

**WIND-TUNNEL STUDY OF WIND OVER AN  
OFFSHORE PLATFORM HELIDECK**

by

**R. Ewald,\* J. A. Peterka\*\*  
and J. E. Cermak\*\*\***

for

**Earl and Wright  
Consulting Engineers  
One Market Plaza  
Spear Street Tower  
San Francisco, California 94105**

**Fluid Mechanics and Wind Engineering Program  
Fluid Dynamics and Diffusion Laboratory  
Department of Civil Engineering  
Colorado State University  
Fort Collins, Colorado 80523**

**December 1978**

**\*Research Associate  
\*\*Associate Professor  
\*\*\*Director, Fluid Dynamics  
and Diffusion Laboratory**

**CER78-79RE-JAP-JEC25**

## TABLE OF CONTENTS

<u>Section</u>	<u>Page</u>
LIST OF TABLES . . . . .	iii
LIST OF FIGURES . . . . .	iv
LIST OF SYMBOLS . . . . .	v
1. INTRODUCTION . . . . .	1
2. EXPERIMENTAL CONFIGURATION . . . . .	3
2.1 Wind Tunnel . . . . .	3
2.2 Model . . . . .	3
2.3 Experimental Arrangement . . . . .	4
3. INSTRUMENTATION AND DATA ACQUISITION . . . . .	6
3.1 Flow Visualization . . . . .	6
3.2 Velocity . . . . .	6
4. RESULTS . . . . .	9
4.1 Flow Visualization . . . . .	9
4.2 Velocity . . . . .	10
5. CONCLUSIONS . . . . .	14
REFERENCES . . . . .	16
TABLES . . . . .	17
FIGURES . . . . .	24
APPENDIX A--VELOCITY PROFILE GRAPHS . . . . .	37
APPENDIX B--VELOCITY PROFILE DATA . . . . .	123

LIBRARIES  
COLORADO STATE UNIVERSITY  
Fort Collins, Colorado 80528

## LIST OF TABLES

<u>Table</u>		<u>Page</u>
1	VELOCITY PROFILE TEST PLAN . . . . .	18
2	MOTION PICTURE SCENE GUIDE . . . . .	20
3	15 PERCENT TURBULENCE LEVELS . . . . .	21

## LIST OF FIGURES

<u>Figure</u>		<u>Page</u>
1	Industrial Aerodynamics Wind Tunnel . . . . .	25
2	Wind-Tunnel Model . . . . .	26
3	Model Photographs . . . . .	32
4	Approach Mean Velocity and Turbulence Intensity Profiles . . . . .	35
5	Approach Velocity Spectra . . . . .	36

## LIST OF SYMBOLS

<u>Symbol</u>	<u>Definition</u>
A	Constant
B	Constant
D	Characteristic dimension (building height, width, etc.)
E	Mean voltage
$E_{rms}$	Root-mean-square of fluctuating voltage
$H_z$	Cycles per second
n	Constant
rms	Root-mean-square
$T_u$	Turbulence intensity $\frac{U_{rms}}{U}$
U	Local mean velocity
$U_{rms}$	Root-mean-square of fluctuating velocity
$U_\infty$	Reference mean velocity outside the boundary layer
$\frac{UD}{v}$	Reynolds number
Z	Height above surface
$\delta$	Height of boundary layer
v	Kinematic viscosity of approach flow

## 1. INTRODUCTION

One factor influencing offshore platform operational capability is the frequency and duration of periods of high wind or high turbulence over the helicopter landing pad which limit landings. Two factors act to influence the wind speed and turbulence over the helideck--1) meteorological variables such as approach wind speed, direction, and stability, and 2) geometry of the platform and location of the helideck on the platform. Little can be done to modify the first factor. Various constraints have typically led to placement of the helideck directly on top of the living quarters structure. The purpose of this study was to investigate the flow field above the helideck of one platform currently under design--the Maui B platform--to determine whether the landing environment could be improved by modification or movement of the helideck. Factors studied included raising the helideck vertically to provide a gap between it and the living quarters, varying the shape and edge characteristics of the helideck, increasing the extent of the helideck cantilever beyond the living quarters and movement of the helideck to a new location. The study included moderate and strong wind cases and the influence of approach wind direction.

The study was performed in the Industrial Aerodynamics Wind Tunnel in the Fluid Dynamics and Diffusion Laboratory. This facility permitted modeling of the platform to a 1:150 scale. Modeling of the wind flow about a structure requires special consideration of flow conditions in order to guarantee similitude between model and prototype. A detailed discussion of the similarity requirements and their wind tunnel implementation can be found in References (1), (2), and (3). In general, the

requirements are that the model and prototype be geometrically similar, that the approach mean velocity at the model location have a vertical profile shape similar to the full-scale flow, that the turbulence characteristics of the flows be similar, and that the Reynolds number for the model and prototype be equal.

These criteria are satisfied by constructing a scale model of the structure and its surroundings and performing the wind tests in a wind tunnel specifically designed to model atmospheric boundary-layer flows. Reynolds number similarity requires that the quantity  $UD/v$  be similar for model and prototype. Since  $v$ , the kinematic viscosity of air is identical for both, Reynolds numbers cannot be made precisely equal with reasonable wind velocities. To accomplish this the air velocity in the wind tunnel would have to be as large as the model scale factor times the prototype wind velocity, a velocity which would introduce unacceptable compressibility effects. However, for sufficiently high Reynolds number ( $>2 \times 10^4$ ) the air flow patterns about the structure will be essentially constant for a large range of Reynolds numbers. Typical values encountered are  $10^7$ - $10^8$  for the full-scale and  $10^5$ - $10^6$  for the wind-tunnel model. In this range acceptable flow similarity is achieved without precise Reynolds number equality.

## 2. EXPERIMENTAL CONFIGURATION

### 2.1 Wind Tunnel

The wind-engineering study was performed in the Industrial Aerodynamics Wind Tunnel located in the Fluid Dynamics and Diffusion Laboratory at Colorado State University (Figure 1). The tunnel is a closed circuit facility driven by a 75 hp variable-pitch propeller. The test section is nominally 6 ft square and 60 ft long and is fed through a 4:1 ratio contracting section about 10 ft long. The roof may be adjusted in height to maintain a zero pressure gradient along the test section. The mean velocity of the airflow can be adjusted continuously from 1 to 65 fps.

### 2.2 Model

In order to obtain an accurate assessment of local velocities near the helideck, the model was constructed to the largest scale that would not produce significant blockage in the wind tunnel. A 1:150 scale model of the offshore drilling platform was constructed from blocks of Lucite plastic and fastened together with metal screws and glue. The drilling mast and vent tower were made of 1/16 and 3/32 in. diameter brass rods which were soldered together to form the towers. The platform was a simplified design which modeled the primary flow-disturbing characteristics of the Maui B platform. Dimensioned drawings of the model are shown in Figure 2.

Since several shapes of helideck were to be tested, the helidecks were made of 0.26 in. (1 m full-scale) thick Lucite plastic fastened to a 0.75 in. diameter vertical support shaft. The support shaft had a keyway cut into it and slipped into a vertical hole drilled into the

platform. It was held in place by a set screw. The keyway and set screw arrangement allowed different shapes of helidecks to be interchanged and also placed at different test heights while always guaranteeing proper alignment of the helideck with the platform.

Four shapes, four elevations and two locations of helidecks were tested. The four shapes included the original design shape and three modifications. The four elevations ranged from 0 to 8.5 m (2.23 in. model scale). The two positions were that of the original design and an alternate location centered near the west corner of the platform (see Figure 2 for details of deck shapes and locations).

### 2.3 Experimental Arrangement

The entire platform assembly was mounted on a 71 in. diameter turntable centered 55 ft downstream from the test-section entrance. The turntable was calibrated to indicate azimuthal orientation to 0.2 degree.

The region upstream from the model was made to resemble two different cases of approach flow. A smooth floor was used to simulate a calm sea while a random pattern of wooden slats was placed across the wind tunnel to simulate a typical rough sea. For the latter case two heights of slats were used to represent both tall (1.47 in.--5.6 m full-scale) and moderate (0.79 in.--3.0 m full-scale) waves. The shorter waves outnumbered the tall waves 2:1. The slats were spaced randomly between 26 in. and 41 in. (100 and 155 m full-scale apart). The technique for simulating the rough sea case was taken from reference (4). Spires were installed at the test section entrance to provide a thicker boundary layer than would otherwise be available. The spires were

approximately triangularly shaped pieces of 1/2 in. thick plywood, 6 in. wide at the base and 1 in. wide at the top, extending from the floor to the top of the test section. They were placed so that the broad side intercepted the flow. Splitter plates, triangular in cross section and made to fit the shape of the spires, were placed downstream from, but in contact with, the spires to form streamlined obstructions in the airflow path. An additional flow trip (7 in. high) extending the full width of the tunnel was placed 3 ft downstream of the spires. This combination of spires and trip (Figure 3) provided a boundary layer thickness of approximately 4 ft and an approach velocity profile power-law exponent similar to that for flow over open seas, a logarithmic velocity profile with a realistic roughness length.

A photograph of the completed model is shown in Figure 3. The wind tunnel ceiling was adjusted after placement of the model to obtain a zero pressure gradient along the test section.

### 3. INSTRUMENTATION AND DATA ACQUISITION

#### 3.1 Flow Visualization

Making the airflow visible in the vicinity of the model is helpful in defining zones of separated flow, reattachment areas, and occurrences of vortex shedding that may create problems. Titanium tetrachloride smoke was released from sources on and near the model to make the flow lines visible to the eye and to make it possible to obtain motion picture records of the tests. A guide to the motion picture scenes is given in Table 2. Conclusions obtained from these smoke studies are discussed in Section 4.1.

#### 3.2 Velocity

Mean velocity and turbulence intensity profiles were measured 2 ft (91 m full-scale) upstream of the model to determine the characteristics of the approach wind. Tests were made at only one wind velocity in the tunnel. This velocity [approximately 50 ft/sec (15 m/s)] was above that required to produce Reynolds number similarity between the model and the prototype as discussed in Section 1. Velocity spectra were obtained upstream of the model 12 in. (46 m full-scale) above the wind tunnel floor. Mean velocity profiles, turbulence intensity profiles, and velocity spectra were taken for both the calm and rough sea case.

To determine quantitatively the wind environment above the helideck, mean velocity and turbulence intensity profiles were taken at seven locations on or near the helideck as shown in Figure 2. These profiles were intended to identify areas of high velocity gradients and high turbulence which can create problems for the helicopter pilot. Profiles were obtained for selected combinations of helideck shape, helideck

elevation, helideck placement on the platform, approach wind direction, and approach sea roughness. The test matrix, selected in close coordination with the project sponsor representative, is shown in Table 1. The test plan includes 183 profiles selected to provide optimum information for selection of a design for the prototype platform.

Measurements were made with a single hot-wire anemometer. The probe was mounted with its axis horizontal and was supported from a vertical traverse which was positioned behind the model so as not to create a disturbance near the model. The instrumentation used was a Thermo Systems constant temperature anemometer (Model 1050) with a 0.001 in. diameter platinum film sensing element 0.020 in. long. Output from the anemometer was fed to an on-line data acquisition system consisting of a Hewlett-Packard 21MX computer, disk unit, card reader, printer, Digi-Data digital tape drive and a Preston Scientific analog-to-digital converter. The data was processed immediately into mean velocities, turbulence intensities, and corresponding heights and stored on the computer disk for printout or further analysis.

Calibration of the hot-wire anemometer was performed using a Thermo Systems calibrator (Model 1125). The calibration data were fit to a variable exponent King's Law relationship.

$$E^2 = A + BU^n$$

where  $E$  is the hot-wire output voltage,  $U$  the approach velocity and  $A$ ,  $B$ , and  $n$  are coefficients selected to fit the data. The above relationship was used to determine the mean velocity at measurement

points using the measured mean voltage data. The fluctuating velocity in the form  $U_{rms}$  (root-mean-square velocity) was obtained from

$$U_{rms} = \frac{2 E E_{rms}}{B n U^{n-1}}$$

where  $E_{rms}$  is the root-mean-square voltage output from the anemometer. The turbulence intensity is then the ratio  $U_{rms}/U$ .

#### 4. RESULTS

##### 4.1 Flow Visualization

A film is included as part of this report showing the characteristics of flow about the structure using smoke to make the flow visible. A listing of contents of the film is shown in Table 2. Several features can be noted from the visualization. The effect of raising the helideck off the living quarters can easily be seen. As the flow divides and goes both above and below the helideck when it is raised up. With the helideck directly on the living quarters the flow can be seen to move upward along the front of the platform and then separate as it goes up and over the edge of the helideck, reattaching somewhere near the center of the helideck, resulting in a turbulent flow near the surface of the helideck. Also, for southeast and southwest wind directions where a corner of the helideck points upstream, vortices can be seen forming at these corners and rolling across the helideck.

Raising the helideck seemed to alleviate some of the adverse characteristics. Modification 1 to the helideck shape ("clipped corners") appeared to decrease vortex formation over the helideck somewhat for the southeast and southwest wind directions. Movement of the helideck to the west corner without lowering its elevation seemed to improve the flow over the upper surface.

Several preliminary flow visualization studies were made before velocity data was obtained to look for possible solutions. Results of these investigations determined that the existing screen-extension of the helideck does not visibly improve or make worse the flow environment over the helideck. Decreasing the porosity of the screen to

approximately a 50 percent porosity also had no visible effect on the flow over the helideck. Movement of the helideck further out over the water toward the southwest had a beneficial effect, but not for any movement distance within economic reality. Improvement in flow conditions over the helideck was very slow until the inboard side of the helideck had virtually cleared the edge of the platform.

#### 4.2 Velocity

Velocity and turbulence profiles for the two approach conditions, smooth floor and waves, are shown in Figure 4. These profiles were taken upstream of the model and are characteristic of the boundary layers approaching the model. As shown in Figure 4, the boundary-layer thickness  $\delta$  was 50 in. for both cases corresponding to the prototype value of 190 m. This is a little less than normally expected for open seas but provides a good simulation for structures of the size of an offshore platform. In the form

$$\frac{U}{U_\infty} = \left(\frac{z}{\delta}\right)^n$$

the velocity profile exponents were 0.10 for the smooth case, and 0.19 for the waves. The turbulence intensity profiles are also shown in Figure 4. As would be expected, the turbulence in the lower regions is higher for the wave case. Turbulence intensities are in the correct ranges for winds over smooth and rough sea surfaces.

Mean velocity and turbulence profiles at the test locations 1-7 shown in Figure 2 for the matrix of test conditions of Table 1 are presented in graphical form in Appendix A and in tabular form in Appendix B. A profile designation code is presented at the front of

each Appendix. The profiles of Appendix A are plotted several to a graph in order to permit direct comparison between plots. At the beginning of Appendix A, a guide to the different profile comparisons is provided. Graphs 1-29 show comparisons of the helideck heights (A, B, C, and D) for the original helideck shape for different wind directions and profile positions. Graphs 30-39 show comparisons of the profile positions (1, 2, 3, 4, 5, 6, and 7) for the original helideck shape for different wind directions and helideck heights. Graphs 40-50 show comparisons of helideck heights A and C for different wind directions at position 1 for the different helideck configurations (M, N, P, and Q). Graph 51 shows the effect of wind direction on the profile at location 1 on the south corner with no helideck present. Graphs 52-54 show comparisons of profiles for different helideck heights (A, B, C, and D) to a profile for the same location with no helideck present. Graphs 55-59 show comparisons of the original helideck moved from the south to west corner of the platform. Graphs 60-63 show comparisons of the original helideck to the modified shapes (M, N, and P). Graphs 64-67 show comparisons of profile positions (1, 3, 5, 6, and 7) for wind azimuths 135 and 225, for helideck heights A and C, with the waves upstream. Graphs 68-71 show comparisons of the helideck heights (A, B, C, and D) at different wind azimuths and profile positions with waves upstream. Graphs 72-74 show comparisons of the smooth and wave approach conditions for the original helideck shape at height A and C for several approach wind azimuths. Graphs 75-78 show the effects of the wind-tunnel speed on the velocity and turbulence data for two configurations of the helideck. Graphs 76 and 78 show in nondimensional form that the tunnel speed has very little

effect on the results. Graphs 79-81 compare profiles at the center of the helideck for different wind directions to the approach profiles for smooth upstream and for wave upstream conditions.

The results of graphs 76 and 78 show that tunnel velocity has little effect on the relative magnitude of the velocity measurements. That is, the profiles shape is the same for profiles taken at differing velocities if the velocities for both cases are divided by the value of the undisturbed velocity well above the model. Using this invariance principal, called Reynolds number invariance, the data presented in Appendices A and B have been adjusted for slight unavoidable variations in wind tunnel speed which occurred from day to day during the testing. For this reason, all of the graphs in Appendix A show accurate comparisons of the various velocity profiles.

Because Reynolds number invariance should be valid for model to full-scale comparisons, full-scale conditions may be determined by multiplying the profiles of Appendix A by a constant such that the velocities well above the platform match those of the full-scale velocities to be studied.

Figure 5 shows a comparison of the normalized velocity spectra for the smooth and wave approach conditions upstream of the model 12 in. (46 m full-scale) above the floor. Figure 5 shows that both conditions have typical energy distributions and do not differ noticeably from each other, as is to be expected.

Certain information extracted from the velocity profiles is presented in Table 3. Table 3 lists the height in meters (full-scale) above the helideck below which the turbulence is greater than 15 percent. Large values of height indicate that areas of high turbulence extend to larger heights above the helideck.

Examination of Table 3 shows the benefit of raising the helideck up off of the living quarters. Comparison of the A and B helideck heights (A = flush on crew quarters, B = 2.5 m separation) shows that the 15 percent turbulence level decreases in height for almost every case when moved from A to B. For some cases, this decrease is quite large. Moving from the B to C and D levels showed mixed results with some decreases, some increases, and some with very little change. The indication is that moving the helideck up by 2.5 m is beneficial for decreasing the turbulence in the landing area. Increased advantage of raising the helideck above the living quarters beyond a 2.5 m gap must be studied carefully, taking into account the probability of occurrence of winds of different azimuths and wind speeds as well as the cost of moving the helideck upward.

Further inspection of both the profiles in Appendix A and the 15 percent turbulence levels of Table 3 shows that moving the helideck to the west corner of the platform from the living quarters on the south corner may be slightly beneficial. Varying the shape of the helideck from the original shape is generally detrimental. The turbulence caused by the square helideck is almost exactly the same as the original shape. However, the modification with clipped corners causes somewhat higher turbulence and the circular model of helideck causes even higher turbulence in the landing area. The difference between calm seas and rough seas seems to be rather small with the rough seas causing only slightly larger turbulence over the helideck. Lastly, winds from the southeast seem to cause somewhat more turbulence over the helideck than winds from other wind directions.

## 5. CONCLUSIONS

An idealized 1:150 scale model of the Maui B offshore platform was constructed and was tested for airflow patterns over the helideck in a boundary layer wind tunnel capable of simulating atmospheric winds. Flow visualization and quantitative velocity measurements were made for various helideck shapes, helideck elevations above the living quarters, and helideck location on the platform for a number of wind directions and two sea roughnesses. Based on these tests, the following conclusions can be drawn.

1. The original helideck shape was slightly better than the three other shapes tested.
2. Increasing the density of the safety screen surrounding the helideck had undetectable influence on flow characteristics over the helideck.
3. Movement of the helideck farther over the water from the living quarters improved the flow over the helideck, but significant improvement came only with large movements of the helideck.
4. Raising the original helideck shape 2.5 m above the living quarters improved the flow conditions over the helideck for all approach wind directions tested.
5. Raising the original helideck shape more than 2.5 m above the living quarters provided additional improvement in flow characteristics above the helideck for many conditions tested but the improvement over the 2.5 m elevated case was small for many cases.

6. Movement of the helideck to the west corner of the platform appeared to have small benefits in flow characteristics for most, but not all, wind directions.
7. Trends in test data determined with smooth seas were not altered for the rough sea case. Rough seas tended to cause higher turbulence levels than smooth seas.
8. Winds from the southeast tended to cause more turbulence over the helideck than winds from other directions.

## REFERENCES

1. Cermak, J. E., "Laboratory Simulation of the Atmospheric Boundary Layer," AIAA Jl., Vol. 9, September 1971.
2. Cermak, J. E., "Applications of Fluid Mechanics to Wind Engineering," A Freeman Scholar Lecture, ASME Jl. of Fluids Engineering, Vol. 97, No. 1, March 1975.
3. Cermak, J. E., "Aerodynamics of Buildings," Annual Review of Fluid Mechanics, Vol. 8, 1976, pp. 75-106.
4. Roll, H. U., "Values of Ocean Waves as a Function of Wind Forces," Armed Services Technical Information Agency, AD 88296, 1954.

**TABLES**

TABLE 1  
VELOCITY PROFILE TEST PLAN

Helideck Configuration	Wind Azimuth	Measurement Positions	Helideck Elevations	Number of Profiles
S	000	1	A,B,C,D	4
S	030	1	A,B,C,D	4
S	045	1	A,B,C,D	4
S	090	1	A,B,C,D	4
S	135	1-5	A,B,C,D	20
S	135	7	A,C	2
S	180	1-5	A,B,C,D	20
S	180	6	A,C	2
S	225	1-5	A,B,C,D	20
S	225	6	A,C	2
S	270	1-5	A,B,C,D	20
S	270	6	A,C	2
S	315	1-5	A,B,C,D	20
S	315	6	A,C	2
M	180	1	A,C	2
M	270	1	A,C	2
N	180	1	A,C	2
N	270	1	A,C	2
P	180	1	A,C	2
P	270	1	A,C	2
Q	135	1	A,C	2
Q	180	1	A,C	2
Q	225	1	A,C	2
Q	270	1	A,C	2
Q	315	1	A,C	2
R	180	1	A	1
R	225	1	A	1
R	270	1	A	1
W	135	1,3,4,7	A,C	8
W	225	1,3,5,6	A,C	8
W	000	1	A,B,C,D	4
W	180	4	A,B,C,D	4
W	270	4,5	A,B,C,D	8
				<u>183 total</u>

#### SPECIAL PROFILES

PLAT A3		
PLAT A4	PLAT A_	Same conditions as A180S4 with variable free stream velocity
PLAT A5		
PLAT C3		
PLAT C4	PLAT C_	Same conditions as C180S4 with variable free stream velocity
PLAT C5		

Free stream velocity for PLAT A\_ and PLAT C\_  
 3 ≈ 14.6 mps; 4 ≈ 11.0 mps; 5 ≈ 7.3 mps

Smooth - approach profile 3 ft upstream with smooth floor

Waves - approach profile 3 ft upstream with wavey floor

#### HELIDECK CONFIGURATION CODE

Smooth Approach: S = original helideck shape on south corner

M = Mod 1 helideck shape on south corner

N = Mod 2 helideck shape on south corner

P = Mod 3 helideck shape on south corner

Q = original helideck shape on west corner

R = no helideck shape on south corner

Wave Approach: W = original helideck shape on south corner

#### HELIDECK ELEVATION DESCRIPTION

A = 0.0 meters platform clearance above living quarters

B = 2.5 meters platform clearance above living quarters

C = 5.0 meters platform clearance above living quarters

D = 8.5 meters platform clearance above living quarters

TABLE 2  
MOTION PICTURE SCENE GUIDE  
(800 ft, 22 min)

<u>Run</u>	<u>Wind Dir</u>	<u>Height</u>	<u>Config</u>	<u>Location</u>	<u>Views</u>
1	30	0.0	0	S	S
2	30	5.0	0	S	S
3	135	0.0	0	S	S
4	135	5.0	0	S	S
5	180	0.0	0	S	S and T
6	180	5.0	0	S	S and T
7	225	0.0	0	S	S and T
8	225	5.0	0	S	S and T
9	225	2.5	0	S	S
10	225	8.5	0	S	S
11	270	0.0	0	S	S and T
12	270	5.0	0	S	S and T
13	180	0.0	0	S	S
14	180	5.0	0	S	S
15	180	0.0	1	S	S and T
16	180	5.0	1	S	S and T
17	270	0.0	1	S	S and T
18	270	5.0	1	S	S and T
19	180	0.0	2	S	S and T
20	180	5.0	2	S	S and T
21	270	0.0	2	S	S and T
22	270	5.0	2	S	S and T
23	180	0.0	3	S	S and T
24	180	5.0	3	S	S and T
25	270	0.0	3	S	S and T
26	270	5.0	3	S	S and T
27	180	0.0	0	W	S
28	180	5.0	0	W	S
29	225	0.0	0	W	S
30	270	0.0	0	W	S
31	180	0.0	removed	S	S
32	225	0.0	removed	S	S
33	270	0.0	removed	S	S

**Configuration:**

- 0 = Original helideck shape
- 1 = Modified helideck - clipped corners
- 2 = Modified helideck - circle
- 3 = Modified helideck - square

**Location:****Views:**

S = South Corner  
W = West Corner

S = Side  
T = Top

Table 3

15 PERCENT TURBULENCE LEVELS--(Height above Helideck)  
 < = less than 15 percent everywhere

Helideck Configuration	WD	Position	Height			
			A	B	C	D
S	000	1	4.0	m	<	<
		1	7.7	5.7	3.3	1.6
		1	9.1	4.0	2.7	2.3
		1	<	2.2	<	<
		1	7.4	5.9	5.5	4.9
		2	6.9	3.9	2.6	1.7
		3	5.0	3.6	3.2	3.0
	180	4	3.5	1.8	1.0	<
		5	8.4	7.0	6.7	5.9
		7	<		<	
		1	<	<	<	<
		2	<	<	<	<
		3	2.6	<	1.6	<
		4	3.0	2.8	2.7	2.4
	225	5	1.6	2.2	2.7	2.6
		6	<		<	
		1	5.4	5.3	5.2	4.9
		2	5.5	5.1	4.9	5.0
		3	5.4	4.6	3.6	3.6
		4	3.5	3.5	3.3	2.6
		5	5.0	4.2	3.9	3.5
		6	<		<	
S	270	1	2.3	1.0	<	<
		2	7.3	3.2	<	<
		3	4.1	3.2	3.1	2.7
		4	3.1	2.9	2.8	2.6
		5	5.5	3.2	2.5	1.3
		6	6.8		2.0	

Table 3 (Continued)

Helideck Configuration	WD	Position	Height			
			A	B	C	D
S	315	1	4.6	2.2	2.9	3.0
		2	4.1	1.1	<	<
		3	4.9	1.7	2.7	3.8
		4	1.6	1.0	1.1	1.4
		5	4.2	1.8	2.3	2.4
		6	6.4		5.3	
M	180	1	<		1.2	
M	270	1	4.3		1.7	
N	180	1	2.7		2.3	
N	270	1	5.4		3.3	
P	180	1	<		<	
P	270	1	4.3		<	
Q	135	1	5.9		1.3	
	180	1	<		<	
	225	1	3.1		3.0	
Q	270	1	<		<	
Q	315	1	4.6		4.4	
R	180	1	1.9			
R	225	1	3.4			
R	270	1	2.8			
W	135	1	8.0		5.6	
		3	5.3		3.8	
		5	10.8		7.2	
		7	<		<	
		225	1	5.7		5.4
		3	5.4		4.9	
		5	6.7		3.6	
		6	<		<	
	000	1	11.2	11.5	3.4	3.5
	180	4	3.4	3.4	2.8	2.7
	270	4	3.7	3.4	3.1	2.8
	270	5	6.5	2.3	1.9	1.0

Table 3 (Continued)

Helideck Configuration	WD	Position	Height			
			A	B	C	D
<b>Special Cases</b>						
Plat 3			2.8		3.3	
Plat 4			2.8		2.7	
Plat 5			2.7		2.8	
Smooth			<			
Waves			57.9	(m above sea level)		

**FIGURES**

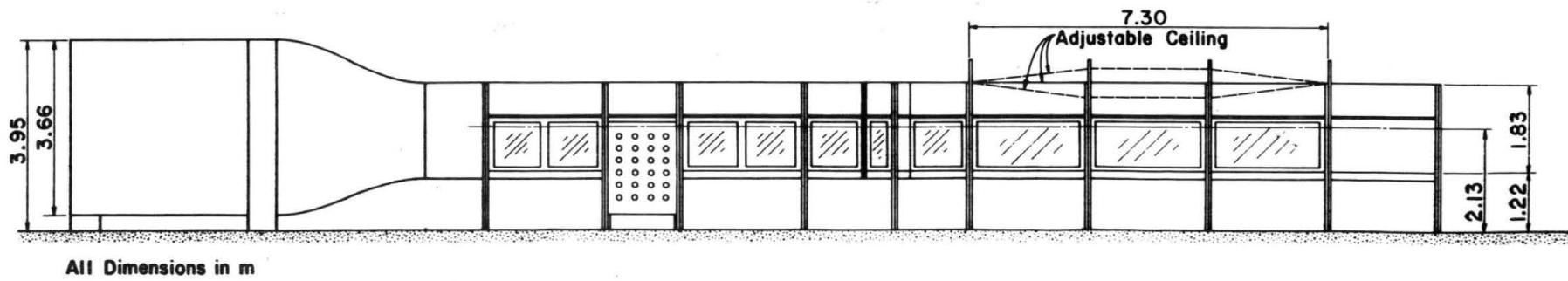
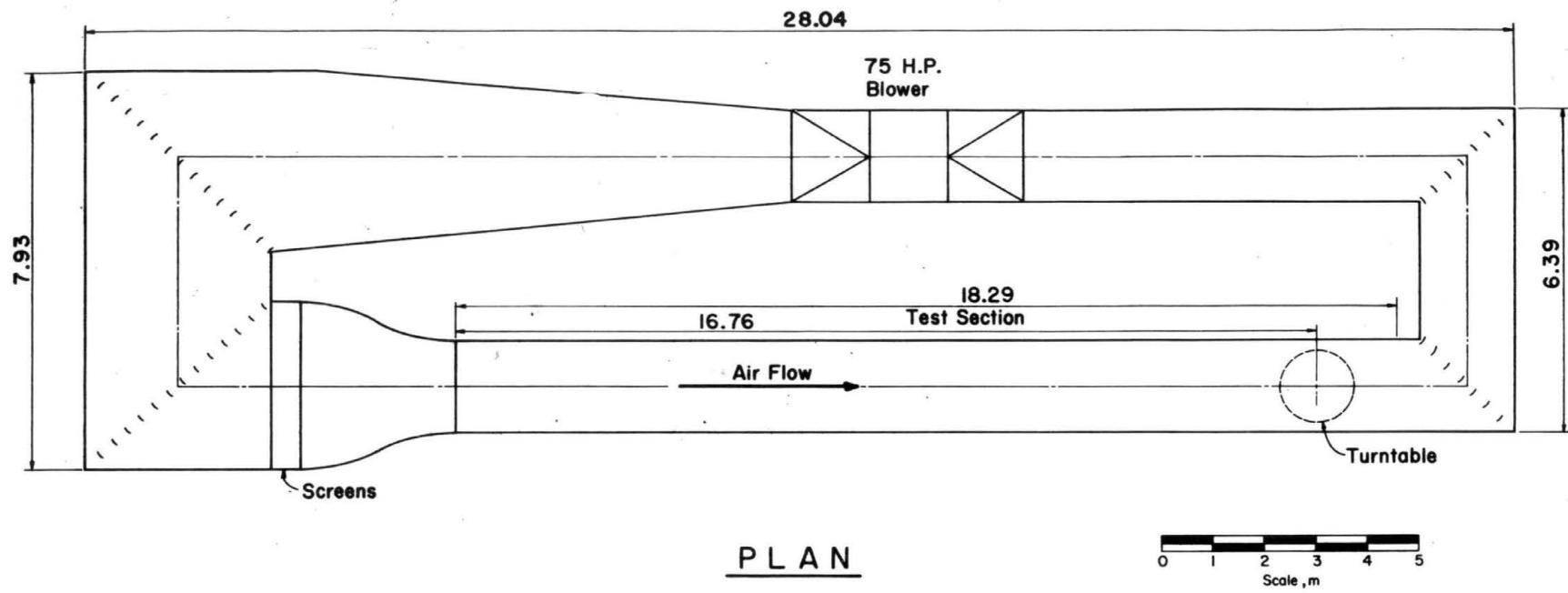
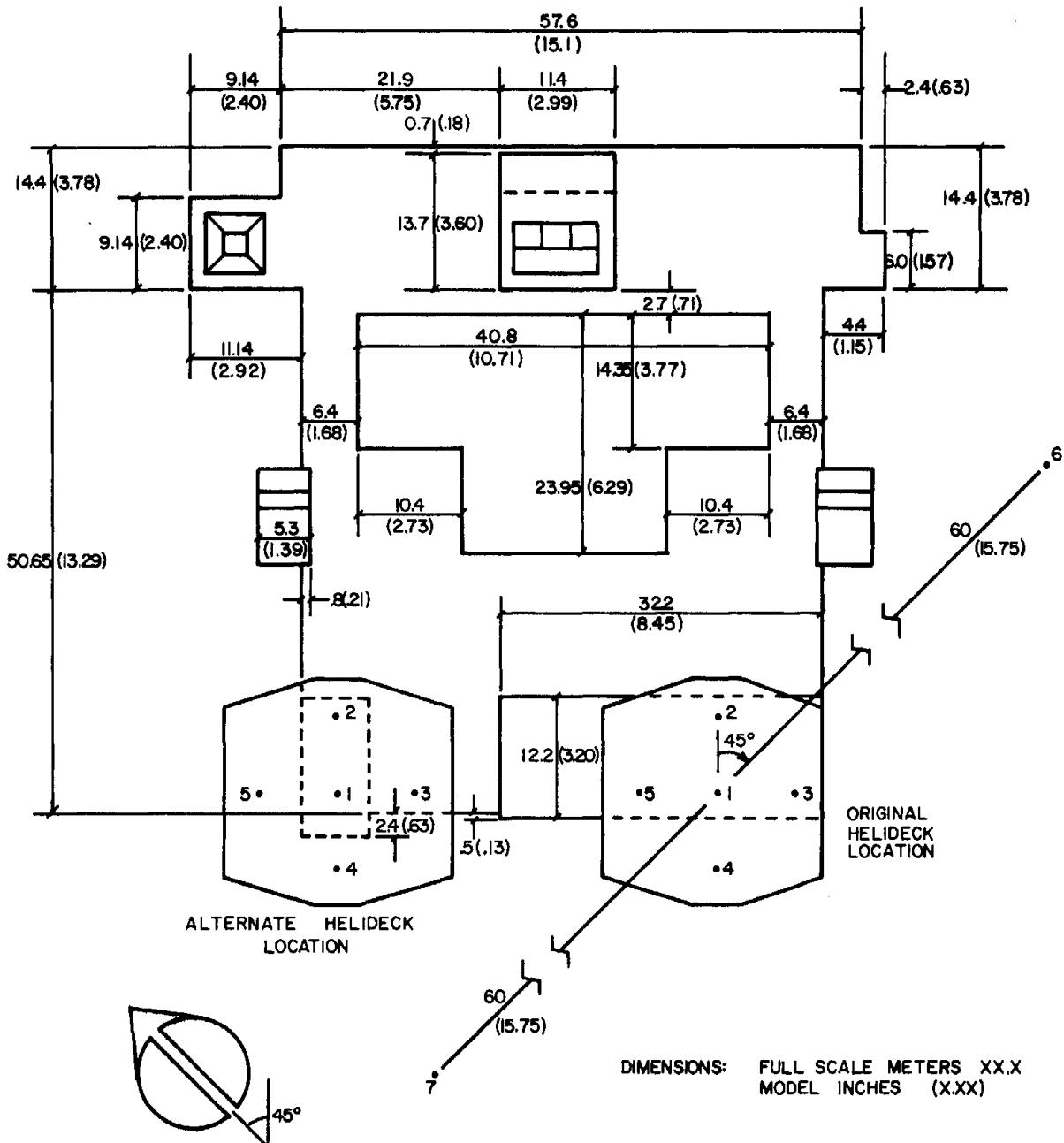


Figure 1. Industrial Aerodynamics Wind Tunnel.



**FIGURE 2a. WIND TUNNEL MODEL**

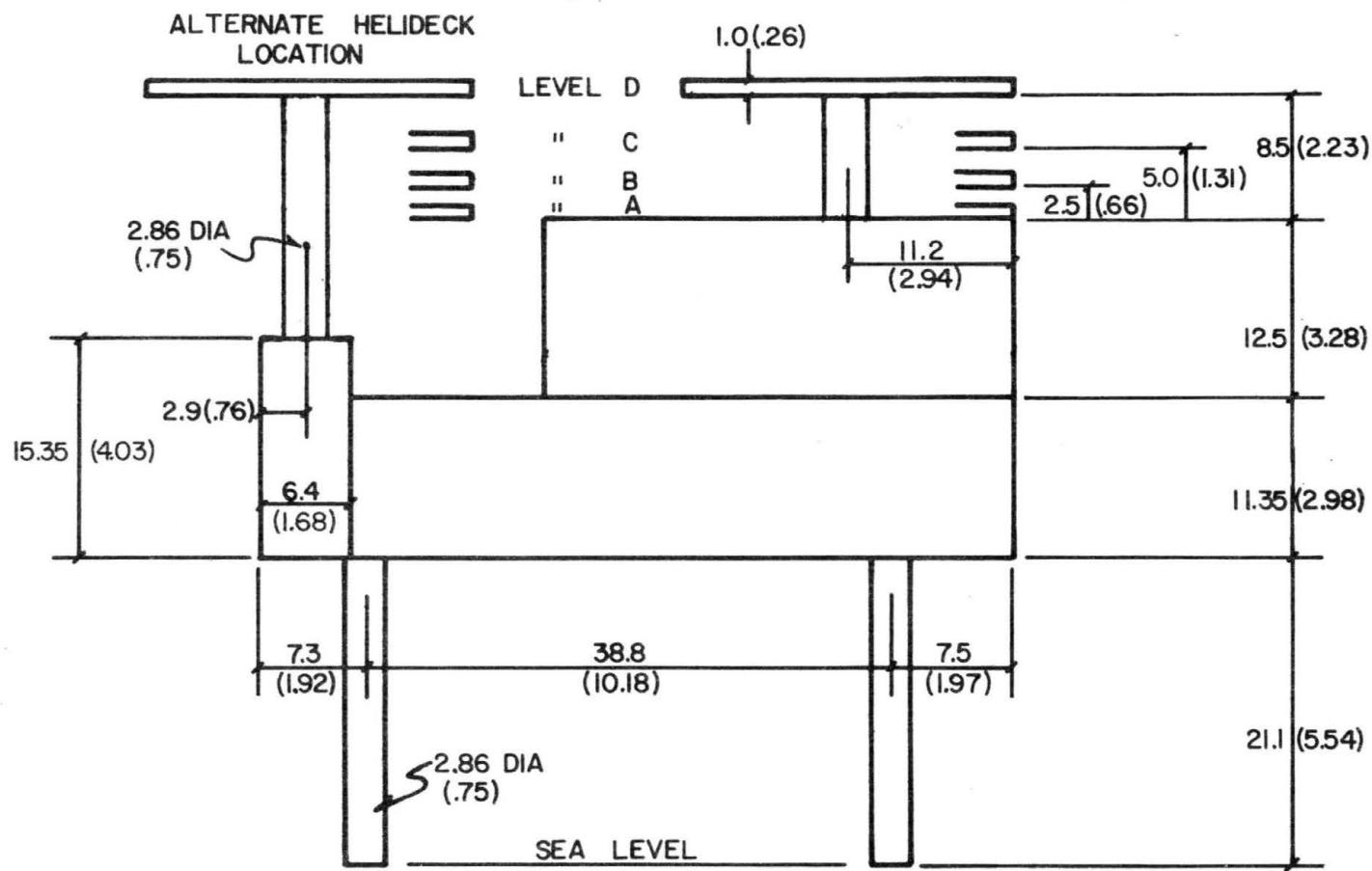


FIGURE 2b. WIND TUNNEL MODEL

SOUTHWEST ELEVATION

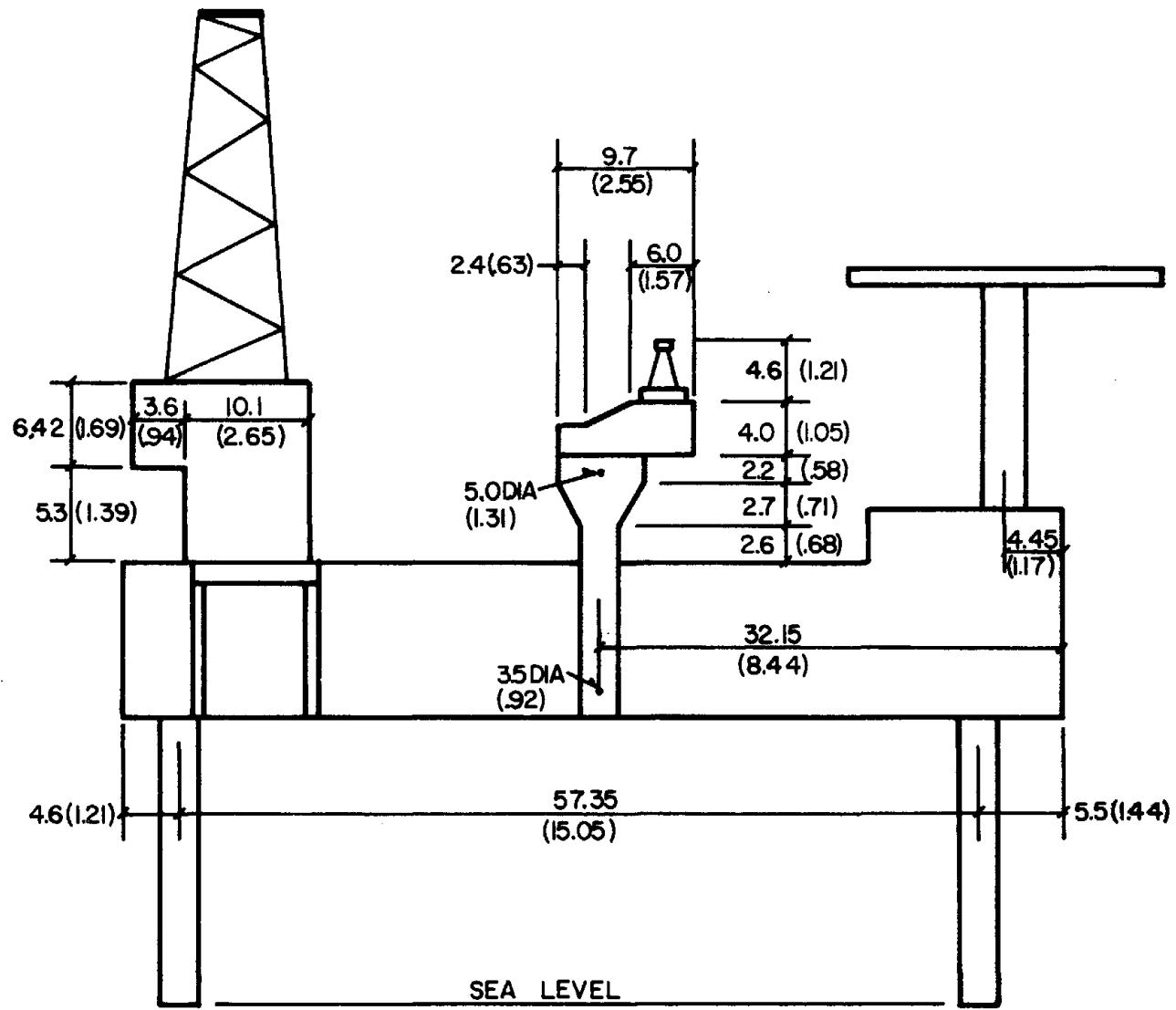


FIGURE 2c. WIND TUNNEL MODEL

NORTHWEST ELEVATION

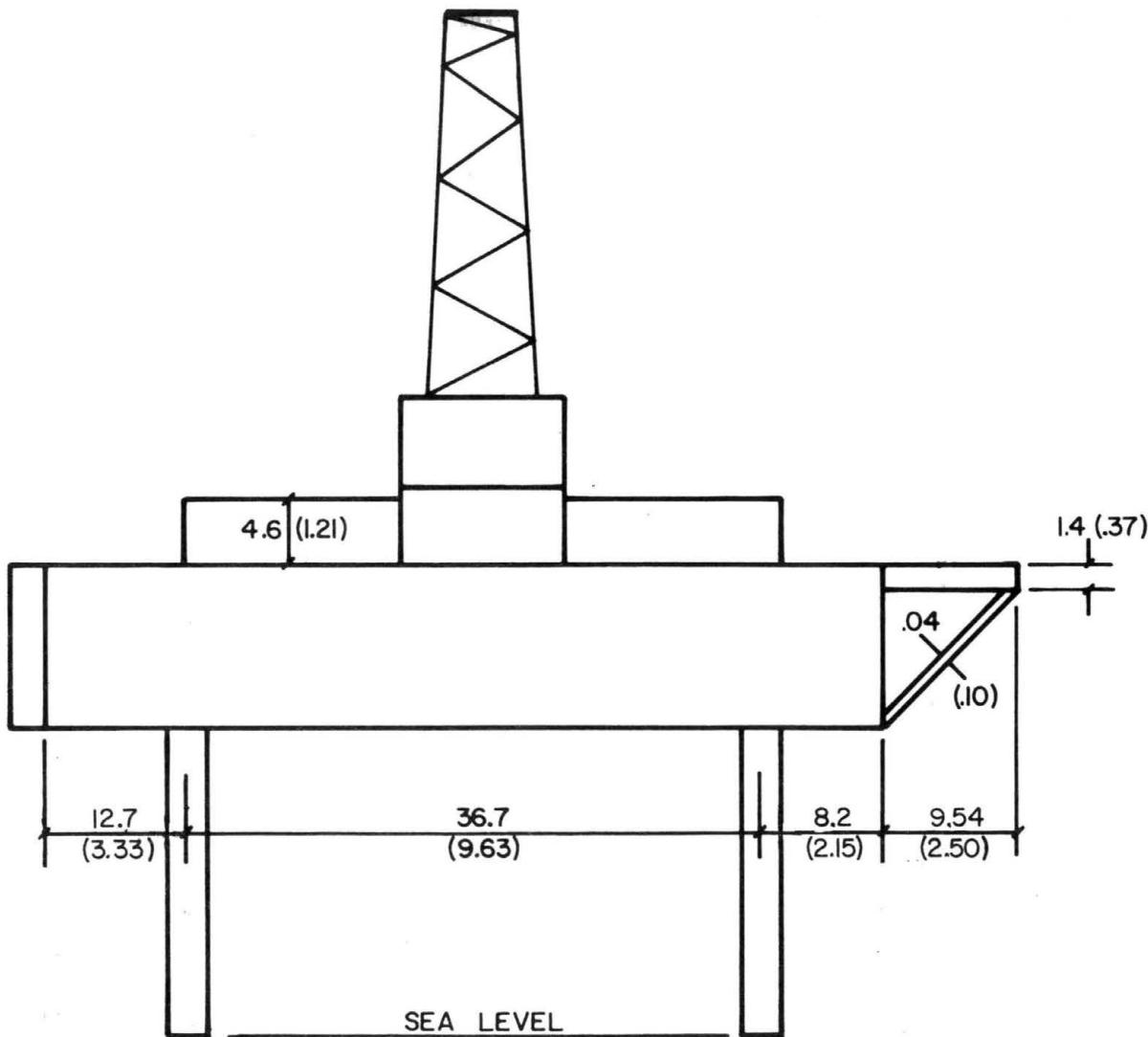


FIGURE 2d. WIND TUNNEL MODEL

NORTHEAST ELEVATION

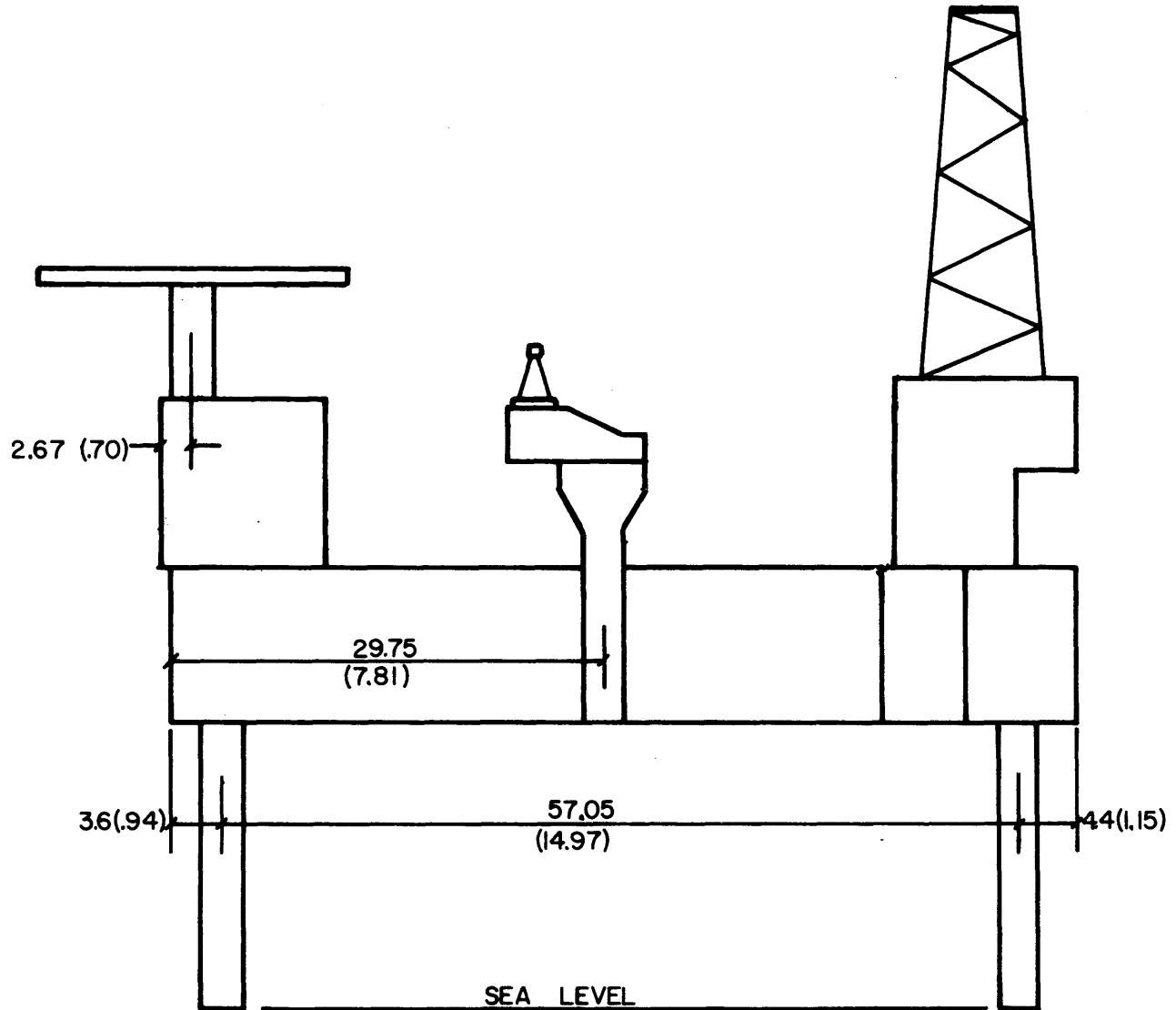


FIGURE 2e. WIND TUNNEL MODEL.

SOUTHEAST ELEVATION

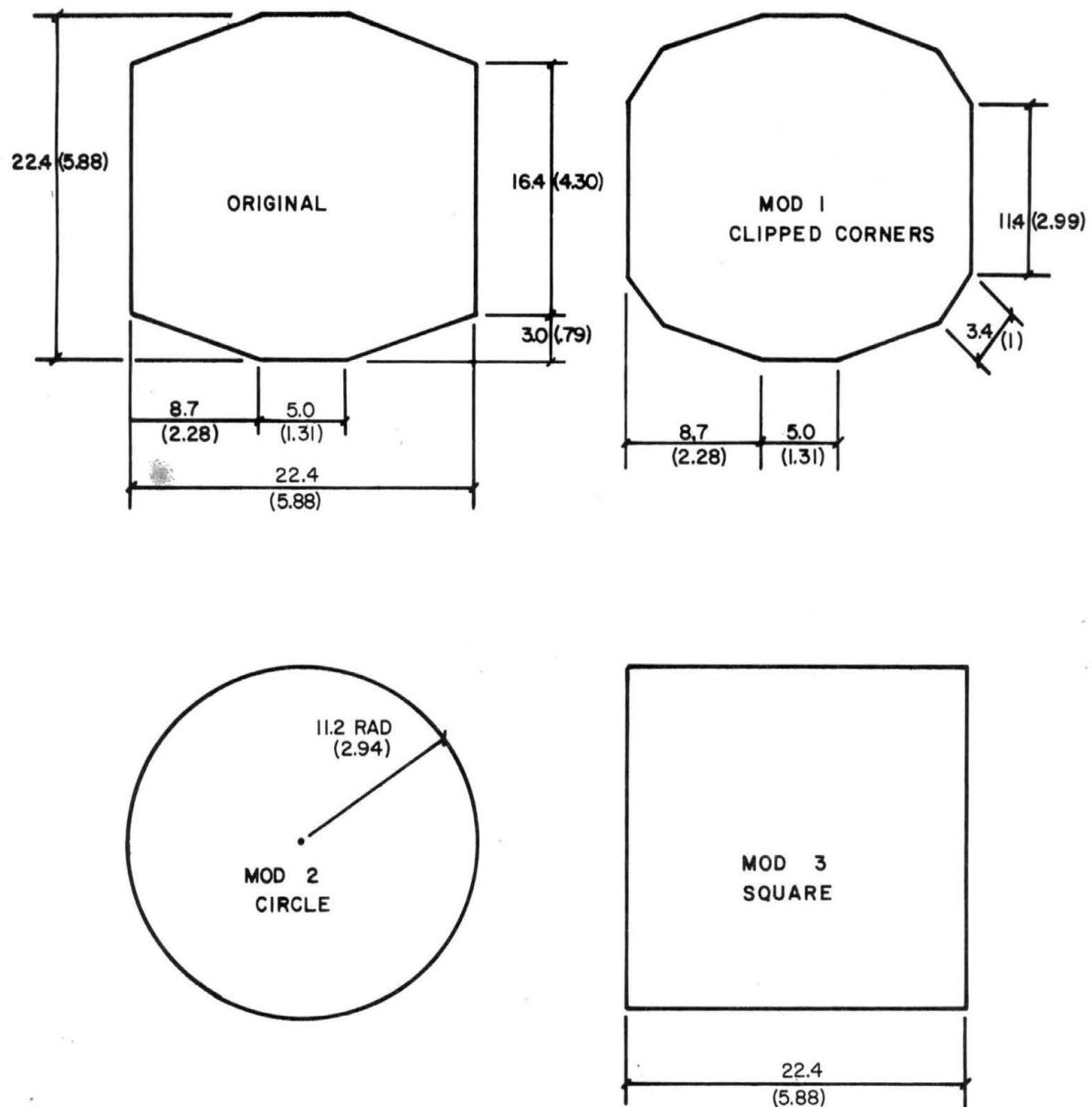


FIGURE 2f. WIND TUNNEL MODEL

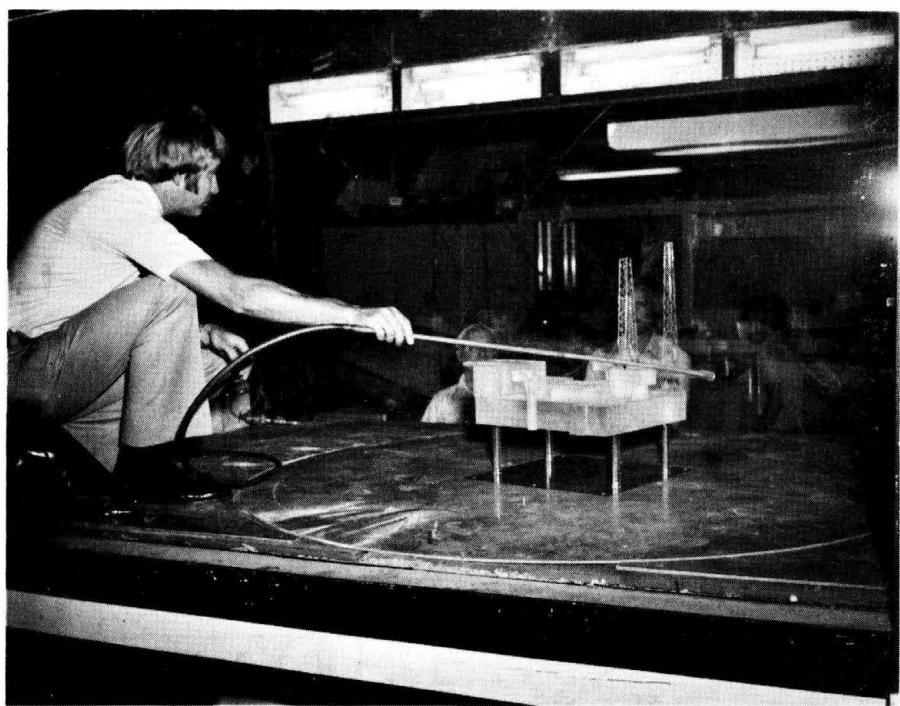


Figure 3a. Model Photographs

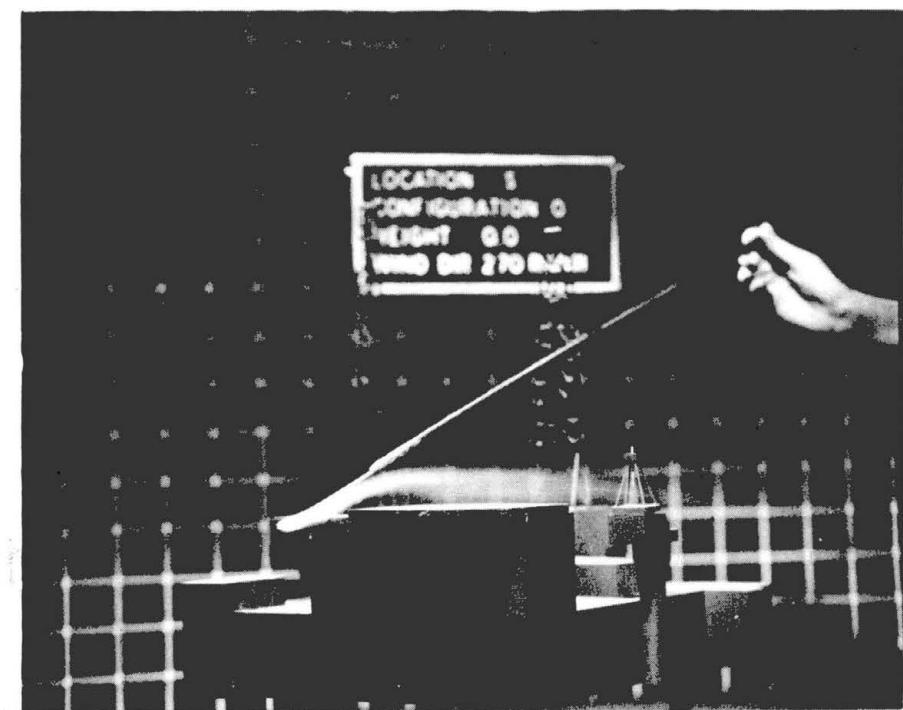
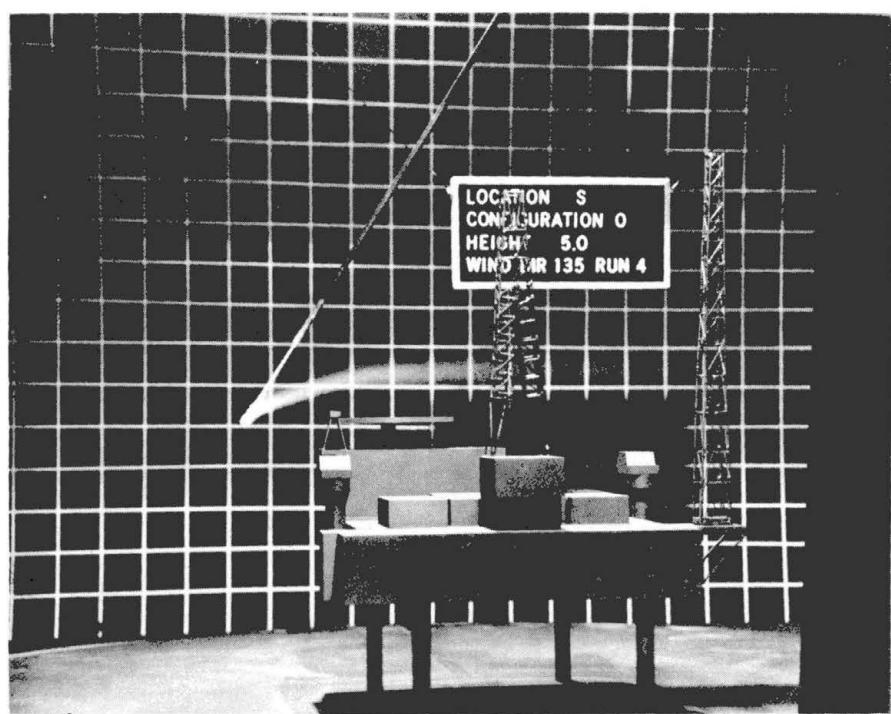


Figure 3b. Model Photographs

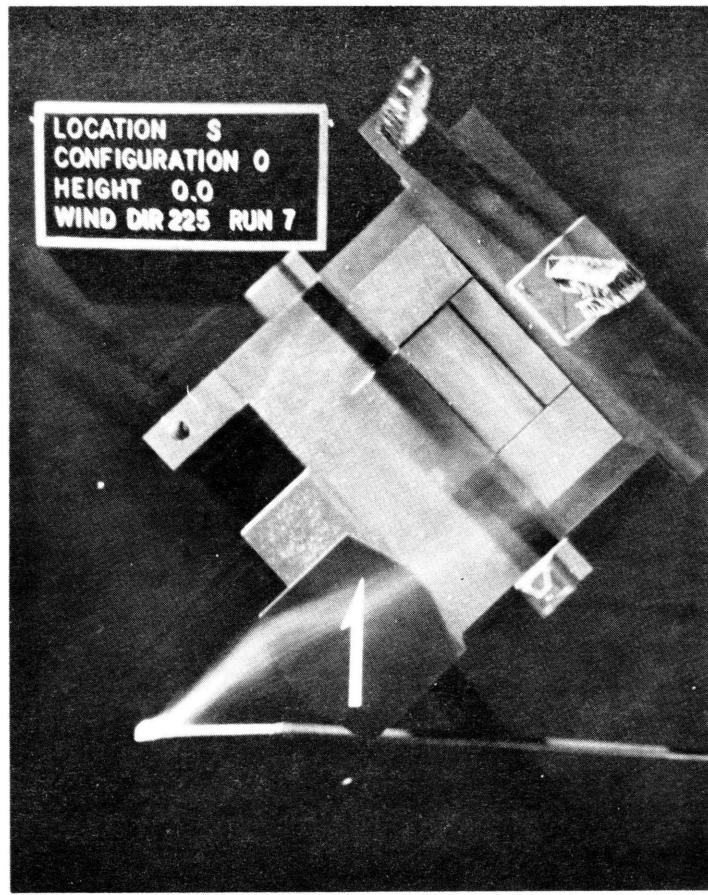
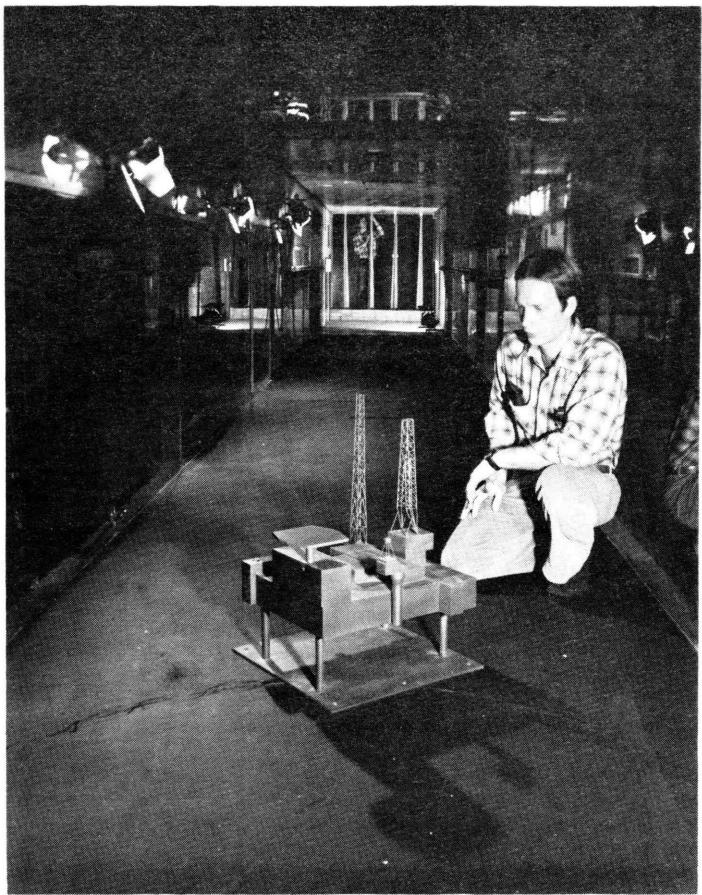


Figure 3c. Model Photographs

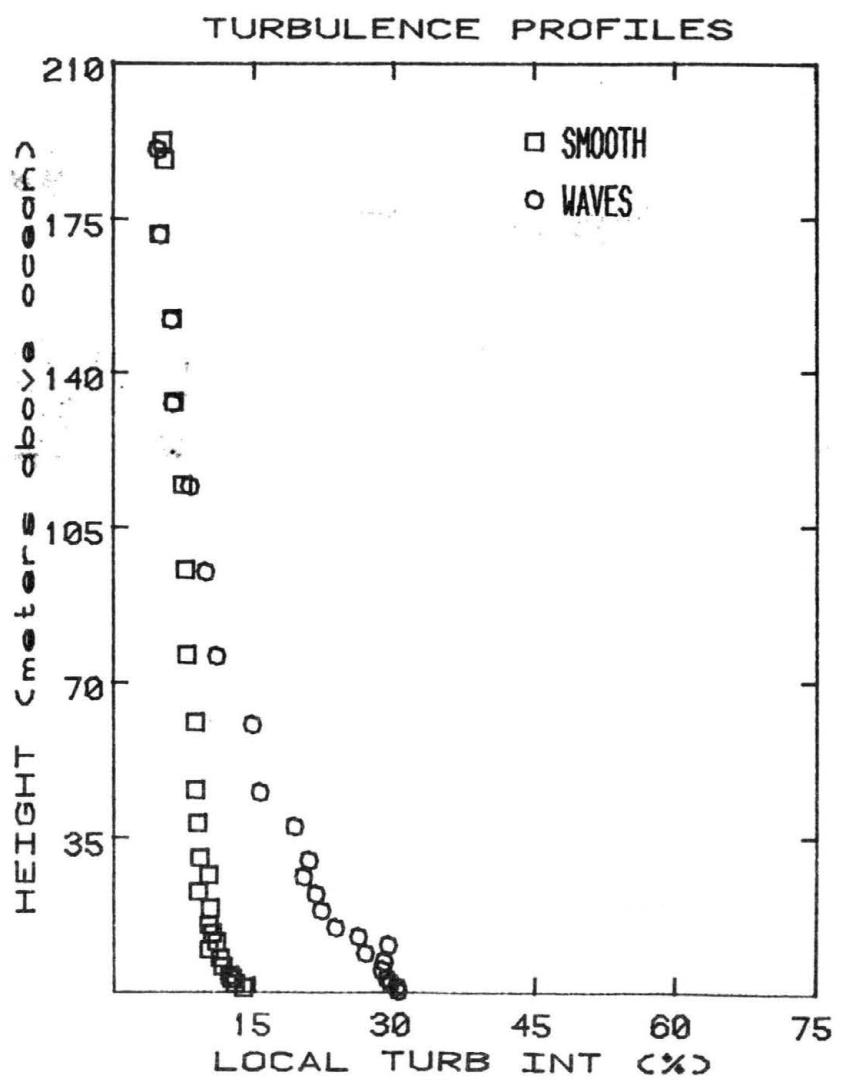
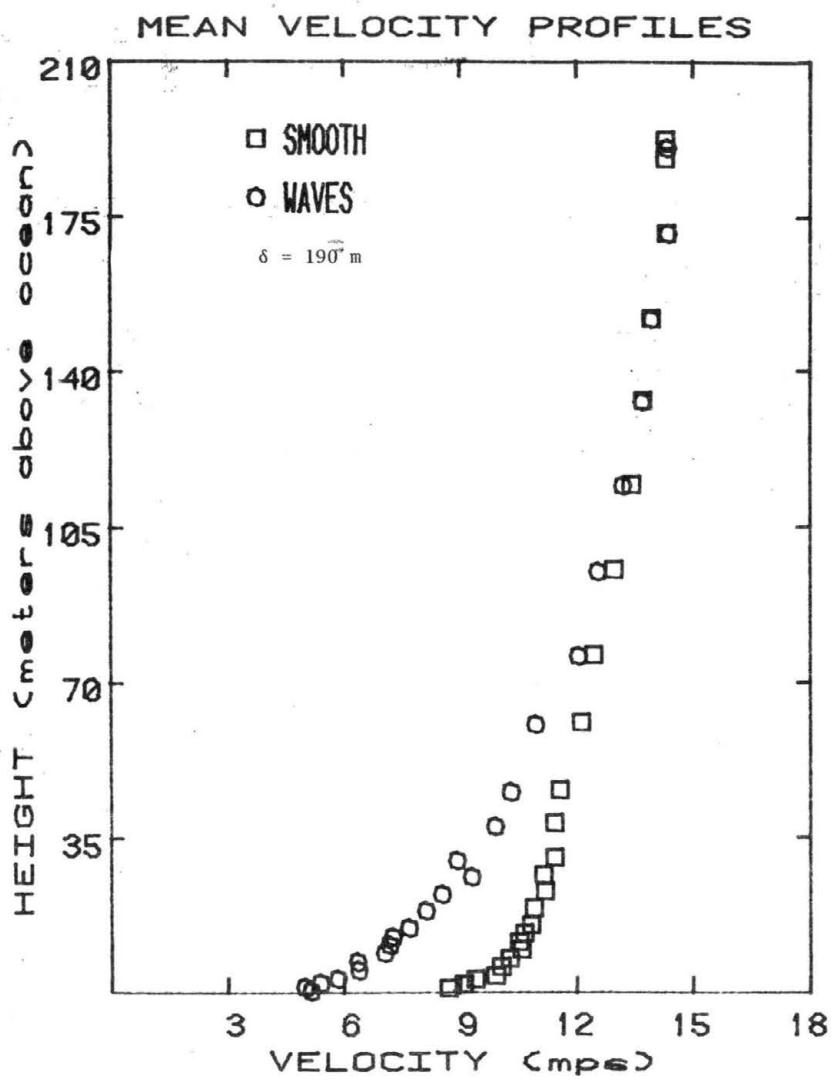


Figure 4. Approach Mean Velocity and Turbulence Intensity Profiles

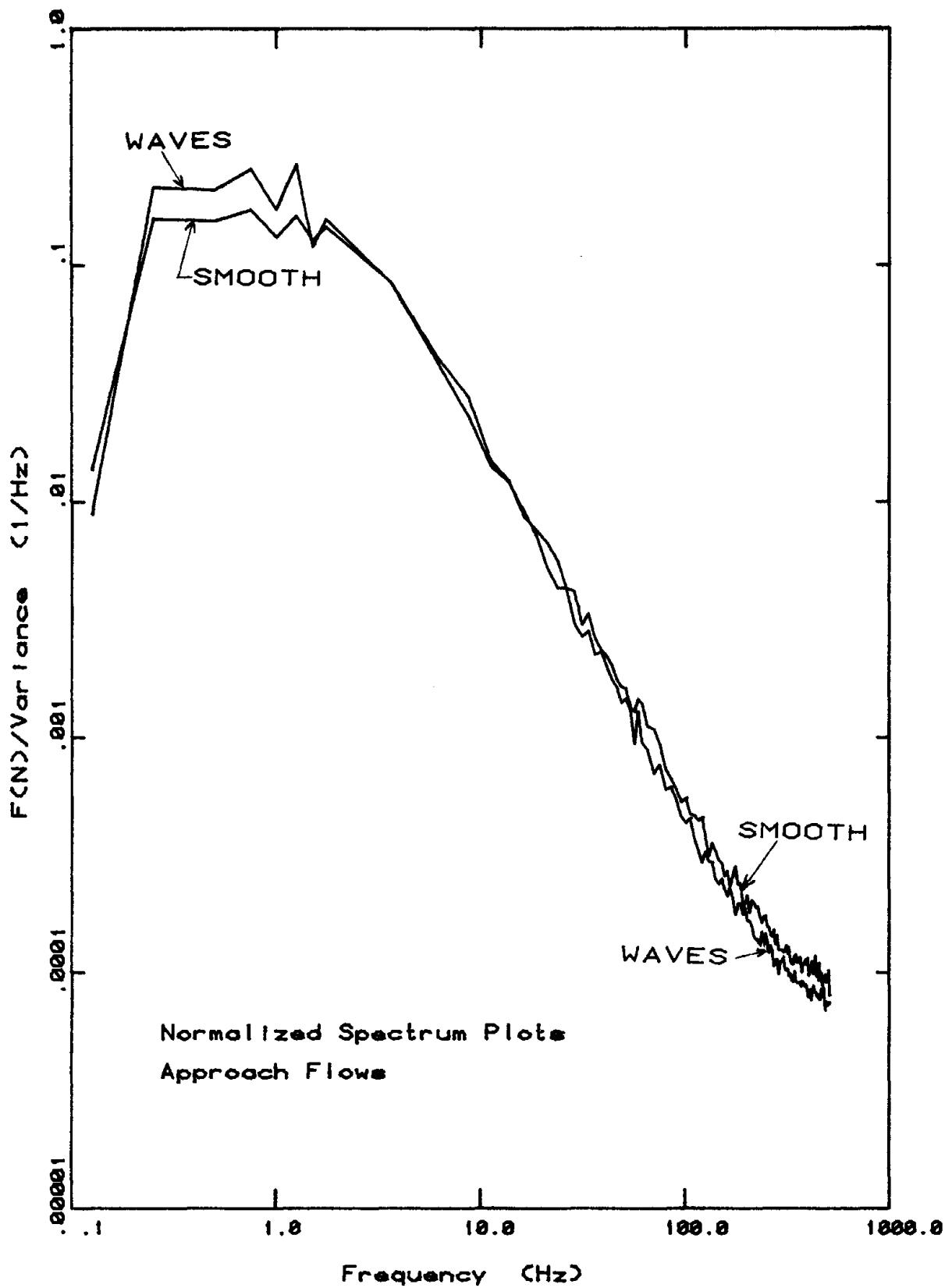


Figure 5. Approach Velocity Spectra

APPENDIX A  
Velocity Profile Graphs

PROFILE CODEPROFILE NAME = H    WD    C    PH = Helideck Height

A = 0.0	meters clearance above living quarters
B = 2.5 "	" " "
C = 5.0 "	" " "
D = 8.5 "	" " "

WD = Wind Azimuth (3 digit number)C = Helideck Configuration

Smooth, S	= original helideck shape on south corner
" M	= Mod 1 (clipped corners) on south corner
" N	= Mod 2 (circle) on south corner
" P	= Mod 3 (square) on south corner
" Q	= original helideck on west corner
" R	= no helideck on south corner
Waves, W	= original helideck on south corner

P = Profile Position (1-7)

(see Figure 2)

## Velocity Profile--Graph Guide

Graph #	1st Profile	2nd Profile	3rd Profile	4th Profile	5th Profile
1	A000S1	B000S1	C000S1	D000S1	
2	A030S1				
3	A045S1				
4	A090S1				
5	A135S1				
6	A135S2				
7	A135S3				
8	A135S4				
9	<b>A135S5</b>				
10	A180S1				
11	A180S2	B's	C's	D's	
12	A180S3				
13	A180S4				
14	A180S5				
15	A225S1				
16	A225S2				
17	A225S3				
18	A225S4				
19	A225S5				
20	A270S1				
21	A270S2				
22	A270S3	B270S3	C270S3	D270S3	
23	A270S4	B270S4	C270S4	D270S4	
24	A270S5				
25	A315S1				
26	A315S2	B's	C's	D's	
27	A315S3				
28	A315S4				
29	A315S5	B315S5	C315S5	D315S5	
30	A135S1	A135S3	A135S5	A135S7	

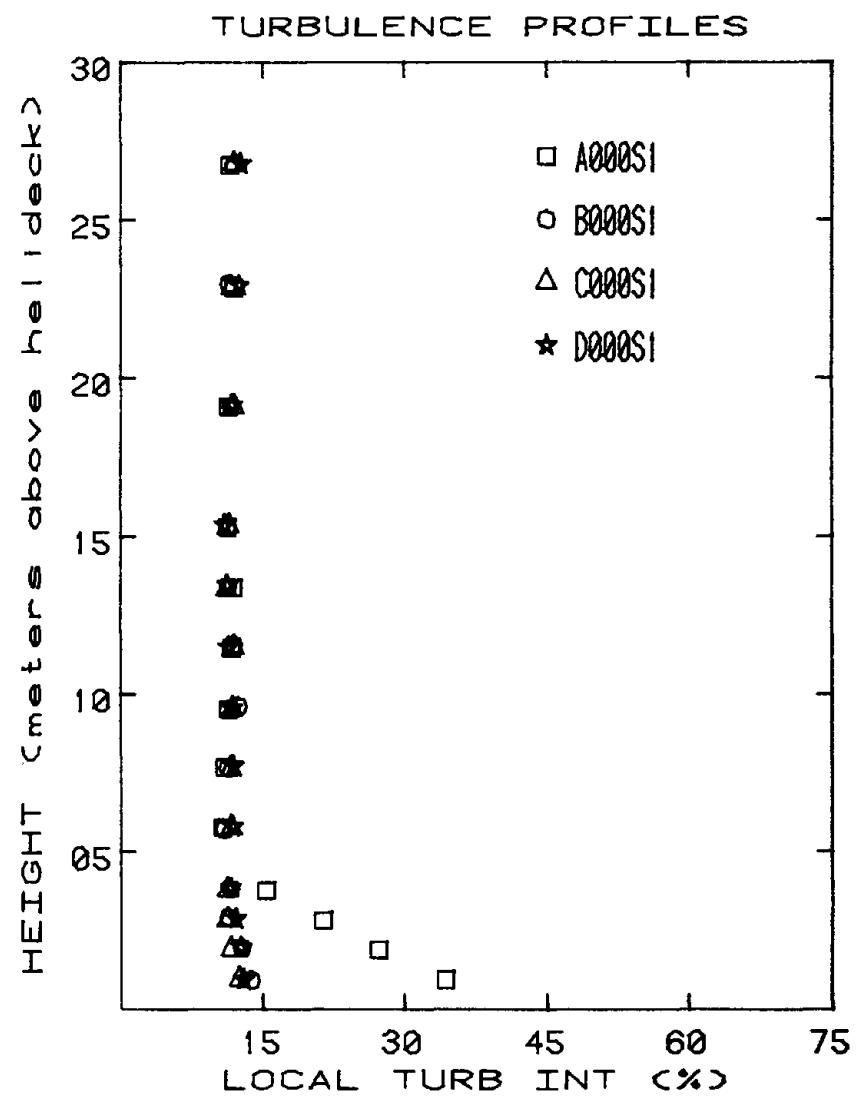
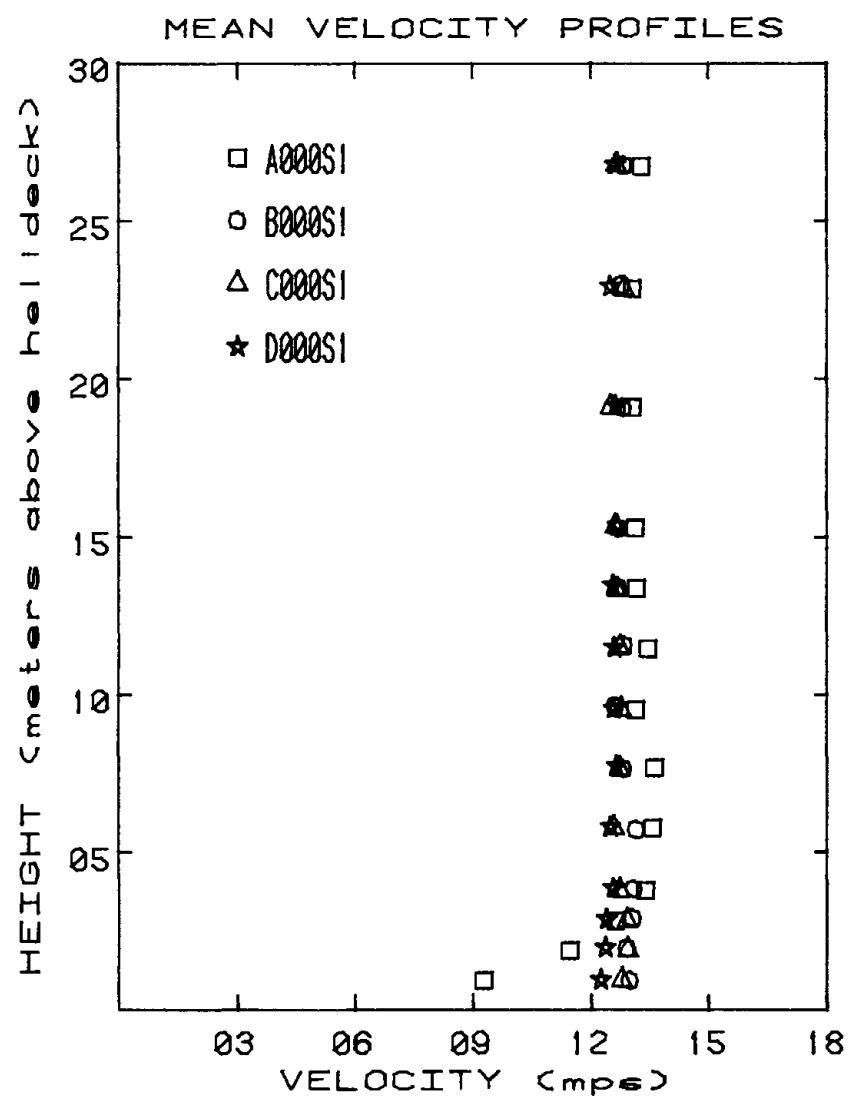
## Velocity Profile--Graph Guide

Graph #	1st Profile	2nd Profile	3rd Profile	4th Profile	5th Profile
31	C135S1	C135S3	C135S5	C135S7	
32	A180S1	A180S3	A180S5	A180S6	
33	C180S1	C180S3	C180S5	C180S6	
34	A225S1	A225S3	A225S5	A225S6	
35	C225S1	C225S3	C225S5	C225S6	
36	A270S1	A270S3	A270S5	A270S6	
37	C270S1	C270S3	C270S5	C270S6	
38	A315S1	A315S3	A315S5	A315S6	
39	C315S1	C315S3	C315S5	C315S6	
40	A180M1	C180M1			
41	A270M1	C270M1			
42	A180N1	C180N1			
43	A270N1	C270N1			
44	A180P1	C180P1			
45	A270P1	C270P1			
46	A135Q1	C135Q1			
47	A180Q1	C180Q1			
48	A225Q1	C225Q1			
49	A270Q1	C270Q1			
50	A315Q1	C315Q1			
51	A180R1	A225R1	A270R1		
52	A180S1	B180S1	C180S1	D180S1	A180R1
53	A225S1	B225S1	C225S1	D225S1	A225R1
54	A270S1	B270S1	C270S1	D270S1	A270R1
55	A135S1	A135Q1	C135S1	C135Q1	
56	A180S1	A180Q1	C180S1	C180Q1	
57	A225S1	A225Q1	C225S1	C225Q1	
58	A270S1	A270Q1	C270S1	C270Q1	
59	A315S1	A315Q1	C315S1	C315Q1	
60	A180S1	A180M1	A180N1	A180P1	
61	C180S1	C180M1	C180N1	C180P1	

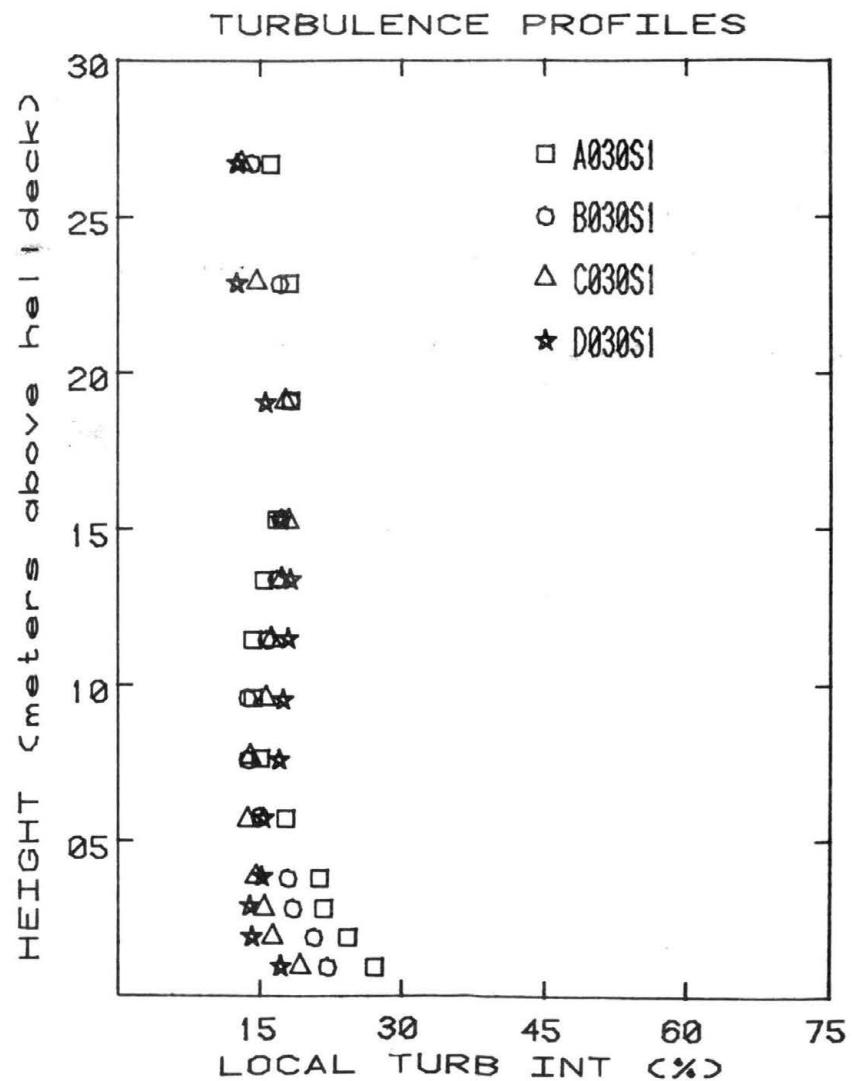
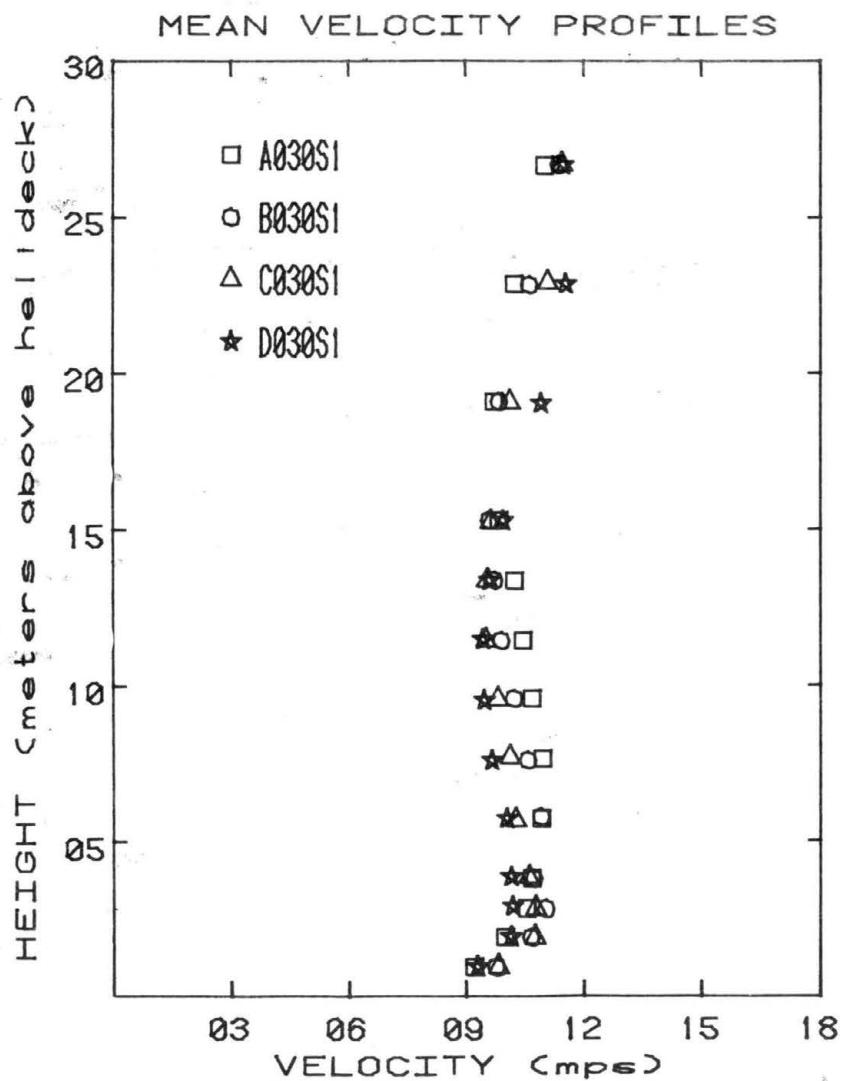
## Velocity Profile--Graph Guide

Graph #	1st Profile	2nd Profile	3rd Profile	4th Profile	5th Profile
62	A270S1	A270M1	A270N1	A270P1	
63	C270S1	C270M1	C270N1	C270P1	
64	A135W1	A135W3	A135W5	A135W7	
65	C135W1	C135W3	C135W5	C135W7	
66	A225W1	A225W3	A225W5	A225W6	
67	C225W1	C225W3	C225W5	C225W6	
68	A000W1	B000W1	C000W1	D000W1	
69	A180W4	B180W4	C180W4	D180W4	
70	A270W4	B270W4	C270W4	D270W4	
71	A270W5	B270W5	C270W5	D270W5	
72	A000S1	A000W1	C000S1	C000W1	
73	A135S1	A135W1	C135S1	C135W1	
74	A225S1	A225W1	C225S1	C225W1	
75	PLAT A3	PLAT A4	PLAT A5	(Dimensional)	
76	PLAT A3	PLAT A4	PLAT A5	(Nondimensional)	
77	PLAT C3	PLAT C4	PLAT C5	(Dimensional)	
78	PLAT C3	PLAT C4	PLAT C5	(Nondimensional)	
79	SMOOTH	A000S1	A045S1	A090S1	A135S1
80	SMOOTH	A180S1	A225S1	A270S1	A315S1
81	WAVES	A000W1	A135W1	A225W1	

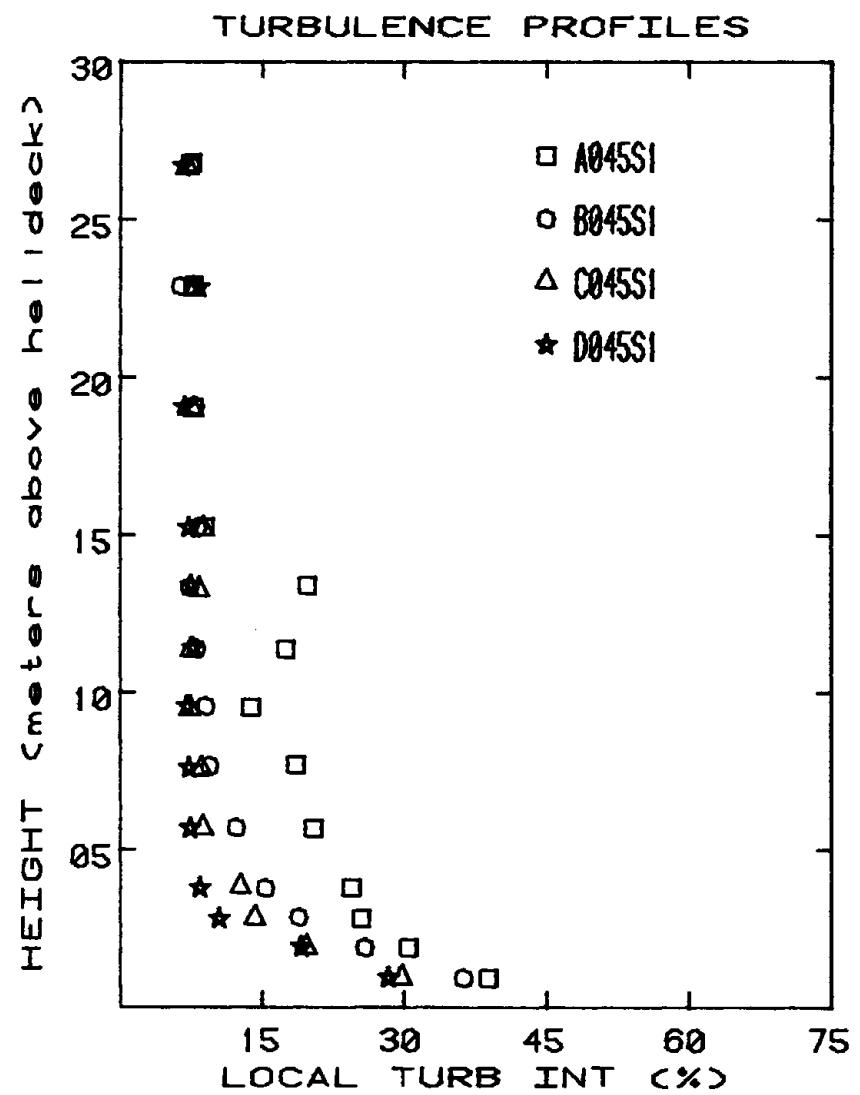
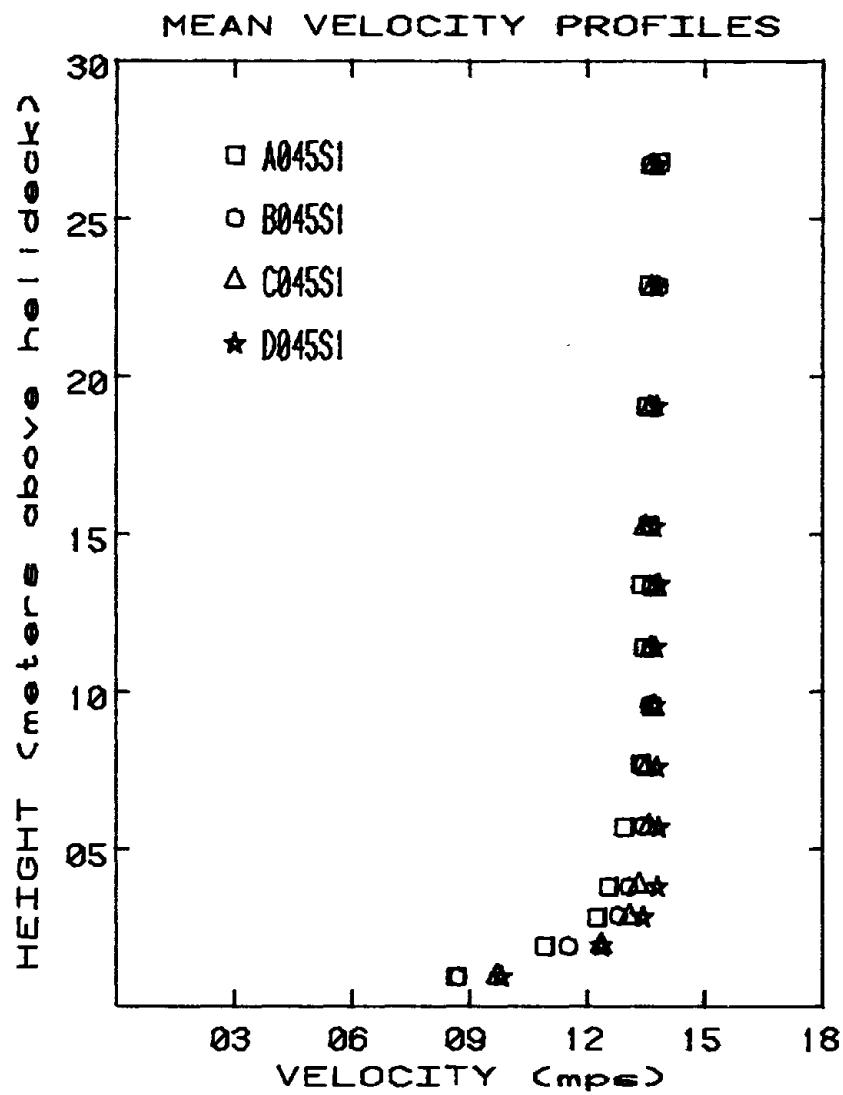
GRAPH # 01



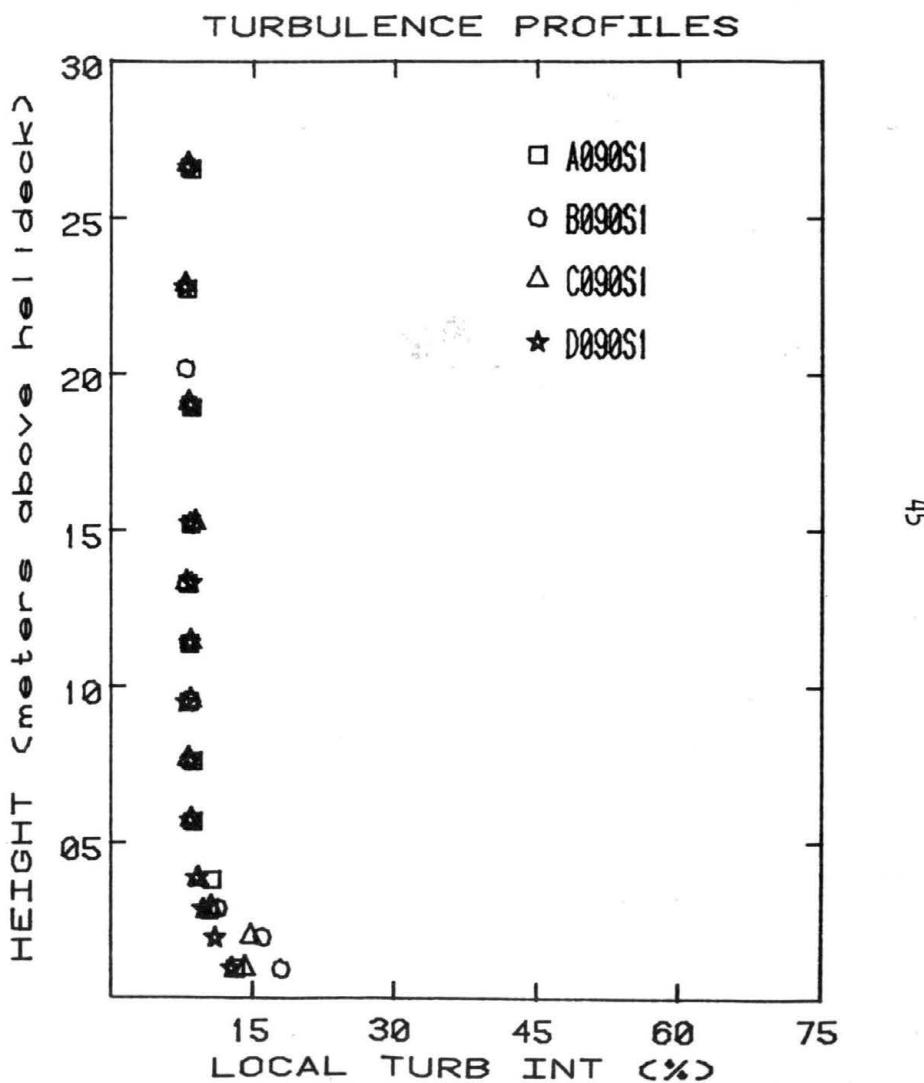
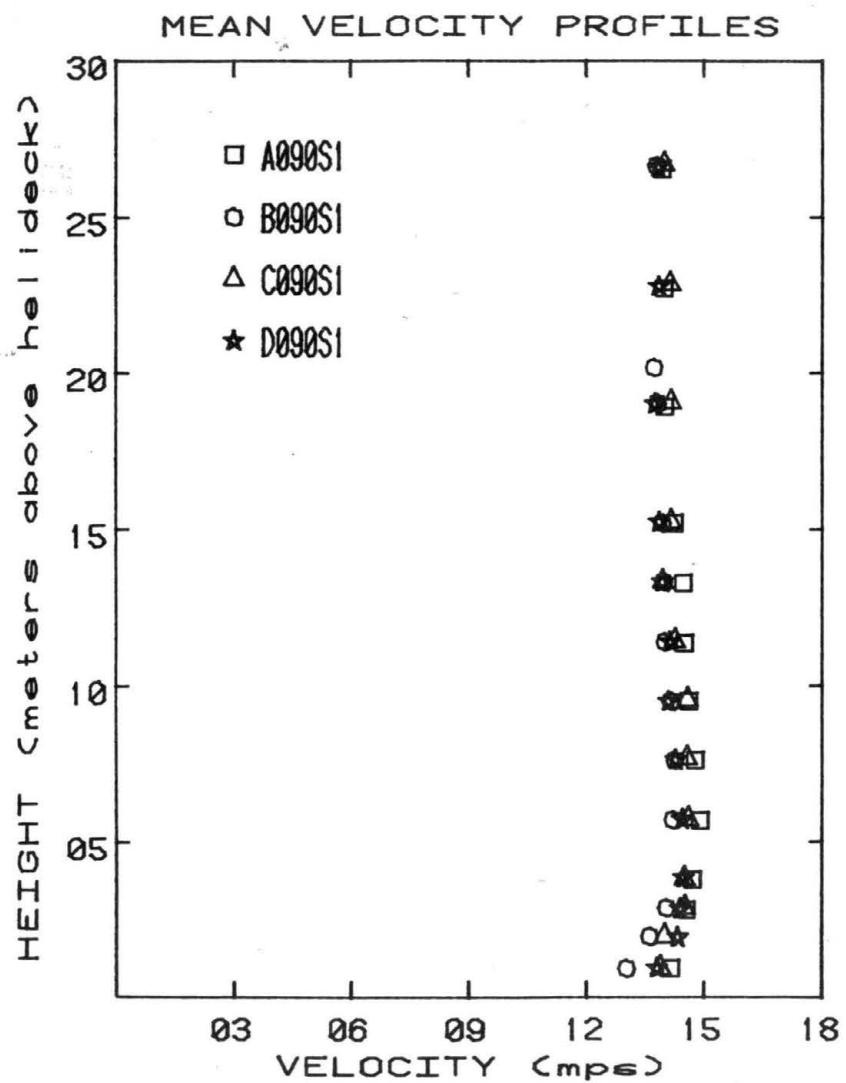
GRAPH # 02



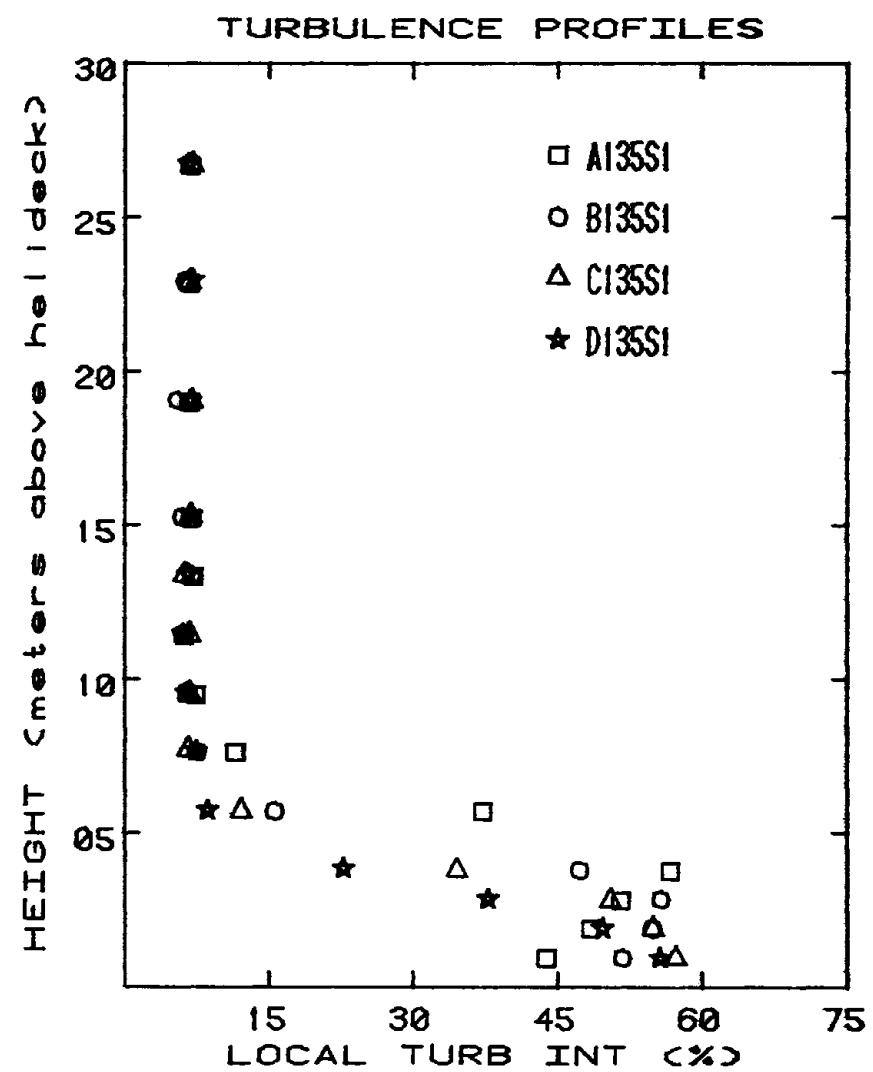
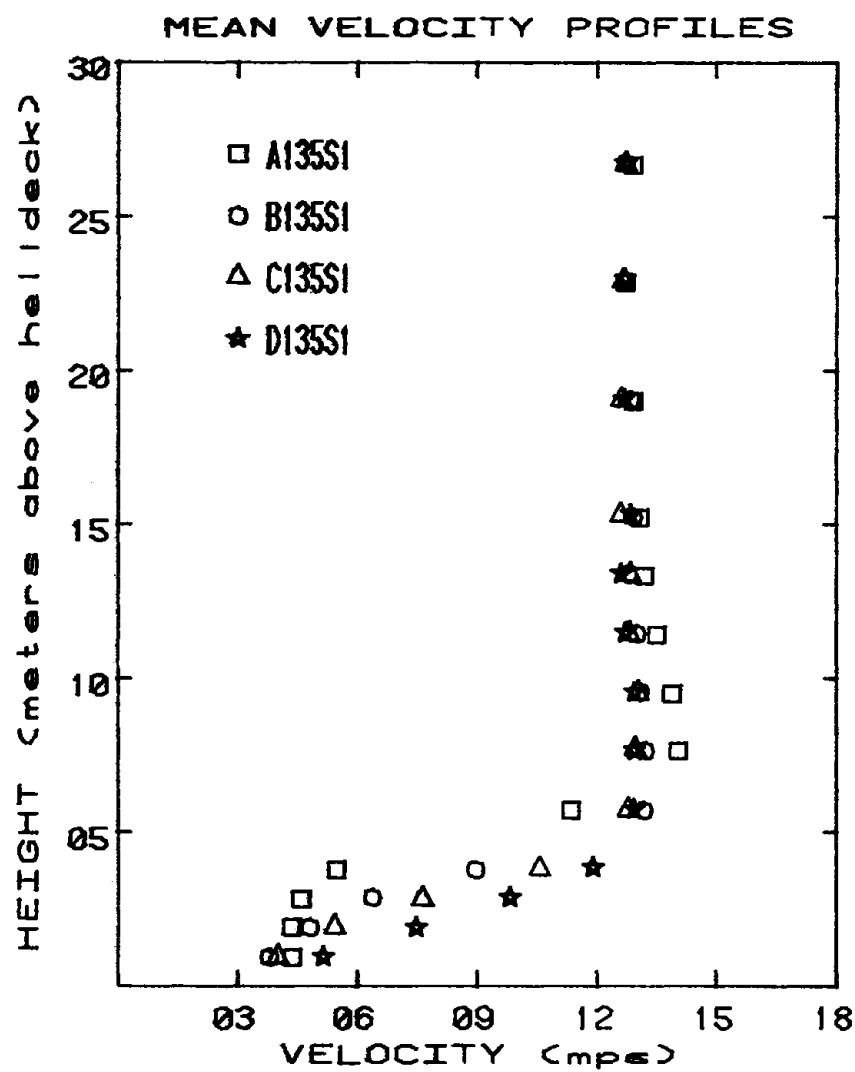
GRAPH # 03



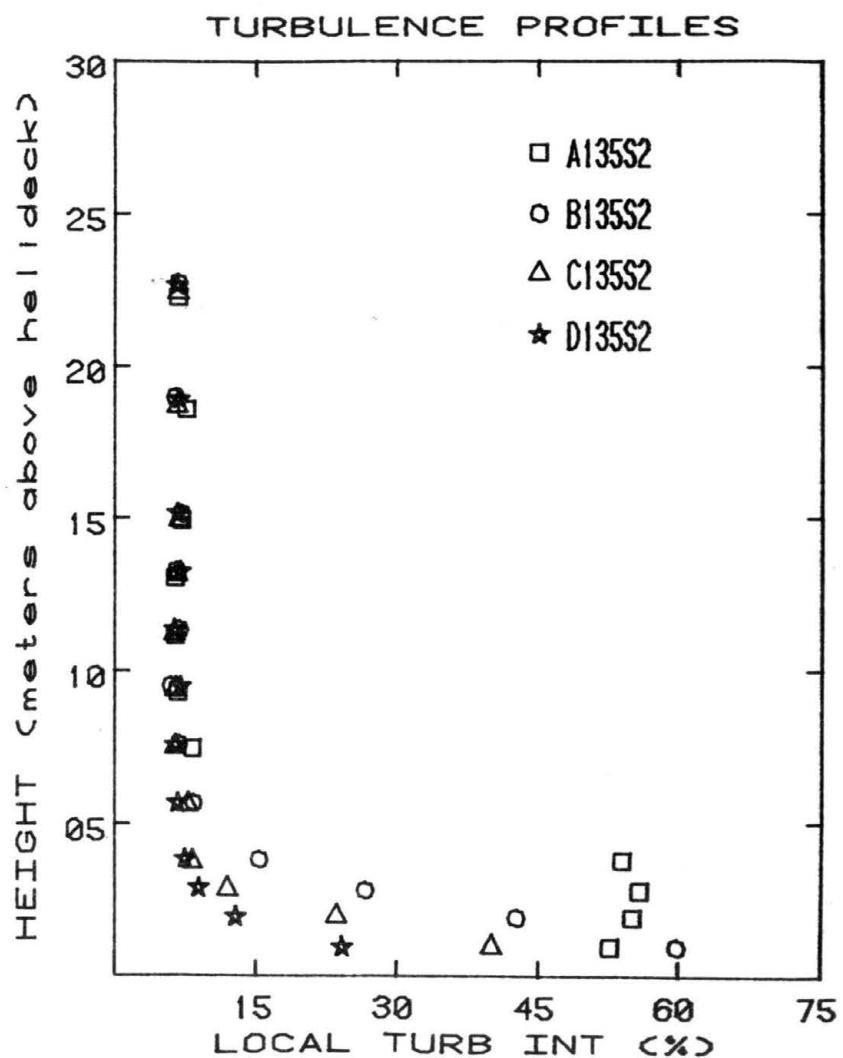
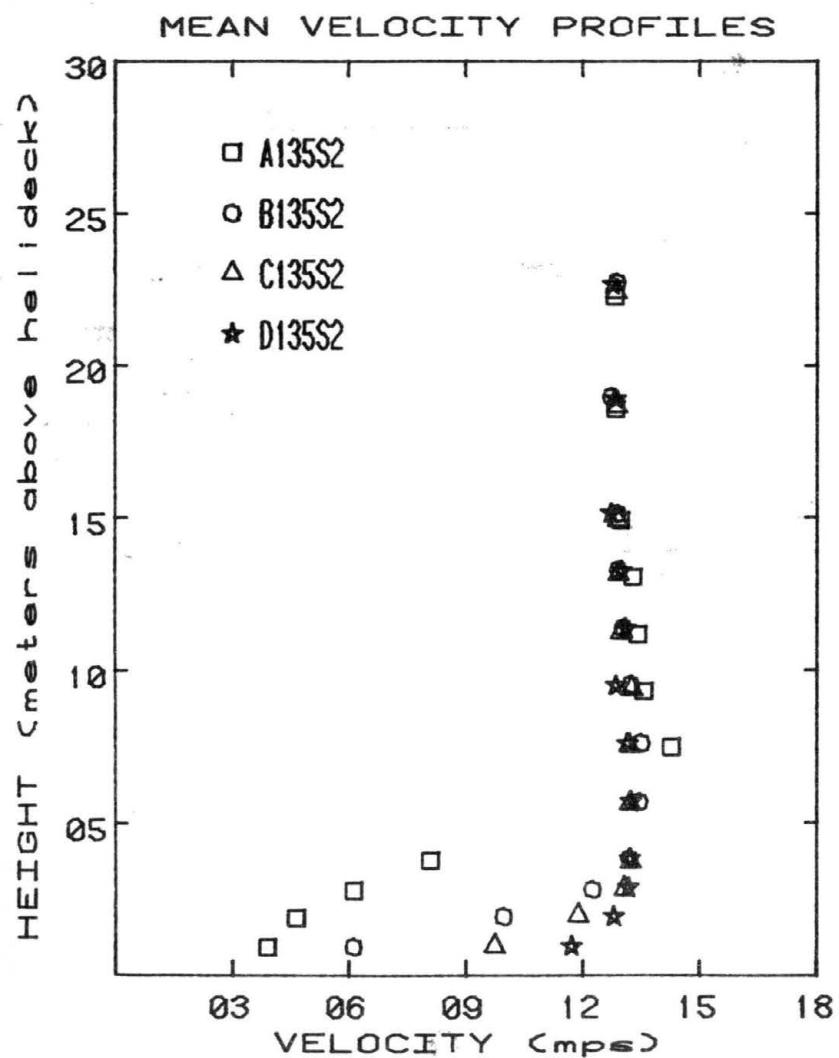
GRAPH # 04



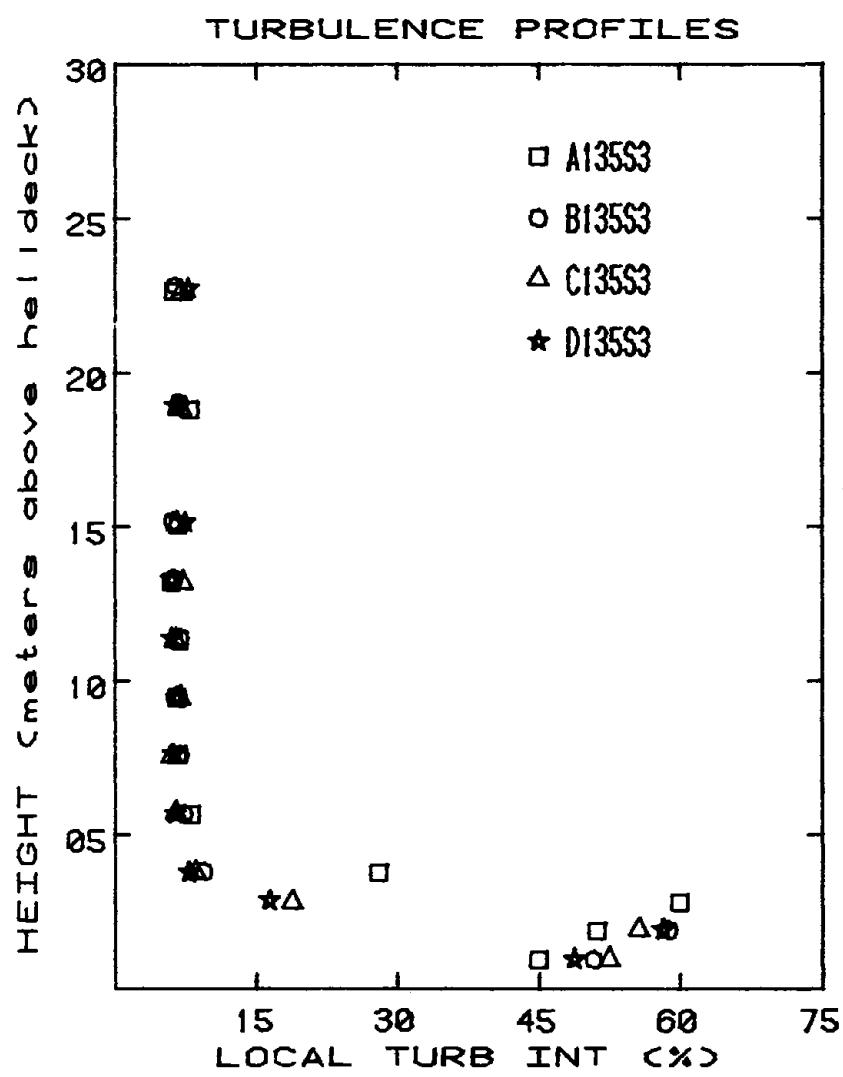
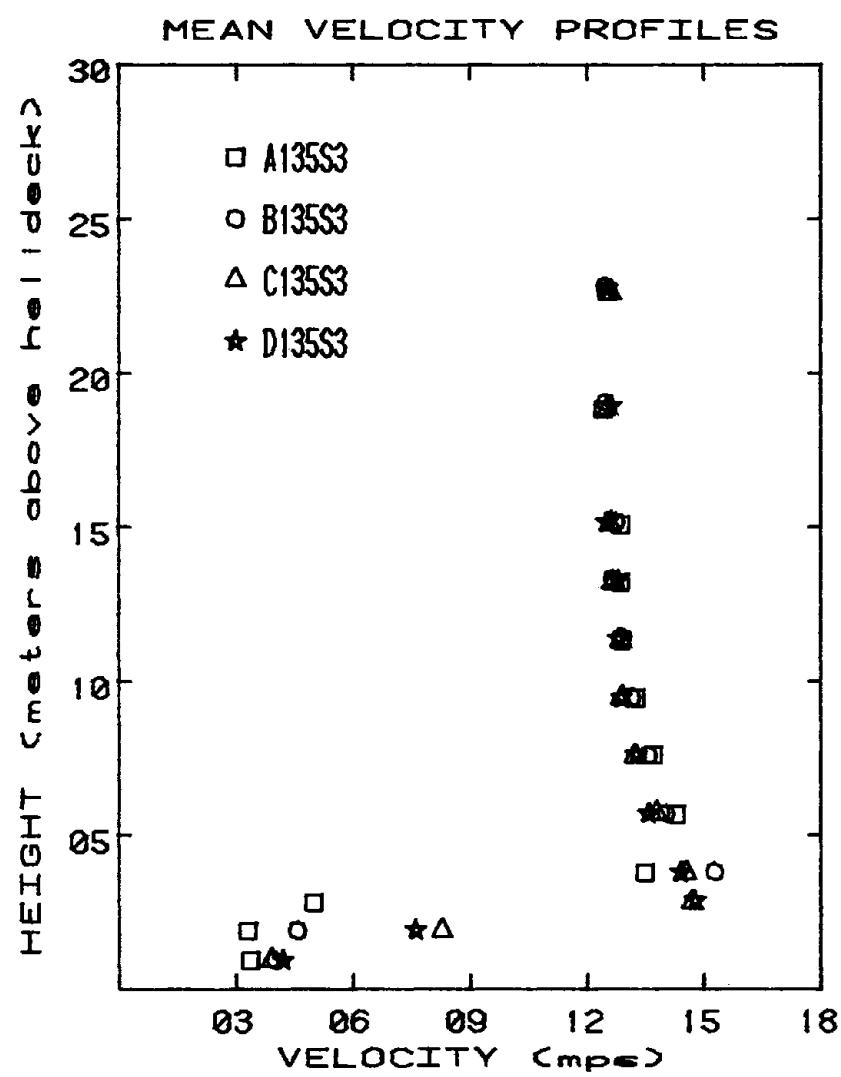
GRAPH # 05



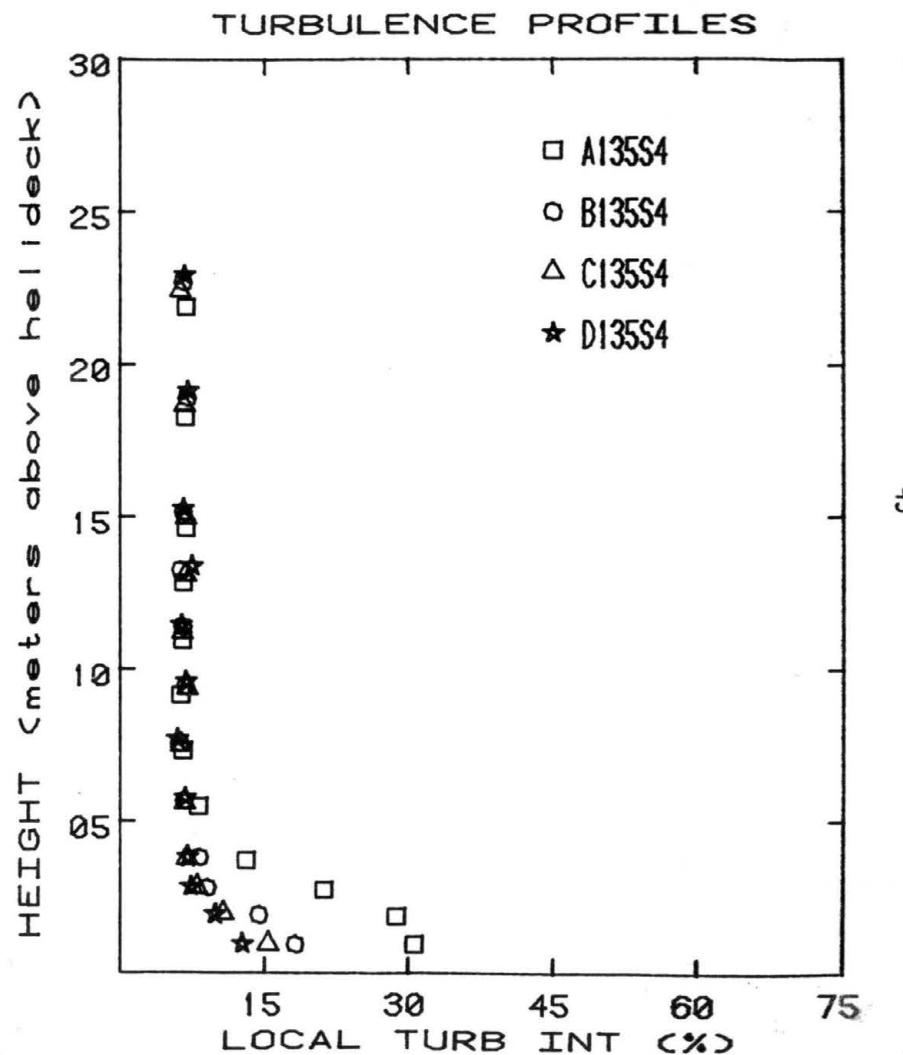
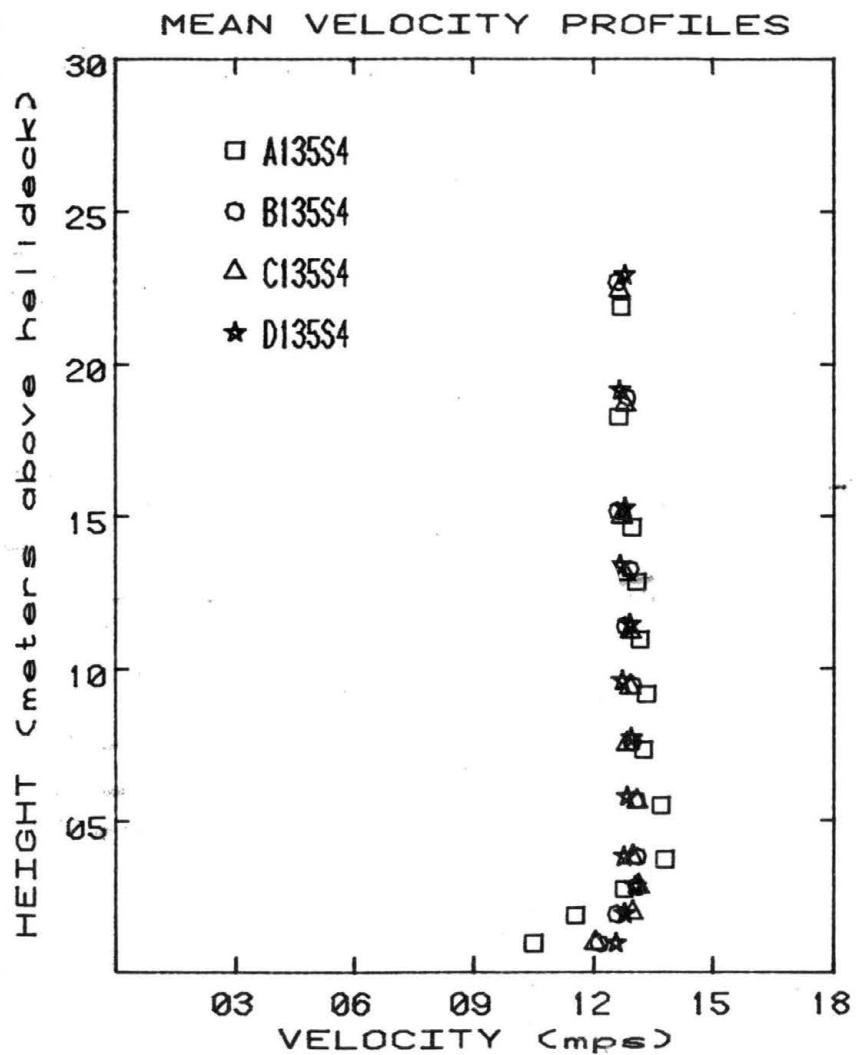
GRAPH # 06



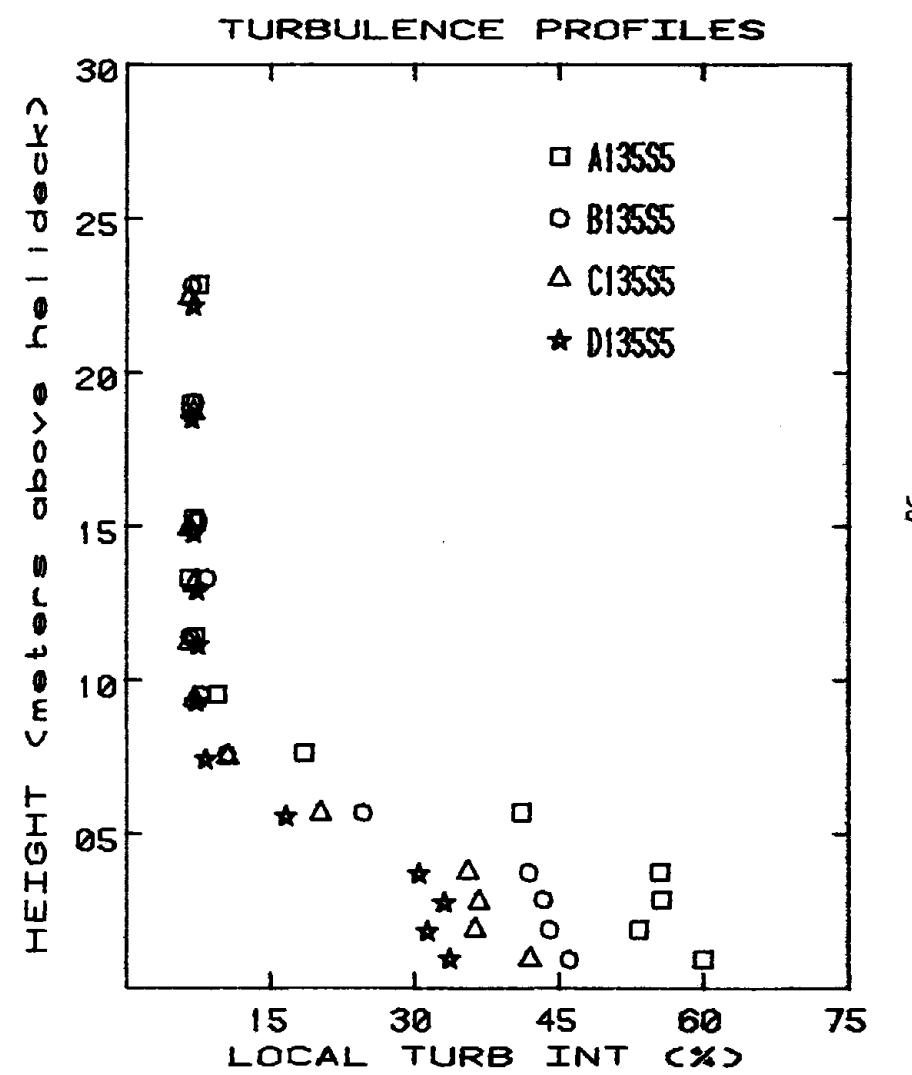
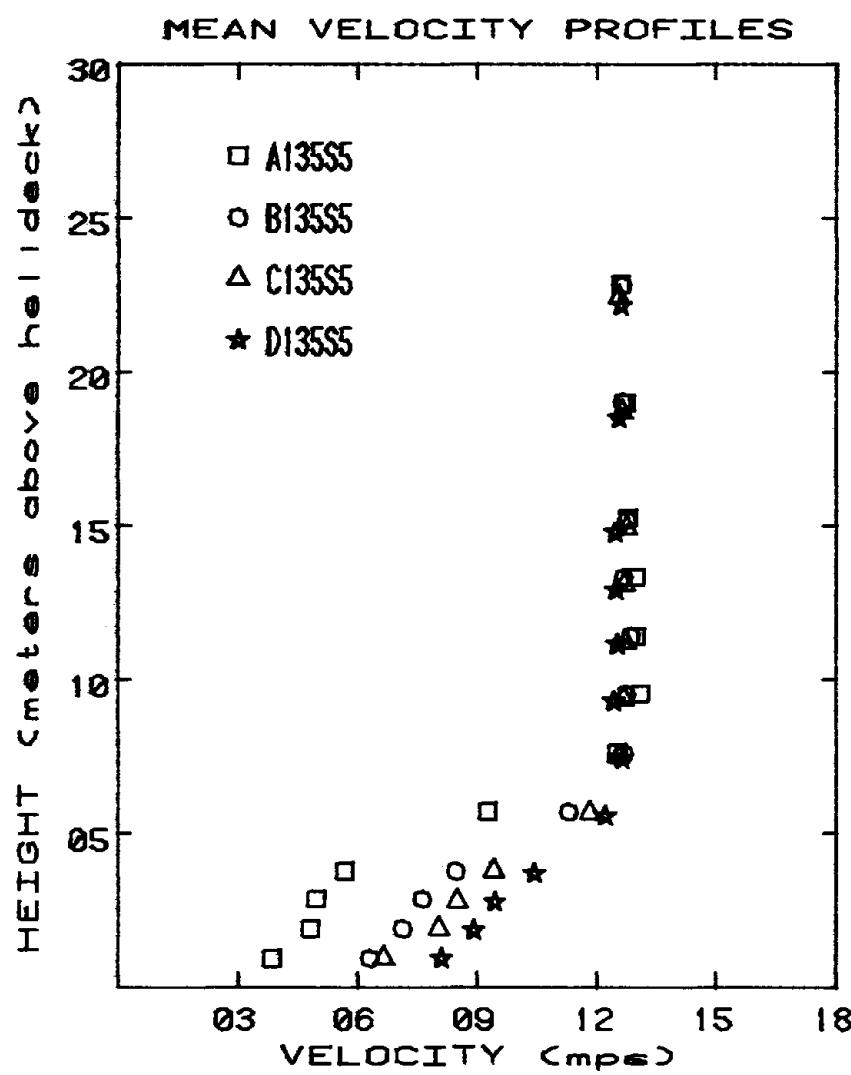
GRAPH # 07



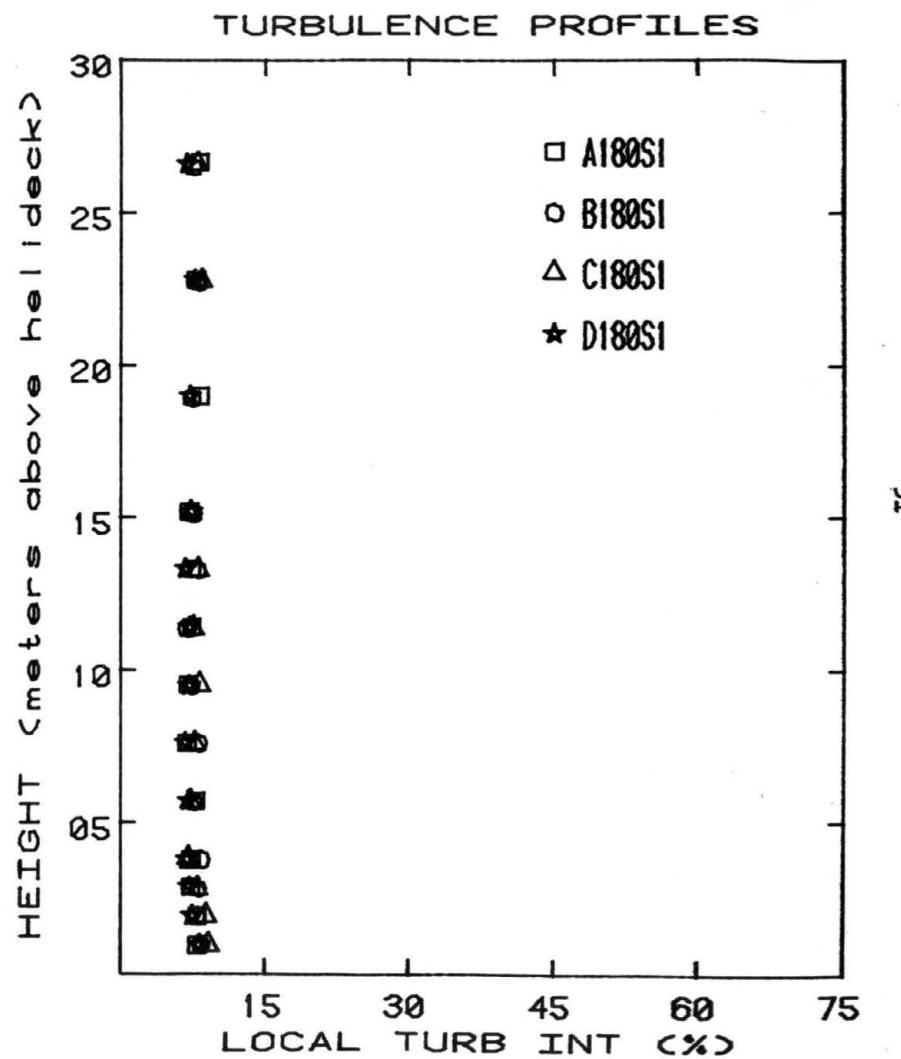
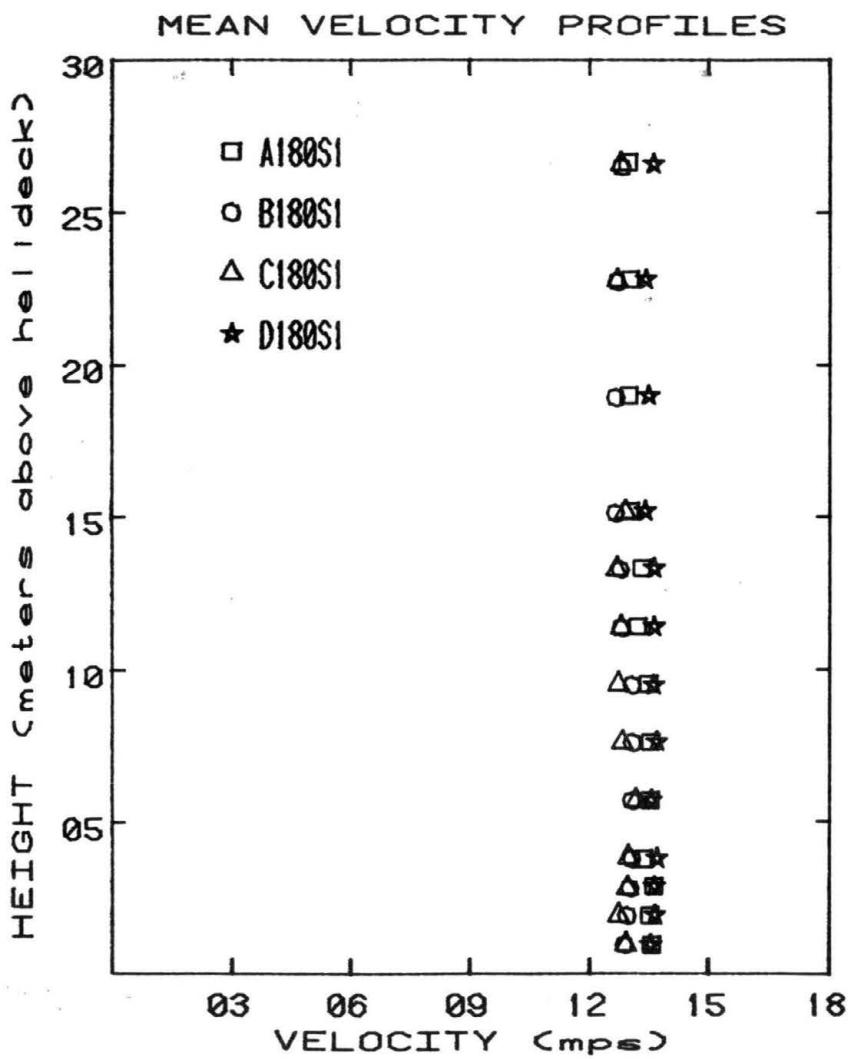
GRAPH # 08



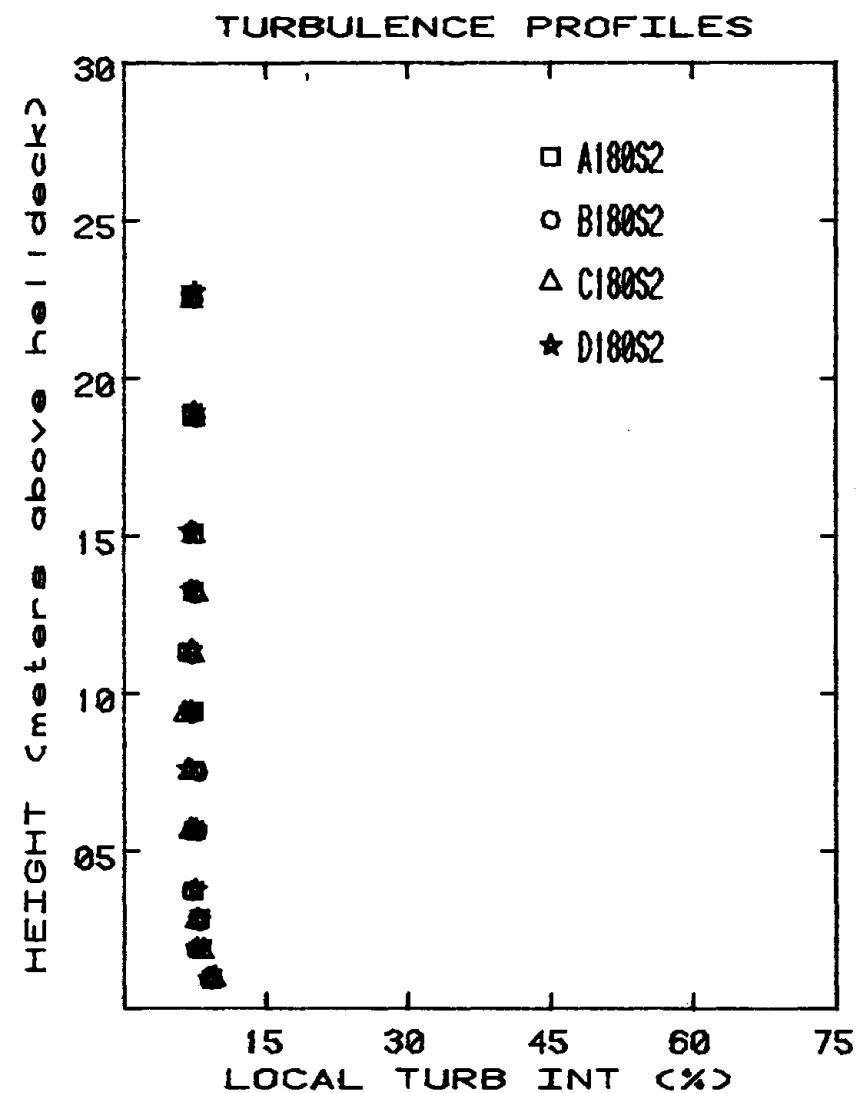
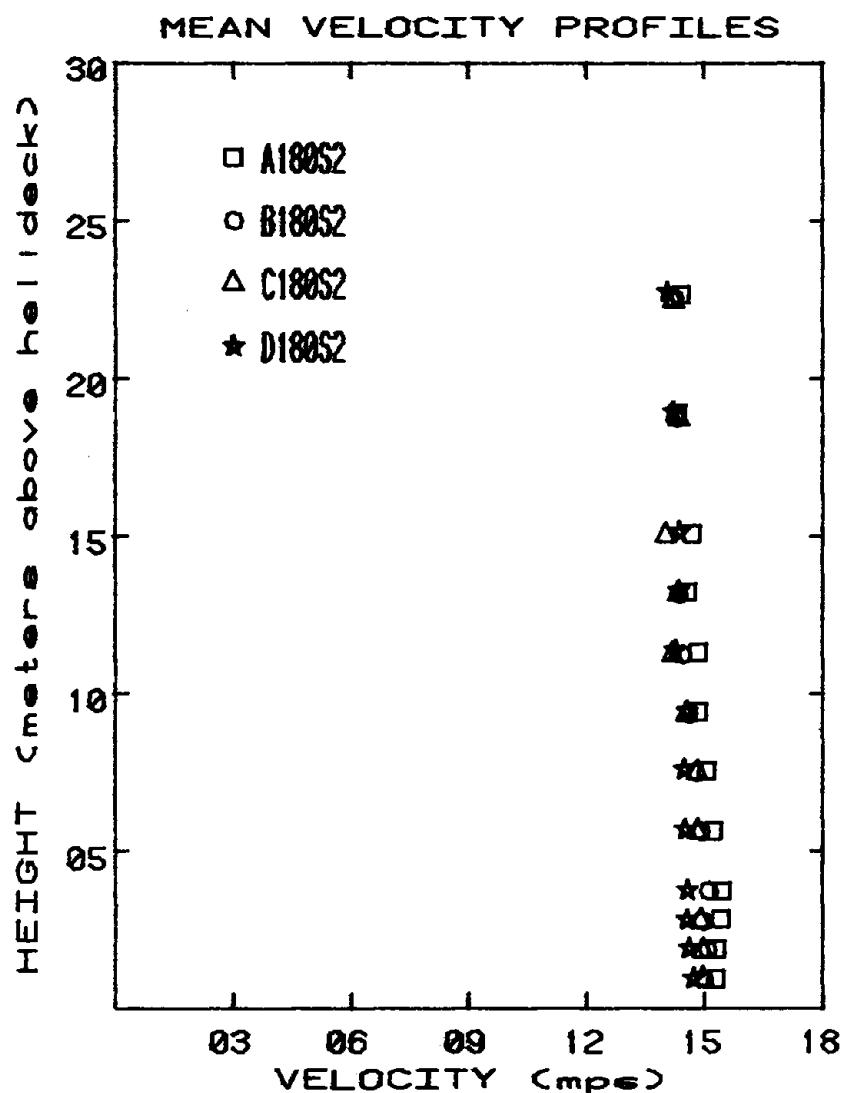
GRAPH # 09



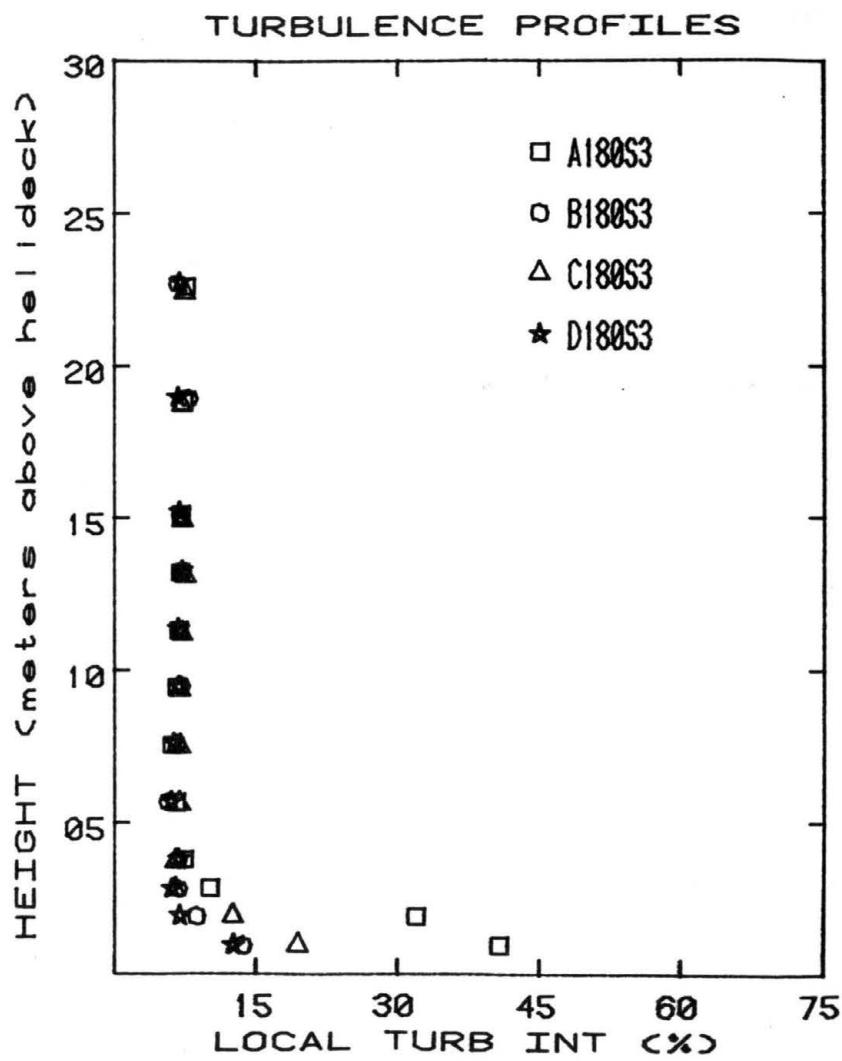
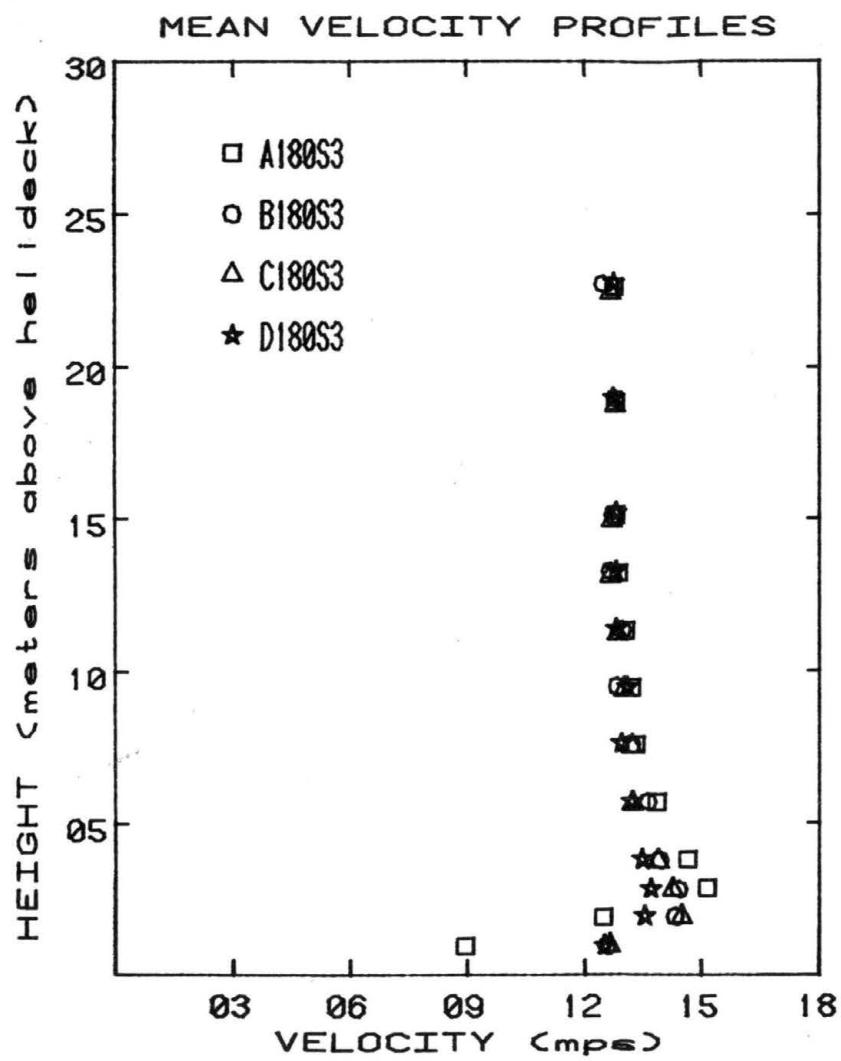
GRAPH # 10



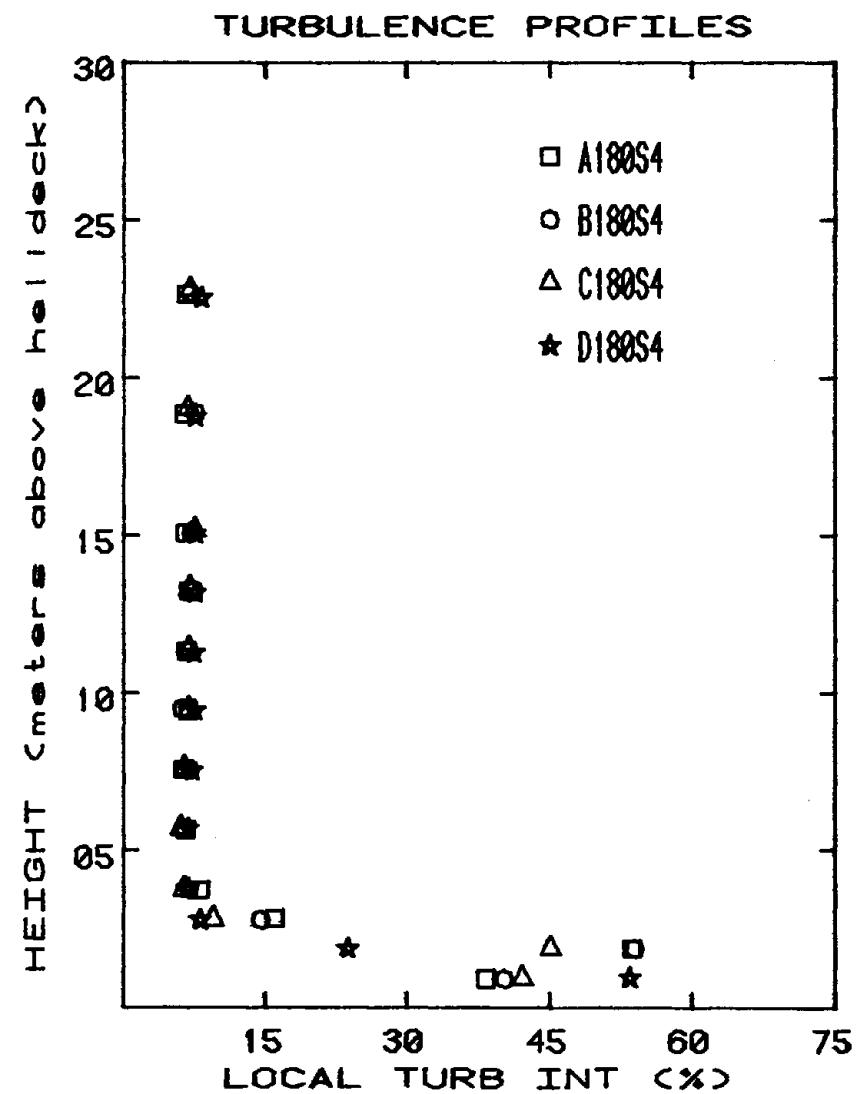
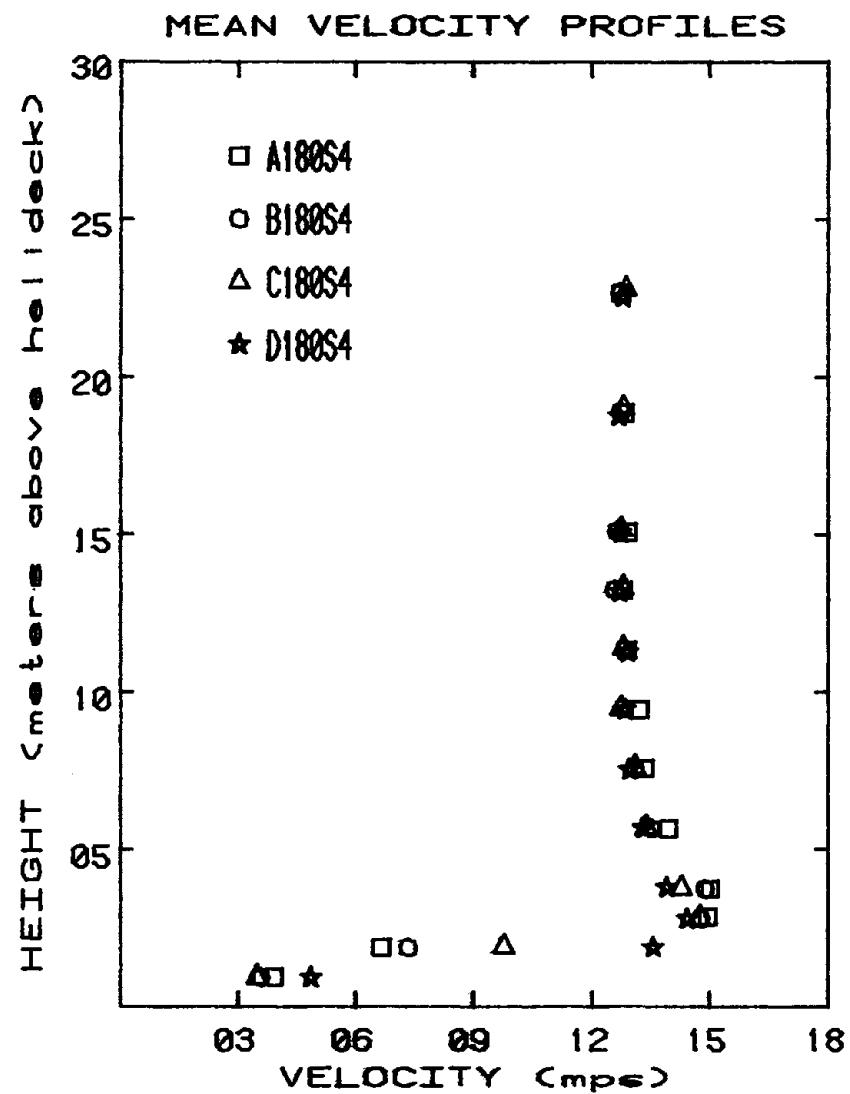
GRAPH # 11



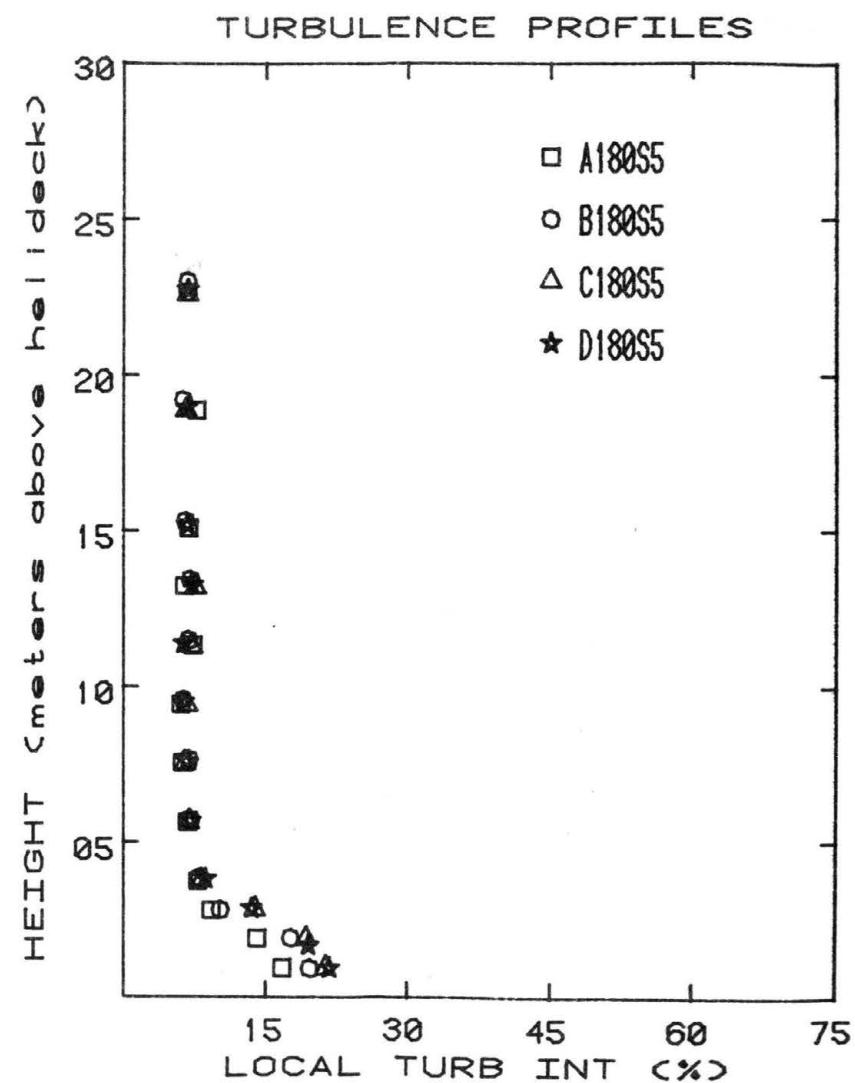
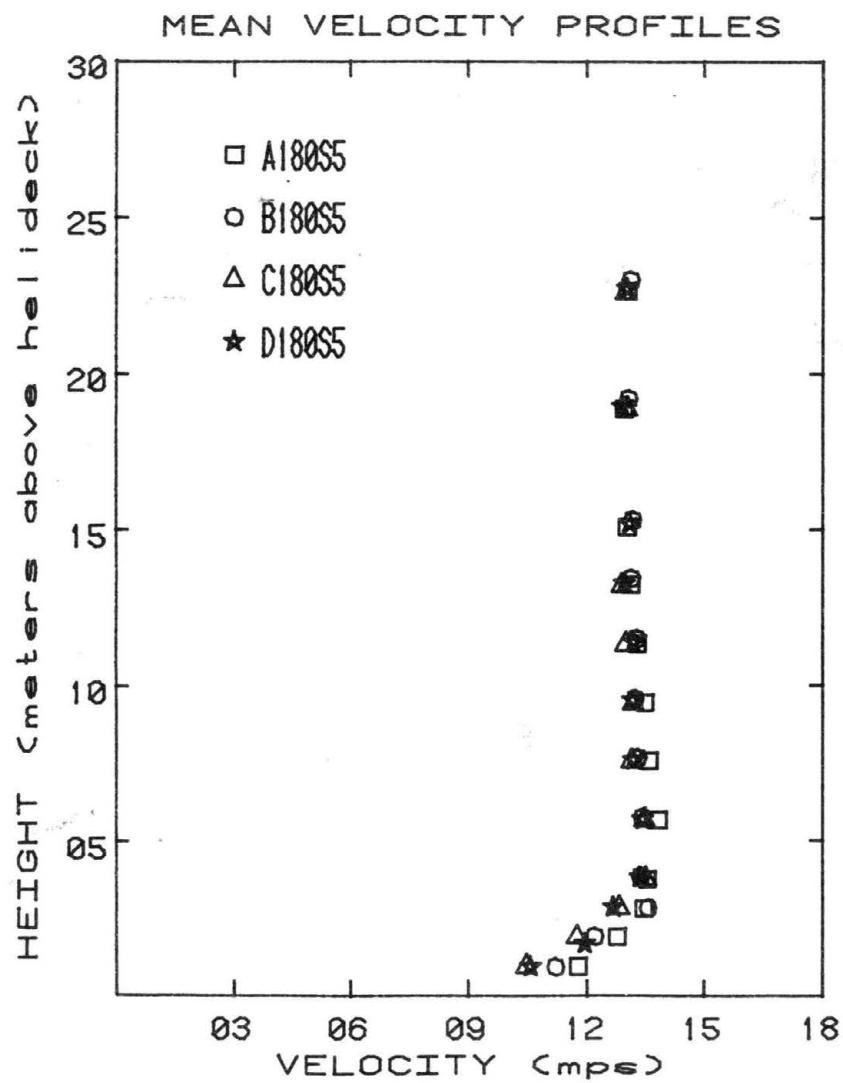
GRAPH # 12



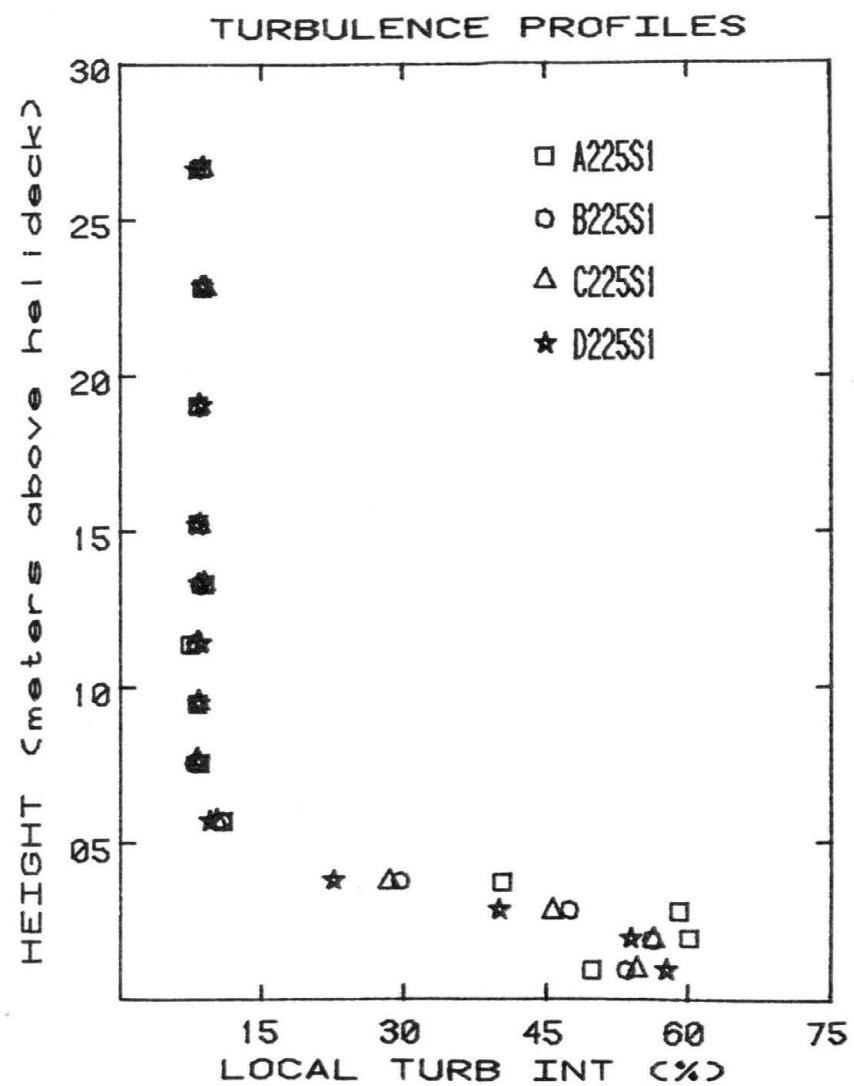
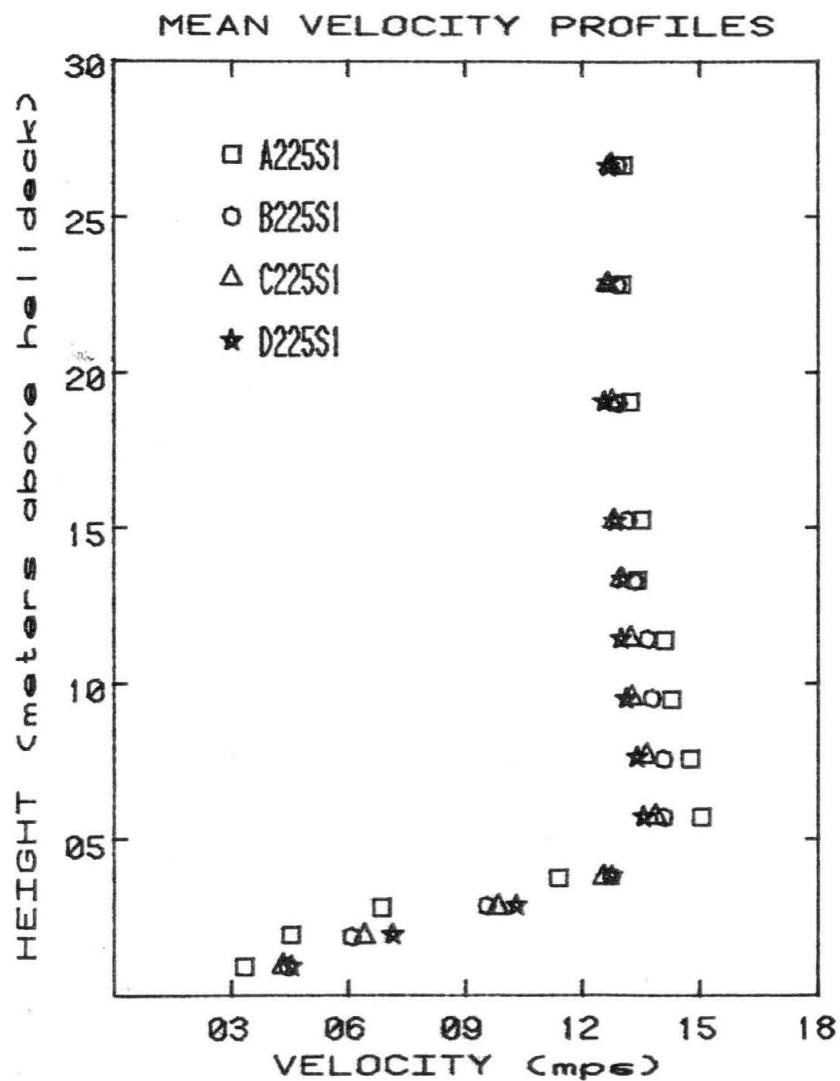
GRAPH # 13



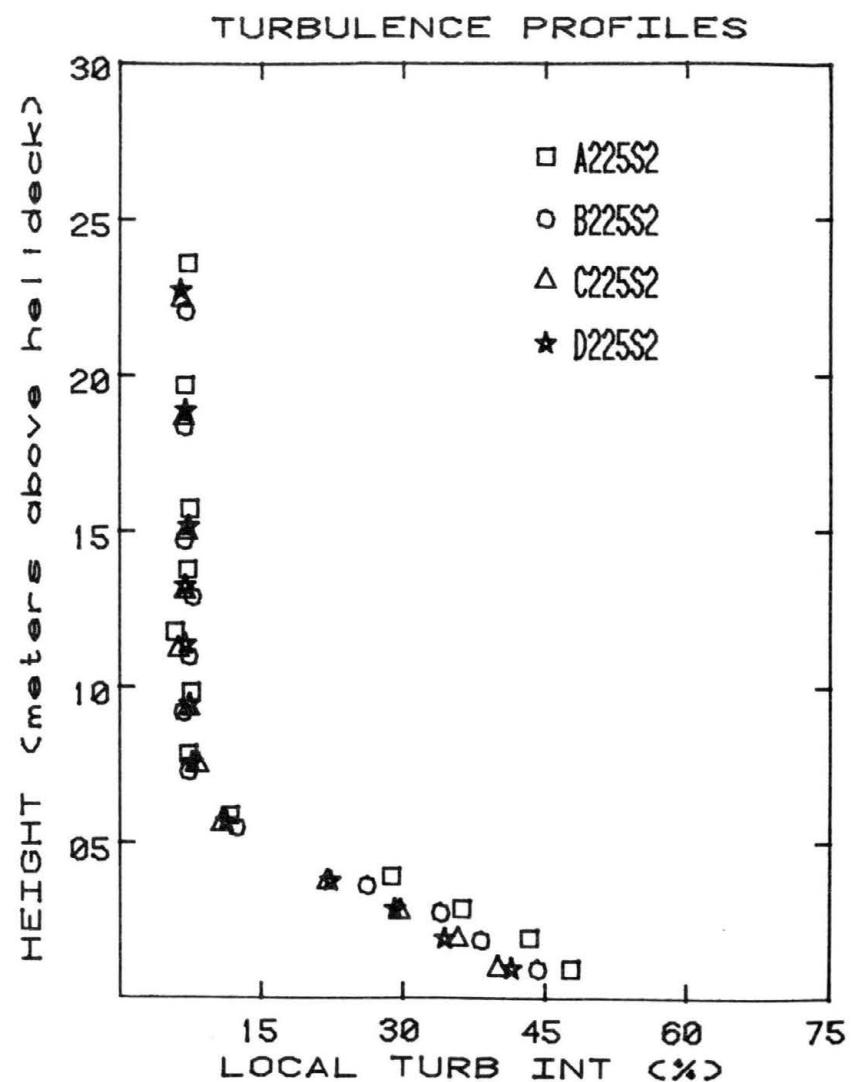
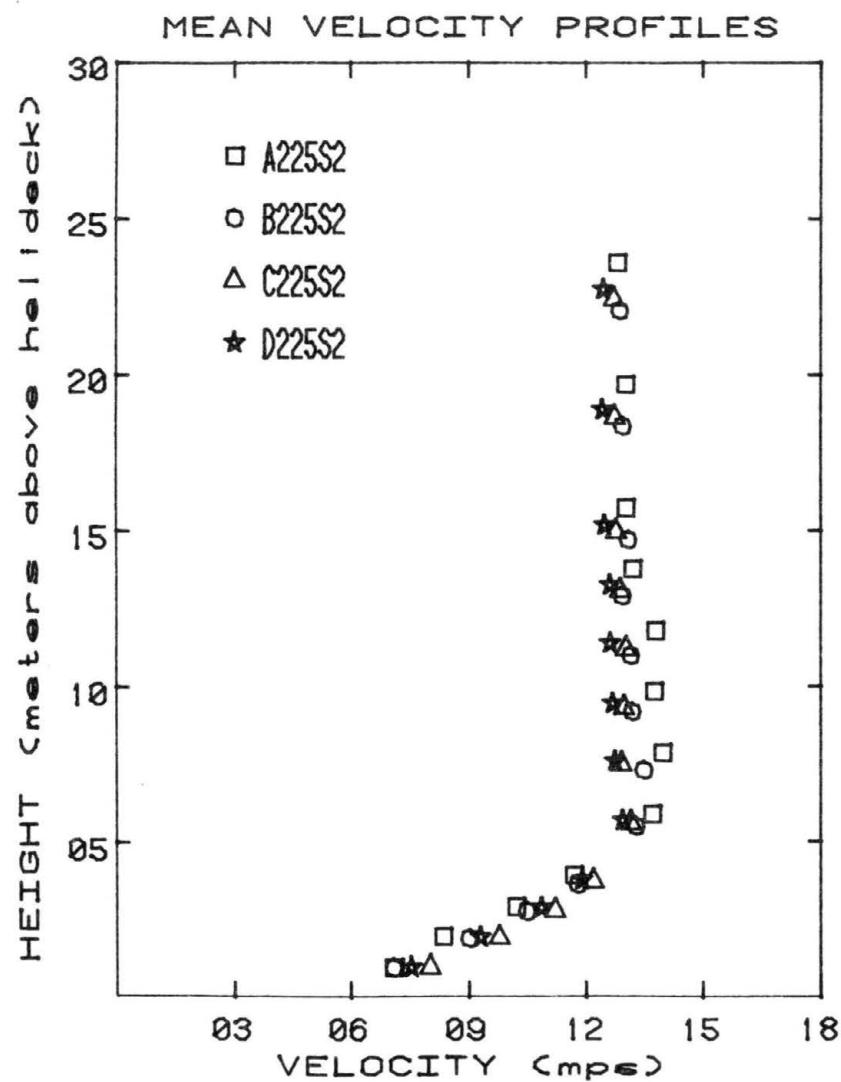
GRAPH # 14



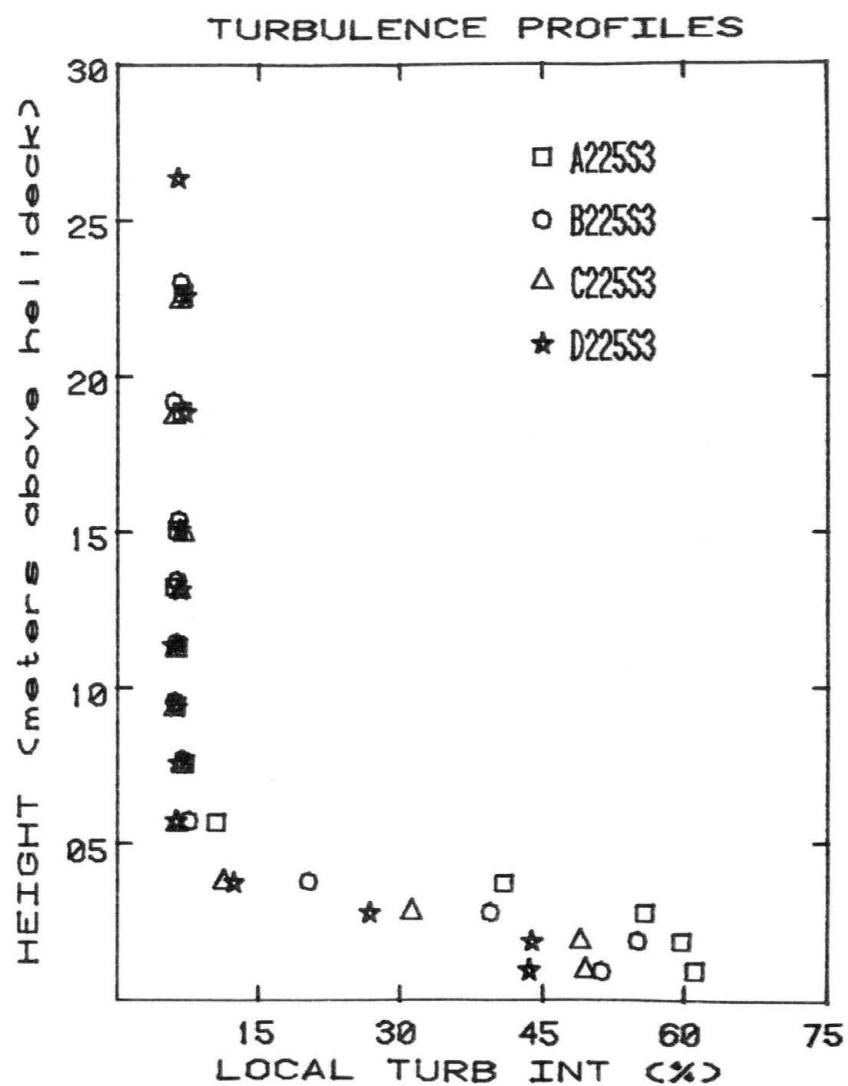
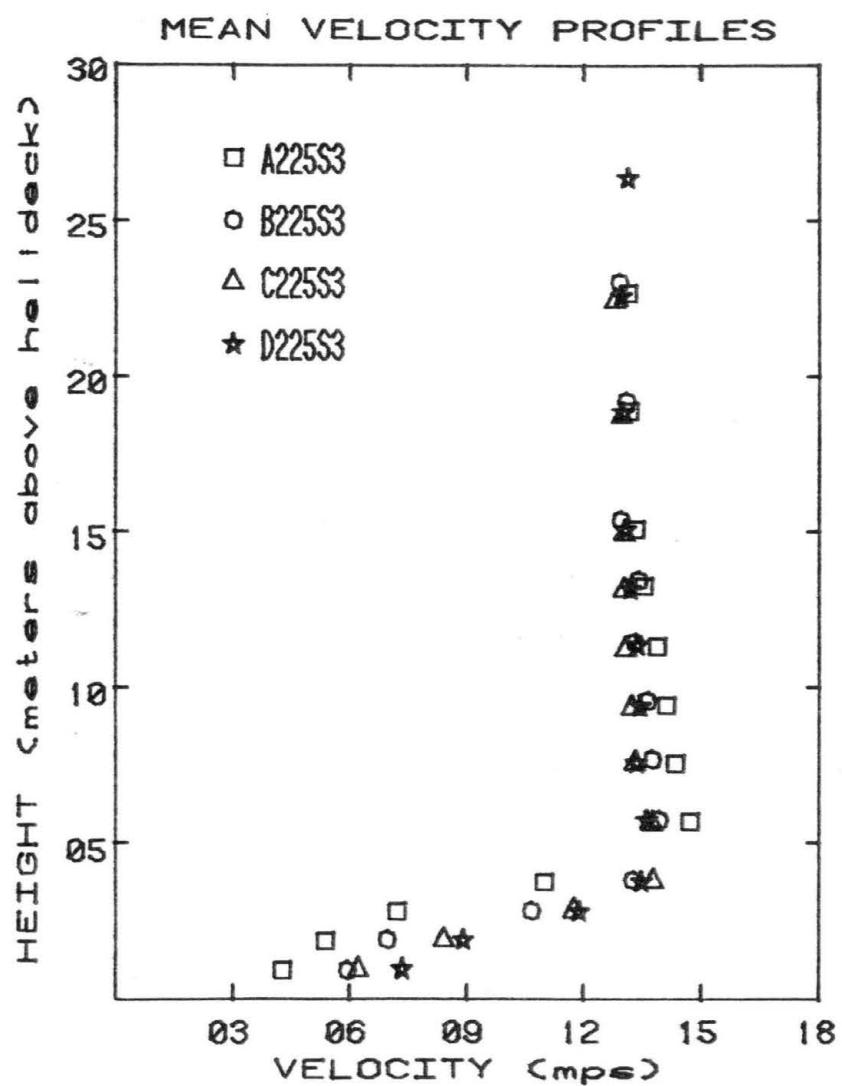
GRAPH # 15



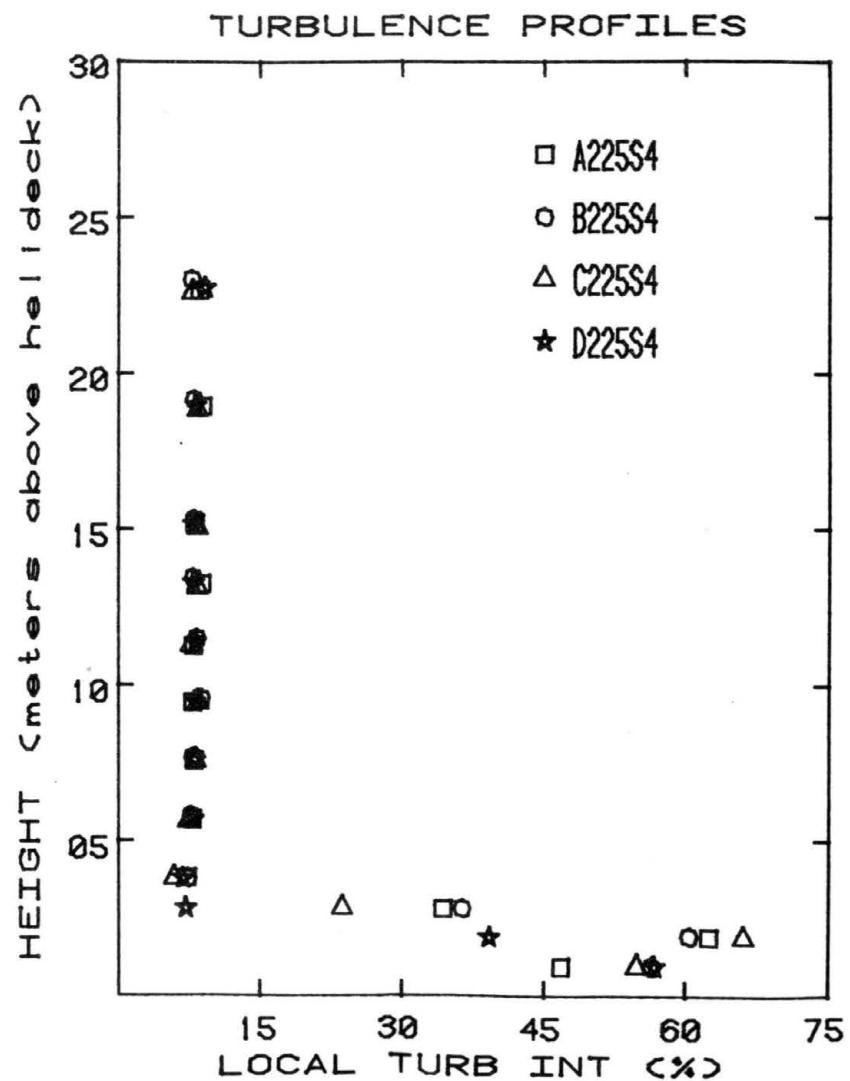
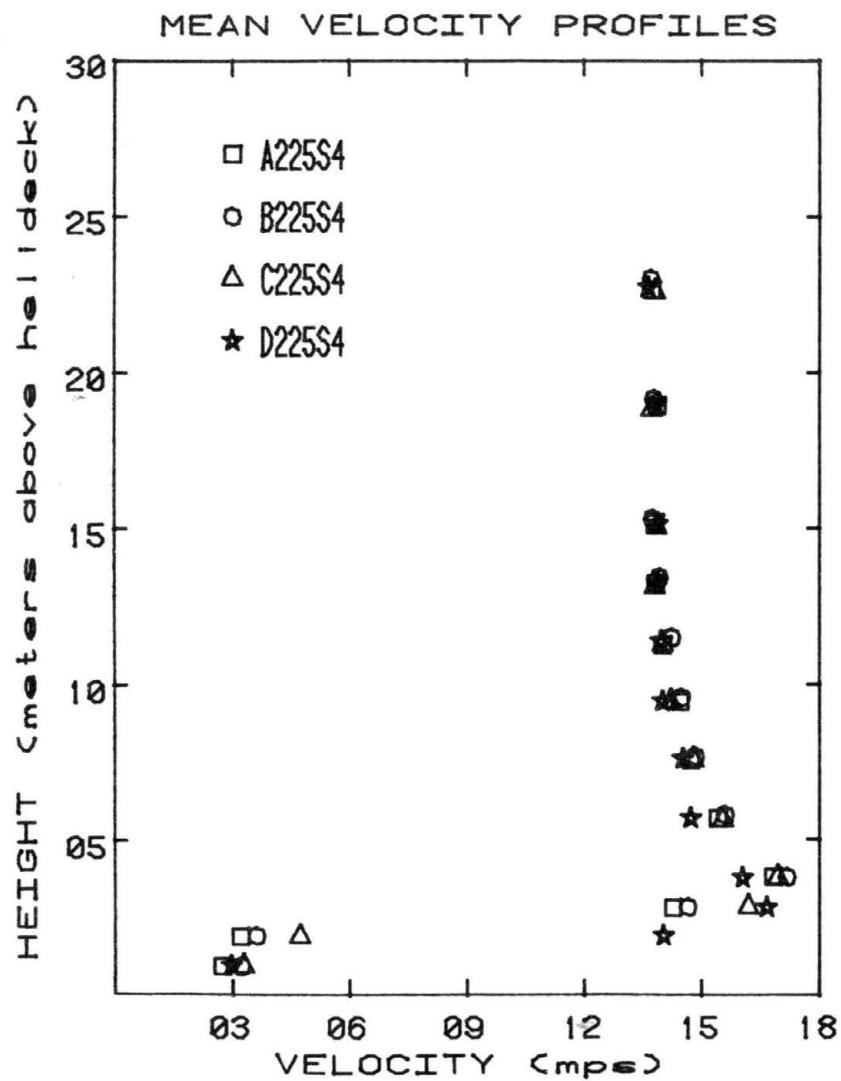
GRAPH # 16



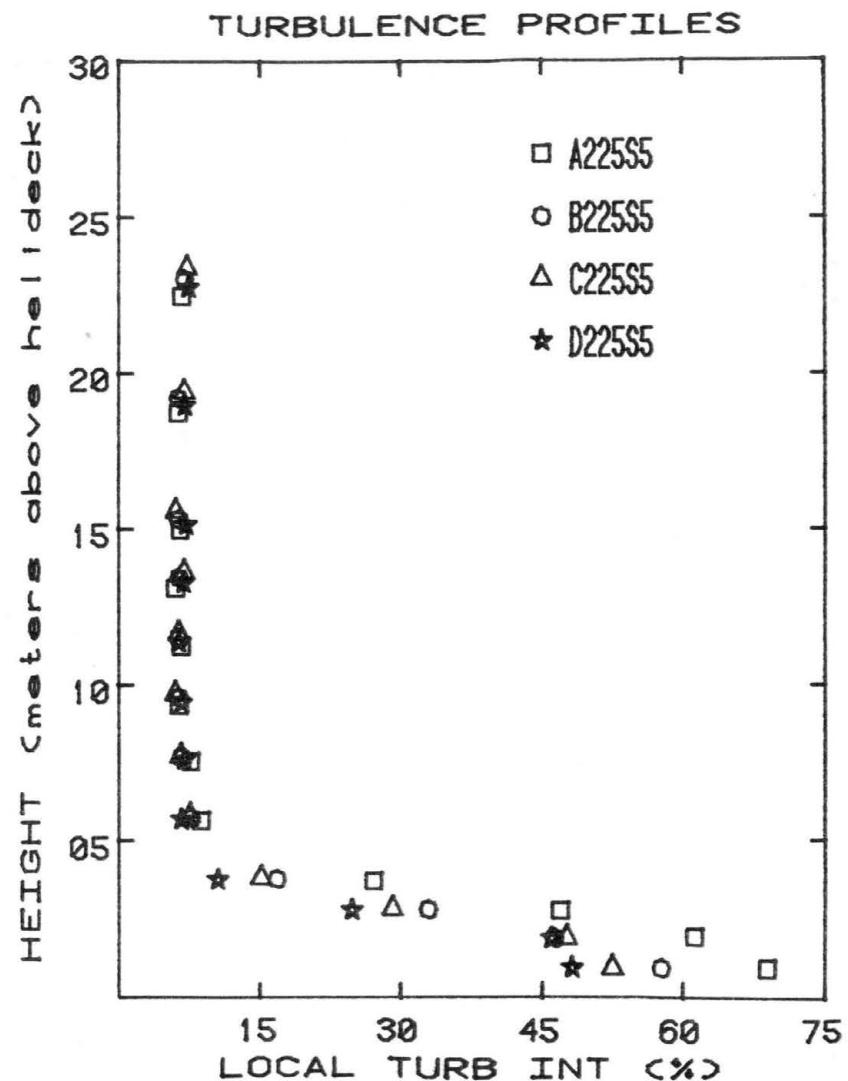
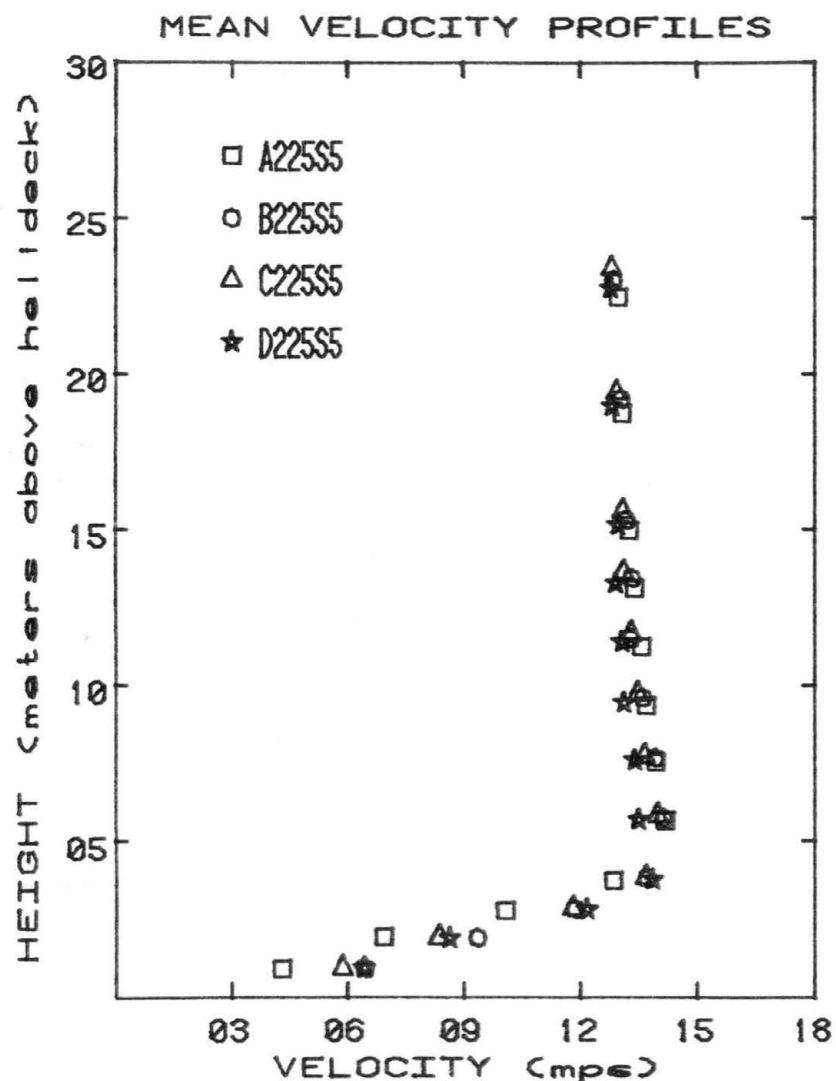
GRAPH # 17



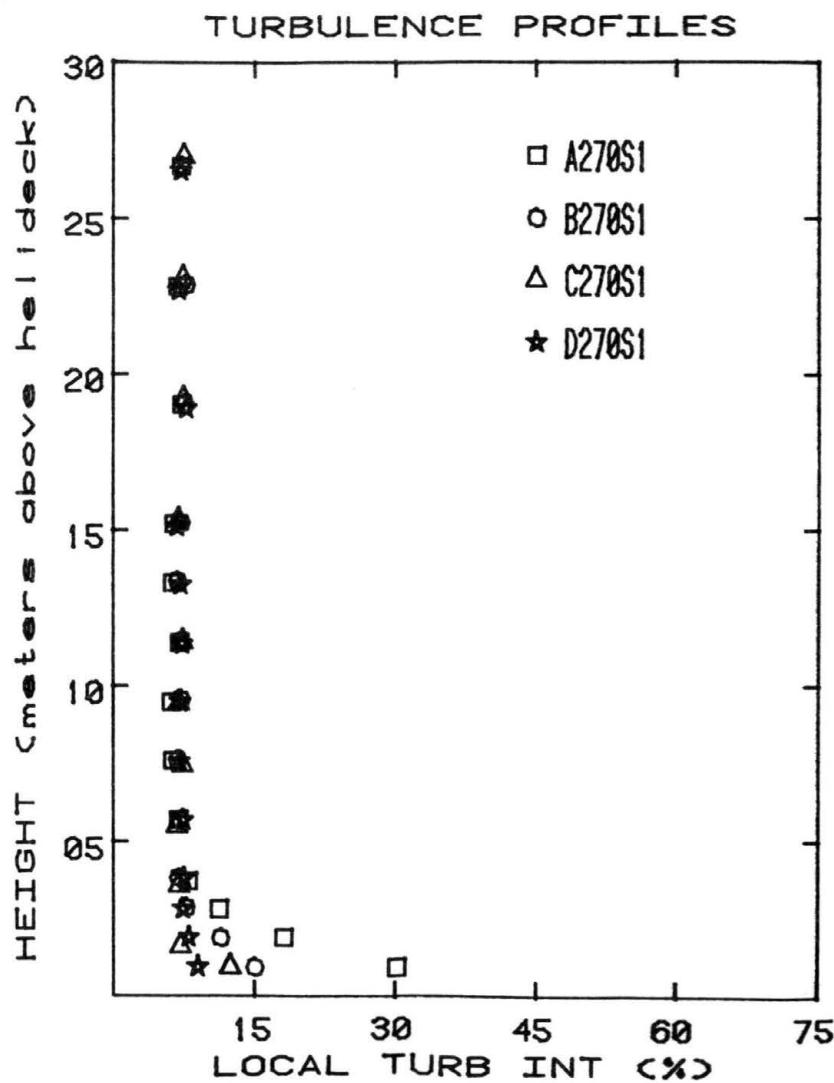
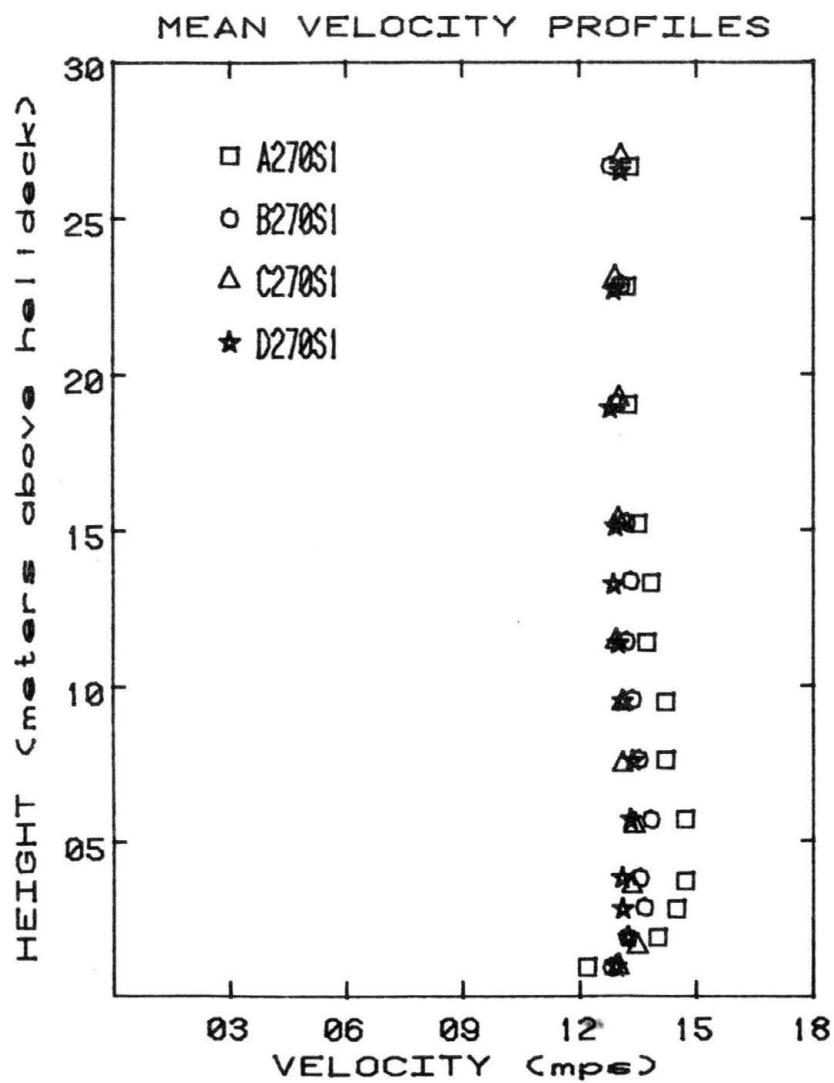
GRAPH # 18



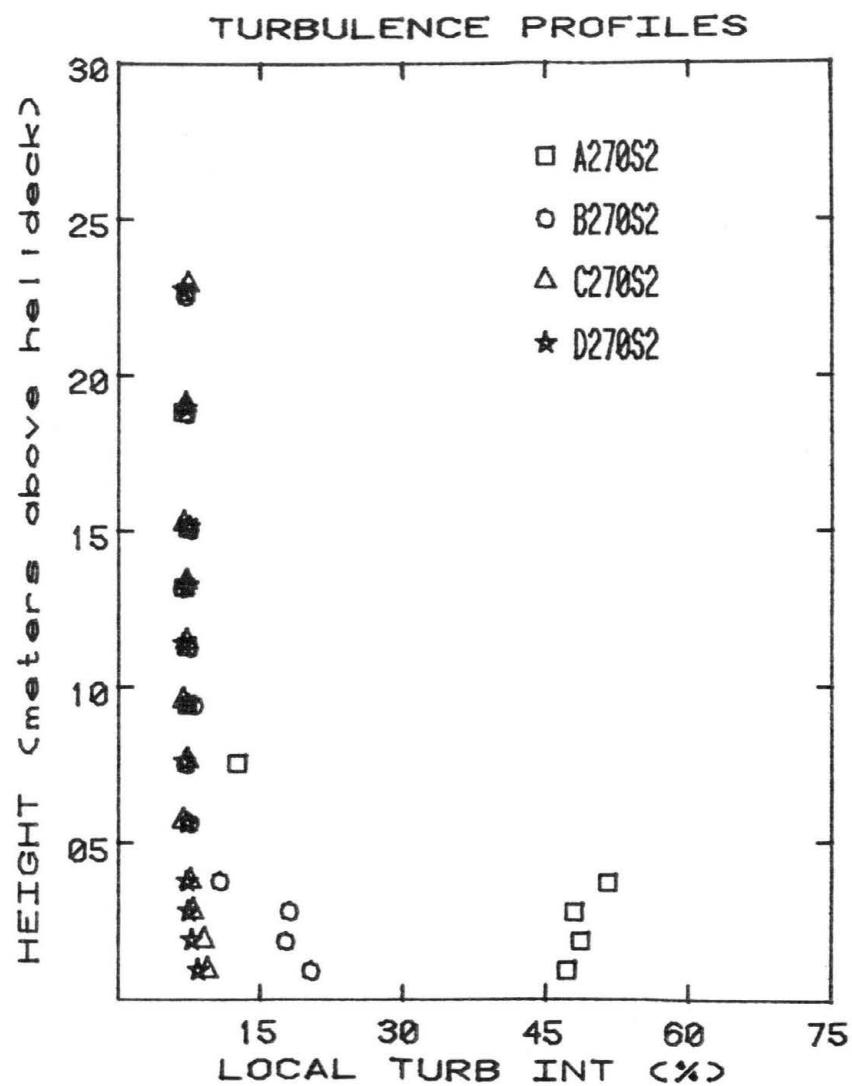
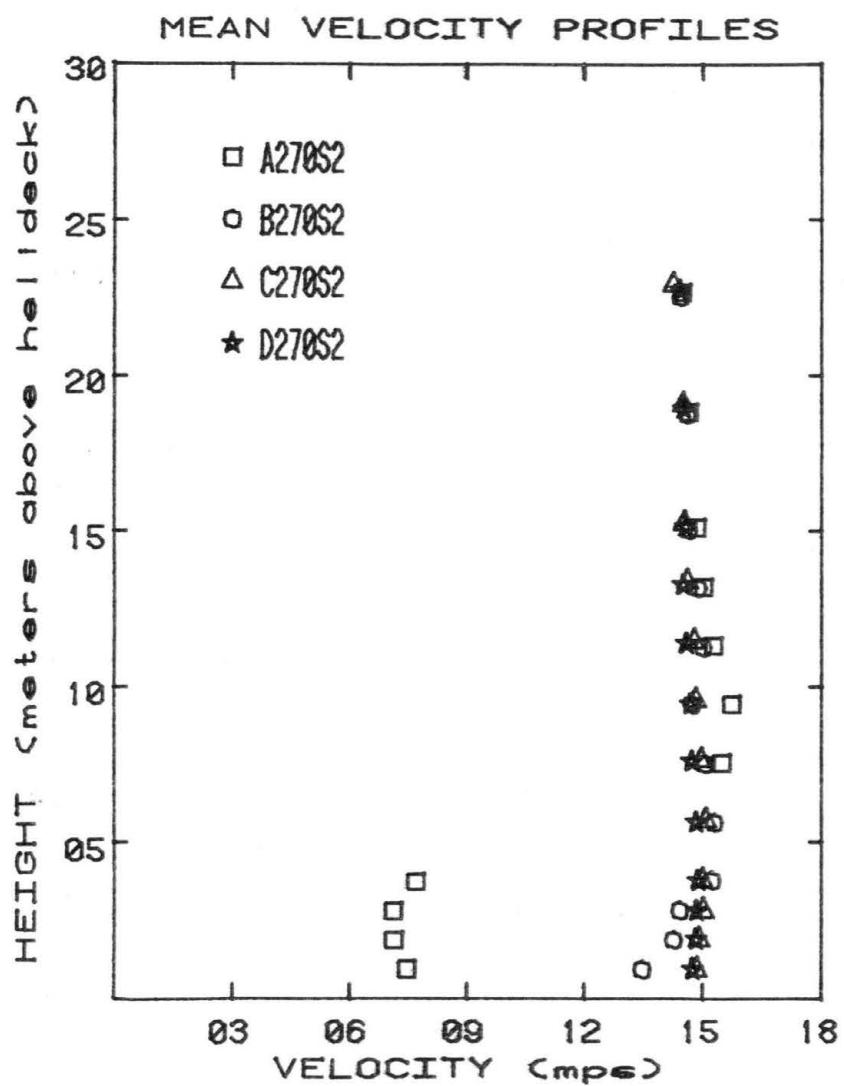
GRAPH # 19



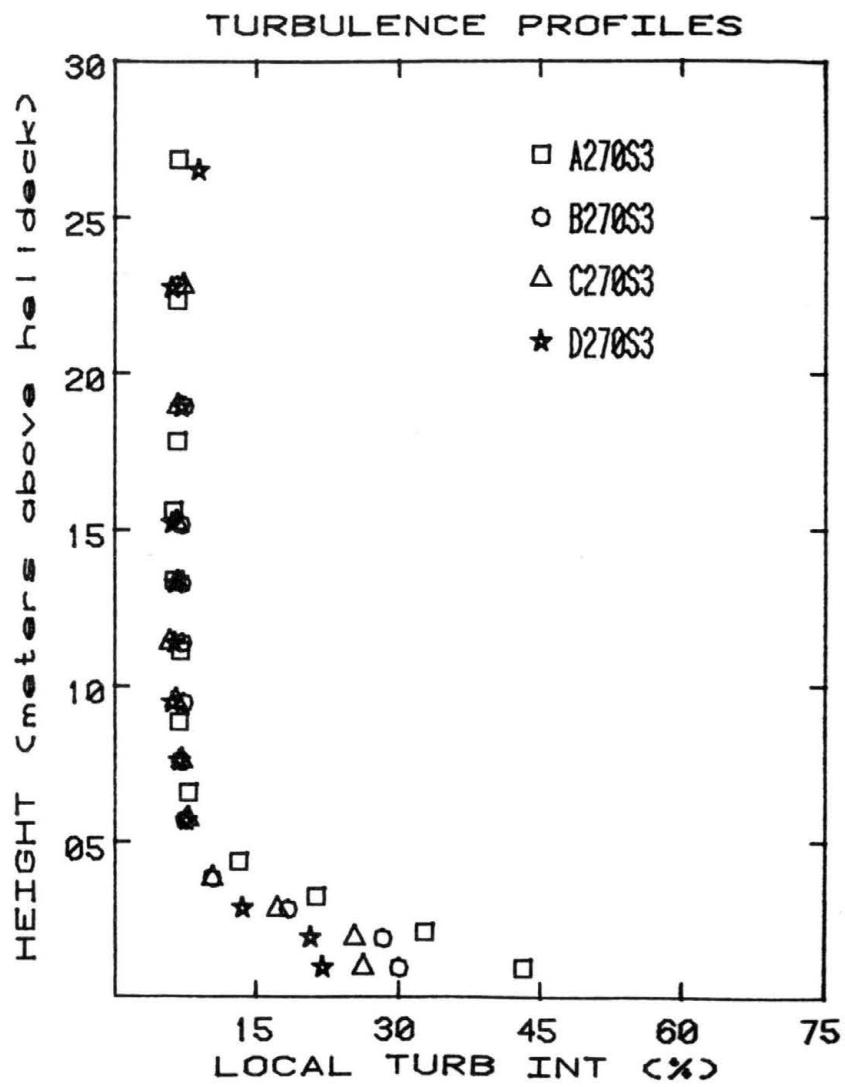
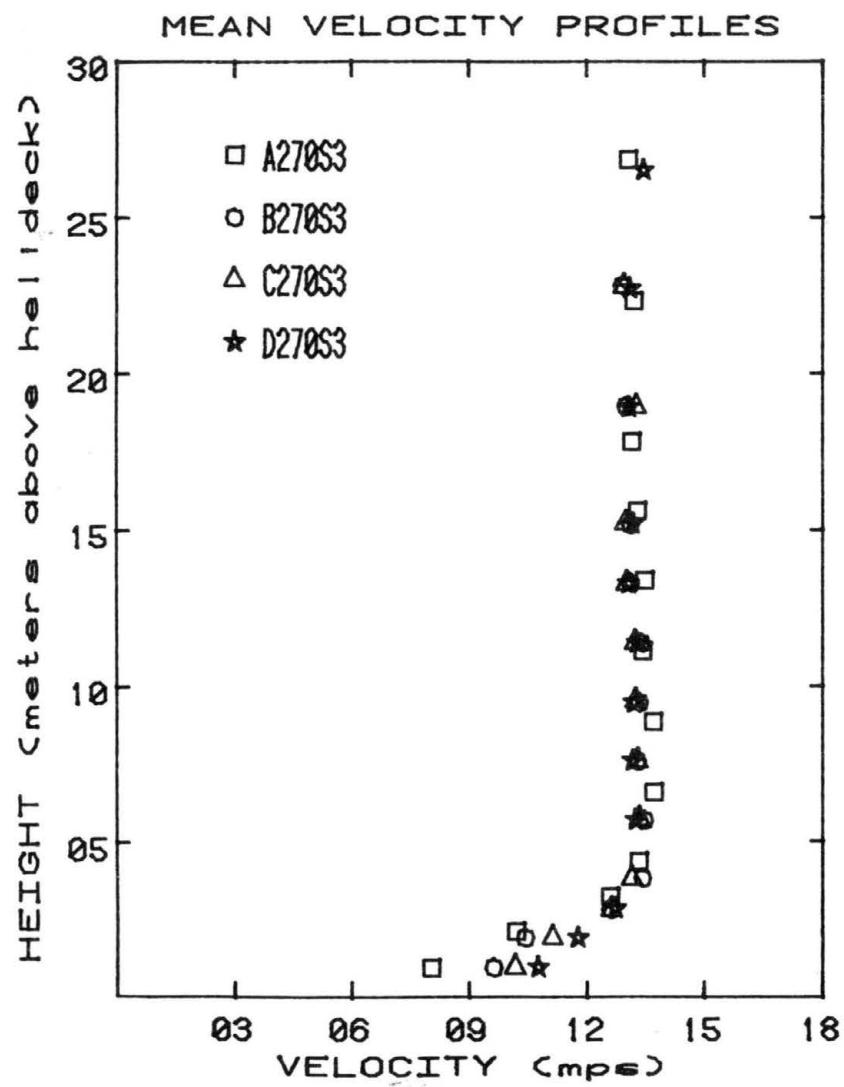
GRAPH # 20



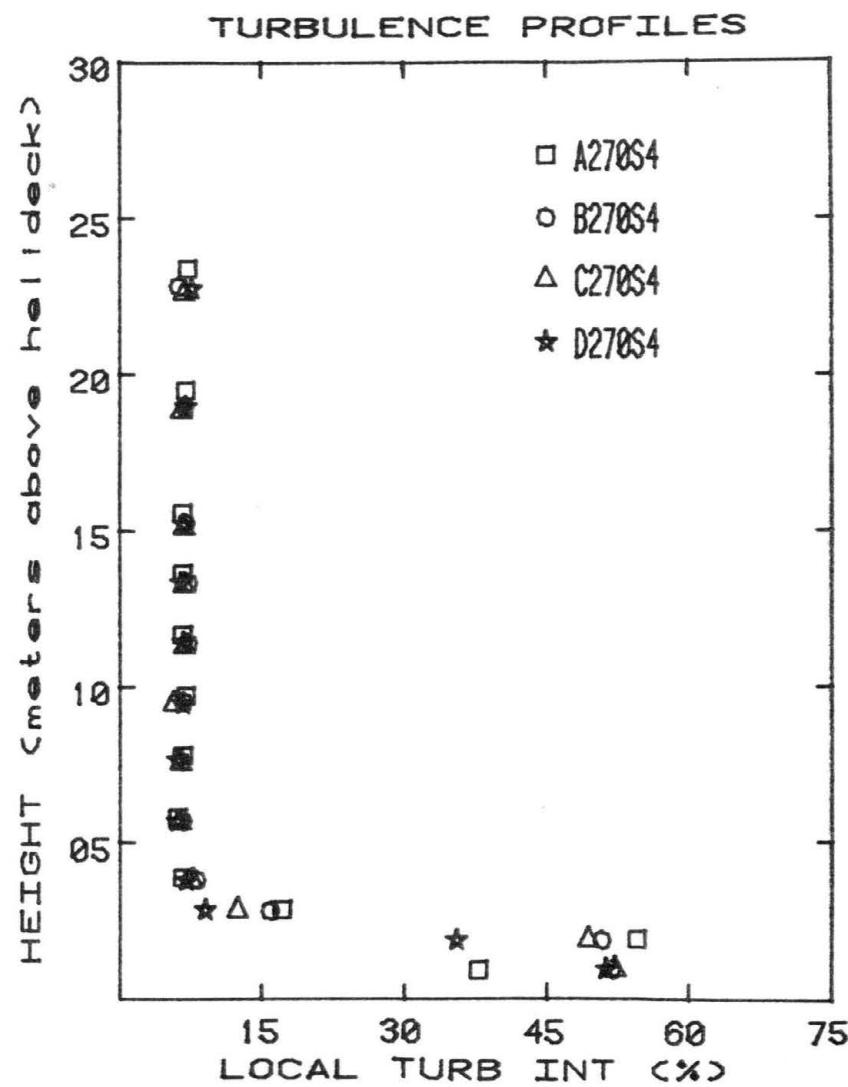
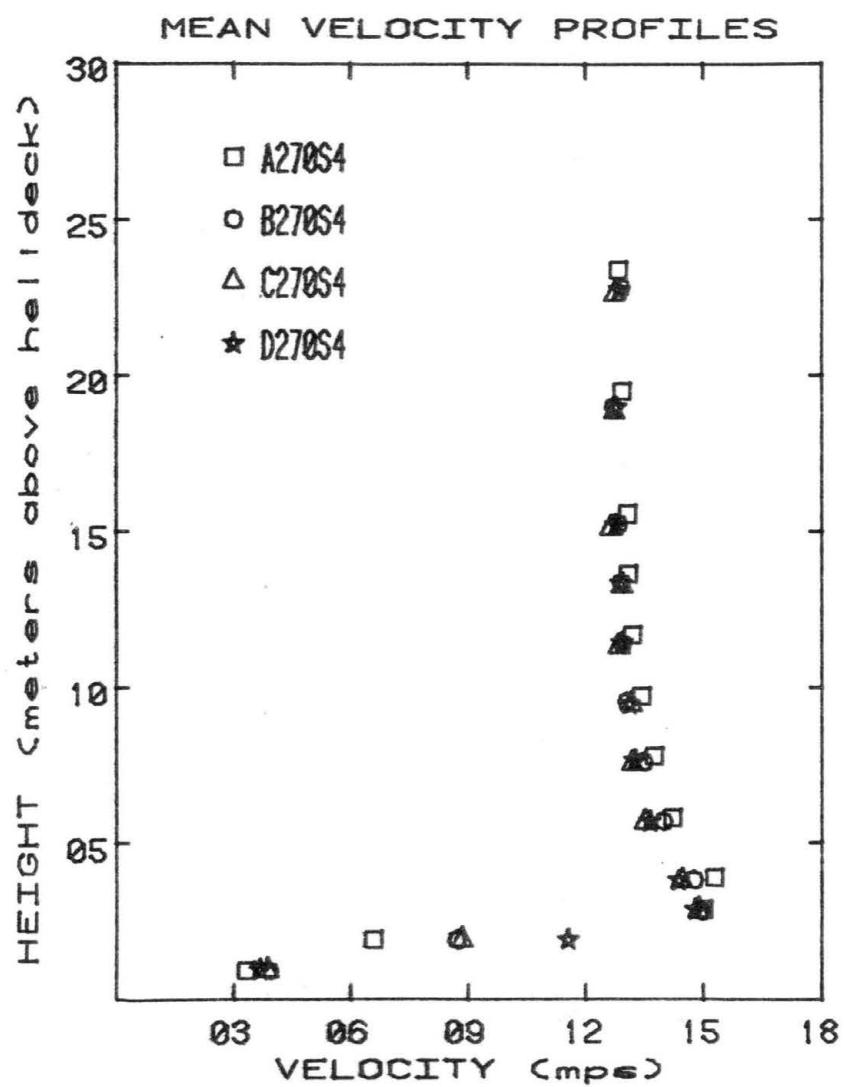
GRAPH # 21



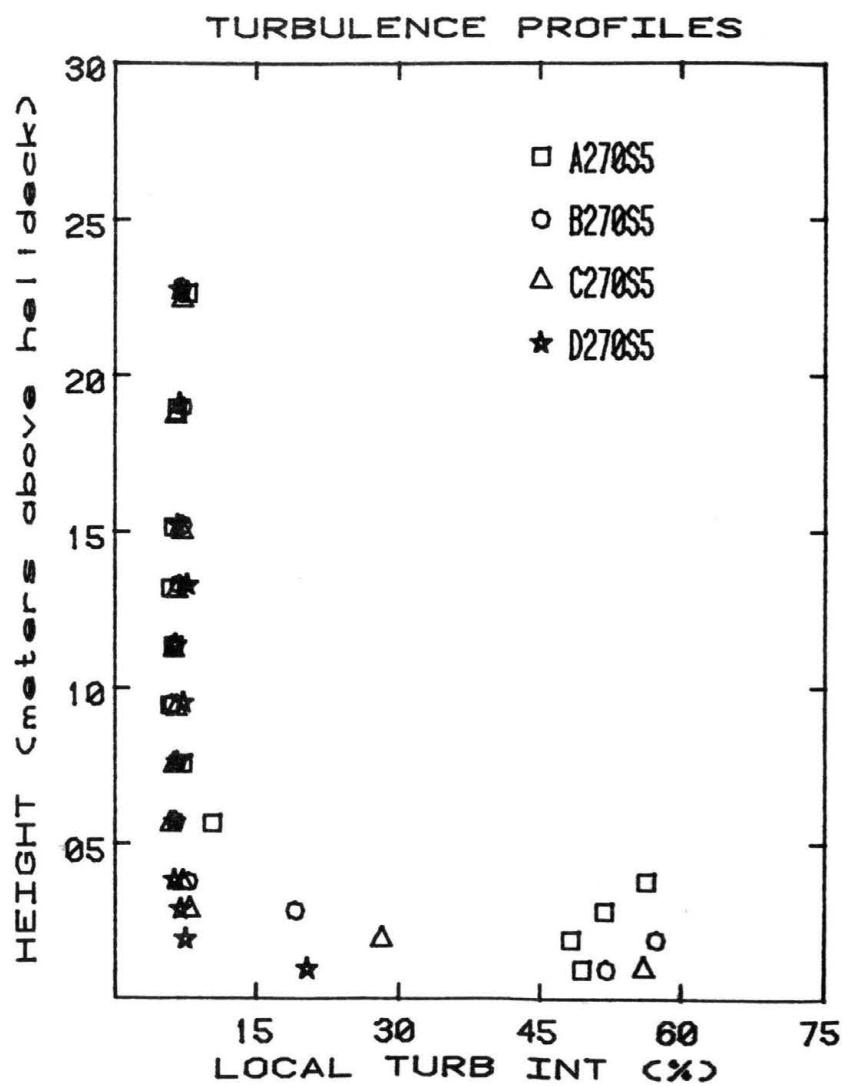
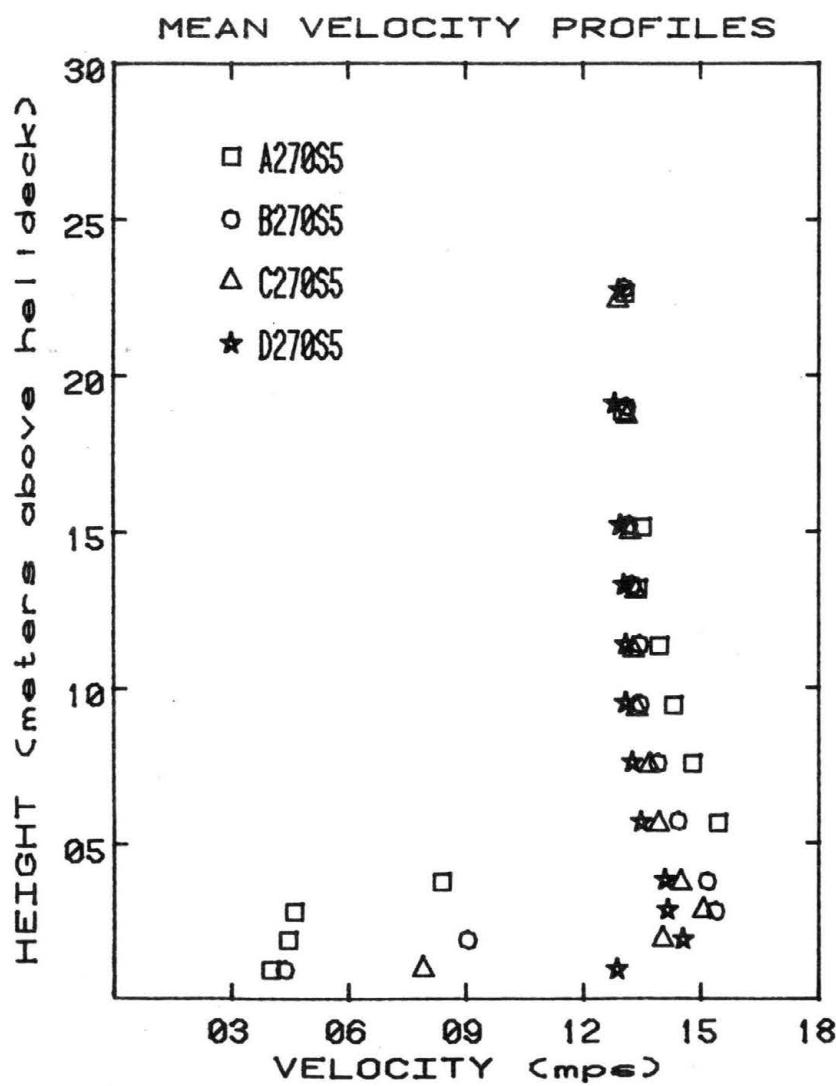
GRAPH # 22



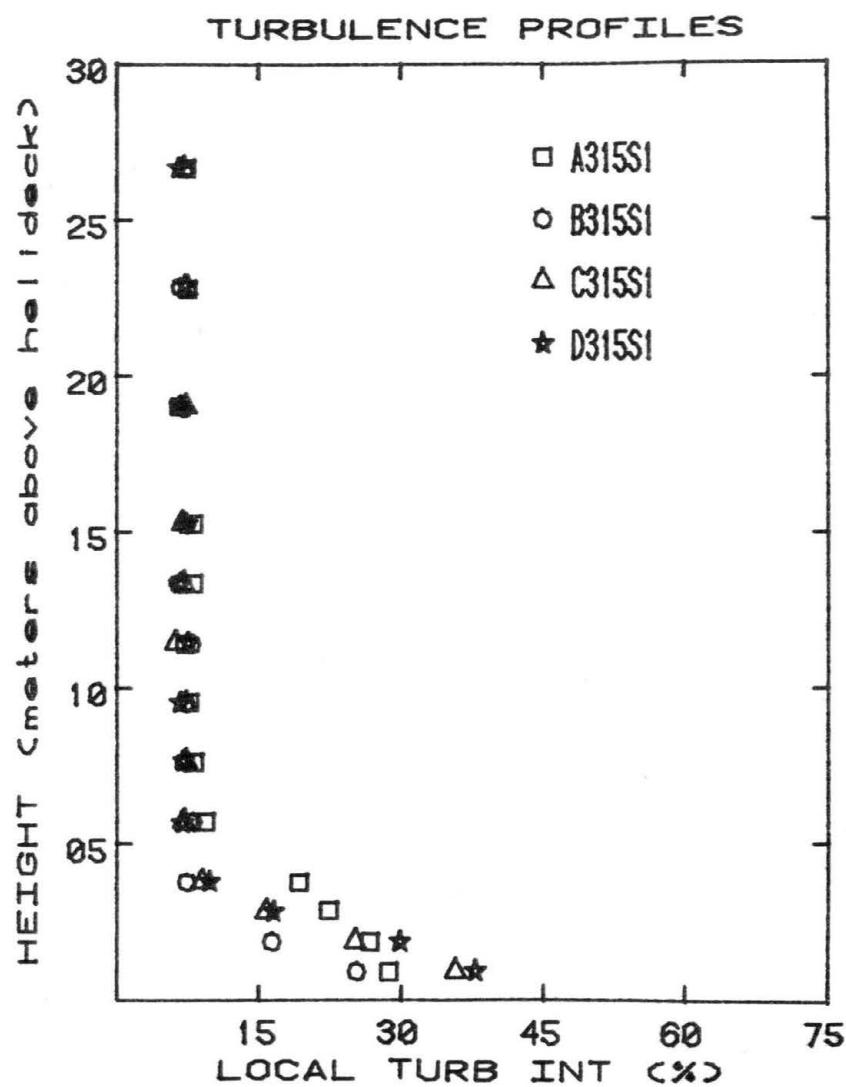
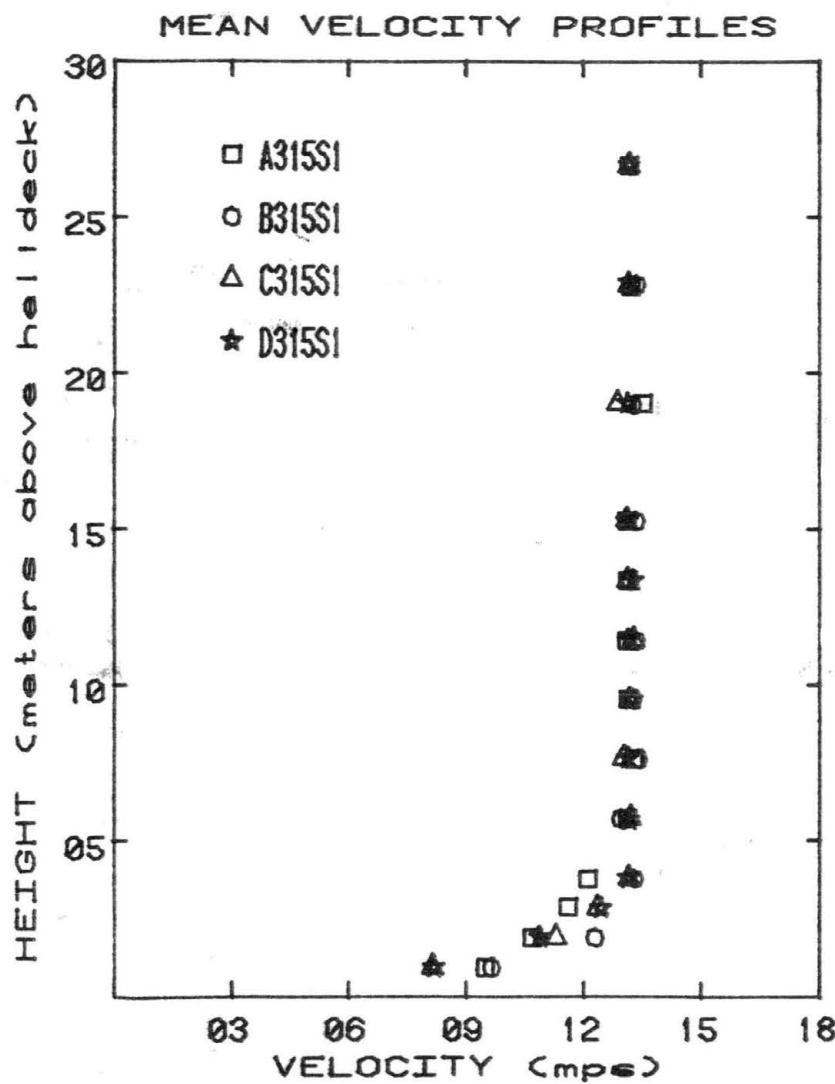
GRAPH # 23



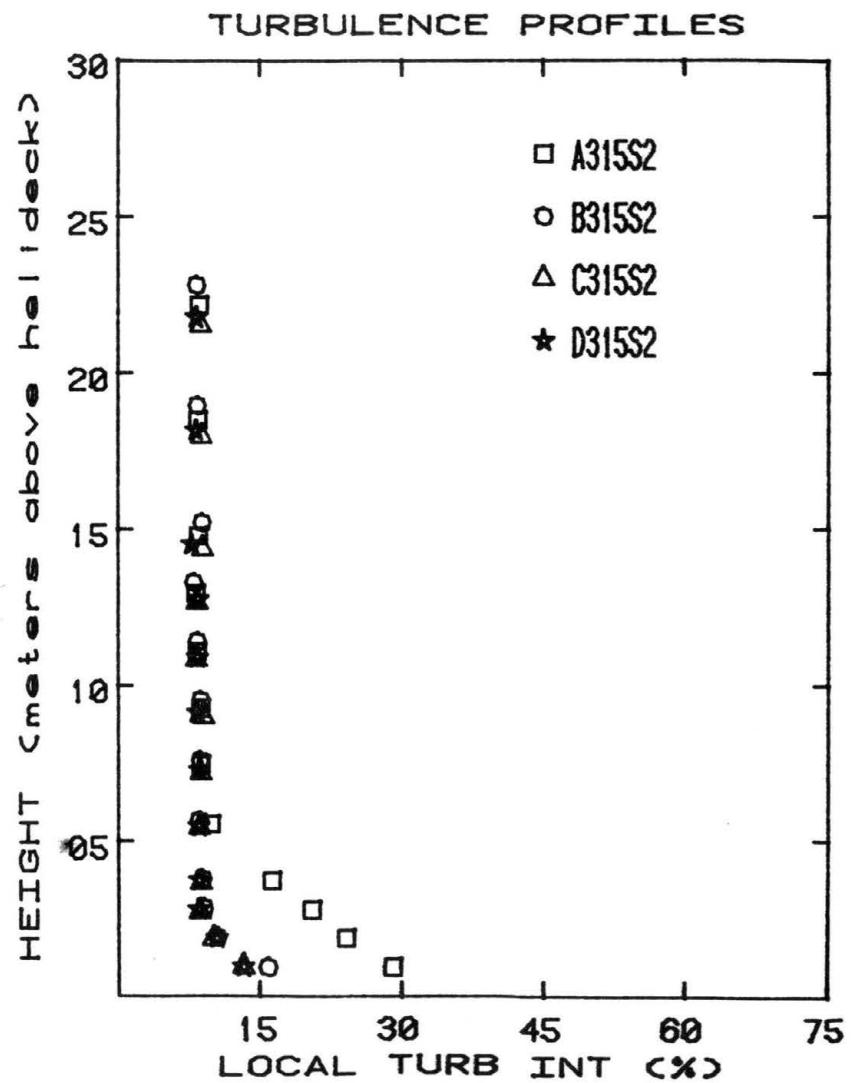
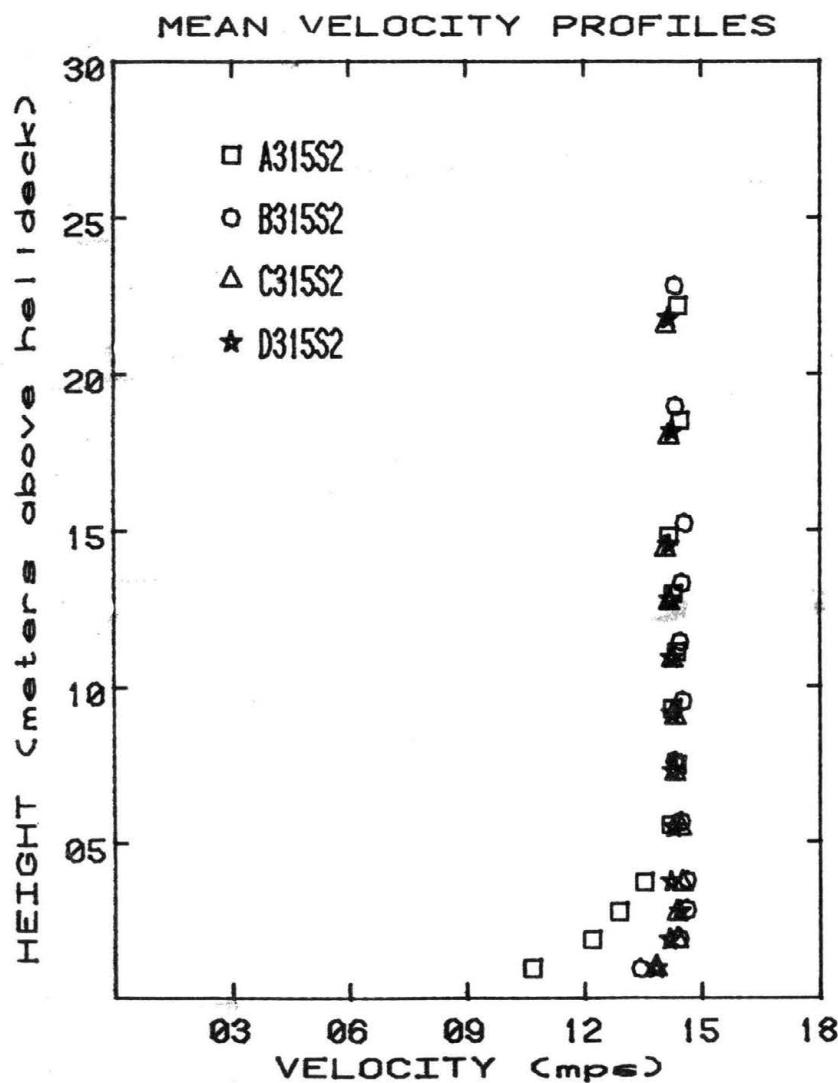
GRAPH # 24



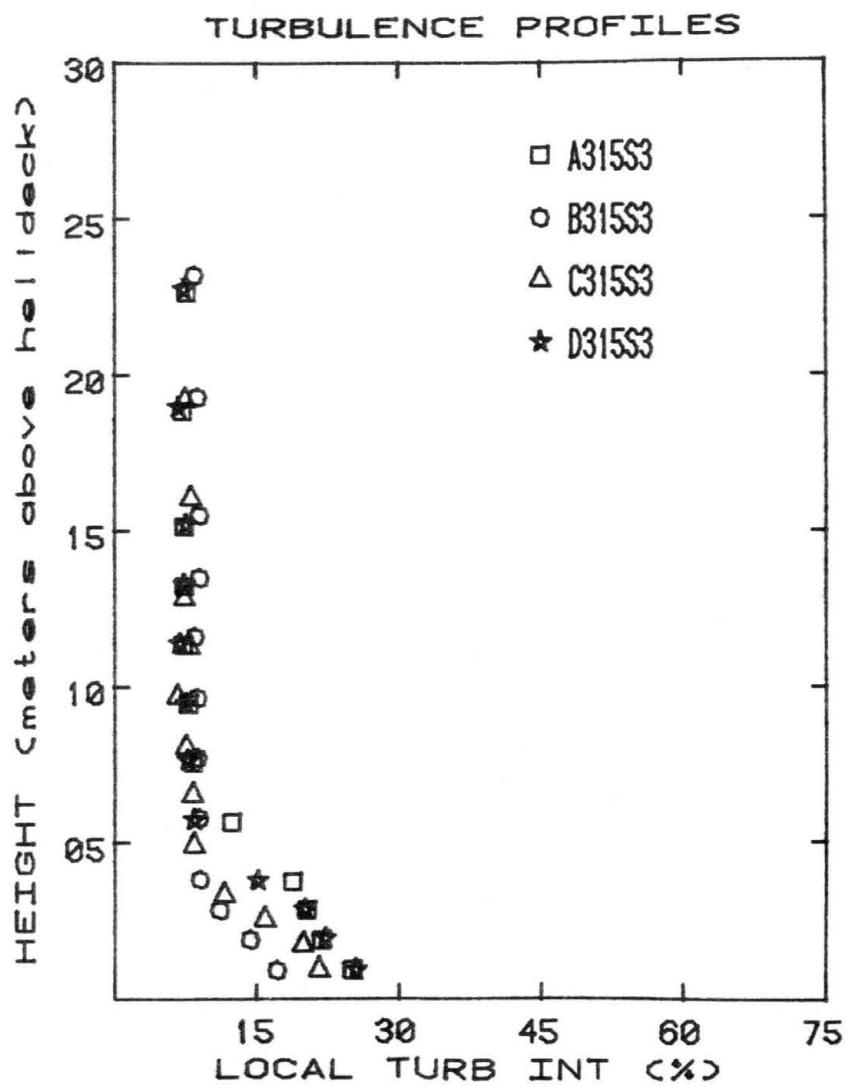
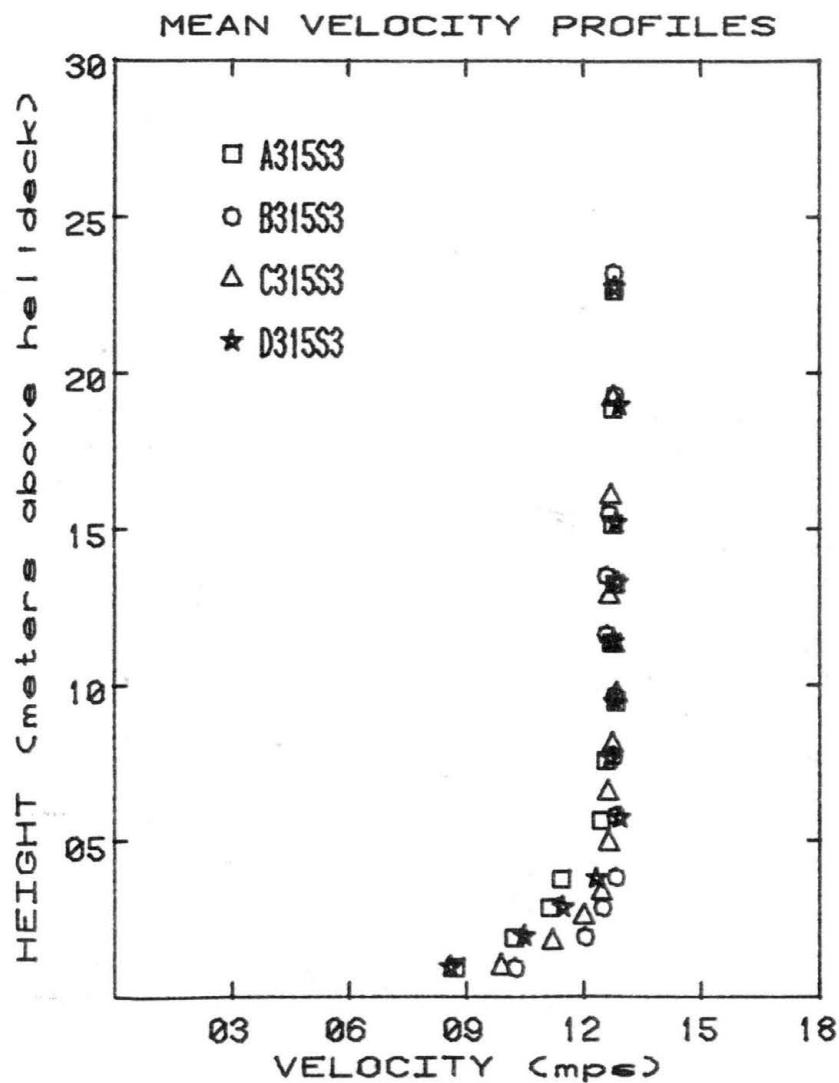
GRAPH # 25



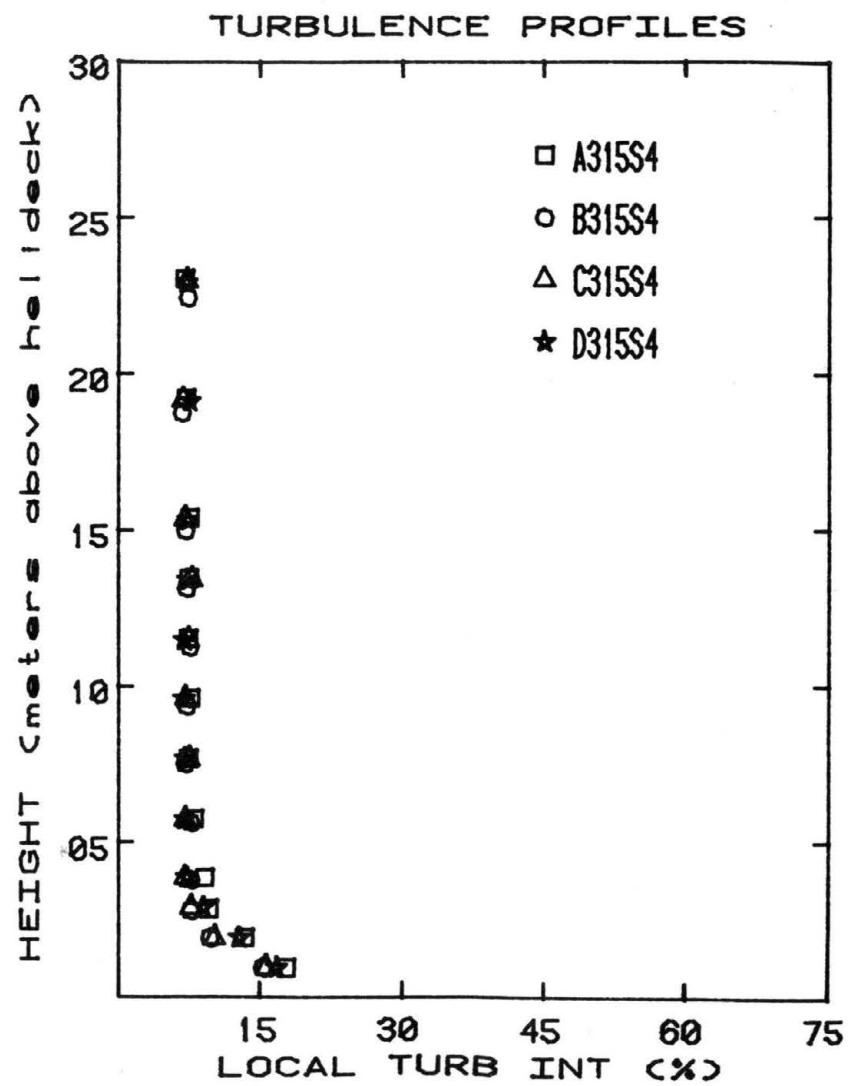
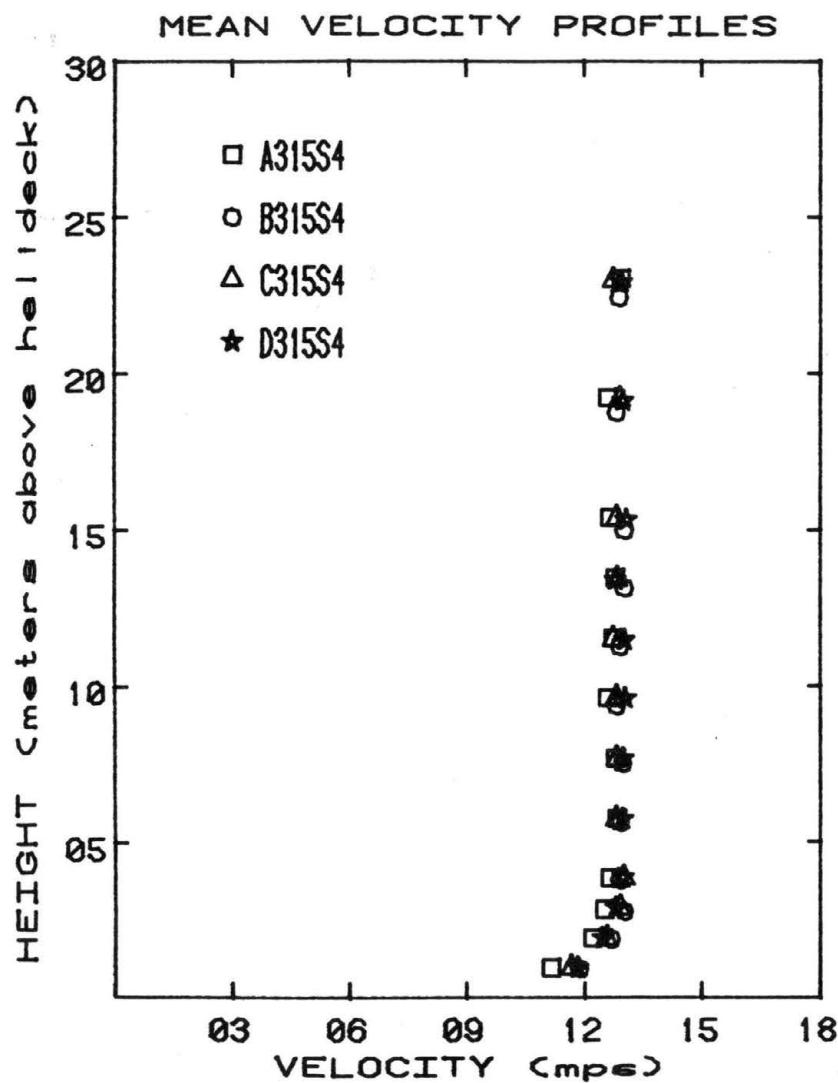
GRAPH # 26



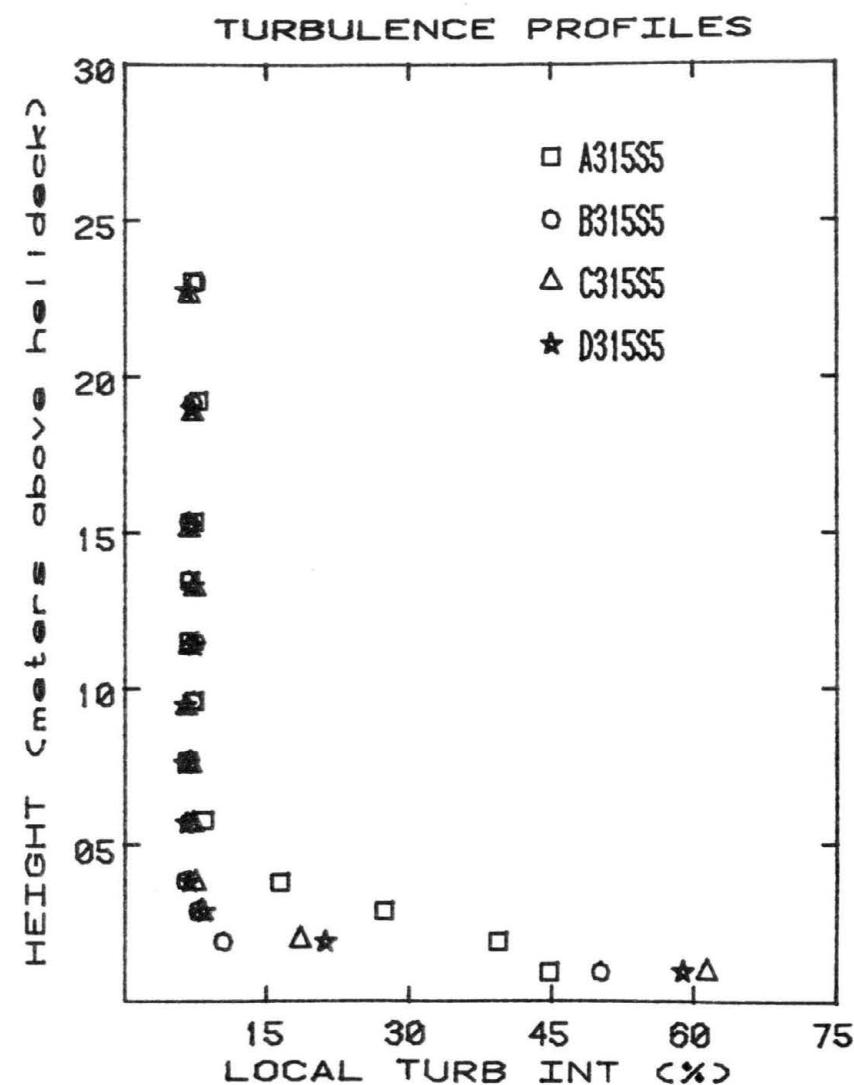
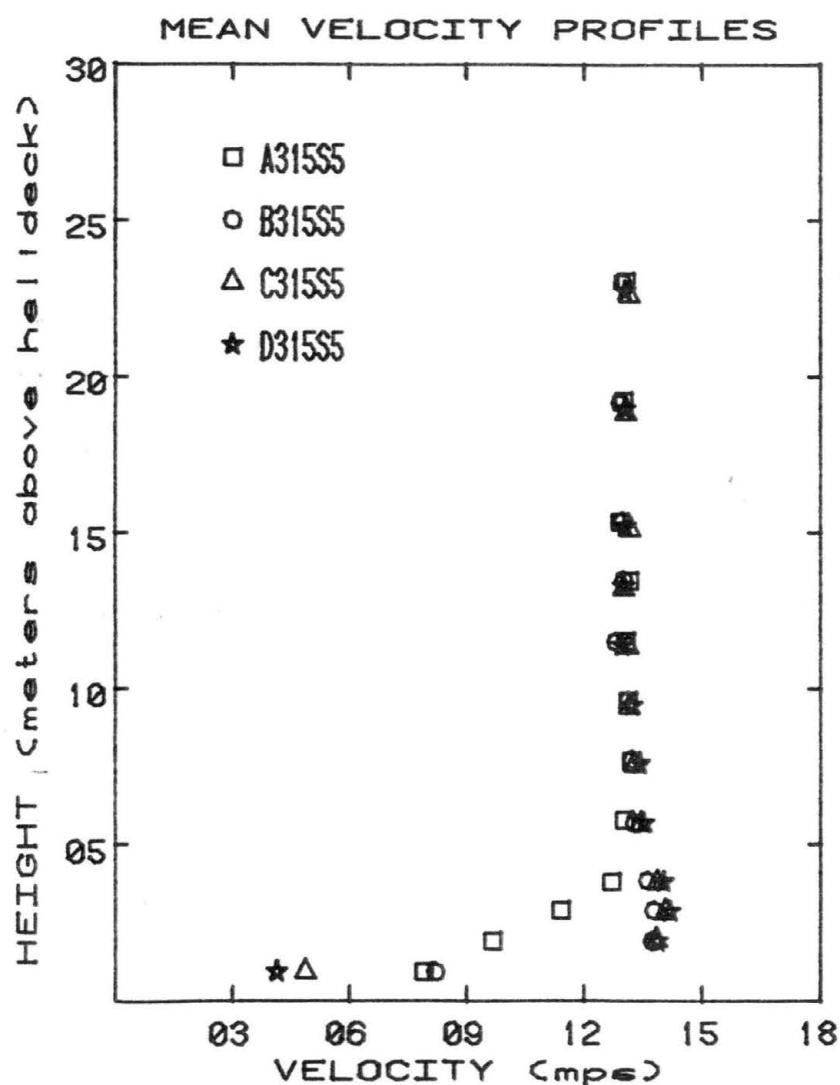
GRAPH # 27



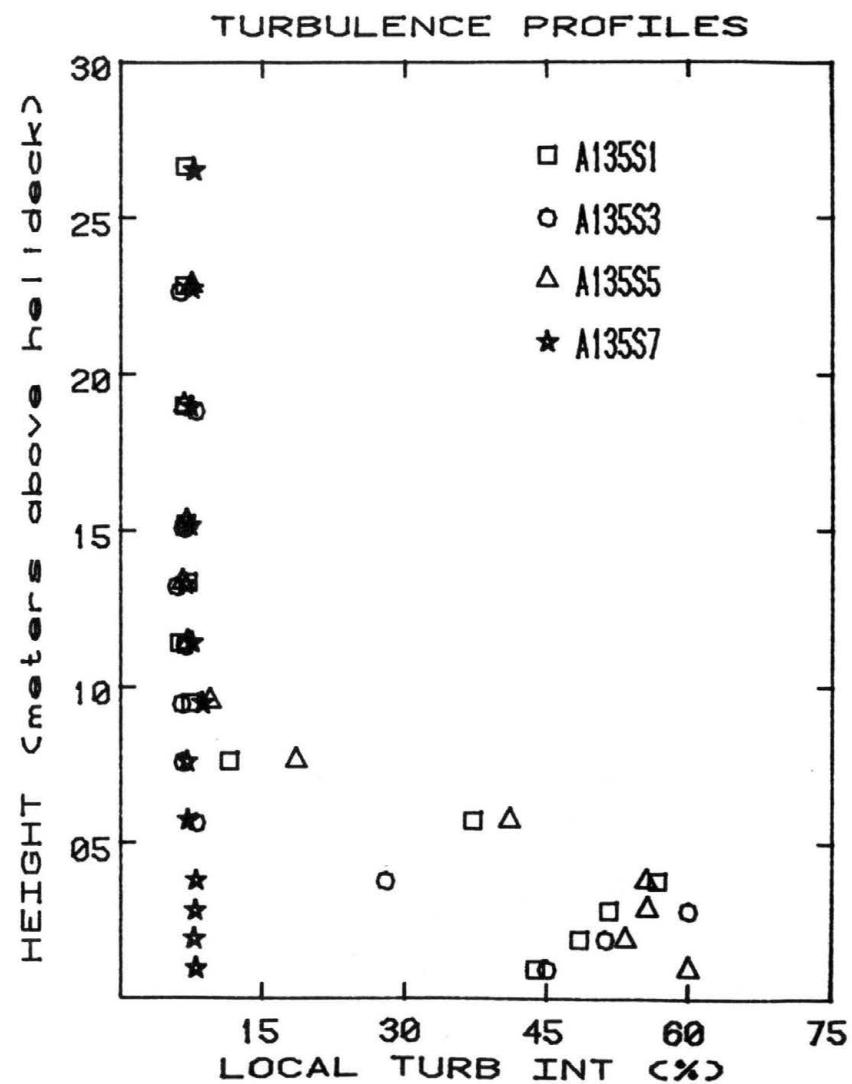
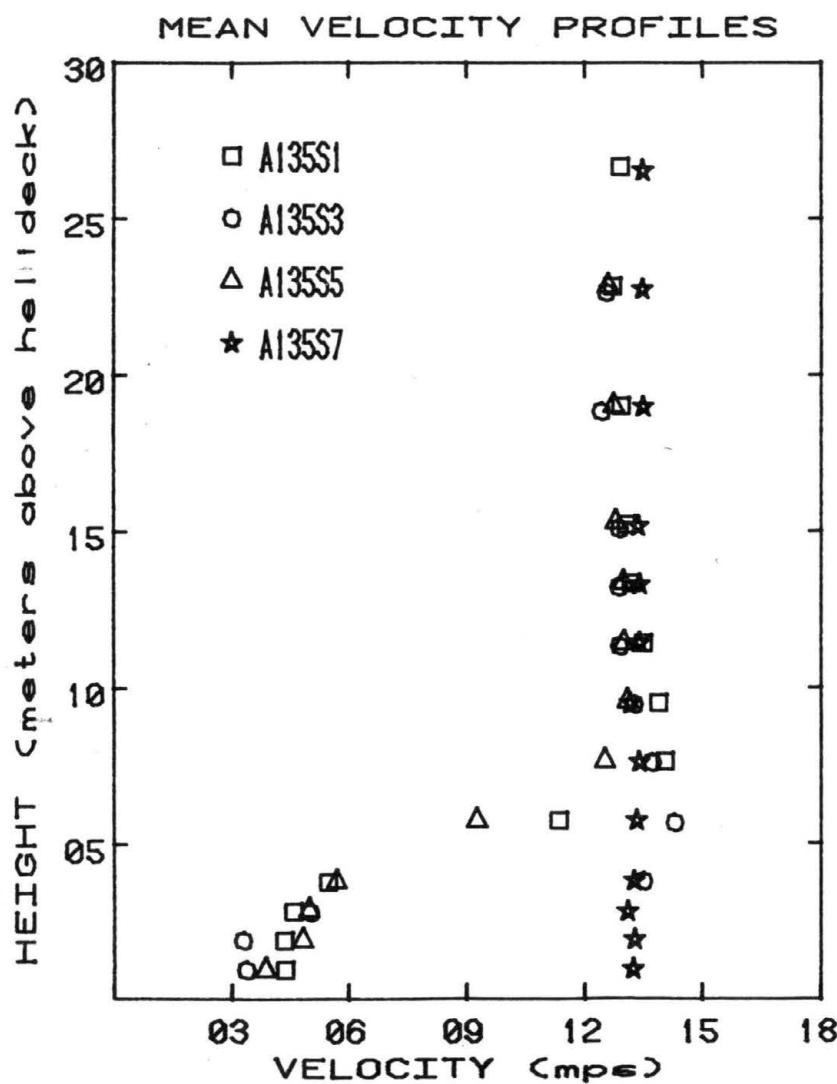
GRAPH # 28



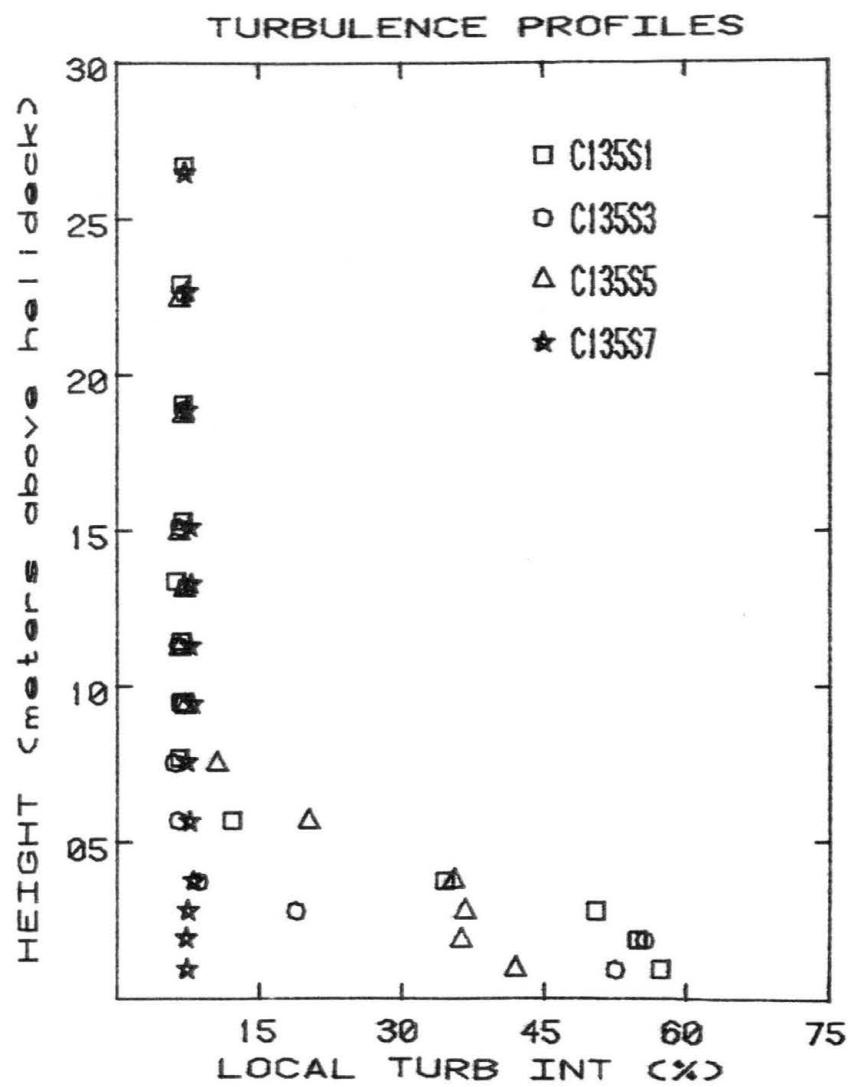
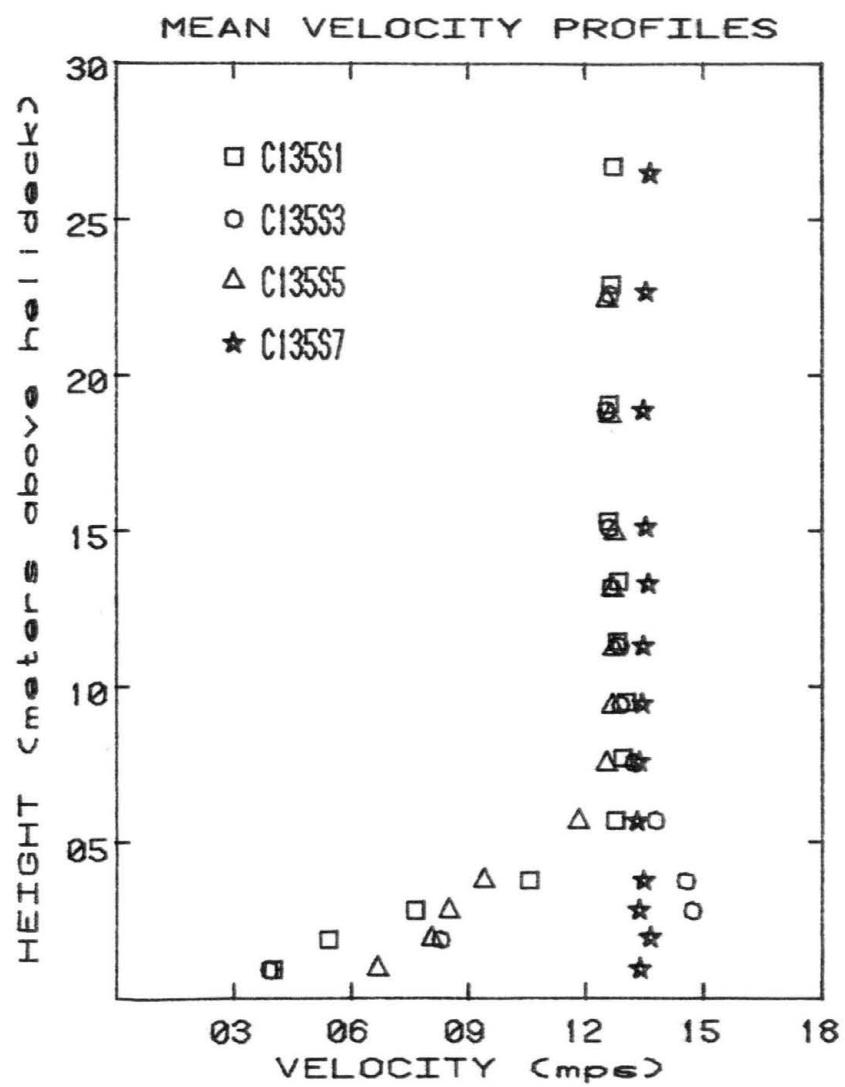
GRAPH # 29



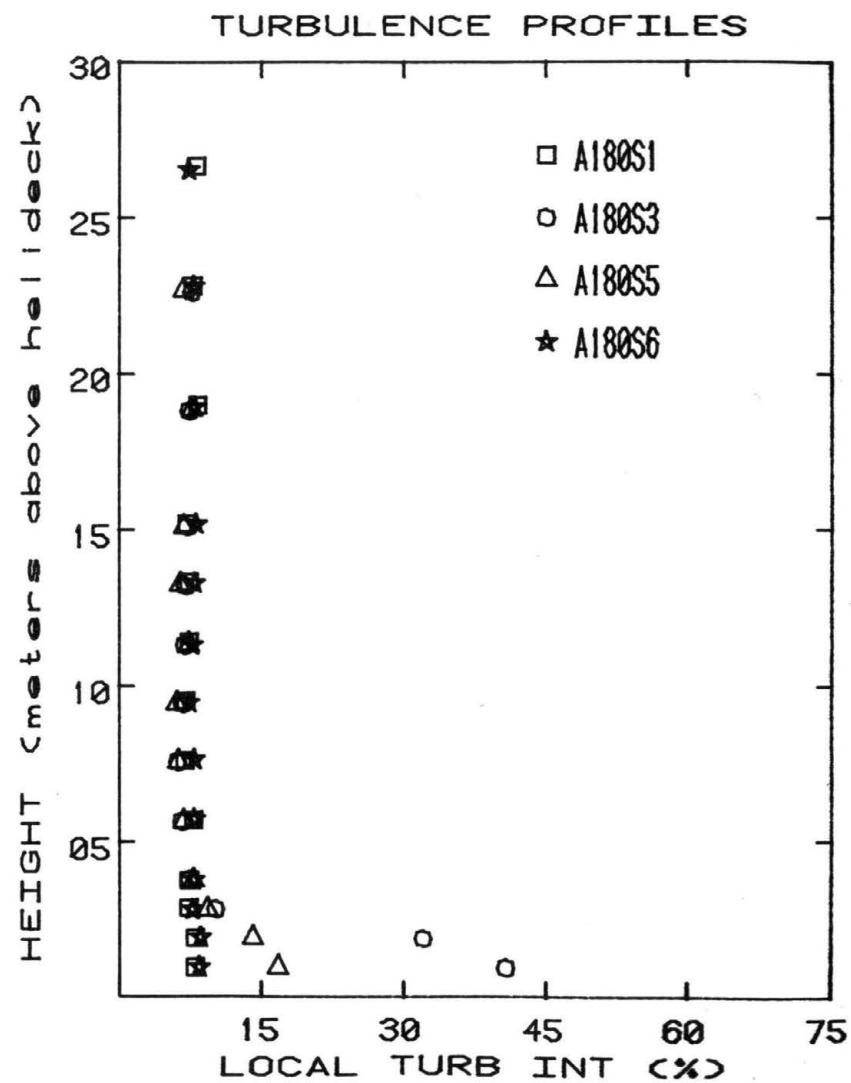
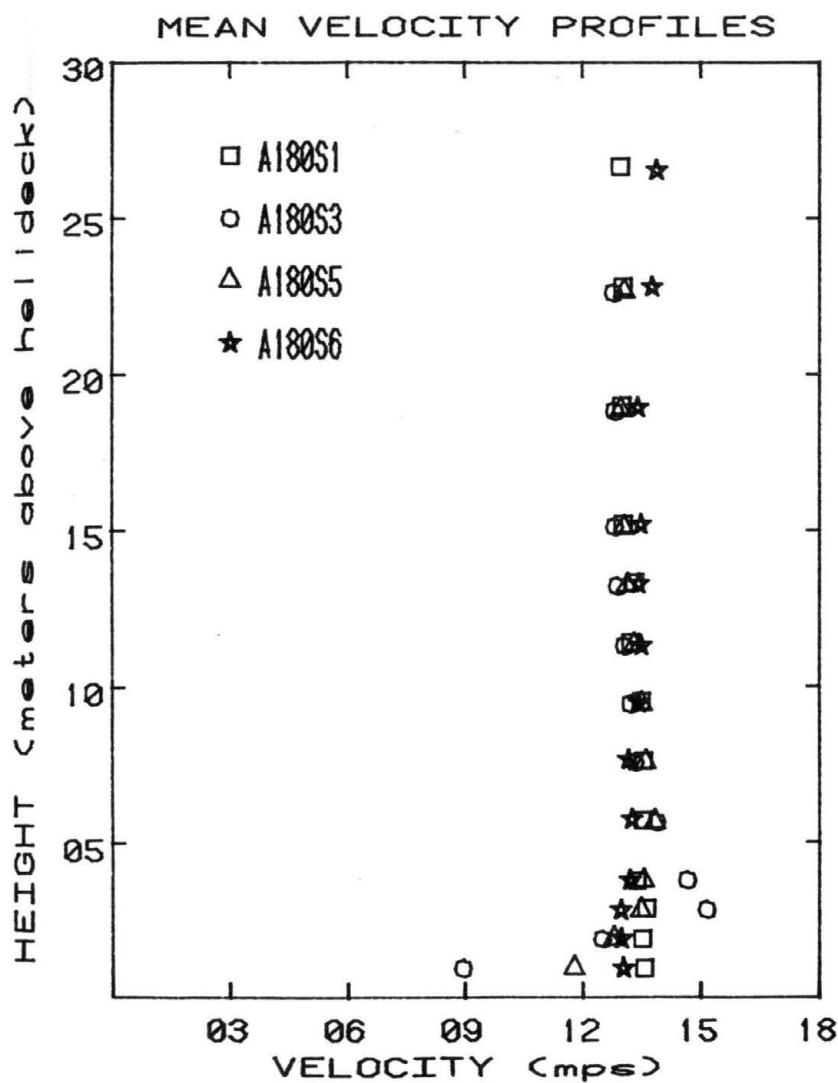
GRAPH # 30



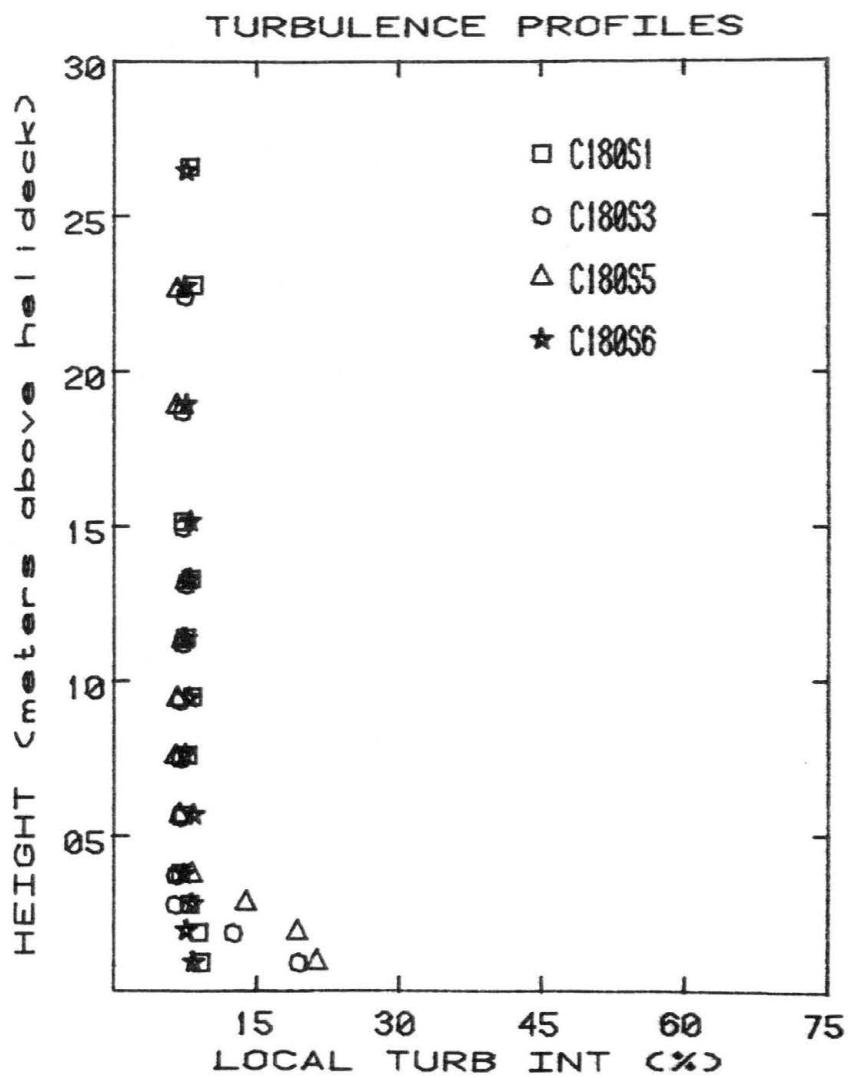
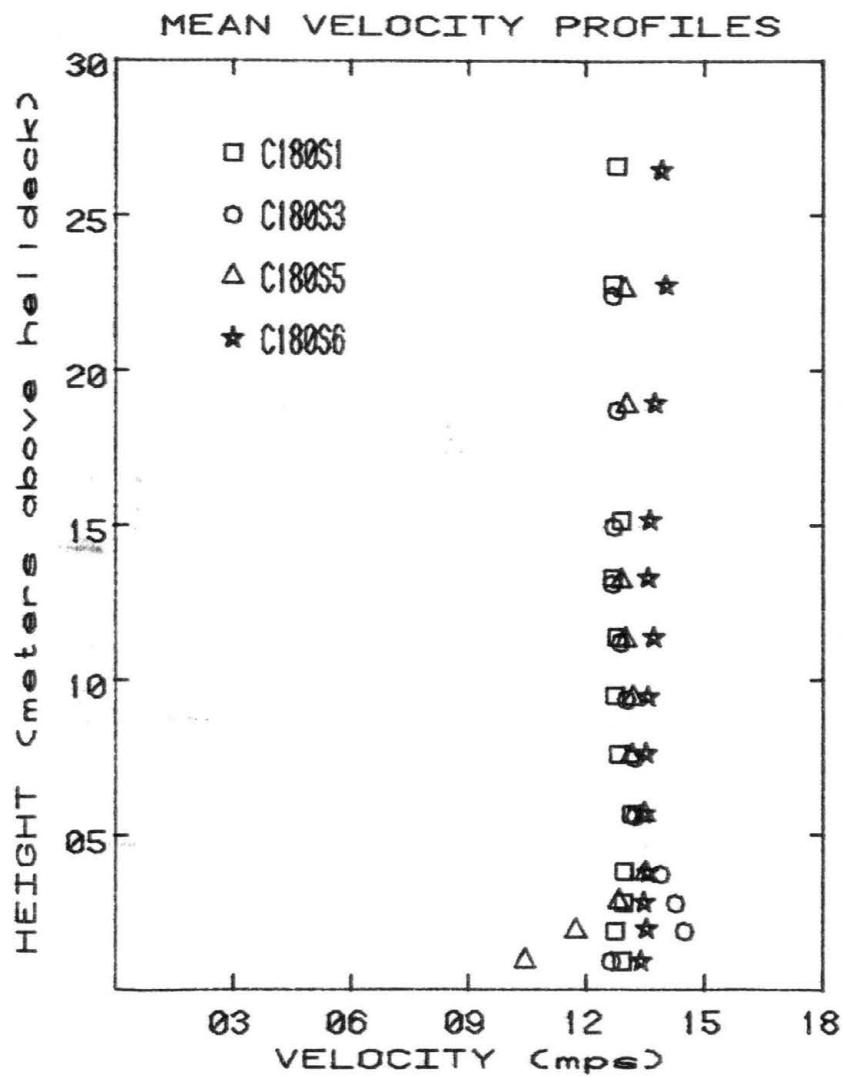
GRAPH # 31



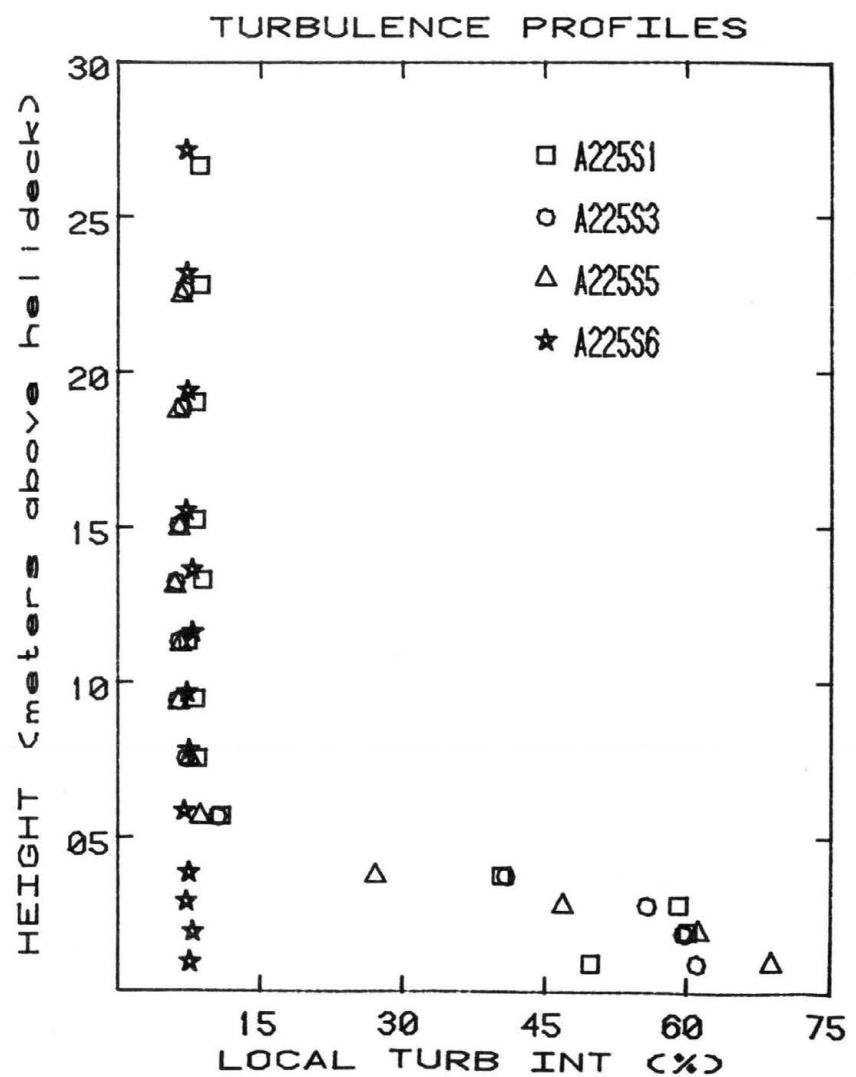
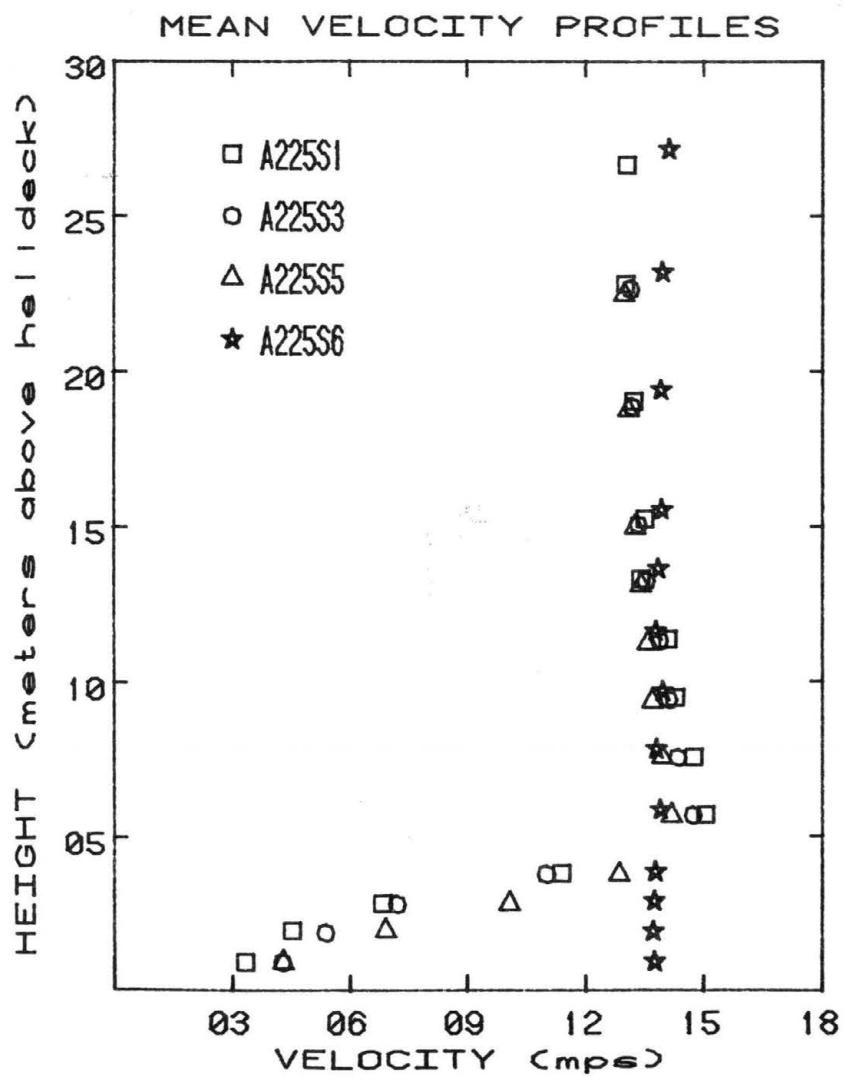
GRAPH # 32



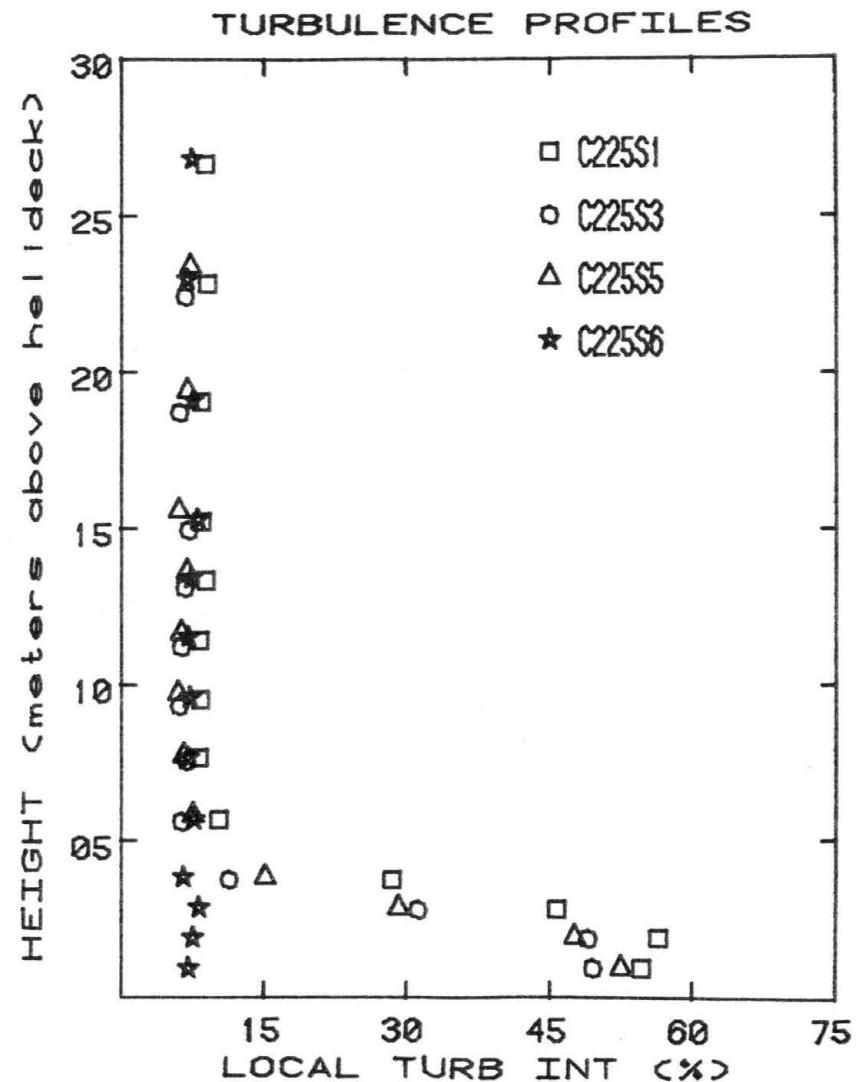
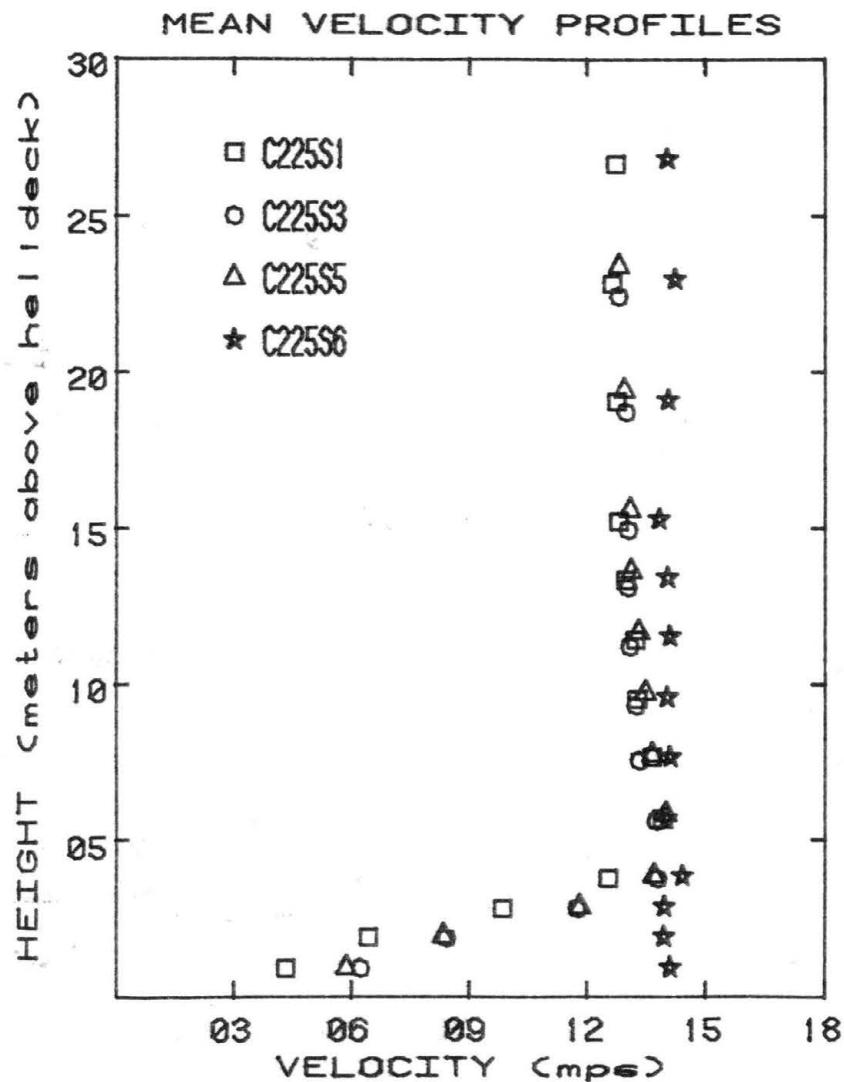
GRAPH # 33



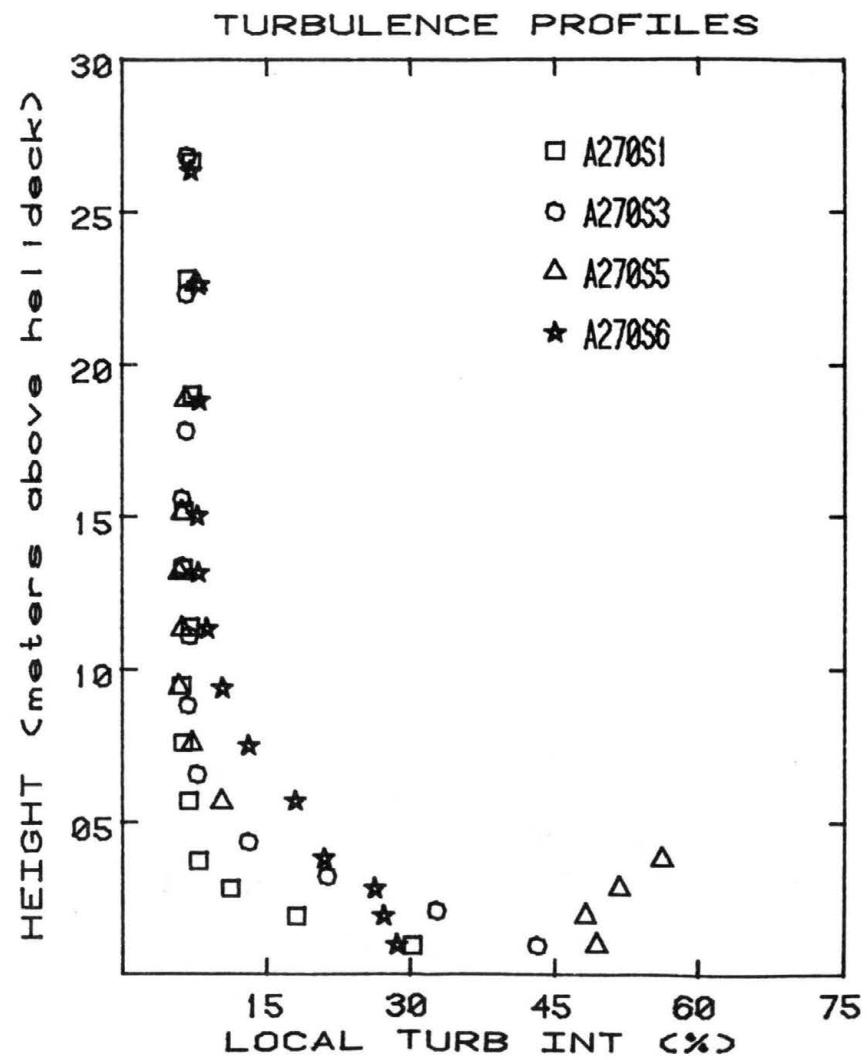
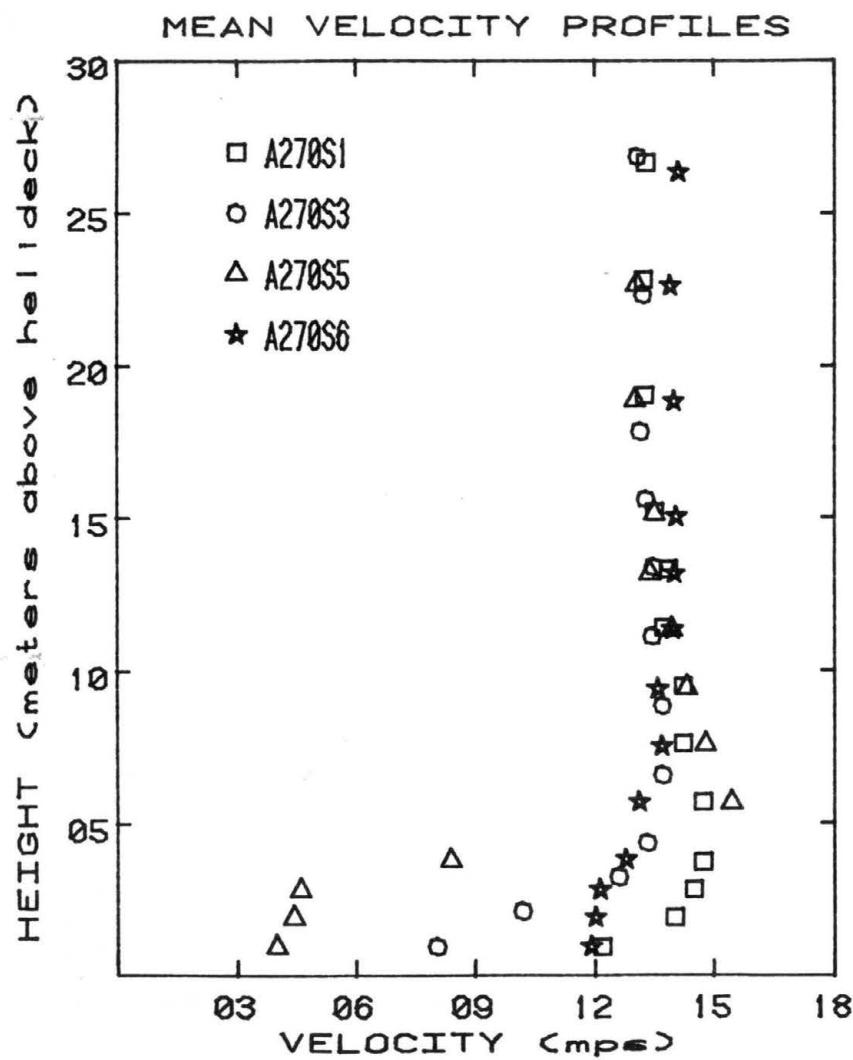
GRAPH # 34



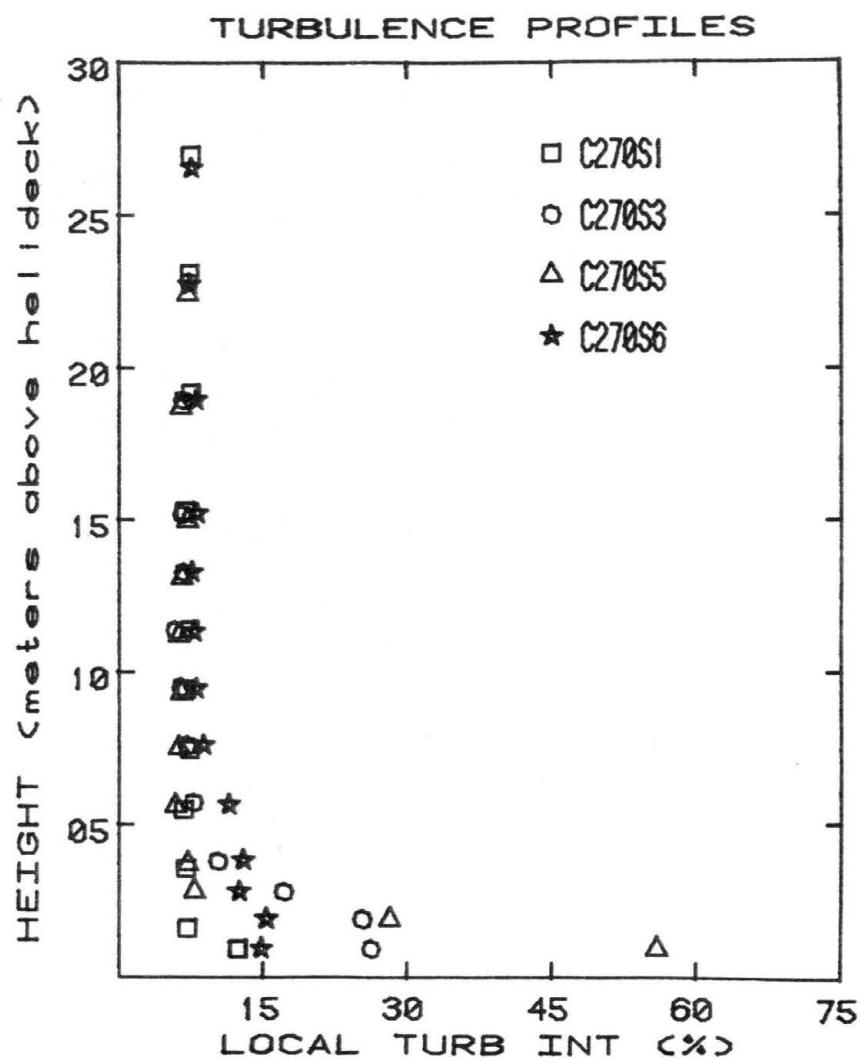
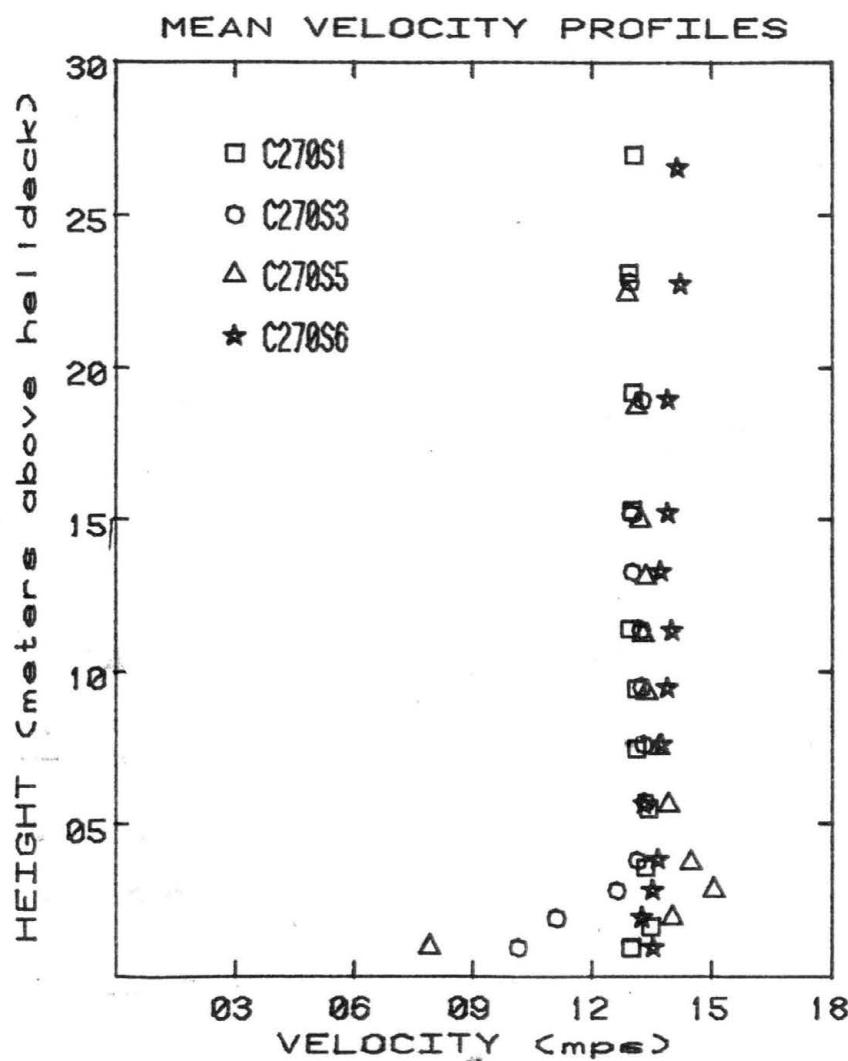
GRAPH # 35



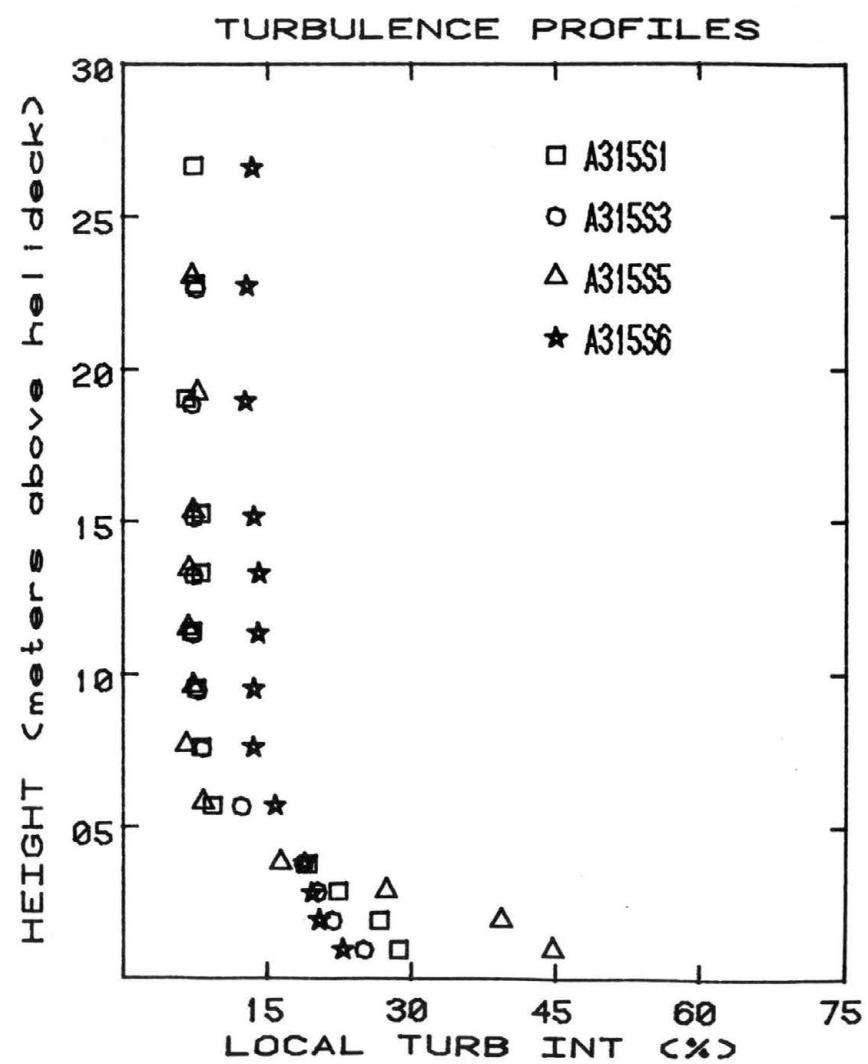
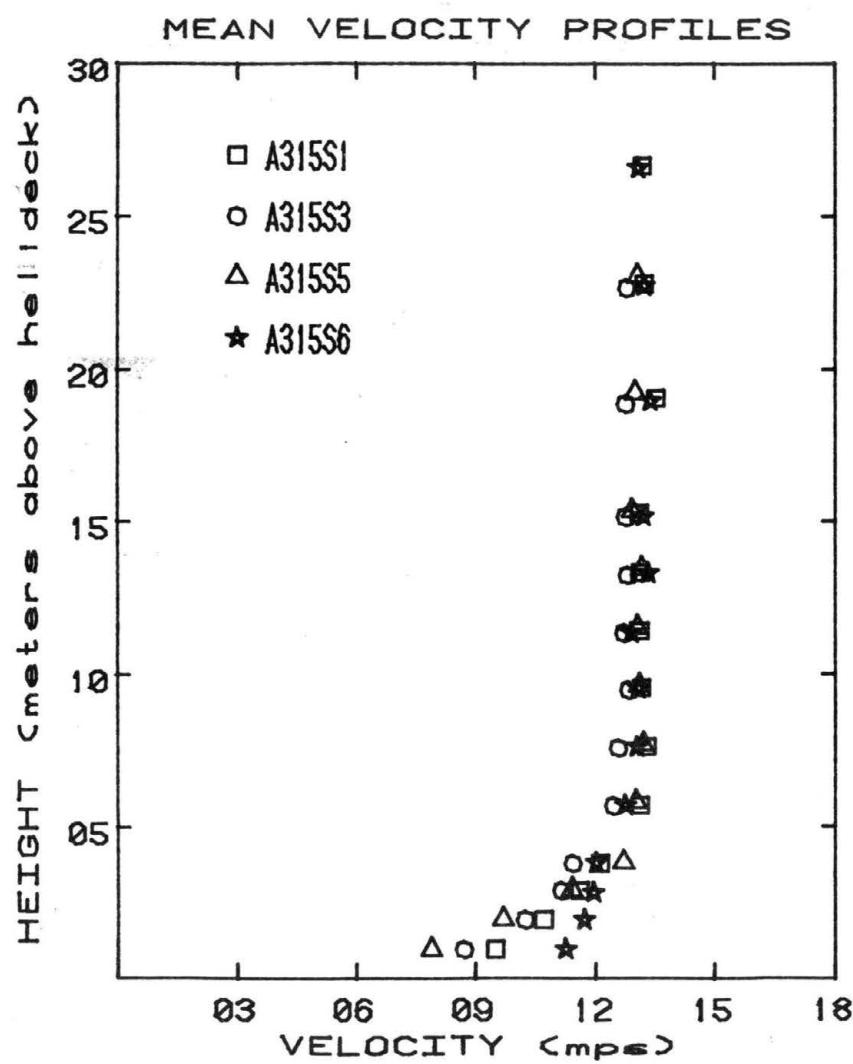
GRAPH # 36



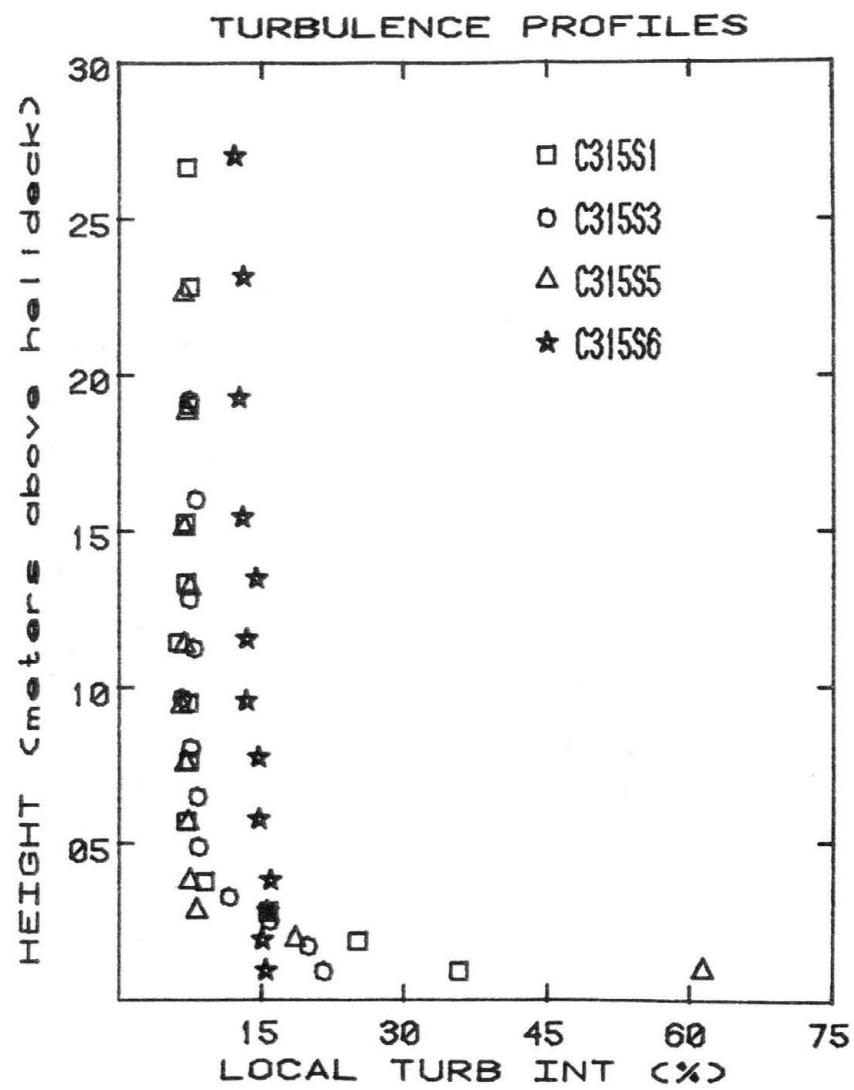
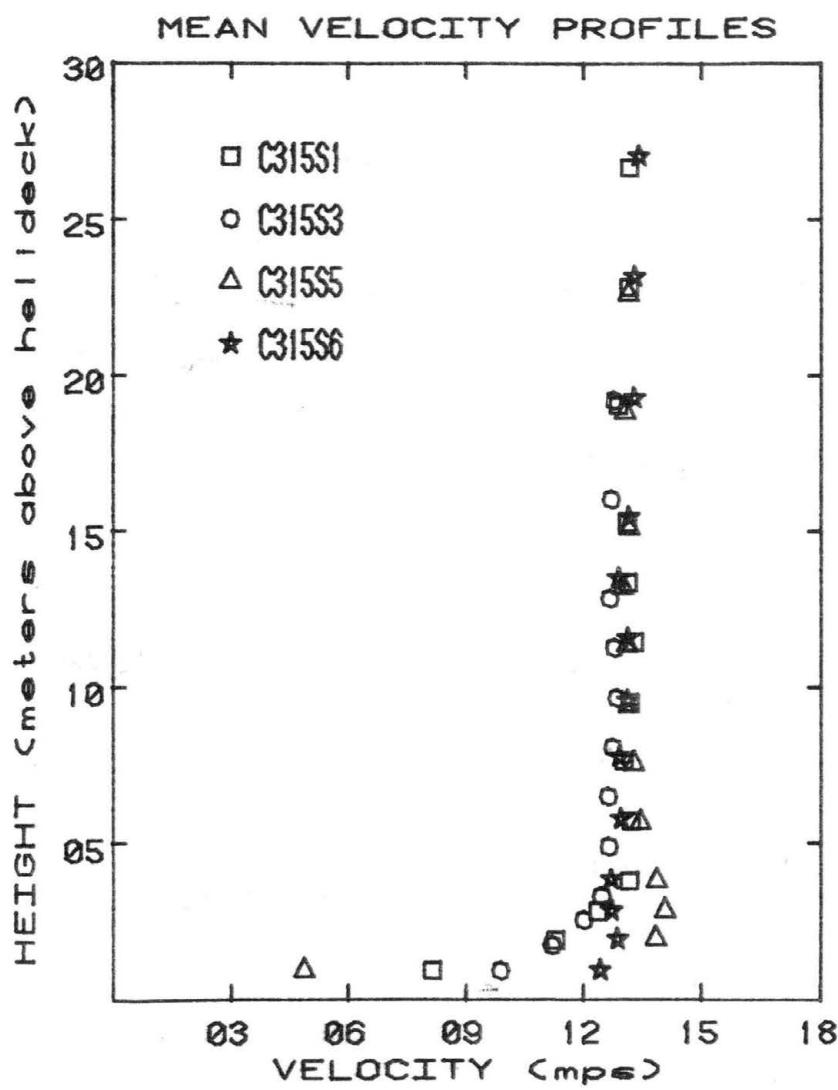
GRAPH # 37



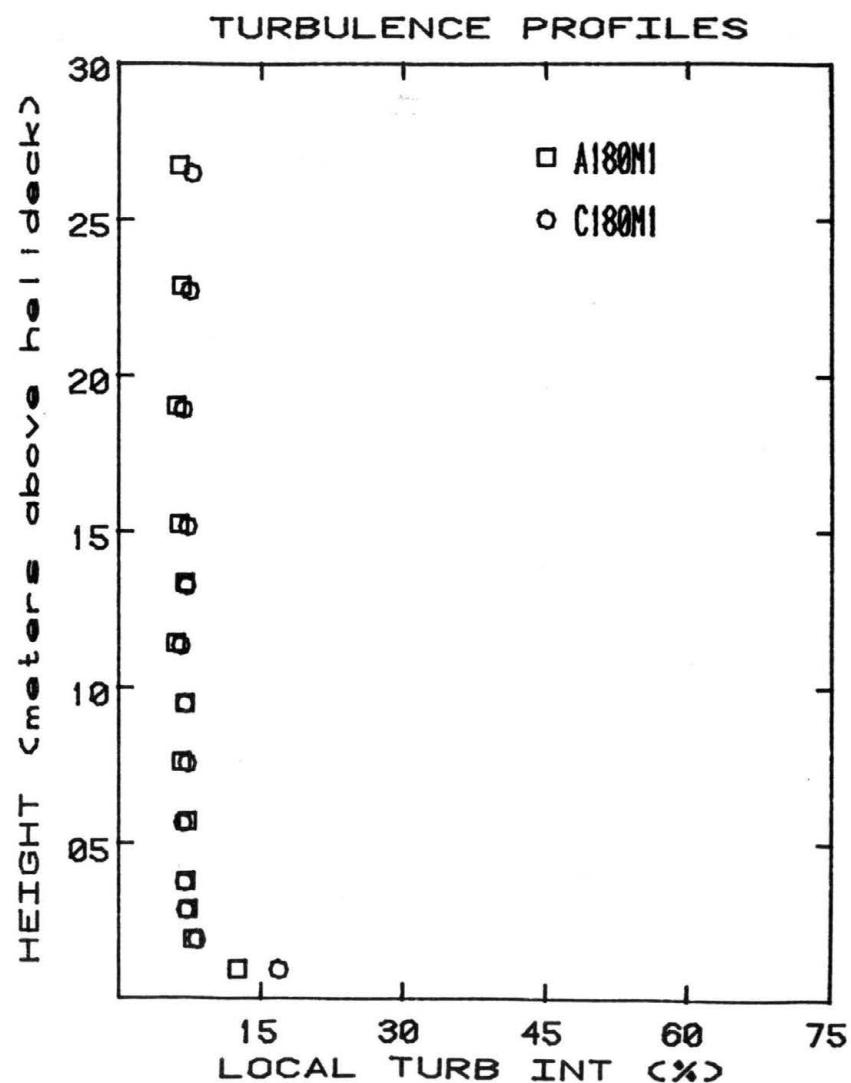
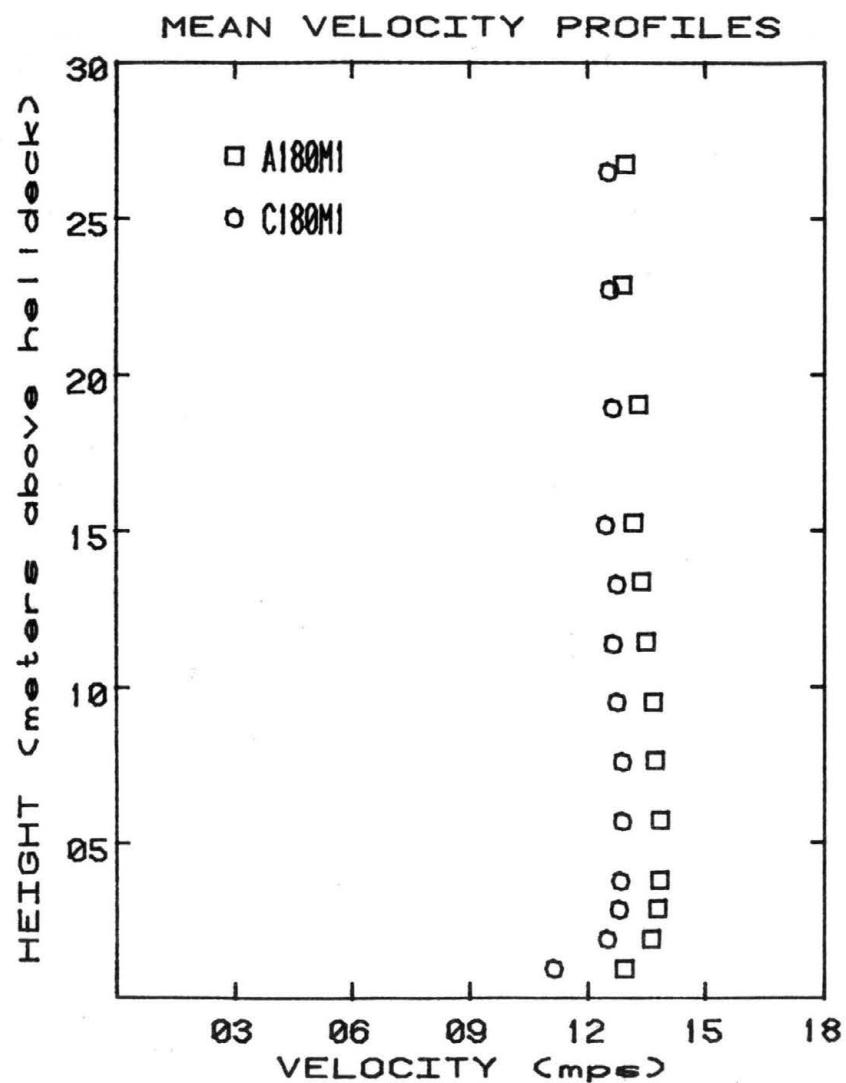
GRAPH # 38



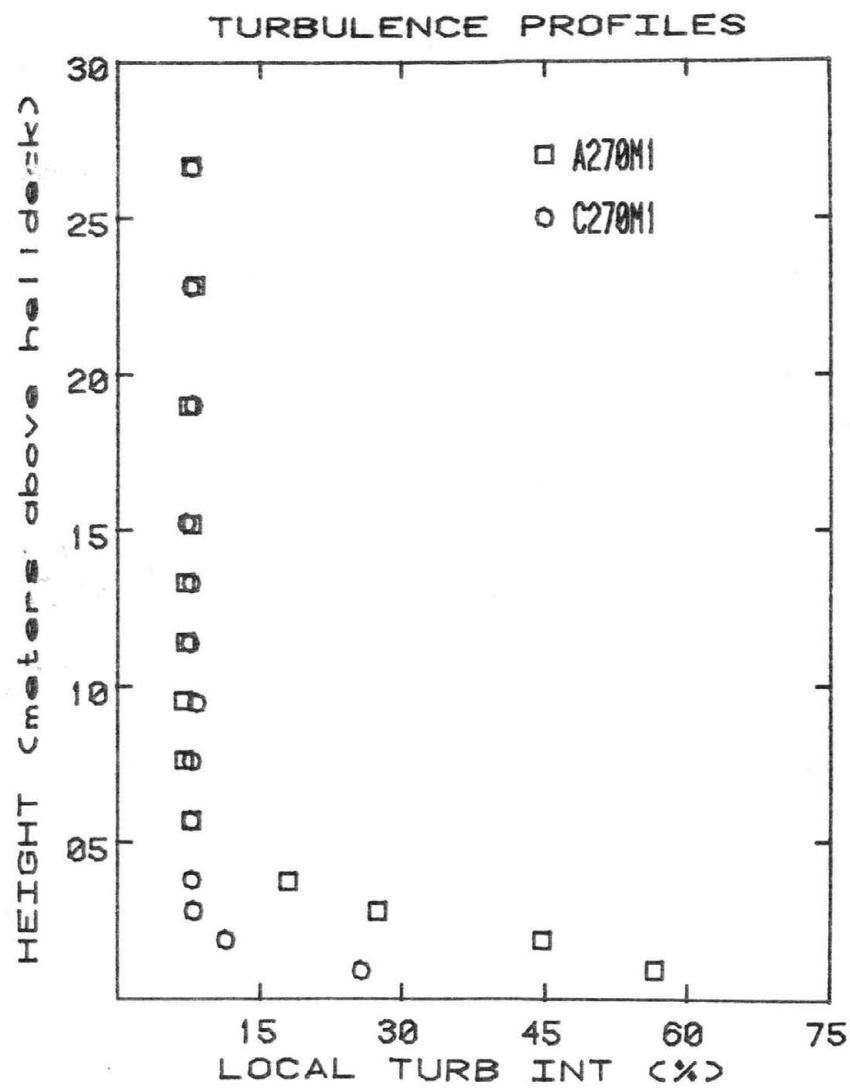
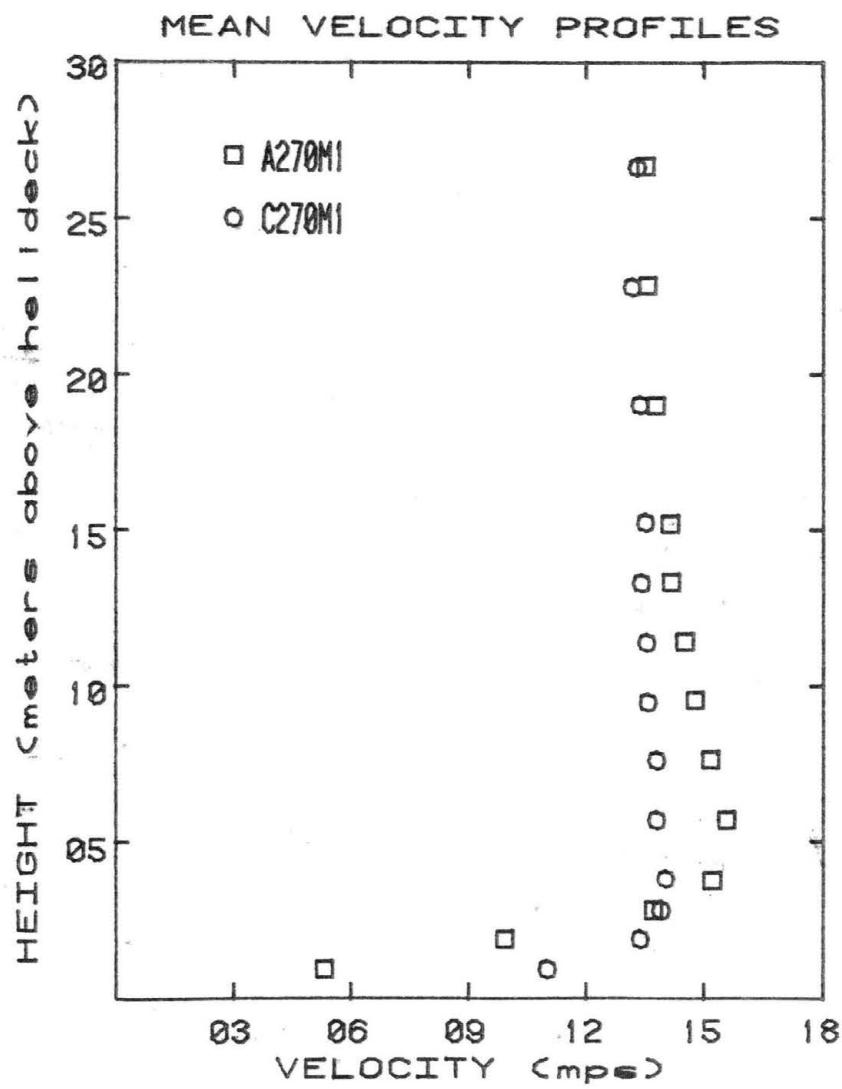
GRAPH # 39



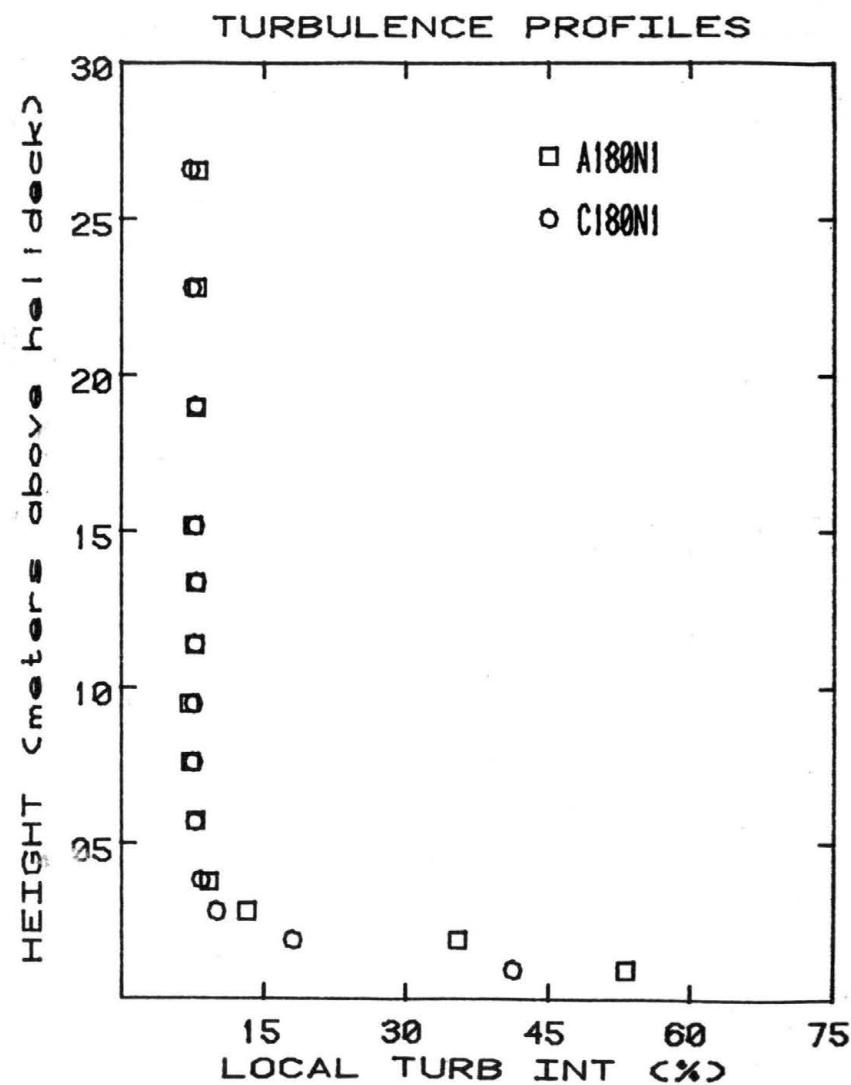
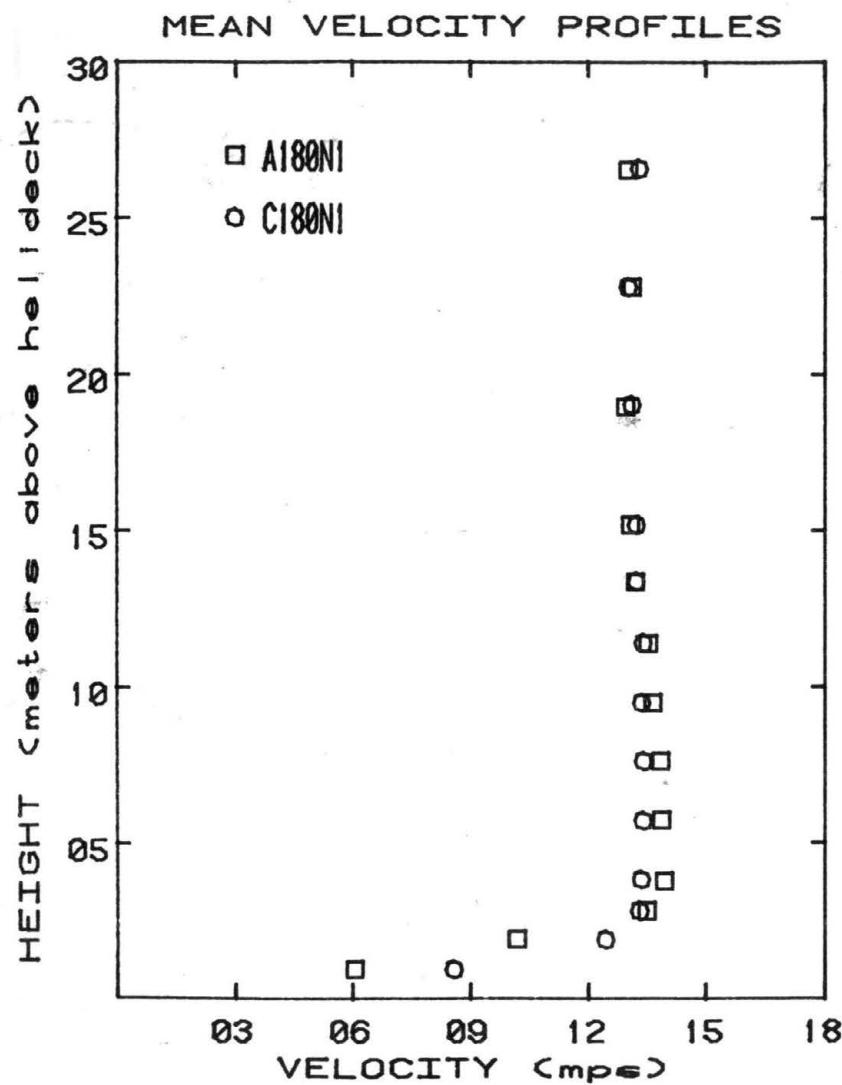
GRAPH # 40



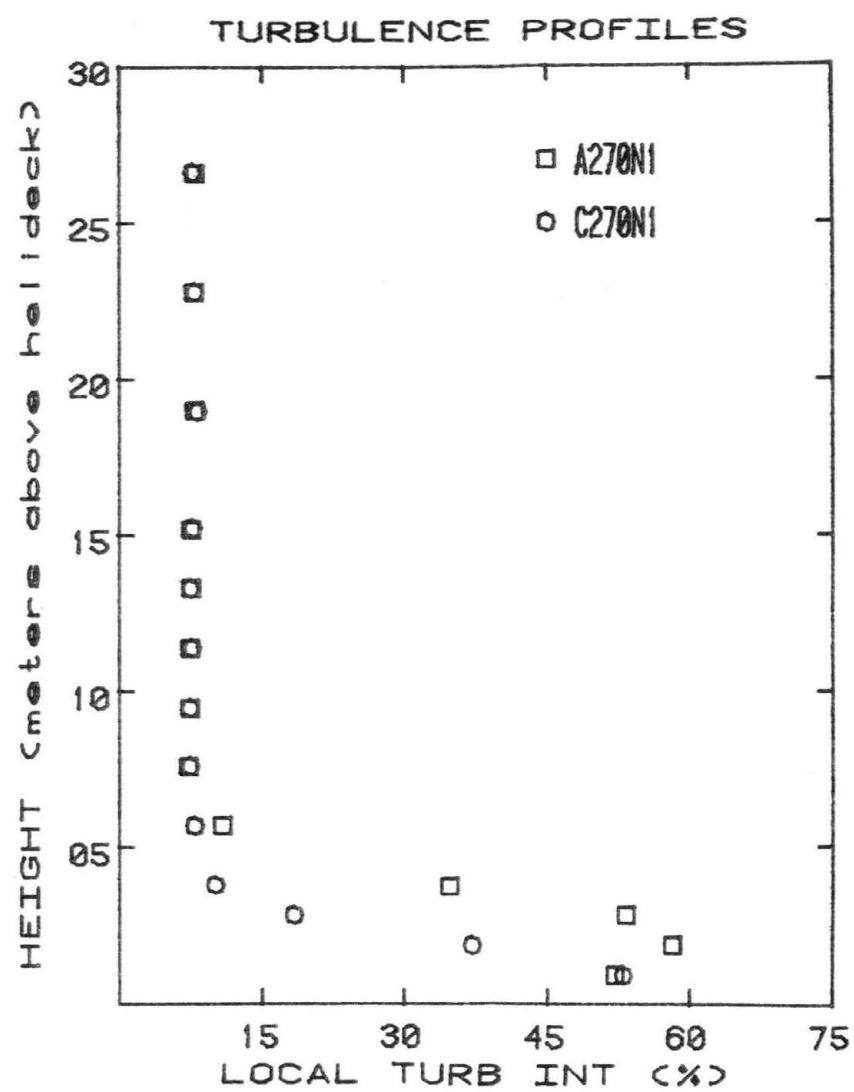
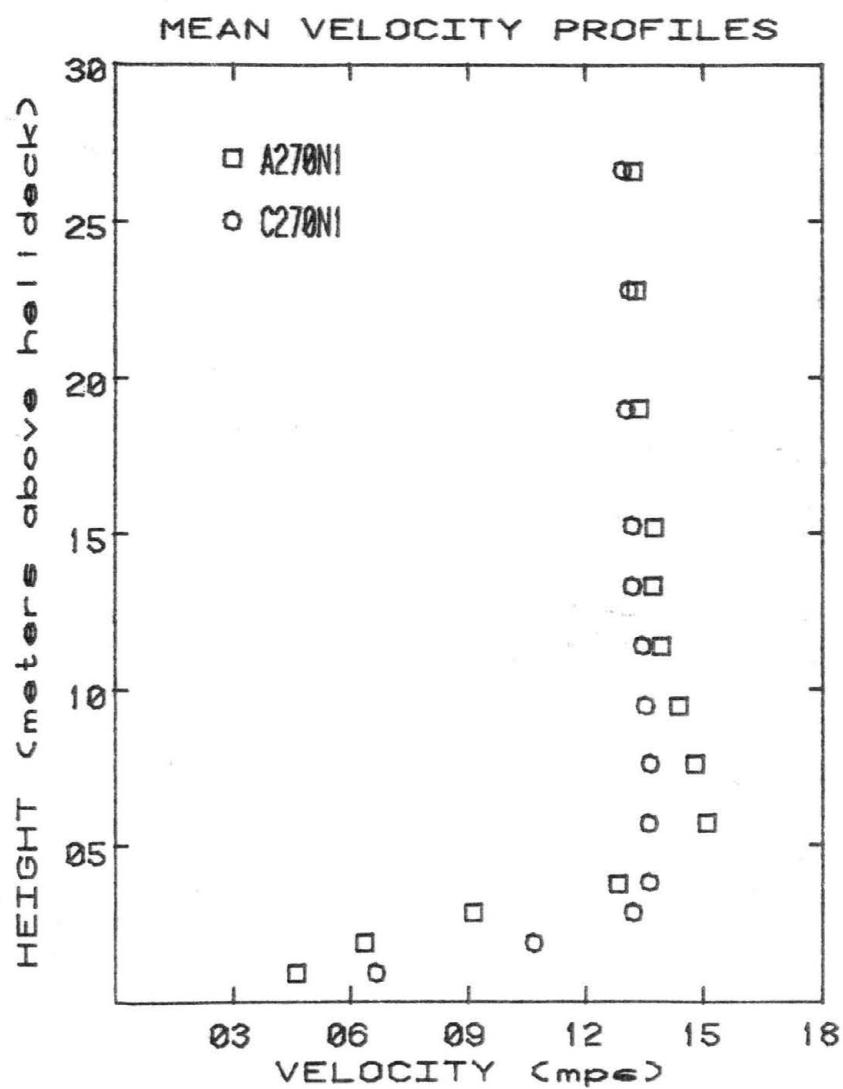
GRAPH # 41



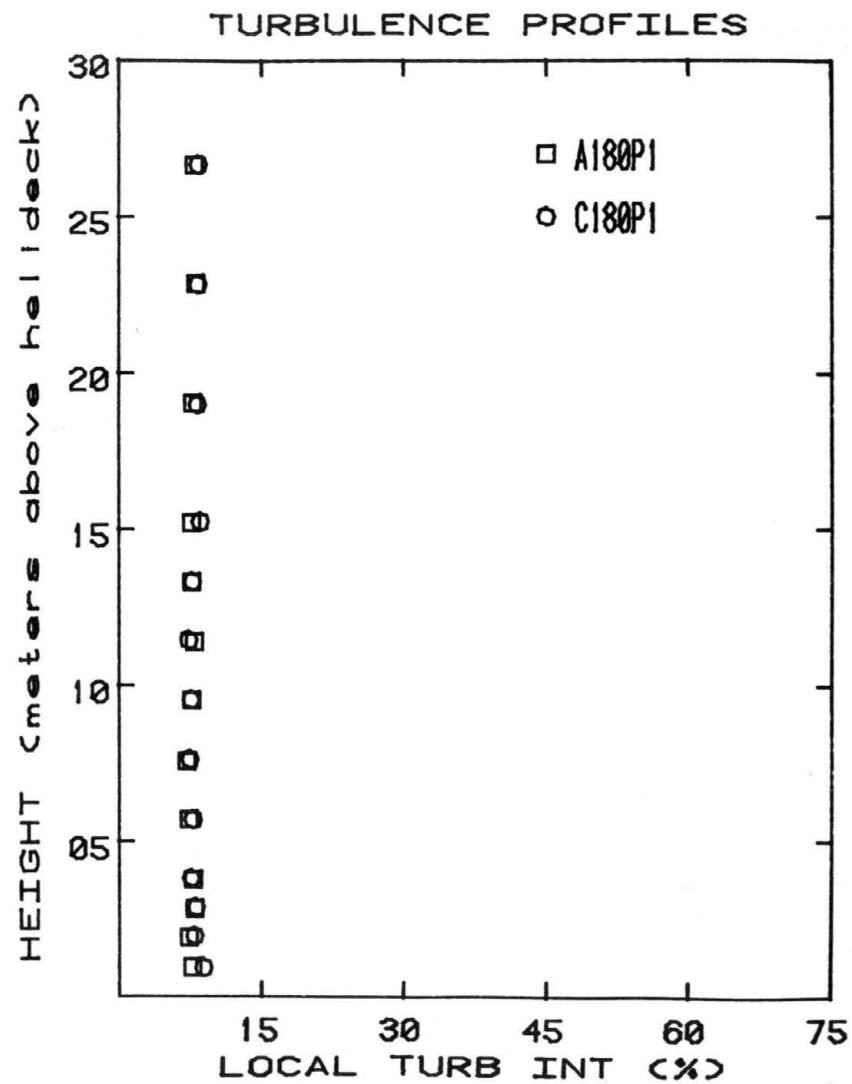
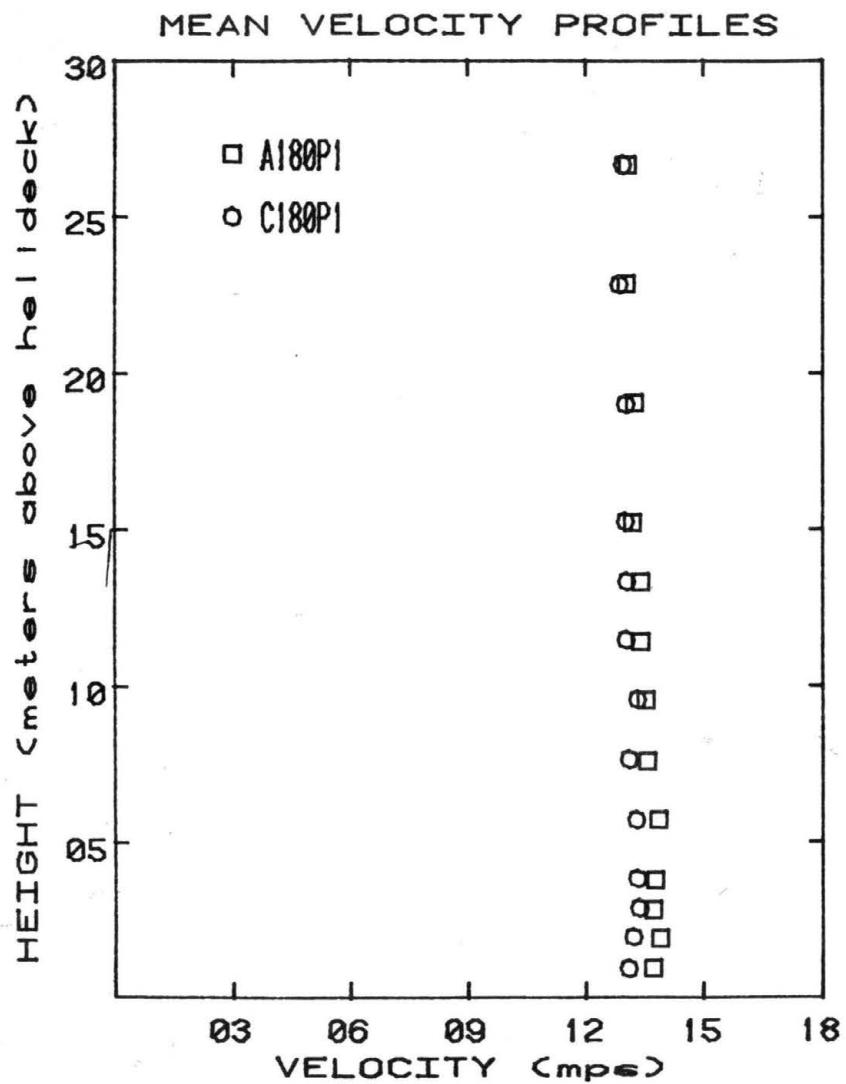
GRAPH # 42



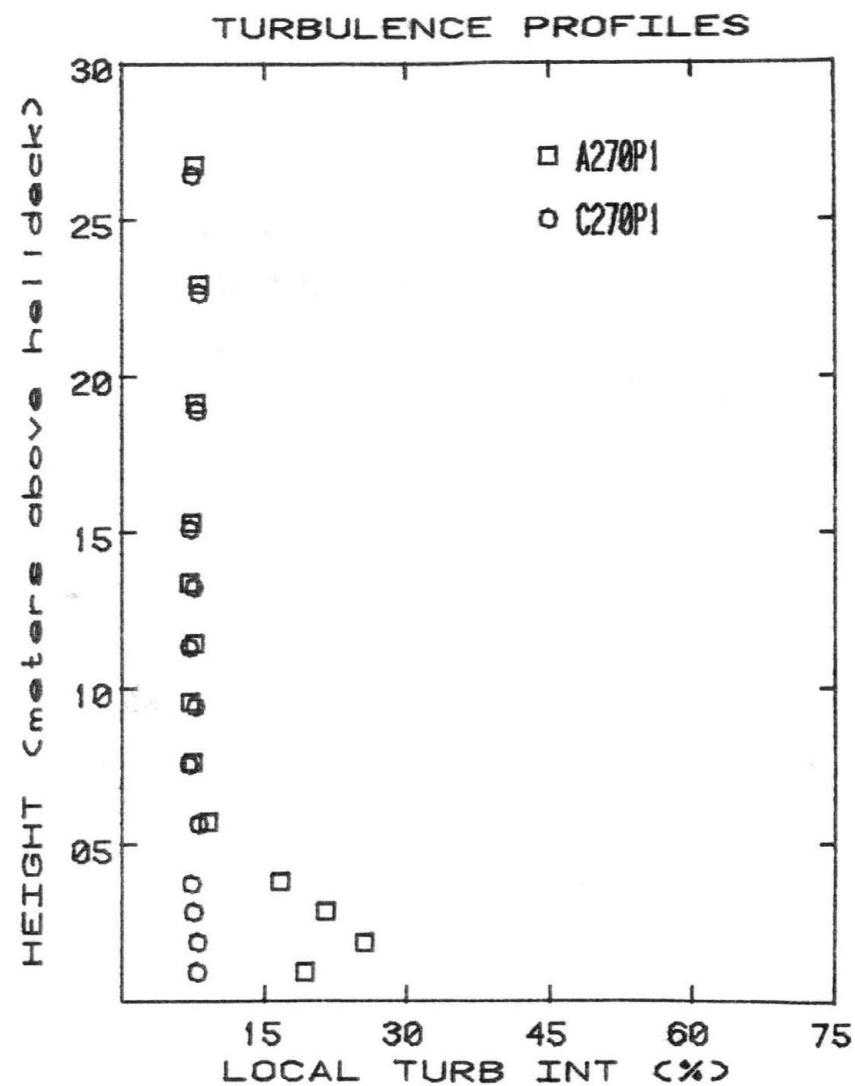
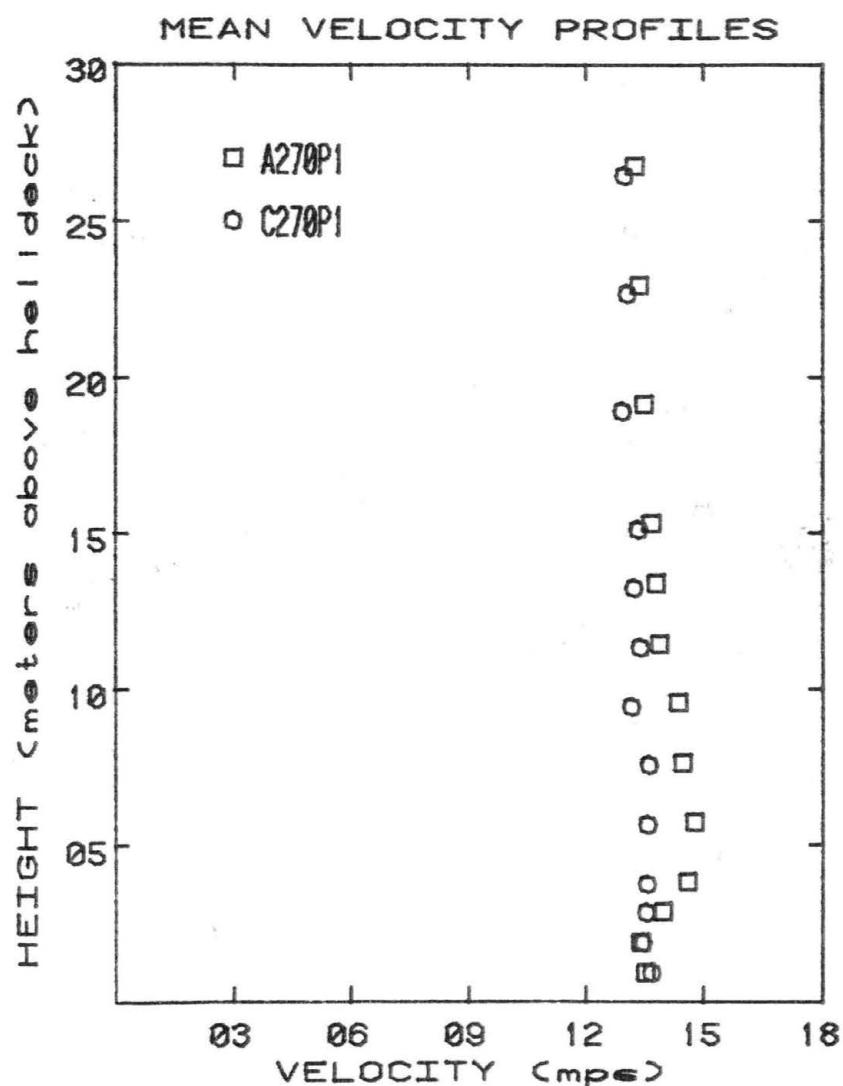
GRAPH # 43



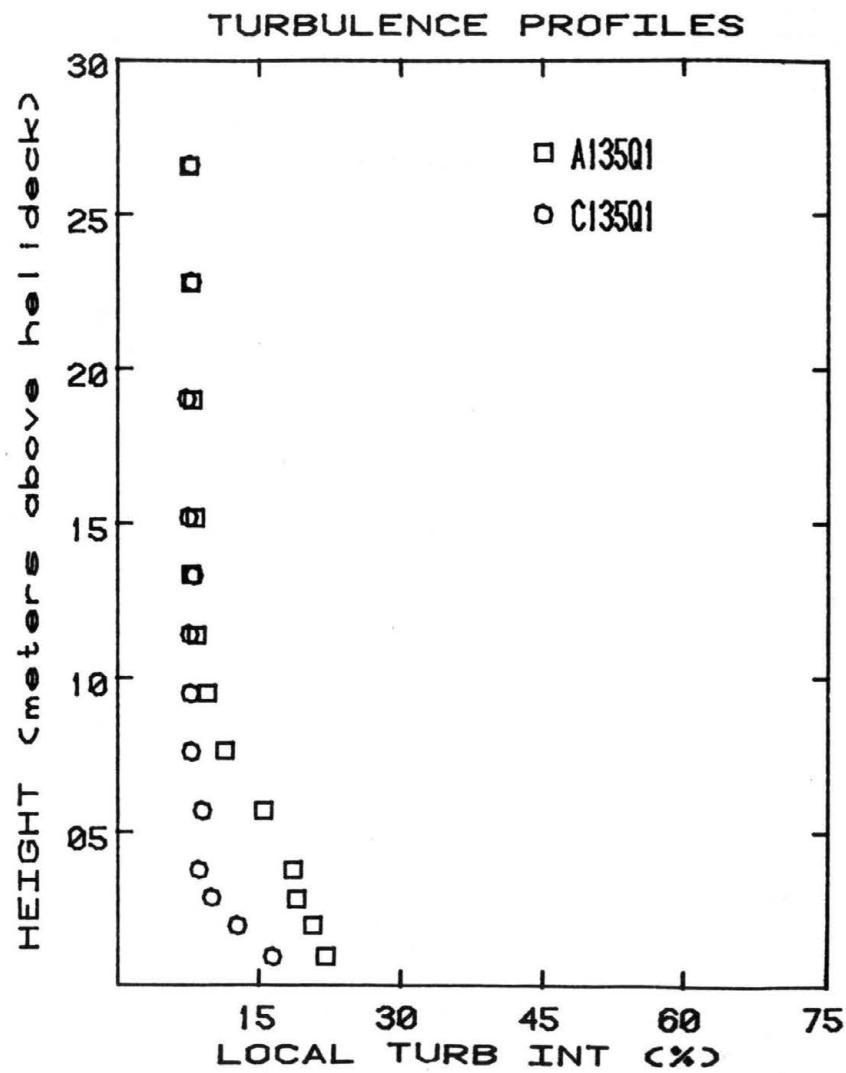
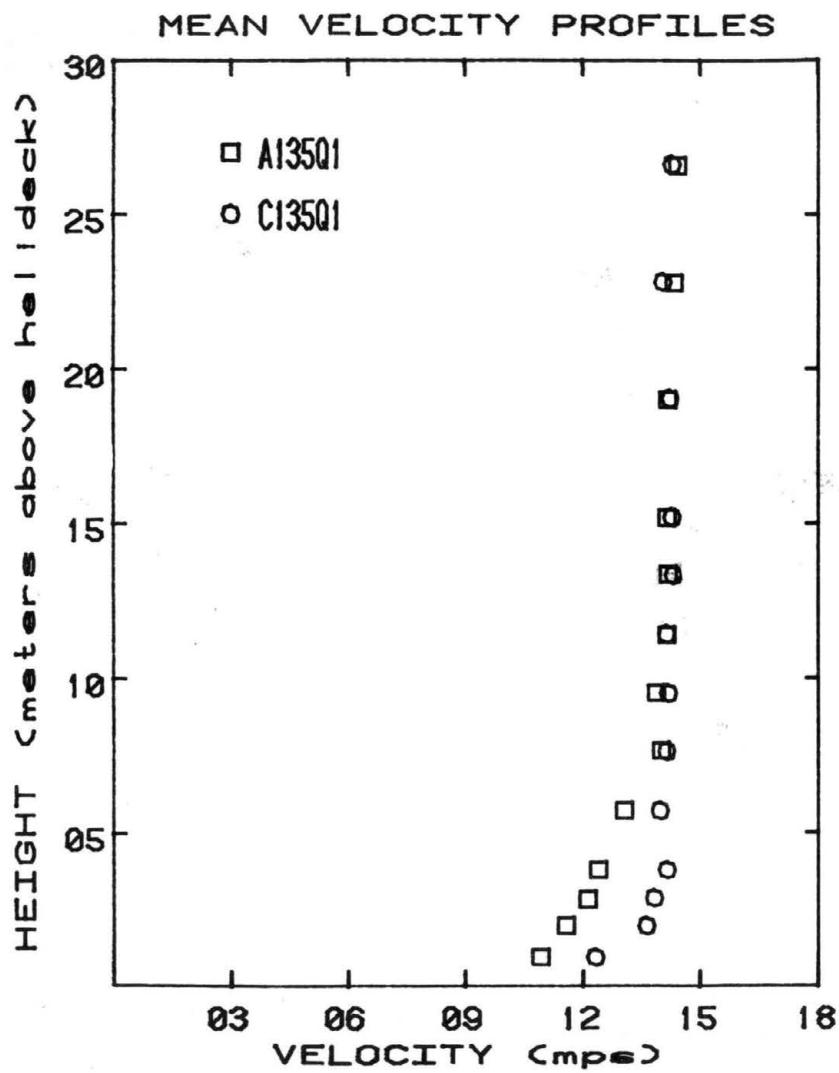
GRAPH # 44



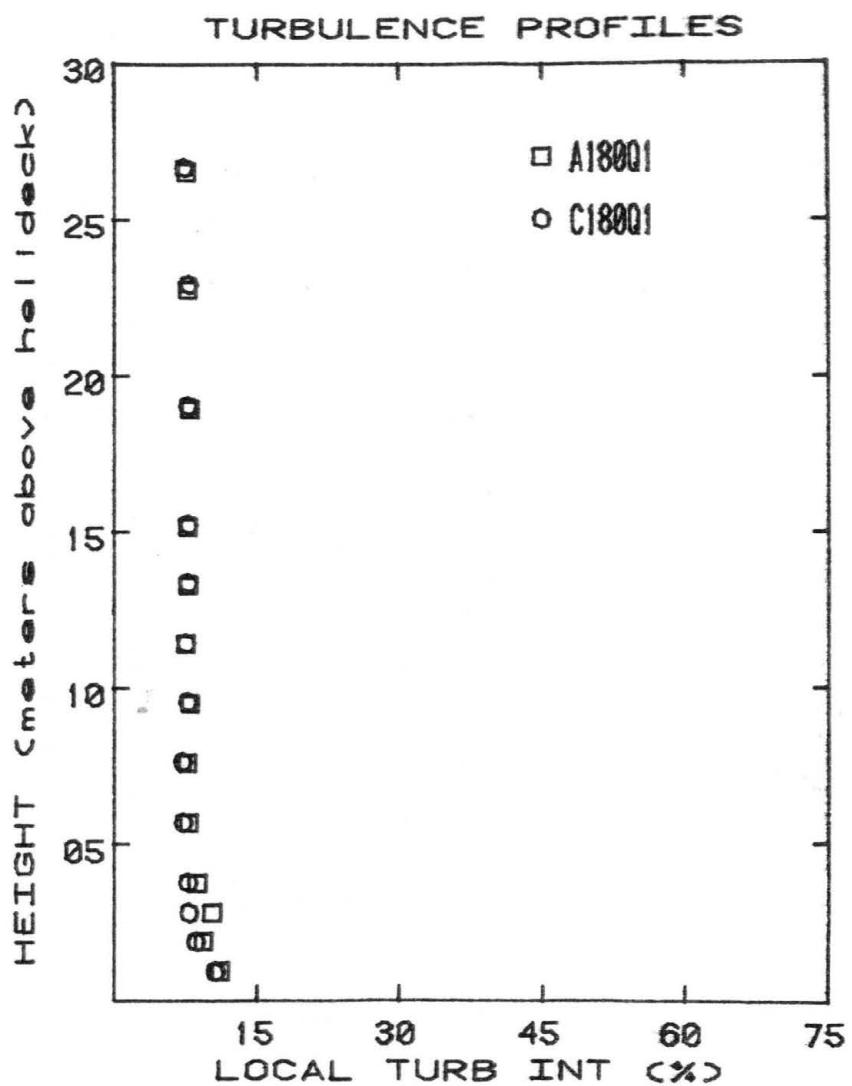
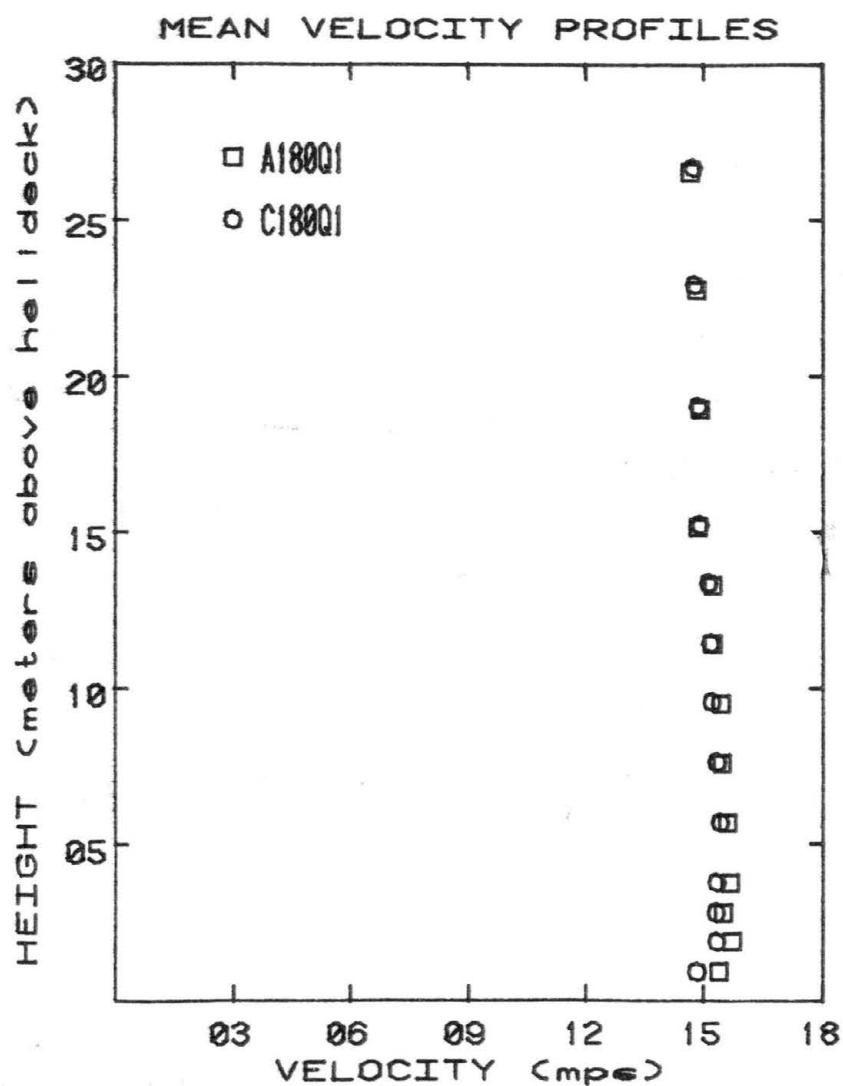
GRAPH # 45



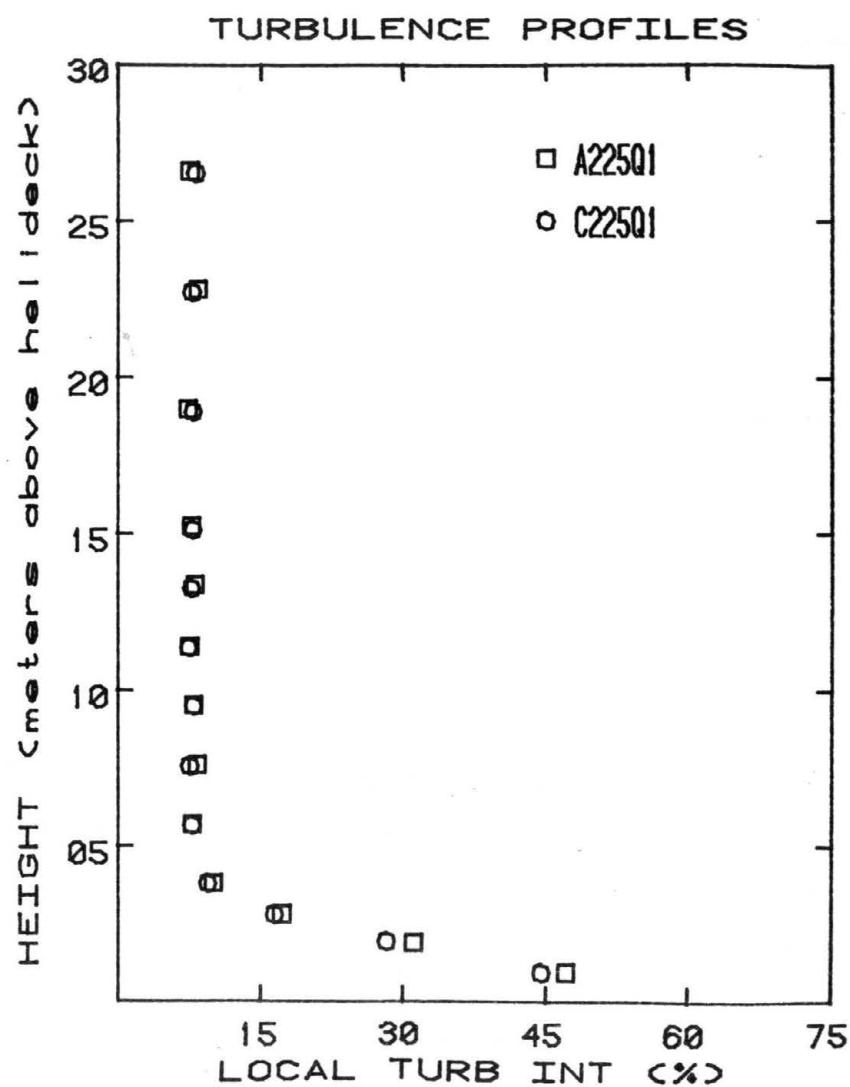
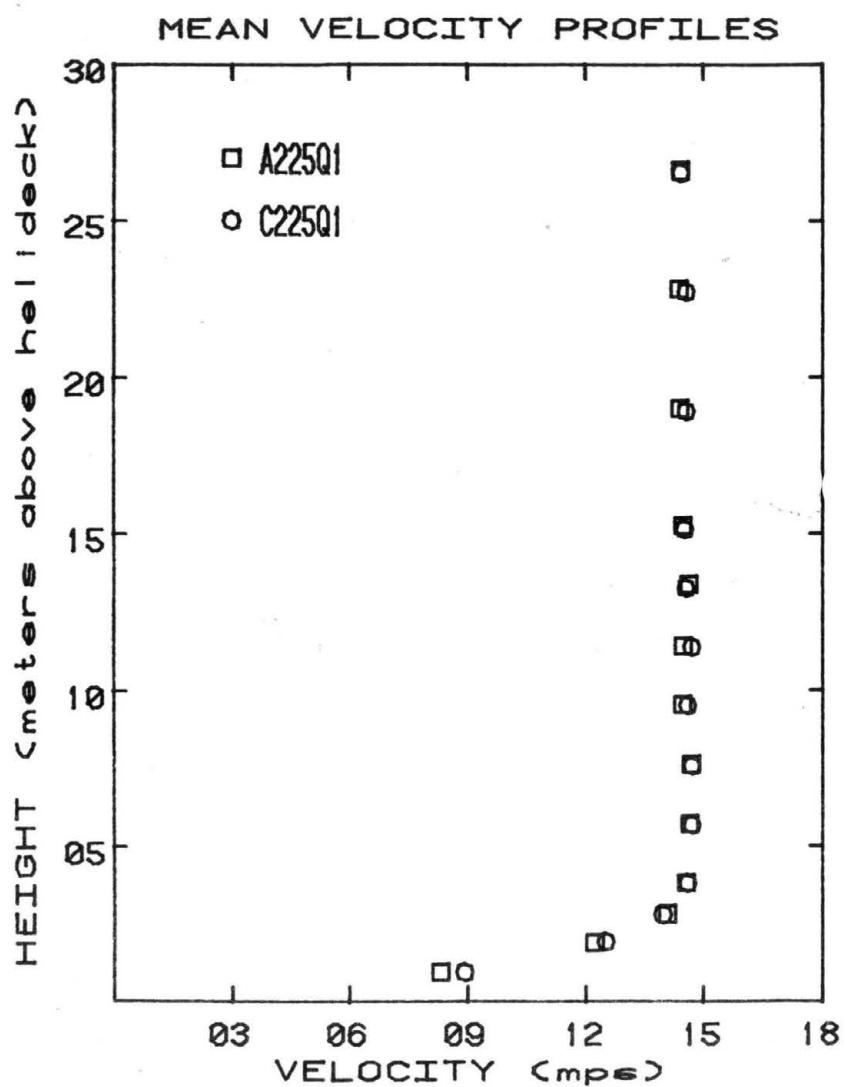
GRAPH # 46



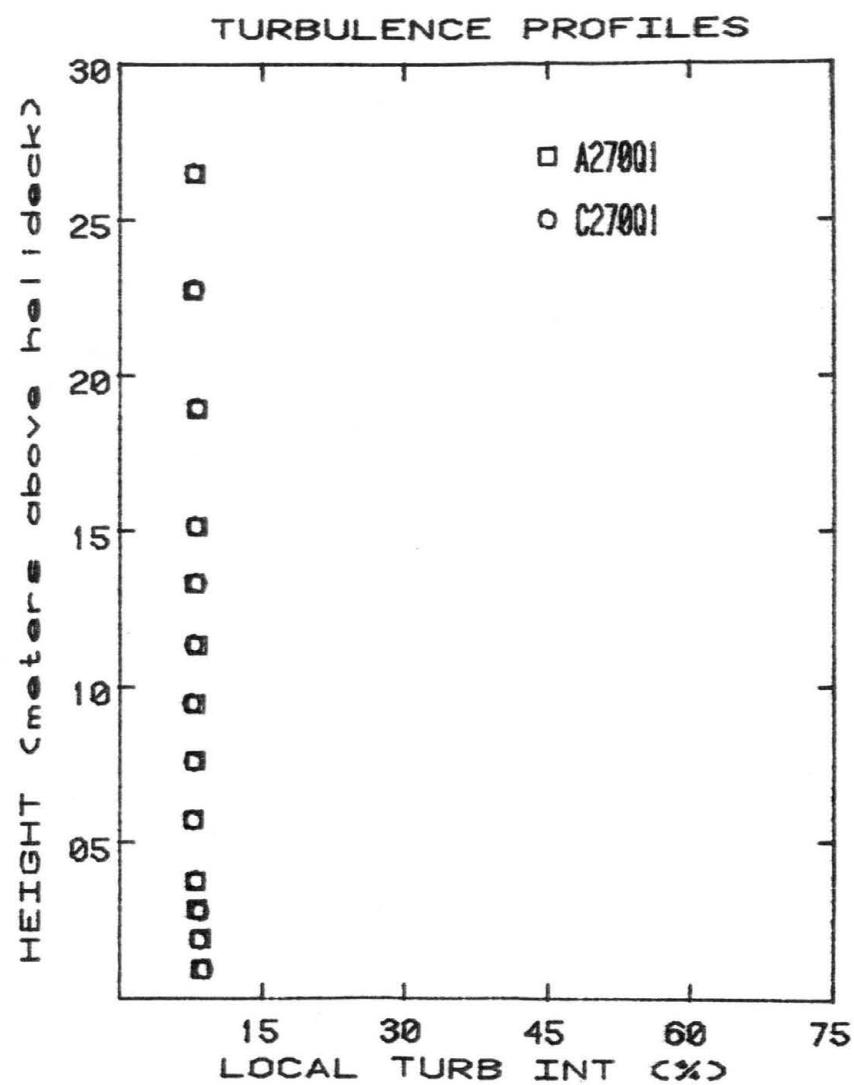
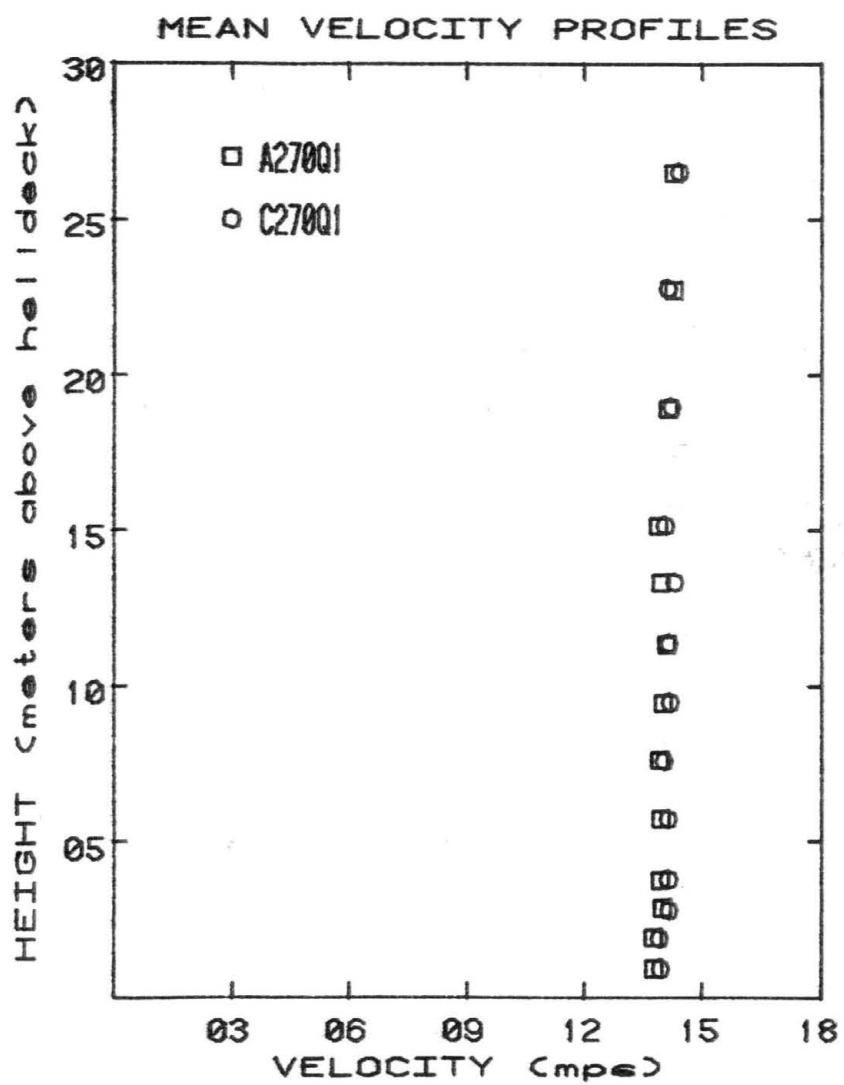
GRAPH # 47



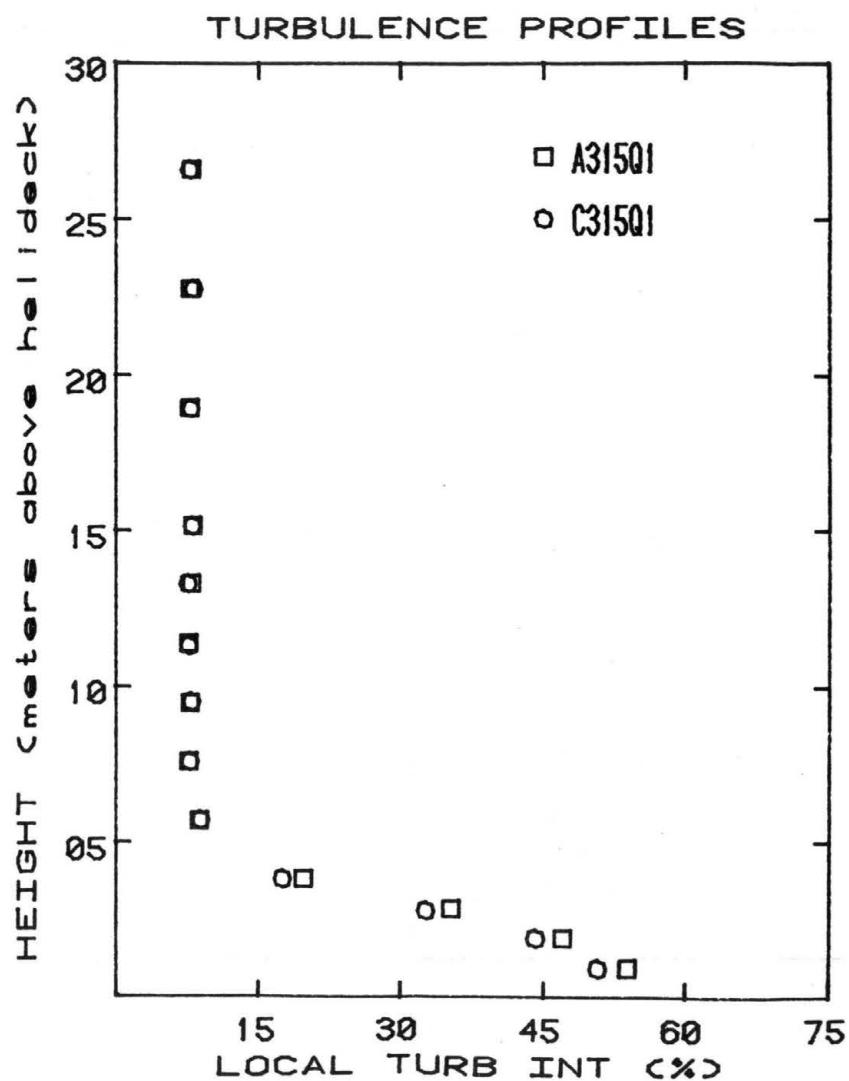
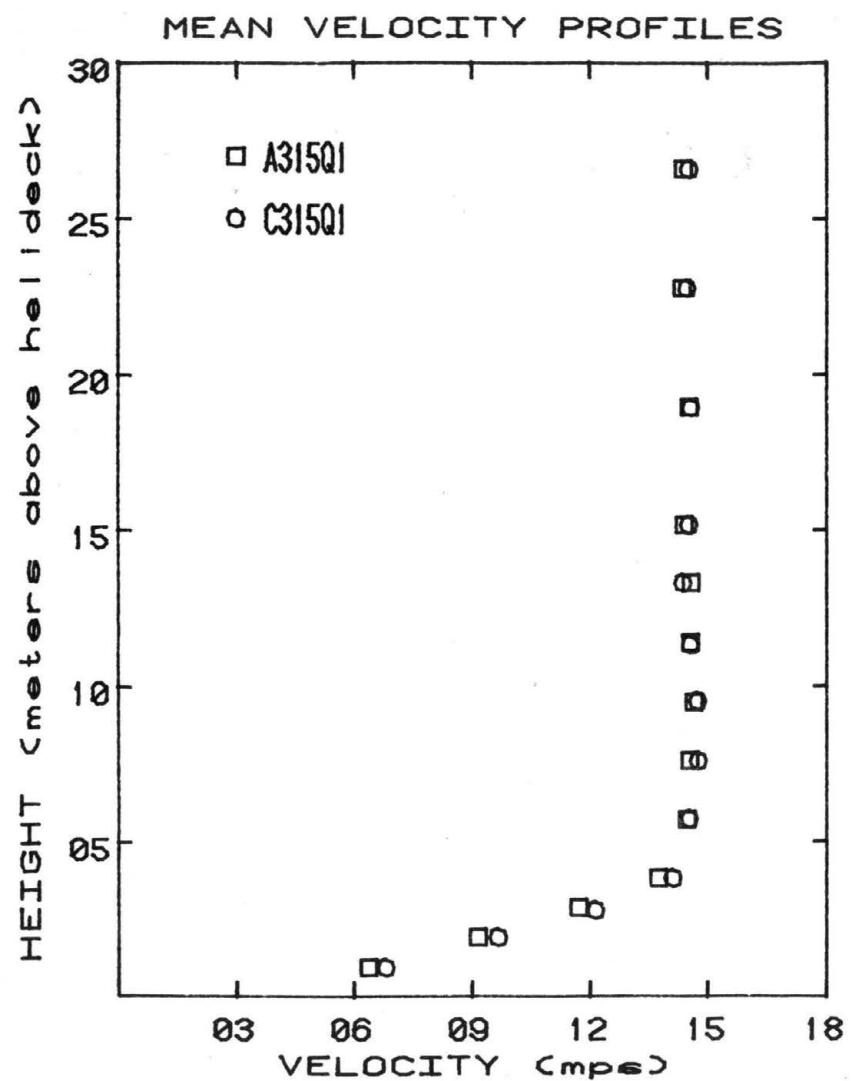
GRAPH # 48



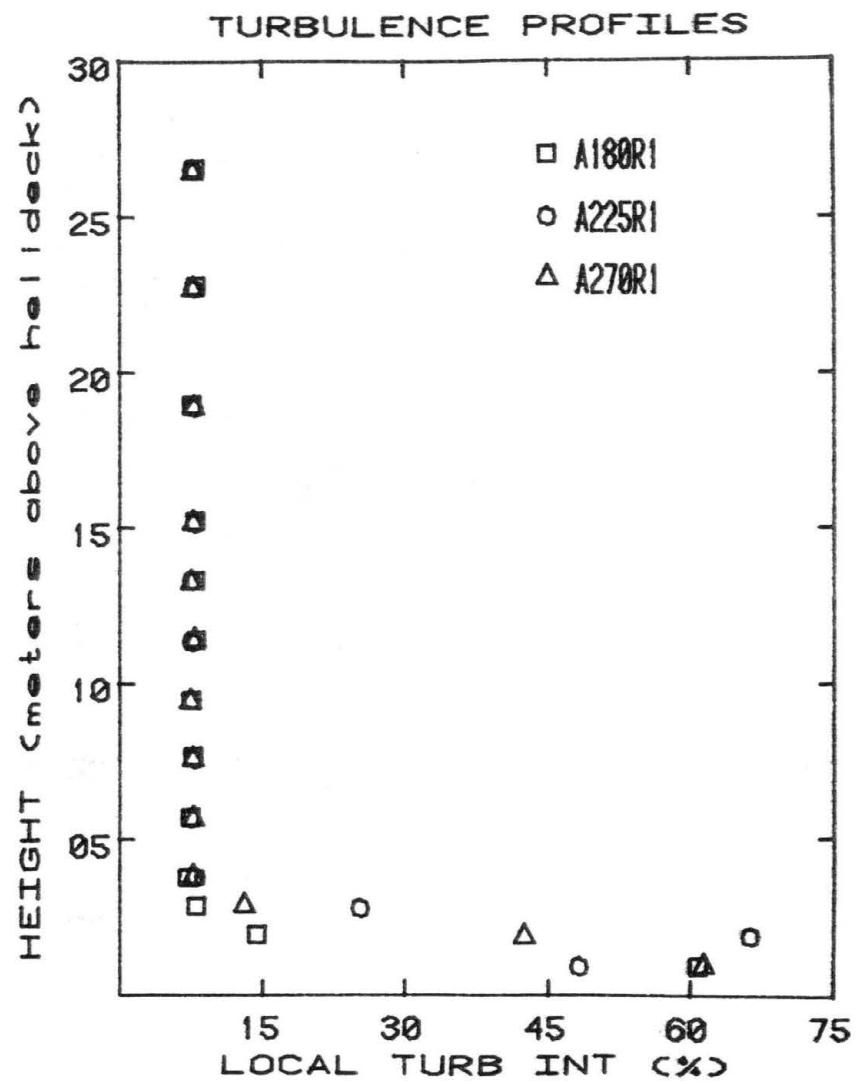
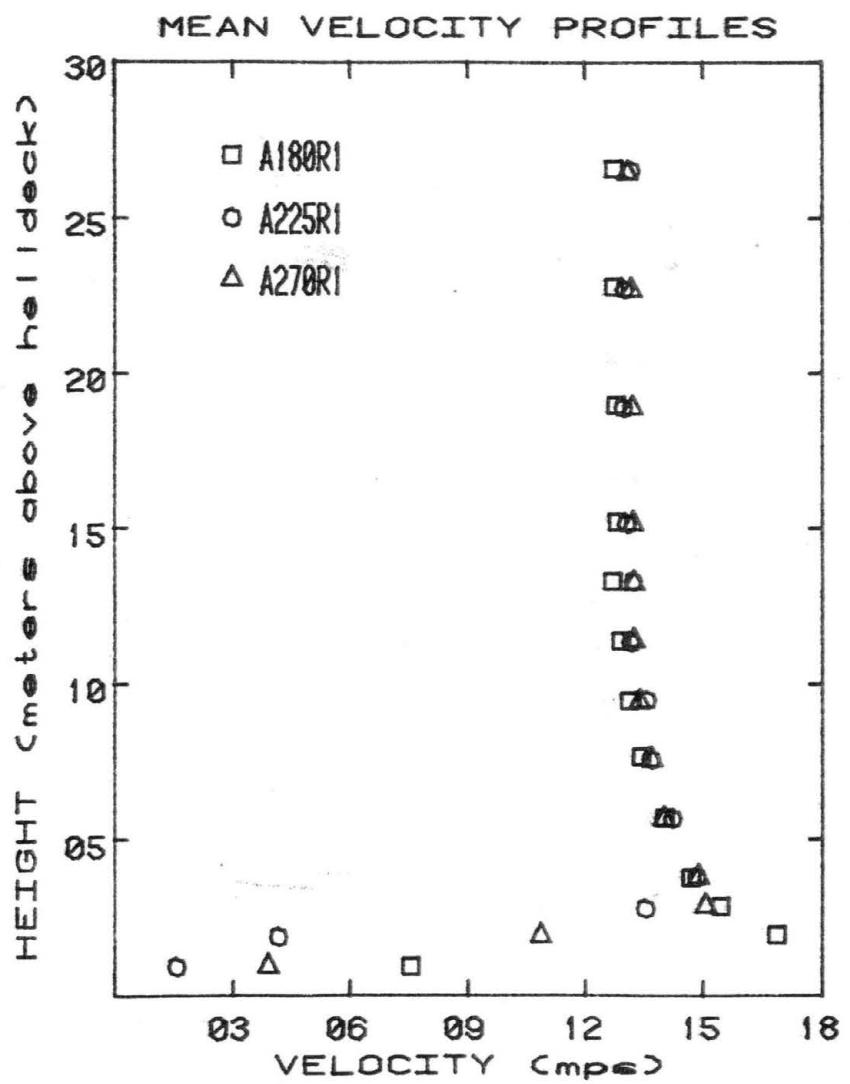
GRAPH # 49



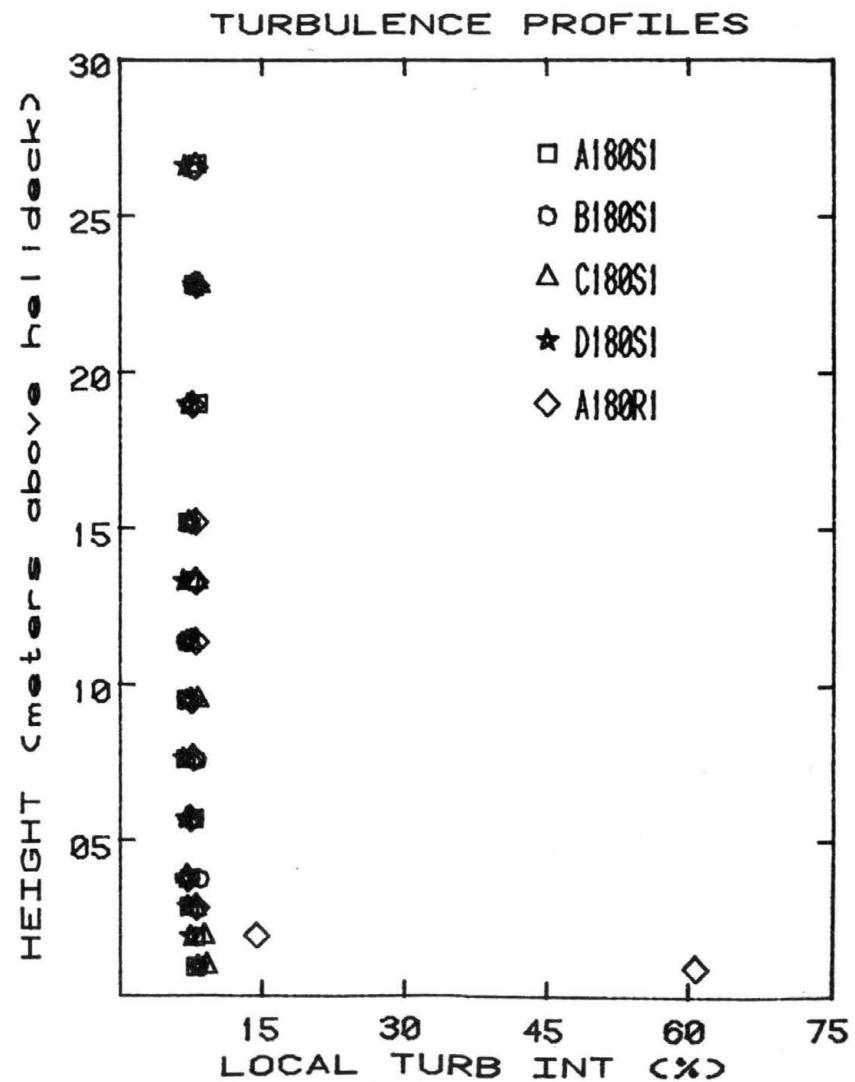
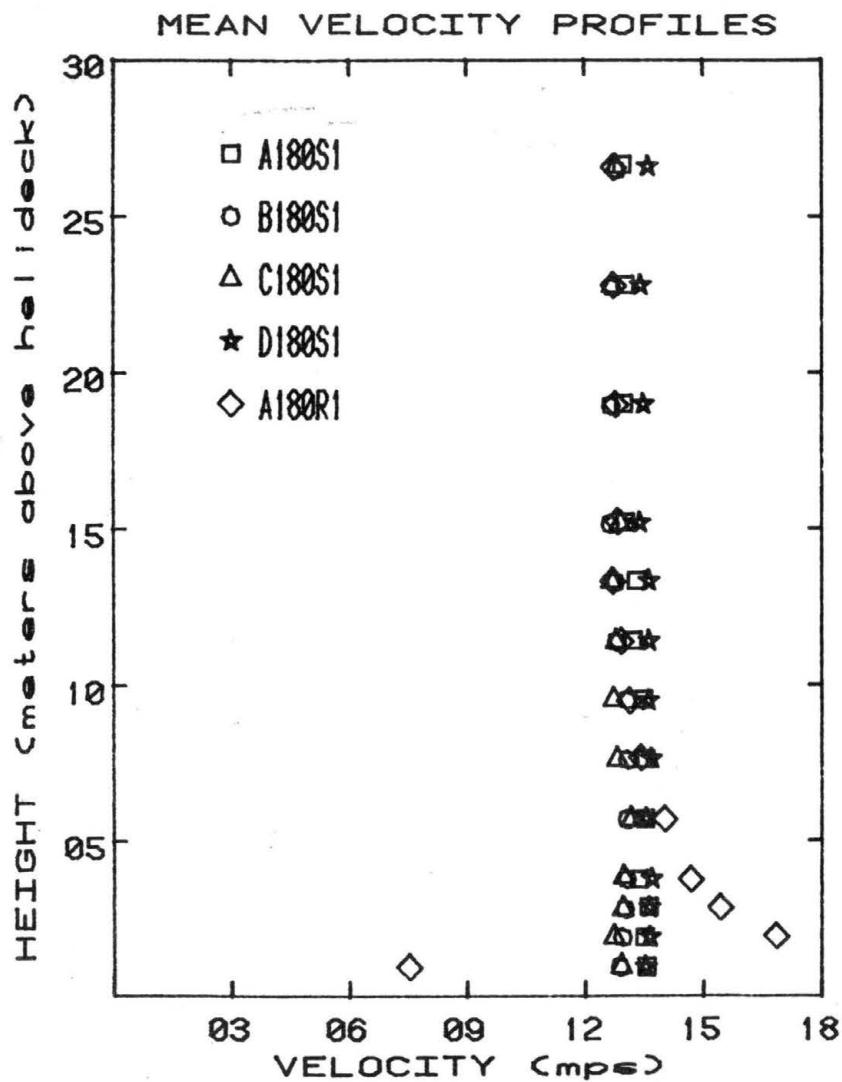
GRAPH # 50



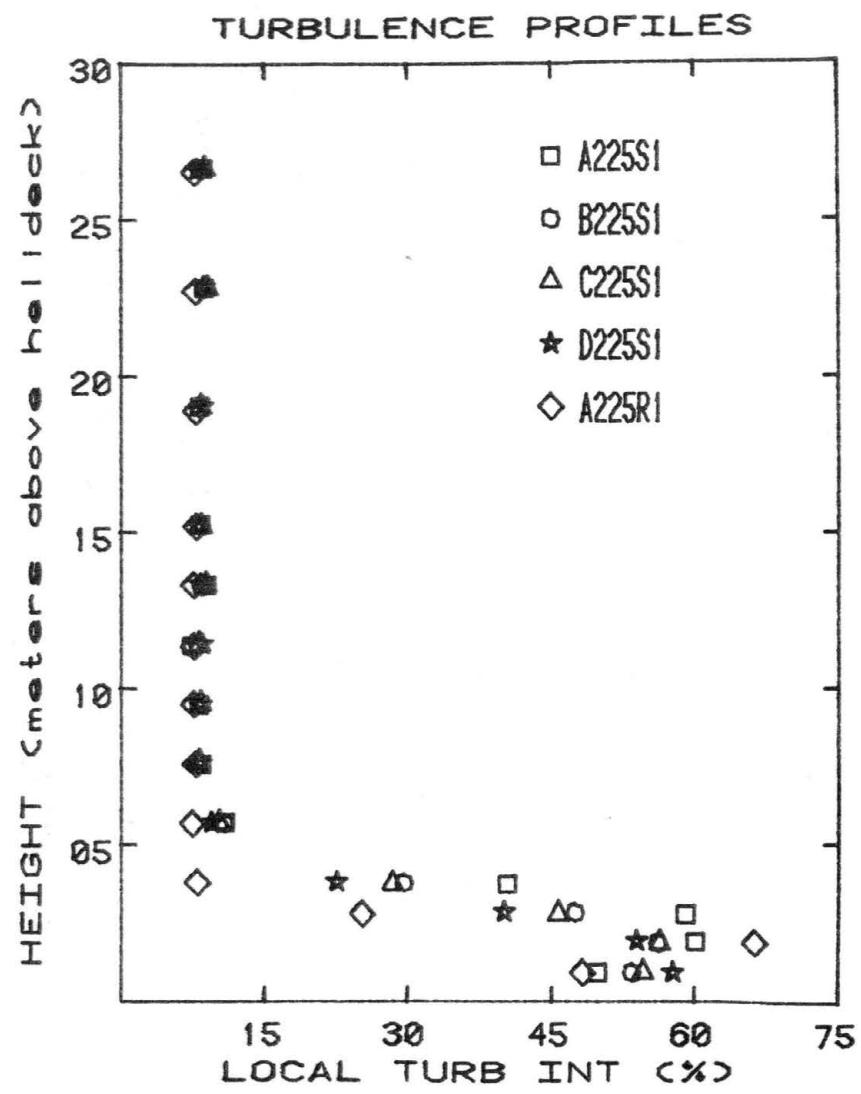
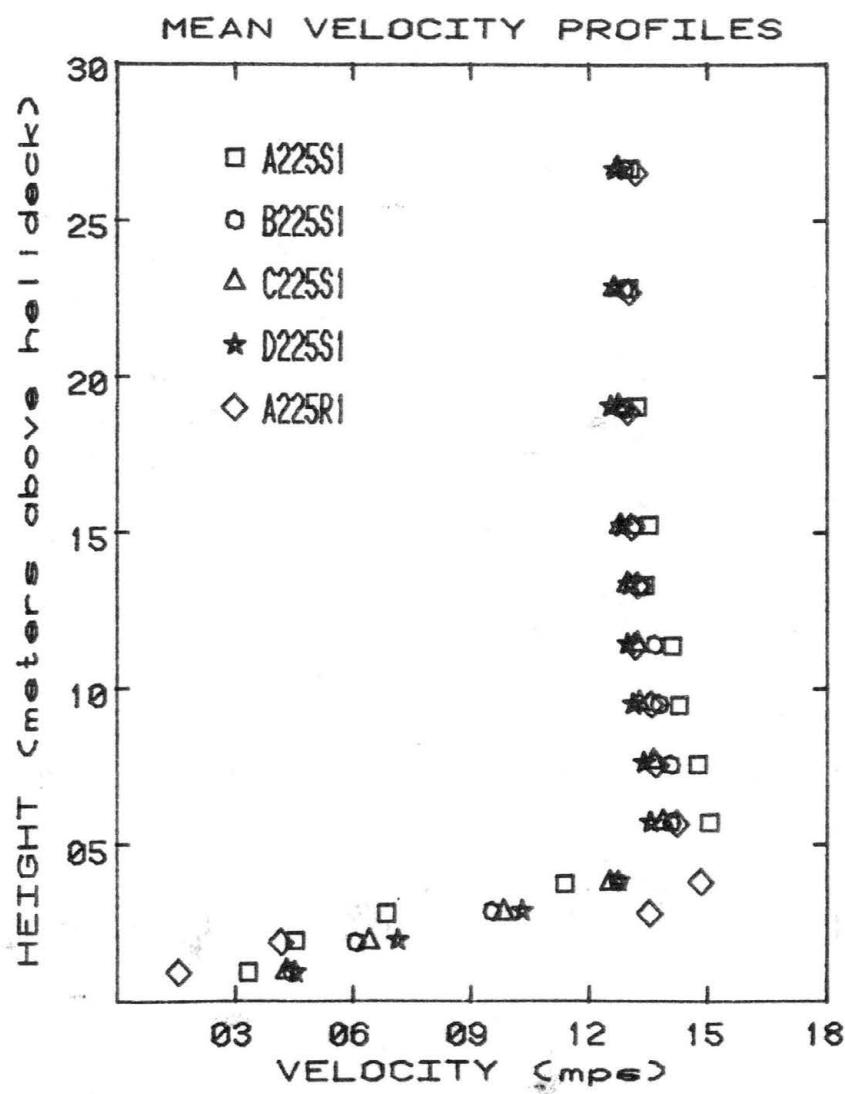
GRAPH # 51



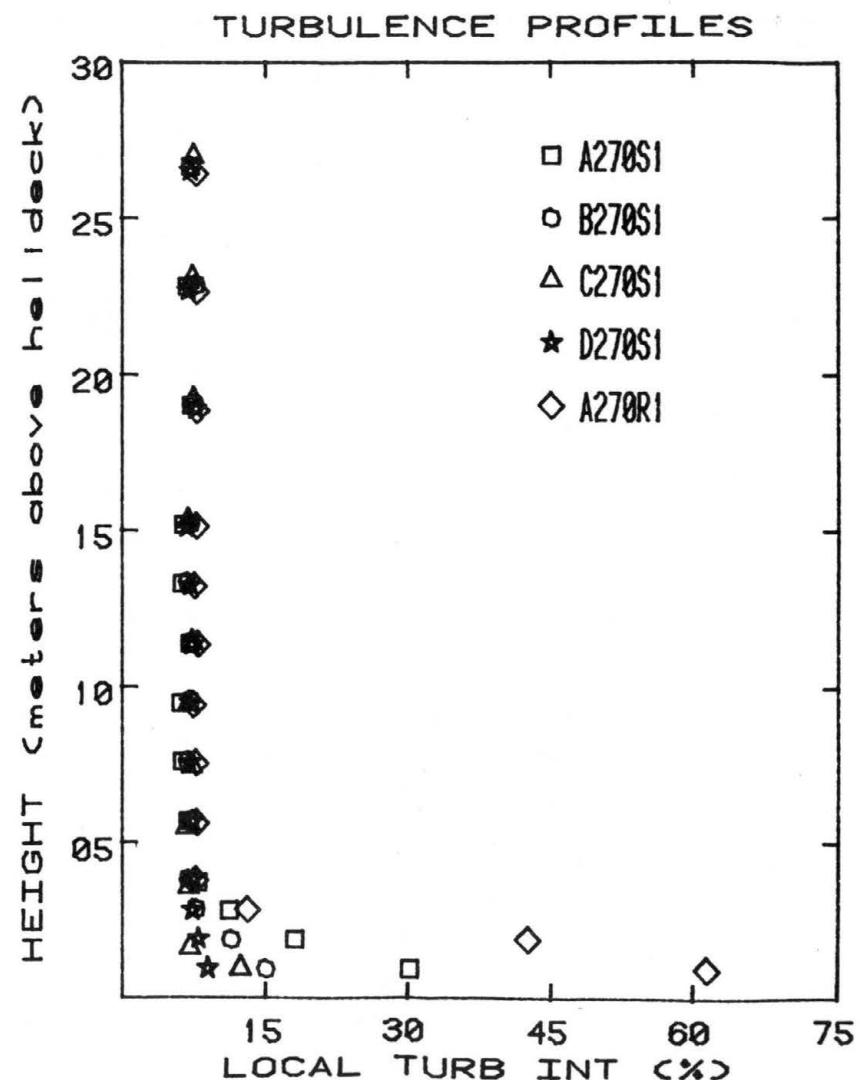
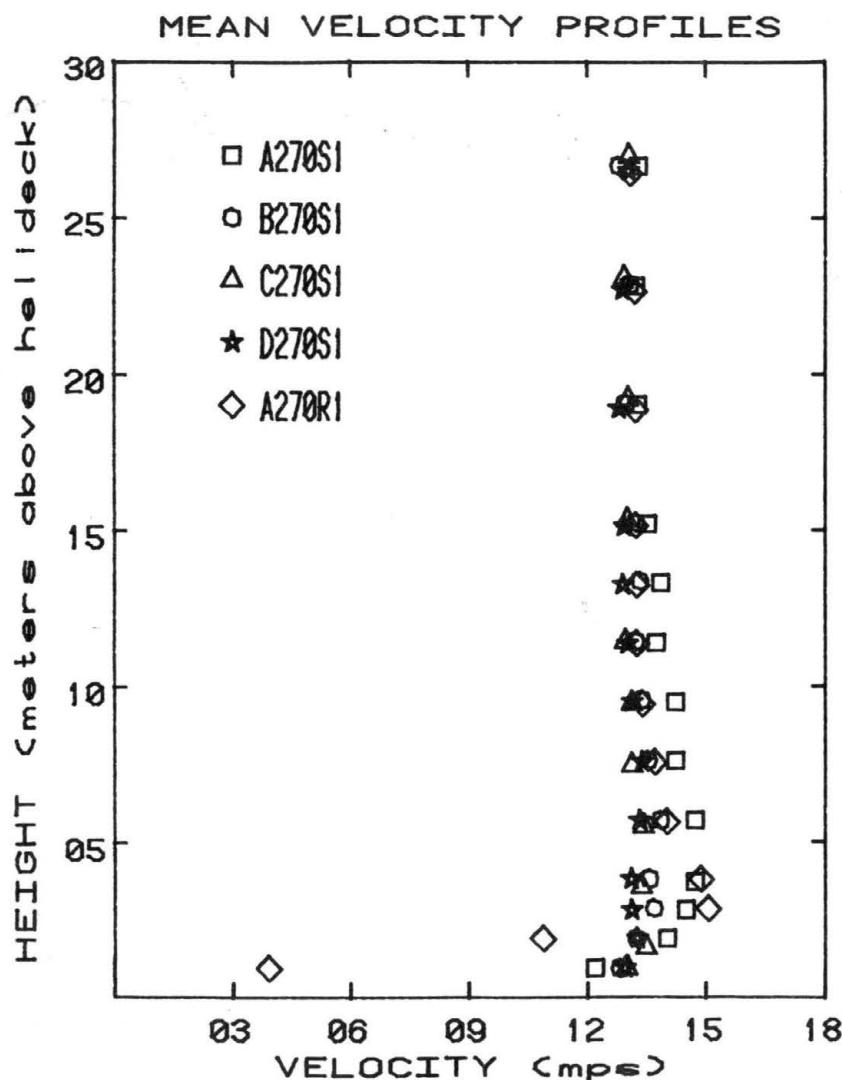
GRAPH # 52



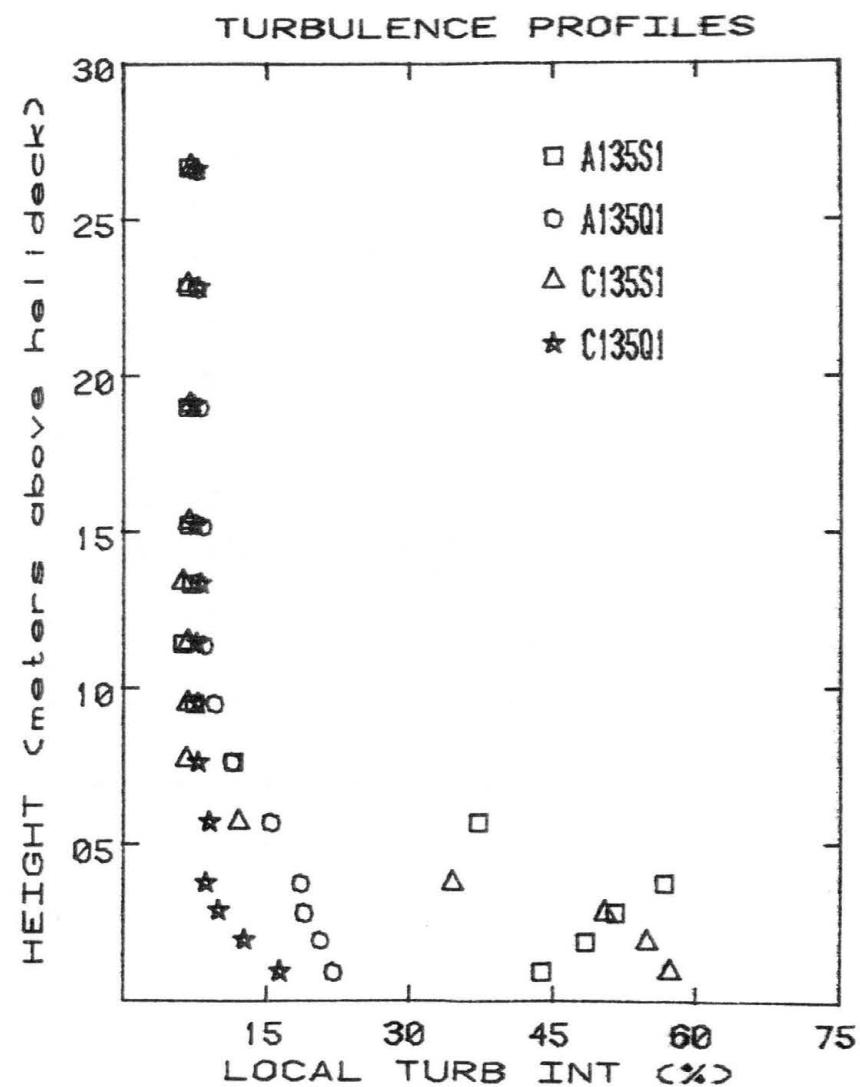
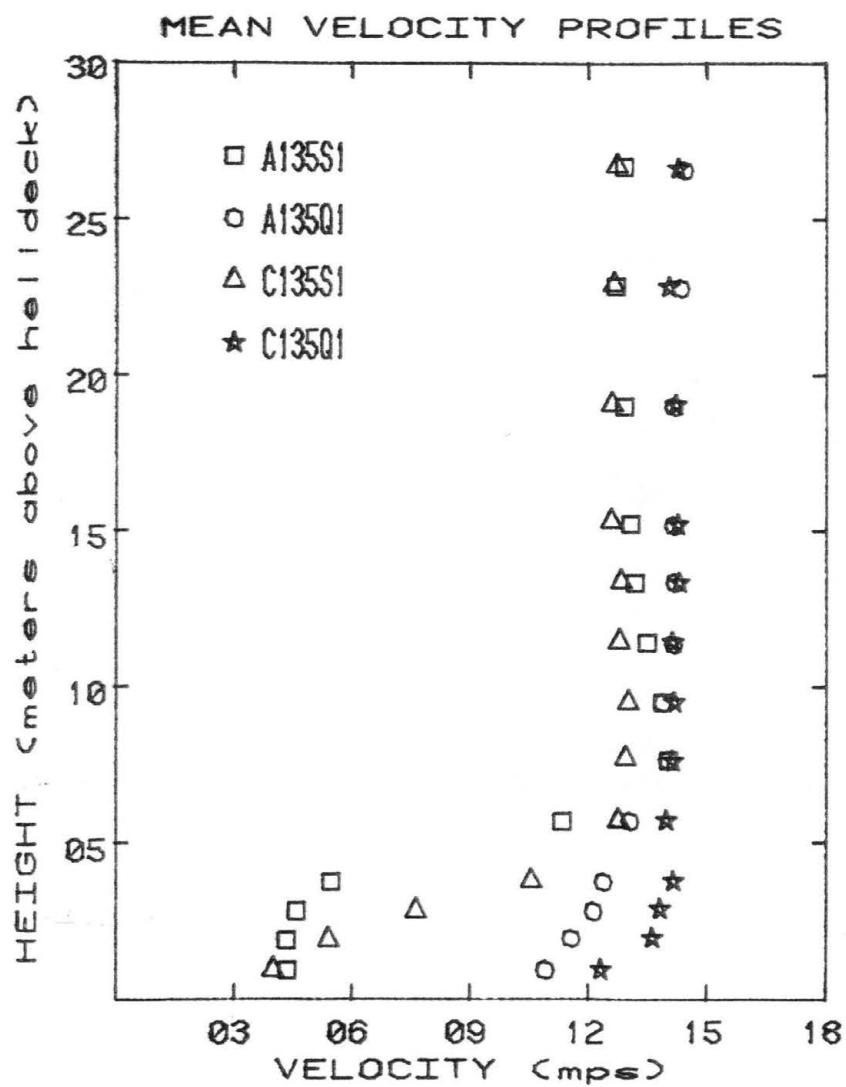
GRAPH # 53



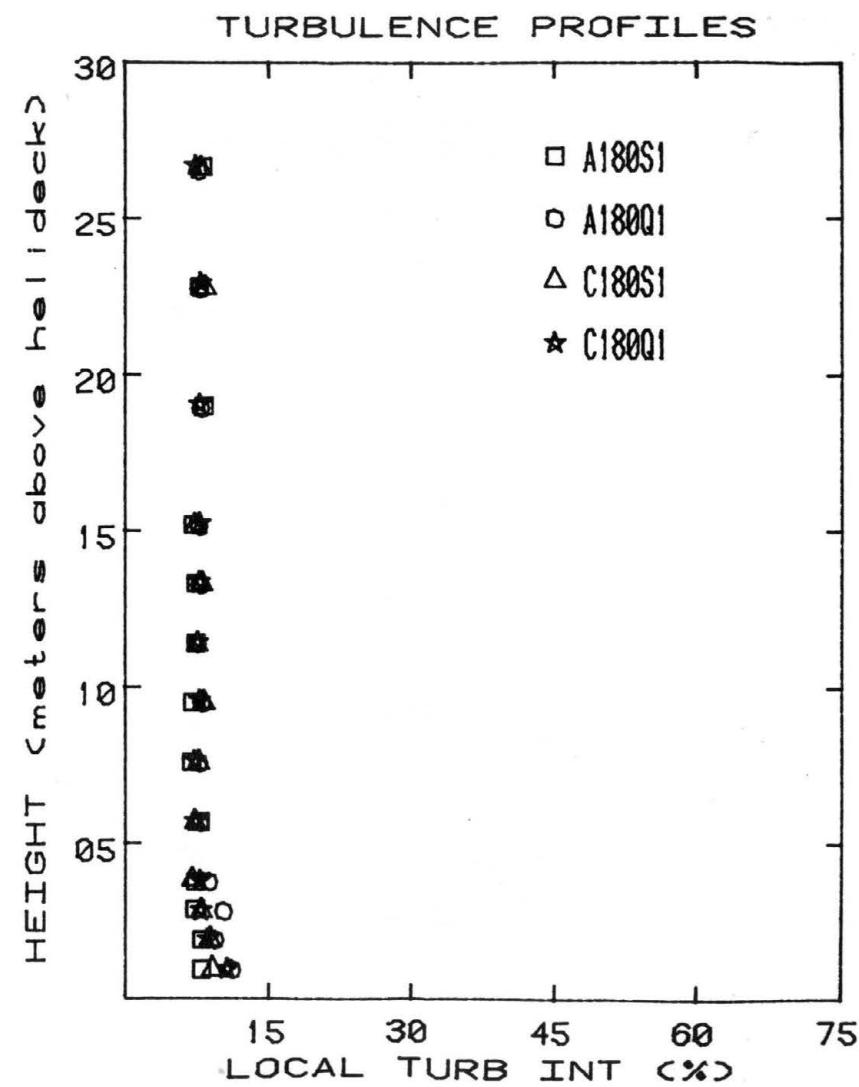
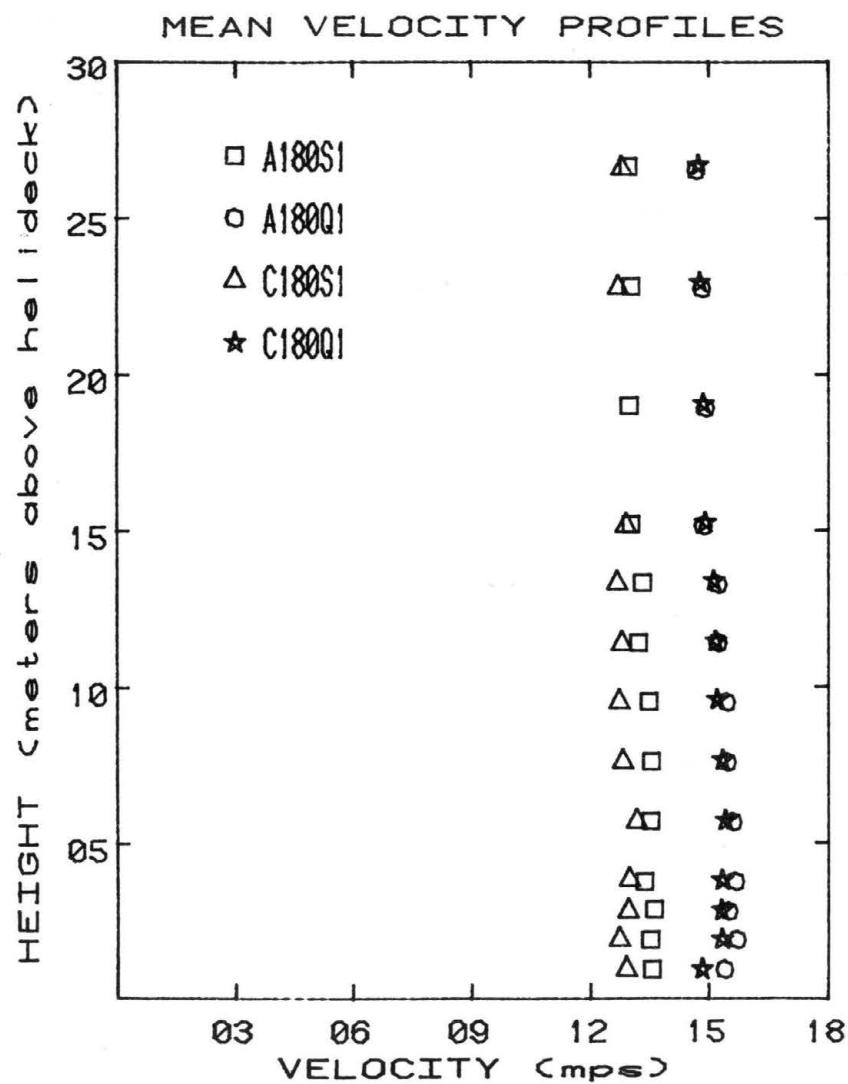
GRAPH # 54



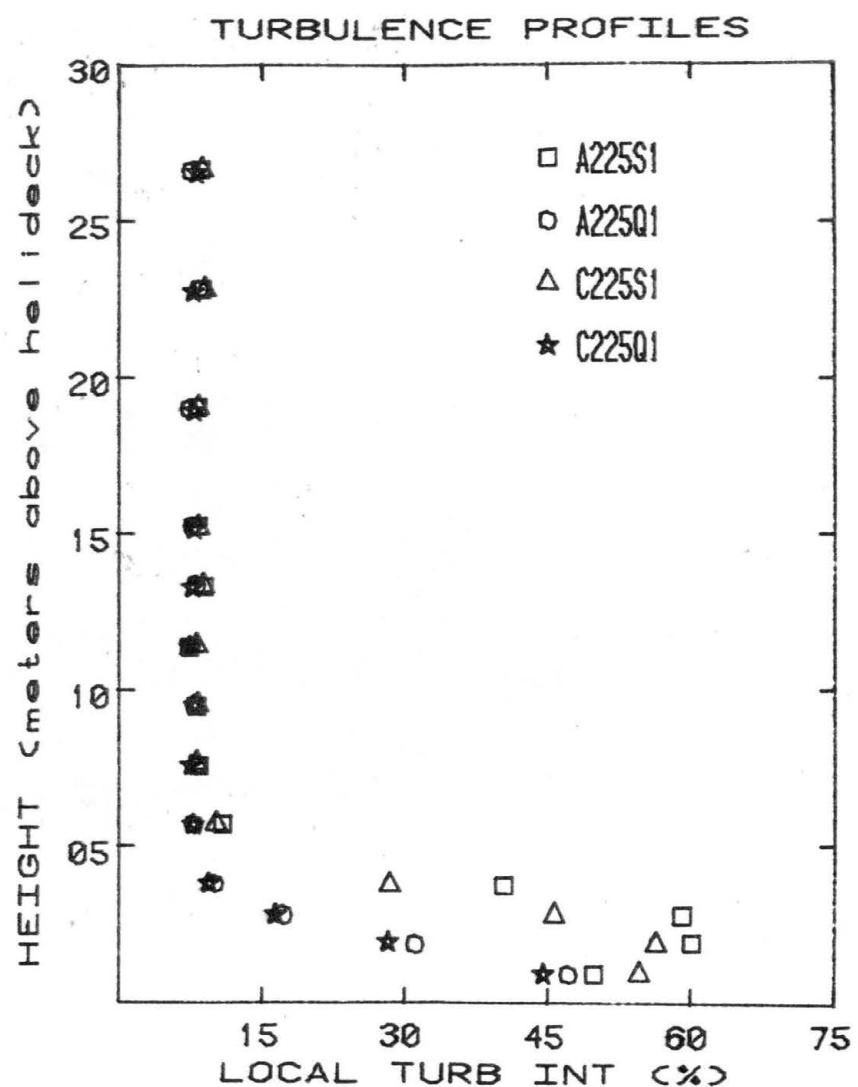
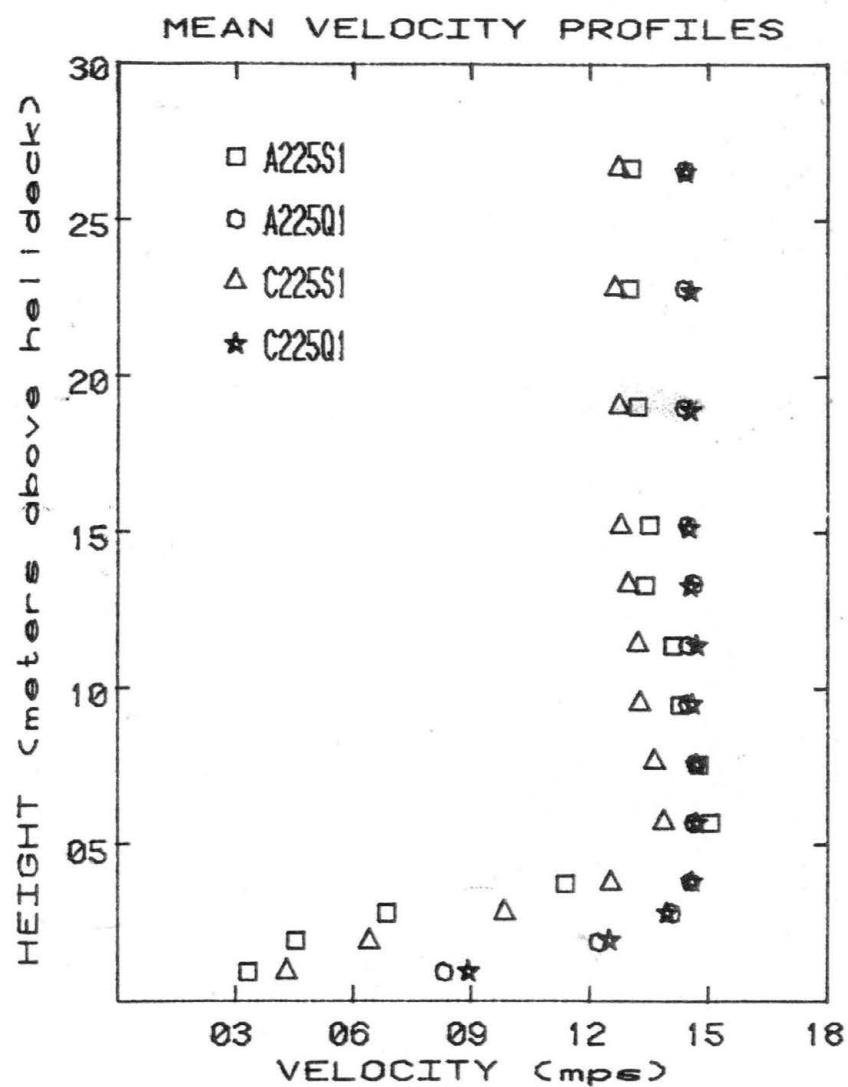
GRAPH # 55



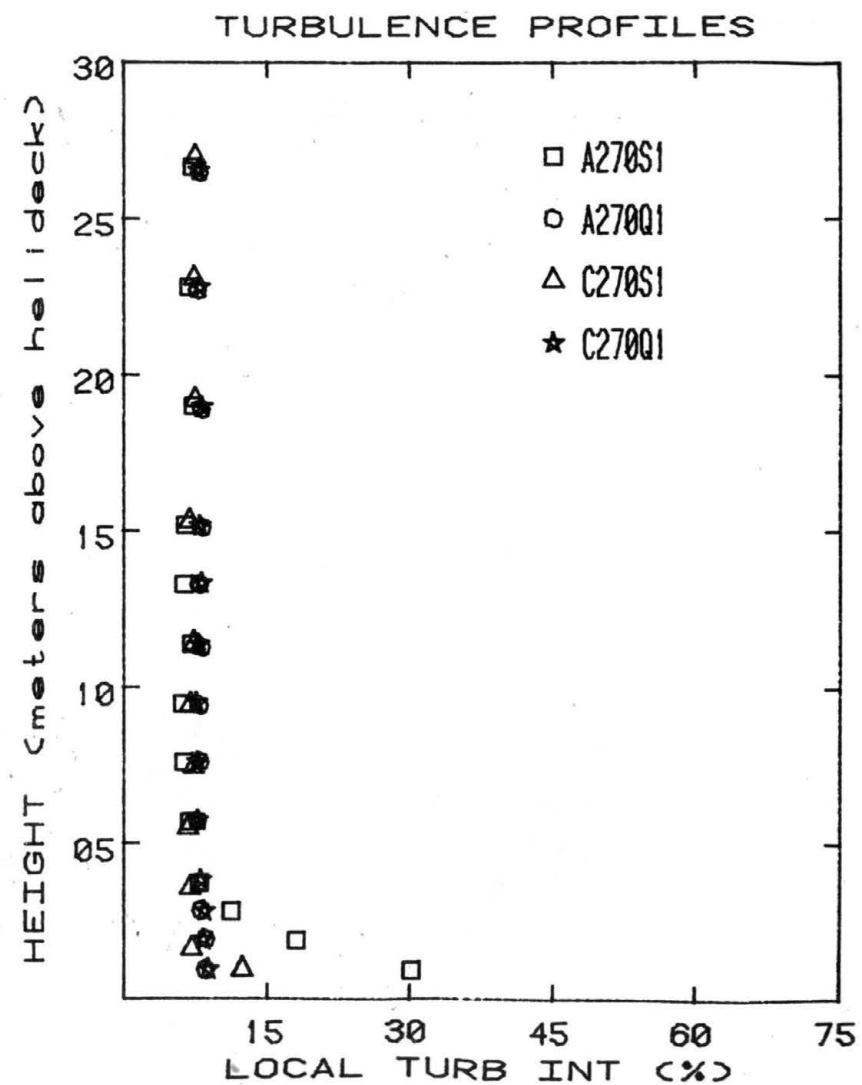
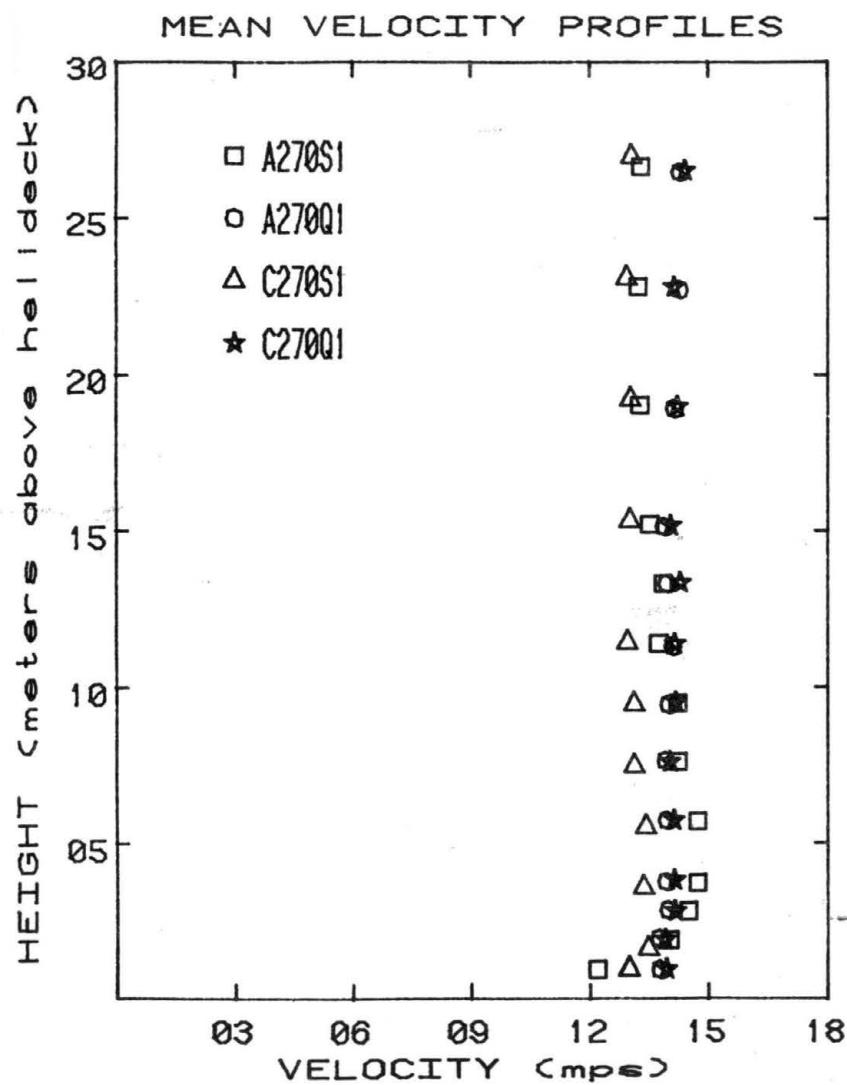
GRAPH # 56



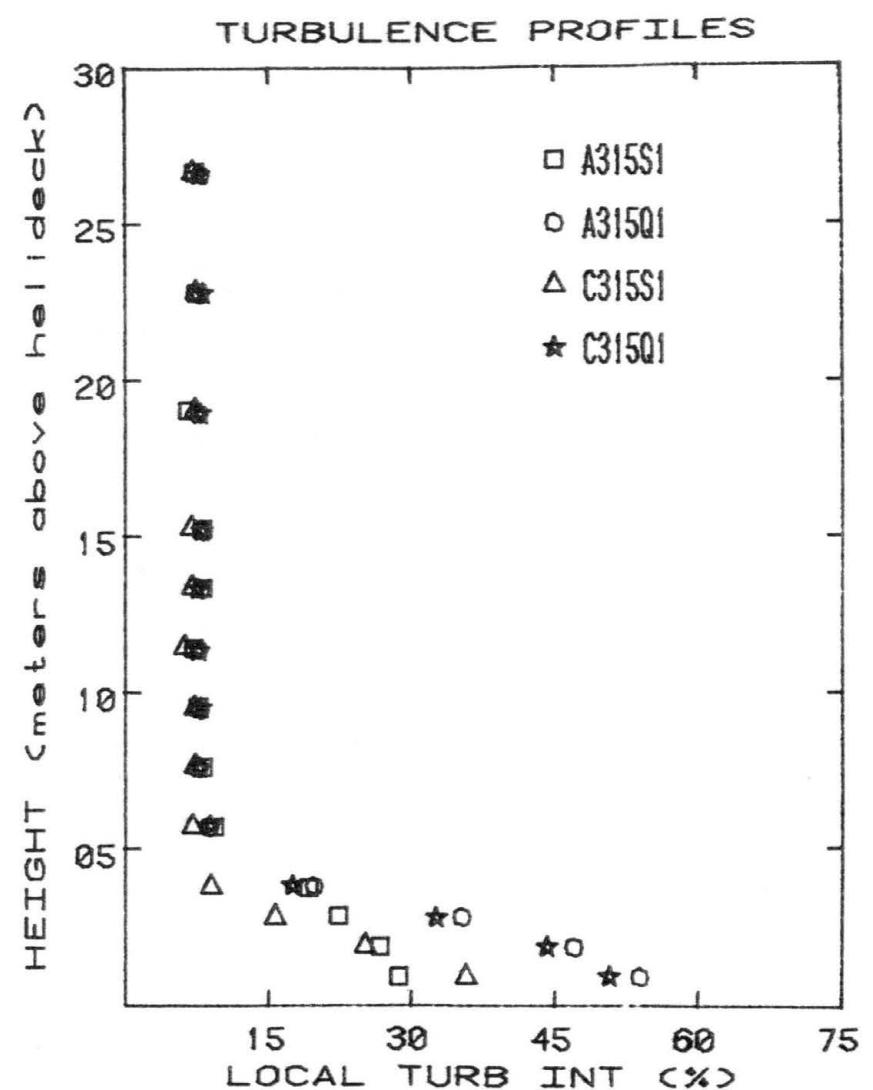
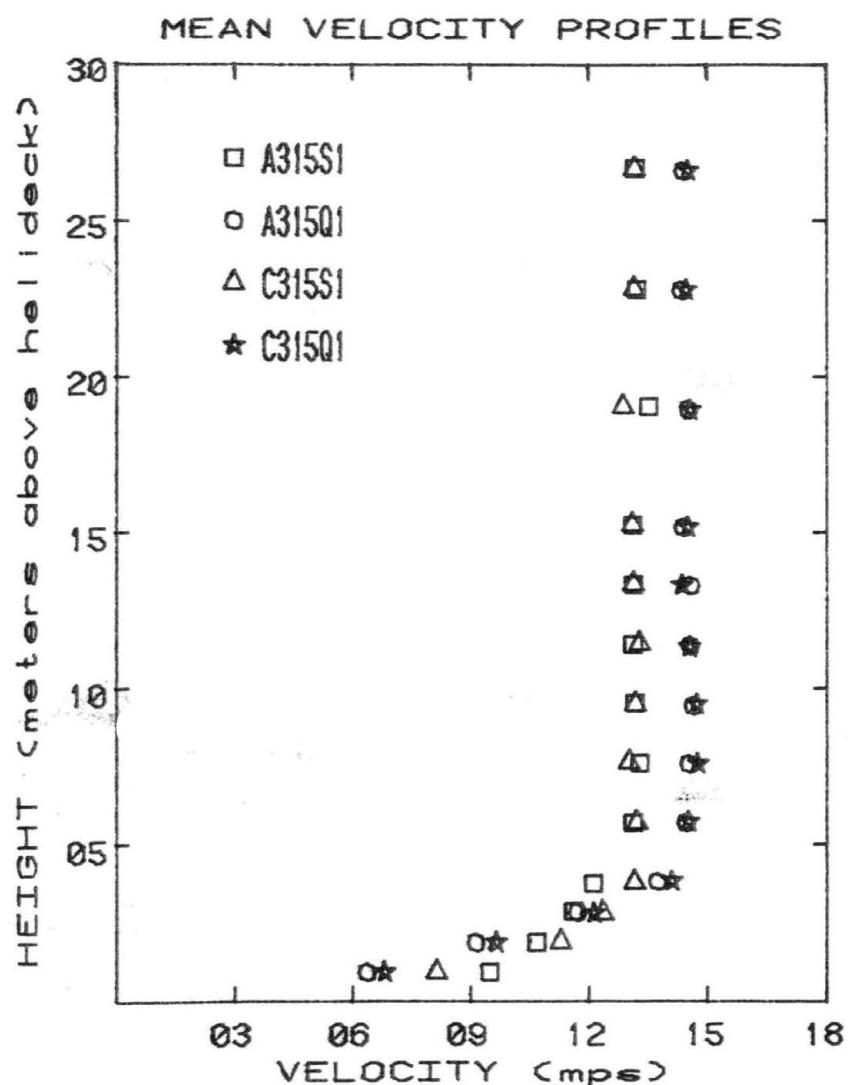
GRAPH # 57



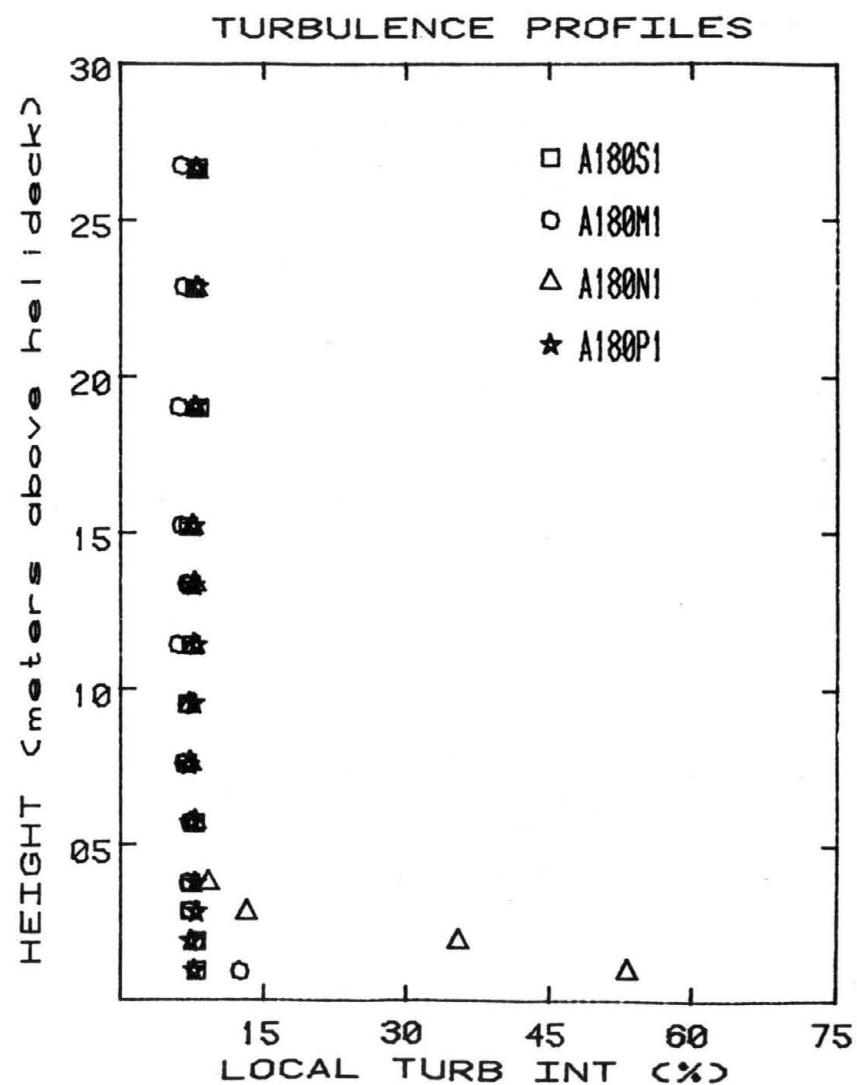
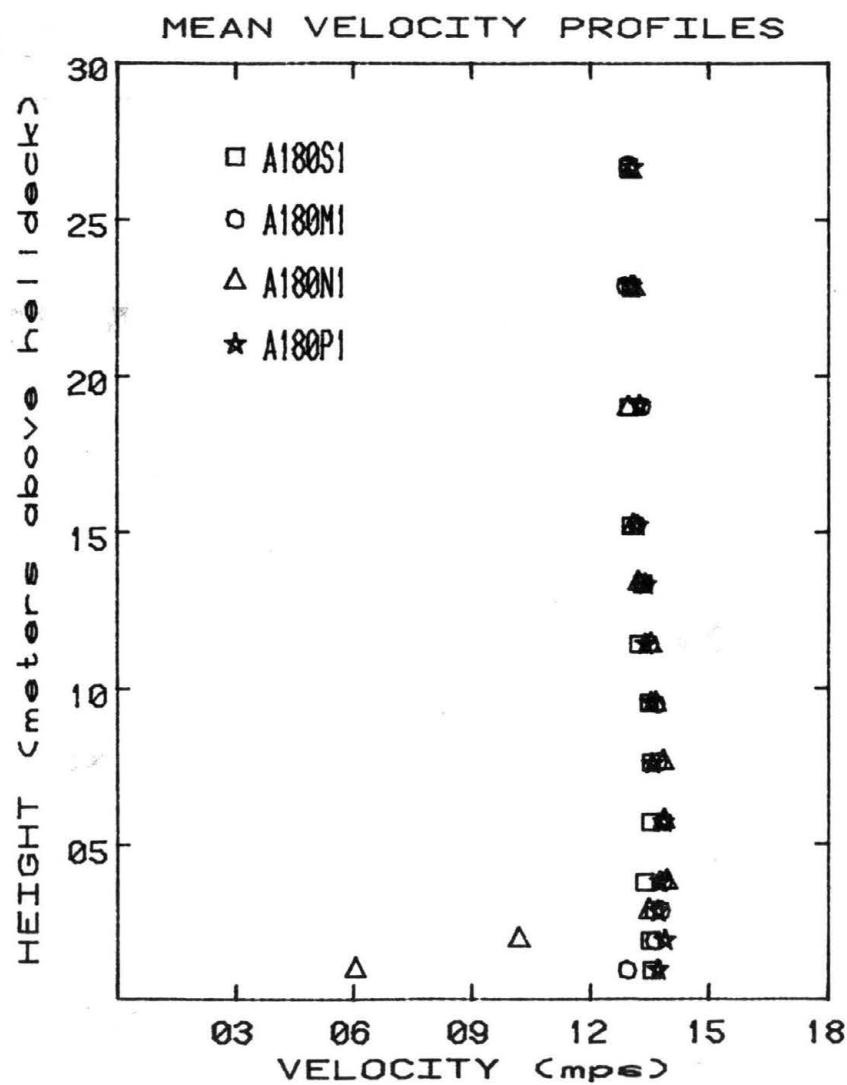
GRAPH # 58



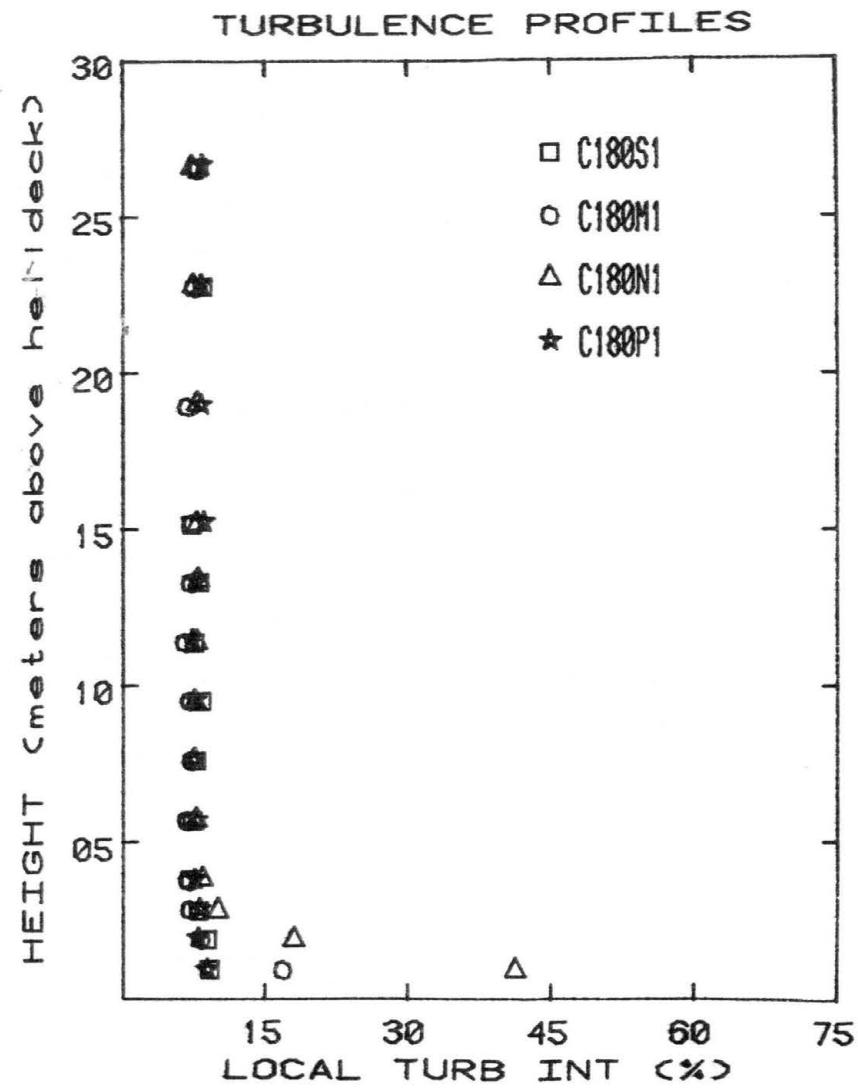
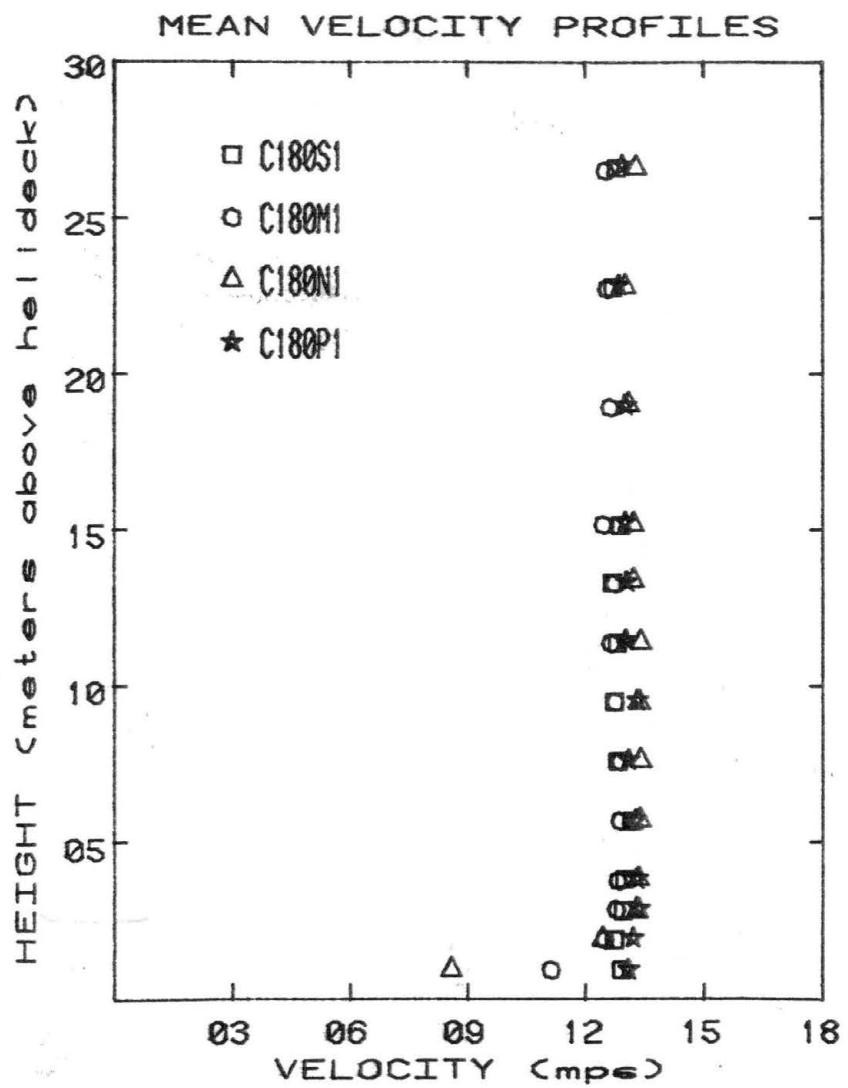
GRAPH # 59



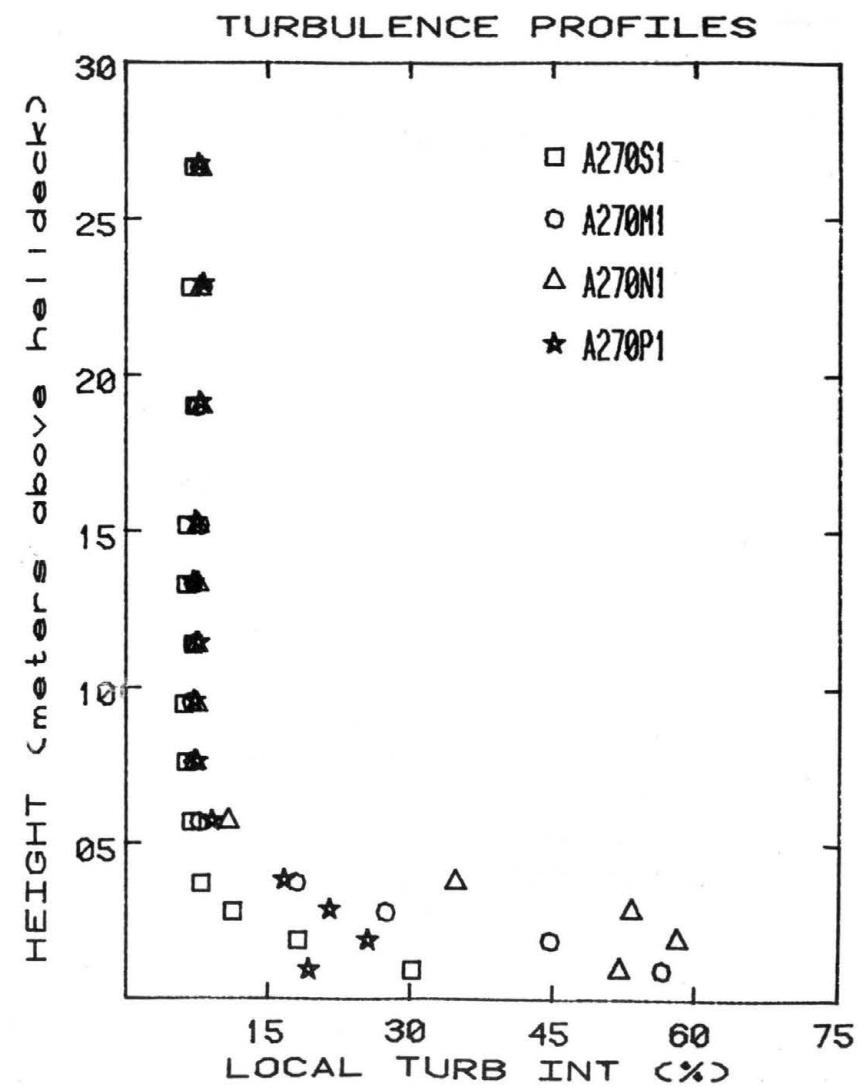
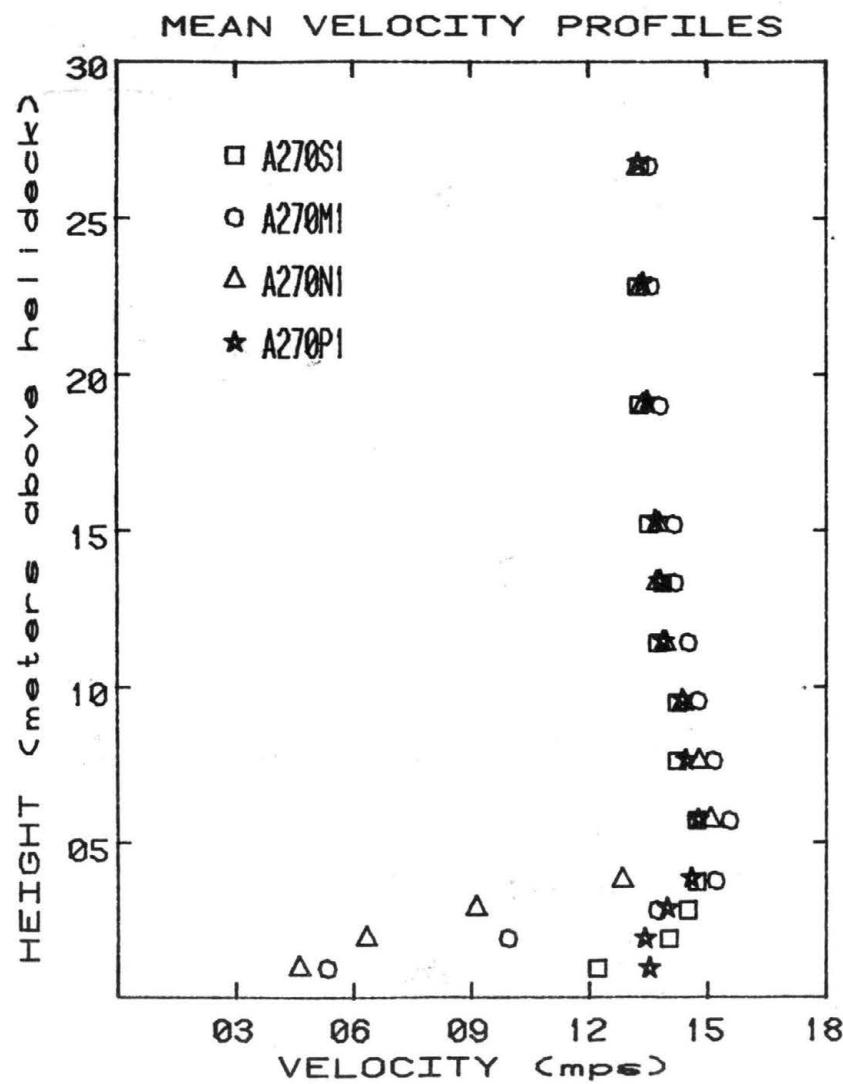
GRAPH # 60



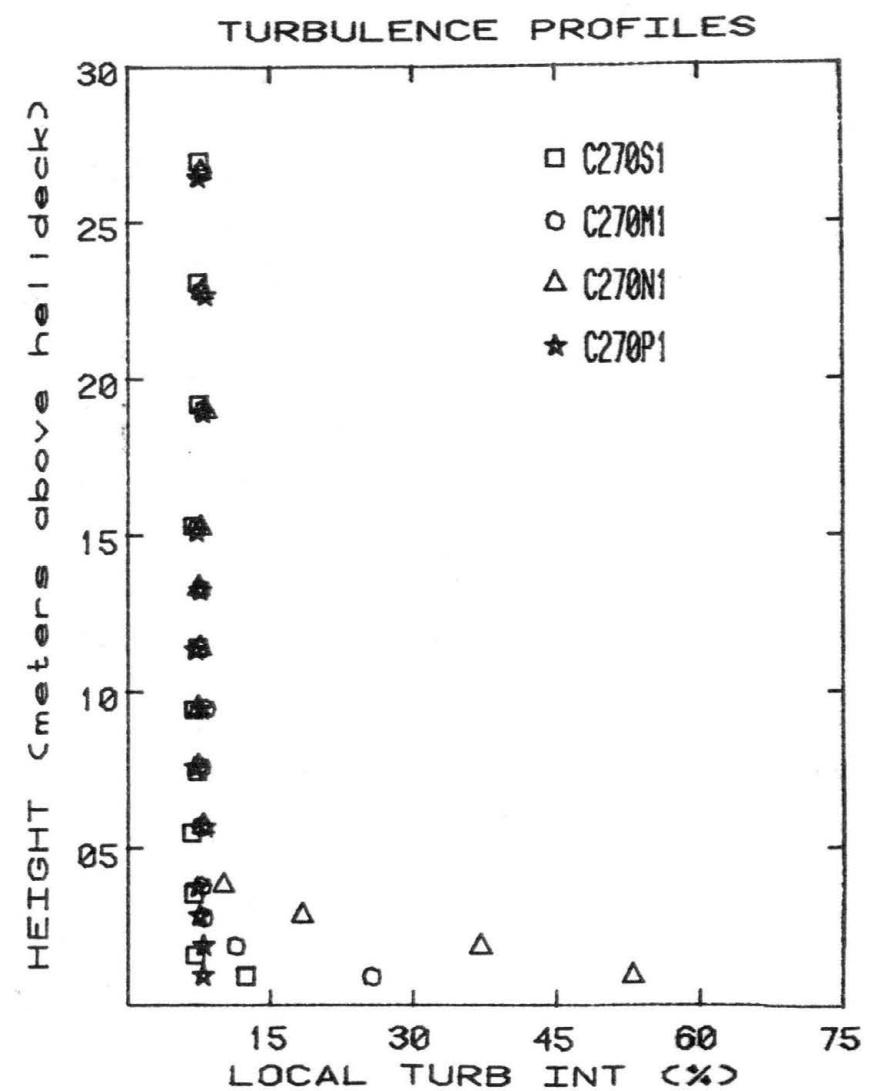
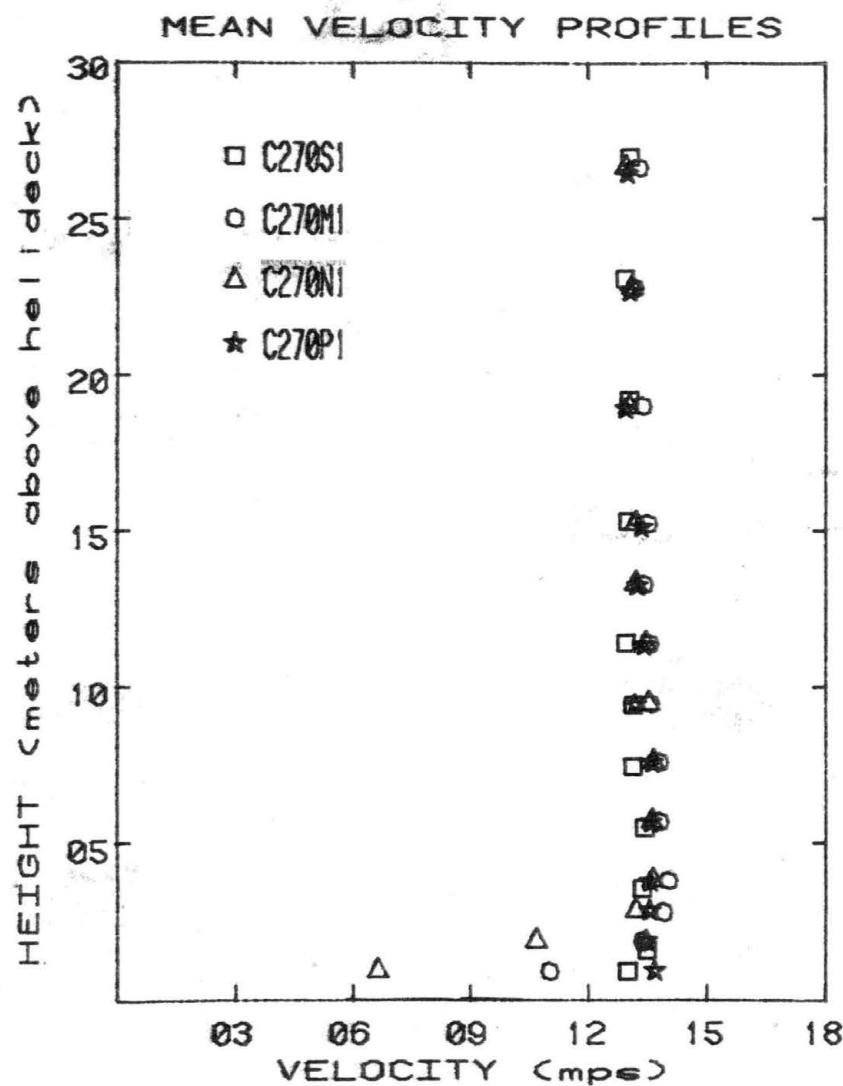
GRAPH # 61



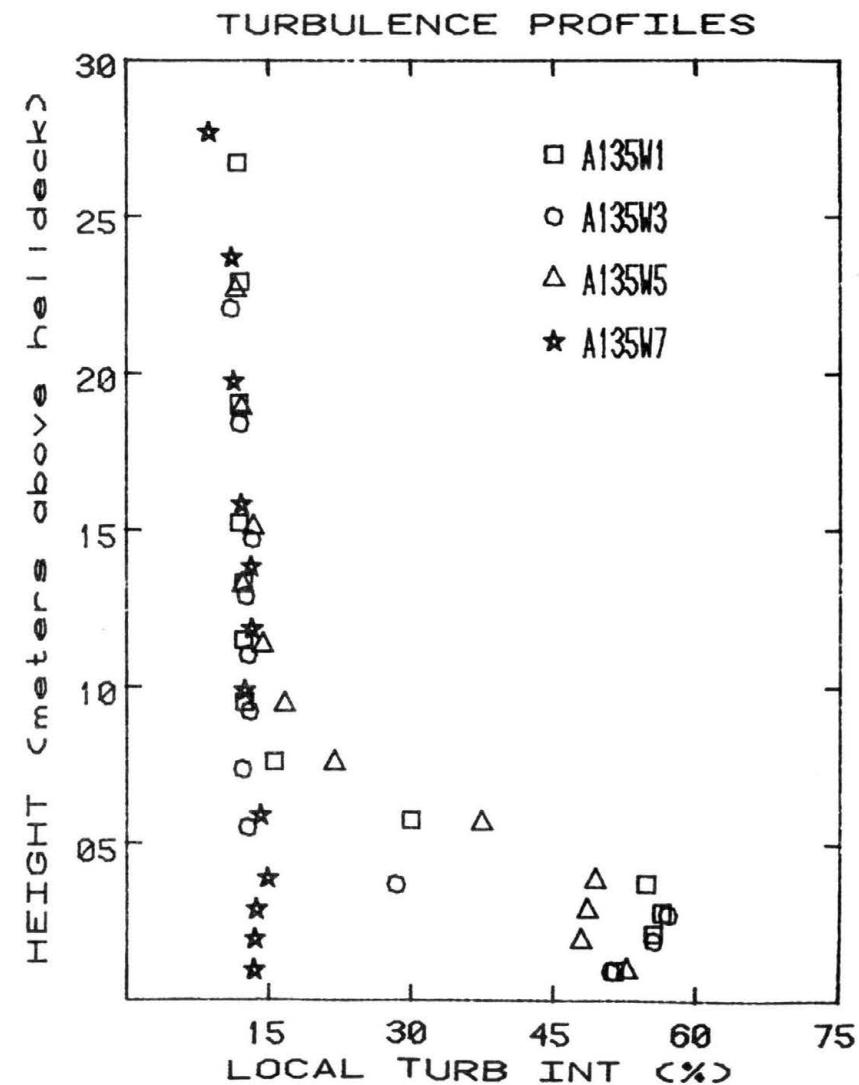
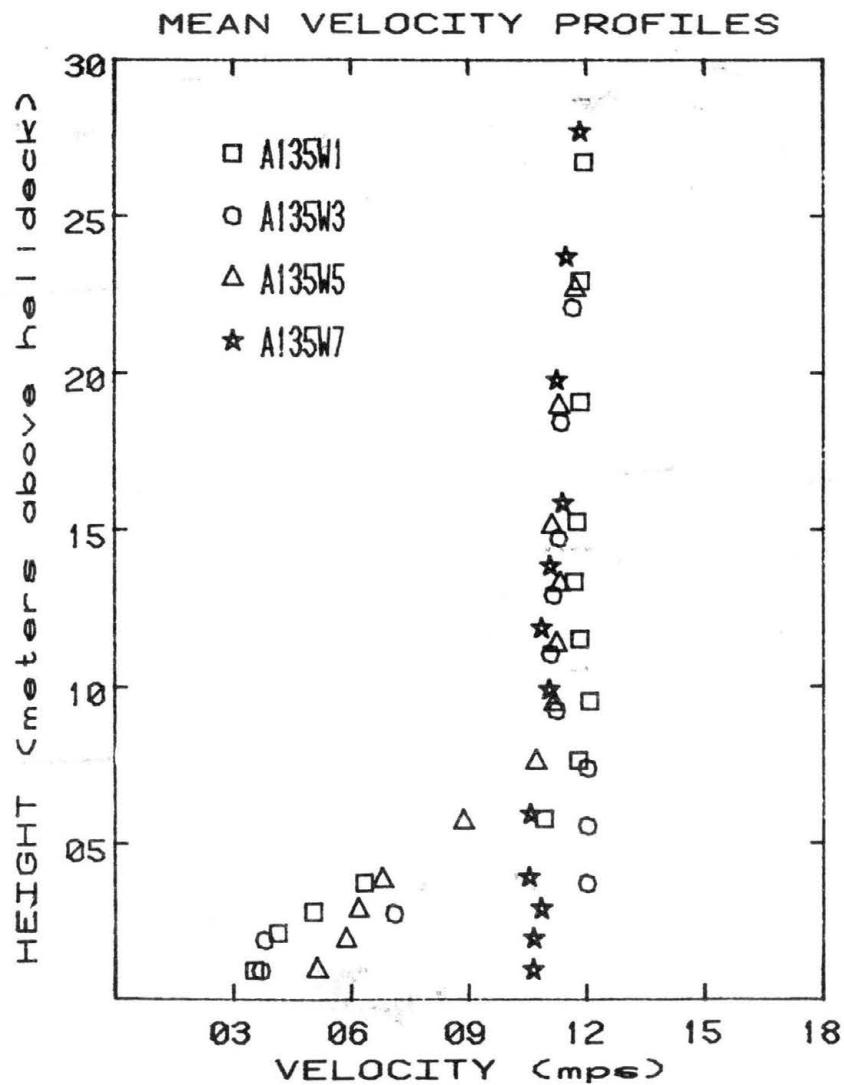
GRAPH # 62



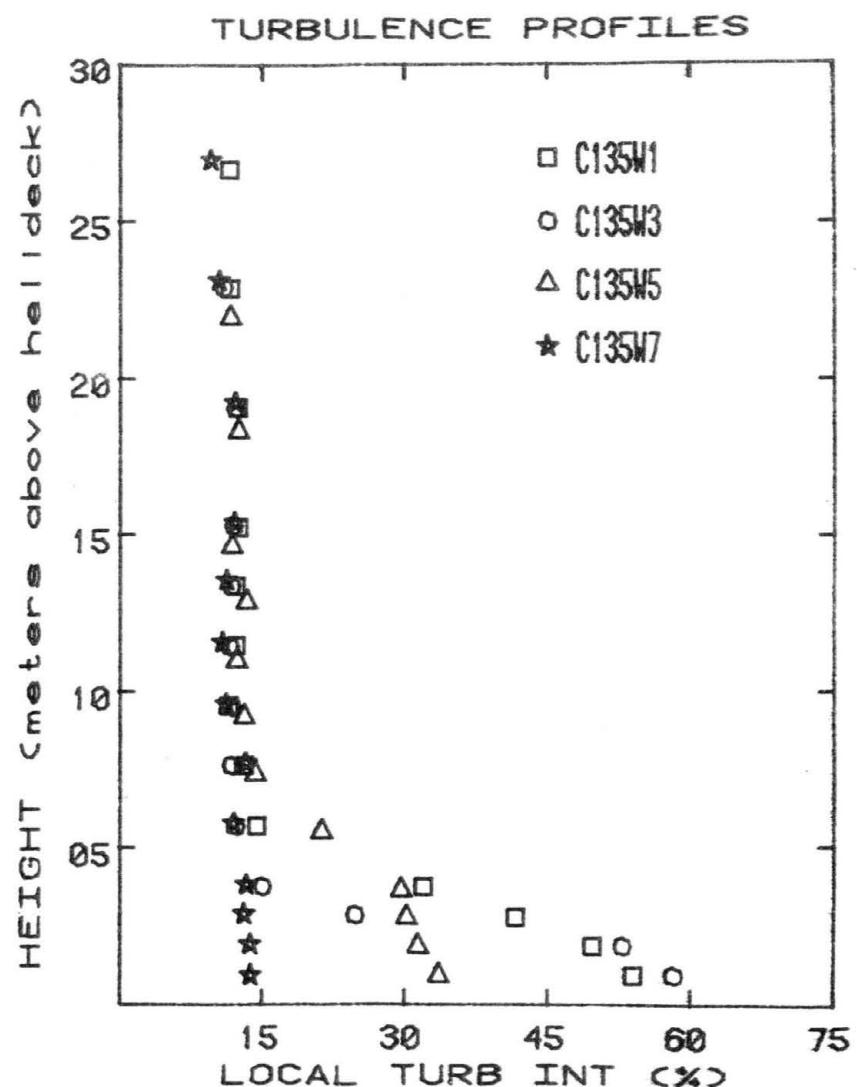
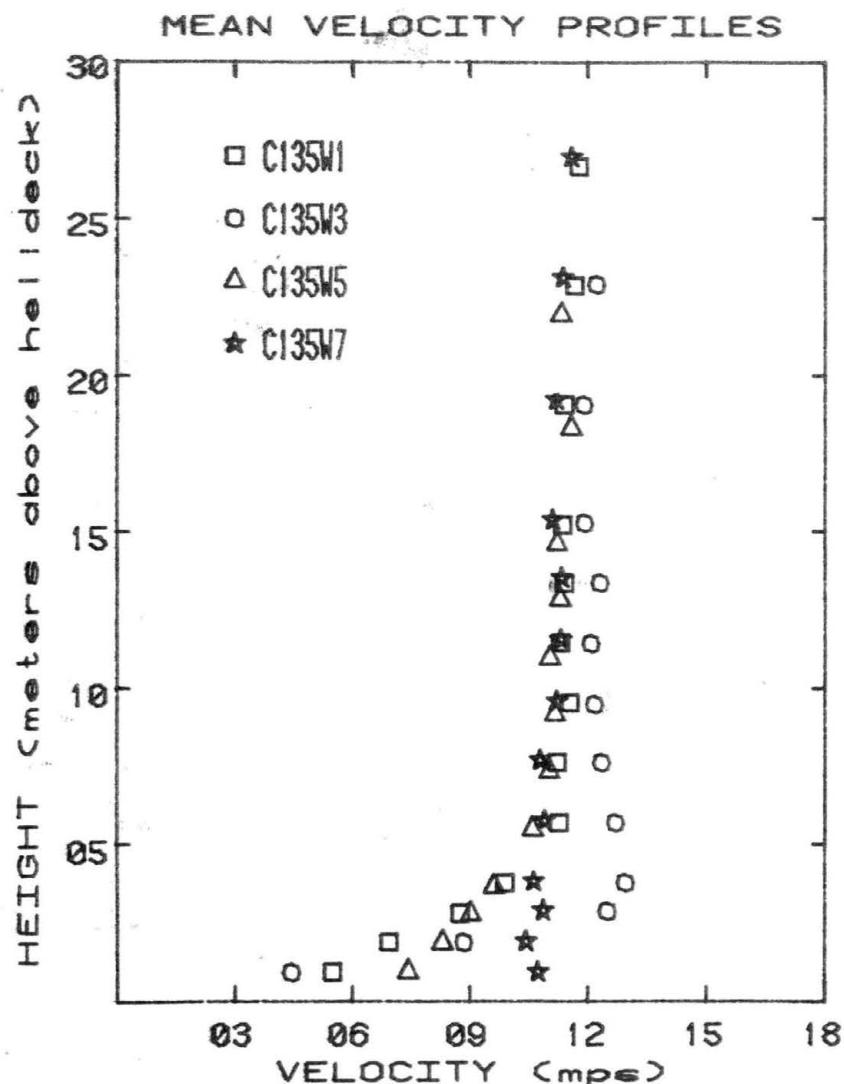
GRAPH # 63



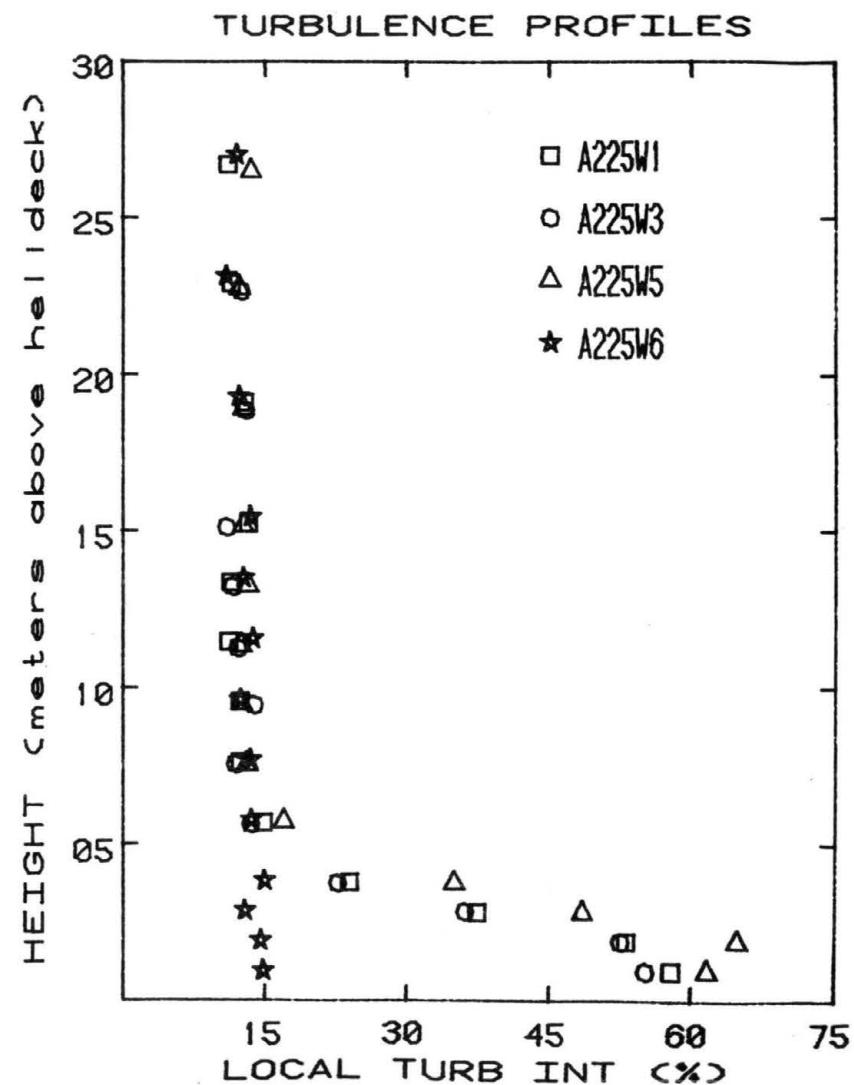
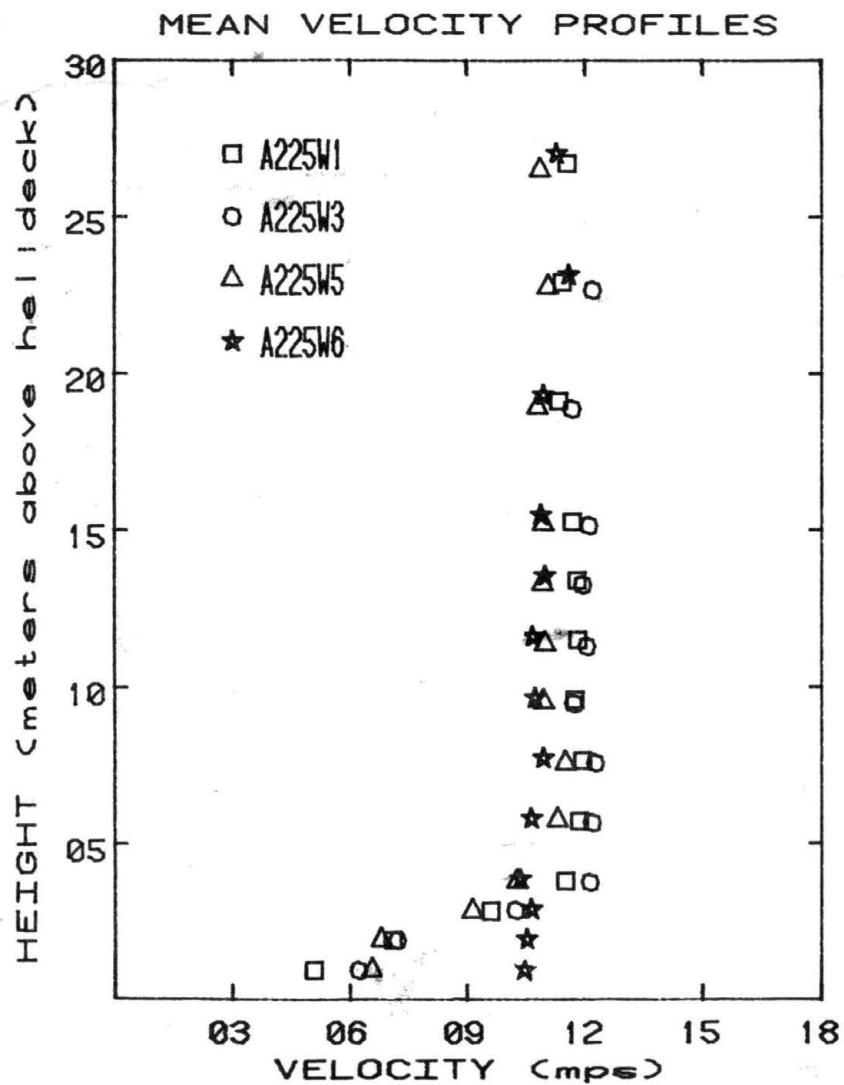
GRAPH # 64



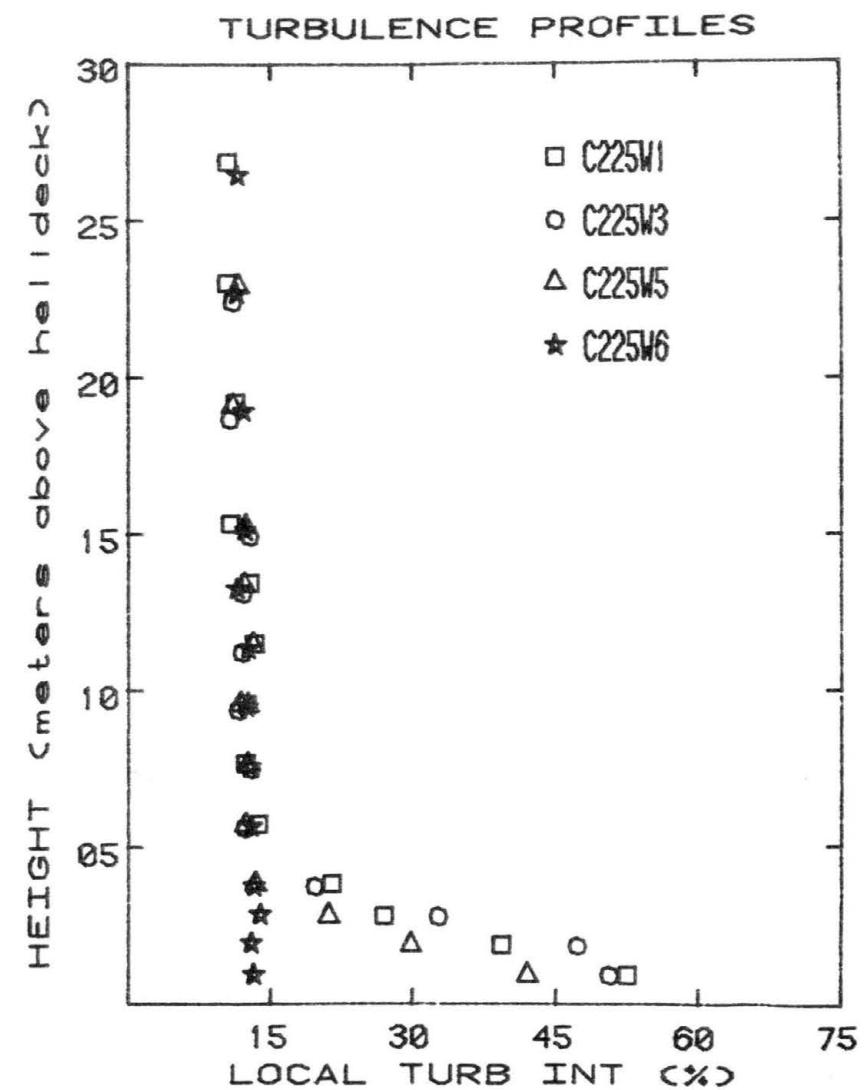
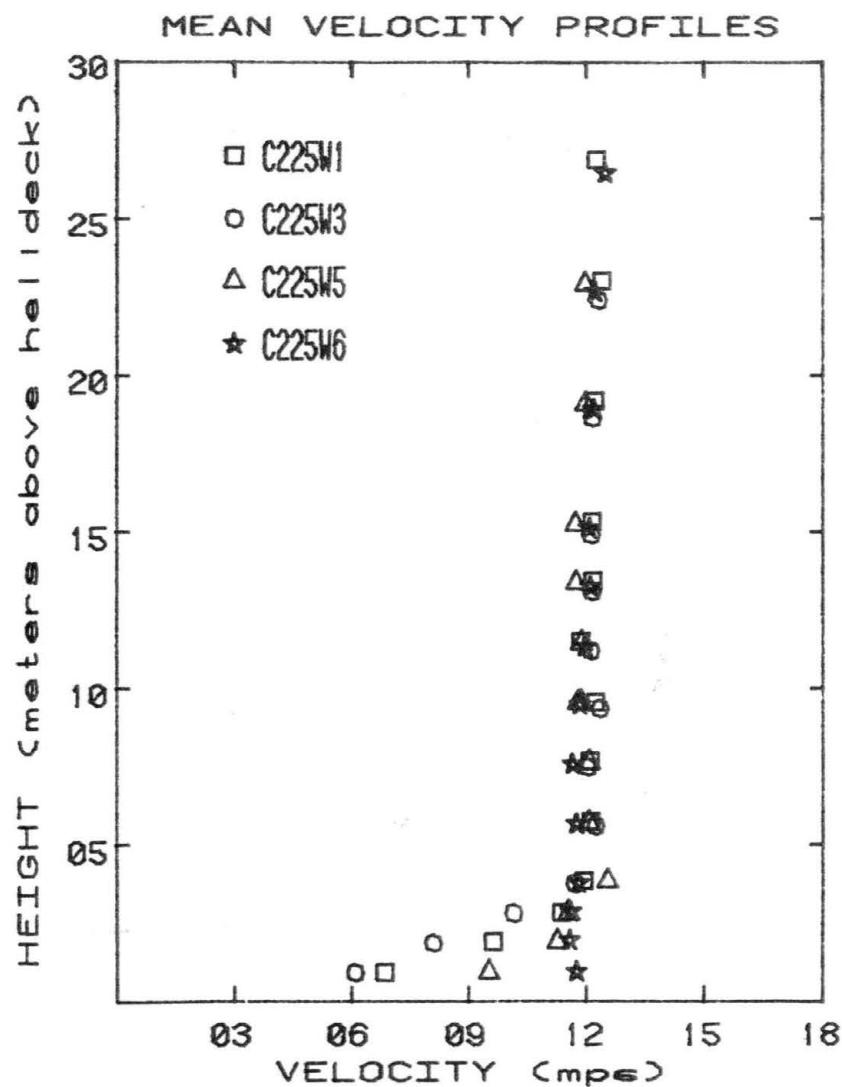
GRAPH # 65



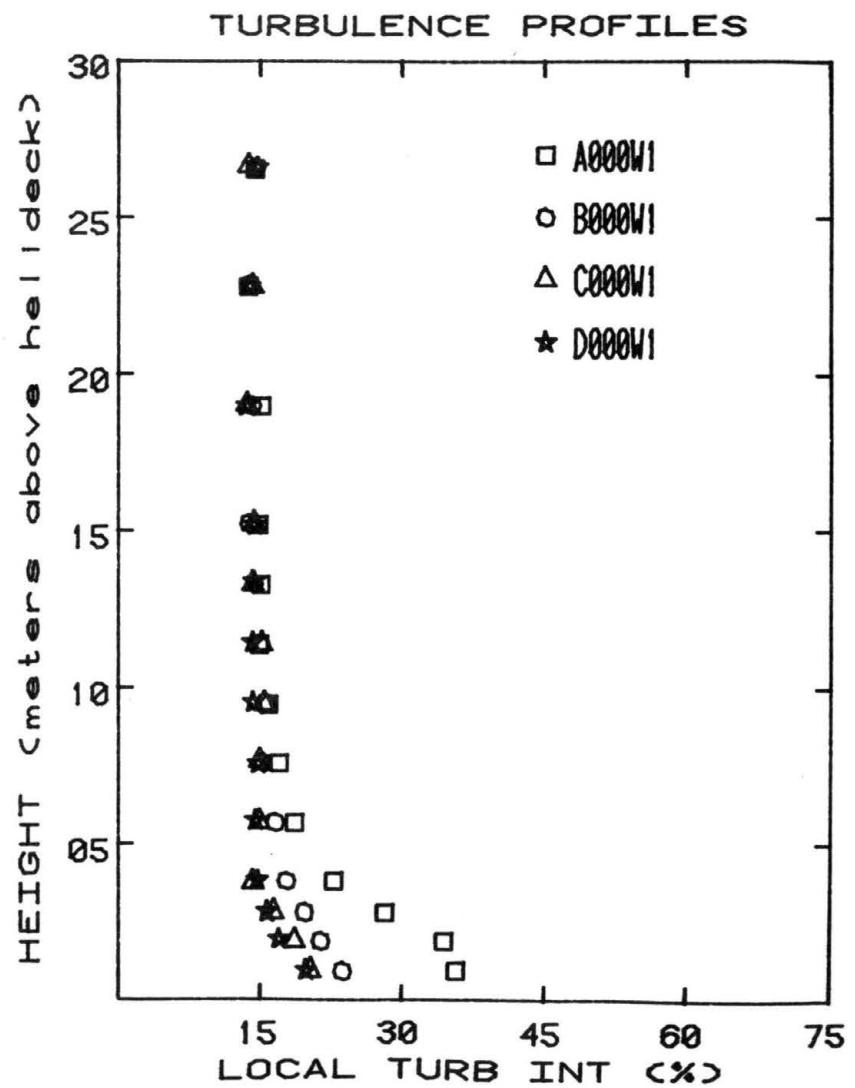
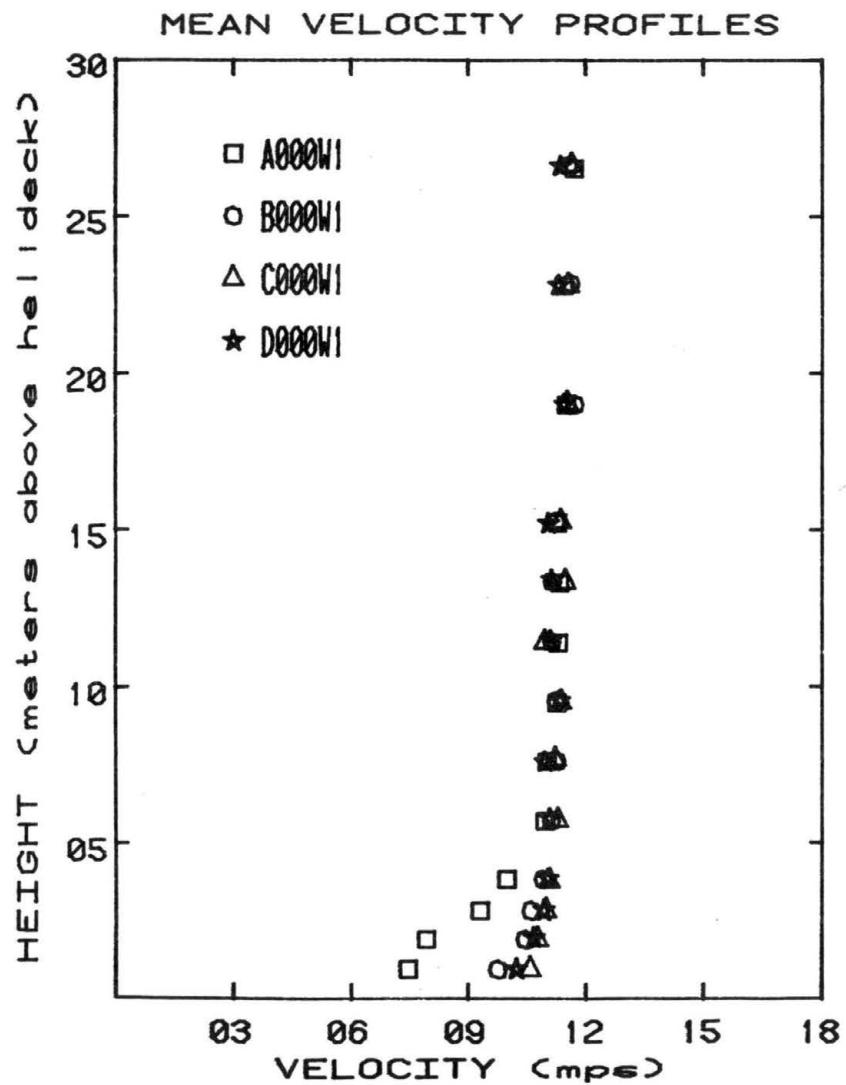
GRAPH # 66



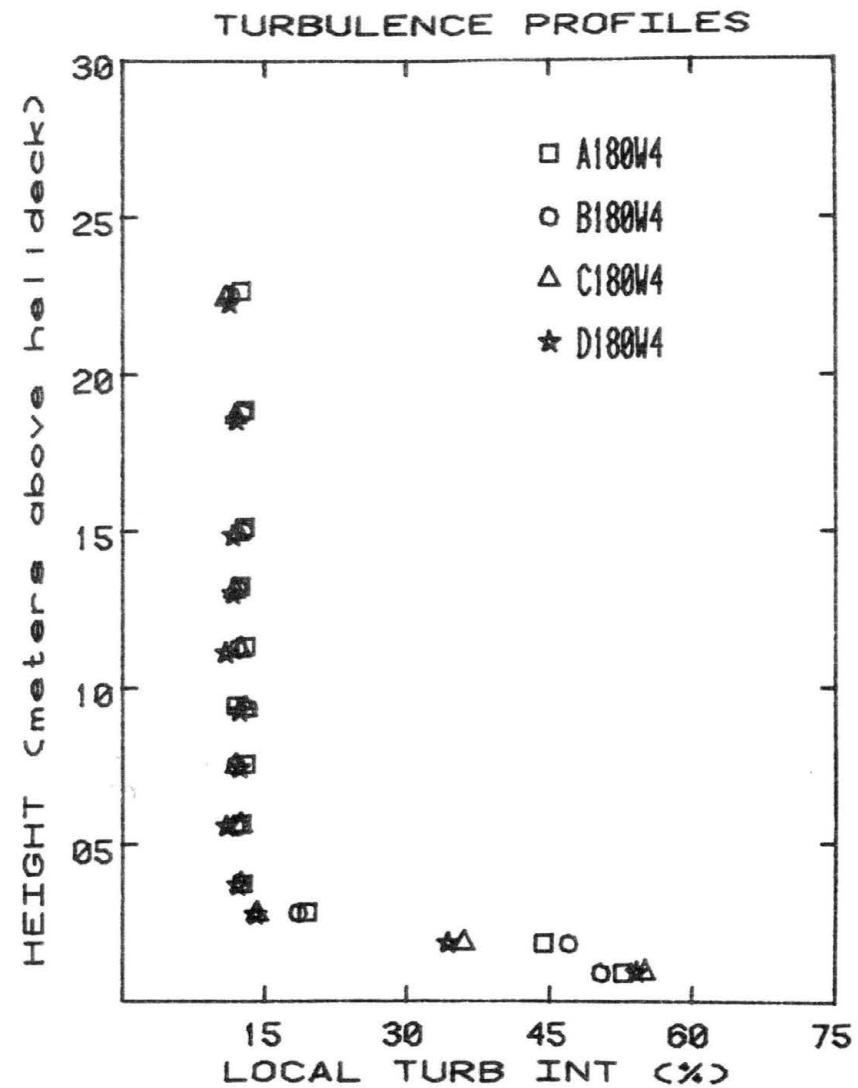
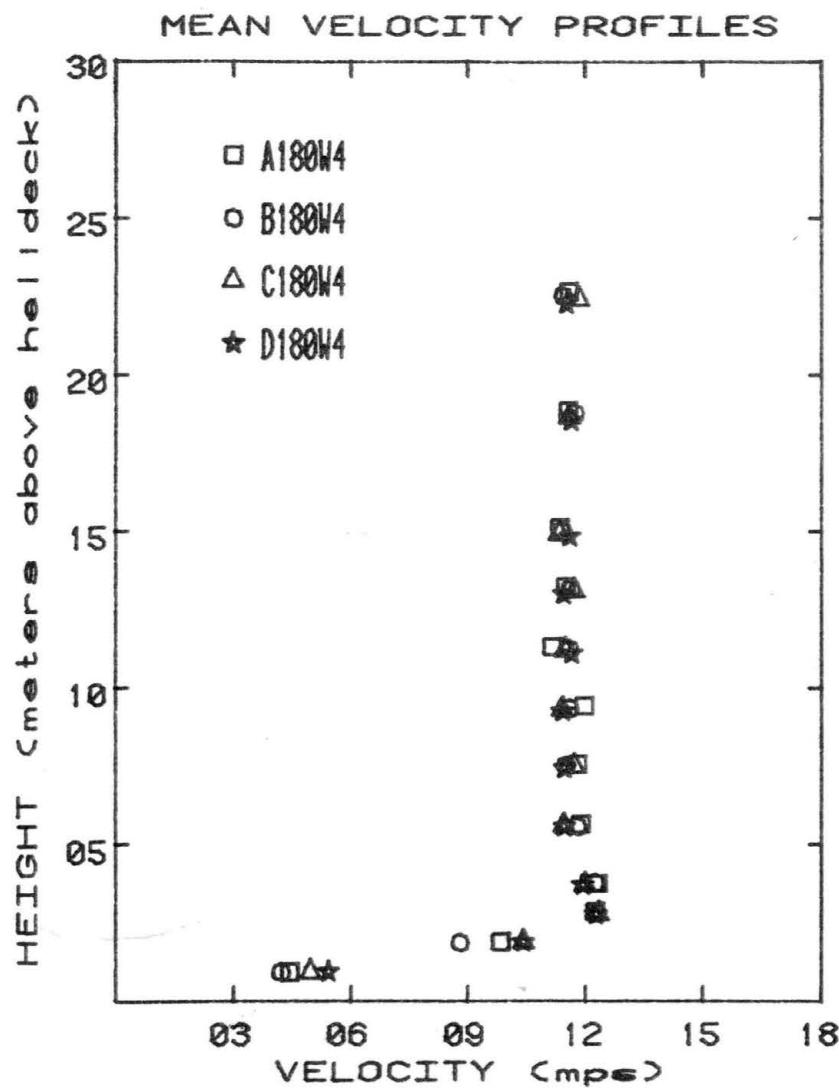
GRAPH # 67



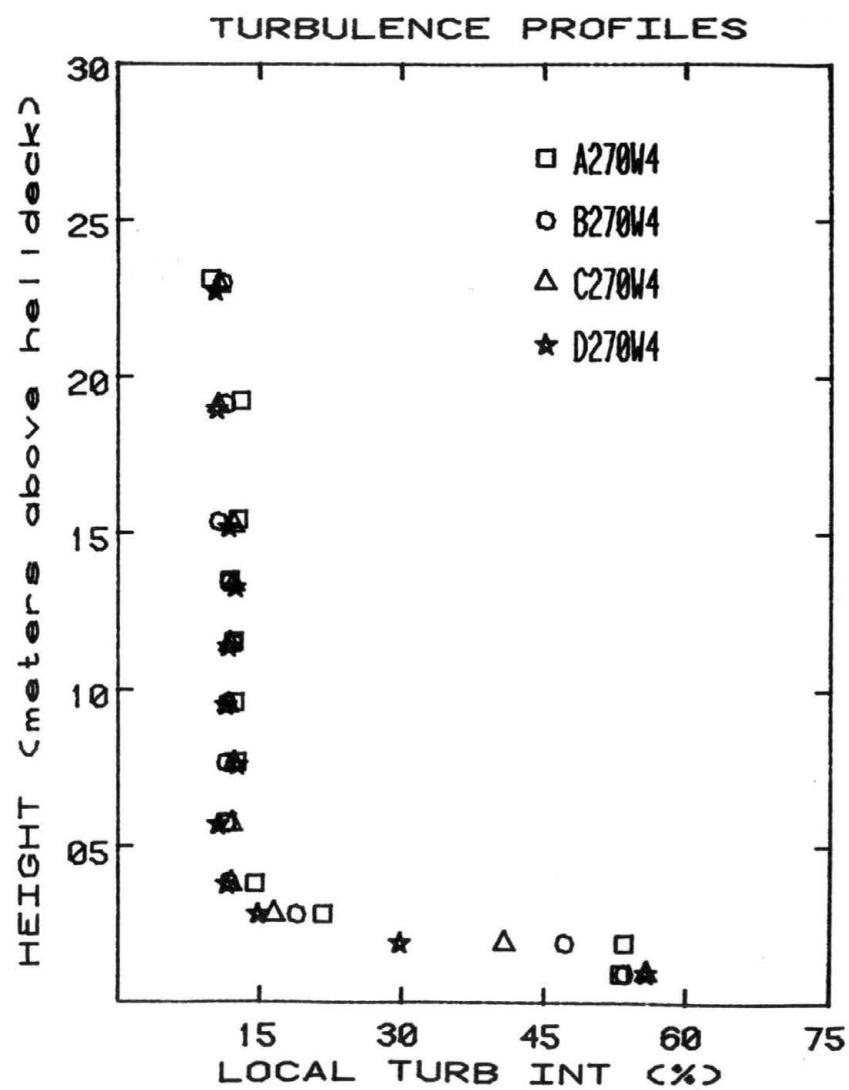
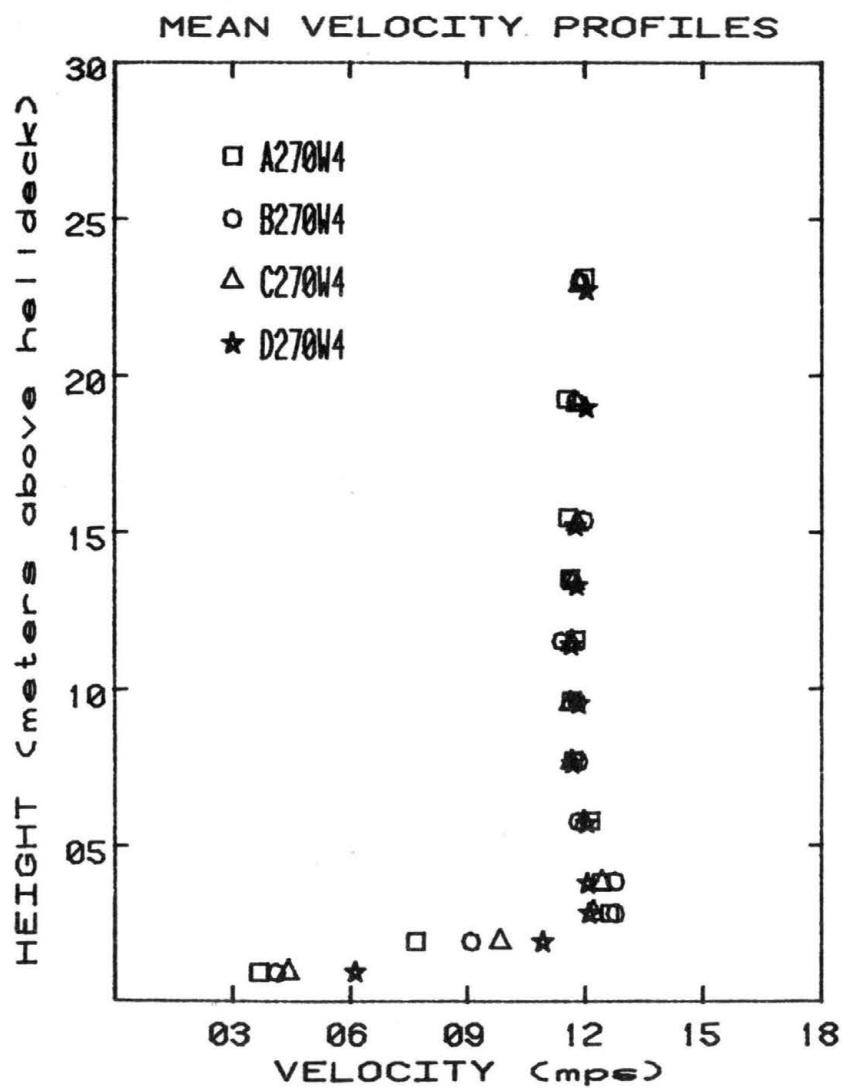
GRAPH # 68



GRAPH # 69

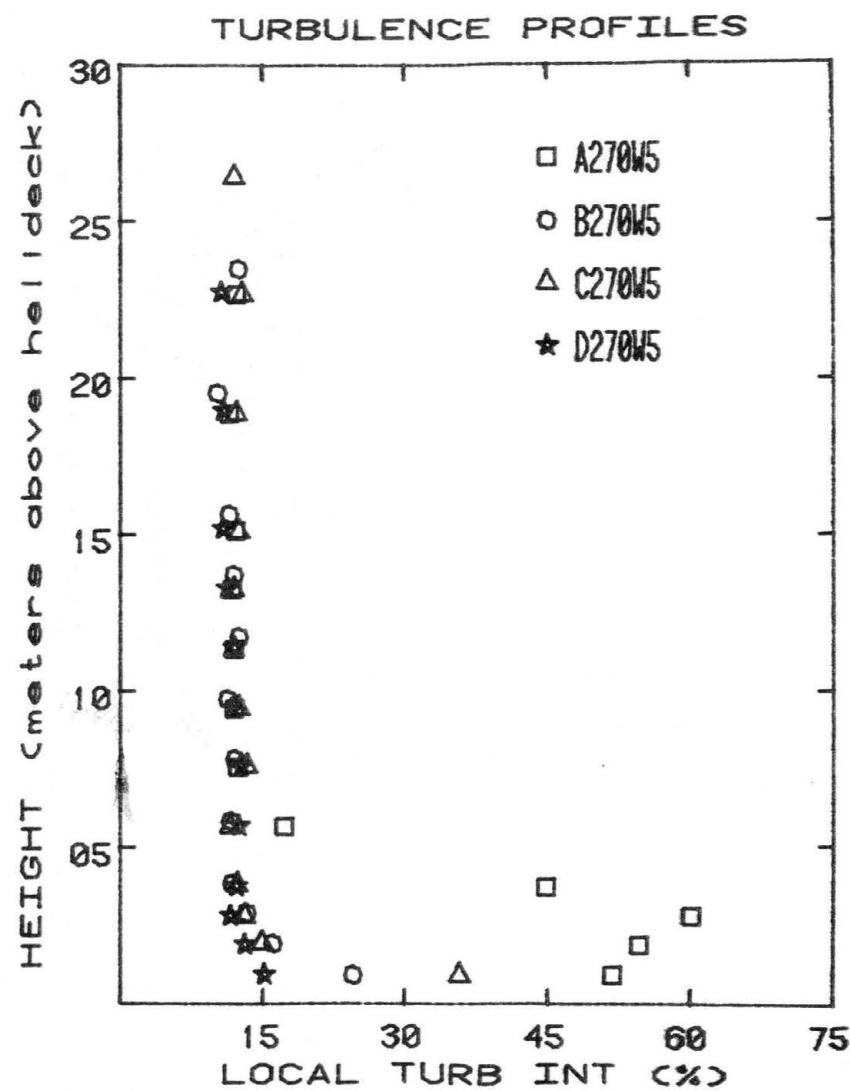
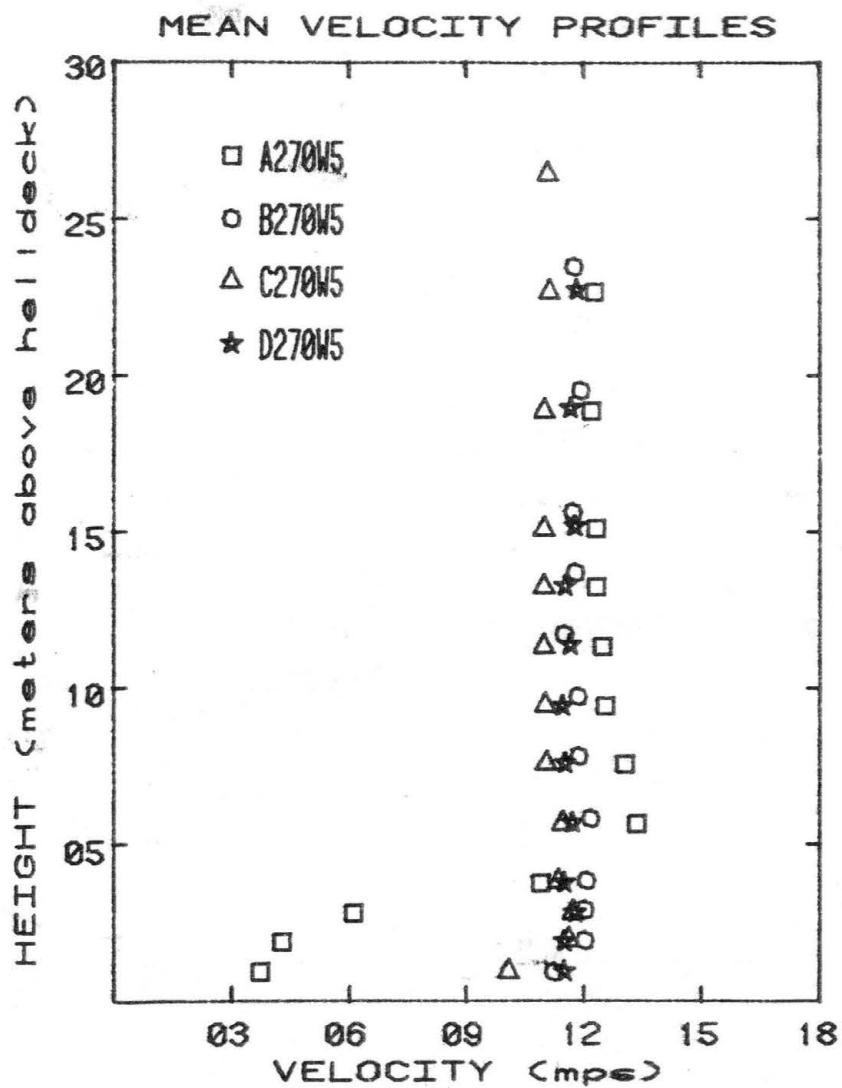


GRAPH # 70

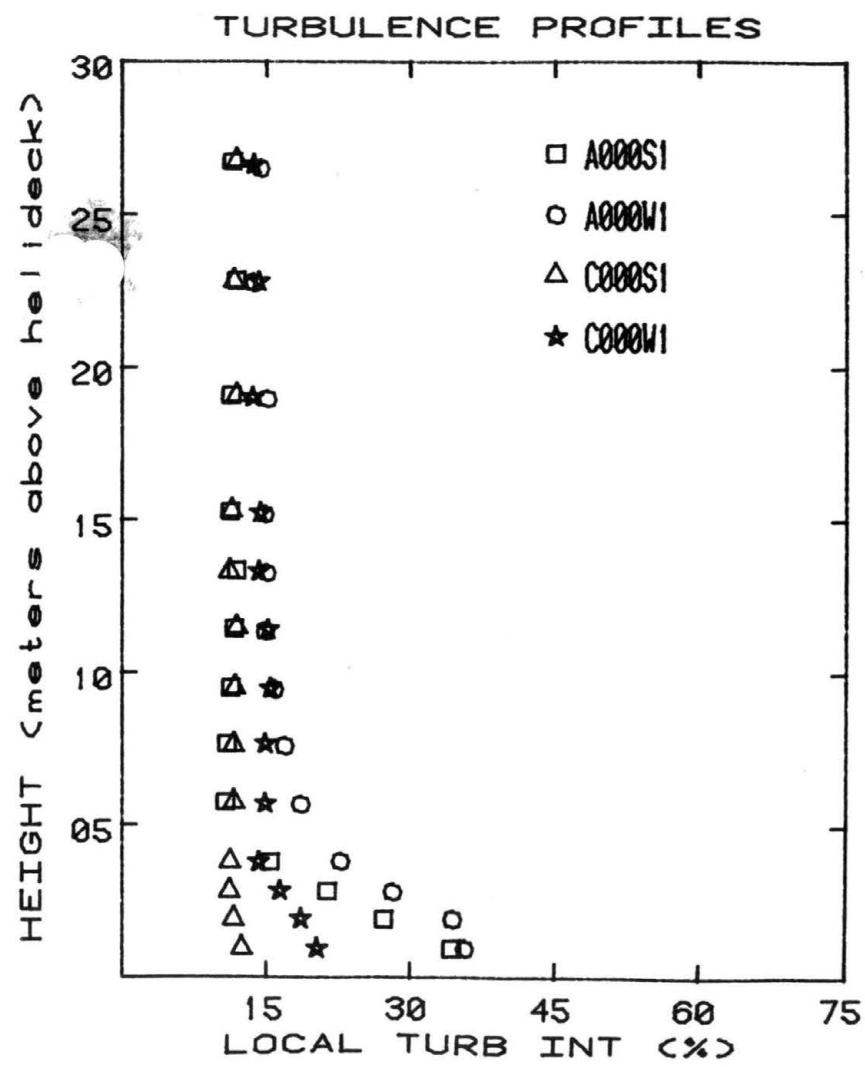
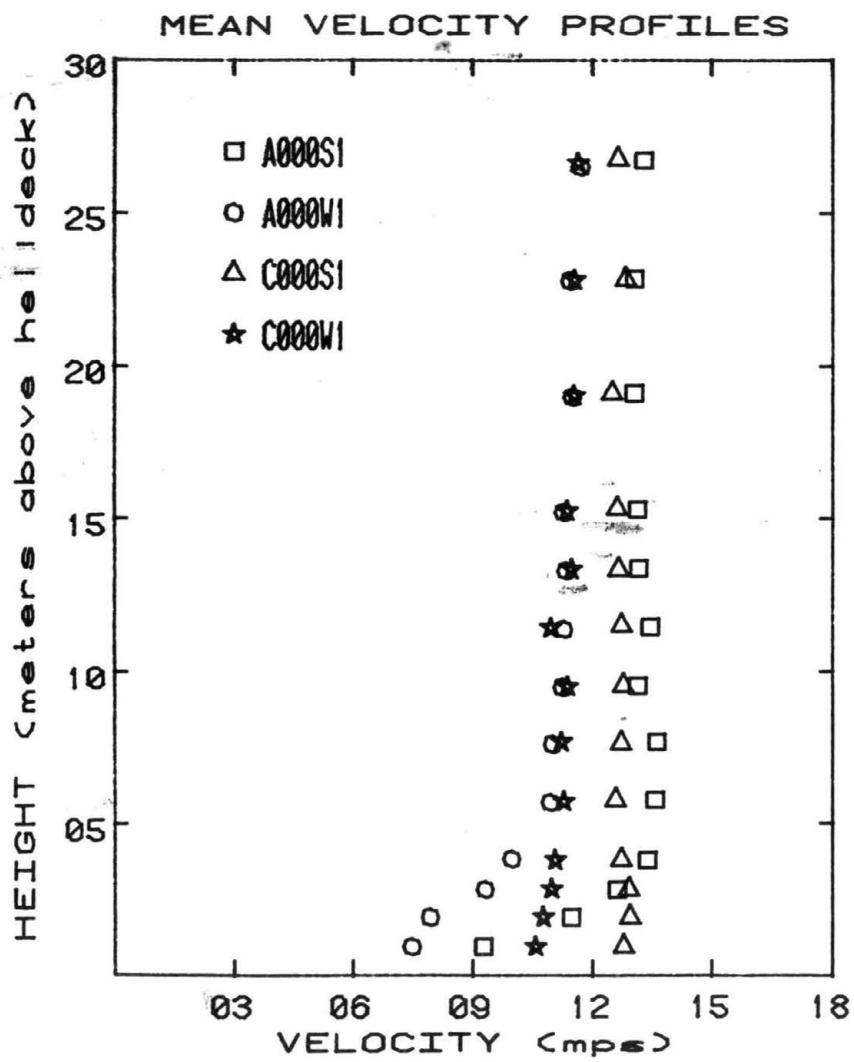


III

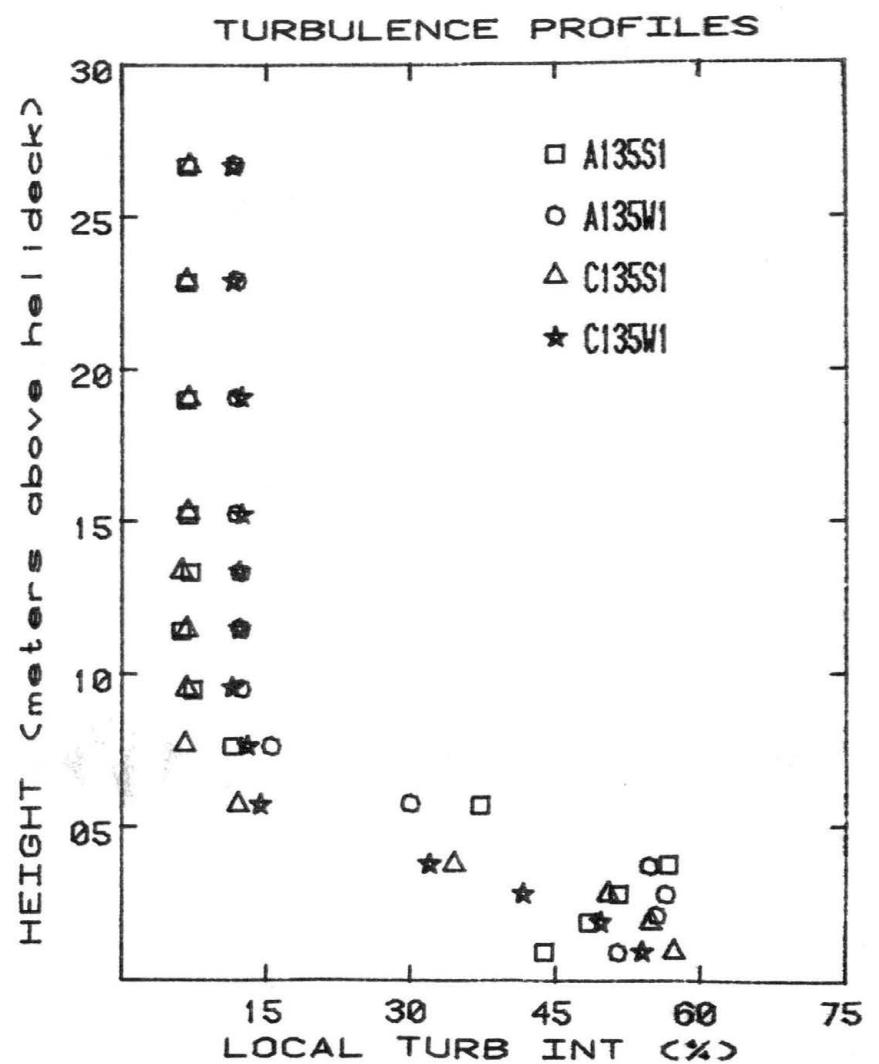
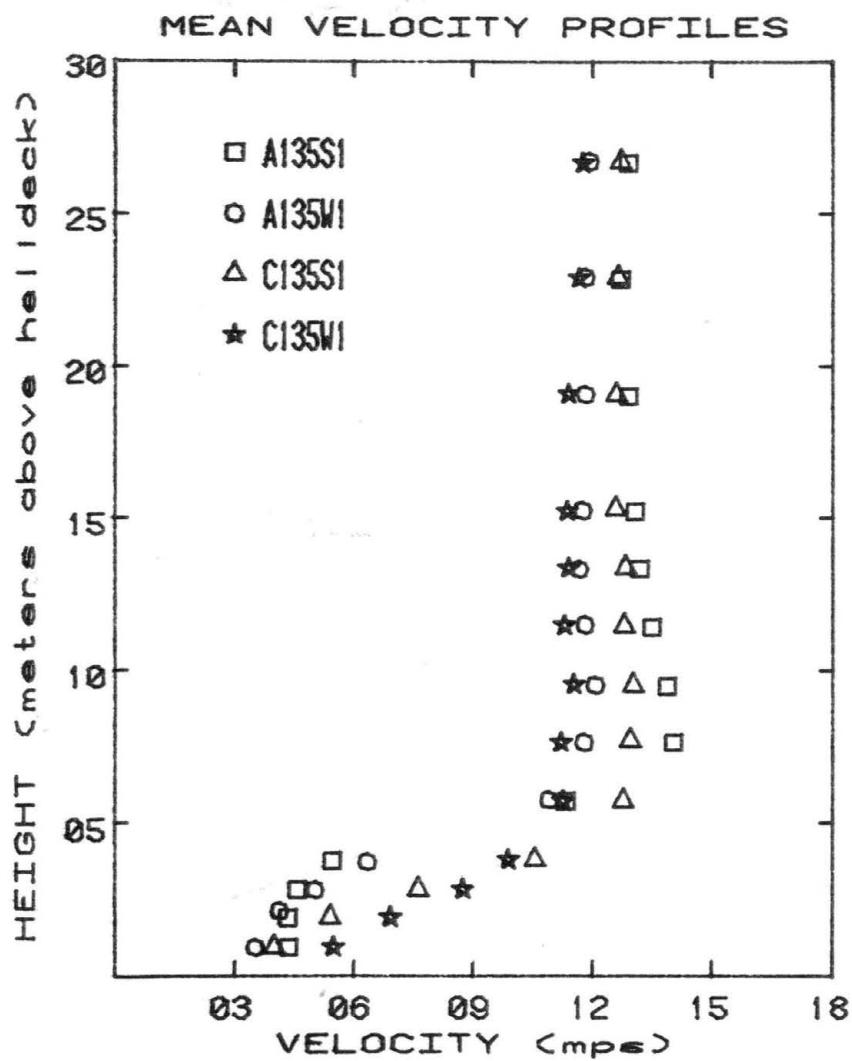
GRAPH # 71



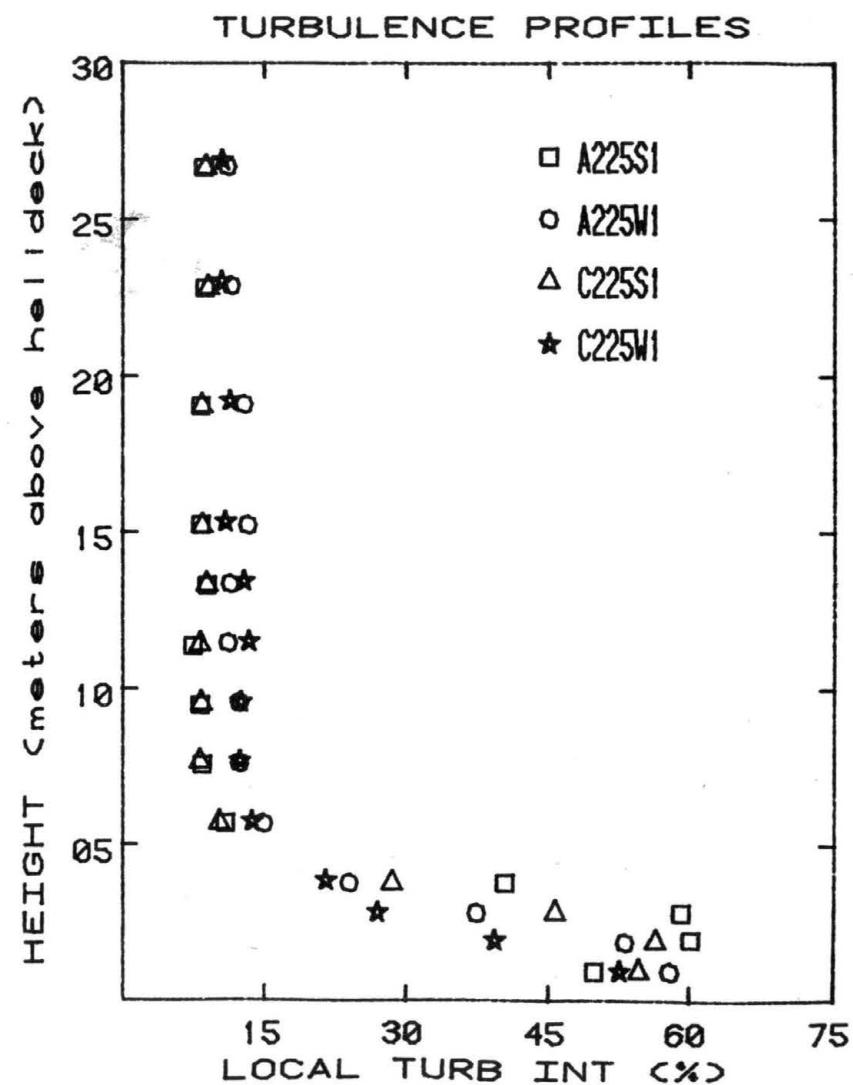
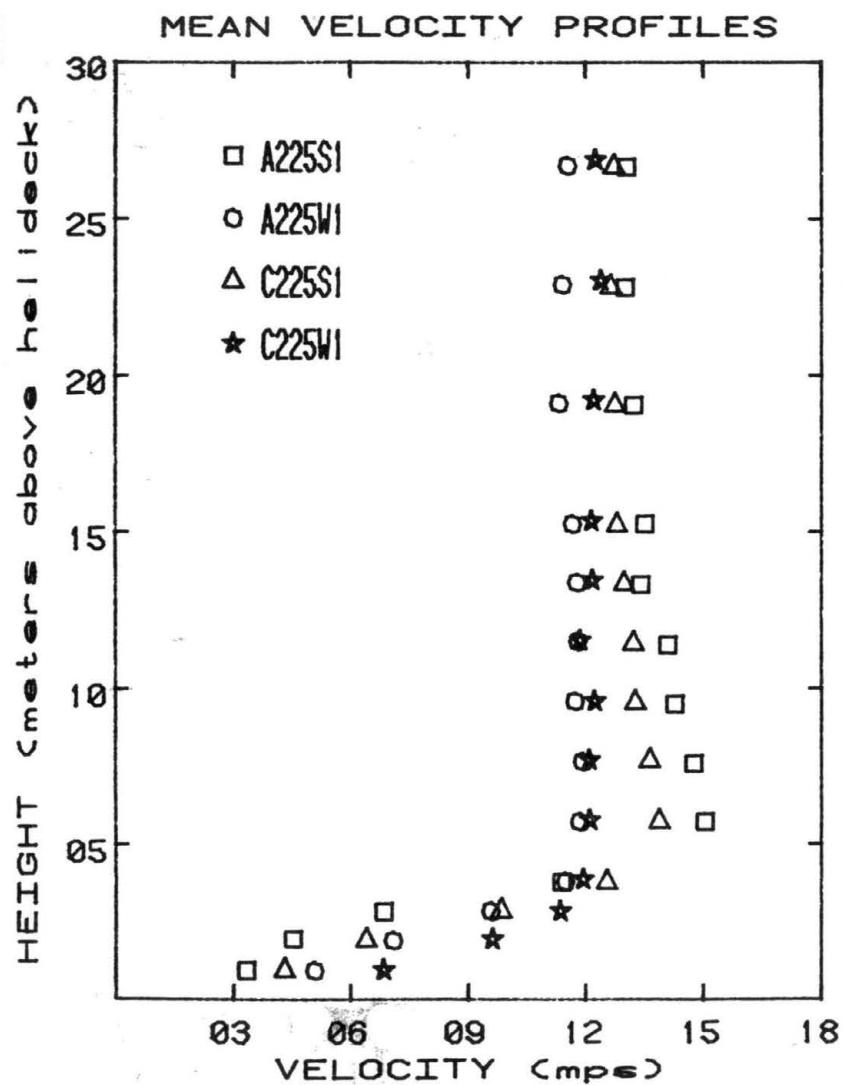
GRAPH # 72



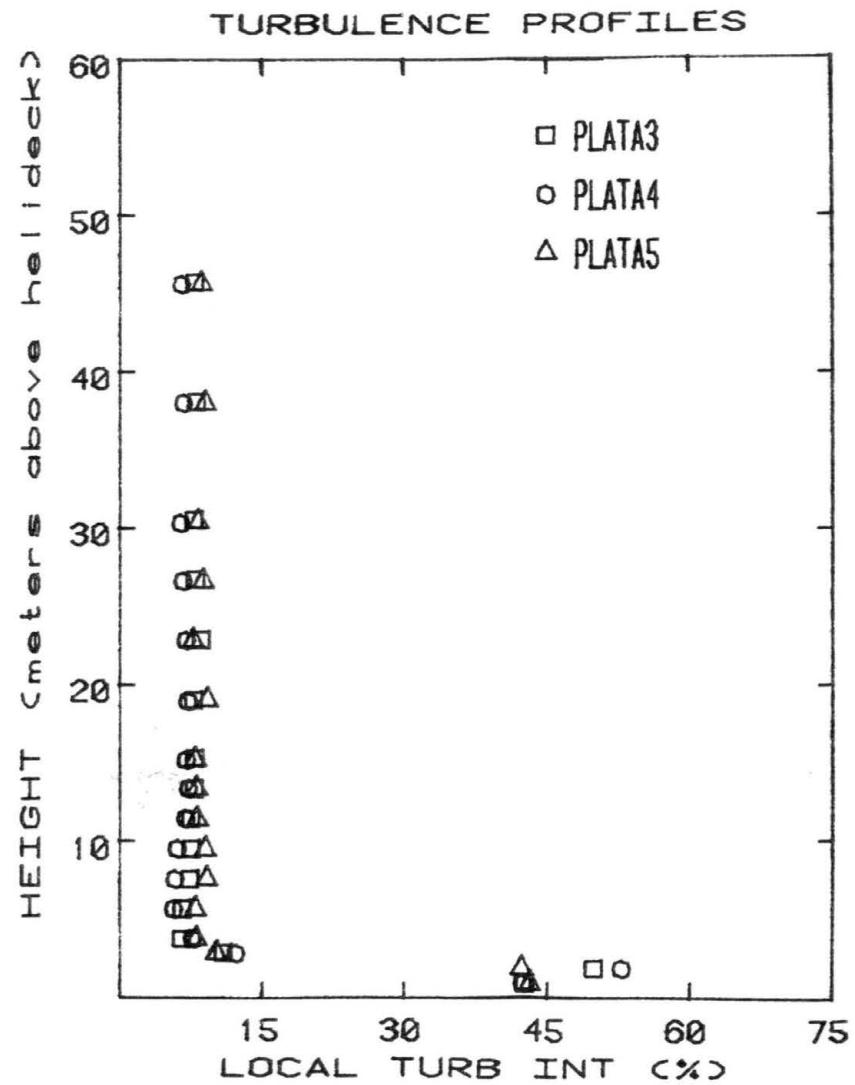
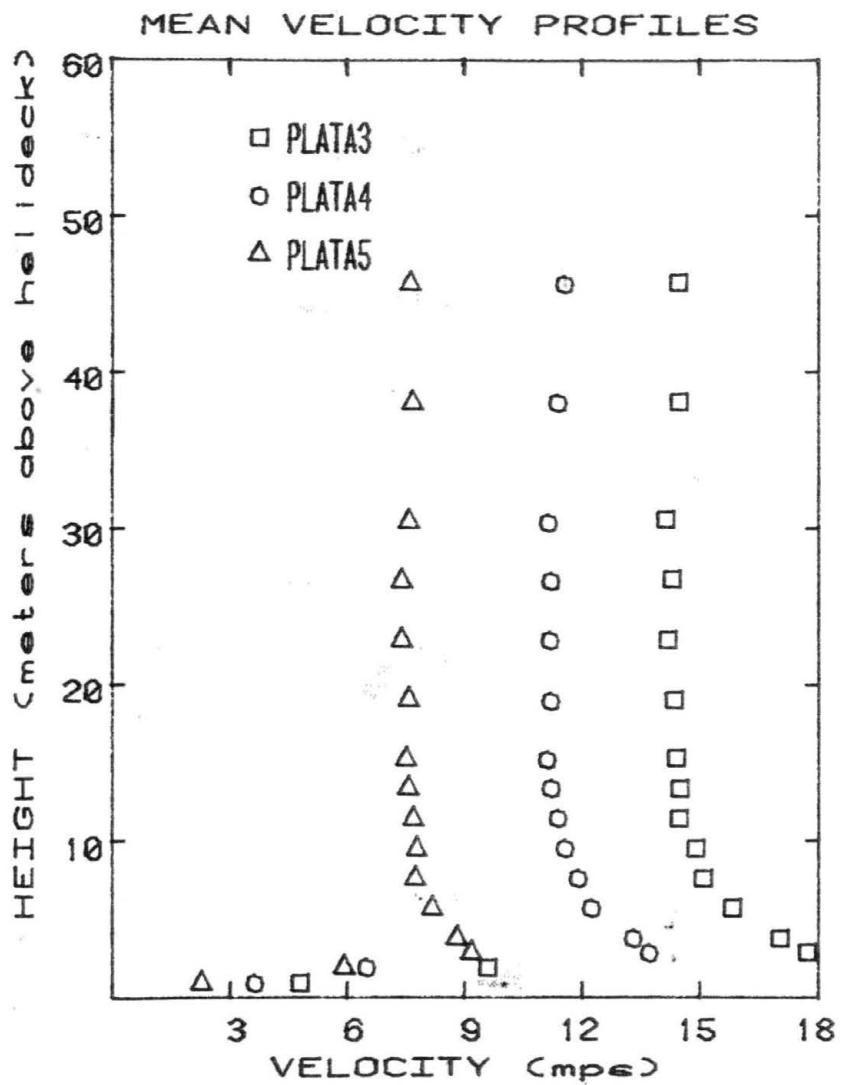
GRAPH # 73



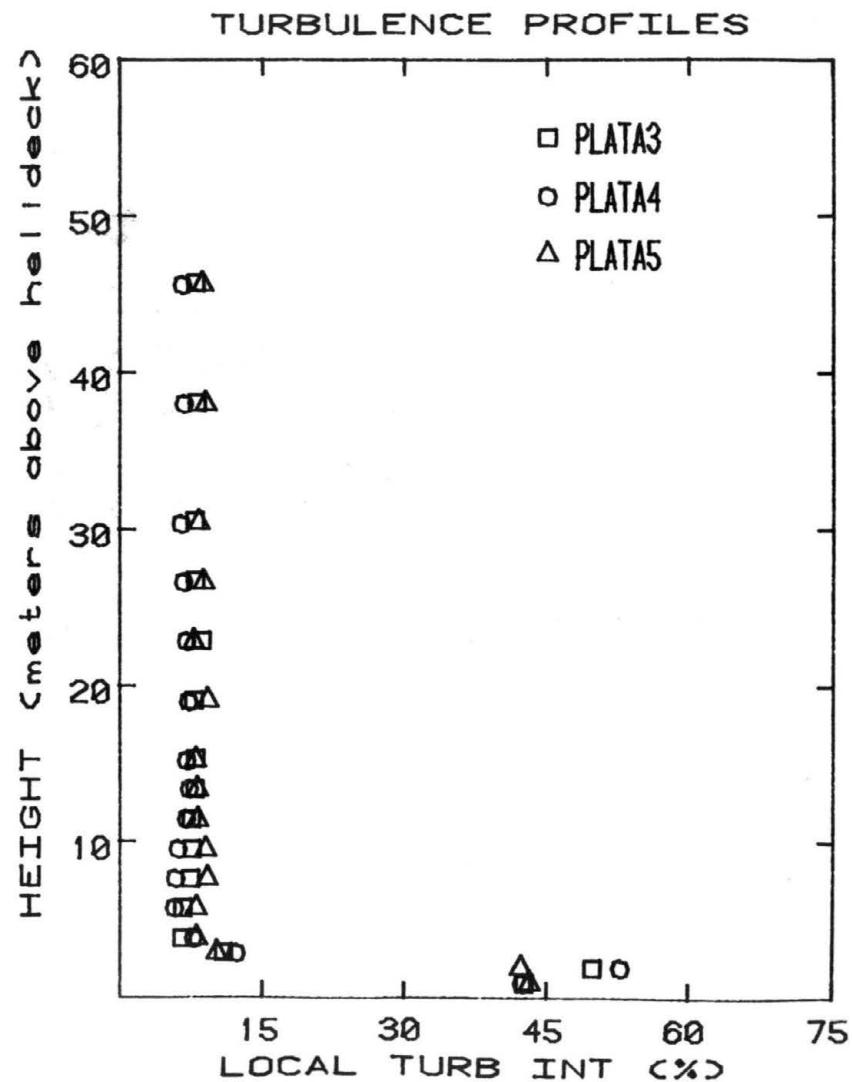
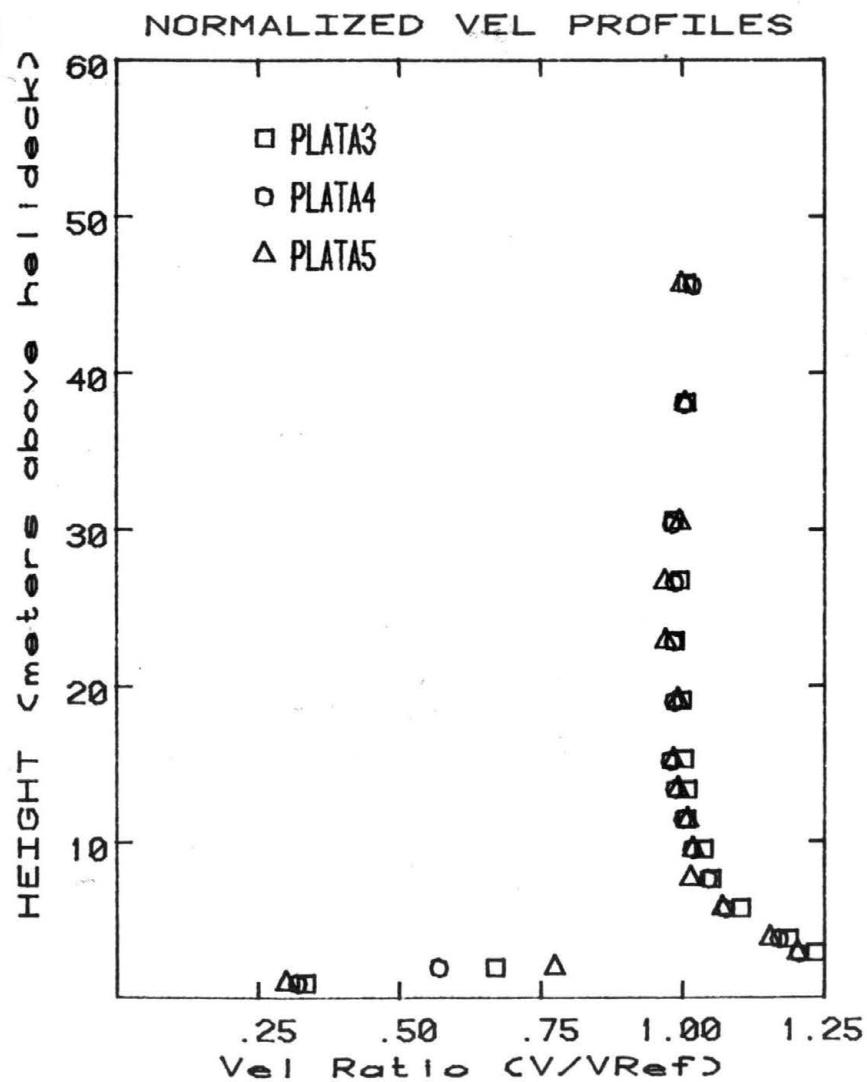
GRAPH # 74



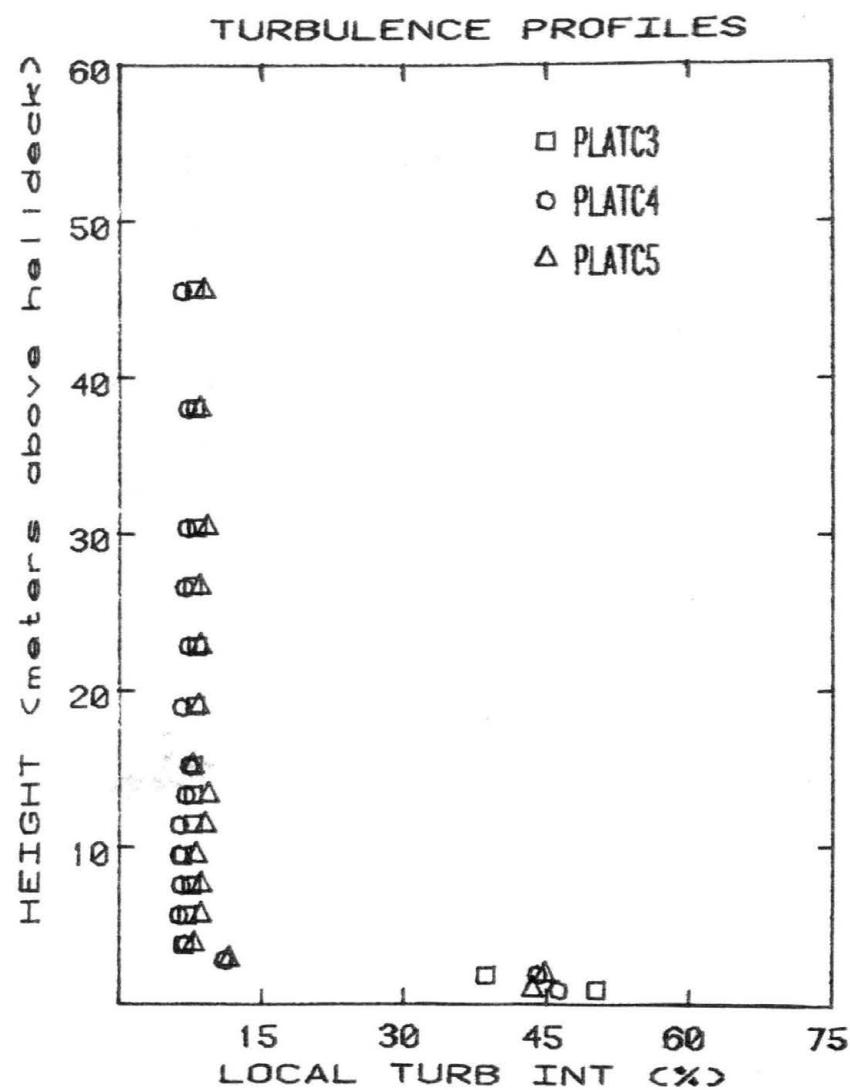
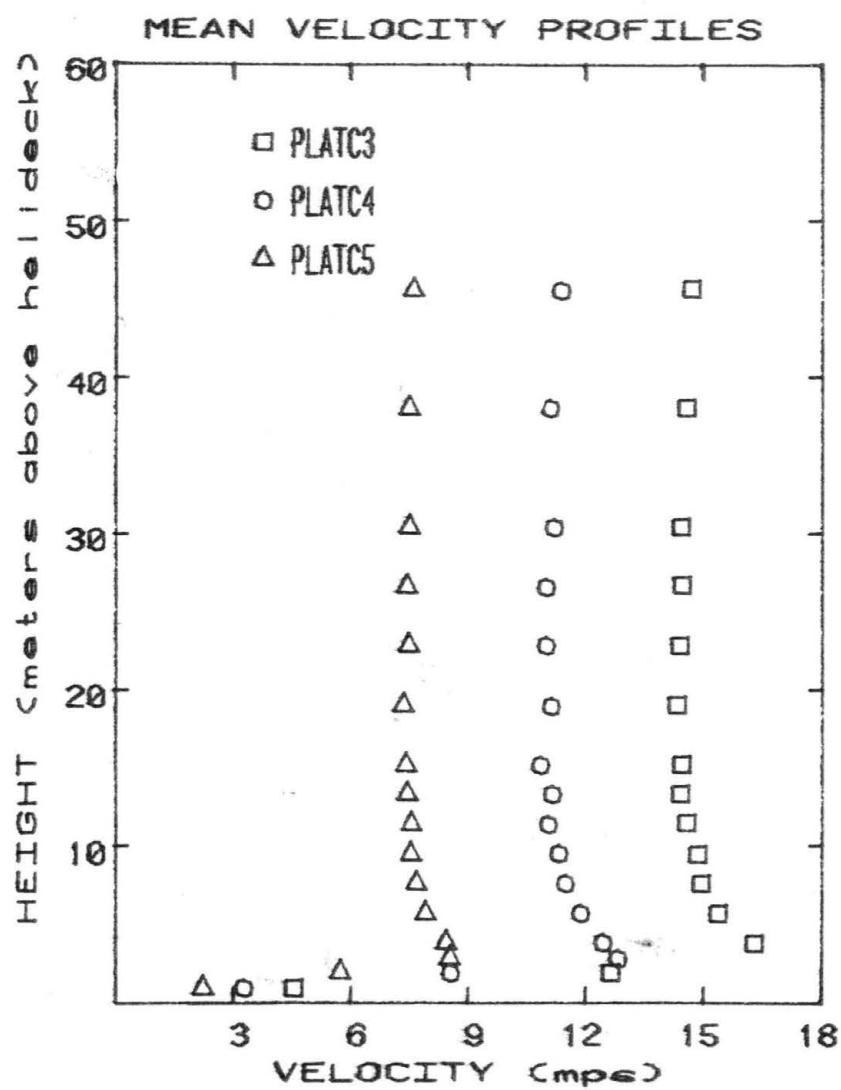
GRAPH # 75



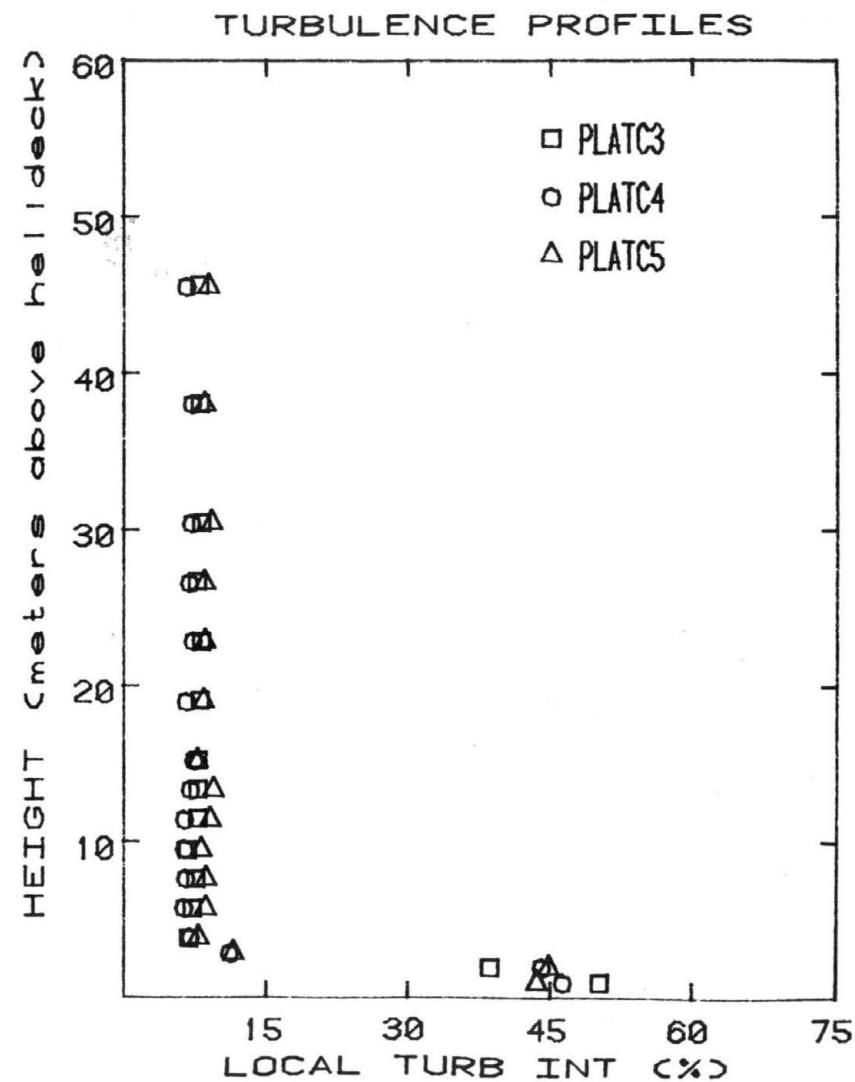
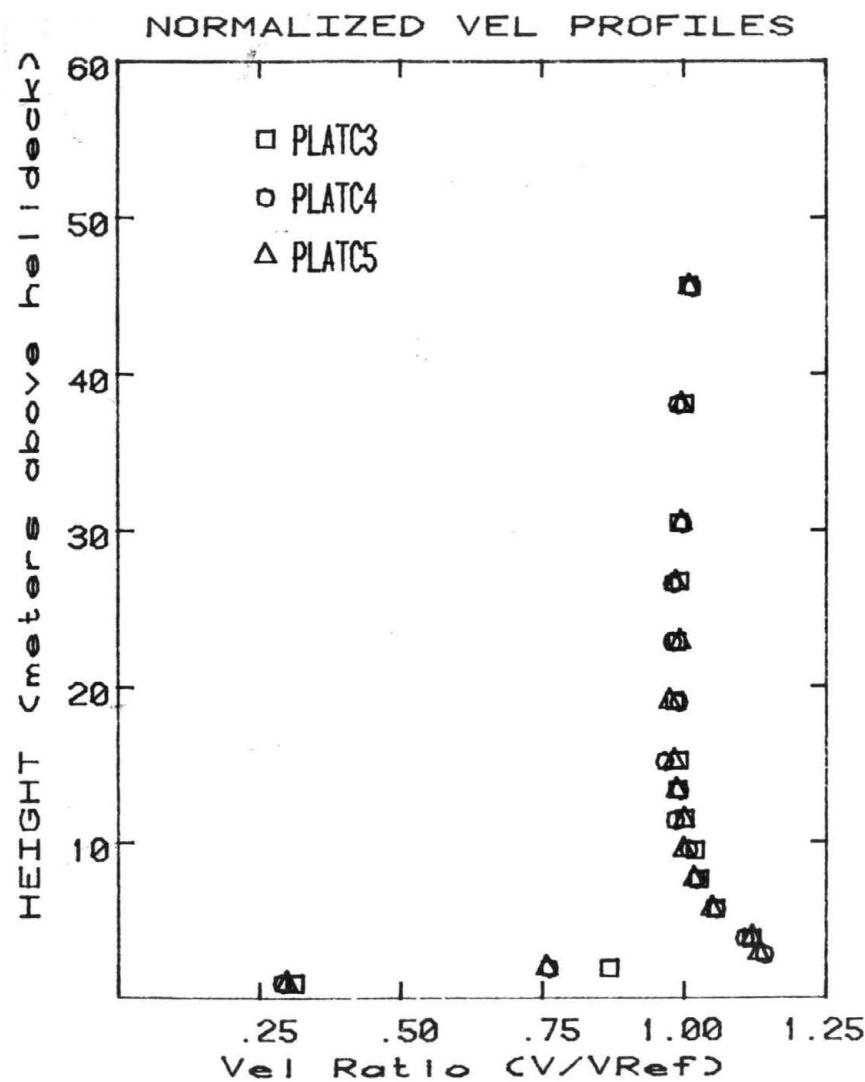
GRAPH # 76



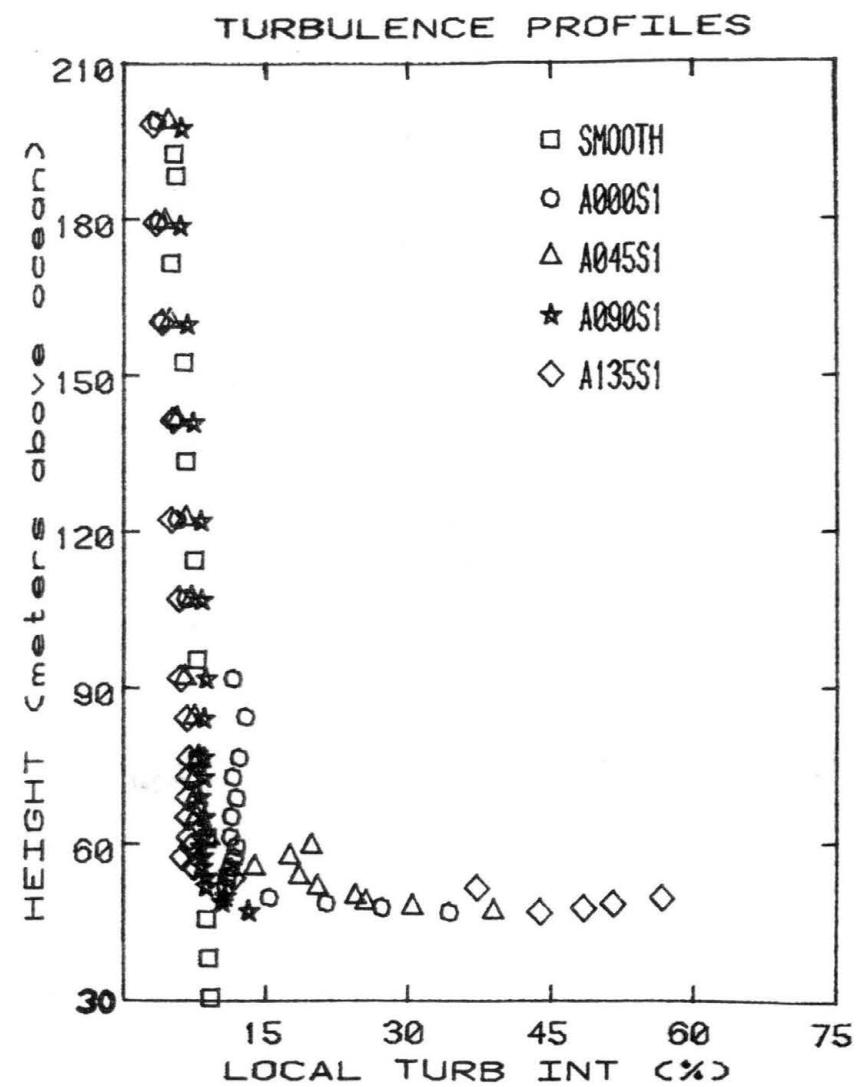
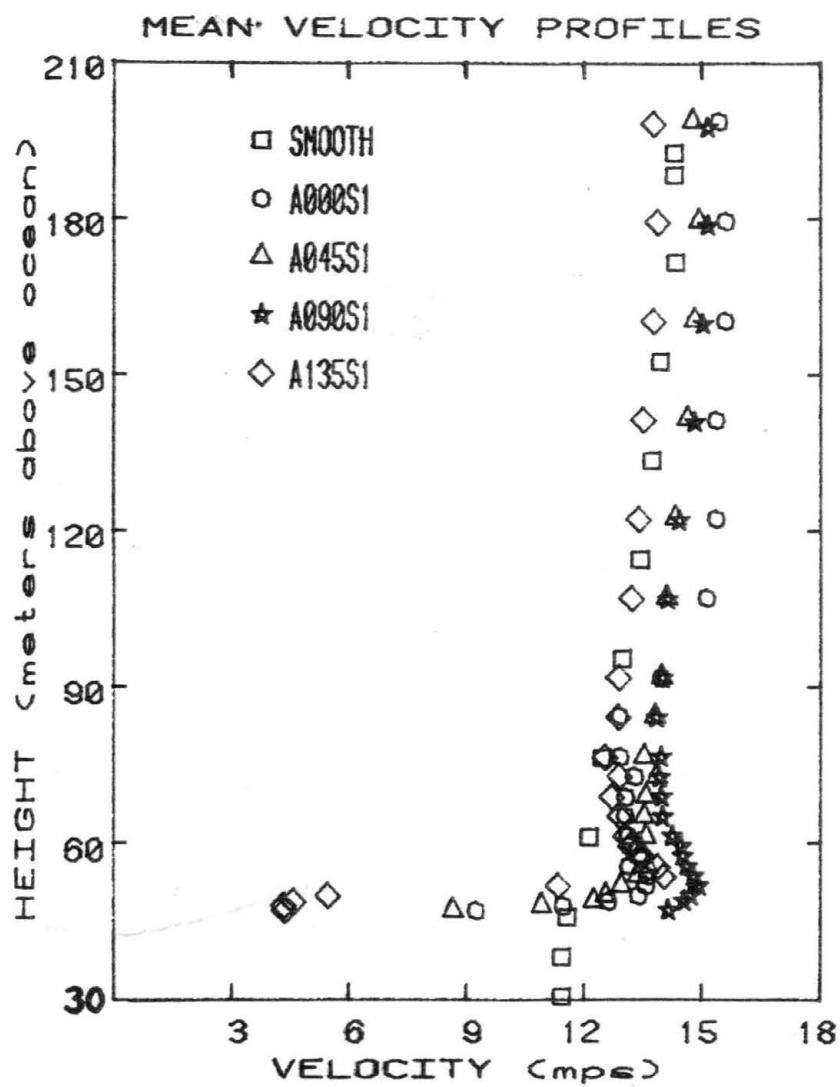
GRAPH # 77



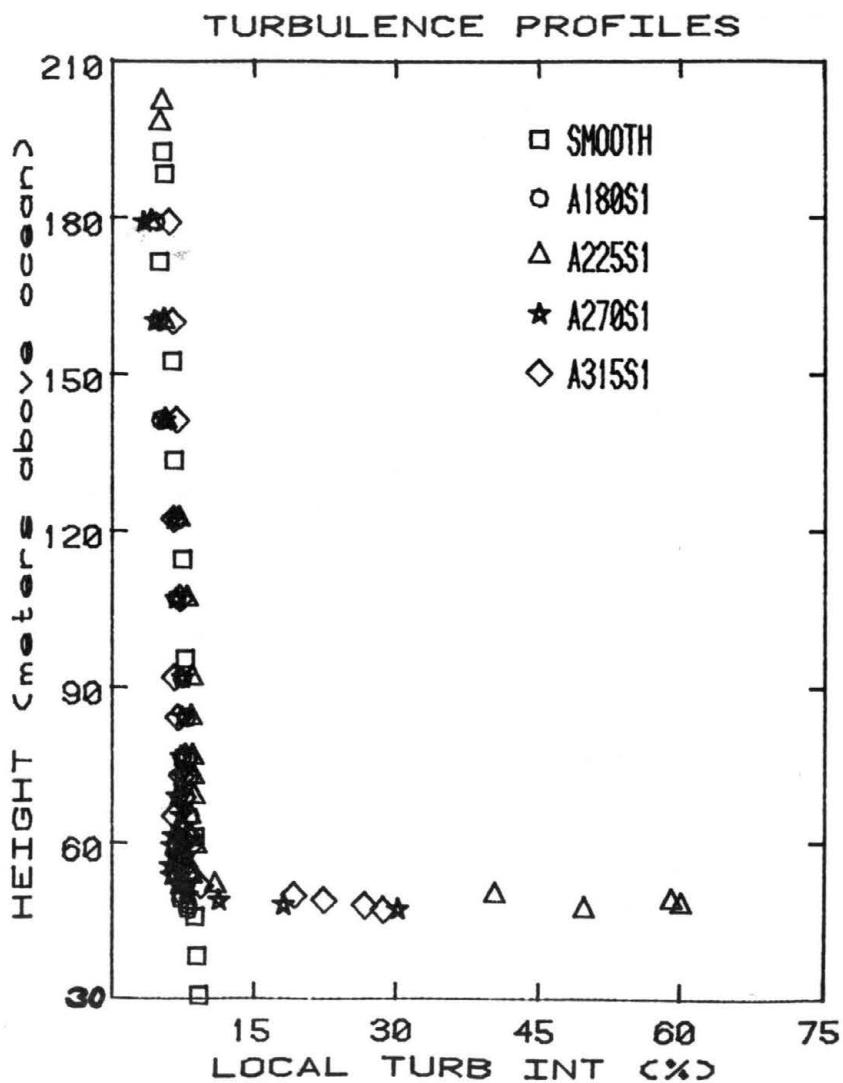
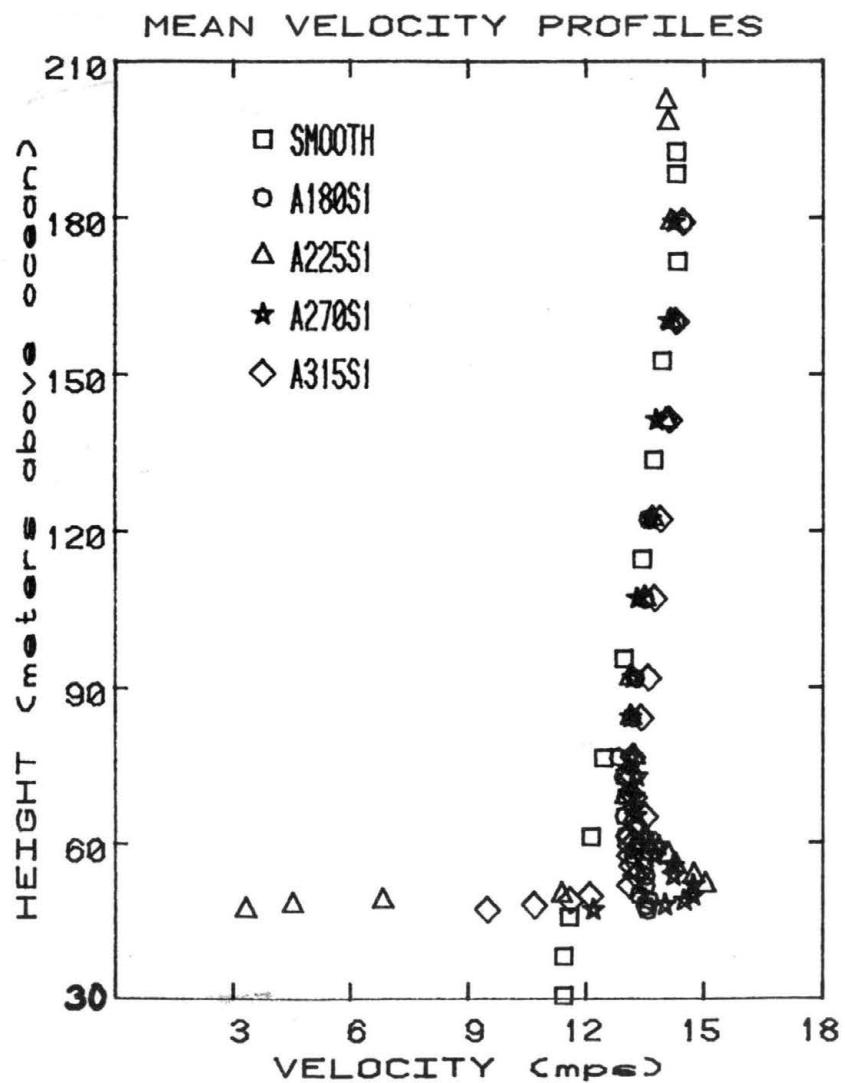
GRAPH # 78



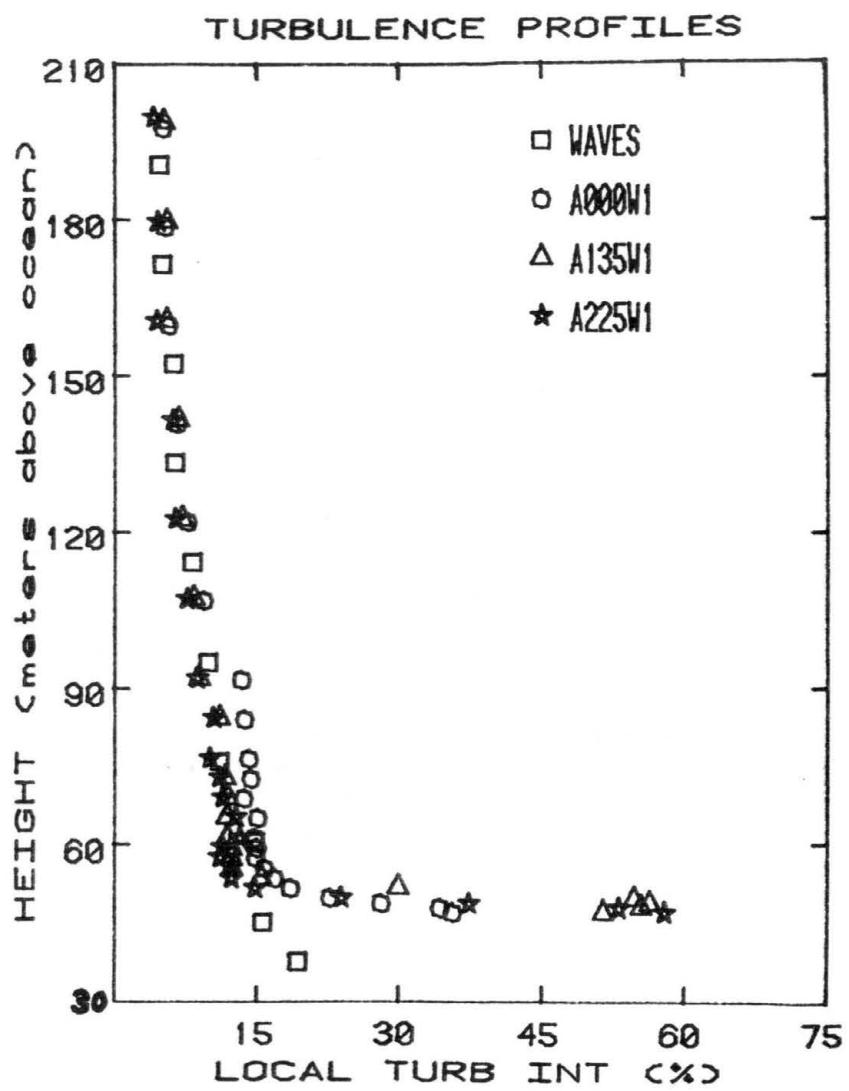
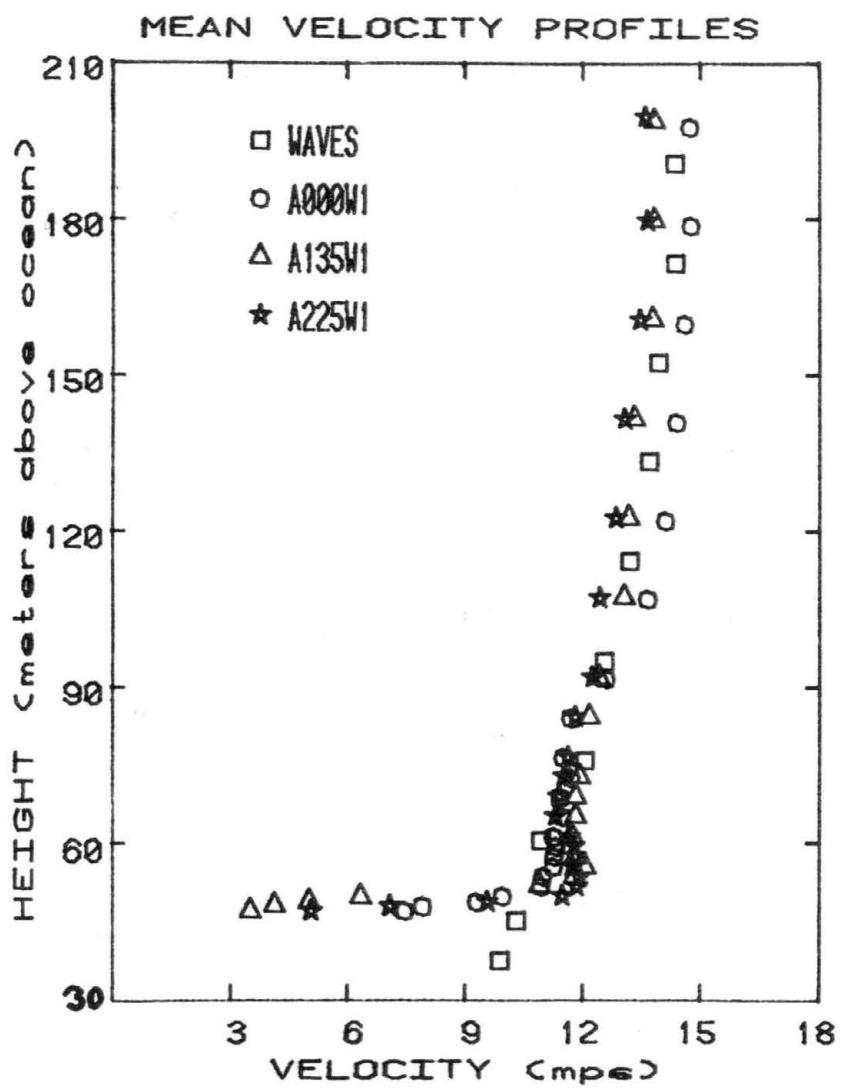
GRAPH # 79



GRAPH # 80



GRAPH # 81



APPENDIX B

*Velocity Profile Data*

PROFILE CODEPROFILE NAME = H    WD    C    PH = Helideck Height

A = 0.0 meters clearance above living quarters  
B = 2.5      "      "      "      "  
C = 5.0      "      "      "      "  
D = 8.5      "      "      "      "

WD = Wind Azimuth (3 digit number)C = Helideck Configuration

Smooth, S = original helideck shape on south corner  
"      M = Mod 1 (clipped corners) on south corner  
"      N = Mod 2 (circle) on south corner  
"      P = Mod 3 (square) on south corner  
"      Q = original helideck on west corner  
"      R = no helideck on south corner  
Waves, W = original helideck on south corner

P = Profile Position (1-7)

(see Figure 2)

## RESULTS FOR PROFILE- A000S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	9.283	3.192	34.39
2	1.91	11.469	3.132	27.31
3	2.83	12.614	2.699	21.40
4	3.79	13.383	2.060	15.40
5	5.76	13.574	1.466	10.80
6	7.60	13.605	1.489	10.94
7	9.51	13.130	1.490	11.35
8	11.44	13.445	1.571	11.68
9	13.36	13.161	1.569	11.92
10	15.20	13.116	1.478	11.27
11	19.08	13.040	1.481	11.36
12	22.84	13.052	1.553	11.90
13	26.73	13.288	1.532	11.53
14	30.53	12.931	1.576	12.19
15	38.27	12.899	1.661	12.88
16	45.69	13.971	1.616	11.56
17	61.03	15.130	.989	6.54
18	76.19	15.353	.864	5.63
19	95.33	15.353	.798	5.20
20	114.33	15.594	.617	3.95
21	133.52	15.600	.573	3.67
22	152.66	15.426	.541	3.51

15% TURBULENCE IS AT- 4.0 METERS

## RESULTS FOR PROFILE- B000S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.986	1.789	13.78
2	1.96	12.896	1.650	12.79
3	2.93	13.037	1.484	11.38
4	3.84	13.063	1.511	11.57
5	5.73	13.152	1.431	10.88
6	7.66	12.800	1.440	11.25
7	9.63	12.601	1.567	12.43
8	11.56	12.826	1.529	11.92
9	13.40	12.667	1.442	11.38
10	15.28	12.673	1.428	11.27
11	19.09	12.802	1.494	11.67
12	22.95	12.762	1.461	11.45
13	26.76	12.826	1.534	11.96
14	30.58	12.772	1.530	11.98
15	38.29	12.849	1.625	12.65
16	45.92	13.940	1.417	10.16
17	61.31	14.694	.911	6.20
18	76.51	14.958	.795	5.31
19	95.66	14.996	.882	5.88
20	114.91	15.273	.689	4.51
21	134.25	15.303	.595	3.89
22	153.49	15.174	.687	4.52

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- C000S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.783	1.600	12.52
2	1.91	12.944	1.509	11.66
3	2.83	12.919	1.450	11.22
4	3.79	12.728	1.434	11.26
5	5.75	12.576	1.474	11.72
6	7.63	12.724	1.484	11.66
7	9.51	12.768	1.510	11.83
8	11.47	12.738	1.526	11.98
9	13.30	12.661	1.424	11.24
10	15.32	12.615	1.443	11.44
11	19.07	12.487	1.492	11.95
12	22.82	12.831	1.499	11.68
13	26.75	12.647	1.511	11.95
14	30.46	12.646	1.562	12.35
15	38.19	12.693	1.638	12.90
16	45.74	14.320	1.348	9.41
17	60.98	14.591	.967	6.63
18	76.44	14.930	.842	5.64
19	95.38	15.056	.768	5.10
20	114.32	15.207	.653	4.30
21	133.35	15.175	.675	4.45
22	151.47	14.963	.740	4.95

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- D000S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.251	1.589	12.97
2	1.96	12.366	1.568	12.68
3	2.88	12.391	1.505	12.14
4	3.84	12.552	1.451	11.56
5	5.77	12.486	1.474	11.80
6	7.70	12.628	1.501	11.89
7	9.54	12.565	1.478	11.76
8	11.47	12.577	1.433	11.39
9	13.44	12.552	1.416	11.28
10	15.33	12.673	1.389	10.96
11	19.12	12.619	1.481	11.73
12	22.91	12.473	1.563	12.53
13	26.77	12.606	1.597	12.67
14	30.58	12.498	1.618	12.95
15	38.25	13.389	1.614	12.06
16	45.97	14.184	1.118	7.88
17	61.26	14.506	.966	6.66
18	76.56	14.835	.833	5.61
19	95.67	14.996	.758	5.05
20	114.82	15.071	.705	4.68
21	133.89	15.150	.619	4.09
22	148.45	14.979	.656	4.38

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- A030S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	9.203	2.502	27.19
2	1.91	9.992	2.427	24.29
3	2.83	10.551	2.291	21.71
4	3.79	10.659	2.270	21.29
5	5.71	10.922	1.936	17.73
6	7.63	10.951	1.645	15.02
7	9.55	10.681	1.526	14.29
8	11.43	10.440	1.484	14.22
9	13.35	10.244	1.580	15.43
10	15.27	9.837	1.647	16.74
11	19.07	9.722	1.774	18.25
12	22.87	10.246	1.851	18.07
13	26.66	10.993	1.769	16.09
14	30.51	11.436	1.540	13.47
15	38.10	12.049	1.624	13.48
16	45.70	13.816	1.260	9.12
17	61.03	14.188	.945	6.66
18	76.22	14.511	.910	6.27
19	95.25	14.800	.864	5.83
20	114.42	14.930	.728	4.88
21	133.41	15.013	.626	4.17
22	152.53	14.919	.703	4.71
23	164.57	14.635	.753	5.14

15% TURBULENCE IS AT- 7.7 METERS

## RESULTS FOR PROFILE- B030S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	9.767	2.165	22.16
2	1.91	10.651	2.207	20.72
3	2.83	11.031	2.038	18.48
4	3.79	10.713	1.920	17.92
5	5.76	10.911	1.632	14.96
6	7.59	10.577	1.446	13.67
7	9.56	10.227	1.398	13.67
8	11.43	9.908	1.558	15.73
9	13.35	9.731	1.634	16.80
10	15.28	9.599	1.655	17.24
11	19.08	9.846	1.796	18.24
12	22.83	10.615	1.811	17.06
13	26.70	11.355	1.604	14.12
14	30.52	11.516	1.533	13.31
15	38.16	12.681	1.688	13.31
16	45.81	13.966	1.126	8.06
17	61.05	14.185	.975	6.88
18	76.29	14.400	.878	6.10
19	95.33	14.721	.822	5.58
20	114.40	14.848	.677	4.56
21	133.51	14.850	.657	4.42
22	152.59	14.750	.672	4.56
23	162.07	14.610	.690	4.73

15% TURBULENCE IS AT- 5.7 METERS

## RESULTS FOR PROFILE- C030S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	9.826	1.892	19.26
2	1.91	10.749	1.754	16.32
3	2.82	10.772	1.665	15.45
4	3.83	10.607	1.542	14.54
5	5.66	10.271	1.405	13.68
6	7.67	10.131	1.411	13.93
7	9.55	9.825	1.540	15.68
8	11.42	9.524	1.542	16.19
9	13.34	9.551	1.652	17.29
10	15.22	9.640	1.737	18.02
11	19.03	10.124	1.788	17.66
12	22.90	11.095	1.623	14.63
13	26.69	11.455	1.493	13.04
14	30.44	11.482	1.419	12.36
15	38.12	13.267	1.579	11.90
16	45.71	13.818	.924	6.69
17	60.94	14.104	.931	6.60
18	76.17	14.388	.800	5.56
19	95.23	14.642	.741	5.06
20	114.30	14.818	.651	4.40
21	133.32	14.830	.634	4.28
22	152.34	14.590	.687	4.71
23	159.57	14.470	.738	5.10

15% TURBULENCE IS AT- 3.3 METERS

## RESULTS FOR PROFILE- D030S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	9.294	1.598	17.20
2	1.91	10.136	1.432	14.13
3	2.82	10.174	1.414	13.90
4	3.83	10.136	1.537	15.16
5	5.70	10.034	1.538	15.33
6	7.58	9.666	1.645	17.02
7	9.50	9.472	1.651	17.43
8	11.46	9.434	1.694	17.95
9	13.33	9.598	1.750	18.24
10	15.25	9.940	1.714	17.25
11	19.00	10.913	1.696	15.54
12	22.84	11.544	1.443	12.50
13	26.68	11.467	1.439	12.55
14	30.47	12.046	1.578	13.10
15	38.10	13.609	1.196	8.79
16	45.69	13.854	.947	6.84
17	60.91	14.215	.811	5.70
18	76.08	14.386	.903	6.28
19	95.13	14.702	.711	4.83
20	114.24	14.659	.705	4.81
21	133.20	14.768	.633	4.29
22	152.26	14.579	.660	4.53

15% TURBULENCE IS AT- 1.6 METERS

## RESULTS FOR PROFILE- A045S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	8.673	3.385	39.03
2	1.91	10.934	3.335	30.50
3	2.83	12.257	3.138	25.61
4	3.81	12.555	3.075	24.49
5	5.67	12.950	2.654	20.49
6	7.69	13.361	2.481	18.57
7	9.52	13.631	1.891	13.87
8	11.40	13.459	2.359	17.52
9	13.37	13.395	2.656	19.83
10	15.25	13.588	1.221	8.99
11	19.05	13.538	1.042	7.69
12	22.90	13.586	1.046	7.70
13	26.79	13.850	1.048	7.56
14	30.50	13.531	1.078	7.96
15	38.15	13.816	1.030	7.45
16	45.76	13.987	.903	6.45
17	61.02	14.116	1.008	7.14
18	76.32	14.324	.944	6.59
19	95.47	14.640	.827	5.65
20	114.49	14.812	.726	4.90
21	133.55	14.930	.648	4.34
22	152.65	14.765	.699	4.73
23	164.57	14.564	1.173	8.05

15% TURBULENCE IS AT- 9.1 METERS

## RESULTS FOR PROFILE- B045S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	8.728	3.175	36.37
2	1.91	11.523	2.984	25.89
3	2.87	12.796	2.420	18.92
4	3.79	13.056	2.007	15.37
5	5.71	13.403	1.639	12.23
6	7.68	13.430	1.270	9.45
7	9.55	13.607	1.231	9.05
8	11.39	13.640	1.103	8.09
9	13.31	13.634	1.005	7.37
10	15.23	13.634	1.120	8.21
11	19.08	13.675	1.085	7.93
12	22.87	13.837	.881	6.36
13	26.72	13.620	1.009	7.41
14	30.52	13.611	1.004	7.37
15	38.12	13.831	.985	7.12
16	45.81	13.910	.896	6.44
17	61.00	14.171	.901	6.36
18	76.29	14.419	.913	6.33
19	95.28	14.617	.905	6.19
20	114.42	14.792	.690	4.67
21	133.41	14.883	.639	4.29
22	152.54	14.675	.662	4.51

15% TURBULENCE IS AT- 4.0 METERS

## RESULTS FOR PROFILE- C045S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	9.730	2.908	29.89
2	1.91	12.362	2.440	19.74
3	2.82	13.089	1.867	14.26
4	3.82	13.328	1.695	12.72
5	5.69	13.582	1.193	8.79
6	7.56	13.522	1.160	8.58
7	9.48	13.696	1.010	7.37
8	11.35	13.635	1.029	7.55
9	13.26	13.722	1.144	8.33
10	15.18	13.478	1.187	8.81
11	18.96	13.594	1.051	7.73
12	22.79	13.643	1.047	7.67
13	26.63	13.680	.980	7.16
14	30.37	13.692	1.031	7.53
15	38.03	13.595	.973	7.16
16	45.60	14.105	.897	6.36
17	60.78	14.148	.850	6.01
18	75.97	14.504	.888	6.12
19	95.03	14.730	.750	5.09
20	113.96	14.808	.722	4.88
21	132.93	14.885	.675	4.54
22	151.95	14.544	.739	5.08

15% TURBULENCE IS AT- 2.7 METERS

## RESULTS FOR PROFILE- D045S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	9.822	2.791	28.42
2	1.91	12.363	2.365	19.13
3	2.82	13.432	1.408	10.48
4	3.78	13.789	1.152	8.36
5	5.66	13.809	1.015	7.35
6	7.58	13.781	1.000	7.25
7	9.54	13.707	.967	7.06
8	11.37	13.743	1.057	7.69
9	13.38	13.824	1.034	7.48
10	15.21	13.706	.984	7.18
11	19.05	13.760	.932	6.78
12	22.84	13.767	1.142	8.29
13	26.68	13.784	.907	6.58
14	30.38	13.876	1.046	7.54
15	38.06	13.998	.979	6.99
16	45.64	13.882	.950	6.85
17	60.91	14.280	.919	6.43
18	76.12	14.612	.839	5.74
19	95.23	14.782	.764	5.17
20	114.15	14.866	.715	4.81
21	133.25	14.873	.612	4.12
22	152.26	14.704	.697	4.74

15% TURBULENCE IS AT- 2.3 METERS

## RESULTS FOR PROFILE- A090S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	14.150	1.872	13.23
2	2.81	14.550	1.518	10.43
3	3.77	14.720	1.577	10.71
4	5.68	14.910	1.300	8.72
5	7.61	14.781	1.287	8.71
6	9.50	14.614	1.200	8.21
7	11.36	14.509	1.212	8.36
8	13.27	14.475	1.174	8.11
9	15.18	14.236	1.198	8.42
10	18.91	13.998	1.186	8.48
11	22.73	13.965	1.120	8.02
12	26.55	13.917	1.171	8.41
13	30.32	13.955	1.174	8.41
14	37.87	13.838	1.172	8.47
15	45.46	13.989	1.221	8.72
16	60.60	14.124	1.162	8.23
17	75.79	14.423	1.179	8.18
18	94.75	14.815	1.088	7.34
19	113.64	15.028	1.014	6.75
20	132.58	15.155	.907	5.98
21	151.45	15.137	.919	6.07
22	170.45	14.746	1.022	6.93
23	176.00	14.715	1.035	7.03

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- B090S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.026	2.345	18.00
2	1.95	13.622	2.183	16.03
3	2.87	14.043	1.588	11.31
4	5.70	14.213	1.196	8.42
5	7.62	14.271	1.171	8.20
6	9.49	14.165	1.210	8.54
7	11.41	14.004	1.156	8.25
8	13.32	13.976	1.113	7.96
9	15.17	13.947	1.199	8.60
10	19.03	13.820	1.143	8.27
11	20.17	13.728	1.088	7.92
12	26.66	13.793	1.120	8.12
13	30.40	13.625	1.162	8.53
14	38.02	13.838	1.156	8.36
15	45.69	13.844	1.128	8.15
16	60.85	13.995	1.160	8.29
17	76.06	14.353	1.121	7.81
18	95.14	14.535	1.121	7.71
19	114.09	14.892	1.007	6.76
20	133.13	14.853	.995	6.70
21	152.17	14.829	.972	6.56
22	171.12	14.452	1.102	7.62

15% TURBULENCE IS AT- 2.2 METERS

## RESULTS FOR PROFILE- C090S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.904	1.974	14.20
2	1.96	13.995	2.075	14.83
3	2.87	14.520	1.538	10.60
4	3.79	14.514	1.338	9.22
5	5.71	14.611	1.240	8.49
6	7.67	14.573	1.187	8.15
7	9.55	14.585	1.233	8.45
8	11.42	14.259	1.202	8.43
9	13.30	13.956	1.113	7.98
10	15.22	14.166	1.266	8.94
11	19.06	14.160	1.164	8.22
12	22.86	14.131	1.111	7.86
13	26.70	13.981	1.138	8.14
14	30.45	13.978	1.136	8.12
15	38.09	13.989	1.170	8.36
16	45.69	14.348	1.191	8.30
17	60.96	14.304	1.191	8.33
18	76.22	14.556	1.150	7.90
19	95.27	14.860	1.090	7.34
20	114.34	15.124	.952	6.30
21	133.37	15.245	.899	5.90
22	152.45	15.108	.879	5.79
23	171.47	14.760	1.072	7.26

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- D090S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.805	1.763	12.77
2	1.91	14.323	1.577	11.01
3	2.82	14.390	1.397	9.71
4	3.82	14.484	1.317	9.09
5	5.69	14.443	1.214	8.41
6	7.60	14.282	1.204	8.43
7	9.47	14.102	1.116	7.93
8	11.38	14.136	1.180	8.35
9	13.30	13.949	1.181	8.47
10	15.21	13.854	1.154	8.33
11	18.99	13.749	1.153	8.39
12	22.77	13.845	1.070	7.73
13	26.60	13.815	1.115	8.07
14	30.38	13.797	1.185	8.59
15	37.99	13.925	1.089	7.82
16	45.55	14.026	1.170	8.34
17	60.72	14.173	1.161	8.19
18	75.93	14.460	1.132	7.83
19	94.88	14.681	1.073	7.31
20	113.83	14.867	1.014	6.82
21	132.83	14.935	.988	6.62
22	151.78	14.826	1.011	6.82

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- A135S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.367	1.916	43.87
2	1.91	4.339	2.102	48.45
3	2.82	4.589	2.366	51.55
4	3.78	5.466	3.100	56.71
5	5.70	11.341	4.227	37.27
6	7.62	14.034	1.623	11.56
7	9.49	13.877	1.027	7.40
8	11.41	13.497	.843	6.25
9	13.33	13.179	.945	7.17
10	15.20	13.070	.908	6.95
11	18.99	12.910	.872	6.76
12	22.83	12.714	.863	6.79
13	26.67	12.908	.880	6.82
14	30.41	12.534	.867	6.92
15	38.09	12.882	.858	6.66
16	45.67	12.889	.771	5.98
17	60.88	13.216	.775	5.86
18	76.09	13.391	.673	5.03
19	95.18	13.512	.696	5.15
20	114.18	13.763	.554	4.02
21	133.18	13.865	.474	3.42
22	152.18	13.764	.422	3.07

15% TURBULENCE IS AT- 7.4 METERS

## RESULTS FOR PROFILE- B135S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.783	1.956	51.71
2	1.91	4.787	2.624	54.82
3	2.87	6.379	3.556	55.75
4	3.79	8.965	4.240	47.29
5	5.72	13.170	2.059	15.63
6	7.64	13.215	.996	7.54
7	9.57	13.078	.861	6.58
8	11.45	12.992	.790	6.08
9	13.37	12.781	.897	7.02
10	15.25	12.901	.776	6.02
11	19.05	12.855	.715	5.56
12	22.90	12.741	.805	6.32
13	26.71	12.726	.884	6.95
14	30.56	12.671	.803	6.34
15	38.17	12.539	.819	6.53
16	45.73	12.860	.915	7.12
17	61.08	12.981	.728	5.61
18	76.21	13.411	.602	4.49
19	95.46	13.654	.591	4.33
20	114.52	13.758	.529	3.85
21	133.63	13.851	.324	2.34
22	150.64	13.785	.371	2.69

15% TURBULENCE IS AT- 5.9 METERS

## RESULTS FOR PROFILE- C135S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.008	2.299	57.35
2	1.91	5.420	2.977	54.93
3	2.83	7.641	3.860	50.51
4	3.79	10.573	3.656	34.58
5	5.71	12.779	1.550	12.13
6	7.68	12.956	.855	6.60
7	9.52	13.035	.882	6.77
8	11.44	12.799	.870	6.80
9	13.36	12.842	.804	6.26
10	15.29	12.591	.871	6.92
11	19.04	12.610	.880	6.98
12	22.89	12.652	.856	6.77
13	26.70	12.720	.906	7.12
14	30.50	12.633	.882	6.98
15	38.19	12.561	.874	6.96
16	45.80	12.823	.771	6.01
17	61.10	13.101	.735	5.61
18	76.31	13.315	.689	5.17
19	95.41	13.497	.587	4.35
20	114.51	13.644	.512	3.75
21	133.57	13.832	.350	2.53
22	148.14	13.726	.357	2.60

15% TURBULENCE IS AT- 5.5 METERS

## RESULTS FOR PROFILE- D135S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	5.144	2.862	55.65
2	1.91	7.473	3.710	49.64
3	2.88	9.834	3.709	37.72
4	3.84	11.899	2.708	22.76
5	5.72	12.929	1.111	8.59
6	7.65	12.934	.960	7.42
7	9.53	12.932	.825	6.38
8	11.45	12.693	.772	6.08
9	13.38	12.594	.836	6.64
10	15.31	12.842	.892	6.95
11	19.07	12.673	.865	6.83
12	22.96	12.692	.898	7.07
13	26.72	12.707	.849	6.68
14	30.53	12.684	.840	6.62
15	38.19	12.761	.781	6.12
16	45.85	12.917	.755	5.85
17	61.12	13.219	.606	4.58
18	76.44	13.423	.582	4.33
19	95.52	13.528	.612	4.52
20	114.64	13.742	.323	2.35
21	133.77	13.850	.278	2.01
22	144.64	13.794	.308	2.23

15% TURBULENCE IS AT- 4.9 METERS

## RESULTS FOR PROFILE- A135S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.908	2.059	52.69
2	1.89	4.654	2.567	55.15
3	2.78	6.142	3.435	55.93
4	3.76	8.112	4.377	53.96
5	7.46	14.277	1.178	8.25
6	9.29	13.566	.903	6.66
7	11.16	13.418	.859	6.40
8	13.03	13.287	.854	6.43
9	14.91	12.969	.916	7.06
10	18.56	12.838	.971	7.56
11	22.26	12.827	.865	6.75

15% TURBULENCE IS AT- 6.9 METERS

## RESULTS FOR PROFILE- B135S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.126	3.665	59.82
2	1.91	9.987	4.265	42.71
3	2.81	12.265	3.276	26.71
4	3.82	13.210	2.029	15.36
5	5.68	13.461	1.120	8.32
6	7.59	13.501	.917	6.79
7	9.50	13.239	.786	5.94
8	11.37	13.049	.888	6.81
9	13.28	12.912	.843	6.53
10	15.14	12.892	.905	7.02
11	18.96	12.735	.813	6.39
12	22.74	12.871	.855	6.64

15% TURBULENCE IS AT- 3.9 METERS

## RESULTS FOR PROFILE- C135S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	9.767	3.915	40.08
2	1.94	11.901	2.815	23.66
3	2.83	13.075	1.568	12.00
4	3.73	13.233	1.090	8.23
5	5.61	13.219	1.021	7.72
6	7.49	13.202	.849	6.43
7	9.37	13.271	.850	6.41
8	11.21	12.992	.815	6.27
9	13.13	12.923	.845	6.54
10	14.93	12.916	.885	6.85
11	18.64	12.891	.856	6.64
12	22.41	12.862	.859	6.68

15% TURBULENCE IS AT- 2.6 METERS

## RESULTS FOR PROFILE- D135S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	11.723	2.840	24.22
2	1.90	12.804	1.644	12.84
3	2.85	13.174	1.165	8.84
4	3.80	13.207	.983	7.44
5	5.66	13.232	.875	6.62
6	7.56	13.148	.844	6.42
7	9.46	12.854	.890	6.92
8	11.32	13.106	.824	6.29
9	13.22	12.996	.904	6.96
10	15.12	12.723	.839	6.60
11	18.88	12.835	.867	6.75
12	22.64	12.759	.828	6.49

15% TURBULENCE IS AT- 1.7 METERS

## RESULTS FOR PROFILE- A135S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.376	1.521	45.04
2	1.90	3.301	1.690	51.17
3	2.80	4.996	2.995	59.95
4	3.80	13.493	3.783	28.04
5	5.65	14.291	1.143	8.00
6	7.59	13.717	.904	6.59
7	9.45	13.264	.860	6.49
8	11.30	12.893	.879	6.82
9	13.20	12.869	.772	6.00
10	15.05	12.870	.856	6.65
11	18.80	12.422	.986	7.94
12	22.65	12.537	.783	6.24

15% TURBULENCE IS AT- 5.0 METERS

## RESULTS FOR PROFILE- B135S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.005	2.038	50.88
2	1.91	4.574	2.688	58.76
4	3.83	15.278	1.438	9.41
5	5.70	14.037	1.027	7.32
6	7.61	13.578	.936	6.89
7	9.48	13.155	.832	6.33
8	11.40	12.936	.895	6.92
9	13.32	12.652	.794	6.28
10	15.19	12.746	.778	6.11
11	19.02	12.487	.852	6.83
12	22.81	12.477	.799	6.40

15% TURBULENCE IS AT- 3.6 METERS

## RESULTS FOR PROFILE- C135S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.917	2.058	52.53
2	1.90	8.301	4.622	55.68
3	2.80	14.723	2.782	18.90
4	3.75	14.559	1.241	8.52
5	5.70	13.794	.891	6.46
6	7.55	13.235	.799	6.04
7	9.45	12.905	.898	6.96
8	11.30	12.873	.831	6.45
9	13.20	12.662	.920	7.26
10	15.10	12.615	.831	6.59
11	18.85	12.541	.879	7.01
12	22.60	12.627	.892	7.06

15% TURBULENCE IS AT- 3.2 METERS

## RESULTS FOR PROFILE- D135S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.197	2.048	48.79
2	1.90	7.621	4.437	58.22
3	2.86	14.779	2.426	16.42
4	3.77	14.413	1.126	7.81
5	5.68	13.585	.861	6.34
6	7.58	13.259	.812	6.12
7	9.45	12.885	.840	6.52
8	11.36	12.807	.764	5.97
9	13.27	12.797	.773	6.04
10	15.13	12.518	.933	7.45
11	18.90	12.635	.801	6.34
12	22.72	12.516	.973	7.78

15% TURBULENCE IS AT- 3.0 METERS

## RESULTS FOR PROFILE- A135S4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	10.499	3.222	30.69
2	1.87	11.534	3.319	28.78
3	2.74	12.742	2.708	21.26
4	3.70	13.771	1.805	13.11
5	5.49	13.692	1.116	8.15
6	7.33	13.254	.872	6.58
7	9.17	13.325	.843	6.33
8	10.96	13.160	.858	6.52
9	12.84	13.081	.868	6.63
10	14.63	12.954	.890	6.87
11	18.26	12.617	.861	6.82
12	21.88	12.687	.873	6.88

15% TURBULENCE IS AT- 3.5 METERS

## RESULTS FOR PROFILE- B135S4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.137	2.215	18.25
2	1.90	12.562	1.810	14.41
3	2.81	13.070	1.187	9.08
4	3.81	13.088	1.084	8.28
5	5.67	13.053	.868	6.65
6	7.58	12.952	.798	6.16
7	9.44	12.976	.883	6.81
8	11.39	12.783	.842	6.59
9	13.25	12.907	.813	6.30
10	15.16	12.590	.833	6.62
11	18.88	12.827	.893	6.96
12	22.70	12.584	.829	6.59

15% TURBULENCE IS AT- 1.8 METERS

## RESULTS FOR PROFILE- C135S4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.046	1.858	15.42
2	1.94	12.970	1.395	10.76
3	2.83	13.125	1.055	8.04
4	3.77	12.963	.905	6.98
5	5.61	13.085	.878	6.71
6	7.49	12.823	.817	6.37
7	9.37	12.918	.907	7.02
8	11.21	12.924	.843	6.52
9	13.09	12.791	.882	6.90
10	14.97	12.696	.877	6.91
11	18.64	12.789	.863	6.75
12	22.41	12.650	.796	6.30

15% TURBULENCE IS AT- 1.0 METERS

## RESULTS FOR PROFILE- D135S4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.539	1.594	12.71
2	1.91	12.766	1.261	9.88
3	2.83	13.045	.960	7.36
4	3.79	12.749	.896	7.03
5	5.76	12.824	.867	6.76
6	7.69	12.942	.773	5.97
7	9.57	12.712	.877	6.90
8	11.45	12.896	.826	6.40
9	13.37	12.654	.954	7.54
10	15.25	12.778	.847	6.63
11	19.10	12.649	.895	7.08
12	22.91	12.775	.860	6.73

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- A13555

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.860	2.317	60.03
2	1.91	4.810	2.566	53.36
3	2.87	4.967	2.766	55.69
4	3.78	5.690	3.158	55.50
5	5.70	9.283	3.817	41.12
6	7.62	12.519	2.322	18.54
7	9.54	13.098	1.247	9.52
8	11.41	12.994	.929	7.15
9	13.33	12.982	.857	6.60
10	15.25	12.790	.901	7.04
11	19.00	12.729	.864	6.79
12	22.84	12.589	.946	7.51

15% TURBULENCE IS AT- 8.4 METERS

## RESULTS FOR PROFILE- B13555

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.316	2.912	46.10
2	1.91	7.136	3.139	43.99
3	2.87	7.634	3.311	43.37
4	3.78	8.478	3.547	41.84
5	5.70	11.301	2.789	24.68
6	7.61	12.688	1.326	10.45
7	9.53	12.748	.999	7.83
8	11.40	12.861	.857	6.67
9	13.32	12.678	1.067	8.41
10	15.19	12.763	.953	7.46
11	19.02	12.659	.898	7.09
12	22.81	12.643	.866	6.85

15% TURBULENCE IS AT- 7.0 METERS

## RESULTS FOR PROFILE- C13555

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.680	2.809	42.05
2	1.89	8.068	2.932	36.34
3	2.79	8.512	3.124	36.71
4	3.77	9.426	3.354	35.58
5	5.65	11.833	2.401	20.29
6	7.49	12.536	1.325	10.57
7	9.37	12.678	.908	7.16
8	11.21	12.733	.836	6.57
9	13.09	12.691	.898	7.08
10	14.93	12.749	.838	6.57
11	18.69	12.646	.886	7.00
12	22.41	12.558	.823	6.55

15% TURBULENCE IS AT- 6.7 METERS

## RESULTS FOR PROFILE- D13555

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	8.106	2.729	33.66
2	1.84	8.934	2.809	31.44
3	2.76	9.455	3.129	33.09
4	3.69	10.448	3.182	30.46
5	5.55	12.222	2.033	16.63
6	7.41	12.633	1.039	8.22
7	9.27	12.428	.904	7.28
8	11.13	12.518	.938	7.49
9	12.90	12.473	.920	7.37
10	14.76	12.470	.870	6.98
11	18.47	12.574	.860	6.84
12	22.15	12.601	.872	6.92

15% TURBULENCE IS AT- 5.9 METERS

## RESULTS FOR PROFILE- A135S7

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.218	1.061	8.03
2	1.90	13.263	1.037	7.82
3	2.81	13.079	1.031	7.88
4	3.77	13.243	1.063	8.03
5	5.72	13.310	.949	7.13
6	7.59	13.373	.939	7.02
7	9.45	13.147	1.146	8.71
8	11.41	13.391	1.015	7.58
9	13.27	13.391	.932	6.96
10	15.13	13.355	.982	7.35
11	18.95	13.483	1.006	7.46
12	22.73	13.449	1.021	7.59
13	26.50	13.466	1.047	7.78
14	30.27	13.650	.988	7.24
15	37.91	13.630	.944	6.93
16	45.51	13.462	.966	7.16

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- C135S7

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.393	.988	7.38
2	1.95	13.652	.990	7.25
3	2.81	13.367	.999	7.48
4	3.76	13.483	1.084	8.04
5	5.66	13.314	1.013	7.61
6	7.57	13.359	.978	7.32
7	9.42	13.442	1.068	7.95
8	11.28	13.463	1.036	7.70
9	13.28	13.596	1.063	7.82
10	15.09	13.526	1.042	7.70
11	18.85	13.473	.989	7.34
12	22.66	13.542	1.007	7.44
13	26.46	13.654	.976	7.15
14	30.18	13.792	1.017	7.37
15	37.75	13.970	.925	6.62
16	45.27	13.776	1.014	7.36

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- A180S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.557	1.085	8.00
2	1.91	13.502	1.082	8.02
3	2.87	13.613	.996	7.31
4	3.78	13.349	.982	7.36
5	5.70	13.522	1.064	7.87
6	7.61	13.535	.936	6.92
7	9.53	13.482	.949	7.04
8	11.40	13.207	.981	7.43
9	13.32	13.314	.986	7.40
10	15.19	13.017	.928	7.13
11	18.98	12.976	1.077	8.30
12	22.81	13.021	1.016	7.81
13	26.65	12.955	1.056	8.15
14	30.44	12.843	.962	7.49
15	38.01	13.171	1.041	7.90
16	45.64	13.269	.987	7.44
17	60.83	13.500	.924	6.84
18	76.03	13.584	.920	6.77
19	95.07	14.082	.726	5.16
20	114.10	14.292	.701	4.90
21	133.09	14.466	.671	4.64

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- B180S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.872	1.077	8.37
2	1.90	12.935	1.033	7.98
3	2.81	13.001	1.049	8.07
4	3.77	13.057	1.101	8.43
5	5.68	13.055	.989	7.57
6	7.59	13.083	1.062	8.12
7	9.50	13.066	.952	7.29
8	11.36	12.798	.885	6.92
9	13.27	12.774	1.024	8.02
10	15.13	12.641	.950	7.51
11	18.90	12.656	.941	7.43
12	22.72	12.681	1.023	8.07
13	26.50	12.805	.963	7.52
14	30.27	12.658	.878	6.93
15	35.59	12.869	1.039	8.08
16	45.45	12.996	.909	6.99
17	60.59	13.235	.951	7.19
18	75.77	13.387	.851	6.36
19	94.68	13.990	.744	5.32
20	113.63	14.052	.600	4.27
21	132.54	14.189	.583	4.11

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- C180S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.912	1.187	9.19
2	1.91	12.741	1.136	8.91
3	2.82	12.960	1.040	8.03
4	3.82	12.979	.914	7.04
5	5.68	13.174	.966	7.33
6	7.59	12.819	.995	7.76
7	9.51	12.741	1.056	8.29
8	11.37	12.795	.972	7.60
9	13.28	12.689	1.028	8.10
10	15.15	12.896	.946	7.34
11	22.75	12.693	1.069	8.43
12	26.57	12.780	1.021	7.99
13	30.31	12.891	.976	7.57
14	37.95	13.029	.965	7.41
15	45.51	13.088	.873	6.67
16	60.66	13.429	.935	6.96
17	75.82	13.556	.858	6.33
18	94.80	13.931	.827	5.94
19	113.73	14.275	.633	4.44
20	132.71	14.266	.655	4.59

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- D180S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.535	1.114	8.23
2	1.91	13.629	1.009	7.40
3	2.87	13.621	.971	7.13
4	3.78	13.686	.952	6.95
5	5.69	13.543	.958	7.07
6	7.61	13.688	.918	6.71
7	9.48	13.616	.971	7.13
8	11.39	13.622	.977	7.17
9	13.31	13.625	.918	6.74
10	15.18	13.397	.989	7.39
11	18.96	13.486	.974	7.22
12	22.79	13.404	1.035	7.72
13	26.58	13.598	.938	6.90
14	30.36	13.607	1.030	7.57
15	38.03	13.477	1.049	7.79
16	45.60	13.712	.971	7.08
17	60.78	14.158	.921	6.51
18	76.01	14.411	.904	6.27
19	94.98	14.729	.845	5.74
20	114.00	14.989	.680	4.54
21	132.97	15.010	.689	4.59

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- A180S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	15.274	1.412	9.25
2	1.90	15.299	1.245	8.14
3	2.85	15.409	1.228	7.97
4	3.76	15.435	1.131	7.33
5	5.66	15.209	1.124	7.39
6	7.56	15.047	1.109	7.37
7	9.42	14.847	1.085	7.31
8	11.32	14.830	1.002	6.75
9	13.22	14.553	1.073	7.37
10	15.08	14.678	1.078	7.34
11	18.89	14.305	1.034	7.23
12	22.65	14.308	1.023	7.11

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- B180S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	14.993	1.362	9.08
2	1.90	15.081	1.152	7.64
3	2.80	14.932	1.175	7.87
4	3.74	15.113	1.080	7.14
5	5.63	14.913	1.143	7.67
6	7.53	14.765	1.148	7.70
7	9.37	14.582	1.017	6.98
8	11.27	14.447	1.025	7.09
9	13.16	14.338	1.072	7.46
10	18.74	14.250	1.070	7.51
11	22.53	14.240	1.041	7.31

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- C180S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	14.965	1.429	9.55
2	1.85	14.955	1.245	8.32
3	2.79	14.896	1.141	7.66
4	5.62	14.810	1.038	7.01
5	7.50	14.808	1.035	6.99
6	9.34	14.537	.932	6.41
7	11.23	14.189	1.045	7.36
8	13.16	14.329	1.105	7.71
9	15.00	14.003	1.036	7.40
10	18.73	14.348	1.055	7.35
11	22.45	14.217	1.016	7.14

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- D180S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	14.712	1.324	9.00
2	1.90	14.605	1.124	7.69
3	2.81	14.535	1.160	7.98
4	3.77	14.556	1.096	7.53
5	5.68	14.491	1.092	7.53
6	7.58	14.464	.974	6.73
7	9.45	14.544	1.025	7.05
8	11.36	14.250	1.018	7.15
9	13.27	14.324	1.016	7.09
10	15.13	14.360	1.013	7.06
11	18.90	14.194	1.048	7.39
12	22.72	14.040	1.040	7.41

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- A180S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	8.968	3.656	40.77
2	1.90	12.487	4.007	32.09
3	2.85	15.156	1.542	10.17
4	3.80	14.655	1.078	7.36
5	5.65	13.868	.913	6.58
6	7.55	13.322	.819	6.15
7	9.45	13.207	.879	6.66
8	11.30	13.062	.897	6.87
9	13.20	12.882	.899	6.98
10	15.10	12.815	.903	7.09
11	18.81	12.802	.942	7.36
12	22.61	12.770	.974	7.63

15% TURBULENCE IS AT- 2.6 METERS

## RESULTS FOR PROFILE- B180S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.569	1.710	13.61
2	1.90	14.326	1.249	8.72
3	2.81	14.420	.978	6.78
4	3.76	13.929	.939	6.74
5	5.67	13.617	.780	5.73
6	7.58	13.215	.876	6.63
7	9.49	12.853	.909	7.07
8	11.35	12.981	.896	6.90
9	13.25	12.672	.918	7.25
10	15.12	12.738	.890	6.98
11	18.93	12.802	1.014	7.92
12	22.70	12.494	.840	6.72

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- C180S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.642	2.464	19.49
2	1.89	14.496	1.819	12.55
3	2.79	14.259	.918	6.44
4	3.73	13.888	.902	6.49
5	5.61	13.239	.916	6.92
6	7.49	13.221	.926	7.00
7	9.37	13.032	.902	6.92
8	11.21	12.860	.925	7.20
9	13.09	12.669	.964	7.61
10	14.93	12.708	.925	7.28
11	18.69	12.798	.920	7.19
12	22.41	12.681	.948	7.47

15% TURBULENCE IS AT- 1.6 METERS

## RESULTS FOR PROFILE- D180S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.522	1.581	12.62
2	1.90	13.543	.938	6.92
3	2.81	13.702	.837	6.11
4	3.77	13.474	.911	6.76
5	5.68	13.223	.796	6.02
6	7.58	12.950	.817	6.31
7	9.45	13.114	.896	6.83
8	11.36	12.809	.866	6.76
9	13.27	12.814	.922	7.20
10	15.17	12.813	.890	6.95
11	18.95	12.745	.858	6.73
12	22.72	12.761	.884	6.93

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- A180S4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.909	1.498	38.32
2	1.90	6.635	3.562	53.71
3	2.85	14.961	2.403	16.06
4	3.76	15.005	1.210	8.07
5	5.66	13.950	.910	6.52
6	7.56	13.327	.836	6.27
7	9.42	13.208	.891	6.75
8	11.32	12.889	.853	6.62
9	13.22	12.783	.881	6.89
10	15.06	12.919	.845	6.54
11	18.84	12.808	.819	6.39
12	22.65	12.733	.845	6.64

15% TURBULENCE IS AT- 3.0 METERS

## RESULTS FOR PROFILE- B180S4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.575	1.440	40.28
2	1.90	7.336	3.958	53.95
3	2.81	14.774	2.152	14.57
4	3.76	14.878	1.026	6.90
5	5.67	13.506	.861	6.38
6	7.58	13.099	.917	7.00
7	9.49	12.793	.791	6.18
8	11.35	12.847	.884	6.88
9	13.25	12.565	.933	7.42
10	15.12	12.638	.896	7.09
11	18.88	12.732	.956	7.51
12	22.70	12.715	.887	6.98

15% TURBULENCE IS AT- 2.8 METERS

## RESULTS FOR PROFILE- C180S4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.495	1.474	42.18
2	1.90	9.783	4.417	45.15
3	2.82	14.772	1.405	9.51
4	3.78	14.293	.913	6.39
5	5.69	13.389	.818	6.11
6	7.61	13.094	.844	6.44
7	9.48	12.735	.874	6.86
8	11.39	12.600	.890	6.95
9	13.31	12.793	.895	6.99
10	15.17	12.754	.960	7.53
11	19.00	12.601	.865	6.76
12	22.79	12.664	.902	7.01

15% TURBULENCE IS AT- 2.7 METERS

## RESULTS FOR PROFILE- D180S4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.056	2.597	53.47
2	1.90	13.562	3.220	23.74
3	2.80	14.431	1.173	8.13
4	3.79	13.905	.941	6.77
5	5.68	13.300	.903	6.79
6	7.53	12.944	.932	7.20
7	9.42	12.829	.961	7.49
8	11.27	12.891	.953	7.40
9	13.16	12.695	.954	7.51
10	15.05	12.719	.958	7.53
11	18.74	12.674	.953	7.52
12	22.53	12.772	1.045	8.18

15% TURBULENCE IS AT- 2.4 METERS

## RESULTS FOR PROFILE- A180S5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	11.780	1.972	16.74
2	1.90	12.783	1.803	14.11
3	2.81	13.472	1.253	9.30
4	3.76	13.547	1.062	7.84
5	5.66	13.831	.936	6.77
6	7.56	13.591	.845	6.22
7	9.42	13.490	.821	6.08
8	11.32	13.302	.982	7.38
9	13.22	13.135	.847	6.45
10	15.08	13.040	.898	6.88
11	16.84	12.967	.994	7.67
12	22.65	13.051	.888	6.80

15% TURBULENCE IS AT- 1.6 METERS

## RESULTS FOR PROFILE- B180S5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	11.220	2.210	19.70
2	1.92	12.209	2.152	17.63
3	2.84	13.569	1.387	10.22
4	3.85	13.381	1.069	7.99
5	5.74	13.433	.953	7.10
6	7.67	13.308	.926	6.96
7	9.56	13.251	.832	6.28
8	11.49	13.282	.914	6.88
9	13.43	13.156	.934	7.10
10	15.31	13.180	.864	6.55
11	19.18	13.081	.820	6.27
12	23.00	13.127	.890	6.78

15% TURBULENCE IS AT- 2.2 METERS

## RESULTS FOR PROFILE- C180S5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	10.477	2.242	21.40
2	1.90	11.759	2.271	19.31
3	2.85	12.836	1.786	13.91
4	3.75	13.511	1.113	8.24
5	5.65	13.486	.935	6.93
6	7.55	13.165	.854	6.49
7	9.40	13.196	.889	6.74
8	11.30	13.007	.941	7.24
9	13.20	12.905	.986	7.64
10	16.85	13.038	.860	6.59
11	22.60	12.992	.874	6.73

15% TURBULENCE IS AT- 2.7 METERS

## RESULTS FOR PROFILE- D180S5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	10.571	2.299	21.75
2	1.68	11.950	2.336	19.55
3	2.86	12.675	1.717	13.54
4	3.81	13.348	1.155	8.66
5	5.68	13.431	.943	7.02
6	7.58	13.195	.879	6.66
7	9.49	13.181	.834	6.33
8	11.36	13.197	.839	6.36
9	13.27	12.967	.942	7.27
10	15.17	13.095	.883	6.74
11	18.90	12.917	.858	6.64
12	22.72	13.037	.886	6.79

15% TURBULENCE IS AT- 2.6 METERS

## RESULTS FOR PROFILE- A180S6

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.012	1.100	8.46
2	1.90	12.967	1.109	8.55
3	2.81	12.948	.994	7.68
4	3.77	13.188	1.032	7.83
5	5.72	13.238	1.046	7.90
6	7.63	13.149	1.036	7.88
7	9.45	13.400	.986	7.36
8	11.32	13.480	1.040	7.71
9	13.27	13.417	1.067	7.95
10	15.18	13.468	1.091	8.10
11	18.91	13.392	1.067	7.97
12	22.77	13.745	1.079	7.85
13	26.50	13.866	1.014	7.31
14	30.27	13.909	.995	7.16
15	37.91	14.079	.980	6.96
16	45.51	14.075	1.048	7.45

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- C180S6

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.390	1.122	8.38
2	1.95	13.532	1.030	7.61
3	2.81	13.469	1.113	8.26
4	3.77	13.563	.997	7.35
5	5.68	13.467	1.132	8.40
6	7.63	13.520	1.008	7.45
7	9.45	13.567	1.077	7.94
8	11.36	13.711	1.042	7.60
9	13.27	13.575	1.086	8.00
10	15.13	13.623	1.100	8.07
11	18.91	13.746	1.049	7.63
12	22.73	14.033	1.057	7.53
13	26.45	13.921	1.063	7.64
14	30.27	13.925	1.106	7.94
15	37.82	14.273	1.018	7.13
16	45.46	14.365	.944	6.57

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- A225S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.339	1.664	49.83
2	1.95	4.534	2.727	60.14
3	2.82	6.861	4.056	59.11
4	3.78	11.403	4.612	40.44
5	5.70	15.047	1.641	10.91
6	7.57	14.753	1.234	8.37
7	9.48	14.280	1.166	8.16
8	11.35	14.103	1.050	7.45
9	13.32	13.400	1.194	8.91
10	15.23	13.503	1.117	8.27
11	19.02	13.222	1.093	8.27
12	22.81	13.009	1.133	8.71
13	26.64	13.043	1.122	8.60
14	30.43	13.238	1.128	8.52
15	38.00	13.148	1.105	8.40
16	45.62	13.135	1.118	8.51
17	60.82	13.506	1.074	7.95
18	76.06	13.704	.973	7.10
19	95.04	14.046	.791	5.63
20	114.02	14.160	.772	5.45
21	133.05	14.163	.581	4.11
22	152.03	14.086	.705	5.01
23	156.00	14.033	.730	5.20

15% TURBULENCE IS AT- 5.4 METERS

## RESULTS FOR PROFILE- B225S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.444	2.378	53.51
2	1.91	6.094	3.427	56.23
3	2.87	9.578	4.551	47.52
4	3.83	12.732	3.781	29.70
5	5.70	14.081	1.522	10.81
6	7.57	14.069	1.103	7.84
7	9.53	13.779	1.140	8.28
8	11.40	13.663	1.087	7.95
9	13.27	13.330	1.125	8.44
10	15.24	13.163	1.106	8.40
11	18.98	12.910	1.070	8.29
12	22.81	12.896	1.128	8.75
13	26.65	12.905	1.060	8.21
14	30.44	12.817	1.080	8.43
15	38.06	12.842	1.092	8.50
16	45.59	12.979	1.076	8.29
17	60.79	13.463	1.010	7.50
18	76.04	13.485	1.021	7.57
19	95.03	13.852	.892	6.44
20	114.06	13.947	.735	5.27
21	133.00	13.952	.738	5.29
22	153.50	13.917	.781	5.61

15% TURBULENCE IS AT- 5.3 METERS

## RESULTS FOR PROFILE- C225S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.319	2.360	54.65
2	1.91	6.426	3.628	56.45
3	2.82	9.869	4.510	45.71
4	3.78	12.548	3.576	28.50
5	5.70	13.875	1.427	10.28
6	7.66	13.631	1.111	8.15
7	9.53	13.276	1.108	8.34
8	11.40	13.226	1.089	8.24
9	13.32	12.981	1.155	8.90
10	15.19	12.793	1.078	8.43
11	19.02	12.748	1.070	8.39
12	22.81	12.646	1.145	9.06
13	26.64	12.719	1.119	8.79
14	30.39	12.870	1.096	8.51
15	38.05	12.861	1.105	8.59
16	45.63	12.891	1.058	8.21
17	60.87	13.256	1.061	8.00
18	76.02	13.297	1.037	7.80
19	95.05	13.705	.891	6.50
20	114.08	13.809	.864	6.26
21	133.02	13.928	.703	5.05
22	151.00	13.838	.801	5.79

15% TURBULENCE IS AT- 5.2 METERS

## RESULTS FOR PROFILE- D225S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.537	2.621	57.76
2	1.95	7.141	3.056	54.00
3	2.87	10.314	4.138	40.12
4	3.83	12.748	2.082	22.61
5	5.70	13.557	1.283	9.46
6	7.62	13.388	1.107	8.27
7	9.49	13.122	1.084	8.26
8	11.40	12.985	1.100	8.47
9	13.32	13.025	1.083	8.32
10	15.19	12.822	1.038	8.10
11	19.03	12.557	1.071	8.53
12	22.86	12.656	1.103	8.72
13	26.61	12.658	1.004	7.94
14	30.40	12.598	1.100	8.73
15	38.07	12.682	1.058	8.34
16	45.69	12.904	1.077	8.35
17	60.85	12.952	1.023	7.90
18	76.05	13.331	1.023	7.67
19	95.09	13.600	.924	6.79
20	114.12	13.786	.835	6.06
21	133.07	13.734	.853	6.21
22	147.49	13.673	.857	6.27

15% TURBULENCE IS AT- 4.9 METERS

151

## RESULTS FOR PROFILE- A225S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	7.107	3.394	47.76
2	1.94	8.361	3.626	43.36
3	2.89	10.231	3.709	36.26
4	3.93	11.678	3.364	28.80
5	5.87	13.693	1.604	11.72
6	7.85	13.970	1.019	7.29
7	9.84	13.745	1.048	7.62
8	11.78	13.793	.808	5.86
9	13.76	13.206	.950	7.19
10	15.70	13.019	.970	7.45
11	19.67	13.030	.903	6.93
12	23.60	12.818	.924	7.21

15% TURBULENCE IS AT- 5.5 METERS

## RESULTS FOR PROFILE- B225S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	7.096	3.140	44.25
2	1.88	9.033	3.458	38.28
3	2.76	10.488	3.563	33.98
4	3.64	11.776	3.087	26.21
5	5.49	13.278	1.642	12.36
6	7.29	13.481	.989	7.33
7	9.19	13.184	.888	6.74
8	10.99	13.150	.966	7.35
9	12.89	12.924	.997	7.72
10	14.69	13.080	.896	6.85
11	18.35	12.937	.888	6.87
12	22.05	12.857	.897	6.98

15% TURBULENCE IS AT- 5.1 METERS

142

## RESULTS FOR PROFILE- C225S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	8.023	3.217	40.09
2	1.89	9.794	3.510	35.83
3	2.78	11.206	3.329	29.71
4	3.72	12.177	2.677	21.99
5	5.60	13.145	1.422	10.82
6	7.48	12.907	1.072	8.31
7	9.31	12.982	.959	7.39
8	11.19	13.030	.813	6.24
9	13.06	12.870	.892	6.93
10	14.94	12.775	.914	7.16
11	18.61	12.738	.877	6.88
12	22.41	12.707	.836	6.58

15% TURBULENCE IS AT- 4.9 METERS

## RESULTS FOR PROFILE- D225S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	7.545	3.132	41.51
2	1.90	9.304	3.203	34.43
3	2.85	10.847	3.164	29.17
4	3.76	11.891	2.656	22.34
5	5.67	12.923	1.454	11.25
6	7.57	12.739	.982	7.71
7	9.43	12.681	.942	7.43
8	11.38	12.623	.883	7.00
9	13.24	12.605	.874	6.93
10	15.14	12.467	.910	7.30
11	18.86	12.418	.867	6.98
12	22.72	12.442	.802	6.45

15% TURBULENCE IS AT- 5.0 METERS

## RESULTS FOR PROFILE- A225S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.273	2.610	61.09
2	1.90	5.386	3.214	59.67
3	2.80	7.221	4.030	55.80
4	3.75	11.009	4.505	40.92
5	5.67	14.733	1.553	10.54
6	7.55	14.346	1.026	7.15
7	9.40	14.105	.887	6.29
8	11.30	13.879	.888	6.40
9	13.24	13.533	.828	6.12
10	15.05	13.329	.850	6.38
11	18.85	13.178	.899	6.82
12	22.65	13.135	.921	7.01

15% TURBULENCE IS AT- 5.4 METERS

## RESULTS FOR PROFILE- B225S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	5.953	3.051	51.25
2	1.92	6.971	3.843	55.12
3	2.84	10.684	4.223	39.53
4	3.80	13.256	2.695	20.33
5	5.74	13.926	1.065	7.65
6	7.67	13.748	.964	7.01
7	9.56	13.630	.835	6.13
8	11.45	13.309	.850	6.39
9	13.43	13.422	.861	6.41
10	15.36	12.951	.850	6.56
11	19.18	13.099	.787	6.01
12	23.00	12.913	.876	6.78

15% TURBULENCE IS AT- 4.6 METERS

143

## RESULTS FOR PROFILE- C225S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.233	3.091	49.60
2	1.89	8.432	4.137	49.06
3	2.83	11.759	3.677	31.27
4	3.77	13.775	1.563	11.35
5	5.61	13.752	.871	6.33
6	7.54	13.311	.912	6.85
7	9.33	13.240	.808	6.10
8	11.21	13.080	.827	6.32
9	13.09	13.030	.872	6.70
10	14.93	13.040	.926	7.10
11	18.69	12.975	.795	6.13
12	22.41	12.800	.861	6.73

15% TURBULENCE IS AT- 3.6 METERS

## RESULTS FOR PROFILE- D225S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	7.346	3.205	43.63
2	1.90	8.915	3.912	43.88
3	2.80	11.887	3.190	26.83
4	3.75	13.472	1.668	12.38
5	5.68	13.612	.846	6.22
6	7.53	13.339	.867	6.50
7	9.38	13.428	.843	6.28
8	11.32	13.371	.791	5.92
9	13.12	13.190	.889	6.74
10	15.02	13.063	.869	6.65
11	18.81	13.011	.938	7.21
12	22.55	12.954	.939	7.25
13	26.34	13.126	.844	6.42

15% TURBULENCE IS AT- 3.6 METERS

## RESULTS FOR PROFILE- A22554

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	2.729	1.278	46.83
2	1.90	3.203	2.002	62.49
3	2.84	14.266	4.901	34.35
4	3.81	16.823	1.230	7.31
5	5.67	15.423	1.201	7.78
6	7.58	14.709	1.188	8.08
7	9.44	14.451	1.139	7.88
8	11.25	14.010	1.116	7.96
9	13.25	13.832	1.228	8.88
10	15.16	13.820	1.124	8.13
11	16.92	13.860	1.234	8.90
12	22.65	13.723	1.191	8.68
15% TURBULENCE IS AT- 3.5 METERS				

## RESULTS FOR PROFILE- B22554

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.221	1.820	56.50
2	1.92	3.605	2.179	60.46
3	2.84	14.646	5.335	36.43
4	3.80	17.168	1.261	7.34
5	5.78	15.596	1.211	7.77
6	7.67	14.850	1.175	7.91
7	9.56	14.487	1.276	8.81
8	11.49	14.237	1.185	8.32
9	13.43	13.918	1.109	7.97
10	15.31	13.737	1.119	8.14
11	19.14	13.783	1.115	8.09
12	23.00	13.702	1.065	7.77
15% TURBULENCE IS AT- 3.5 METERS				

## RESULTS FOR PROFILE- C22554

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.285	1.804	54.94
2	1.90	4.724	3.123	66.11
3	2.84	16.197	3.840	23.71
4	3.79	16.933	1.002	5.92
5	5.64	15.537	1.160	7.47
6	7.58	14.787	1.216	8.22
7	9.43	14.216	1.210	8.51
8	11.28	14.008	1.086	7.75
9	13.13	13.805	1.166	8.45
10	15.02	13.848	1.167	8.43
11	16.81	13.721	1.161	8.46
12	22.60	13.815	1.084	7.84
15% TURBULENCE IS AT- 3.3 METERS				

## RESULTS FOR PROFILE- D22554

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	2.970	1.686	56.77
2	1.90	14.024	5.506	39.26
3	2.84	16.655	1.188	7.13
4	3.77	16.033	1.099	6.85
5	5.68	14.714	1.177	8.00
6	7.58	14.508	1.174	8.10
7	9.45	14.001	1.134	8.10
8	11.36	13.958	1.149	8.23
9	13.27	13.863	1.105	7.97
10	15.13	13.860	1.101	7.95
11	18.95	13.824	1.126	8.15
12	22.72	13.623	1.250	9.18
15% TURBULENCE IS AT- 2.6 METERS				

## RESULTS FOR PROFILE- A225S5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.296	2.962	60.94
2	1.94	6.932	4.245	61.23
3	2.79	10.092	4.735	46.92
4	3.73	12.856	3.498	27.21
5	5.66	14.186	1.236	8.72
6	7.55	13.938	1.058	7.59
7	9.35	13.697	.875	6.39
8	11.23	13.580	.900	6.63
9	13.12	13.408	.809	6.03
10	14.96	13.263	.867	6.54
11	18.73	13.088	.832	6.36
12	22.45	12.985	.874	6.73

15% TURBULENCE IS AT- 5.0 METERS

## RESULTS FOR PROFILE- B225S5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.448	3.723	57.74
2	1.92	9.367	4.340	46.33
3	2.84	11.870	3.912	32.95
4	3.80	13.724	2.321	16.91
5	5.74	14.133	1.083	7.67
6	7.67	13.916	.922	6.63
7	9.61	13.615	.872	6.40
8	11.49	13.305	.847	6.36
9	13.43	13.326	.853	6.40
10	15.31	13.187	.835	6.33
11	19.18	13.050	.832	6.37
12	23.00	12.862	.901	7.00

15% TURBULENCE IS AT- 4.2 METERS

## RESULTS FOR PROFILE- C225S5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	5.868	3.082	52.53
2	1.93	8.358	3.982	47.64
3	2.86	11.816	3.450	29.20
4	3.84	13.697	2.079	15.18
5	5.81	13.999	1.058	7.56
6	7.72	13.649	.897	6.57
7	9.73	13.484	.816	6.05
8	11.64	13.318	.844	6.34
9	13.60	13.124	.909	6.92
10	15.56	13.095	.796	6.08
11	19.39	12.945	.906	7.00
12	23.36	12.812	.930	7.26

15% TURBULENCE IS AT- 3.9 METERS

## RESULTS FOR PROFILE- D225S5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.429	3.098	48.20
2	1.90	8.624	3.967	46.01
3	2.81	12.176	3.033	24.91
4	3.77	13.854	1.457	10.52
5	5.68	13.496	.891	6.61
6	7.58	13.395	.929	6.94
7	9.45	13.126	.875	6.66
8	11.36	13.064	.822	6.29
9	13.27	12.900	.878	6.81
10	15.13	12.971	.930	7.17
11	18.95	12.814	.893	6.97
12	22.72	12.782	.951	7.44

15% TURBULENCE IS AT- 3.5 METERS

## RESULTS FOR PROFILE- A22556

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.754	1.040	7.56
2	1.93	13.714	1.082	7.89
3	2.90	13.742	.994	7.23
4	3.83	13.758	1.028	7.47
5	5.84	13.893	.968	6.97
6	7.79	13.793	1.029	7.46
7	9.65	13.952	1.021	7.32
8	11.61	13.779	1.092	7.92
9	13.61	13.837	1.084	7.83
10	15.51	13.933	1.002	7.19
11	19.38	13.910	1.026	7.37
12	23.19	13.946	1.015	7.28
13	27.15	14.114	1.019	7.22
14	31.01	14.143	1.026	7.26
15	38.78	14.140	1.028	7.27
16	46.46	14.302	.995	6.96

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- C22556

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	14.092	.990	7.02
2	1.91	13.933	1.046	7.51
3	2.88	13.941	1.140	8.17
4	3.84	14.411	.942	6.53
5	5.68	14.001	1.071	7.65
6	7.65	14.097	.996	7.07
7	9.58	14.027	1.016	7.24
8	11.51	14.093	.995	7.06
9	13.39	14.034	1.034	7.37
10	15.27	13.813	1.113	8.05
11	19.08	14.050	1.060	7.55
12	22.94	14.229	.978	6.87
13	26.79	14.026	1.040	7.41
14	30.60	14.208	1.065	7.49
15	38.27	14.300	1.022	7.15
16	45.84	14.360	1.033	7.20

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- A270S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.193	3.687	30.24
2	1.91	14.003	2.541	18.14
3	2.82	14.497	1.632	11.26
4	3.73	14.730	1.175	7.98
5	5.69	14.732	1.023	6.94
6	7.61	14.232	.902	6.34
7	9.48	14.227	.879	6.18
8	11.40	13.739	.976	7.11
9	13.31	13.848	.876	6.32
10	15.18	13.507	.874	6.47
11	19.02	13.266	.973	7.34
12	22.80	13.225	.906	6.85
13	26.63	13.292	.958	7.20
14	30.38	13.172	.960	7.29
15	37.99	13.138	.973	7.40
16	45.61	13.200	.981	7.43
17	60.80	13.317	.906	6.80
18	76.00	13.631	.880	6.46
19	95.02	13.784	.767	5.56
20	114.00	14.094	.635	4.50
21	133.02	14.231	.479	3.36

15% TURBULENCE IS AT- 2.3 METERS

## RESULTS FOR PROFILE- B270S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.816	1.934	15.09
2	1.91	13.232	1.515	11.45
3	2.87	13.669	1.058	7.74
4	3.83	13.555	.938	6.92
5	5.71	13.843	.984	7.11
6	7.63	13.536	.926	6.84
7	9.56	13.379	.963	7.20
8	11.43	13.225	.952	7.20
9	13.36	13.332	.912	6.84
10	15.23	13.221	.956	7.23
11	19.03	12.979	.988	7.61
12	22.88	13.083	1.014	7.75
13	26.68	12.784	.925	7.23
14	30.48	13.029	.876	6.72
15	38.13	12.918	.976	7.56
16	45.77	13.067	1.016	7.78
17	61.02	13.247	.876	6.61
18	76.31	13.446	.854	6.35
19	95.36	13.832	.699	5.06
20	114.40	14.071	.641	4.56
21	133.49	14.128	.444	3.14

15% TURBULENCE IS AT- 1.0 METERS

## RESULTS FOR PROFILE- C270S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.995	1.621	12.47
5	1.61	13.484	.962	7.14
6	3.57	13.351	.931	6.97
7	5.50	13.415	.911	6.79
8	7.46	13.120	.966	7.36
9	9.43	13.116	.919	7.01
10	11.40	12.954	.960	7.41
11	15.29	13.003	.900	6.92
12	19.18	13.031	.980	7.52
13	23.07	12.926	.958	7.41
14	26.96	13.055	.979	7.50
15	34.79	13.054	.902	6.91
16	42.62	13.162	.897	6.82
17	58.23	13.250	.913	6.89
18	73.88	13.662	.839	6.14
19	93.38	13.736	.735	5.35
20	112.88	13.986	.625	4.47
21	132.42	14.079	.548	3.90

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- D270S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.936	1.161	8.97
2	1.90	13.245	1.063	8.03
3	2.81	13.111	.967	7.37
4	3.81	13.092	.984	7.52
5	5.67	13.314	.991	7.44
6	7.57	13.376	.943	7.05
7	9.48	13.122	.929	7.08
8	11.34	13.009	.950	7.30
9	13.25	12.891	.922	7.15
10	15.11	12.925	.879	6.80
11	18.87	12.784	.989	7.74
12	22.68	12.881	.892	6.93
13	26.49	13.046	.936	7.18
14	30.21	12.768	.894	7.00
15	37.79	12.943	.971	7.50
16	45.37	12.965	.894	6.90
17	60.48	13.313	.855	6.42
18	75.63	13.487	.815	6.04
19	94.51	13.659	.801	5.87
20	113.34	13.864	.658	4.75
21	132.26	14.049	.577	4.11

ALL TURBULENCE IS BELOW 15%

/h[T

## RESULTS FOR PROFILE- A270S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	7.479	3.532	47.22
2	1.90	7.139	3.474	48.67
3	2.80	7.133	3.424	46.00
4	3.75	7.707	3.974	51.57
5	7.55	15.491	1.945	12.56
6	9.45	15.740	1.146	7.28
7	11.30	15.286	1.101	7.20
8	13.20	15.018	1.045	6.96
9	15.10	14.843	1.092	7.36
10	18.80	14.649	1.099	6.82
11	22.65	14.489	1.031	7.11

15% TURBULENCE IS AT- 7.3 METERS

## RESULTS FOR PROFILE- B270S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.463	2.744	20.38
2	1.90	14.261	2.524	17.70
3	2.84	14.424	2.605	18.06
4	3.79	15.235	1.639	10.76
5	5.63	15.291	1.152	7.54
6	7.53	15.066	1.081	7.18
7	9.42	14.723	1.178	8.00
8	11.27	15.010	1.119	7.46
9	13.16	14.877	1.002	6.74
10	15.05	14.637	1.108	7.57
11	18.74	14.602	1.053	7.21
12	22.53	14.430	1.017	7.05

15% TURBULENCE IS AT- 3.2 METERS

148

## RESULTS FOR PROFILE- C270S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	14.850	1.400	9.43
2	1.91	14.926	1.356	9.09
3	2.83	15.027	1.185	7.88
4	3.79	15.001	1.147	7.65
5	5.71	15.094	1.035	6.85
6	7.64	14.964	1.095	7.32
7	9.56	14.833	1.022	6.89
8	11.44	14.777	1.061	7.18
9	13.36	14.613	1.053	7.21
10	15.24	14.537	1.007	6.93
11	19.04	14.506	1.037	7.15
12	22.88	14.249	1.056	7.41

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- D270S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	14.737	1.240	8.42
2	1.90	14.825	1.151	7.76
3	2.81	14.838	1.105	7.44
4	3.77	14.878	1.080	7.26
5	5.63	14.827	1.087	7.33
6	7.58	14.712	1.027	6.98
7	9.45	14.687	1.080	7.36
8	11.36	14.573	1.001	6.87
9	13.27	14.493	1.063	7.33
10	15.13	14.558	1.096	7.53
11	18.90	14.598	1.035	7.13
12	22.72	14.413	.984	6.83

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- A270S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	8.057	3.480	43.20
2	2.08	10.207	3.342	32.75
3	3.22	12.601	2.692	21.36
4	4.35	13.325	1.756	13.18
5	6.57	13.713	1.067	7.78
6	8.84	13.698	.939	6.86
7	11.11	13.444	.940	6.99
8	13.38	13.476	.859	6.37
9	15.60	13.293	.831	6.25
10	17.81	13.149	.878	6.68
11	22.32	13.205	.883	6.68
12	26.84	13.067	.885	6.77

15% TURBULENCE IS AT- 4.1 METERS

## RESULTS FOR PROFILE- B270S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	9.638	2.899	30.08
2	1.91	10.437	2.959	28.35
3	2.82	12.591	2.312	18.36
4	3.82	13.419	1.385	10.32
5	5.69	13.474	1.005	7.46
6	7.60	13.293	.930	6.99
7	9.47	13.338	.983	7.37
8	11.38	13.386	.964	7.20
9	13.29	13.119	.937	7.15
10	15.16	13.118	.928	7.07
11	18.94	13.023	.973	7.47
12	22.81	12.907	.860	6.66

15% TURBULENCE IS AT- 3.2 METERS

## RESULTS FOR PROFILE- C270S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	10.182	2.683	26.35
2	1.91	11.126	2.830	25.44
3	2.82	12.635	2.175	17.21
4	3.82	13.146	1.364	10.38
5	5.73	13.341	1.041	7.80
6	7.59	13.296	.954	7.18
7	9.50	13.245	.865	6.53
8	11.37	13.233	.774	5.95
9	13.28	13.021	.883	6.78
10	15.19	12.992	.859	6.61
11	18.92	13.258	.893	6.73
12	22.79	12.951	.944	7.29

15% TURBULENCE IS AT- 3.1 METERS

## RESULTS FOR PROFILE- D270S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	10.751	2.365	22.00
2	1.90	11.772	2.437	20.70
3	2.86	12.725	1.719	13.51
5	5.68	13.230	1.005	7.60
6	7.58	13.174	.904	6.86
7	9.45	13.213	.810	6.13
8	11.36	13.291	.846	6.37
9	13.27	13.075	.839	6.41
10	15.17	13.167	.811	6.16
11	18.90	13.066	.925	7.08
12	22.72	13.097	.795	6.07

15% TURBULENCE IS AT- 2.7 METERS

641

## RESULTS FOR PROFILE- A27054

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.338	1.263	37.84
2	1.93	6.591	3.595	54.55
3	2.87	15.017	2.576	17.16
4	3.90	15.295	1.024	6.70
5	5.82	14.224	.872	6.13
6	7.76	13.753	.921	6.70
7	9.70	13.441	.939	6.99
8	11.67	13.197	.880	6.67
9	13.63	13.091	.876	6.69
10	15.55	13.080	.874	6.68
11	19.48	12.935	.906	7.01
12	23.36	12.851	.930	7.24

15% TURBULENCE IS AT- 3.1 METERS

## RESULTS FOR PROFILE- B27054

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.915	2.031	51.87
2	1.91	8.721	4.430	50.80
3	2.82	14.952	2.379	15.91
4	3.83	14.767	1.201	8.14
5	5.70	13.984	.925	6.62
6	7.61	13.497	.879	6.51
7	9.53	13.053	.876	6.71
8	11.40	12.950	.938	7.24
9	13.32	12.928	.941	7.28
10	15.24	12.848	.897	6.98
11	16.98	12.719	.881	6.93
12	22.81	12.916	.814	6.30

15% TURBULENCE IS AT- 2.9 METERS

150

## RESULTS FOR PROFILE- C27054

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.875	2.023	52.21
2	1.90	8.850	4.371	49.39
3	2.85	14.879	1.854	12.46
4	3.80	14.452	1.107	7.66
5	5.65	13.522	.866	6.41
6	7.55	13.195	.862	6.54
7	9.45	13.191	.751	5.69
8	11.30	12.859	.887	6.90
9	13.24	12.939	.887	6.85
10	15.10	12.659	.863	6.82
11	16.80	12.746	.833	6.54
12	22.60	12.753	.877	6.08

15% TURBULENCE IS AT- 2.8 METERS

## RESULTS FOR PROFILE- D27054

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.677	1.884	51.24
2	1.90	11.569	4.109	35.52
3	2.86	14.795	1.333	9.01
4	3.77	14.363	1.005	7.00
5	5.68	13.641	.827	6.06
6	7.63	13.264	.816	6.15
7	9.45	13.119	.869	6.62
8	11.40	12.938	.867	6.70
9	13.31	12.905	.834	6.46
10	15.17	12.779	.864	6.76
11	16.95	12.786	.895	7.00
12	22.72	12.869	.982	7.63

15% TURBULENCE IS AT- 2.6 METERS

## RESULTS FOR PROFILE- A270S5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.007	1.981	49.44
2	1.90	4.443	2.144	48.25
3	2.81	4.607	2.385	51.76
4	3.76	8.417	4.730	56.20
5	5.66	15.451	1.605	10.39
6	7.56	14.789	1.071	7.24
7	9.42	14.311	.847	5.92
8	11.32	13.950	.868	6.22
9	13.18	13.387	.800	5.97
10	15.13	13.504	.845	6.25
11	18.84	13.024	.861	6.61
12	22.65	13.060	1.010	7.73

15% TURBULENCE IS AT- 5.5 METERS

## RESULTS FOR PROFILE- B270S5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.365	2.270	52.01
2	1.91	9.064	5.192	57.28
3	2.82	15.389	2.938	19.09
4	3.77	15.164	1.179	7.77
5	5.73	14.417	.924	6.41
6	7.60	13.900	.910	6.55
7	9.47	13.461	.821	6.10
8	11.38	13.440	.862	6.41
9	13.29	13.252	.914	6.90
10	15.21	13.169	.947	7.19
11	18.99	13.110	.951	7.26
12	22.81	13.045	.925	7.09

15% TURBULENCE IS AT- 3.2 METERS

## RESULTS FOR PROFILE C270S5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	7.931	4.443	56.03
2	1.89	14.021	3.963	28.26
3	2.83	15.061	1.188	7.89
4	3.73	14.479	1.042	7.19
5	5.61	13.923	.824	5.92
6	7.49	13.682	.864	6.31
7	9.33	13.382	.879	6.57
8	11.21	13.282	.835	6.29
9	13.09	13.358	.884	6.62
10	14.97	13.213	.951	7.19
11	18.69	13.123	.855	6.51
12	22.41	12.887	.926	7.19

15% TURBULENCE IS AT- 2.5 METERS

## RESULTS FOR PROFILE- D270S5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.849	2.615	20.35
2	1.90	14.536	1.090	7.50
3	2.86	14.136	.977	6.91
4	3.81	14.073	.884	6.28
5	5.68	13.467	.854	6.34
6	7.58	13.253	.874	6.60
7	9.49	13.079	.947	7.24
8	11.36	13.076	.843	6.45
9	13.27	13.048	1.013	7.76
10	15.17	12.943	.864	6.67
11	19.08	12.796	.882	6.89
12	22.72	12.917	.882	6.83

15% TURBULENCE IS AT- 1.3 METERS

## RESULTS FOR PROFILE- A27056

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	11.916	3.410	28.62
2	1.90	12.018	3.276	27.26
3	2.80	12.129	3.194	26.33
4	3.79	12.785	2.690	21.04
5	5.68	13.127	2.368	18.04
6	7.49	13.686	1.800	13.15
7	9.38	13.589	1.418	10.44
8	11.32	13.951	1.237	8.87
9	13.17	13.993	1.113	7.95
10	15.01	14.041	1.099	7.63
11	18.80	13.985	1.127	8.06
12	22.59	13.898	1.107	7.96
13	26.33	14.100	1.008	7.15
14	30.07	14.225	.953	6.70
15	37.60	14.339	.980	6.63
16	45.12	14.473	.978	6.75

15% TURBULENCE IS AT- 6.8 METERS

## RESULTS FOR PROFILE- C27056

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.526	2.010	14.86
2	1.91	13.252	2.040	15.39
3	2.82	13.518	1.699	12.57
4	3.82	13.649	1.771	12.98
5	5.64	13.296	1.526	11.48
6	7.59	13.739	1.214	8.84
7	9.46	13.877	1.119	8.06
8	11.33	13.989	1.095	7.83
9	13.28	13.710	1.046	7.63
10	15.19	13.891	1.137	8.18
11	18.93	13.886	1.117	8.04
12	22.70	14.207	1.048	7.37
13	26.53	14.135	1.073	7.59
14	30.30	14.244	1.003	7.04
15	37.90	14.407	.941	6.53
16	45.46	14.478	.944	6.52

15% TURBULENCE IS AT- 2.0 METERS

## RESULTS FOR PROFILE- A315S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	9.514	2.733	28.72
2	1.91	10.708	2.864	26.75
3	2.87	11.623	2.609	22.44
4	3.78	12.116	2.336	19.28
5	5.70	13.119	1.224	9.33
6	7.62	13.282	1.082	8.15
7	9.53	13.165	1.014	7.70
8	11.41	13.121	.947	7.22
9	13.32	13.137	1.068	8.13
10	15.24	13.111	1.062	8.10
11	19.03	13.519	.895	6.62
12	22.78	13.219	.994	7.52
13	26.66	13.171	.969	7.36
14	30.45	13.198	1.032	7.82
15	38.03	13.404	.936	6.98
16	45.65	13.599	.902	6.63
17	50.86	13.751	.990	7.20
18	76.08	13.898	.903	6.50
19	95.15	14.121	.960	6.80
20	114.09	14.296	.913	6.39
21	133.14	14.461	.866	5.99

15% TURBULENCE IS AT- 4.6 METERS

## RESULTS FOR PROFILE- B315S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	9.681	2.453	25.34
2	1.91	12.300	2.010	16.34
3	3.78	13.290	.990	7.45
4	5.70	12.959	1.045	8.06
5	7.62	13.406	.956	7.13
6	9.53	13.265	.962	7.25
7	11.40	13.338	1.057	7.92
8	13.32	13.184	.866	6.57
9	15.24	13.334	.983	7.37
10	18.98	13.265	.928	6.99
11	22.82	13.362	.906	6.78
12	26.65	13.170	.963	7.31
13	30.40	13.339	1.015	7.61
14	38.06	13.388	.880	6.57
15	45.64	13.465	.905	6.72
16	60.84	13.852	.784	5.66
17	76.05	14.105	.631	4.47
18	95.08	14.171	.659	4.65
19	114.12	14.468	.528	3.65
20	133.11	14.535	.354	2.44

15% TURBULENCE IS AT- 2.2 METERS

## RESULTS FOR PROFILE- C315S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	8.155	2.919	35.79
2	1.91	11.306	2.848	25.19
3	2.82	12.356	1.949	15.77
4	3.78	13.159	1.185	9.01
5	5.70	13.211	.939	7.11
6	7.63	13.035	.962	7.38
7	9.50	13.183	.961	7.29
8	11.42	13.282	.831	6.26
9	13.34	13.135	.933	7.10
10	15.26	13.105	.916	6.99
11	19.03	12.874	.945	7.34
12	22.80	13.156	.985	7.49
13	26.64	13.172	.941	7.14
14	30.49	13.235	.880	6.65
15	38.07	13.362	.842	6.30
16	45.71	13.363	.921	6.90
17	60.93	13.500	.854	6.32
18	76.16	13.864	.743	5.36
19	95.27	14.131	.574	4.07
20	114.29	14.273	.497	3.49
21	133.35	14.342	.221	1.54
22	152.33	14.274	.350	2.45

15% TURBULENCE IS AT- 2.9 METERS

## RESULTS FOR PROFILE- D315S1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	8.183	3.099	37.87
2	1.91	10.882	3.258	29.94
3	2.82	12.439	2.057	16.54
4	3.79	13.133	1.284	9.78
5	5.66	13.164	.910	6.91
6	7.63	13.133	.926	7.05
7	9.51	13.253	.892	6.73
8	11.43	13.143	.992	7.55
9	13.35	13.260	.894	6.74
10	15.25	13.125	.966	7.36
11	19.02	13.122	.882	6.72
12	22.87	13.154	.956	7.27
13	26.67	13.159	.861	6.55
14	30.46	13.504	.876	6.49
15	38.15	13.225	.924	6.98
16	45.75	13.434	.804	5.98
17	60.98	13.538	.778	5.75
18	76.22	13.724	.830	6.05
19	95.30	14.136	.618	4.37
20	113.41	14.335	.110	.77
21	152.54	14.094	.385	2.73
22	165.31	13.773	.464	3.37

15% TURBULENCE IS AT- 3.0 METERS

## RESULTS FOR PROFILE- A315S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	10.681	3.109	29.11
2	1.88	12.198	2.949	24.17
3	2.78	12.887	2.643	20.51
4	3.73	13.538	2.207	16.31
5	5.54	14.201	1.399	9.85
6	7.44	14.371	1.265	8.80
7	9.25	14.258	1.259	8.83
8	11.06	14.362	1.215	8.46
9	12.92	14.279	1.182	8.28
10	14.77	14.176	1.211	8.54
11	16.48	14.447	1.228	8.50
12	22.17	14.409	1.250	8.68
15% TURBULENCE IS AT- 4.1 METERS				

## RESULTS FOR PROFILE- B315S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.415	2.133	15.90
2	1.91	14.418	1.507	10.45
3	2.84	14.619	1.327	9.08
4	3.77	14.616	1.300	8.89
5	5.66	14.475	1.245	8.60
6	7.58	14.318	1.244	8.69
7	9.51	14.517	1.271	8.75
8	11.40	14.454	1.216	8.41
9	13.29	14.496	1.171	8.08
10	15.21	14.565	1.296	8.90
11	16.94	14.328	1.207	8.42
12	22.81	14.311	1.188	8.30
15% TURBULENCE IS AT- 1.1 METERS				

## RESULTS FOR PROFILE- C315S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.814	1.840	13.32
2	1.83	14.364	1.444	10.05
3	2.71	14.361	1.245	8.67
4	3.66	14.494	1.279	8.02
5	5.42	14.460	1.248	8.63
6	7.18	14.321	1.258	8.78
7	8.98	14.334	1.301	9.08
8	10.83	14.256	1.186	8.32
9	12.64	14.176	1.186	8.37
10	14.36	14.076	1.264	8.98
11	17.96	14.162	1.256	8.67
12	21.53	14.091	1.232	8.74
ALL TURBULENCE IS BELOW 15%				

## RESULTS FOR PROFILE- D315S2

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.802	1.828	13.25
2	1.86	14.147	1.476	10.44
3	2.75	14.416	1.225	8.50
4	3.71	14.197	1.209	8.52
5	5.44	14.249	1.216	8.53
6	7.27	14.247	1.222	8.58
7	9.09	14.236	1.192	8.37
8	10.87	14.227	1.197	8.41
9	12.74	14.186	1.204	8.49
10	14.47	14.149	1.105	7.81
11	16.12	14.240	1.181	8.29
12	21.76	14.147	1.169	8.26
ALL TURBULENCE IS BELOW 15%				

## RESULTS FOR PROFILE- A315S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	8.722	2.196	25.17
2	1.90	10.254	2.243	21.88
3	2.85	11.151	2.258	20.25
4	3.76	11.436	2.151	18.81
5	5.66	12.455	1.536	12.34
6	7.56	12.585	1.040	8.27
7	9.46	12.833	1.003	7.81
8	11.32	12.719	.926	7.28
9	13.22	12.814	.944	7.36
10	15.13	12.758	.943	7.39
11	18.84	12.760	.910	7.13
12	22.65	12.785	.966	7.56

15% TURBULENCE IS AT- 4.9 METERS

## RESULTS FOR PROFILE- B315S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	10.279	1.764	17.16
2	1.93	12.035	1.724	14.32
3	2.85	12.497	1.389	11.12
4	3.83	12.826	1.155	9.00
5	5.78	12.834	1.146	8.93
6	7.73	12.777	1.122	8.78
7	9.63	12.811	1.125	8.78
8	11.58	12.611	1.073	8.51
9	13.49	12.611	1.132	8.97
10	15.48	12.665	1.136	8.97
11	19.29	12.818	1.121	8.75
12	23.19	12.785	1.075	8.41

15% TURBULENCE IS AT- 1.7 METERS

## RESULTS FOR PROFILE- C315S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	9.915	2.144	21.62
2	1.75	11.224	2.239	19.95
3	2.55	12.013	1.909	15.89
4	3.31	12.462	1.448	11.62
5	4.91	12.643	1.059	8.38
6	6.50	12.633	1.045	8.27
7	8.06	12.749	.967	7.58
8	9.66	12.846	.857	6.67
9	11.26	12.789	1.014	7.93
10	12.82	12.675	.942	7.43
11	16.01	12.710	1.033	8.13
12	19.17	12.756	.951	7.46

15% TURBULENCE IS AT- 2.7 METERS

## RESULTS FOR PROFILE- D315S3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	8.599	2.192	25.49
2	1.95	10.499	2.338	22.27
3	2.86	11.475	2.306	20.10
4	3.77	12.324	1.865	15.13
5	5.72	12.930	1.085	8.40
6	7.63	12.687	.982	7.74
7	9.45	12.802	.962	7.51
8	11.36	12.764	.879	6.89
9	13.27	12.879	.947	7.35
10	15.17	12.842	.965	7.51
11	18.95	12.916	.872	6.75
12	22.72	12.802	.938	7.33

15% TURBULENCE IS AT- 3.8 METERS

## RESULTS FOR PROFILE- A31554

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	11.151	1.978	17.74
2	1.92	12.211	1.641	13.44
3	2.84	12.509	1.201	9.60
4	3.85	12.654	1.157	9.14
5	5.74	12.822	1.031	8.04
6	7.68	12.803	.952	7.43
7	9.61	12.612	.969	7.68
8	11.50	12.751	.954	7.48
9	13.44	12.782	.962	7.53
10	15.38	12.644	.967	7.65
11	19.20	12.606	.912	7.23
12	23.03	12.945	.920	7.10

15% TURBULENCE IS AT- 1.6 METERS

## RESULTS FOR PROFILE- B31554

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	11.855	1.821	15.36
2	1.89	12.671	1.231	9.72
3	2.79	13.004	.998	7.67
4	3.78	12.891	.988	7.67
5	5.62	12.907	.994	7.70
6	7.51	12.971	.917	7.07
7	9.35	12.813	.933	7.28
8	11.24	12.898	.977	7.57
9	13.13	13.012	.948	7.28
10	14.97	13.013	.934	7.18
11	18.75	12.815	.872	6.80
12	22.43	12.873	.946	7.35

15% TURBULENCE IS AT- 1.0 METERS

## RESULTS FOR PROFILE- C31554

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	11.670	1.829	15.67
2	1.92	12.567	1.284	10.21
3	2.88	12.906	.995	7.71
4	3.85	13.010	.920	7.07
5	5.73	12.818	.912	7.12
6	7.66	12.829	.966	7.53
7	9.60	12.824	.917	7.15
8	11.48	12.736	.950	7.46
9	13.41	12.836	1.005	7.83
10	15.34	12.827	.910	7.10
11	19.16	12.903	.890	6.90
12	22.98	12.730	.929	7.30

15% TURBULENCE IS AT- 1.1 METERS

## RESULTS FOR PROFILE- D31554

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	11.828	1.982	16.76
2	1.91	12.454	1.594	12.80
3	2.88	12.795	1.150	8.99
4	3.84	12.967	.941	7.26
5	5.72	12.960	.913	7.04
6	7.64	12.983	.916	7.06
7	9.57	13.049	.906	6.94
8	11.45	13.012	.906	6.97
9	13.37	12.784	.941	7.36
10	15.30	13.075	.961	7.35
11	19.10	12.973	.985	7.59
12	22.91	12.936	.932	7.21

15% TURBULENCE IS AT- 1.4 METERS

## RESULTS FOR PROFILE- A31555

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	7.909	3.539	44.74
2	1.92	9.702	3.823	39.41
3	2.89	11.419	3.134	27.45
4	3.81	12.707	2.088	16.43
5	5.79	13.028	1.090	8.37
6	7.68	13.205	.875	6.63
7	9.61	13.102	.963	7.35
8	11.50	13.068	.889	6.81
9	13.44	13.164	.914	6.94
10	15.33	12.928	.952	7.36
11	19.20	13.011	1.016	7.81
12	23.03	13.051	.940	7.20

15% TURBULENCE IS AT- 4.2 METERS

## RESULTS FOR PROFILE- B31555

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	8.205	4.115	50.15
2	1.92	13.736	1.432	10.42
3	2.88	13.772	1.070	7.77
4	3.85	13.613	.880	6.46
5	5.69	13.278	.904	6.81
6	7.72	13.216	.917	6.94
7	9.61	13.102	.957	7.30
8	11.49	12.808	.964	7.53
9	13.47	13.005	.891	6.85
10	15.36	12.979	.888	6.84
11	19.14	12.921	.934	7.23
12	23.00	12.961	.989	7.63

15% TURBULENCE IS AT- 1.8 METERS

## RESULTS FOR PROFILE- C31555

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.884	3.000	61.42
2	1.94	13.835	2.573	18.60
3	2.85	14.073	1.153	8.19
4	3.80	13.847	1.035	7.47
5	5.65	13.441	.976	7.26
6	7.55	13.278	.935	7.04
7	9.40	13.143	.860	6.55
8	11.34	13.127	.907	6.91
9	13.20	13.003	.971	7.47
10	15.10	13.174	.905	6.87
11	18.80	13.074	.942	7.21
12	22.60	13.145	.895	6.81

15% TURBULENCE IS AT- 2.3 METERS

## RESULTS FOR PROFILE- D31555

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.136	2.434	58.86
2	1.90	13.849	2.939	21.22
3	2.86	14.178	1.186	8.37
4	3.81	14.011	.957	6.83
5	5.68	13.510	.888	6.58
6	7.58	13.399	.849	6.34
7	9.45	13.210	.848	6.42
8	11.36	12.956	.954	7.36
9	13.27	12.989	.944	7.27
10	15.17	13.050	.922	7.06
11	18.95	13.029	.916	7.03
12	22.72	13.034	.848	6.51

15% TURBULENCE IS AT- 2.4 METERS

## RESULTS FOR PROFILE- A31556

DATA POINT	HEIGHT (M ABV HDECK)	UMERN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	11.255	2.581	22.93
2	1.91	11.713	2.395	20.44
3	2.82	11.950	2.354	19.70
4	3.77	12.010	2.266	18.87
5	5.68	12.754	2.018	15.82
6	7.59	13.038	1.768	13.56
7	9.51	13.081	1.785	13.65
8	11.33	12.896	1.814	14.06
9	13.28	13.323	1.886	14.16
10	15.15	13.203	1.803	13.66
11	18.93	13.383	1.705	12.74
12	22.70	13.228	1.703	12.87
13	26.57	13.071	1.754	13.42
14	30.35	13.426	1.683	12.53
15	37.90	13.509	1.386	10.26
16	45.51	14.088	1.232	8.74

15% TURBULENCE IS AT- 6.4 METERS

## RESULTS FOR PROFILE- C31556

DATA POINT	HEIGHT (M ABV HDECK)	UMERN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.425	1.929	15.53
2	1.92	12.866	1.947	15.14
3	2.85	12.714	1.991	15.66
4	3.82	12.699	2.029	15.98
5	5.76	12.959	1.909	14.73
6	7.75	12.900	1.899	14.72
7	9.55	13.124	1.763	13.43
8	11.54	13.118	1.767	13.47
9	13.48	12.894	1.871	14.51
10	15.42	13.142	1.711	13.02
11	19.26	13.289	1.685	12.68
12	23.15	13.296	1.740	13.08
13	26.98	13.406	1.636	12.20
14	30.82	13.390	1.636	12.22
15	38.50	13.927	1.227	8.81
16	46.22	14.189	1.068	7.52

15% TURBULENCE IS AT- 5.3 METERS

## RESULTS FOR PROFILE- A180M1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.926	1.621	12.54
2	1.91	13.612	1.065	7.82
3	2.87	13.782	1.004	7.29
4	3.79	13.822	.980	7.09
5	5.73	13.847	1.007	7.27
6	7.63	13.711	.905	6.60
7	9.51	13.657	.953	6.98
8	11.43	13.499	.812	6.01
9	13.35	13.364	.933	6.98
10	15.23	13.160	.843	6.40
11	19.03	13.283	.811	6.11
12	22.88	12.882	.853	6.62
13	26.72	12.948	.832	6.42
14	30.47	12.978	.950	7.32
15	38.12	13.149	.885	6.73
16	45.76	13.372	.831	6.22
17	61.00	13.379	.875	6.54
18	76.25	13.635	.826	6.06
19	95.33	13.856	.819	5.91
20	114.38	14.142	.809	5.66
21	133.46	14.283	.714	5.00
22	152.50	14.239	.732	5.14

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- C180M1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	11.137	1.882	16.90
2	1.90	12.497	1.028	8.23
3	2.86	12.786	.908	7.10
4	3.77	12.831	.889	6.93
5	5.68	12.876	.876	6.80
6	7.59	12.870	.936	7.27
7	9.50	12.751	.901	7.07
8	11.36	12.643	.833	6.59
9	13.27	12.732	.908	7.14
10	15.18	12.449	.910	7.31
11	18.91	12.631	.864	6.84
12	22.73	12.553	.945	7.53
13	26.50	12.500	.971	7.77
14	30.27	12.570	.895	7.12
15	37.91	12.673	.922	7.27
16	45.46	12.945	.861	6.65
17	60.59	13.102	.840	6.41
18	75.73	13.315	.801	6.02
19	94.69	13.587	.734	5.40
20	113.60	13.885	.536	3.86
21	132.56	14.011	.355	2.54
22	151.47	13.845	.398	2.88

15% TURBULENCE IS AT- 1.2 METERS

## RESULTS FOR PROFILE- A270M1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	5.323	3.012	56.58
2	1.91	9.949	4.447	44.70
3	2.82	13.714	3.768	27.47
4	3.78	15.204	2.735	17.99
5	5.70	15.565	1.208	7.76
6	7.62	15.152	1.064	7.92
7	9.53	14.767	1.028	6.96
8	11.41	14.511	1.044	7.20
9	13.32	14.165	1.015	7.16
10	15.20	14.138	1.112	7.86
11	18.99	13.778	1.033	7.50
12	22.82	13.553	1.110	8.19
13	26.66	13.501	1.048	7.76
14	30.40	13.468	1.090	8.10
15	38.07	13.585	1.025	7.54
16	45.65	13.537	1.057	7.81
17	60.86	13.764	1.083	7.87
18	76.07	14.105	.961	6.82
19	95.11	14.414	.956	6.63
20	114.10	14.468	.846	5.85
21	133.14	14.658	.787	5.37
22	152.18	14.544	.803	5.52

15% TURBULENCE IS AT- 4.3 METERS

## RESULTS FOR PROFILE- C270M1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	11.026	2.839	25.75
2	1.91	13.381	1.524	11.39
3	2.82	13.907	1.114	8.01
4	3.82	14.025	1.103	7.86
5	5.69	13.795	1.066	7.73
6	7.61	13.788	1.076	7.80
7	9.48	13.569	1.127	8.31
8	11.39	13.542	1.035	7.64
9	13.31	13.403	1.036	7.73
10	15.22	13.510	.990	7.33
11	19.00	13.362	1.066	7.98
12	22.79	13.173	1.016	7.71
13	26.62	13.294	1.048	7.88
14	30.40	13.348	1.076	8.06
15	38.02	13.405	1.042	7.77
16	45.58	13.305	1.038	7.80
17	60.77	13.688	1.035	7.56
18	75.99	13.913	.949	6.82
19	94.96	14.043	.865	6.16
20	113.97	14.288	.855	5.99
21	132.94	14.461	.716	4.95
22	151.95	14.361	.705	4.91

15% TURBULENCE IS AT- 1.7 METERS

## RESULTS FOR PROFILE- A180H1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.060	3.225	53.21
2	1.91	10.199	3.620	35.49
3	2.82	13.477	1.786	13.25
4	3.77	13.926	1.288	9.25
5	5.73	13.860	1.088	7.85
6	7.60	13.838	1.013	7.32
7	9.47	13.646	.980	7.18
8	11.38	13.532	1.046	7.73
9	13.34	13.213	1.033	7.82
10	15.16	13.088	.995	7.61
11	18.94	12.956	1.025	7.91
12	22.77	13.103	1.050	8.01
13	26.55	13.015	1.055	8.11
14	30.39	13.170	1.001	7.60
15	37.94	13.263	1.048	7.96
16	45.54	13.313	1.084	8.14
17	60.76	13.704	.983	7.18
18	75.93	13.906	1.001	7.20
19	94.92	14.167	.944	6.67
20	113.87	14.386	.806	5.60
21	132.62	14.573	.791	5.43
22	151.81	14.579	.737	5.06
23	164.57	14.003	1.284	9.17

15% TURBULENCE IS AT- 2.7 METERS

## RESULTS FOR PROFILE- C180H1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.597	3.554	41.34
2	1.91	12.439	2.251	18.10
3	2.82	13.306	1.336	10.04
4	3.82	13.339	1.121	8.40
5	5.69	13.396	1.035	7.72
6	7.61	13.399	1.017	7.59
7	9.48	13.371	1.024	7.66
8	11.39	13.403	1.043	7.78
9	13.35	13.219	1.057	7.99
10	15.18	13.224	1.039	7.86
11	19.01	13.110	1.033	7.88
12	22.79	13.013	.969	7.45
13	26.58	13.285	.971	7.31
14	30.37	13.164	1.044	7.93
15	37.98	13.370	1.017	7.60
16	45.60	13.453	.999	7.43
17	60.83	13.679	1.002	7.33
18	76.02	13.924	1.001	7.19
19	94.99	14.178	.945	6.66
20	114.00	14.500	.859	5.92
21	132.98	14.613	.780	5.34
22	151.95	14.521	.758	5.22

15% TURBULENCE IS AT- 2.3 METERS

## RESULTS FOR PROFILE- A270H1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.617	2.405	52.10
2	1.91	6.363	3.702	58.18
3	2.86	9.148	4.881	53.35
4	3.77	12.835	4.466	34.79
5	5.68	15.094	1.635	10.83
6	7.60	14.794	1.080	7.30
7	9.46	14.380	1.077	7.49
8	11.37	13.934	1.044	7.49
9	13.29	13.719	1.046	7.63
10	15.15	13.745	1.052	7.65
11	18.90	13.377	1.074	8.03
12	22.75	13.299	1.052	7.91
13	26.58	13.222	1.055	7.98
14	30.36	13.091	1.043	7.97
15	37.96	13.341	1.084	8.13
16	45.51	13.297	.991	7.45
17	60.67	13.563	.984	7.25
18	75.83	13.583	.962	7.08
19	94.81	13.938	.943	6.76
20	113.79	14.149	.795	5.62
21	132.68	14.314	.769	5.37
22	151.71	14.255	.788	5.53

15% TURBULENCE IS AT- 5.4 METERS

## RESULTS FOR PROFILE- C270H1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.650	3.526	53.02
2	1.91	10.697	3.972	37.13
3	2.86	13.209	2.429	18.39
4	3.82	13.624	1.376	10.10
5	5.69	13.612	1.083	7.95
6	7.61	13.643	1.021	7.48
7	9.48	13.534	1.014	7.50
8	11.39	13.451	1.033	7.68
9	13.31	13.200	.992	7.51
10	15.22	13.192	1.019	7.72
11	18.96	13.049	1.080	8.28
12	22.79	13.115	1.043	7.95
13	26.62	12.951	1.002	7.74
14	30.36	13.173	1.018	7.73
15	37.97	13.237	.956	7.22
16	45.58	13.147	1.022	7.77
17	60.77	13.398	.996	7.43
18	75.99	13.585	.920	6.77
19	94.96	13.912	.852	6.13
20	113.92	14.180	.832	5.86
21	132.94	14.225	.718	5.04
22	151.95	14.141	.744	5.26

15% TURBULENCE IS AT- 3.3 METERS

## RESULTS FOR PROFILE- A180P1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.704	1.060	7.73
2	1.91	13.881	1.025	7.39
3	2.82	13.695	1.087	7.93
4	3.78	13.754	1.078	7.84
5	5.70	13.840	1.019	7.37
6	7.57	13.553	.970	7.16
7	9.53	13.519	1.036	7.66
8	11.40	13.396	1.068	7.97
9	13.31	13.385	1.031	7.70
10	15.19	13.190	1.016	7.70
11	19.02	13.238	1.039	7.85
12	22.85	13.036	1.057	8.11
13	26.64	13.055	1.047	8.02
14	30.42	13.099	1.031	7.87
15	38.00	13.198	1.052	7.97
16	45.62	13.223	1.042	7.88
17	60.81	13.806	1.020	7.39
18	76.05	13.945	.990	7.10
19	95.03	14.175	.918	6.47
20	114.05	14.501	.807	5.57
21	133.03	14.570	.813	5.58
22	152.01	14.619	.799	5.47

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- C180P1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.084	1.164	8.89
2	1.95	13.196	1.047	7.93
3	2.87	13.352	1.085	8.13
4	3.83	13.295	1.012	7.61
5	5.70	13.279	1.034	7.79
6	7.62	13.095	.978	7.47
7	9.53	13.313	1.016	7.63
8	11.45	13.035	.962	7.38
9	13.32	13.045	1.007	7.72
10	15.24	13.004	1.122	8.62
11	18.99	13.014	1.077	8.27
12	22.82	12.855	1.068	8.31
13	26.66	12.947	1.083	8.36
14	30.40	12.868	1.055	8.20
15	38.03	13.149	1.024	7.79
16	45.70	13.255	.958	7.23
17	60.90	13.536	.972	7.18
18	76.11	13.747	.921	6.70
19	95.15	13.947	.937	6.72
20	114.15	14.296	.791	5.54
21	133.19	14.374	.797	5.54
22	152.14	14.334	.773	5.39

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- A270P1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.520	2.608	19.29
2	1.91	13.401	3.431	25.61
3	2.88	13.970	3.003	21.50
4	3.84	14.588	2.438	16.71
5	5.72	14.761	1.339	9.07
6	7.64	14.458	1.081	7.48
7	9.57	14.360	1.039	7.23
8	11.45	13.877	1.070	7.71
9	13.38	13.790	.983	7.13
10	15.30	13.670	1.018	7.45
11	19.11	13.484	1.056	7.83
12	22.91	13.370	1.092	8.17
13	26.72	13.255	1.022	7.71
14	30.57	13.205	1.037	7.85
15	38.18	13.295	1.020	7.67
16	45.84	13.323	1.008	7.57
17	61.10	13.469	.982	7.29
18	76.37	13.615	.942	6.92
19	95.49	13.972	.901	6.45
20	114.61	14.151	.783	5.53
21	133.68	14.228	.747	5.25
22	152.80	14.160	.769	5.43
23	171.24	13.874	.746	5.37

15% TURBULENCE IS AT- 4.3 METERS

## RESULTS FOR PROFILE- C270P1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.669	1.088	7.96
2	1.90	13.458	1.081	8.03
3	2.85	13.539	1.026	7.58
4	3.76	13.563	.996	7.34
5	5.66	13.569	1.101	8.11
6	7.57	13.615	.963	7.07
7	9.43	13.166	1.016	7.72
8	11.33	13.392	.960	7.17
9	13.23	13.224	1.008	7.62
10	15.09	13.340	.966	7.25
11	18.90	12.937	1.026	7.93
12	22.66	13.051	1.067	8.18
13	26.42	12.980	.960	7.40
14	30.23	13.027	.974	7.48
15	37.76	12.947	.941	7.27
16	45.37	13.115	.983	7.50
17	60.37	13.323	.930	6.98
18	75.51	13.606	.930	6.84
19	94.41	13.830	.882	6.37
20	113.27	14.022	.846	6.03
21	132.22	14.096	.774	5.49
22	151.07	14.037	.731	5.21

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- A135Q1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	10.916	2.414	22.11
2	1.95	11.578	2.395	20.69
3	2.82	12.131	2.301	18.97
4	3.77	12.384	2.308	18.64
5	5.69	13.051	2.025	15.52
6	7.65	13.991	1.594	11.40
7	9.51	13.880	1.324	9.54
8	11.38	14.146	1.195	8.45
9	13.34	14.190	1.112	7.84
10	15.16	14.145	1.169	8.26
11	18.99	14.167	1.136	8.02
12	22.77	14.327	1.110	7.75
13	26.55	14.422	1.093	7.58
14	30.33	14.361	1.128	7.85
15	37.94	14.343	1.097	7.65
16	45.55	14.461	1.078	7.46
17	60.72	14.728	1.124	7.63
18	75.93	15.114	1.012	6.69
19	94.88	15.430	.978	6.34
20	113.84	15.725	.853	5.42
21	132.83	15.835	.798	5.04
22	151.83	15.791	.853	5.40
23	167.04	15.601	.807	5.17

15% TURBULENCE IS AT- 5.9 METERS

## RESULTS FOR PROFILE- C135Q1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	12.327	2.029	16.46
2	1.95	13.620	1.737	12.74
3	2.87	13.812	1.379	9.99
4	3.78	14.152	1.225	8.65
5	5.70	13.970	1.258	9.00
6	7.61	14.133	1.107	7.83
7	9.49	14.181	1.102	7.77
8	11.40	14.142	1.090	7.71
9	13.32	14.304	1.163	8.13
10	15.19	14.270	1.081	7.57
11	19.03	14.217	1.050	7.39
12	22.82	14.035	1.111	7.91
13	26.60	14.265	1.106	7.76
14	30.44	14.124	1.134	8.03
15	38.02	14.404	1.170	8.13
16	45.69	14.559	1.165	8.00
17	60.84	14.742	1.039	7.05
18	76.04	15.243	1.010	6.62
19	95.08	15.372	1.009	6.56
20	114.11	15.658	.891	5.69
21	133.10	15.785	.830	5.26
22	152.14	15.657	.908	5.80

15% TURBULENCE IS AT- 1.3 METERS

## RESULTS FOR PROFILE- A180Q1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	15.396	1.720	11.17
2	1.91	15.716	1.479	9.41
3	2.82	15.497	1.598	10.31
4	3.77	15.673	1.369	8.73
5	5.68	15.596	1.223	7.84
6	7.59	15.467	1.187	7.67
7	9.50	15.449	1.239	8.02
8	11.41	15.227	1.150	7.55
9	13.28	15.227	1.188	7.80
10	15.15	14.851	1.149	7.74
11	18.92	14.910	1.190	7.98
12	22.74	14.818	1.144	7.72
13	26.52	14.660	1.118	7.63
14	30.30	14.788	1.178	7.97
15	37.90	15.046	1.114	7.40
16	45.54	14.908	1.117	7.49
17	60.64	15.030	1.138	7.57
18	75.84	15.326	1.072	6.99
19	94.81	15.655	.997	6.37
20	113.70	15.808	1.021	6.46
21	132.67	16.126	.884	5.48
22	151.64	16.144	.851	5.27
23	165.52	15.981	.794	4.97

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- C180Q1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	14.836	1.587	10.70
2	1.91	15.332	1.322	8.63
3	2.83	15.318	1.213	7.92
4	3.79	15.326	1.194	7.79
5	5.71	15.425	1.126	7.30
6	7.63	15.343	1.112	7.24
7	9.55	15.212	1.183	7.77
8	11.43	15.177	1.148	7.57
9	13.35	15.127	1.181	7.81
10	15.23	14.908	1.172	7.86
11	19.03	14.857	1.162	7.82
12	22.92	14.768	1.170	7.92
13	26.67	14.728	1.087	7.38
14	30.51	14.712	1.087	7.39
15	38.11	14.888	1.145	7.69
16	45.75	14.921	1.118	7.49
17	60.99	15.078	1.041	6.90
18	76.23	15.450	1.067	6.91
19	95.36	15.714	1.017	6.47
20	114.35	16.010	.938	5.86
21	133.48	16.055	.844	5.26
22	152.52	16.058	.876	5.45

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- A225Q1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	8.326	3.928	47.18
2	1.91	12.233	3.814	31.18
3	2.82	14.077	2.431	17.27
4	3.82	14.564	1.464	10.05
5	5.69	14.639	1.152	7.87
6	7.61	14.693	1.227	8.35
7	9.53	14.477	1.155	7.98
8	11.40	14.485	1.096	7.57
9	13.36	14.628	1.191	8.14
10	15.23	14.475	1.121	7.74
11	18.97	14.398	1.067	7.41
12	22.80	14.380	1.211	8.42
13	26.59	14.402	1.095	7.60
14	30.37	14.441	1.101	7.62
15	38.04	14.408	1.187	8.24
16	45.61	14.802	1.131	7.64
17	60.84	14.997	1.116	7.44
18	75.99	15.314	.993	6.49
19	95.01	15.578	.918	5.89
20	114.03	15.971	.923	5.78
21	133.01	16.077	.792	4.92
22	152.03	16.056	.871	5.43
23	164.76	15.992	.799	4.99

15% TURBULENCE IS AT- 3.1 METERS

## RESULTS FOR PROFILE- C225Q1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	8.937	3.979	44.52
2	1.95	12.508	3.543	28.33
3	2.81	13.954	2.297	16.46
4	3.81	14.587	1.383	9.48
5	5.67	14.698	1.142	7.77
6	7.58	14.698	1.114	7.58
7	9.49	14.592	1.159	7.94
8	11.35	14.706	1.097	7.46
9	13.26	14.544	1.127	7.75
10	15.12	14.508	1.143	7.88
11	18.89	14.547	1.151	7.91
12	22.71	14.543	1.131	7.77
13	26.52	14.404	1.176	8.17
14	30.29	14.497	1.123	7.74
15	37.88	14.699	1.132	7.70
16	45.41	14.815	1.152	7.77
17	60.54	15.085	1.072	7.11
18	75.66	15.342	1.091	7.11
19	94.60	15.668	.922	5.89
20	113.50	15.888	.928	5.84
21	132.44	16.069	.840	5.23
22	151.38	15.991	.853	5.34

15% TURBULENCE IS AT- 3.0 METERS

## RESULTS FOR PROFILE- A270Q1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.782	1.187	8.61
2	1.95	13.747	1.182	8.60
3	2.86	13.978	1.135	8.12
4	3.77	13.930	1.107	7.94
5	5.72	13.945	1.080	7.75
6	7.63	13.924	1.114	8.00
7	9.44	14.000	1.117	7.98
8	11.30	14.097	1.153	8.18
9	13.30	13.948	1.104	7.92
10	15.12	13.874	1.145	8.25
11	18.89	14.143	1.152	8.15
12	22.70	14.261	1.107	7.76
13	26.47	14.284	1.137	7.96
14	30.24	14.359	1.109	7.72
15	37.83	14.476	1.132	7.82
16	45.46	14.738	1.219	8.27
17	60.49	14.819	1.147	7.74
18	75.66	15.310	1.104	7.21
19	94.50	15.615	1.043	6.68
20	113.53	16.007	.948	5.92
21	132.42	16.162	.839	5.19
22	151.32	16.129	.814	5.05
23	157.90	15.946	.942	5.90

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- C270Q1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	13.929	1.237	8.88
2	1.90	13.892	1.158	8.33
3	2.81	14.152	1.197	8.46
4	3.81	14.131	1.139	8.06
5	5.72	14.122	1.094	7.74
6	7.59	14.019	1.087	7.76
7	9.50	14.171	1.083	7.64
8	11.36	14.148	1.107	7.82
9	13.32	14.287	1.168	8.18
10	15.14	14.044	1.124	8.01
11	18.96	14.210	1.166	8.20
12	22.78	14.128	1.120	7.93
13	26.51	14.403	1.132	7.86
14	30.28	14.336	1.108	7.73
15	37.92	14.701	1.149	7.81
16	45.47	14.696	1.134	7.72
17	60.61	15.128	1.180	7.80
18	75.85	15.506	.964	6.21
19	94.77	15.858	.868	5.47
20	113.64	16.049	.861	5.36
21	132.60	16.121	.848	5.26
22	151.57	15.985	.868	5.43

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- A31501

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.382	3.443	53.94
2	1.91	9.167	4.307	46.99
3	2.86	11.704	4.134	35.32
4	3.82	13.732	2.722	19.82
5	5.68	14.460	1.275	8.82
6	7.60	14.533	1.119	7.70
7	9.46	14.636	1.148	7.84
8	11.38	14.558	1.116	7.67
9	13.29	14.571	1.159	7.95
10	15.15	14.398	1.168	8.11
11	18.93	14.527	1.125	7.81
12	22.76	14.344	1.125	7.84
13	26.58	14.374	1.144	7.96
14	30.32	14.526	1.182	8.14
15	37.92	14.602	1.175	8.05
16	45.52	14.780	1.166	7.89
17	60.73	15.175	1.119	7.37
18	75.84	15.308	1.072	7.00
19	94.83	15.668	1.084	6.92
20	113.77	15.885	1.009	6.35
21	132.75	16.106	.821	5.09

## RESULTS FOR PROFILE- C31501

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.827	3.467	50.78
2	1.91	9.675	4.274	44.17
3	2.82	12.133	3.961	32.64
4	3.82	14.100	2.476	17.56
5	5.73	14.526	1.299	8.94
6	7.60	14.756	1.149	7.79
7	9.51	14.727	1.172	7.96
8	11.33	14.548	1.121	7.71
9	13.29	14.361	1.100	7.66
10	15.15	14.506	1.171	8.07
11	18.93	14.564	1.149	7.89
12	22.76	14.458	1.180	8.16
13	26.58	14.510	1.132	7.80
14	30.36	14.543	1.095	7.53
15	37.91	14.699	1.120	7.62
16	45.52	14.997	1.080	7.20
17	60.72	15.228	1.046	6.87
18	75.84	15.387	1.061	6.90
19	94.86	15.651	.980	6.26
21	132.74	16.048	.853	5.31
22	150.99	15.907	.789	4.96

15% TURBULENCE IS AT- 4.6 METERS

15% TURBULENCE IS AT- 4.4 METERS

## RESULTS FOR PROFILE- A180R1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	7.543	4.586	60.79
2	1.95	16.663	2.438	14.46
3	2.86	15.432	1.241	8.04
4	3.78	14.608	1.051	7.15
5	5.69	14.021	1.046	7.46
6	7.65	13.428	1.039	7.73
7	9.47	13.130	.987	7.52
8	11.39	12.910	1.043	8.08
9	13.30	12.713	1.015	7.99
10	15.22	12.843	1.032	8.03
11	16.95	12.783	.976	7.64
12	22.78	12.730	1.027	8.07
13	26.56	12.735	1.012	7.95
14	30.39	12.657	1.052	8.31
15	38.01	13.065	1.001	7.66
16	45.57	13.003	.997	7.62
17	60.75	13.295	1.010	7.59
18	75.93	13.583	.997	7.34
19	94.98	14.075	.893	6.35
20	113.89	14.168	.826	5.83
21	132.90	14.376	.719	5.00
22	151.86	14.344	.744	5.19
23	164.76	13.937	1.155	8.29

15% TURBULENCE IS AT- 1.9 METERS

## RESULTS FOR PROFILE- A225R1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	1.570	.758	48.32
2	1.90	4.173	2.767	66.31
3	2.81	13.533	3.423	25.29
4	3.81	14.834	1.187	8.00
5	5.67	14.219	1.062	7.47
6	7.58	13.689	1.065	7.78
7	9.48	13.565	1.037	7.65
8	11.35	13.169	1.006	7.64
9	13.30	13.224	1.013	7.66
10	15.16	13.074	1.030	7.88
11	16.88	12.984	1.020	7.86
12	22.69	13.001	1.015	7.81
13	26.51	13.167	1.012	7.69
14	30.23	12.967	1.078	8.31
15	37.86	13.111	1.096	8.36
16	45.44	13.304	1.032	7.76
17	60.51	13.467	1.054	7.83
18	75.62	13.787	1.039	7.53
19	94.55	14.034	.924	6.59
20	113.44	14.357	.870	6.06
21	132.36	14.445	.766	5.30
22	151.27	14.471	.773	5.34
23	165.14	14.213	.857	6.03

15% TURBULENCE IS AT- 3.4 METERS

## RESULTS FOR PROFILE- A270R1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.914	2.404	61.43
2	1.90	10.883	4.630	42.54
3	2.85	15.068	1.981	13.14
4	3.81	14.887	1.155	7.76
5	5.66	14.011	1.095	7.81
6	7.57	13.700	1.064	7.77
7	9.42	13.384	.999	7.46
8	11.37	13.254	1.057	7.97
9	13.23	13.248	1.005	7.58
10	15.13	13.229	1.032	7.80
11	16.85	13.208	1.033	7.82
12	22.66	13.186	1.028	7.79
13	26.42	13.085	1.013	7.74
14	30.23	13.217	.995	7.53
15	37.75	13.078	1.055	8.07
16	45.32	13.230	1.026	7.75
17	60.41	13.504	.993	7.36
18	75.50	13.561	.991	7.31
19	94.44	14.026	.901	6.43
20	113.25	14.226	.793	5.58
21	132.10	14.236	.781	5.49
22	151.04	14.279	.745	5.22

15% TURBULENCE IS AT- 2.8 METERS

## RESULTS FOR PROFILE- NO

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
------------	-------------------------	------------------	-----------------	-----------------------

## RESULTS FOR PROFILE- A135W1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.528	1.816	51.49
2	2.14	4.140	2.300	55.55
3	2.83	5.039	2.844	56.43
4	3.75	6.364	3.486	54.78
5	5.76	10.922	3.279	30.02
6	7.64	11.797	1.837	15.58
7	9.52	12.076	1.504	12.45
8	11.49	11.821	1.463	12.37
9	13.32	11.685	1.440	12.33
10	15.25	11.760	1.403	11.93
11	19.05	11.836	1.410	11.91
12	22.90	11.833	1.419	11.99
13	26.71	11.935	1.398	11.71
14	30.21	12.188	1.353	11.10
15	45.82	12.428	1.118	8.99
16	61.08	13.066	1.094	8.37
17	76.38	13.180	.950	7.21
18	95.49	13.326	.900	6.75
19	114.56	13.703	.766	5.56
20	133.62	13.824	.763	5.52
21	152.73	13.832	.731	5.28
22	170.28	13.624	.731	5.36

15% TURBULENCE IS AT- 8.0 METERS

## RESULTS FOR PROFILE- A135W3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.694	1.889	51.14
2	1.92	3.790	2.106	55.57
3	2.76	7.116	4.060	57.06
4	3.73	12.003	3.413	28.44
5	5.54	12.018	1.537	12.79
6	7.39	12.014	1.472	12.25
7	9.24	11.233	1.458	12.98
8	11.05	11.072	1.421	12.83
9	12.90	11.159	1.410	12.63
10	14.71	11.299	1.499	13.26
11	18.41	11.342	1.360	11.99
12	22.07	11.637	1.282	11.02

15% TURBULENCE IS AT- 5.3 METERS

## RESULTS FOR PROFILE- A135W5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	5.137	2.713	52.81
2	1.90	5.878	2.817	47.92
3	2.85	6.199	3.012	48.59
4	3.80	6.828	3.376	49.45
5	5.66	8.892	3.334	37.50
6	7.56	10.726	2.356	21.96
7	9.42	11.176	1.863	16.67
8	11.32	11.244	1.614	14.36
9	13.22	11.334	1.395	12.31
10	15.08	11.130	1.496	13.44
11	18.89	11.308	1.301	12.21
12	22.65	11.717	1.353	11.55

15% TURBULENCE IS AT- 10.8 METERS

## RESULTS FOR PROFILE- A135W7

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	10.633	1.433	13.48
2	1.95	10.646	1.441	13.54
3	2.90	10.850	1.487	13.70
4	3.89	10.534	1.567	14.88
5	5.89	10.569	1.492	14.11
6	9.87	11.053	1.375	12.44
7	11.82	10.857	1.441	13.27
8	13.81	11.072	1.455	13.14
9	15.80	11.392	1.380	12.11
10	19.74	11.245	1.273	11.32
11	23.68	11.484	1.277	11.12
12	27.67	11.835	1.029	8.69
13	31.56	11.850	1.071	9.93
14	39.48	11.928	.977	8.19
15	47.41	12.185	1.051	8.63

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- C135W1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	5.498	2.971	54.03
2	1.91	6.938	3.446	49.67
3	2.82	8.760	3.648	41.64
4	3.78	9.904	3.172	32.02
5	5.71	11.268	1.629	14.46
6	7.63	11.212	1.470	13.11
7	9.55	11.533	1.326	11.49
8	11.47	11.302	1.386	12.26
9	13.34	11.406	1.395	12.23
10	15.22	11.376	1.420	12.48
11	19.06	11.408	1.421	12.46
12	22.85	11.663	1.352	11.60
13	26.65	11.776	1.360	11.55
14	30.49	11.957	1.141	9.55
15	38.12	12.258	1.101	8.98
16	45.58	12.004	1.197	9.90
17	60.94	12.610	.949	7.53
18	76.17	13.103	.813	6.21
19	95.23	13.391	.824	6.15
20	114.25	13.667	.727	5.32
21	133.32	13.746	.683	4.97
22	152.34	13.770	.683	4.96
23	165.28	13.498	.628	4.65

15% TURBULENCE IS AT- 5.6 METERS

## RESULTS FOR PROFILE- C135W3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.453	2.595	58.27
2	1.91	8.858	4.685	52.89
3	2.87	12.494	3.100	24.81
4	3.79	12.939	1.947	15.05
5	5.71	12.697	1.555	12.25
6	7.64	12.343	1.457	11.80
7	9.51	12.164	1.442	11.85
8	11.44	12.081	1.410	11.67
9	13.36	12.308	1.456	11.83
10	15.28	11.911	1.434	12.04
11	19.04	11.902	1.457	12.24
12	22.88	12.222	1.338	10.95

15% TURBULENCE IS AT- 3.8 METERS

## RESULTS FOR PROFILE- C135W5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	7.437	2.506	33.70
2	1.87	8.313	2.615	31.46
3	2.79	9.051	2.741	30.29
4	3.67	9.634	2.861	29.69
5	5.51	10.611	2.263	21.33
6	7.35	11.037	1.581	14.33
7	9.18	11.175	1.467	13.13
8	10.98	11.045	1.367	12.38
9	12.82	11.304	1.517	13.42
10	14.62	11.233	1.334	11.87
11	18.30	11.589	1.455	12.56
12	21.93	11.337	1.327	11.70

15% TURBULENCE IS AT- 7.2 METERS

## RESULTS FOR PROFILE- C135W7

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	10.739	1.479	13.77
2	1.92	10.432	1.431	13.72
3	2.89	10.873	1.427	13.12
4	3.82	10.622	1.422	13.38
5	5.76	10.911	1.315	12.05
6	7.70	10.796	1.437	13.31
7	9.60	11.215	1.257	11.21
8	11.54	11.318	1.229	10.86
9	13.53	11.342	1.280	11.28
10	15.38	11.112	1.349	12.14
11	19.22	11.202	1.363	12.17
12	23.10	11.374	1.192	10.48
13	26.94	11.595	1.117	9.64
14	30.82	11.785	1.047	8.88
15	38.54	11.874	1.054	8.87
16	46.22	12.222	.927	7.58

ALL TURBULENCE IS BELOW .15%

1/91

## RESULTS FOR PROFILE- A225W1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	5.067	2.936	57.96
2	1.91	7.101	3.772	53.12
3	2.83	9.592	3.589	37.42
4	3.79	11.491	2.758	24.00
5	5.71	11.850	1.761	14.86
6	7.64	11.922	1.470	12.33
7	9.56	11.731	1.447	12.34
8	11.48	11.813	1.320	11.17
9	13.36	11.778	1.339	11.36
10	15.24	11.665	1.549	13.28
11	19.08	11.320	1.453	12.84
12	22.88	11.407	1.307	11.46
13	26.69	11.542	1.281	11.10
14	30.53	11.636	1.172	10.07
15	38.18	11.828	1.238	10.46
16	45.78	12.255	1.076	8.78
17	61.03	12.445	.957	7.69
18	76.28	12.854	.829	6.45
19	95.37	13.088	.810	6.19
20	114.47	13.468	.600	4.46
21	133.52	13.649	.626	4.58
22	153.49	13.596	.566	4.16
23	169.33	13.266	.578	4.36

15% TURBULENCE IS AT- 5.7 METERS

## RESULTS FOR PROFILE- A225W3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.227	3.437	55.20
2	1.90	7.212	3.793	52.60
3	2.85	10.225	3.694	36.12
4	3.76	12.108	2.745	22.67
5	5.66	12.168	1.645	13.52
6	7.56	12.247	1.451	11.85
7	9.46	11.702	1.618	13.83
8	11.28	12.041	1.462	12.14
9	13.22	11.931	1.381	11.58
10	15.13	12.097	1.322	10.93
11	18.84	11.650	1.509	12.95
12	22.65	12.180	1.520	12.48

15% TURBULENCE IS AT- 5.4 METERS

## RESULTS FOR PROFILE- A225W5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.579	4.061	61.72
2	1.90	6.810	4.419	64.88
3	2.81	9.140	4.432	48.49
4	3.77	10.262	3.595	35.03
5	5.72	11.296	1.920	17.00
6	7.54	11.497	1.508	13.12
7	9.49	10.943	1.370	12.52
8	11.35	10.980	1.376	12.53
9	13.26	10.925	1.448	13.26
10	15.16	10.939	1.392	12.72
11	18.89	10.795	1.372	12.71
12	22.75	11.069	1.363	12.31
13	26.47	10.862	1.471	13.54
14	30.24	11.268	1.196	10.61

15% TURBULENCE IS AT- 6.7 METERS

## RESULTS FOR PROFILE- A225W6

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	10.433	1.545	14.80
2	1.92	10.510	1.529	14.55
3	2.87	10.632	1.369	12.88
4	3.82	10.337	1.547	14.97
5	5.76	10.621	1.440	13.55
6	7.71	10.930	1.475	13.49
7	9.61	10.724	1.328	12.38
8	11.55	10.670	1.467	13.75
9	13.49	10.974	1.399	12.75
10	15.44	10.877	1.465	13.47
11	19.28	10.929	1.339	12.25
12	23.12	11.573	1.264	10.92
13	27.01	11.268	1.356	12.03
14	30.81	11.594	1.095	9.44
15	38.54	11.656	1.108	9.51
16	46.27	12.013	.965	8.03

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- C225W1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.854	3.604	52.58
2	1.92	9.633	3.789	39.34
3	2.84	11.366	3.066	26.97
4	3.85	11.943	2.567	21.49
5	5.74	12.104	1.658	13.70
6	7.67	12.091	1.501	12.42
7	9.56	12.240	1.532	12.52
8	11.49	11.854	1.588	13.39
9	13.43	12.172	1.560	12.81
10	15.32	12.146	1.321	10.87
11	19.18	12.204	1.384	11.34
12	23.01	12.382	1.297	10.48
13	26.87	12.244	1.290	10.54
14	30.65	12.593	1.252	9.94
15	38.34	12.700	1.128	8.88
16	46.03	13.079	1.041	7.96
17	61.36	13.306	.986	7.41
18	76.70	13.661	.907	6.64
19	95.90	14.005	.784	5.60
20	115.06	14.336	.840	5.86
21	134.26	14.394	.790	5.49
22	153.46	14.322	.748	5.22
23	161.47	14.198	.737	5.19

15% TURBULENCE IS AT- 5.4 METERS

## RESULTS FOR PROFILE- C225W3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.107	3.093	50.65
2	1.89	8.102	3.829	47.25
3	2.83	10.155	3.320	32.69
4	3.77	11.704	2.311	19.74
5	5.61	12.230	1.501	12.27
6	7.49	12.026	1.553	12.92
7	9.37	12.332	1.434	11.63
8	11.21	12.107	1.455	12.02
9	13.09	12.141	1.464	12.06
10	14.93	12.113	1.555	12.83
11	18.64	12.151	1.305	10.74
12	22.41	12.309	1.358	11.03

15% TURBULENCE IS AT- 4.9 METERS

## RESULTS FOR PROFILE- C225W5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	9.534	4.009	42.05
2	1.91	11.269	3.364	29.85
3	2.83	11.554	2.445	21.16
4	3.83	12.537	1.690	13.48
5	5.71	12.068	1.494	12.38
6	7.64	12.077	1.524	12.62
7	9.54	11.800	1.496	12.68
8	9.56	11.857	1.408	11.87
9	11.44	11.882	1.572	13.23
10	13.36	11.742	1.442	12.28
11	15.24	11.732	1.455	12.40
12	19.08	11.988	1.325	11.05
13	22.88	11.974	1.401	11.70

15% TURBULENCE IS AT- 3.6 METERS

## RESULTS FOR PROFILE- C225W6

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	11.748	1.560	13.28
2	1.95	11.565	1.504	13.01
3	2.85	11.585	1.617	13.96
4	3.76	11.799	1.563	13.25
5	5.66	11.747	1.527	13.00
6	7.57	11.640	1.492	12.82
7	9.47	11.817	1.480	12.53
8	11.33	11.960	1.514	12.66
9	13.23	12.109	1.390	11.48
10	15.09	12.084	1.489	12.32
11	18.89	12.178	1.478	12.14
12	22.66	12.227	1.399	11.44
13	26.42	12.481	1.440	11.54
14	30.18	12.823	1.262	9.84
15	37.75	13.143	1.151	8.76
16	45.27	13.042	1.099	8.42

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- A000W1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	7.474	2.667	35.68
2	1.91	7.940	2.732	34.40
3	2.81	9.309	2.628	26.23
4	3.82	9.986	2.275	22.78
5	5.68	10.954	2.039	18.61
6	7.59	10.998	1.863	16.94
7	9.45	11.256	1.788	15.88
8	11.36	11.287	1.684	14.92
9	13.27	11.339	1.709	15.07
10	15.19	11.274	1.676	14.86
11	16.96	11.503	1.742	15.15
12	22.78	11.431	1.562	13.67
13	26.51	11.706	1.689	14.42
14	30.28	11.507	1.639	14.24
15	37.92	11.720	1.609	13.73
16	45.47	12.603	1.693	13.43
17	60.66	13.655	1.281	9.38
18	75.76	14.105	1.088	7.72
19	94.73	14.392	.956	6.64
20	113.65	14.600	.839	5.74
21	132.61	14.755	.790	5.35
22	151.53	14.734	.750	5.09

15% TURBULENCE IS AT- 11.2 METERS

## RESULTS FOR PROFILE- B000W1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	9.764	2.312	23.68
2	1.91	10.459	2.237	21.39
3	2.82	10.605	2.090	19.71
4	3.83	10.893	1.934	17.75
5	5.70	11.115	1.844	16.59
6	7.61	11.258	1.720	15.28
7	9.53	11.246	1.758	15.63
8	11.40	11.130	1.673	15.03
9	13.32	11.138	1.605	14.41
10	15.24	11.233	1.549	13.79
11	18.98	11.715	1.663	14.19
12	22.86	11.615	1.618	13.93
13	26.60	11.546	1.688	14.62
14	30.43	11.843	1.713	14.47
15	38.01	11.853	1.613	13.61
16	45.68	12.994	1.616	12.44
17	60.83	14.018	1.144	8.16
18	76.03	14.113	1.071	7.59
19	95.11	14.506	.896	6.17
20	114.09	14.722	.860	5.84
21	133.08	14.827	.789	5.32
22	152.11	14.761	.806	5.46

15% TURBULENCE IS AT- 11.5 METERS

## RESULTS FOR PROFILE- C000W1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	10.570	2.150	20.34
2	1.91	10.765	2.005	18.63
3	2.82	10.972	1.799	16.40
4	3.78	11.066	1.571	14.20
5	5.69	11.277	1.684	14.93
6	7.65	11.222	1.674	14.92
7	9.48	11.370	1.760	15.48
8	11.39	10.946	1.663	15.19
9	13.31	11.472	1.634	14.24
10	15.22	11.364	1.635	14.39
11	19.01	11.535	1.569	13.69
12	22.79	11.550	1.644	14.23
13	26.62	11.636	1.600	13.75
14	30.36	11.505	1.696	14.74
15	37.98	12.256	1.658	13.53
16	45.60	13.033	1.449	11.12
17	60.78	13.766	1.140	8.28
18	75.97	13.934	1.038	7.45
19	94.98	14.443	.905	6.27
20	114.00	14.555	.829	5.70
21	132.97	14.662	.740	5.05
22	151.94	14.545	.771	5.30

15% TURBULENCE IS AT- 3.4 METERS

## RESULTS FOR PROFILE- D000W1

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	10.233	2.031	19.85
2	1.95	10.663	1.810	16.98
3	2.82	10.924	1.719	15.74
4	3.82	11.020	1.621	14.71
5	5.74	11.065	1.601	14.47
6	7.56	10.948	1.615	14.75
7	9.52	11.335	1.614	14.24
8	11.44	11.092	1.571	14.16
9	13.35	11.122	1.592	14.31
10	15.18	11.044	1.590	14.39
11	18.96	11.445	1.547	13.52
12	22.79	11.294	1.567	13.87
13	26.57	11.350	1.666	14.68
14	30.40	11.525	1.596	13.85
15	37.97	12.601	1.614	12.81
16	45.63	13.204	1.336	10.12
17	60.77	13.751	1.076	7.83
18	76.00	14.029	.932	6.65
19	94.96	14.134	.889	6.29
20	113.98	14.450	.741	5.13
21	132.99	14.477	.713	4.92
22	151.96	14.200	.629	5.84

15% TURBULENCE IS AT- 3.5 METERS

## RESULTS FOR PROFILE- A180W4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.459	2.350	52.70
2	1.90	9.866	4.377	44.36
3	2.85	12.249	2.394	19.54
4	3.76	12.324	1.559	12.65
5	5.66	11.886	1.488	12.52
6	7.56	11.810	1.536	13.01
7	9.42	11.974	1.442	12.05
8	11.32	11.171	1.451	12.99
9	13.22	11.519	1.432	12.43
10	15.13	11.353	1.462	12.88
11	18.84	11.573	1.489	12.87
12	22.65	11.588	1.449	12.50

15% TURBULENCE IS AT- 3.4 METERS

## RESULTS FOR PROFILE- B180W4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.227	2.130	50.40
2	1.90	8.820	4.144	46.98
3	2.84	12.310	2.288	18.59
4	3.79	12.257	1.538	12.55
5	5.59	11.803	1.422	12.05
6	7.53	11.516	1.378	11.96
7	9.37	11.612	1.538	13.24
8	11.27	11.599	1.413	12.19
9	13.16	11.639	1.425	12.25
10	15.00	11.409	1.463	12.83
11	18.79	11.760	1.497	12.73
12	22.53	11.451	1.303	11.38

15% TURBULENCE IS AT- 3.4 METERS

171

## RESULTS FOR PROFILE- C180W4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.983	2.744	55.07
2	1.89	10.437	3.765	36.07
3	2.79	12.346	1.758	14.24
4	3.73	12.001	1.500	12.50
5	5.61	11.466	1.437	12.53
6	7.49	11.729	1.406	11.98
7	9.33	11.422	1.490	13.05
8	11.21	11.492	1.434	12.48
9	13.09	11.730	1.392	11.87
10	14.93	11.350	1.381	12.17
11	18.64	11.609	1.392	11.99
12	22.41	11.848	1.292	10.91

15% TURBULENCE IS AT- 2.8 METERS

## RESULTS FOR PROFILE- D180W4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	5.432	2.940	54.13
2	1.88	10.422	3.580	34.35
3	2.77	12.278	1.717	13.99
4	3.71	11.944	1.449	12.13
5	5.57	11.461	1.255	10.95
6	7.44	11.477	1.414	12.32
7	9.26	11.418	1.404	12.30
8	11.08	11.643	1.260	10.83
9	13.00	11.454	1.335	11.66
10	14.82	11.606	1.353	11.66
11	18.51	11.647	1.402	12.04
12	22.24	11.530	1.301	11.28

15% TURBULENCE IS AT- 2.7 METERS

## RESULTS FOR PROFILE- A270W4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.670	1.947	53.05
2	1.92	7.685	4.105	53.42
3	2.85	12.602	2.733	21.69
4	3.82	12.401	1.789	14.42
5	5.76	12.114	1.394	11.51
6	7.71	11.698	1.467	12.54
7	9.61	11.652	1.436	12.32
8	11.55	11.748	1.436	12.22
9	13.49	11.615	1.370	11.79
10	15.44	11.555	1.465	12.68
11	19.23	11.524	1.495	12.97
12	23.12	11.976	1.173	9.79

15% TURBULENCE IS AT- 3.7 METERS

## RESULTS FOR PROFILE- B270W4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.108	2.194	53.41
2	1.92	9.099	4.288	47.13
3	2.84	12.752	2.407	18.88
4	3.85	12.742	1.489	11.69
5	5.74	11.805	1.354	11.47
6	7.67	11.823	1.347	11.39
7	9.56	11.783	1.353	11.48
8	11.49	11.394	1.387	12.17
9	13.43	11.650	1.366	11.73
10	15.36	11.960	1.265	10.58
11	19.14	11.754	1.346	11.45
12	23.00	11.864	1.310	11.04

15% TURBULENCE IS AT- 3.4 METERS

## RESULTS FOR PROFILE- C270W4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.417	2.468	55.87
2	1.91	9.846	4.014	40.77
3	2.83	12.204	2.015	16.51
4	3.79	12.427	1.486	11.96
5	5.71	11.969	1.442	12.05
6	7.64	11.660	1.427	12.23
7	9.51	11.615	1.350	11.63
8	11.44	11.651	1.378	11.83
9	13.36	11.700	1.432	12.24
10	15.24	11.793	1.443	12.23
11	19.04	11.794	1.246	10.57
12	22.88	11.863	1.266	10.68

15% TURBULENCE IS AT- 3.1 METERS

## RESULTS FOR PROFILE- D270W4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	6.121	3.413	55.76
2	1.90	10.928	3.252	29.76
3	2.81	12.091	1.783	14.74
4	3.77	12.054	1.380	11.45
5	5.68	12.031	1.267	10.53
6	7.58	11.669	1.460	12.51
7	9.49	11.816	1.342	11.35
8	11.36	11.628	1.347	11.59
9	13.27	11.775	1.454	12.35
10	15.17	11.729	1.367	11.66
11	18.95	12.012	1.247	10.38
12	22.72	12.009	1.226	10.21

15% TURBULENCE IS AT- 2.8 METERS

## RESULTS FOR PROFILE- A270W5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.739	1.938	51.84
2	1.90	4.284	2.339	54.60
3	2.81	6.120	3.679	60.11
4	3.78	10.927	4.894	44.79
5	5.66	13.370	2.312	17.30
6	7.56	13.058	1.611	12.33
7	9.44	12.559	1.512	12.04
8	11.32	12.479	1.497	12.00
9	13.22	12.328	1.453	11.79
10	15.10	12.329	1.498	12.15
11	18.86	12.190	1.402	11.50
12	22.65	12.271	1.502	12.24

15% TURBULENCE IS AT- 6.5 METERS

## RESULTS FOR PROFILE- B270W5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	11.238	2.763	24.59
2	1.94	12.026	1.933	16.07
3	2.93	12.029	1.600	13.30
4	3.87	12.073	1.423	11.79
5	5.84	12.186	1.423	11.67
6	7.82	11.870	1.434	12.08
7	9.75	11.865	1.342	11.31
8	11.72	11.513	1.438	12.49
9	13.70	11.799	1.410	11.95
10	15.62	11.728	1.346	11.48
11	19.53	11.920	1.224	10.26
12	23.48	11.754	1.463	12.44

15% TURBULENCE IS AT- 2.3 METERS

## RESULTS FOR PROFILE- C270W5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	10.101	3.615	35.79
2	1.95	11.633	1.742	14.98
3	2.81	11.727	1.542	13.15
4	3.80	11.361	1.400	12.33
5	5.66	11.477	1.331	11.60
6	7.59	11.058	1.476	13.34
7	9.47	11.032	1.383	12.53
8	11.32	10.995	1.319	11.99
9	13.23	10.998	1.314	11.95
10	15.08	11.014	1.377	12.50
11	18.84	11.017	1.346	12.22
12	22.65	11.145	1.437	12.89
13	26.41	11.089	1.333	12.02

15% TURBULENCE IS AT- 1.9 METERS

## RESULTS FOR PROFILE- D270W5

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	11.494	1.746	15.19
2	1.90	11.501	1.505	13.08
3	2.81	11.777	1.365	11.59
4	3.77	11.505	1.411	12.27
5	5.68	11.708	1.463	12.50
6	7.58	11.522	1.469	12.75
7	9.45	11.458	1.350	11.78
8	11.36	11.658	1.404	12.05
9	13.27	11.533	1.300	11.27
10	15.17	11.777	1.272	10.80
11	18.95	11.666	1.263	10.82
12	22.72	11.821	1.255	10.62

15% TURBULENCE IS AT- 1.0 METERS

## RESULTS FOR PROFILE- PLATA3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.793	2.046	42.69
2	1.91	9.626	4.805	49.92
3	2.87	17.734	1.944	10.96
4	3.79	17.037	1.116	6.55
5	5.71	15.832	1.049	6.63
6	7.63	15.007	1.127	7.47
7	9.50	14.893	1.131	7.59
8	11.43	14.466	1.089	7.53
9	13.36	14.487	1.145	7.90
10	15.27	14.399	1.142	7.93
11	19.02	14.345	1.118	7.80
12	22.86	14.182	1.216	8.58
13	26.70	14.294	1.141	7.98
14	30.50	14.136	1.116	7.96
15	38.09	14.467	1.177	8.14
16	45.73	14.459	1.151	7.96
17	60.97	14.807	1.130	7.63
18	76.24	15.199	1.033	6.79
19	95.27	15.698	.939	5.98
20	114.30	15.816	.982	6.21
21	133.38	15.952	.816	5.12
22	152.45	15.982	.792	4.95

15% TURBULENCE IS AT- 2.8 METERS

## RESULTS FOR PROFILE- PLATC3

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	4.550	2.288	50.29
2	1.91	12.653	4.898	38.71
3	3.78	16.310	1.121	6.87
4	5.70	15.384	1.111	7.22
5	7.61	14.956	1.138	7.61
6	9.48	14.856	1.000	6.73
7	11.44	14.585	1.140	7.81
8	13.36	14.414	1.128	7.83
9	15.19	14.450	1.137	7.87
10	19.02	14.330	1.156	8.07
11	22.81	14.400	1.184	8.22
12	26.64	14.456	1.122	7.76
13	30.43	14.436	1.185	8.21
14	38.05	14.580	1.178	8.08
15	45.62	14.703	1.169	7.95
16	60.82	15.013	1.120	7.46
17	76.06	15.278	1.080	7.07
18	95.04	15.594	.989	6.34
19	114.02	15.909	.895	5.63
20	133.05	16.068	.802	4.99
21	152.08	15.917	.829	5.21
22	159.38	15.741	.944	5.99

15% TURBULENCE IS AT- 3.3 METERS

174

## RESULTS FOR PROFILE- PLATA4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.633	1.545	42.54
2	1.91	6.495	3.431	52.84
3	2.86	13.701	1.685	12.30
4	3.77	13.305	1.028	7.73
5	5.69	12.234	.703	5.74
6	7.60	11.894	.701	5.89
7	9.51	11.568	.710	6.14
8	11.43	11.386	.798	7.01
9	13.34	11.213	.819	7.30
10	15.16	11.121	.785	7.06
11	18.94	11.207	.814	7.27
12	22.82	11.193	.787	7.03
13	26.60	11.213	.751	6.70
14	30.33	11.151	.721	6.46
15	37.98	11.392	.775	6.80
16	45.59	11.565	.758	6.55
17	60.72	11.668	.753	6.45
18	75.88	11.982	.626	5.23
19	94.88	12.170	.542	4.45
20	113.78	12.467	.432	3.46
21	132.87	12.621	.231	1.83
22	151.82	12.609	.160	1.27
23	164.76	12.418	.497	4.00

15% TURBULENCE IS AT- 2.8 METERS

## RESULTS FOR PROFILE- PLATC4

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	3.269	1.515	46.33
2	1.91	8.566	3.778	44.11
3	2.82	12.834	1.431	11.15
4	3.82	12.453	.868	6.97
5	5.69	11.892	.755	6.35
6	7.60	11.495	.753	6.55
7	9.51	11.337	.726	6.41
8	11.38	11.066	.710	6.42
9	13.30	11.160	.784	7.03
10	15.16	10.869	.806	7.42
11	18.94	11.134	.737	6.62
12	22.82	11.017	.806	7.31
13	26.55	11.018	.767	6.96
14	30.33	11.213	.800	7.14
15	37.99	11.119	.801	7.20
16	45.50	11.402	.756	6.63
17	60.76	11.555	.761	6.59
18	75.89	11.836	.636	5.37
19	94.89	12.152	.559	4.60
20	113.84	12.287	.425	3.46
21	132.83	12.419	.158	1.27
22	151.79	12.377	.271	2.19
23	159.76	12.286	.427	3.48

15% TURBULENCE IS AT- 2.7 METERS

## RESULTS FOR PROFILE- PLATAS

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	2.289	.990	43.27
2	1.91	5.929	2.512	42.36
3	2.87	9.196	.943	10.25
4	3.78	8.828	.719	8.14
5	5.69	8.184	.659	8.05
6	7.61	7.754	.718	9.26
7	9.48	7.792	.706	9.06
8	11.40	7.711	.635	8.24
9	13.31	7.583	.620	8.17
10	15.23	7.526	.603	8.02
11	19.01	7.586	.704	9.29
12	22.80	7.418	.579	7.80
13	26.59	7.409	.657	8.87
14	30.42	7.611	.635	8.34
15	37.99	7.689	.698	9.08
16	45.61	7.626	.662	8.68
17	60.80	7.864	.674	8.57
18	76.03	8.117	.655	8.07
19	95.01	8.339	.578	6.94
20	114.03	8.465	.567	6.69
21	133.01	8.466	.567	6.70
22	151.99	8.499	.502	5.91
23	164.76	8.501	.512	6.02

15% TURBULENCE IS AT- 2.7 METERS

## RESULTS FOR PROFILE- PLATCS

DATA POINT	HEIGHT (M ABV HDECK)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT (PERCENT)
1	.95	2.250	.982	43.65
2	1.91	5.736	2.573	44.86
3	2.86	8.559	.994	11.62
4	3.82	8.468	.668	7.89
5	5.69	7.931	.688	8.67
6	7.60	7.693	.668	8.68
7	9.47	7.557	.617	8.17
8	11.38	7.562	.691	9.14
9	13.30	7.458	.704	9.44
10	15.16	7.429	.578	7.78
11	18.99	7.365	.623	8.45
12	22.77	7.505	.645	8.59
13	26.60	7.445	.638	8.57
14	30.38	7.530	.701	9.31
15	37.99	7.520	.641	8.53
16	45.55	7.625	.684	8.96
17	60.72	7.942	.654	8.24

15% TURBULENCE IS AT- 2.8 METERS

## RESULTS FOR PROFILE- SMOOTH

DATA POINT	HEIGHT (M ABV OCEAN)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT. (PERCENT)
1	1.00	8.708	1.212	13.92
2	1.96	9.106	1.184	13.00
3	2.92	9.408	1.194	12.69
4	3.84	9.914	1.231	12.42
5	5.76	10.063	1.174	11.66
6	7.68	10.275	1.170	11.39
7	9.60	10.588	1.077	10.17
8	11.43	10.529	1.160	11.02
9	13.40	10.656	1.121	10.52
10	15.32	10.838	1.099	10.14
11	19.11	10.911	1.126	10.32
12	22.86	11.194	1.015	9.07
13	26.71	11.152	1.134	10.17
14	30.55	11.435	1.058	9.25
15	38.19	11.444	1.028	8.98
16	45.78	11.590	1.013	8.74
17	61.01	12.145	1.063	8.75
18	76.24	12.454	.982	7.68
19	95.36	12.980	1.003	7.73
20	114.39	13.426	1.006	7.49
21	133.42	13.720	.902	6.57
22	152.45	13.938	.882	6.33
23	171.52	14.324	.720	5.03
24	188.36	14.290	.782	5.47
25	192.52	14.291	.756	5.29

ALL TURBULENCE IS BELOW 15%

## RESULTS FOR PROFILE- WAVES

DATA POINT	HEIGHT (M ABV OCEAN)	UMEAN (M/SEC)	URMS (M/SEC)	TURB INT. (PERCENT)
1	.25	5.144	1.565	30.43
2	1.21	4.996	1.517	30.37
3	2.13	5.388	1.597	29.63
4	3.14	5.846	1.712	29.29
5	5.03	6.397	1.841	28.77
6	6.96	6.364	1.842	28.94
7	8.84	7.082	1.911	26.98
8	10.77	7.201	2.119	29.42
9	12.70	7.279	1.909	26.23
10	14.62	7.714	1.834	23.77
11	18.44	8.139	1.810	22.23
12	22.25	8.555	1.854	21.67
13	26.11	9.330	1.894	20.30
14	29.87	8.945	1.872	20.93
15	37.54	9.935	1.923	19.36
16	45.21	10.336	1.622	15.69
17	60.51	10.967	1.630	14.86
18	75.04	12.061	1.337	11.08
19	94.95	12.569	1.241	9.87
20	114.10	13.211	1.088	8.23
21	133.21	13.695	.878	6.41
22	152.36	13.928	.866	6.21
23	171.46	14.368	.727	5.06
24	190.57	14.345	.686	4.78

15% TURBULENCE IS AT- 57.9 METERS