808	-.071044	-.059421
6	-.245800	-.074886	-.032730	-.261438	-.150440	.069169
7	-.055819	-.002030	-.026853	-.184446	-.110059	.133947
8	.227301	.021267	-.000947	.182295	-.056983	.063204
9-11	.282255	-.020452	-.000232	.076225	.017386	.003889
12-14	.489591	-.026704	-.002070	.176349	.025596	-.037907
15-21	-.110946	-.033653	-.003008	.001639	-.039785	-.026496
22-30	-.110348	-.005745	-.002150	-.045457	-.015553	-.016169

RUN NO 95A 46M 6-19-63 1446-1602(EST)
301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

NORMALIZED AUTOCOVARIANCE

M	U	V	W	T
	0.78164 10E 00	0.37969 10E 00	0.27211 10E 00	0.26098 10E-01
0	1.000000	1.000000	1.000000	1.000000
1	.613810	.282826	.267121	.724731
2	.323008	-.070147	.078894	.458746
3	.209298	-.135679	.005117	.341147
4	.111306	-.034602	.100642	.277827
5	.003097	.007467	-.069963	.192236
6	-.024148	.020897	-.131993	.111592
7	-.020035	.015443	-.113081	.019285
8	-.063026	-.106495	.002314	-.084220
9	-.082970	-.159749	-.116740	-.117385
10	-.113616	-.079666	-.167952	-.138598
11	-.132825	.002519	-.164103	-.182308
12	-.219988	-.051021	-.048337	-.236890
13	-.258222	-.103647	-.132488	-.239487
14	-.228532	-.144909	-.117843	-.248651
15	-.178315	-.025108	-.084291	-.283579
16	-.170462	.024106	-.002181	-.283198
17	-.174914	.037982	.003029	-.263455
18	-.130871	.000446	.005265	-.275240
19	-.175386	-.010816	-.018971	-.282762
20	-.182609	-.066395	.011239	-.255621
21	-.139586	.006914	.024601	-.260574
22	-.133411	.044005	-.040918	-.298873
23	-.118868	-.001189	.049894	-.277243
24	-.077246	.003584	.065688	-.204726
25	-.064079	.007565	-.028620	-.147777
26	-.053222	-.018289	.002082	-.066189
27	.005639	-.043725	-.020235	-.025856
28	.050897	-.071084	.095180	.010262
29	.081566	.055899	.065757	.040134
30	.063030	.096062	-.009817	.075495

POWER SPECTRUM

K	U	V	W	T
	10E 00	10E-01	10E-01	10E-02
0	.013700	.0'7388	.010936	.082840
1	.134532	.163691	.149949	.691101
2	.128141	.209949	.216955	.572062
3	.093917	.243063	.249671	.347464
4	.060010	.191718	.182885	.199134
5	.048154	.148373	.128174	.131393
6	.048197	.160851	.124288	.096769
7	.048380	.196151	.130232	.086604
8	.034966	.201479	.111751	.070091
9-11	.021785	.272294	.086349	.077992
12-14	.017471	.157236	.110741	.060970
15-21	.016809	.135029	.101165	.033794
22-30	.009411	.115923	.101888	.017853

RUN NO 95A 15M 6-19-63 1446-1602(EST)
RUN NO 95A 46M 6-19-63 1446-1602(EST)
61 POINT RUNNING MEAN, NO BLOCK AVERAGING

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.512861	.252280	.499969	.511294
1	.514197	.537007	.369384	.474649
2	.459684	.572734	.373067	.417904
3	.337625	.539014	.364247	.311842
4	.145324	.422630	.246738	.108342
5	.123404	.304719	.092233	.058159
6	.069824	.208281	.090518	.083706
7-8	.045601	.179254	.072028	.077104
9-11	.126791	.227447	.087222	.091559
12-15	.113926	.115691	.094263	.072967
16-20	.062380	.133493	.141754	.087738
21-27	.093844	.104718	.107758	.102176
28-36	.066187	.118112	.089595	.128819
37-47	.129664	.070691	.109650	.155982
48-60	.074465	.083009	.098177	.082971

301 POINT RUNNING MEAN, 10 POINT BLOCK AVERAGE

COHERENCE WITH QUADRATURE

K	U	V	W	T
	10E 00	10E 00	10E 00	10E 00
0	.895316	.036972	.310221	.959578
1	.863060	.140934	.507928	.911763
2	.747650	.353942	.544327	.828738
3	.592841	.559537	.548310	.690009
4	.511082	.634567	.565929	.654219
5	.637684	.543836	.557072	.568917
6	.549448	.465719	.520621	.412105
7	.464506	.472720	.463280	.472866
8	.446133	.493790	.365523	.537683
9-11	.601190	.578552	.228400	.524341
12-14	.396167	.606900	.456828	.410181
15-21	.242890	.422331	.354679	.323638
22-30	.178024	.248444	.239104	.185651

REFERENCES

Cramer, H.E., 1959: Measurements of turbulence structure near the ground within the frequency range from 0.5 to 0.1 cycles sec^{-1}. Advances in Geophysics. New York, Academic Press, 6, 75-96.

Cramer, H.E., F.A. Record, and J.E. Tillman, 1962: Studies of the spectra of the vertical fluxes of momentum, heat and moisture in the atmospheric boundary layer. M.I.T. Dept. of Meteor., Final Report under Contract No. DA-36-039-SC-80209, 112 pp.

_____, 1967: M.I.T. Dept. of Meteor., Final Report under Grant No. DA-AMC-36-039-64-G1 (to be published).

Cramer, H.E., F.A. Record, J.E. Tillman, and H.C. Vaughan, 1961: Studies of the spectra of the vertical fluxes of momentum, heat and moisture in the atmospheric boundary layer. M.I.T. Dept. of Meteor., Annual Report under Contract No. DA-36-039-SC-80209, 130 pp.

Blackman, R.B., and J.W. Tukey, 1958: The measurement of power spectra from the point of view of communications engineering. Bell Sys. Tech. J., 37, 185-288 and 485-569.

Pasquill, F., 1962: Atmospheric Diffusion. D. Van Nostrand Co., Ltd., London, 297 pp.

UNCLASSIFIED

Security Classification

DOCUMENT CONTROL DATA - R & D

(Security classification of title, body of abstract and indexing annotation must be entered when the overall report is classified)

1. ORIGINATING ACTIVITY *(Corporate author)*
Meteorology Department
Massachusetts Institute of Technology
Cambridge, Massachusetts

2a. REPORT SECURITY CLASSIFICATION
UNCLASSIFIED

2b. GROUP

3. REPORT TITLE
ROUND HILL TURBULENCE MEASUREMENTS - VOLUME I

EXPERIMENTAL TECHNIQUES, DATA-PROCESSING PROCEDURES, AND DATA TABULATIONS FOR RUNS 87A THROUGH 95A

4. DESCRIPTIVE NOTES *(Type of report and inclusive dates)*
Volume I of Five Volumes

5. AUTHOR(S) *(First name, middle initial, last name)*
H. E. Cramer, F. A. Record, and J. E. Tillman

6. REPORT DATE
December 1966

7a. TOTAL NO. OF PAGES
246

7b. NO. OF REFS
6

8a. CONTRACT OR GRANT NO.
Grant DA-AMC-28-043-65-G10

b. PROJECT NO.
DA Task 1V0-14501-B53A-08

c.

d.

9a. ORIGINATOR'S REPORT NUMBER(S)

9b. OTHER REPORT NO(S) *(Any other numbers that may be assigned this report)*
ECOM-65-G10

10. DISTRIBUTION STATEMENT
Distribution of this document is unlimited.

11. SUPPLEMENTARY NOTES

12. SPONSORING MILITARY ACTIVITY
U.S. Army Electronics Command
Atmospheric Sciences Laboratory, Research Division, Fort Huachuca, Arizona

13. ABSTRACT

This volume describes the experimental techniques and the data-processing procedures employed in a program of turbulent structure measurements carried out at the Round Hill Field Station. It also contains data summaries for 12 of the 76 field experiments selected for inclusion in this report. The field site and the experimental procedures are described in Section I. Sections II and III respectively contain descriptions of the data-acquisition system and the data-processing procedures. Section IV contains data summaries for Runs 87A through 95A; data summaries for the remaining field experiments are presented in Volumes II, III, IV, and V.

DD FORM 1 NOV 68 1473 REPLACES DD FORM 1473, 1 JAN 64, WHICH IS OBSOLETE FOR ARMY USE.

UNCLASSIFIED

Security Classification

14. KEY WORDS	LINK A		LINK B		LINK C	
	ROLE	WT	ROLE	WT	ROLE	WT
Data summaries						
Vertical profiles						
Turbulence statistics						