NASA/TM—2019–220053

Effect of Upstream Buildings on the Aerodynamic Flow Quality in the Test Section of the National Full-Scale Aerodynamics Complex 80- by 120-Foot Wind Tunnel

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January 2019

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ACKNOWLEDGMENTS

Special thanks to Dr. William Warmbrodt who initiated this research program and provided continuous guidance and encouragement to numerous interns who contributed to the project, and to Farid Haddad and Arturo Zamora of the NFAC for their help in preparing for and executing the program.

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NOMENCLATURE

H, W	height and width of 1/50th-scale 80x120 test section
I_u	relative turbulence intensity in x-direction, $\sigma_u \ / \ U$ (%)
I_v	relative turbulence intensity in y-direction, $\sigma_v \ / \ U$ (%)
I_w	relative turbulence intensity in z-direction, $\sigma_w \ / \ U$ (%)
I_{uvw}	overall relative turbulence intensity, σ_{uvw} / U (%)
u, v, w	instantaneous velocity components in x, y, and z directions, respectively
U, V, W	mean velocity components in x, y, and z directions
σ_u	rms fluctuation in x-component of velocity
σ_v	rms fluctuation in y-component of velocity
σ_w	rms fluctuation in z-component of velocity
σ_{uvw}	average rms velocity fluctuation, $\sqrt{\{(\sigma_u{}^2 + \sigma_v{}^2 + \sigma_w{}^2) / 3\}}$

NFAC	National Full-Scale Aerodynamics Complex
NREL	National Renewable Energy Lab
40x80	40- by 80-Foot Wind Tunnel
40x80x120	40- by 80-Foot/80- by 120-Foot Wind Tunnel
80x120	80- by 120-Foot Wind Tunnel

Effect of Upstream Buildings on the Aerodynamic Flow Quality in the Test Section of the National Full-Scale Aerodynamics Complex 80- by 120-Foot Wind Tunnel

Hannah Dromiack,[*] Ariel Chitan,[†] Sarah Schoultz,[‡] and Alan Wadcock

Ames Research Center

SUMMARY

The effect of upwind buildings on flow quality in the test section of the 80- by 120-Foot Wind Tunnel housed at the National Full-Scale Aerodynamics Complex at NASA Ames Research Center was modeled in this study. A 1/50th-scale model of the 80x120 leg was placed in the test section of the full-scale 80x120. Models of existing buildings were constructed at 1/50th scale. A variety of upwind blockage conditions were studied using rectangular bodies to simulate a 2D blockage directly ahead of the inlet. Surveys of test section flow quality were achieved using a Cobra probe to provide all three orthogonal velocity components. Measurements were restricted to the simulation of quiescent (no wind) atmospheric conditions. The primary intent of this paper is to be a data report, therefore it contains a minimum amount of analysis and discussion.

INTRODUCTION

The National Aeronautics and Space Administration (NASA) is home to the National Full-Scale Aerodynamics Complex (NFAC) at Ames Research Center in California. The 80- by 120-Foot Wind Tunnel (80x120) is an open circuit wind tunnel (Fig. 1). Air is drawn in through the inlet and passes through the contraction on its way to the test section. Winds and turbulence can enter through the inlet and affect test section flow quality. In this way, the test section is subject to external atmospheric conditions. It is important to minimize external turbulence, for example by controlling the size and placement of upwind buildings, so that test section flow quality is preserved.

In 1987, an internal NASA memo established a building exclusion zone in front of the 80x120 inlet. In 2004, a second memo was written that waived the building restriction but introduced height restrictions in the 80x120 right-of-way. This allowed for future construction at NASA Ames Research Center near Building N-258 (Fig. 2). At the time of this report, there are several buildings located in this exclusion zone, all of which adhere to the height restrictions of the 2004 memo. In 2013, however, construction began at NASA Ames near Building N-258 that, if completed, would not adhere to the height limitations established in the 2004 memo.

This report describes testing that was conducted in 2014 to measure the effect of upwind blockage on the aerodynamic flow quality within the 80x120 test section. A 1/50th-scale model of the 40- by 80-Foot/80- by 120-Foot Wind Tunnel (40x80x120) was used in 1976 for testing

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prior to NFAC 80x120 construction. This model is shown installed in the NFAC 40- by 80-Foot Wind Tunnel (40x80) in Figure 3. An abbreviated model of the 80x120 leg was placed in the test section of the full-scale 80x120 for the current test program (Fig. 4). The model inlet is shown mounted as close as possible to the axis of rotation of the turntable.

PHASE I AND PHASE II STUDIES

Previous research, referred to as Phase I, occurred in 2013 and determined the sensitivity of the aerodynamic flow quality ahead of the inlet to upwind blockage. The Phase I report (Ref. 1) documents the turbulence level *in the plane of the model inlet* for four blockage conditions:

1. No Buildings.
2. Existing Buildings.
3. Existing plus Future Buildings.
4. Generic 2D Buildings located directly upstream from the inlet.

Phase I measurements were taken in the plane of the inlet because the guide vanes for the model inlet were still under design at the time of testing. Phase I results indicate that planned future buildings would cause no significant increase in turbulence level in the plane of the inlet for quiescent atmospheric conditions (i.e., zero wind). The second half of Phase I testing was to include the effect of wind using the NFAC fan drive to provide 0- to 20-mph winds and rotation of the turntable to vary wind direction. Unfortunately, nonzero wind condition testing was left incomplete when the NFAC 80x120 had to be vacated earlier than anticipated.

Testing outlined in this report, referred to as Phase II, was conducted in 2014 and used newly designed and built inlet guide vanes installed in the 1/50th-scale model of the 80x120 inlet (Figs. 5 and 6). A Cobra Probe was installed in the model test section, and velocity survey measurements taken for four blockage conditions:

1. Baseline (No Upwind Buildings).
2. Existing Buildings.
3. 2D Blockage. Rectangular geometries were placed directly in front of the inlet. This was an attempt to provide a generic building-geometry database that could prove helpful for future testing and predictions as it represents a worst-case scenario for flow quality in the NFAC 80x120 test section.
4. Spires at Inlet. Additional testing was also conducted in Phase II to assist future test planning for the National Renewable Energy Lab (NREL). NREL has voiced interest in returning to the NFAC 80x120 to perform a small-scale wind turbine test with a simulated atmospheric boundary layer and higher free-stream turbulence than is normally provided to NFAC customers. Spires were therefore installed immediately in front of the model inlet to simulate an atmospheric boundary layer inside the test section with an associated increase in turbulence level.

It is noteworthy that future buildings were not tested in Phase II as they had already been investigated in Phase I and shown to have minimal effect on flow quality at the inlet for

quiescent atmospheric conditions. Unfortunately, once again, the sensitivity to external atmospheric winds was not determined as the NFAC 80x120 test section had to be prematurely vacated.

TEST FACILITY AND TEST HARDWARE

The test section of the NFAC 80x120 was chosen as the best location to conduct testing because of its large size and controllable environment. The test section is 80 feet high, 120 feet wide, and 120 feet long. The 1/50th-scale 80x120 model was placed on the turntable in the NFAC 80x120 test section with the inlet as close as possible to the turntable axis, and model buildings were placed upwind as necessary. For "no wind" testing, NFAC Vane Set 4 was closed. Closing Vane Set 4 eliminated flow *through* the NFAC 80x120 test section but did not eliminate flow recirculation from external wind entering via the NFAC 80x120 inlet or from the model 80x120 exhaust.

1/50th-Scale Model NFAC

The 1/50th-scale model of the NFAC can be configured as a complete model that includes the NFAC 40x80 circuit, the NFAC drive system, and the NFAC 80x120 leg. To simplify operation of the 1/50th-scale model in the current study, the 1/50th-scale 40x80 circuit was deemed unnecessary. The only components that were used from the 1/50th-scale model were the 80x120 inlet with its cowling, the contraction, and the test section.

Drive Fan

The fan used to drive the 1/50th-scale 80x120 leg is a single D/47 vane axial fan from the Chicago Blower Corporation (Fig. 7). The fan is rated at 40,000 cubic feet per minute, which translates to a maximum achievable speed of 52.9 meters per second (m/s) (102.9 knots) in the test section, meeting the 100-knot requirement for this experiment. Since the fan is 47 inches in diameter, a long transition section was built to keep the flow attached between the test section and the fan. A variable frequency drive was used to control the fan frequency, and therefore the air velocity in the test section.

Series 100 Cobra Probe

A single Cobra probe was used to acquire velocity measurements in the test section of the 1/50th-scale wind tunnel (Fig. 8). The probe provides velocity components in three orthogonal directions (Fig. 9). Measurements were taken in the model test section by manually driving the probe through holes in the test section ceiling. Measurements were taken at specific points in the cross-flow plane (Fig. 10) with locations 7, 8, and 9 providing a vertical survey through the test section centerline. The computer station responsible for data acquisition was positioned immediately adjacent to the test section (Fig. 11) to minimize cable length between probe and data acquisition system, as recommended by the manufacturer. The Cobra probe is capable of measuring velocities between 2 m/s and 100 m/s with a resolution of 0.1 m/s. Further specifications for the Cobra probe are provided in Appendix A. All Phase II Cobra probe data were acquired at 5 kHz for a duration of slightly longer than 30 seconds.

Upwind Buildings

Multiple 1/50th-scale models were constructed to simulate existing upwind buildings that can affect flow quality entering the NFAC 80x120 inlet. Tested configurations are defined as follows:

1. No Buildings. No obstructions upstream of the inlet (baseline measurements).
2. Existing Buildings. Buildings north of the NASA Ames boundary in the city of Mountain View, plus NASA Ames Buildings N-258 and T35A-C (Fig. 12).
3. 2D Blockage. Blockage consisted of several 1-foot-square sections made from foam core board of 16-foot span located directly ahead of the inlet. Run classification according to blockage height is provided in Table 1. These blockages had heights of 1, 2, and 4 feet and were placed at distances 4, 8, 12, and 16 feet ahead of the inlet for each blockage (Fig. 13). Typical uncertainty in streamwise blockage placement was ± 1 inch.
4. Spires. Spires were placed against the front face of the inlet guide vanes in order to simulate an atmospheric boundary layer inside the test section. Testing was done with two sizes of spires: small spires (Fig. 14) and big spires (Fig. 15), both having the same inlet blocked area.

Boundary Layer Rake

A boundary layer rake was also used in Phase II testing (Fig. 16). It was placed inside the test section at $y/W = 0.203$, approximately 10 inches downstream from the Cobra probe survey plane so that it would not interfere with velocity survey measurements by the Cobra probe. Data from this rake was acquired by the 80x120 BDAS data acquisition system. Rake data acquisition was limited to Runs 28–42. Rake measurements can be used to locally extend the Cobra survey area to the test section floor and may prove beneficial for any future small-scale NREL wind turbine testing.

TEST PROCEDURE

Testing was conducted in the test section of the full-scale 80x120. Testing was performed with Vane Set 4 closed (NFAC in 40x80 configuration) to eliminate flow *through* the test section. Testing was conducted during daylight hours (as opposed to night), and there was no attempt to control slight recirculation effects within the full-scale test section. Sources of recirculation that went uncontrolled include the fan blower exhaust, atmospheric winds entering the test section through the inlet, and thermally induced wind drafts due to full-scale 80x120 wall-temperature differentials.

Before testing began, the fan blower was calibrated to produce wind speeds of 50 and 100 knots in the test section of the 1/50th-scale 80x120. This was done by placing the Cobra probe on the test section centerline of the 1/50th-scale model and the test section wind speed measured while varying the frequency of the blower. Twenty-five Hz was found to deliver approximately 50 knots in the test section, and 50 Hz provided approximately 100 knots.

Test conditions were repeated multiple times as a check on measurement repeatability despite variations in external atmospheric wind conditions, time of day, thermal gradients inside the NFAC 80x120 test section, etc.

RESULTS AND DISCUSSION

Test section velocity measurements were limited to blower frequencies of either 25 or 50 Hz (test section velocity of 50 or 100 knots). Cobra probe measurements were acquired for a duration slightly longer than 30 seconds. Each 30-second-long record was broken up into 12 equal duration records that were separately processed for mean values and standard deviations. The average mean and standard deviation were then computed from the population of 12 values for each to arrive at final values representative of the 30-second-duration record. The mean value was not changed by this procedure, but the resultant standard deviation became relatively insensitive to low-frequency changes in the mean velocity (associated with very large turbulent eddies recirculating inside the NFAC). Measured turbulence levels became more repeatable using this approach.

A brief run log summary is provided in Table 1 herein. Table A1 in Appendix A provides tabulated Cobra data from Runs 2–42.

Although it would be nice to generate test section turbulence levels at 1/50th-scale that match full scale, this is not necessary. The goal of the current measurements is to establish a baseline turbulence level corresponding to no upwind buildings and then determine *changes* in this turbulence level due to existing upwind buildings or any additional upwind blockage.

Baseline Measurements

For baseline runs, no buildings or any other form of blockage were present upstream of the inlet. These runs establish a baseline for the turbulence level that the tunnel would expect to see in the absence of upwind buildings. Baseline measurements were recorded in Runs 2, 28, 31, and 32. Contour plots are provided for baseline measurements in Figures 17, 18, 21, and 22 for 100 knots only. Table 1 shows that only vertical surveys through the test section centerline are available at 50-knot test section velocity. Contour plots are therefore unavailable at 50 knots.

Existing Buildings

Measurements of test section turbulence in the presence of existing buildings upstream from the 80x120 inlet were also acquired at 1/50th scale. These measurements were intended to provide representative *changes* in test section turbulence caused by existing buildings upwind from the NFAC inlet by comparison with the prior baseline (zero upwind buildings) measurements. Existing building measurements were acquired in Runs 29, 30, and 33 for 100-knot test section velocity. Contour plots for test section turbulence with existing upwind buildings are provided in Figures 19, 20, and 23, and act as a new baseline for future development ahead of the inlet.

Tufts on the top of the inlet bell-mouth clearly indicated flow being entrained into the inlet from “downstream” of the inlet under quiescent conditions. Location of the computer station directly adjacent to the 1/50th-scale model (Figs. 11 and 13) is believed to have resulted in increased turbulence levels observed in the upper left-hand side of the test section in pilot view.

2D Blockage Study

The 2D study was designed to determine test section turbulence levels for the worst-case scenario of a 2D blockage constructed directly upwind from the inlet. Two-dimensional blockage measurements were recorded in Runs 3–28 and 40–42. Only a limited number of full test section velocity surveys are available (Runs 3, 4, 28, and 40–42). Contour plots of test section flow quality measured during the 2D blockage study are presented in Appendix B, Figures B1–B5. The majority of 2D blockage data were acquired along a vertical survey through the test section centerline. Turbulence measurements at probe locations 7, 8, and 9 are available as a function of blockage height and distance upstream from inlet.

Figures B6–B8 in Appendix B summarize the turbulence measured in the vertical survey through the test section centerline and show that turbulence remains at a minimum on the test section centerline independent of blockage height and location. In addition, the overall relative turbulence intensity at 50 knots is approximately 30 percent greater than at 100-knot test section velocity. Repeatability is good in Figures B6–B8, especially considering that external atmospheric turbulence drawn into the NFAC is not identical from day to day, or even hour to hour. Upwind buildings need to be less than 8 feet ahead of the inlet in order for any discernible increase in test section turbulence to be identified (400 feet at full scale) *under quiescent wind conditions*.

Inlet Spires

Spires were placed immediately ahead of the inlet vanes in an attempt to create a vertical velocity gradient inside the test section as a rough simulation of the atmospheric boundary layer. Spire measurements were recorded in Runs 34, 38, and 39 (small spires) and Runs 35–37 (big spires). Contour plots of test section flow quality are shown in Appendix C, Figures C1–C6. Figure C6 was created using the average of Run34.Point7 and Run38.Point7 to compensate for missing data at probe location 6.

For data quality reasons, spire testing was conducted at a nominal 100-knot model test section velocity. It is unlikely that 50 percent blockage at the inlet from spires (small or large) would be allowable at 100-knot test section velocity in the NFAC because of structural considerations. It is also expected that NREL will only be interested in simulating nominal 20- to 30-mph winds (17.4 to 26.1 knots). It is also assumed that the appropriate velocity distribution and turbulence intensity distribution across the test section at 20 to 30 mph can be estimated by a simple scaling of the measurements obtained at 100 knots.

Line plots of $\boldsymbol{U}$, V, W, I_u, I_v, and I_w are provided in Appendix C, Figures C7–C12 at lateral stations $y/W = 0$ (test section centerline) and $y/W = 0.203$ (lateral location of test section boundary layer rake). Cobra probe measurements corresponding to probe locations 4, 5, and 6, corresponding to $y/W = 0.188$, are plotted as representative of the lateral location of the rake. Note that V and W are normalized with the local value of U (not the mean test section centerline velocity) and local relative turbulence intensities are also each normalized with the local value of U.

To extend the test section velocity survey closer to the floor of the test section a small pitot-static rake was mounted downstream from the Cobra probe survey plane. The rake extends from the floor of the test section to 8 inches above the floor, implying rake data are available for $-0.500 < z / H < -0.083$. Rake data have not been processed or plotted. Details of the rake geometry are listed in Table C1 of Appendix C. Rake measurements are shown in Table C2 of Appendix C.

It is hoped that Figures C1–C12, together with the rake measurements, will provide enough information to start a discussion of future NREL tests involving small wind turbines mounted close to the test section floor.

CONCLUSIONS

Upwind buildings need to be less than 8 feet ahead of the inlet in order for any discernible increase in test section turbulence to be identified (400 feet at full scale) *under quiescent wind conditions*.

FUTURE WORK

In future testing, Cobra probe surveys will be fully automated. The improved efficiency can be used to provide more rapid surveys or improved spatial resolution of the survey measurements depending on the requirements.

Instead of being inserted into predetermined holes in the top of the test section and manually moved from position to position, the Cobra probe will be inserted into the test section through a lateral slot in the test section ceiling. To prevent room air from bleeding into the test section through this slot, the survey apparatus will be enclosed in a closed plenum made from acrylic. The data acquisition and survey control laptop will remain adjacent to the test section, but future testing will not have personnel standing next to the experiment while testing is ongoing. Instead a Keyboard–Video–Mouse (KVM) extender will be used for remote control of the survey.

In the future, the effect of external wind (i.e., non-quiescent atmospheric conditions) will also be simulated. The 1/50th-scale model will, once again, be placed on the 80x120 test section turntable and subjected to nonzero wind by means of either the NFAC fan drive (the preferred approach) or via a linear array of blowers placed upstream from the 1/50th-scale inlet.

REFERENCES

1. Denise Salazar and Jillian Yuricich, “Turbulence Intensity at Inlet of 80- by 120-Foot Wind Tunnel Caused by Upwind Blockage,” NASA CR-2014-216637, Jan. 2014.

Table 1. Run Log Summary

Run	Portion of Test Section Measured	Nominal Test Section Speed (knot)	Buildings/Blockage Configuration
2	Centerline	50	No Buildings
	Full Survey	100	
2D Blockage			
3	Centerline	50	1' tall, x = 16'
	Full Survey	100	
4	Centerline	50	1' tall, x = 12'
	Full Survey	100	
5	Centerline	50, 100	1' tall, x = 8'
6	Centerline	50, 100	1' tall, x = 4'
7	Centerline	50, 100	1' tall, x = 16'
8	Centerline	50, 100	No Blockage
9	Centerline	50, 100	No Blockage
10	Centerline	50, 100	2' tall, x = 16'
11	Centerline	50, 100	2' tall, x = 12'
12	Centerline	50, 100	2' tall, x = 8'
13	Centerline	50, 100	2' tall, x = 4'
14	Centerline	50, 100	4' tall, x = 16'
15	Centerline	50, 100	4' tall, x = 12'
16	Centerline	50, 100	4' tall, x = 8'
17	Centerline	50, 100	4' tall, x = 4'
18	Centerline	50, 100	4' tall, x = 16'
19	Centerline	50, 100	No Blockage
20	Centerline	50, 100	1' tall, x = 4'
21	Centerline	50, 100	2' tall, x = 4'
22	Centerline	50, 100	4' tall, x = 4'
23	Centerline	50, 100	2' tall, x = 4'
24	Centerline	50, 100	1' tall, x = 4'
25	Centerline	50, 100	No Blockage
26	Centerline	50, 100	4' tall, x = 4'
28	Full Survey	100	No Blockage
Buildings			
29	Full Survey	100	Existing Buildings
30	Full Survey	100	Existing Buildings

Table 1. Run Log Summary (cont.)

Run	Portion of Test Section Measured	Nominal Test Section Speed (kt)	Buildings/Blockage Configuration
31	Full Survey	100	No Buildings
32	Full Survey	100	No Buildings
33	Full Survey	100	Existing Buildings
Spires			
34	Full Survey	100	Small Spires
35	Full Survey	100	Big Spires
36	Full Survey	100	Big Spires
37	Full Survey	100	Big Spires
38	Full Survey	100	Small Spires
39	Full Survey	100	Small Spires
2D Blockage			
40	Full Survey	100	4' tall, x = 4'
41	Full Survey	100	2' tall, x = 4'
42	Full Survey	100	1' tall, x = 4'

Figure 1. Aerial view of 80- by 120-Foot Wind Tunnel.

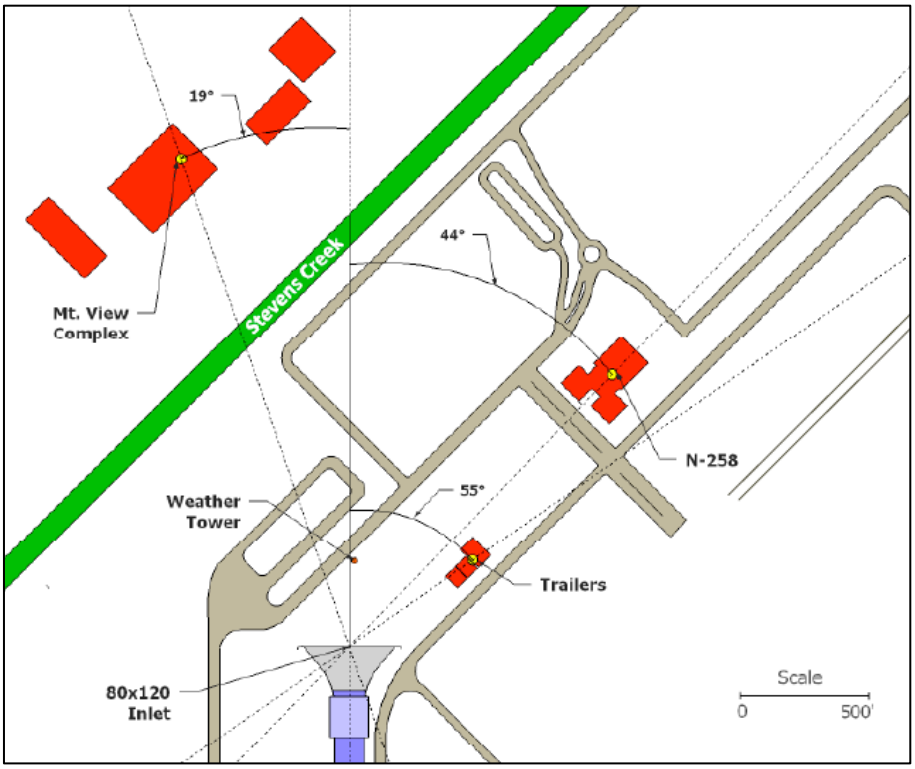

Figure 2. Schematic showing 80x120 inlet with existing upwind buildings.

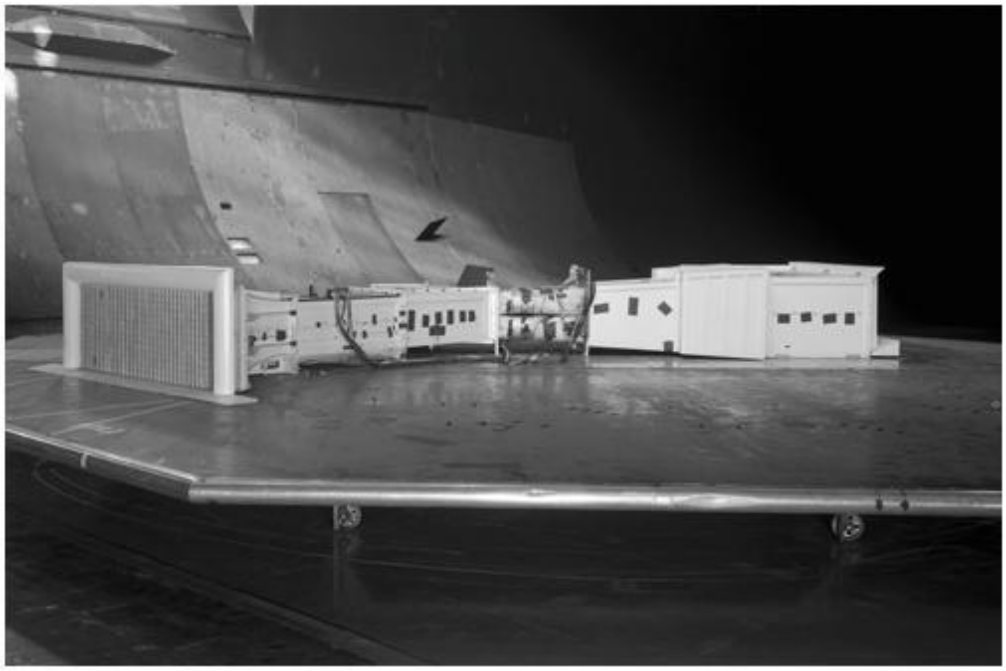

Figure 3. 1/50th-scale model of NFAC in the full-scale 40- by 80-Foot Wind Tunnel (1976).

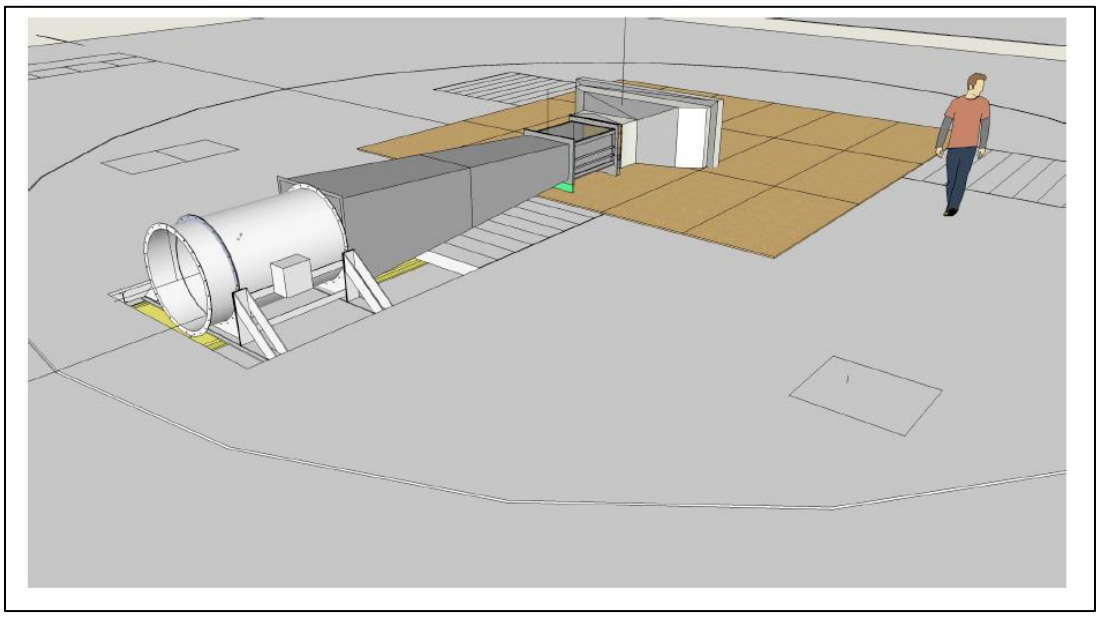

Figure 4. 1/50th-scale 80x120 leg in the full-scale 80x120 test section.

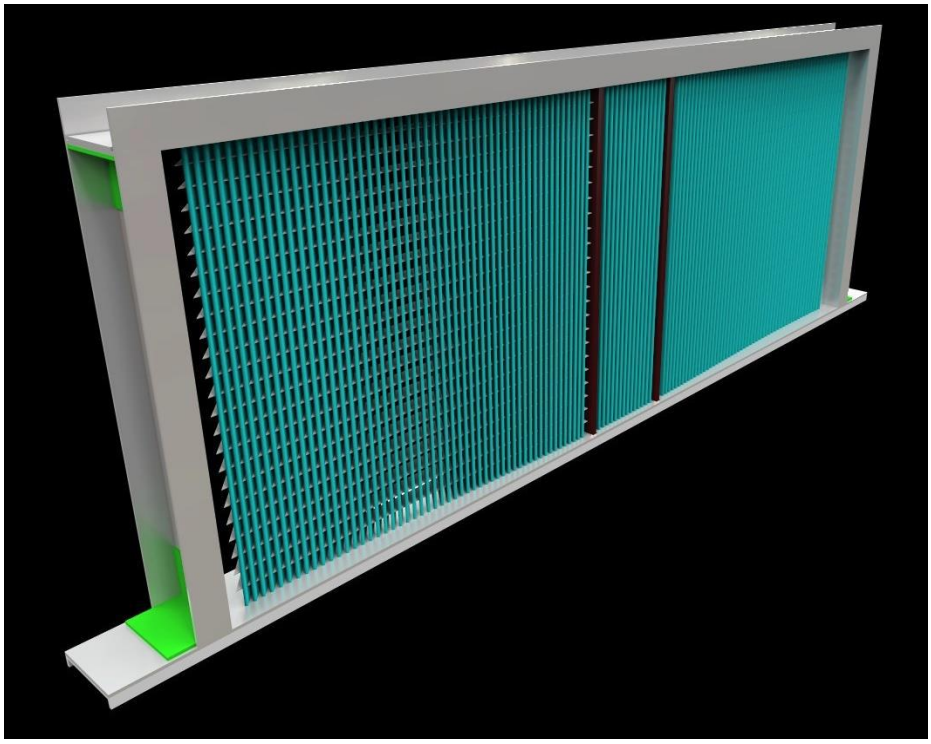

Figure 5. Inlet guide vanes.

Figure 6. Guide vanes installed in model inlet.

Figure 7. Chicago Blower Co. D/47 vane axial fan attached to rear of 1/50th-scale model.

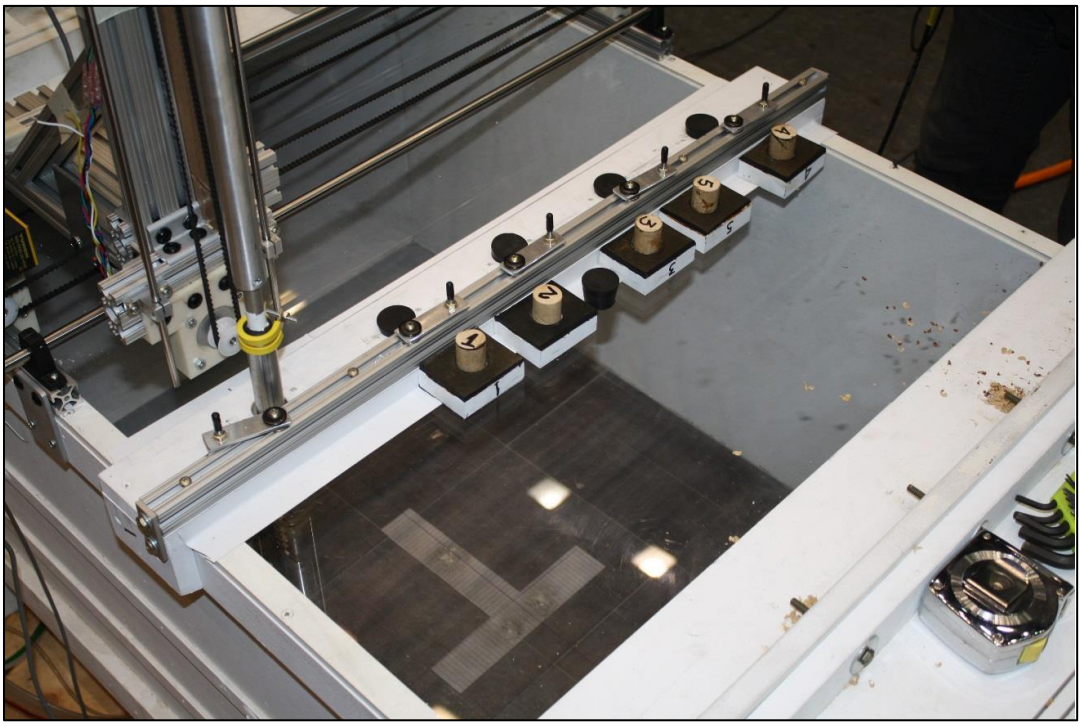

Figure 8. Cobra probe and survey access holes in model test section ceiling.

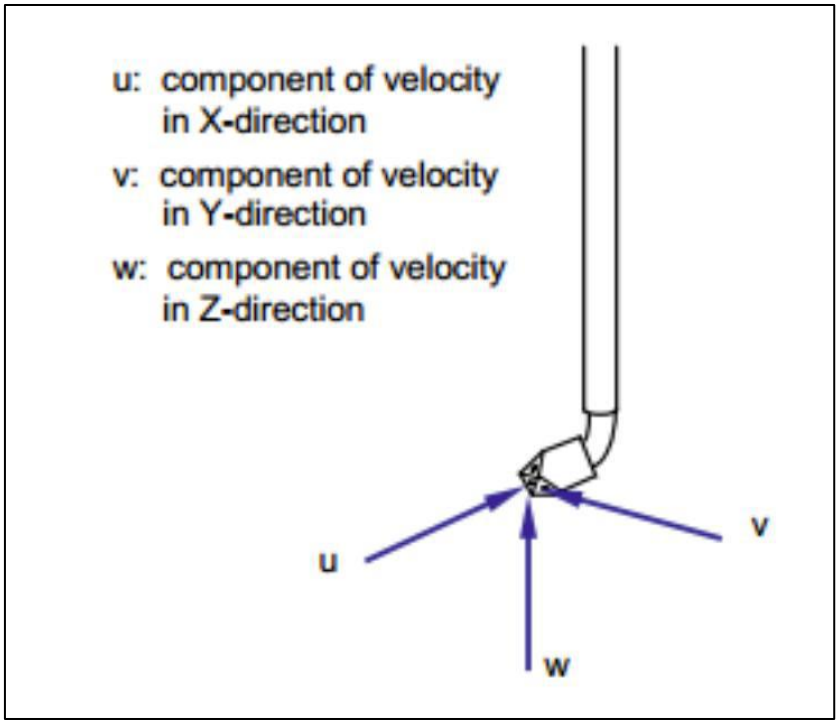

Figure 9. Cobra probe axis definition.

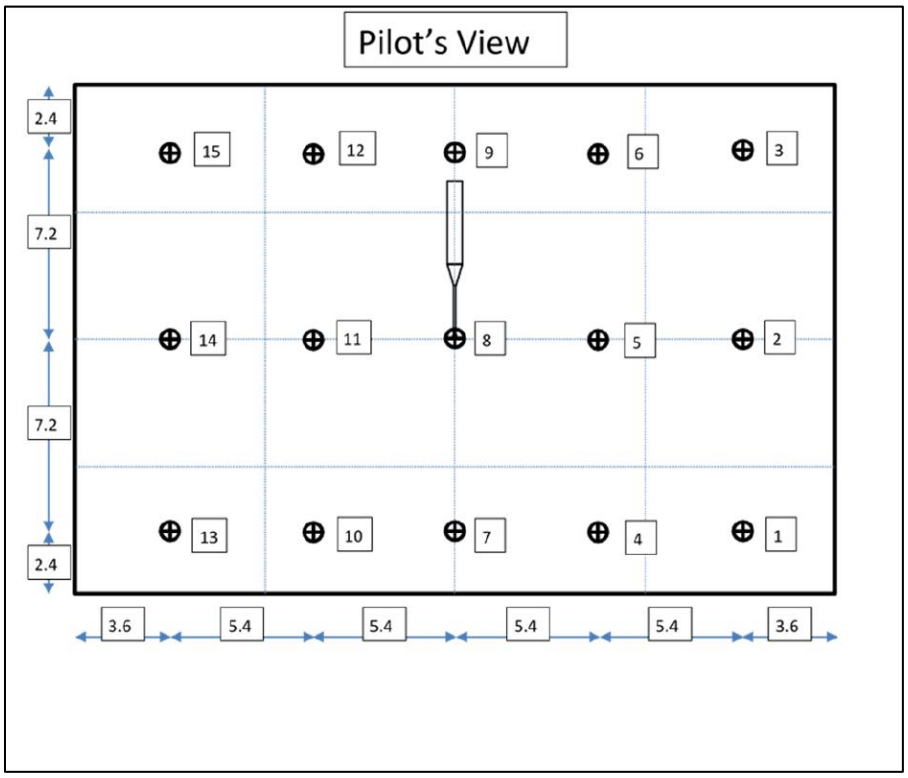

Figure 10. Cobra probe survey locations in model test section; pilot view.

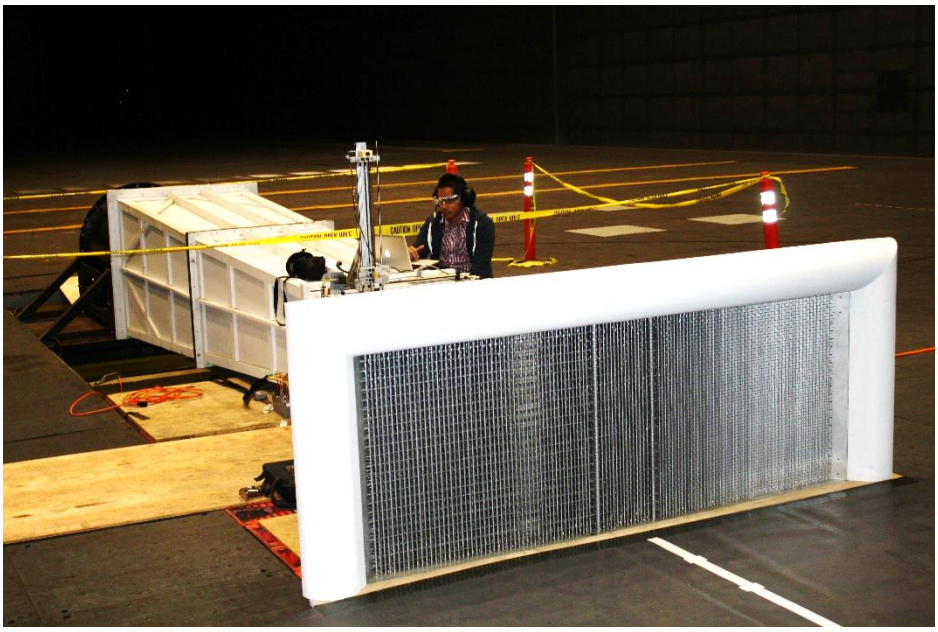

Figure 11. Computer station for data acquisition adjacent to model test section.

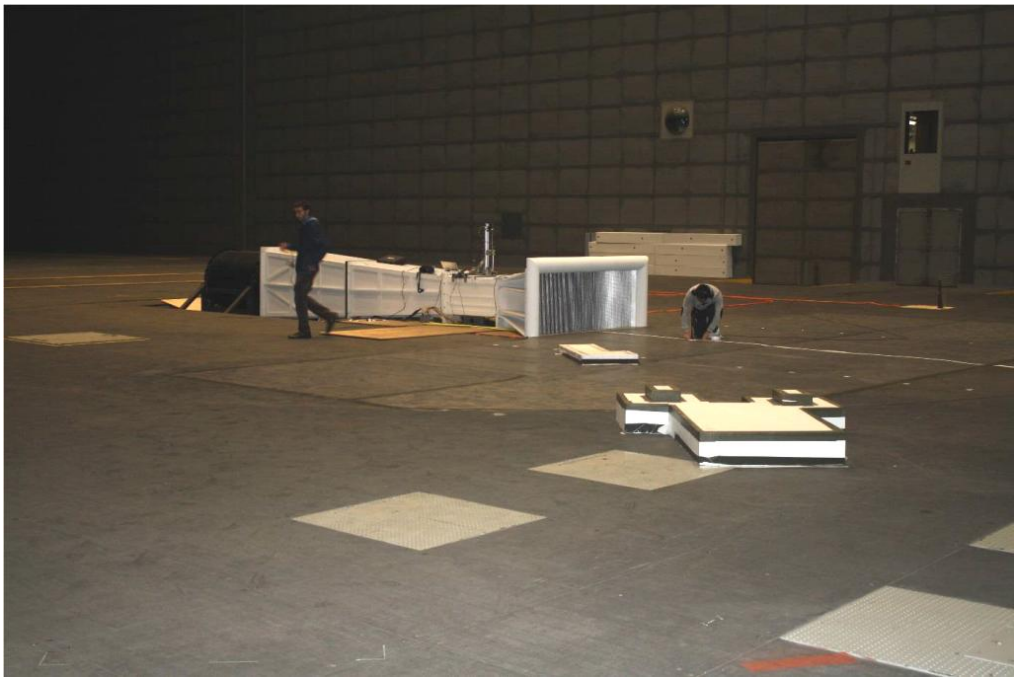

Figure 12. Existing buildings upwind from 80x120 inlet.

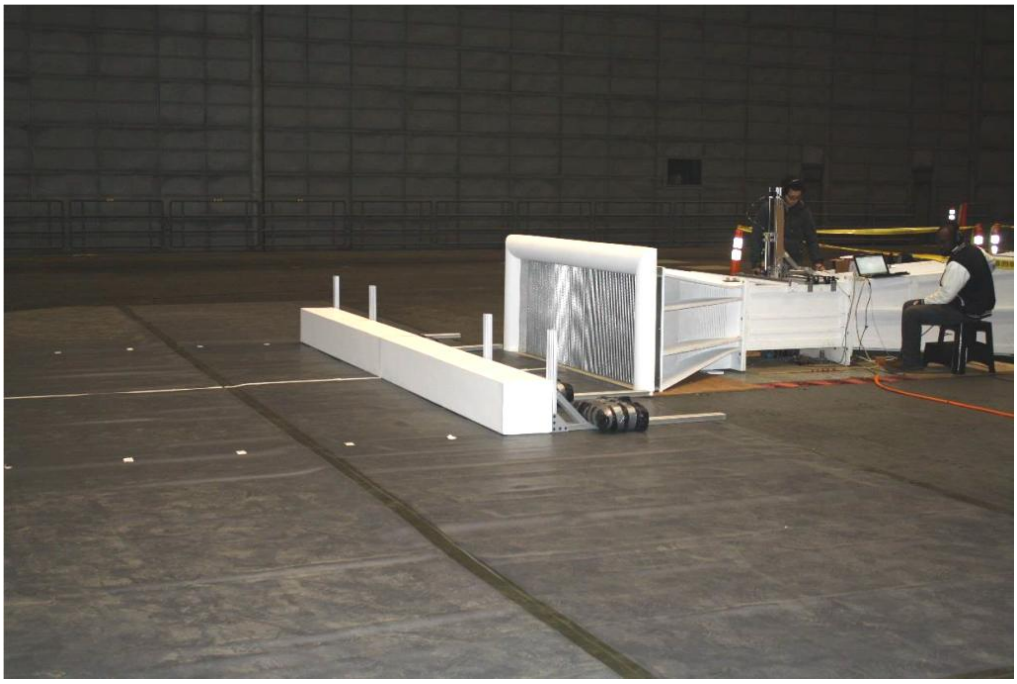

Figure 13. 1/50th-scale model with 1-foot-tall 2D upwind blockage.

.

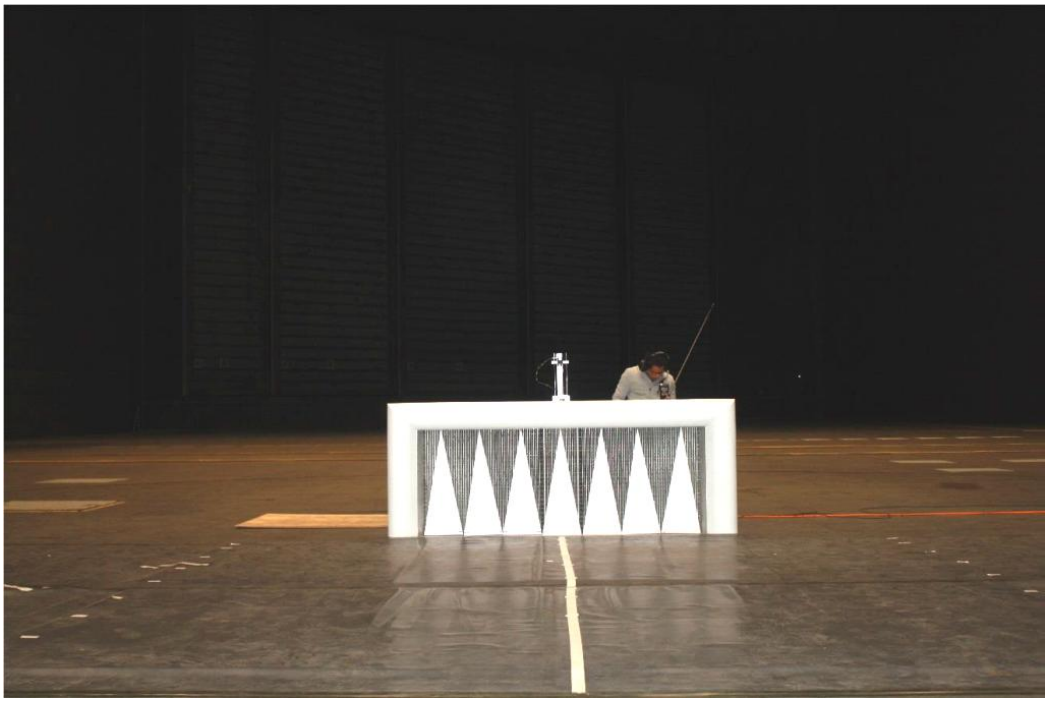

Figure 14. Model inlet with small spires.

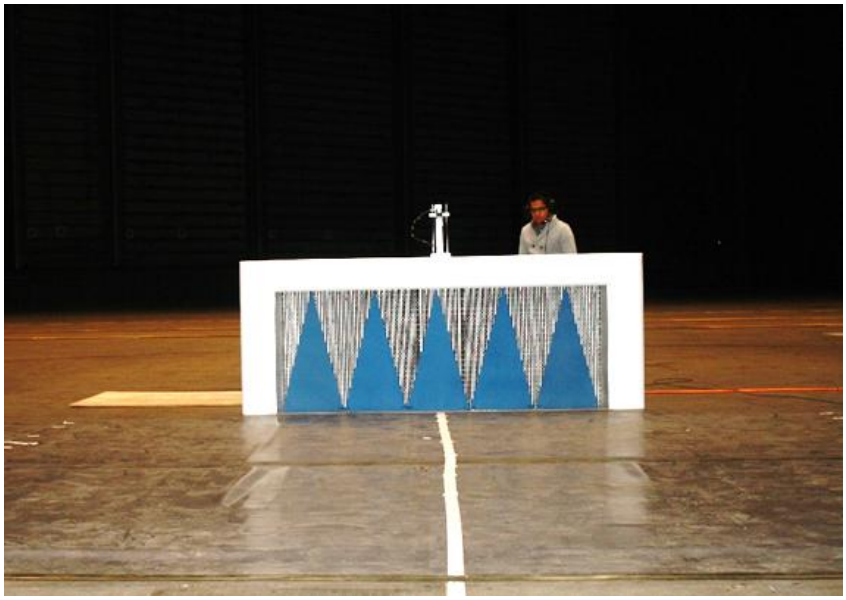

Figure 15. Model inlet with big spires.

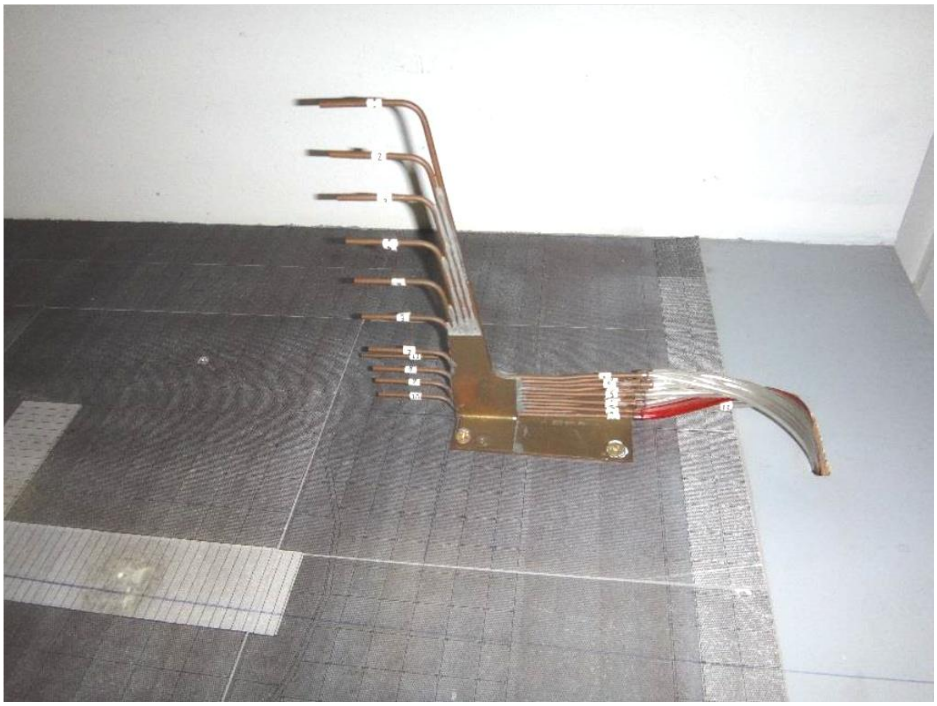

Figure 16. Boundary layer rake on floor of model test section.

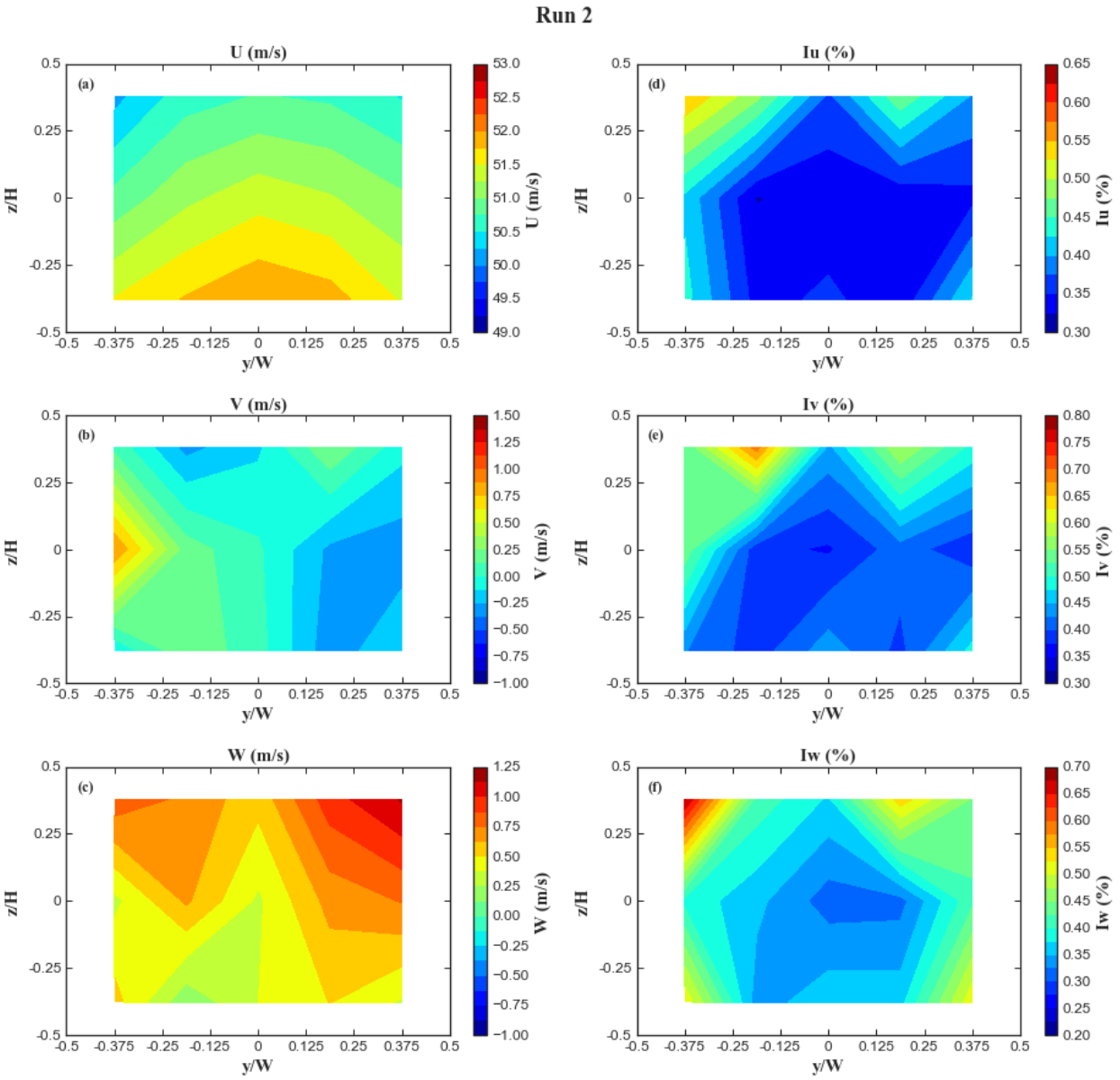

Figure 17. Test section survey at 100 knots with no upwind buildings; pilot view.

(a) U, (b) V, (c) W, (d) I_u(%), (e) I_v(%), and (f) I_w(%).

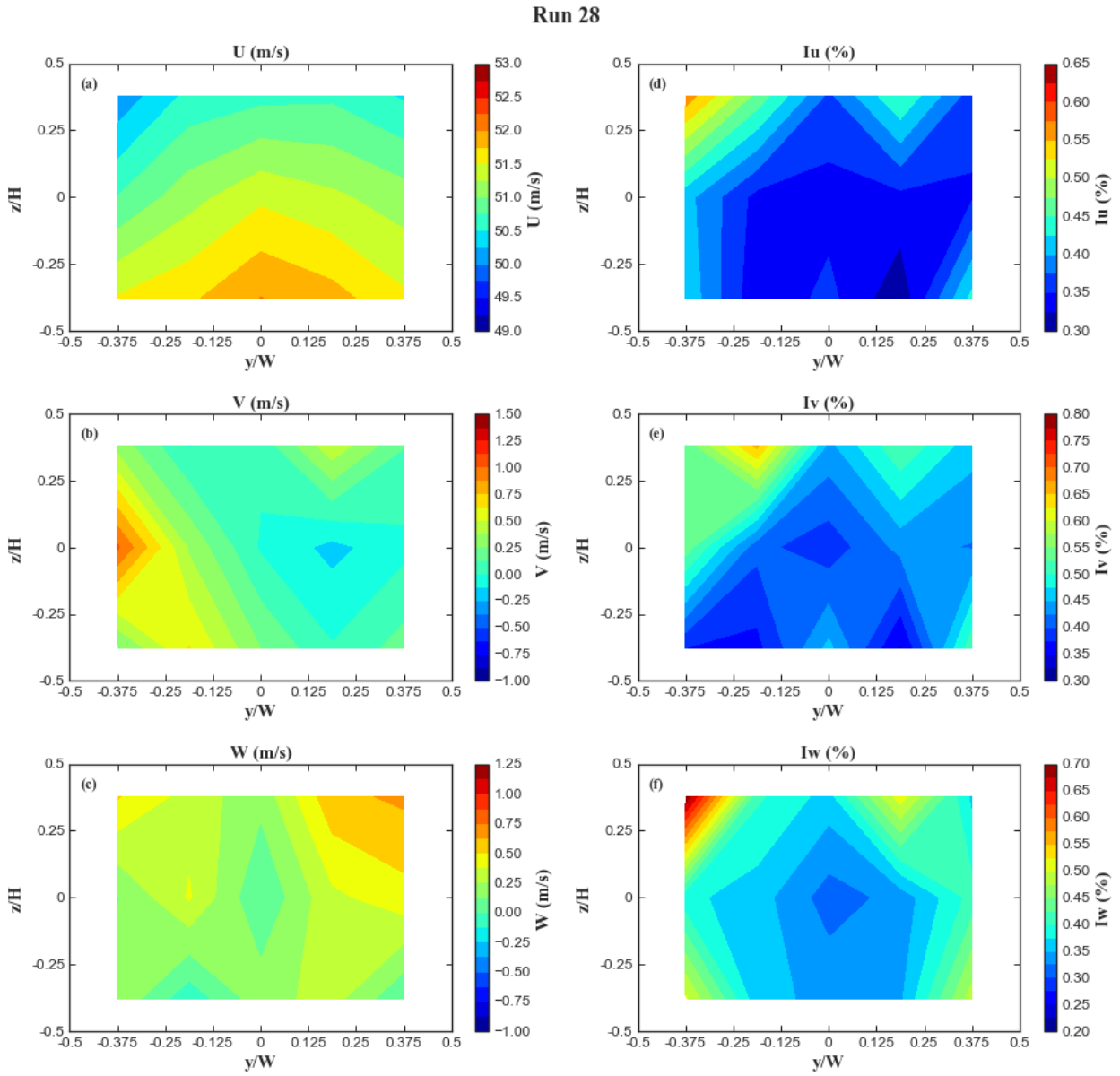

Figure 18. Test section survey at 100 knots with no upwind buildings; pilot view.

(a) U, (b) V, (c) W, (d) I_u(%), (e) I_v(%), and (f) I_w(%).

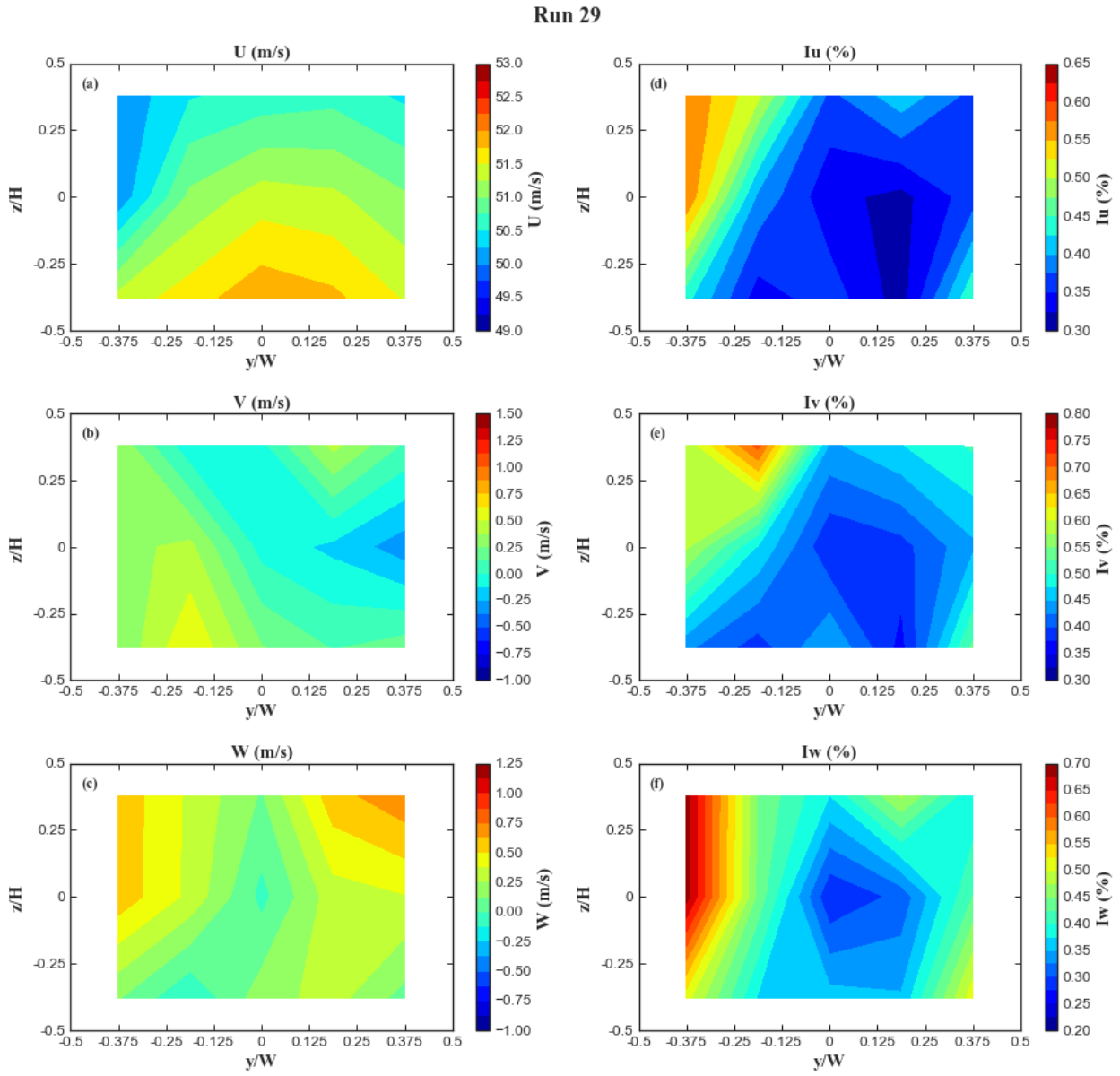

Figure 19. Test section survey at 100 knots with existing upwind buildings; pilot view.

(a) U, (b) V, (c) W, (d) I_u(%), (e) I_v(%), and (f) I_w(%).

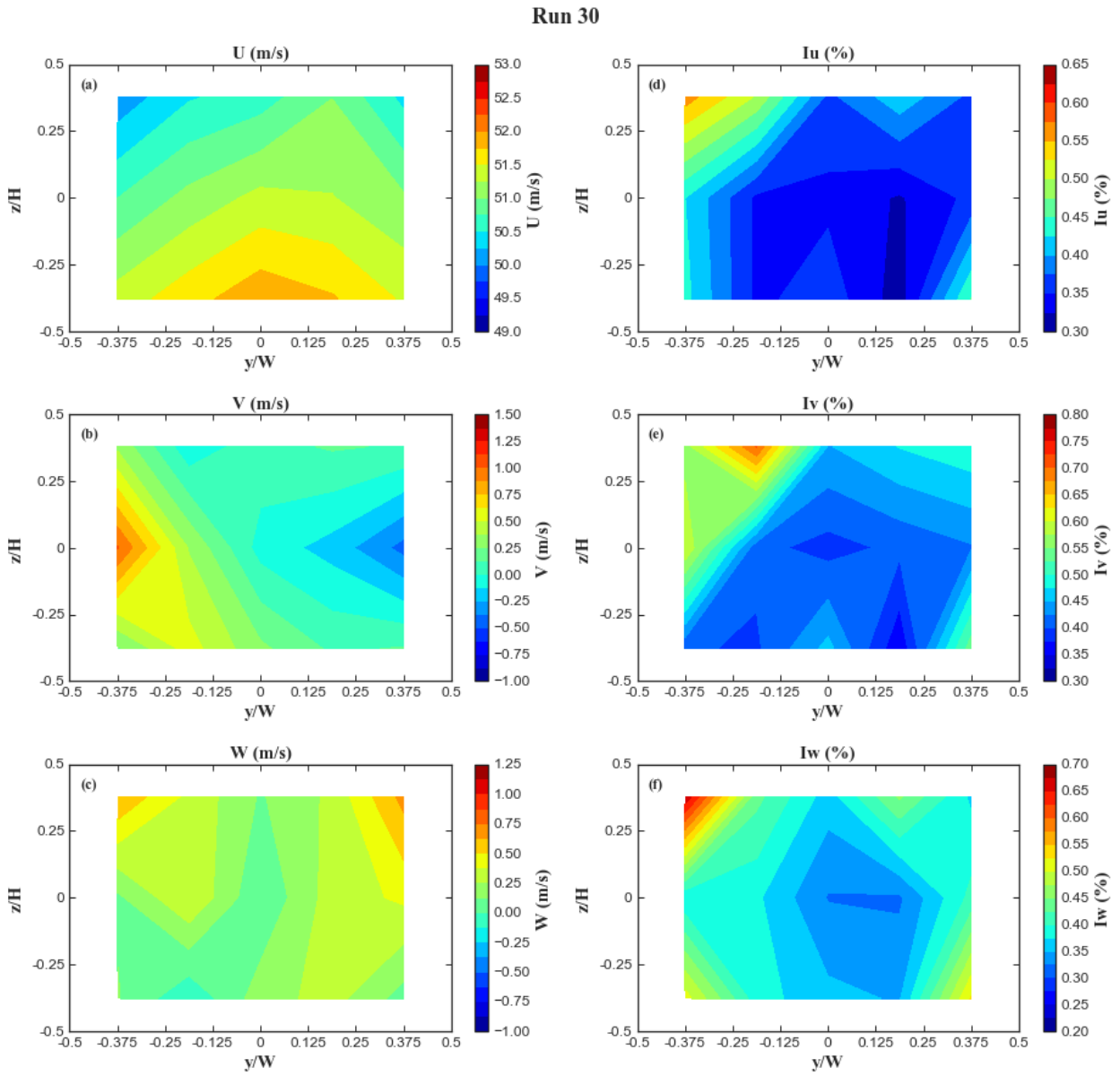

Figure 20. Test section survey at 100 knots with existing upwind buildings; pilot view.

(a) U, (b) V, (c) W, (d) I_u(%), (e) I_v(%), and (f) I_w(%).

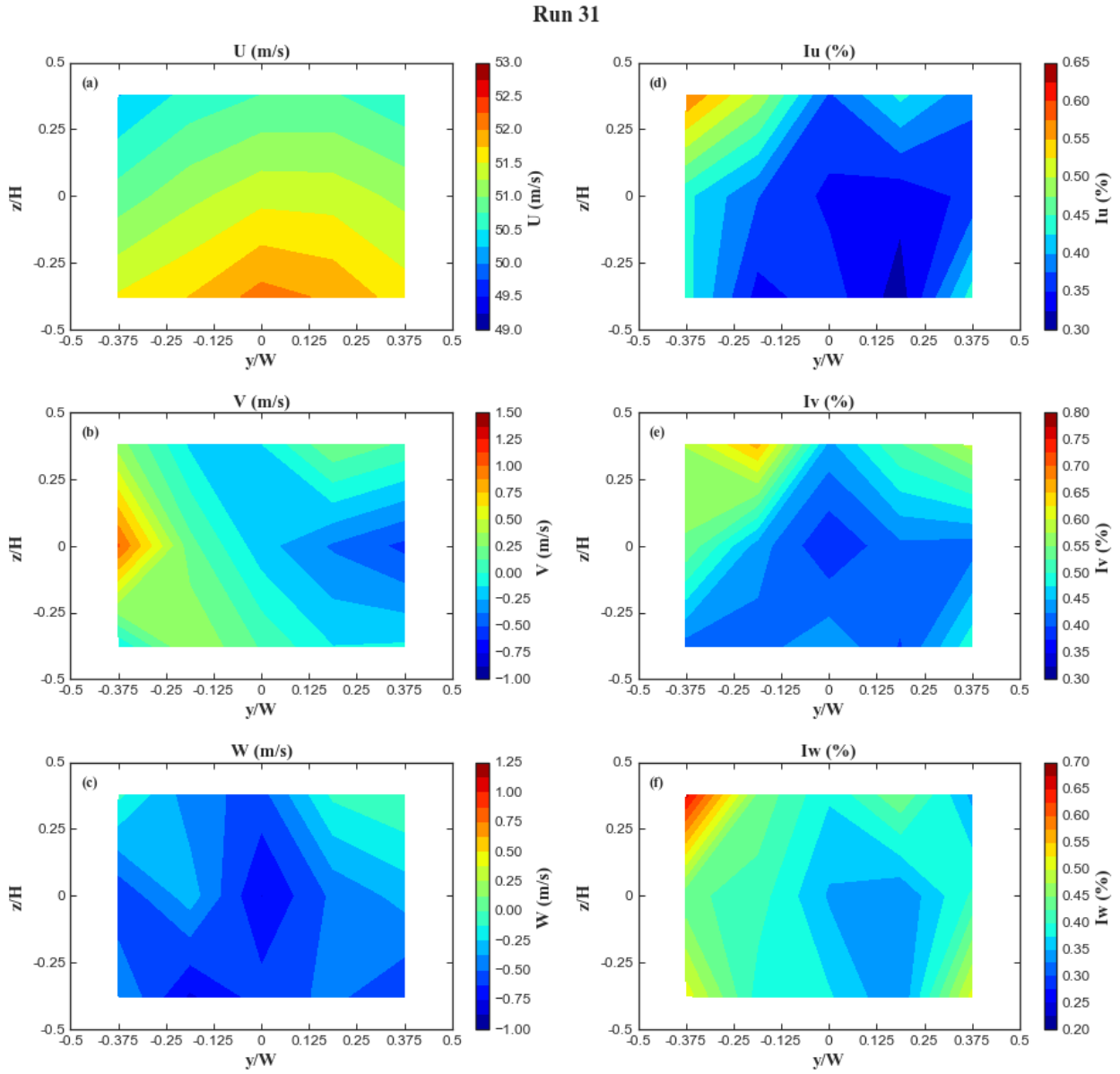

Figure 21. Test section survey at 100 knots with no upwind buildings; pilot view.

(a) U, (b) V, (c) W, (d) I_u(%), (e) I_v(%), and (f) I_w(%).

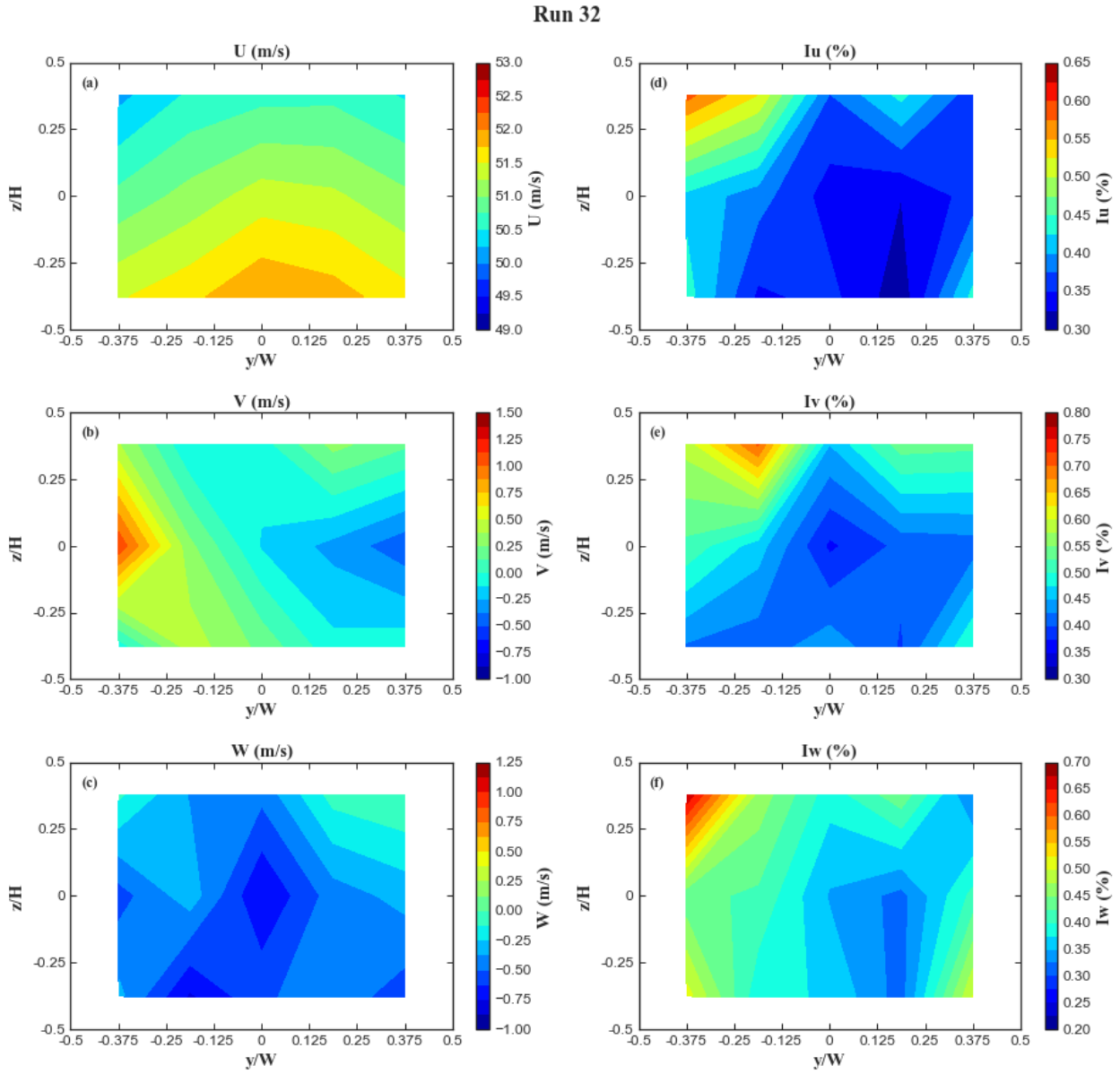

Figure 22. Test section survey at 100 knots with no upwind buildings; pilot view.

(a) U, (b) V, (c) W, (d) I_u(%), (e) I_v(%), and (f) I_w(%).

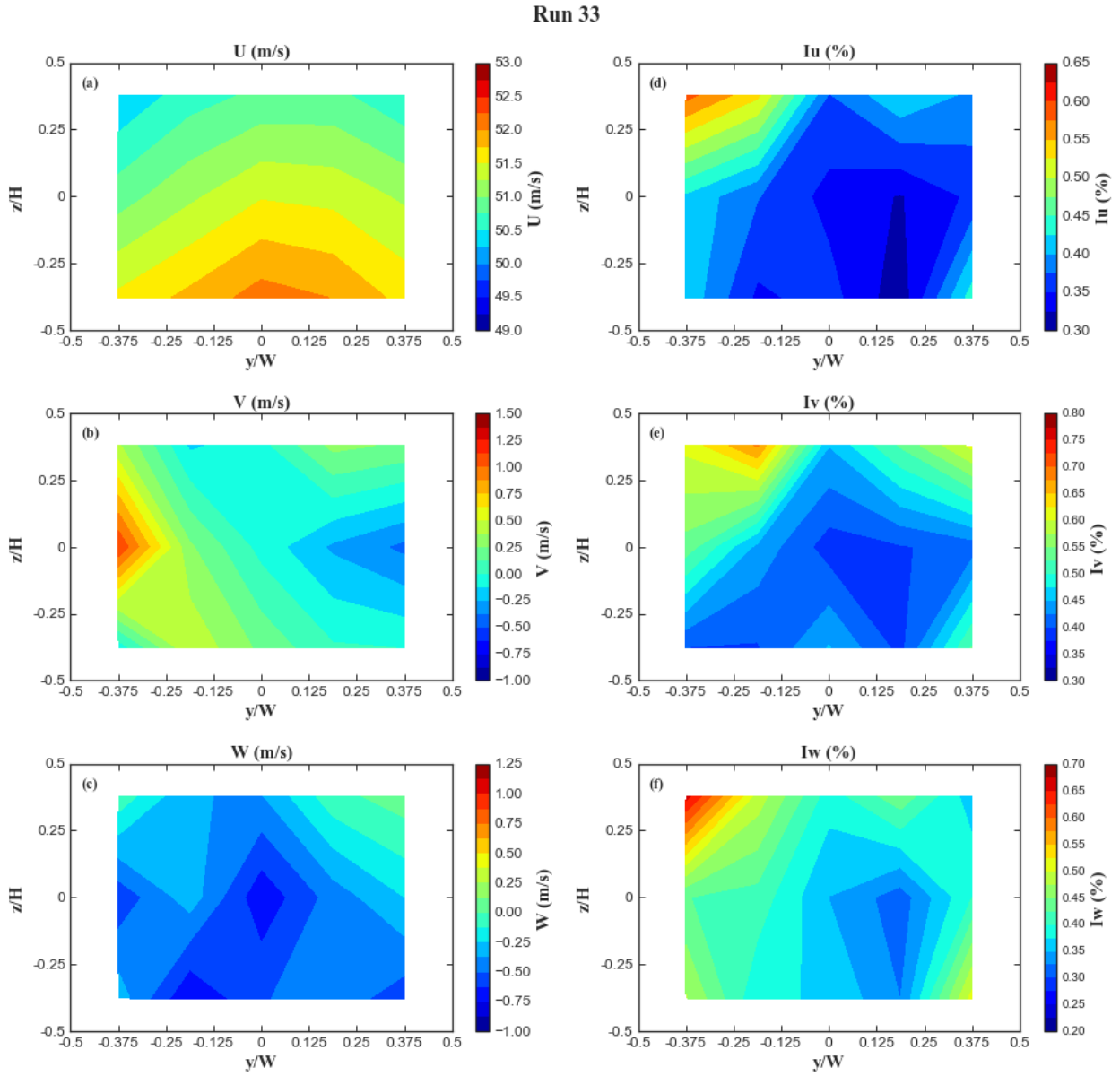

Figure 23. Test section survey at 100 knots with existing upwind buildings; pilot view.

(a) U, (b) V, (c) W, (d) I_u(%), (e) I_v(%), and (f) I_w(%).

APPENDIX A

COBRA PROBE VELOCITY MEASUREMENTS

Cobra Probe Specifications

- Cobra probe length: approximately 160 mm.
- Cobra probe maximum diameter: 14 mm.
- Measures flow angles within $\pm$45-degree cone.
- Velocity range: 2 to 100 m/s.
- Velocity resolution: 0.1 m/s in *u*, *v*, and *w* components.
- Velocity typically accurate to $\pm$0.5 m/s.
- Pitch and yaw typically accurate to $\pm$1.0 degree.
- Capable of measuring at frequencies higher than 2000 Hz.

Table A1. Cobra Probe Measurements

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
2	3	8	30.31	100.00%	25.6665	-0.0817	0.2552	0.4226	0.4743	0.4047
2	4	7	30.31	100.00%	26.0742	0.1185	0.3925	0.4794	0.6486	0.4479
2	5	8	30.31	100.00%	25.6866	-0.0543	0.2449	0.4242	0.4347	0.4040
2	6	9	30.31	100.00%	25.3987	-0.1474	0.3046	0.4864	0.5446	0.4941
2	7	8	30.31	100.00%	51.3725	-0.0282	0.3921	0.3317	0.3681	0.3147
2	8	1	30.31	100.00%	51.4716	-0.1315	0.3591	0.4266	0.4836	0.5188
2	9	2	30.31	100.00%	51.0404	-0.3253	0.7571	0.3427	0.3811	0.4185
2	10	3	30.31	100.00%	50.4771	-0.0847	1.1385	0.3972	0.4910	0.4477
2	11	4	30.31	100.00%	51.8614	-0.3316	0.5033	0.3316	0.3925	0.3653
2	12	5	30.31	100.00%	51.2698	-0.2803	0.6704	0.3310	0.4125	0.3152
2	13	6	30.31	100.00%	50.7054	0.2384	0.9462	0.4687	0.5746	0.5405
2	14	7	30.31	100.00%	51.9751	0.0495	0.3743	0.3557	0.4389	0.3670
2	15	8	30.31	100.00%	51.3971	0.0202	0.3511	0.3316	0.3714	0.3124
2	16	9	30.31	100.00%	50.7636	-0.1484	0.5402	0.3695	0.4420	0.3715
2	17	10	30.31	100.00%	51.7741	0.2212	0.1585	0.3400	0.3870	0.3368
2	18	11	30.31	100.00%	51.1886	0.1865	0.6453	0.3239	0.3824	0.3568
2	19	12	30.31	100.00%	50.6358	-0.2920	0.7244	0.4819	0.6864	0.4158
2	20	13	30.31	100.00%	51.5140	-0.1051	0.5528	0.4351	0.4266	0.5202
2	21	14	30.31	100.00%	50.8276	0.8728	0.3396	0.4189	0.5425	0.3919
2	22	15	30.31	100.00%	50.1604	0.0858	0.8320	0.5494	0.5257	0.6786
2	23	8	30.31	100.00%	51.3268	0.0238	0.3802	0.3353	0.3799	0.3309
3	1	8	30.31	100.00%	25.7722	-0.0542	0.2746	0.4393	0.4851	0.4474
3	2	8	30.31	100.00%	25.6328	-0.0615	0.2549	0.4287	0.4829	0.4174
3	3	7	30.31	100.00%	26.0493	0.1121	0.4173	0.4915	0.6707	0.4560
3	4	8	30.31	100.00%	25.5971	-0.0700	0.2457	0.4266	0.4768	0.4217
3	5	9	30.31	100.00%	25.3715	-0.1459	0.2820	0.4880	0.5526	0.4924
3	6	8	30.31	100.00%	51.1751	-0.0802	0.3760	0.3307	0.3710	0.3187

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
3	7	1	30.31	100.00%	51.3002	-0.0257	0.2510	0.4303	0.4766	0.5294
3	8	2	30.31	100.00%	50.8098	-0.3375	0.7616	0.3502	0.4288	0.4337
3	9	3	30.31	100.00%	50.3129	-0.1167	1.0849	0.3800	0.4722	0.4088
3	10	4	30.31	100.00%	51.6523	-0.2469	0.5115	0.3224	0.4038	0.3584
3	11	5	30.31	100.00%	51.0715	-0.3469	0.6084	0.3438	0.4277	0.3414
3	12	6	30.31	100.00%	50.5785	0.1769	1.0012	0.4636	0.5495	0.5366
3	13	7	30.31	100.00%	51.8216	0.1379	0.4046	0.3580	0.4530	0.3772
3	14	8	30.31	100.00%	51.1904	-0.0781	0.3323	0.3383	0.3760	0.3327
3	15	9	30.31	100.00%	50.6001	-0.1969	0.5461	0.3675	0.4394	0.3807
3	16	10	30.31	100.00%	51.5666	0.2189	0.1481	0.3509	0.4060	0.3934
3	17	11	30.31	100.00%	50.9810	0.1491	0.6357	0.3914	0.4842	0.4436
3	18	12	30.31	100.00%	50.4205	-0.3154	0.7363	0.5099	0.7249	0.4486
3	19	13	30.31	100.00%	51.3559	-0.1496	0.6484	0.4394	0.4352	0.5314
3	20	14	30.31	100.00%	50.6885	0.8287	0.3786	0.4235	0.5631	0.3931
3	21	15	30.31	100.00%	50.0573	0.0846	0.8144	0.5523	0.5289	0.6774
3	22	8	30.31	100.00%	51.2256	-0.0529	0.3832	0.3296	0.3687	0.3196
4	1	8	30.31	100.00%	25.7648	-0.0959	0.2565	0.4260	0.4691	0.4184
4	2	7	30.31	100.00%	26.1934	0.1232	0.4435	0.4831	0.6568	0.4543
4	3	8	30.31	100.00%	25.7521	-0.1139	0.2535	0.4303	0.4761	0.4264
4	4	9	30.31	100.00%	25.4320	-0.1650	0.2405	0.4857	0.5354	0.4966
4	5	8	30.31	100.00%	51.2953	-0.0873	0.4037	0.3402	0.3972	0.3463
4	6	1	30.31	100.00%	51.4292	-0.2059	0.3381	0.4280	0.5122	0.5127
4	7	2	30.31	100.00%	51.0041	-0.4857	0.7334	0.3398	0.4142	0.4177
4	8	3	30.31	100.00%	50.4052	-0.1583	1.0655	0.3703	0.4625	0.4022
4	9	4	30.31	100.00%	51.7524	-0.2308	0.5416	0.3178	0.3895	0.3627
4	10	5	30.31	100.00%	51.2090	-0.3720	0.5997	0.3233	0.4053	0.3221
4	11	6	30.31	100.00%	50.6628	0.1146	0.9129	0.4274	0.5159	0.4961

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
4	12	7	30.31	100.00%	51.9267	0.0634	0.4140	0.3607	0.4509	0.3796
4	13	8	30.31	100.00%	51.2884	-0.1954	0.3572	0.3364	0.3786	0.3250
4	14	9	30.31	100.00%	50.5890	-0.2217	0.4511	0.3721	0.4419	0.3854
4	15	10	30.31	100.00%	51.5701	0.2344	0.1449	0.3516	0.4038	0.3912
4	16	11	30.31	100.00%	50.9656	0.0475	0.6562	0.3776	0.4606	0.4215
4	17	12	30.31	100.00%	50.3739	-0.3830	0.6665	0.5035	0.7118	0.4462
4	18	13	30.31	100.00%	51.2887	-0.1186	0.5173	0.4221	0.4351	0.5028
4	19	14	30.31	100.00%	50.6073	0.7652	0.3817	0.4421	0.6117	0.4027
4	20	15	30.31	100.00%	49.9545	0.0559	0.8604	0.5493	0.5240	0.6808
4	21	8	30.31	100.00%	51.1698	-0.1530	0.3618	0.3410	0.3899	0.3389
5	1	8	30.31	100.00%	25.6943	-0.0851	0.2376	0.4208	0.4682	0.4196
5	2	7	30.31	100.00%	26.1346	0.0699	0.3485	0.4829	0.6507	0.4615
5	3	8	30.31	100.00%	25.6811	-0.0816	0.2322	0.4215	0.4543	0.4284
5	4	8	30.31	100.00%	25.6806	-0.1016	0.2571	0.4304	0.4714	0.4290
5	5	9	30.31	100.00%	26.1209	0.0887	0.4515	0.4881	0.6549	0.4575
5	6	8	30.31	100.00%	25.7149	-0.0946	0.2551	0.4292	0.4722	0.4213
5	7	9	30.31	100.00%	25.4408	-0.1365	0.2922	0.4854	0.5491	0.4951
5	8	8	30.31	100.00%	51.2742	-0.1306	0.3752	0.3353	0.3848	0.3338
5	9	7	30.31	100.00%	51.8986	0.0511	0.4368	0.3601	0.4490	0.4138
5	10	8	30.31	100.00%	51.2536	-0.1427	0.3854	0.3328	0.3804	0.3300
5	11	9	30.31	100.00%	50.6440	-0.2658	0.6192	0.3656	0.4460	0.3836
6	1	8	30.31	100.00%	25.7636	-0.0907	0.2202	0.4274	0.4697	0.4272
6	2	7	30.31	100.00%	26.1978	0.1184	0.4346	0.4830	0.6558	0.4659
6	3	8	30.31	100.00%	25.7918	-0.0835	0.2529	0.4365	0.4813	0.4413
6	4	9	30.31	100.00%	25.5184	-0.1148	0.2972	0.4803	0.5522	0.4944
6	5	8	30.31	100.00%	51.2623	-0.2417	0.3169	0.3329	0.3659	0.3222

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
6	6	7	30.31	100.00%	51.8452	0.0094	0.4152	0.3692	0.4678	0.4369
6	7	8	30.31	100.00%	51.2186	-0.1707	0.3962	0.3344	0.3704	0.3340
6	8	9	30.31	100.00%	50.5949	-0.2568	0.5801	0.3688	0.4456	0.3872
7	1	8	30.31	100.00%	25.7075	-0.1012	0.2228	0.4295	0.4716	0.4295
7	2	7	30.31	100.00%	26.0831	0.0754	0.3993	0.4884	0.6450	0.4696
7	3	8	30.31	100.00%	25.6754	-0.0461	0.2524	0.4273	0.4770	0.4160
7	4	9	30.31	100.00%	25.4254	-0.1427	0.3081	0.4864	0.5531	0.5004
7	5	8	30.31	100.00%	51.2276	-0.1131	0.4430	0.3331	0.3751	0.3326
7	6	7	30.31	100.00%	51.8619	-0.0148	0.4652	0.3630	0.4571	0.3845
7	7	8	30.31	100.00%	51.2218	-0.1625	0.4306	0.3354	0.3796	0.3409
7	8	9	30.31	100.00%	50.6569	-0.2563	0.6161	0.3651	0.4434	0.3925
8	1	8	30.31	100.00%	25.8491	-0.0452	0.2763	0.4156	0.4623	0.4028
8	2	7	30.31	100.00%	26.2334	0.1198	0.3989	0.4929	0.6697	0.4498
8	3	8	30.31	100.00%	25.8187	-0.0639	0.2513	0.4230	0.4746	0.4120
8	4	9	30.31	100.00%	25.5602	-0.1417	0.3422	0.4813	0.5432	0.4984
8	5	8	30.31	100.00%	51.2779	-0.0719	0.3462	0.3320	0.3809	0.3199
8	6	7	30.31	100.00%	51.9015	0.1109	0.3632	0.3590	0.4499	0.3774
8	7	8	30.31	100.00%	51.2593	-0.0773	0.3561	0.3328	0.3752	0.3236
8	8	9	30.31	100.00%	50.6838	-0.1892	0.5532	0.3611	0.4320	0.3814
9	3	8	30.31	100.00%	25.1878	-0.0893	-0.1796	0.4128	0.4400	0.4030
9	4	7	30.31	100.00%	25.5604	0.1094	0.1701	0.4931	0.6314	0.4548
9	5	8	30.31	100.00%	25.1847	-0.1430	-0.1281	0.4149	0.4409	0.4062
9	6	9	30.31	100.00%	24.9547	-0.1684	0.0267	0.4879	0.5251	0.4997
9	7	8	30.31	100.00%	51.2822	-0.5851	-0.4799	0.3193	0.3541	0.3173
9	8	7	30.31	100.00%	52.1711	-0.3654	-0.3480	0.3600	0.4518	0.3463

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
9	9	8	30.31	100.00%	51.5824	-0.5839	-0.7401	0.3183	0.3511	0.3252
9	10	9	30.31	100.00%	50.7008	-0.5078	-0.5833	0.3723	0.4435	0.3781
10	1	8	30.31	100.00%	25.5793	-0.4127	-0.2088	0.4102	0.5112	0.4089
10	2	8	30.31	100.00%	25.5908	-0.1210	-0.2028	0.4118	0.4471	0.4143
10	3	7	30.31	100.00%	25.9402	0.0511	0.0882	0.4927	0.6407	0.4659
10	4	8	30.31	100.00%	25.5903	-0.1747	-0.1772	0.4114	0.4536	0.4160
10	5	9	30.31	100.00%	25.3903	-0.1464	-0.0202	0.4820	0.5257	0.5019
10	6	8	30.31	100.00%	51.1792	-0.3623	-0.6648	0.3233	0.3515	0.3347
10	7	7	30.31	100.00%	51.8330	-0.1747	-0.4054	0.3633	0.4401	0.3674
10	8	8	30.31	100.00%	51.1877	-0.4685	-0.5984	0.3247	0.3600	0.3392
10	9	9	30.31	100.00%	50.6431	-0.4713	-0.2034	0.3710	0.4387	0.3732
11	1	8	30.31	100.00%	25.5925	-0.2070	-0.1470	0.4142	0.4635	0.4164
11	2	7	30.31	100.00%	25.9263	-0.0302	0.0992	0.4878	0.6331	0.4600
11	3	8	30.31	100.00%	25.5618	-0.2598	-0.1537	0.4126	0.4821	0.4167
11	4	9	30.31	100.00%	25.3619	-0.2404	0.0118	0.4810	0.5397	0.5058
11	5	8	30.31	100.00%	51.3568	-0.4307	-0.6033	0.3225	0.3477	0.3353
11	6	7	30.31	100.00%	51.9257	-0.2270	-0.4233	0.3641	0.4583	0.3668
11	7	8	30.31	100.00%	51.3418	-0.4558	-0.6213	0.3261	0.3582	0.3373
11	8	9	30.31	100.00%	50.8079	-0.3498	-0.2152	0.3645	0.4296	0.3590
12	1	8	30.31	100.00%	25.6561	-0.2874	-0.1577	0.4233	0.4796	0.4380
12	2	7	30.31	100.00%	25.9879	-0.1099	0.1978	0.4982	0.6518	0.4776
12	3	8	30.31	100.00%	25.6945	-0.3167	-0.1538	0.4153	0.4861	0.4172
12	4	9	30.31	100.00%	25.4342	-0.2834	0.0285	0.4838	0.5530	0.5033
12	5	8	30.31	100.00%	51.3534	-0.6451	-0.5212	0.3259	0.3504	0.3277
12	6	7	30.31	100.00%	51.9754	-0.4089	-0.3067	0.3644	0.4571	0.3777
12	7	8	30.31	100.00%	51.2892	-0.6503	-0.5608	0.3263	0.3534	0.3318

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
12	8	9	30.31	100.00%	50.7128	-0.5094	-0.4366	0.3667	0.4317	0.3692
13	1	8	30.31	100.00%	25.7741	-0.3421	-0.1636	0.4109	0.4919	0.4138
13	2	7	30.31	100.00%	26.1069	-0.1792	0.1945	0.4896	0.6529	0.4912
13	3	8	30.31	100.00%	25.7566	-0.2429	-0.1850	0.4217	0.4724	0.4364
13	4	9	30.31	100.00%	25.5068	-0.2294	-0.0689	0.4828	0.5312	0.5002
13	5	8	30.31	100.00%	51.3698	-0.5398	-0.5497	0.3344	0.3710	0.3389
13	6	7	30.31	100.00%	51.8861	-0.2984	-0.1579	0.3689	0.4726	0.4018
13	7	8	30.31	100.00%	51.3184	-0.5007	-0.6025	0.3315	0.3633	0.3407
13	8	9	30.31	100.00%	50.7175	-0.4038	-0.3455	0.3717	0.4270	0.3715
14	1	8	30.31	100.00%	25.6650	-0.2960	-0.1356	0.4110	0.4727	0.4165
14	2	7	30.31	100.00%	26.0150	-0.0957	0.1552	0.4830	0.6192	0.4541
14	3	8	30.31	100.00%	25.6690	-0.3357	-0.1319	0.4203	0.5129	0.4365
14	4	8	30.31	100.00%	25.6369	0.0043	-0.0919	0.4144	0.4587	0.4138
14	5	9	30.31	100.00%	25.3543	-0.0092	0.0298	0.4839	0.5404	0.5005
14	6	8	30.31	100.00%	51.3563	0.0665	-0.4004	0.3301	0.3554	0.3193
14	7	7	30.31	100.00%	51.9045	0.3279	-0.1151	0.3530	0.4558	0.3389
14	8	8	30.31	100.00%	51.3399	-0.0042	-0.3688	0.3291	0.3610	0.3178
14	9	9	30.31	100.00%	50.7496	0.0561	-0.1650	0.3684	0.4298	0.3719
15	1	8	30.31	100.00%	25.6096	-0.0608	-0.1145	0.4200	0.4369	0.4287
15	2	7	30.31	100.00%	26.0417	0.1694	0.2169	0.4851	0.6555	0.4630
15	3	8	30.31	100.00%	25.6675	-0.0963	-0.0890	0.4203	0.4588	0.4336
15	4	9	30.31	100.00%	25.4228	-0.0623	0.0483	0.4848	0.5339	0.4970
15	5	8	30.31	100.00%	51.3468	-0.2387	-0.3366	0.3380	0.3747	0.3341
15	6	7	30.31	100.00%	51.9188	0.1247	-0.0991	0.3603	0.4561	0.3512
15	7	8	30.31	100.00%	51.3952	-0.1591	-0.3299	0.3312	0.3587	0.3103
15	8	9	30.31	100.00%	50.7980	-0.0868	-0.1129	0.3660	0.4314	0.3646

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
16	1	8	30.31	100.00%	25.5162	-0.1836	-0.0679	0.4261	0.4555	0.4468
16	2	7	30.31	100.00%	25.8649	0.0412	0.3213	0.4846	0.6547	0.4422
16	3	8	30.31	100.00%	25.5184	-0.2204	0.0293	0.4240	0.4685	0.4272
16	4	9	30.31	100.00%	25.2563	-0.1580	0.1275	0.4825	0.5432	0.4990
16	5	8	30.31	100.00%	51.6147	-0.6080	-0.1311	0.3281	0.3610	0.3150
16	6	7	30.31	100.00%	52.1471	-0.3931	0.1163	0.3591	0.4696	0.3672
16	7	8	30.31	100.00%	51.6435	-0.6593	-0.1115	0.3315	0.3657	0.3213
16	8	9	30.31	100.00%	51.0038	-0.5726	0.1164	0.3671	0.4331	0.3878
17	1	8	30.31	100.00%	26.0689	-0.3035	-0.0470	0.4369	0.4991	0.4664
17	2	7	30.31	100.00%	26.4354	-0.0886	0.2794	0.4974	0.6521	0.4806
17	3	8	30.31	100.00%	26.0943	-0.3315	-0.0503	0.4259	0.5065	0.4398
17	4	9	30.31	100.00%	25.8039	-0.2941	0.0300	0.4767	0.5484	0.4978
17	5	8	30.31	100.00%	51.1901	-0.7750	-0.1816	0.3560	0.4089	0.3657
17	6	7	30.31	100.00%	51.6758	-0.4549	0.1638	0.3776	0.5013	0.4326
17	7	8	30.31	100.00%	51.2072	-0.7542	-0.1901	0.3416	0.3793	0.3317
17	8	9	30.31	100.00%	50.5698	-0.6055	0.0548	0.3684	0.4328	0.3728
18	1	8	30.31	100.00%	51.1985	-0.3276	-0.1662	0.3331	0.3677	0.3146
18	2	7	30.31	100.00%	51.6951	-0.0679	0.0832	0.3589	0.4720	0.3486
18	3	8	30.31	100.00%	51.1880	-0.3478	-0.1169	0.3341	0.3646	0.3171
18	4	9	30.31	100.00%	50.5887	-0.2700	0.0918	0.3706	0.4381	0.3803
18	5	8	30.31	100.00%	25.4078	-0.1177	0.0237	0.4819	0.5303	0.5078
18	6	7	30.31	100.00%	25.6560	-0.1478	-0.0349	0.4053	0.4525	0.4010
18	7	8	30.31	100.00%	26.0201	0.0805	0.2914	0.4856	0.6476	0.4502
18	8	9	30.31	100.00%	25.6584	-0.1884	-0.0058	0.4017	0.4505	0.4013
19	1	8	30.31	100.00%	25.6317	-0.1961	-0.0099	0.4097	0.4555	0.4084
19	2	7	30.31	100.00%	25.9266	0.0201	0.2286	0.4893	0.6465	0.4574

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
19	3	8	30.31	100.00%	25.5773	-0.1887	-0.0650	0.4107	0.4647	0.4028
19	4	9	30.31	100.00%	25.3057	-0.1446	0.1187	0.4809	0.5395	0.4975
19	5	8	30.31	100.00%	51.2801	-0.5244	-0.1572	0.3313	0.3589	0.3125
19	6	7	30.31	100.00%	51.8499	-0.2757	0.0989	0.3575	0.4589	0.3573
19	7	8	30.31	100.00%	51.2696	-0.5440	-0.1330	0.3338	0.3602	0.3162
19	8	9	30.31	100.00%	50.5966	-0.4831	0.0232	0.3740	0.4320	0.3891
20	3	8	30.31	100.00%	25.6399	-0.3954	-0.0782	0.4074	0.4969	0.4101
20	4	8	30.31	100.00%	25.6997	-0.1078	-0.0455	0.4210	0.4566	0.4276
20	5	7	30.31	100.00%	26.0479	0.0945	0.1960	0.4900	0.6554	0.4544
20	6	8	30.31	100.00%	25.6970	-0.1520	0.0111	0.4154	0.4473	0.4238
20	7	9	30.31	100.00%	25.4487	-0.0872	0.1397	0.4791	0.5310	0.4988
20	8	8	30.31	100.00%	51.3066	-0.3335	-0.1601	0.3357	0.3804	0.3207
20	9	7	30.31	100.00%	51.8242	-0.0367	0.0956	0.3600	0.4623	0.3615
20	10	8	30.31	100.00%	51.2656	-0.3352	-0.1395	0.3350	0.3640	0.3150
20	11	9	30.31	100.00%	50.6232	-0.2494	0.0607	0.3649	0.4257	0.3794
21	1	8	30.31	100.00%	25.7326	-0.1579	-0.0158	0.4176	0.4502	0.4213
21	2	7	30.31	100.00%	26.0949	0.0669	0.2823	0.4842	0.6486	0.4766
21	3	8	30.31	100.00%	25.7787	-0.1942	-0.0275	0.4320	0.4591	0.4502
21	4	9	30.31	100.00%	25.4983	-0.1090	0.0947	0.4813	0.5499	0.4957
21	5	8	30.31	100.00%	51.2416	-0.4102	-0.1528	0.3430	0.3777	0.3330
21	6	7	30.31	100.00%	51.7813	-0.0856	0.0809	0.3658	0.4817	0.3799
21	7	8	30.31	100.00%	51.2400	-0.3910	-0.1223	0.3373	0.3612	0.3165
21	8	9	30.31	100.00%	50.5842	-0.2785	0.1353	0.3693	0.4336	0.3901
22	1	8	30.31	100.00%	25.6644	-0.2027	-0.0284	0.4453	0.4741	0.4783
22	2	7	30.31	100.00%	26.0400	0.0109	0.2295	0.4914	0.6590	0.4851

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	%Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
22	3	8	30.31	100.00%	25.6724	-0.2044	0.0013	0.4581	0.4717	0.4741
22	4	9	30.31	100.00%	25.4611	-0.1358	0.1475	0.4938	0.5760	0.5038
22	5	8	30.31	100.00%	51.2150	-0.4865	-0.1410	0.3604	0.4154	0.3804
22	6	8	30.31	100.00%	51.1871	-0.4431	-0.1582	0.3591	0.4089	0.3782
23	1	8	30.31	100.00%	51.2151	-0.4363	-0.1620	0.3531	0.4061	0.3613
23	2	7	30.31	100.00%	51.7338	-0.2629	0.0958	0.3602	0.4717	0.3708
23	3	8	30.31	100.00%	51.2300	-0.4398	-0.1221	0.3437	0.3830	0.3422
23	4	9	30.31	100.00%	50.6363	-0.3248	0.0135	0.3636	0.4253	0.3625
23	5	8	30.31	100.00%	25.6941	-0.1772	-0.0633	0.4140	0.4563	0.4154
23	6	7	30.31	100.00%	26.0516	-0.0090	0.1923	0.4991	0.6582	0.4809
23	7	8	30.31	100.00%	25.8130	-0.2052	-0.0393	0.4165	0.4607	0.4213
23	8	9	30.31	100.00%	25.5274	-0.1366	0.0648	0.4800	0.5391	0.4960
24	1	8	30.31	100.00%	25.8333	-0.2566	-0.0127	0.4208	0.4602	0.4268
24	2	7	30.31	100.00%	26.1660	0.0209	0.2573	0.4860	0.6519	0.4516
24	3	8	30.31	100.00%	25.8176	-0.2337	-0.0526	0.4182	0.4670	0.4294
24	4	9	30.31	100.00%	25.5579	-0.1645	0.0849	0.4801	0.5416	0.4953
24	5	8	30.31	100.00%	51.3575	-0.5159	-0.2021	0.3397	0.3834	0.3239
24	6	7	30.31	100.00%	51.9014	-0.2175	0.0640	0.3567	0.4511	0.3493
24	7	8	30.31	100.00%	51.3428	-0.5060	-0.1887	0.3365	0.3779	0.3244
24	8	9	30.31	100.00%	50.6778	-0.4475	0.0220	0.3651	0.4262	0.3755
25	1	8	30.31	100.00%	51.2870	-0.5362	-0.1625	0.3340	0.3665	0.3126
25	2	7	30.31	100.00%	51.7972	-0.2832	0.0820	0.3596	0.4645	0.3494
25	3	8	30.31	100.00%	51.2569	-0.5646	-0.1556	0.3343	0.3648	0.3151
25	4	9	30.31	100.00%	50.6323	-0.4744	-0.0363	0.3659	0.4289	0.3765
25	5	8	30.31	100.00%	25.8287	-0.2635	-0.0673	0.4207	0.4662	0.4242
25	6	7	30.31	100.00%	26.1707	-0.0103	0.2417	0.4847	0.6335	0.4573

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
25	7	8	30.31	100.00%	25.8081	-0.2682	-0.0570	0.4173	0.4659	0.4202
25	8	9	30.31	100.00%	25.5825	-0.2200	-0.0059	0.4791	0.5410	0.4973
26	1	8	30.31	100.00%	25.7736	-0.2850	-0.0370	0.4595	0.5085	0.5021
26	2	7	30.31	100.00%	26.1482	-0.0405	0.2431	0.4860	0.6525	0.4650
26	3	8	30.31	100.00%	25.7580	-0.2779	-0.0395	0.4552	0.4955	0.4900
26	4	9	30.31	100.00%	25.5582	-0.2099	0.0643	0.4795	0.5476	0.4930
26	5	8	30.31	100.00%	51.2589	-0.6002	-0.2039	0.3582	0.4099	0.3774
26	6	7	30.31	100.00%	51.8084	-0.2660	0.0790	0.3668	0.4737	0.3944
26	7	8	30.31	100.00%	51.2284	-0.6441	-0.1718	0.3509	0.4115	0.3732
26	8	9	30.31	100.00%	50.6322	-0.5007	-0.0579	0.3651	0.4277	0.3609
26	9	8	30.31	100.00%	51.2245	-0.6284	-0.1637	0.3595	0.4157	0.3807
26	10	7	30.31	100.00%	51.7618	-0.3704	0.0367	0.3662	0.4862	0.3830
26	11	8	30.31	100.00%	51.2177	-0.6273	-0.1742	0.3592	0.4115	0.3796
26	12	9	30.31	100.00%	50.6455	-0.5318	-0.0516	0.3671	0.4368	0.3721
28	3	8	30.31	100.00%	51.4455	-0.0175	0.0057	0.3396	0.3843	0.3125
28	4	1	30.31	100.00%	51.5418	0.1795	0.0081	0.4318	0.5174	0.4874
28	5	2	30.31	100.00%	51.1156	-0.0384	0.4514	0.3464	0.4232	0.4089
28	6	3	30.31	100.00%	50.4643	0.1289	0.6499	0.3609	0.4590	0.3682
28	7	4	30.31	100.00%	51.8477	0.0109	0.3011	0.3059	0.3446	0.3446
28	8	5	30.31	100.00%	51.2992	-0.1656	0.3451	0.3425	0.4326	0.3333
28	9	6	30.31	100.00%	50.7012	0.4611	0.5903	0.4494	0.5215	0.5146
28	10	7	30.31	100.00%	52.0061	0.2503	0.1979	0.3570	0.4570	0.3436
28	11	8	30.31	100.00%	51.3992	-0.0442	-0.0113	0.3374	0.3759	0.3072
28	12	9	30.31	100.00%	50.6715	0.0324	0.1630	0.3691	0.4415	0.3645
28	13	10	30.31	100.00%	51.6984	0.6314	-0.0855	0.3298	0.3665	0.3574
28	14	11	30.31	100.00%	51.1513	0.3532	0.3886	0.3409	0.4069	0.3613
28	15	12	30.31	100.00%	50.5704	-0.0030	0.3259	0.4667	0.6557	0.4046

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
28	16	13	30.31	100.00%	51.5202	0.2212	0.2267	0.4190	0.3744	0.5050
28	17	14	30.31	100.00%	50.7539	1.0194	0.1148	0.4092	0.5390	0.3815
28	18	15	30.31	100.00%	50.0621	0.3245	0.5119	0.5663	0.5299	0.6989
28	19	8	30.31	100.00%	51.3382	-0.0212	-0.0390	0.3341	0.3774	0.3134
29	1	8	30.31	100.00%	51.3691	-0.0529	-0.0417	0.3328	0.3771	0.2773
29	2	1	30.31	100.00%	51.4727	0.1885	0.0757	0.4464	0.5310	0.5151
29	3	2	30.31	100.00%	51.0319	-0.3239	0.3674	0.3633	0.4442	0.4254
29	4	3	30.31	100.00%	50.4450	0.0993	0.7145	0.3656	0.5042	0.3782
29	5	4	30.31	100.00%	51.8066	0.1160	0.3011	0.3124	0.3655	0.3528
29	6	5	30.31	100.00%	51.2988	-0.1577	0.3160	0.3168	0.3899	0.3070
29	7	6	30.31	100.00%	50.6633	0.4106	0.5790	0.4162	0.4736	0.4783
29	8	7	30.31	100.00%	51.9272	0.2587	0.1938	0.3631	0.4500	0.3602
29	9	8	30.31	100.00%	51.3339	-0.0582	-0.0350	0.3366	0.3810	0.3121
29	10	9	30.31	100.00%	50.5944	-0.0420	0.1104	0.3671	0.4443	0.3747
29	11	10	30.31	100.00%	51.6300	0.6130	-0.1211	0.3370	0.3867	0.3719
29	12	11	30.31	100.00%	51.0565	0.4074	0.3412	0.3940	0.4727	0.4421
29	13	12	30.31	100.00%	50.4757	-0.0894	0.3501	0.5053	0.7081	0.4473
29	14	13	30.31	100.00%	51.3364	0.2645	0.1352	0.4327	0.4304	0.5096
29	15	14	30.31	100.00%	50.0538	0.3370	0.5810	0.5736	0.5797	0.6865
29	16	15	30.31	100.00%	50.0538	0.3370	0.5810	0.5736	0.5797	0.6865
29	17	8	30.31	100.00%	51.3052	-0.0854	0.0121	0.3444	0.3565	0.3268
30	1	8	30.31	100.00%	51.3208	-0.0544	0.0128	0.3437	0.3905	0.3233
30	2	1	30.31	100.00%	51.4651	0.1358	0.0666	0.4509	0.5391	0.5276
30	3	2	30.31	100.00%	51.0319	-0.4206	0.3996	0.3569	0.4223	0.4075
30	4	3	30.31	100.00%	50.4231	0.1123	0.6715	0.3682	0.4923	0.3695
30	5	4	30.31	100.00%	51.7769	0.1025	0.3014	0.3118	0.3543	0.3473

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
30	6	5	30.31	100.00%	51.2614	-0.1740	0.3064	0.3220	0.4057	0.3205
30	7	6	30.31	100.00%	50.9941	0.1383	0.2776	0.4160	0.4760	0.4538
30	8	7	30.31	100.00%	51.9215	0.2775	0.1903	0.3644	0.4582	0.3576
30	9	8	30.31	100.00%	51.3299	-0.0407	-0.0213	0.3378	0.3884	0.3229
30	10	9	30.31	100.00%	50.6225	0.0815	0.1120	0.3682	0.4481	0.3626
30	11	10	30.31	100.00%	51.6533	0.5523	-0.1105	0.3433	0.3956	0.3856
30	12	11	30.31	100.00%	51.0761	0.3635	0.3702	0.3439	0.4075	0.3796
30	13	12	30.31	100.00%	50.4697	-0.0922	0.3438	0.4972	0.7025	0.4325
30	14	13	30.31	100.00%	51.3577	0.2273	0.1370	0.4330	0.4037	0.5120
30	15	14	30.31	100.00%	50.7457	1.0121	0.0987	0.4253	0.5990	0.3782
30	16	15	30.31	100.00%	50.0744	0.3490	0.6145	0.5624	0.5631	0.6719
30	17	8	30.31	100.00%	51.2501	1.6445	-1.4642	0.3280	0.3523	0.3708
31	1	8	30.31	100.00%	51.4115	-0.2050	-0.7558	0.3436	0.3766	0.3461
31	2	1	30.31	100.00%	51.6208	-0.1087	-0.6110	0.4361	0.4912	0.5078
31	3	2	30.31	100.00%	51.1766	-0.5366	-0.3312	0.3568	0.4119	0.4033
31	4	3	30.31	100.00%	50.5483	0.0981	-0.0050	0.3807	0.5831	0.3417
31	5	4	30.31	100.00%	51.9559	-0.1228	-0.4699	0.3122	0.3973	0.3254
31	6	5	30.31	100.00%	51.3894	-0.3950	-0.4745	0.3329	0.4189	0.3275
31	7	6	30.31	100.00%	50.7684	0.2299	-0.1002	0.4309	0.5223	0.4463
31	8	7	30.31	100.00%	52.0996	0.1085	-0.5688	0.3623	0.4447	0.3780
31	9	8	30.31	100.00%	51.4259	-0.1435	-0.7474	0.3373	0.3755	0.3393
31	10	9	30.31	100.00%	50.7496	-0.1311	-0.5516	0.3712	0.4416	0.3783
31	11	10	30.31	100.00%	51.7569	0.3730	-0.7729	0.3406	0.4135	0.3891
31	12	11	30.31	100.00%	51.1737	0.1696	-0.3128	0.3760	0.4371	0.4117
31	13	12	30.31	100.00%	50.5795	-0.1482	-0.4477	0.4952	0.6582	0.4442
31	14	13	30.31	100.00%	51.5282	-0.1211	-0.3697	0.4347	0.4125	0.5125
31	15	14	30.31	100.00%	50.8522	1.0143	-0.6055	0.4310	0.5459	0.4317

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
31	16	15	30.31	100.00%	50.2298	0.3085	-0.0947	0.5731	0.5756	0.6571
31	17	8	30.31	100.00%	51.3738	-0.1530	-0.7334	0.3378	0.3800	0.3405
32	1	8	30.31	100.00%	51.3648	-0.1400	-0.7557	0.3387	0.3696	0.3472
32	2	1	30.31	100.00%	51.5916	-0.0469	-0.5705	0.4328	0.5001	0.5013
32	3	2	30.31	100.00%	51.0490	-0.4625	-0.3308	0.3598	0.4117	0.4073
32	4	3	30.31	100.00%	50.4698	0.1475	-0.0067	0.3587	0.5317	0.3230
32	5	4	30.31	100.00%	51.8688	-0.0871	-0.4216	0.3095	0.3971	0.3130
32	6	5	30.31	100.00%	51.2947	-0.2918	-0.4410	0.3253	0.4068	0.3164
32	7	6	30.31	100.00%	50.6790	0.2886	-0.0733	0.4321	0.5371	0.4420
32	8	7	30.31	100.00%	51.9904	0.2139	-0.5240	0.3575	0.4401	0.3716
32	9	8	30.31	100.00%	51.3357	-0.0908	-0.7107	0.3406	0.3937	0.3526
32	10	9	30.31	100.00%	50.6628	-0.0597	-0.4663	0.3738	0.4499	0.3855
32	11	10	30.31	100.00%	51.6836	0.4389	-0.7731	0.3450	0.4099	0.3827
32	12	11	30.31	100.00%	51.0898	0.2788	-0.3045	0.3855	0.4615	0.4198
32	13	12	30.31	100.00%	50.5402	-0.1239	-0.3870	0.5244	0.7030	0.4665
32	14	13	30.31	100.00%	51.4679	-0.0805	-0.3377	0.4356	0.4211	0.5106
32	15	14	30.31	100.00%	50.8134	1.0986	-0.5578	0.4179	0.5184	0.4330
32	16	15	30.31	100.00%	50.1682	0.3857	-0.0962	0.5836	0.5847	0.6730
32	17	8	30.31	100.00%	51.3214	-0.0408	-0.7308	0.3373	0.3850	0.3465
33	1	8	30.31	100.00%	51.4764	-0.0481	-0.7199	0.3413	0.3874	0.3496
33	2	1	30.31	100.00%	51.6652	-0.0020	-0.5747	0.4369	0.5270	0.5090
33	3	2	30.31	100.00%	51.2046	-0.4092	-0.2505	0.3553	0.4111	0.3995
33	4	3	30.31	100.00%	50.5398	0.2260	0.0695	0.3942	0.6080	0.3601
33	5	4	30.31	100.00%	51.9926	0.0161	-0.4212	0.3090	0.3916	0.3245
33	6	5	30.31	100.00%	51.4218	-0.2735	-0.4478	0.3231	0.3975	0.3111
33	7	6	30.31	100.00%	50.8170	0.2847	-0.0437	0.4215	0.5278	0.4423

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
33	8	7	30.31	100.00%	52.1129	0.2189	-0.5131	0.3599	0.4517	0.3718
33	9	8	30.31	100.00%	51.4561	-0.0300	-0.6992	0.3371	0.3862	0.3425
33	10	9	30.31	100.00%	50.8069	-0.0439	-0.3853	0.3731	0.4507	0.3863
33	11	10	30.31	100.00%	51.8175	0.4757	-0.7514	0.3448	0.3973	0.3798
33	12	11	30.31	100.00%	51.1974	0.2702	-0.3079	0.3765	0.4427	0.4147
33	13	12	30.31	100.00%	50.6278	-0.1484	-0.3701	0.5305	0.6789	0.4895
33	14	13	30.31	100.00%	51.5530	-0.0864	-0.3012	0.4176	0.3993	0.4776
33	15	14	30.31	100.00%	50.8777	1.1162	-0.5928	0.4204	0.5394	0.4258
33	16	15	30.31	100.00%	50.2763	0.3949	-0.0358	0.5844	0.6068	0.6614
33	17	8	30.31	100.00%	51.4756	-0.0332	-0.7166	0.3359	0.3691	0.3416
34	1	8	30.31	100.00%	48.7962	0.2114	-2.3909	1.1842	1.4589	1.0832
34	2	1	30.31	100.00%	45.1826	5.4910	0.4347	4.6382	4.3050	5.0283
34	3	2	30.31	100.00%	45.7022	-2.7823	-0.3130	3.9456	3.8177	4.4098
34	4	3	30.31	100.00%	47.9188	-0.4435	-0.2359	0.7753	0.8755	0.6267
34	5	4	30.31	100.00%	46.3133	2.6903	-1.8683	4.5314	4.5632	4.6502
34	6	5	30.31	100.00%	47.2354	-2.4545	-2.3419	1.6421	2.2913	1.6106
34	7	6	30.31	100.00%	49.3295	0.0500	-0.6105	0.8474	0.7818	0.7396
34	8	7	30.31	100.00%	47.2028	0.4710	-2.2582	4.0158	5.2436	4.3738
34	9	8	30.31	100.00%	48.7146	0.3082	-2.3622	1.1867	1.4590	1.1061
34	10	9	30.31	100.00%	49.7963	0.3975	-0.3042	0.6001	0.5488	0.5072
34	11	10	30.31	100.00%	46.0205	-2.0054	-1.5383	4.4135	4.5090	4.8140
34	12	11	30.31	100.00%	47.0845	3.1679	-3.1945	2.1272	2.8470	2.1808
34	13	12	30.31	100.00%	49.3303	1.0389	-0.6866	0.6215	0.5356	0.5267
34	14	13	30.31	100.00%	44.2301	-4.7011	1.5468	5.0596	5.2197	5.2351
34	15	14	30.31	100.00%	45.2694	1.2294	-0.0093	3.8882	4.0266	3.8015
34	16	15	30.31	100.00%	46.7744	1.9895	-0.0310	1.0195	1.2688	0.6442
34	17	8	30.31	100.00%	48.6680	0.3562	-2.3502	1.2203	1.4895	1.1833

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
35	1	8	30.31	100.00%	49.0775	0.4820	-2.1911	1.5789	1.7407	1.1781
35	2	1	30.31	100.00%	45.0269	3.8321	0.2685	4.8269	4.6927	5.1009
35	3	2	30.31	100.00%	44.5007	-3.1897	-0.5201	6.1100	5.7506	5.5333
35	4	3	30.31	100.00%	47.7610	-0.6090	-0.2374	0.9651	1.2360	0.6043
35	5	4	30.31	100.00%	46.8829	2.6113	-0.8450	4.3850	5.2313	4.7942
35	6	5	30.31	100.00%	47.8436	-2.7309	-2.8922	1.1787	1.5749	1.3190
35	7	6	30.31	100.00%	49.6121	0.1791	-0.2048	0.6380	0.5931	0.5181
35	8	7	30.31	100.00%	46.8485	1.0195	-2.8066	4.3727	3.9253	4.5695
35	9	8	30.31	100.00%	49.0025	0.4633	-2.2395	1.5759	1.7423	1.1881
35	10	9	30.31	100.00%	49.9104	0.4704	-0.4704	0.6121	0.5270	0.5282
35	11	10	30.31	100.00%	45.5474	-2.6384	-0.3867	5.7102	5.5189	6.5044
35	12	11	30.31	100.00%	47.1446	3.1847	-3.3533	2.1187	2.2439	2.6096
35	13	12	30.31	100.00%	49.0032	1.0072	-1.1542	1.0334	1.1775	0.7801
35	14	13	30.31	100.00%	44.6736	-3.8680	0.1530	6.1596	5.8892	6.2396
35	15	14	30.31	100.00%	44.7740	3.0600	0.4167	5.1549	4.9776	4.6759
35	16	15	30.31	100.00%	46.9618	1.3568	-0.7858	1.3484	1.2325	0.9600
35	17	8	30.31	100.00%	48.9075	0.3220	-2.3597	1.5336	1.7404	1.2235
36	1	8	30.31	100.00%	49.0938	0.3057	-2.7678	1.3089	1.2124	1.1836
36	2	1	30.31	100.00%	45.1209	3.9643	0.1514	4.8863	4.6841	4.8459
36	3	2	30.31	100.00%	43.3713	-4.6358	-0.8739	6.8895	5.9724	6.0099
36	4	3	30.31	100.00%	47.5641	-0.6803	-0.3582	0.9199	1.1680	0.6143
36	5	4	30.31	100.00%	46.5397	2.8463	-0.9744	4.2894	4.4253	4.8658
36	6	5	30.31	100.00%	47.8356	-2.0977	-3.1816	0.9520	1.2486	1.1049
36	7	6	30.31	100.00%	49.2670	-0.0327	-0.1429	0.6564	0.6107	0.5459
36	8	7	30.31	100.00%	47.3033	0.4471	-3.5270	3.7125	3.5881	3.7524
36	9	8	30.31	100.00%	48.9234	0.3112	-2.8025	1.3204	1.2615	1.1712
36	10	9	30.31	100.00%	49.6069	0.3073	-0.4718	0.5935	0.5119	0.5350

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
36	11	10	30.31	100.00%	45.1410	-2.9927	0.4602	5.6482	5.2889	6.8477
36	12	11	30.31	100.00%	47.6556	1.9533	-3.2589	1.4224	1.6957	1.7275
36	13	12	30.31	100.00%	48.9949	0.7437	-1.2670	0.9703	1.1486	0.7793
36	14	13	30.31	100.00%	45.3855	-5.8746	-0.0538	4.8322	5.0306	5.1184
36	15	14	30.31	100.00%	44.0368	4.7841	-0.1859	6.9547	5.6700	5.7692
36	16	15	30.31	100.00%	46.7762	1.2862	-0.6547	1.2748	1.1980	1.0665
36	17	8	30.31	100.00%	48.9775	0.3365	-2.7525	1.3085	1.2251	1.1840
37	1	8	30.31	100.00%	49.0199	0.3297	-2.6700	1.3385	1.2900	1.1571
37	2	1	30.31	100.00%	45.0639	3.9819	0.1402	4.8690	4.6108	4.8681
37	3	2	30.31	100.00%	43.3059	-4.5802	-0.8523	7.0009	6.0407	6.0573
37	4	3	30.31	100.00%	47.5937	-0.6507	-0.2870	0.9361	1.1543	0.6434
37	5	4	30.31	100.00%	46.5492	2.8477	-0.9591	4.2693	4.4360	4.8358
37	6	5	30.31	100.00%	47.9093	-2.0440	-3.1678	0.9096	1.1825	1.0462
37	7	6	30.31	100.00%	49.3836	0.0101	-0.1510	0.6424	0.5806	0.5324
37	8	7	30.31	100.00%	47.1990	0.6375	-3.4605	3.8767	3.6963	3.9688
37	9	8	30.31	100.00%	49.0353	0.3259	-2.7543	1.3342	1.2830	1.1398
37	10	9	30.31	100.00%	49.7042	0.3558	-0.4857	0.6029	0.5109	0.5407
37	11	10	30.31	100.00%	45.1900	-2.8981	0.5555	5.6755	5.3308	6.8366
37	12	11	30.31	100.00%	47.6139	2.0212	-3.2487	1.4469	1.7265	1.7744
37	13	12	30.31	100.00%	48.9514	0.7884	-1.2067	0.9670	1.1631	0.7595
37	14	13	30.31	100.00%	45.3162	-5.8335	-0.0983	4.9317	5.0494	5.2456
37	15	14	30.31	100.00%	44.0037	4.8312	-0.1553	7.0265	5.7527	5.8566
37	16	15	30.31	100.00%	46.7265	1.2964	-0.7397	1.2834	1.1715	1.0798
37	17	8	30.31	100.00%	48.9776	0.3358	-2.7629	1.3375	1.2789	1.1585
38	1	8	30.31	100.00%	48.7110	-0.6091	-2.6267	1.5505	2.2588	1.1978
38	2	1	30.31	100.00%	44.8559	4.1038	1.3291	5.0380	5.5653	5.2845

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
38	3	2	30.31	100.00%	46.0700	-1.6788	0.1306	3.5617	3.2424	4.1487
38	4	3	30.31	100.00%	47.8893	-0.3679	-0.3708	0.7783	0.8533	0.6692
38	5	4	30.31	100.00%	46.2963	2.6465	-2.2012	4.6735	4.3484	4.8411
38	6	5	30.31	100.00%	47.6506	-2.1905	-2.6672	1.7405	2.3309	1.8784
38	7	6	30.31	100.00%	49.3060	-0.1279	-0.6574	0.8181	0.8295	0.7632
38	8	7	30.31	100.00%	47.1628	0.6289	-1.8675	3.9177	5.4029	3.9798
38	9	8	30.31	100.00%	48.5485	-0.5462	-2.5469	1.5806	2.2731	1.2142
38	10	9	30.31	100.00%	49.7195	0.2066	-0.7391	0.6207	0.6786	0.5662
38	11	10	30.31	100.00%	45.9727	-2.1011	-2.0290	4.3180	4.3370	4.7336
38	12	11	30.31	100.00%	47.1728	2.5023	-2.3079	2.2082	2.9202	2.4870
38	13	12	30.31	100.00%	49.2107	0.3251	-0.6517	0.6272	0.6473	0.6185
38	14	13	30.31	100.00%	44.3055	-4.8646	1.3829	5.1082	5.0055	5.3958
38	15	14	30.31	100.00%	45.1452	1.7733	-0.0353	4.4318	4.4901	4.2442
38	16	15	30.31	100.00%	47.1155	1.5842	-0.2496	0.9838	1.3215	0.6373
38	17	8	30.31	100.00%	48.5616	-0.5532	-2.5361	1.5911	2.2907	1.2182
39	1	8	30.31	100.00%	48.5161	-0.6881	-2.5537	1.5920	2.2657	1.2418
39	2	1	30.31	100.00%	44.8141	4.1966	1.3402	4.9618	5.4777	5.2364
39	3	2	30.31	100.00%	46.1053	-1.7675	-0.0780	3.5000	3.2013	4.1474
39	4	3	30.31	100.00%	47.8270	-0.3727	-0.2792	0.7778	0.8501	0.6551
39	5	4	30.31	100.00%	46.2441	2.6599	-2.2598	4.6021	4.2860	4.8330
39	6	5	30.31	100.00%	47.5350	-2.2102	-2.7504	1.8046	2.3925	1.9795
39	7	6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
39	8	7	30.31	100.00%	47.0710	0.7349	-1.9508	3.9827	5.3556	4.0963
39	9	8	30.31	100.00%	48.5065	-0.5825	-2.5440	1.5763	2.2717	1.2327
39	10	9	30.31	100.00%	49.6512	0.3611	-0.6299	0.5831	0.5798	0.5303
39	11	10	30.31	100.00%	45.9171	-2.0008	-1.9128	4.3176	4.3210	4.7892
39	12	11	30.31	100.00%	47.1914	2.6777	-2.2793	1.9773	2.6056	2.0836

Table A1. Cobra Probe Measurements (cont.)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
39	13	12	30.31	100.00%	49.2462	0.4400	-0.6855	0.6270	0.6135	0.6139
39	14	13	30.31	100.00%	44.2739	-4.7674	1.3437	5.1120	5.0510	5.4102
39	15	14	30.31	100.00%	45.0867	1.6999	0.2442	4.3769	4.4049	4.2822
39	16	15	30.31	100.00%	47.0858	1.7469	-0.1818	1.0097	1.3837	0.6348
39	17	8	30.31	100.00%	48.4985	-0.5724	-2.5799	1.5786	2.2798	1.2248
40	1	8	30.31	100.00%	51.2957	-0.1811	-0.7362	0.3520	0.4222	0.3852
40	2	1	30.31	100.00%	51.4600	-0.1142	-0.5160	0.4386	0.5451	0.5189
40	3	2	30.31	100.00%	50.9495	-0.5330	-0.2871	0.3612	0.4349	0.4176
40	4	3	30.31	100.00%	50.3876	0.1212	-0.0145	0.3921	0.5942	0.3747
40	5	4	30.31	100.00%	51.7644	-0.1626	-0.4408	0.3387	0.4628	0.3643
40	6	5	30.31	100.00%	51.1653	-0.3602	-0.4933	0.3476	0.4533	0.3380
40	7	6	30.31	100.00%	50.6884	0.1960	-0.1351	0.4433	0.5387	0.4611
40	8	7	30.31	100.00%	51.9683	0.0843	-0.4950	0.3675	0.5246	0.4096
40	9	8	30.31	100.00%	51.2768	-0.1648	-0.7541	0.3500	0.4083	0.3766
40	10	9	30.31	100.00%	50.6232	-0.1832	-0.6187	0.3729	0.4420	0.3993
40	11	10	30.31	100.00%	51.5934	0.3492	-0.7921	0.3437	0.4092	0.3972
40	12	11	30.31	100.00%	51.0105	0.1190	-0.3627	0.3784	0.4764	0.4080
40	13	12	30.31	100.00%	50.3962	-0.0828	-0.4368	0.5281	0.8082	0.4327
40	14	13	30.31	100.00%	51.3695	-0.1854	-0.2005	0.4095	0.4685	0.4345
40	15	14	30.31	100.00%	50.7186	0.9100	-0.5762	0.4053	0.4870	0.4296
40	16	15	30.31	100.00%	50.0635	0.4012	-0.0348	0.5913	0.6546	0.6678
40	17	8	30.31	100.00%	51.2204	-0.1662	-0.7730	0.3432	0.3961	0.3617
41	1	8	30.31	100.00%	51.2342	-0.1586	-0.7620	0.3344	0.3665	0.3495
41	2	1	30.31	100.00%	51.4435	-0.0802	-0.6089	0.4409	0.5636	0.5085
41	3	2	30.31	100.00%	50.9208	-0.4842	-0.2853	0.3701	0.4347	0.4176
41	4	3	30.31	100.00%	50.3303	0.0779	-0.0729	0.3950	0.6034	0.3832
41	5	4	30.31	100.00%	51.7563	-0.1592	-0.4328	0.3247	0.4344	0.3530
41	6	5	30.31	100.00%	51.1354	-0.3648	-0.5045	0.3519	0.4606	0.3416

Table A1. Cobra Probe Measurements (concluded)

Run	Point	Probe Position	tsample (s)	% Good Data	U (m/s)	V (m/s)	W (m/s)	I_u (%)	I_v (%)	I_w (%)
41	7	6	30.31	100.00%	50.5786	0.2822	-0.1764	0.4632	0.5646	0.4835
41	8	7	30.31	100.00%	51.8670	0.0250	-0.4819	0.3676	0.5174	0.4206
41	9	8	30.31	100.00%	51.2635	-0.1488	-0.7797	0.3379	0.3860	0.3502
41	10	9	30.31	100.00%	50.5877	-0.1141	-0.6048	0.3728	0.4486	0.3876
41	11	10	30.31	100.00%	51.5973	0.3227	-0.7879	0.3412	0.3880	0.3933
41	12	11	30.31	100.00%	51.0182	0.1234	-0.3777	0.3719	0.4567	0.3986
41	13	12	30.31	100.00%	50.4813	0.0675	-0.4806	0.4654	0.7113	0.3975
41	14	13	30.31	100.00%	51.4205	-0.2211	-0.2537	0.4123	0.4441	0.4352
41	15	14	30.31	100.00%	50.7832	0.8845	-0.5724	0.4060	0.4830	0.4306
41	16	15	30.31	100.00%	50.1231	0.4233	0.0462	0.5859	0.6603	0.6387
41	17	8	30.31	100.00%	51.2904	-0.1276	-0.7558	0.3303	0.3745	0.3452
42	1	8	30.31	100.00%	51.2865	-0.1062	-0.7501	0.3303	0.3765	0.3439
42	2	1	30.31	100.00%	51.4640	-0.1415	-0.5736	0.4315	0.5270	0.5083
42	3	2	30.31	100.00%	51.0281	-0.4840	-0.2829	0.3596	0.4170	0.3981
42	4	3	30.31	100.00%	50.4265	0.1791	0.0842	0.3764	0.5604	0.3588
42	5	4	30.31	100.00%	51.8011	-0.2035	-0.4314	0.3139	0.3946	0.3161
42	6	5	30.31	100.00%	51.2282	-0.2880	-0.4931	0.3202	0.4107	0.3009
42	7	6	30.31	100.00%	50.7065	0.2134	-0.0464	0.4317	0.5342	0.4469
42	8	7	30.31	100.00%	51.9052	0.0571	-0.6020	0.3736	0.5208	0.4171
42	9	8	30.31	100.00%	51.2865	-0.1121	-0.7451	0.3281	0.3684	0.3423
42	10	9	30.31	100.00%	50.6368	-0.0559	-0.6234	0.3687	0.4517	0.3833
42	11	10	30.31	100.00%	51.6278	0.3296	-0.8094	0.3214	0.3665	0.3643
42	12	11	30.31	100.00%	51.0603	0.1687	-0.3746	0.3560	0.4317	0.3806
42	13	12	30.31	100.00%	50.4706	0.0686	-0.5291	0.4736	0.7214	0.3999
42	14	13	30.31	100.00%	51.4257	-0.1747	-0.2282	0.4246	0.4652	0.4573
42	15	14	30.31	100.00%	50.7809	0.9025	-0.5784	0.4107	0.4924	0.4366
42	16	15	30.31	100.00%	50.1605	0.4211	0.0186	0.5724	0.6485	0.6093
42	17	8	30.31	100.00%	51.3233	-0.0885	-0.7451	0.3270	0.3661	0.3418

APPENDIX B

2D BLOCKAGE MEASUREMENTS

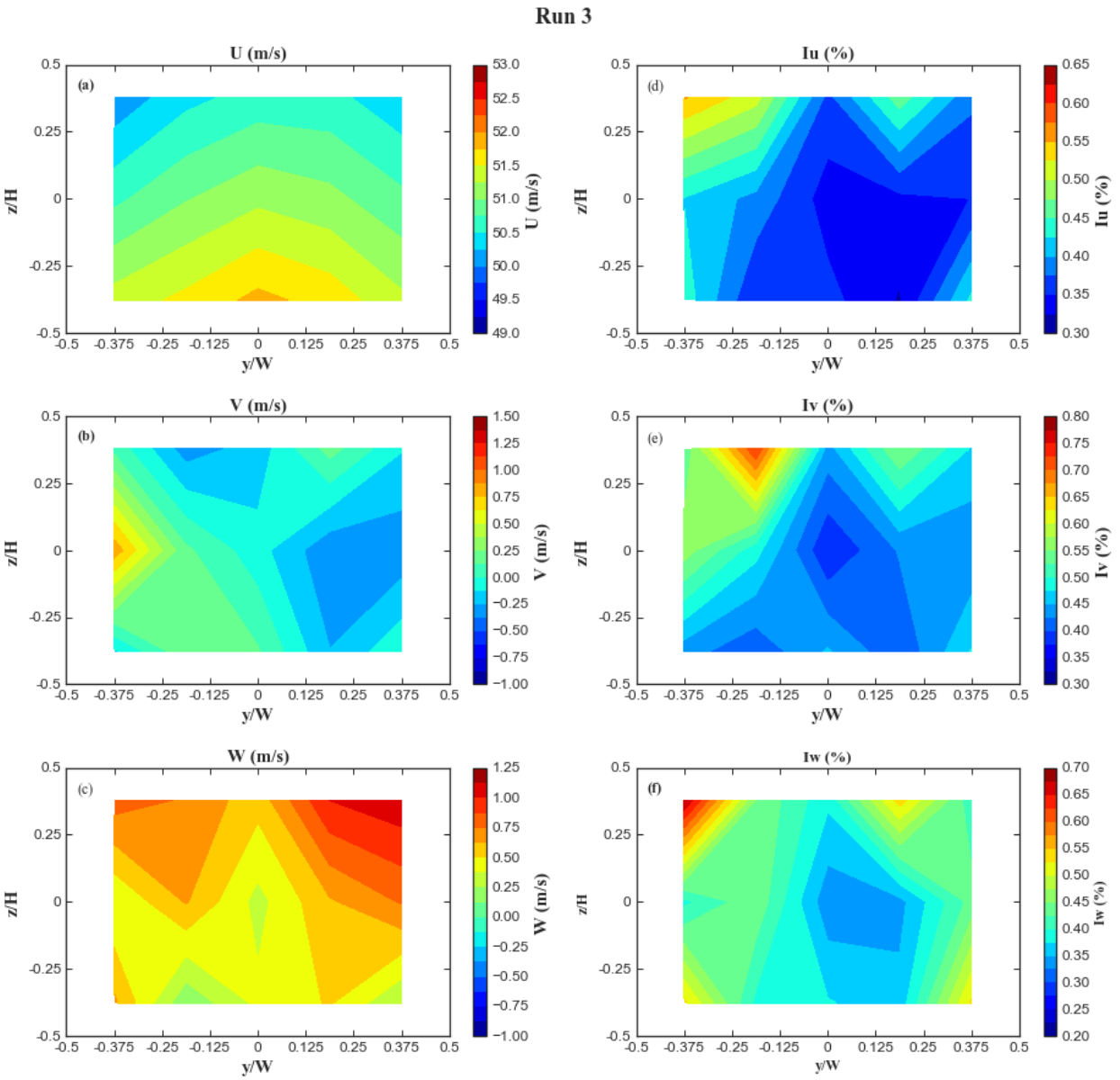

Figure B1. Test section survey at 100 knots with 2D blockage 1 foot tall, 16 feet ahead of inlet; pilot view.

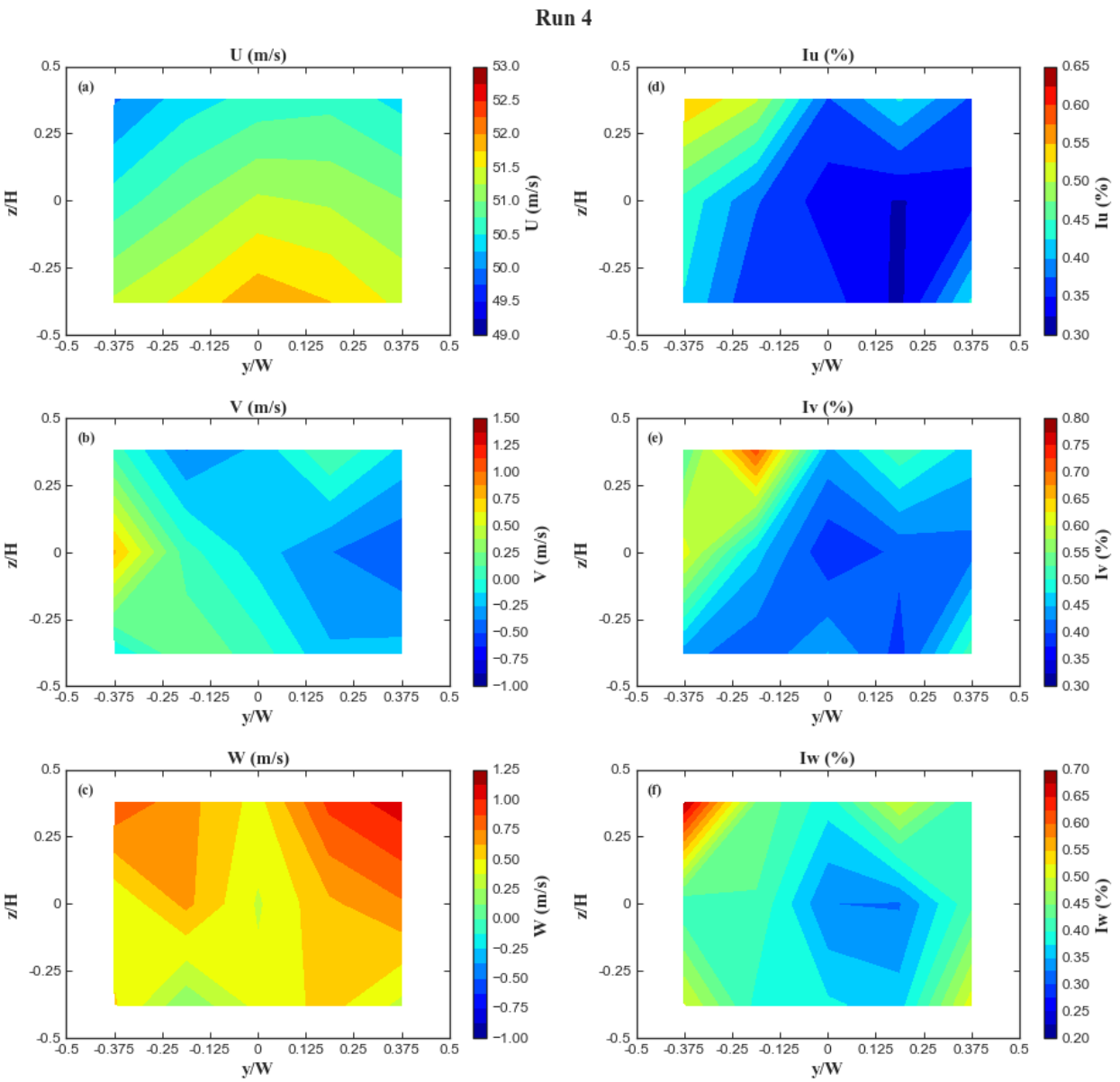

Figure B2. Test section survey at 100 knots with 2D blockage 1 foot tall, 12 feet ahead of inlet; pilot view.

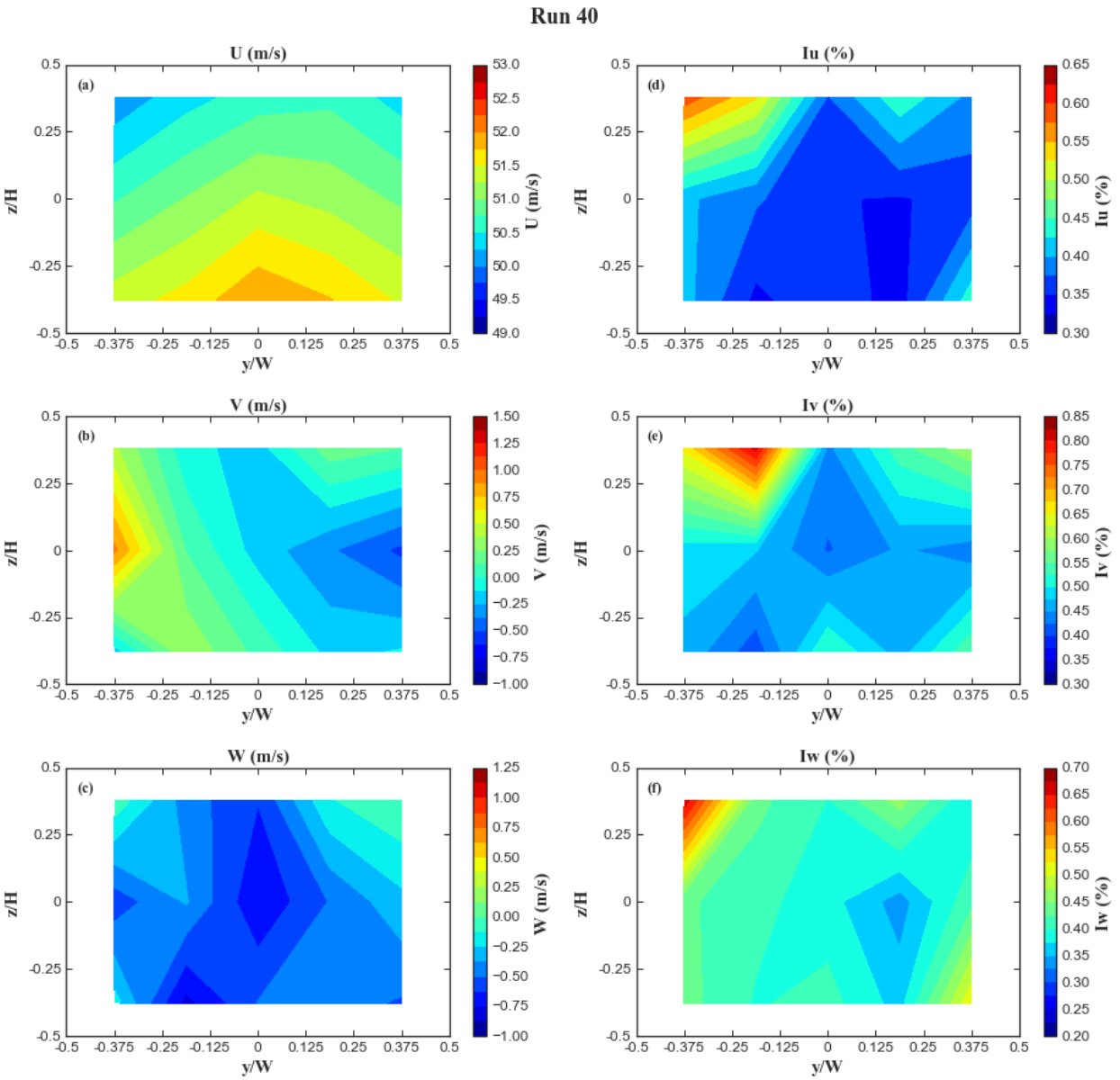

Figure B3. Test section survey at 100 knots with 2D blockage 4 feet tall, 4 feet ahead of inlet; pilot view.

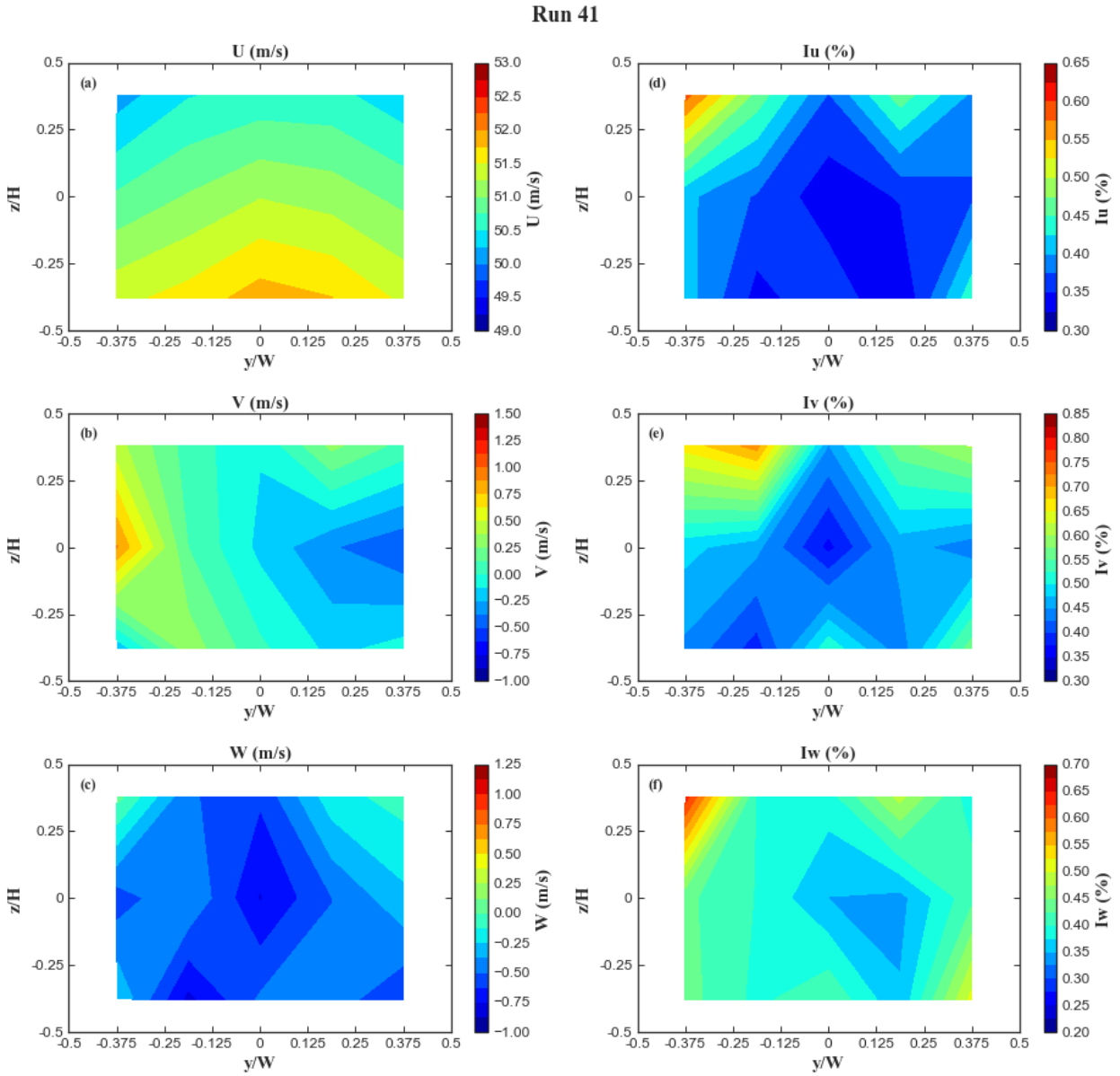

Figure B4. Test section survey at 100 knots with 2D blockage 2 feet tall, 4 feet ahead of inlet; pilot view.

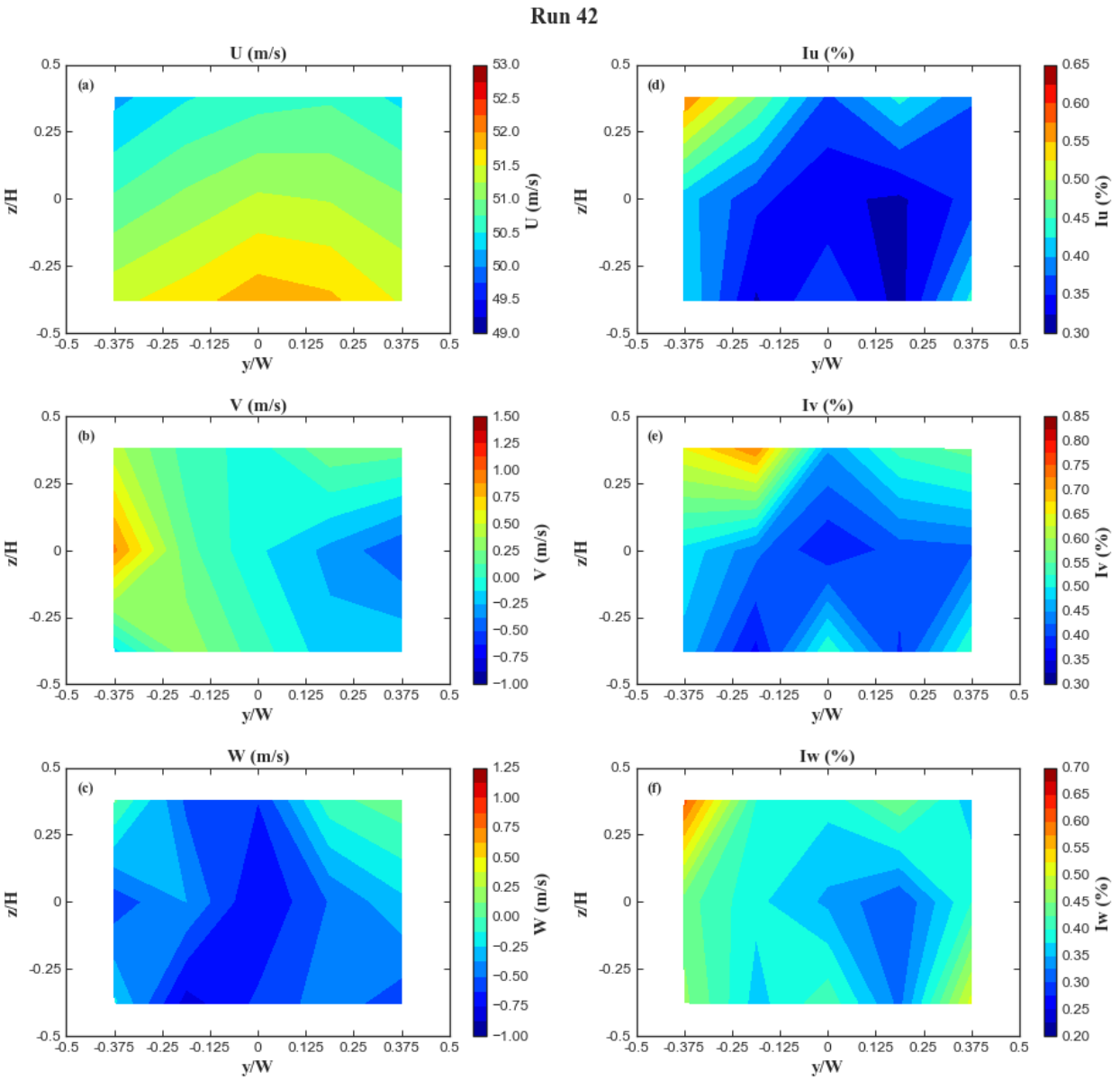

Figure B5. Test section survey at 100 knots with 2D blockage 1 foot tall, 4 feet ahead of inlet; pilot view.

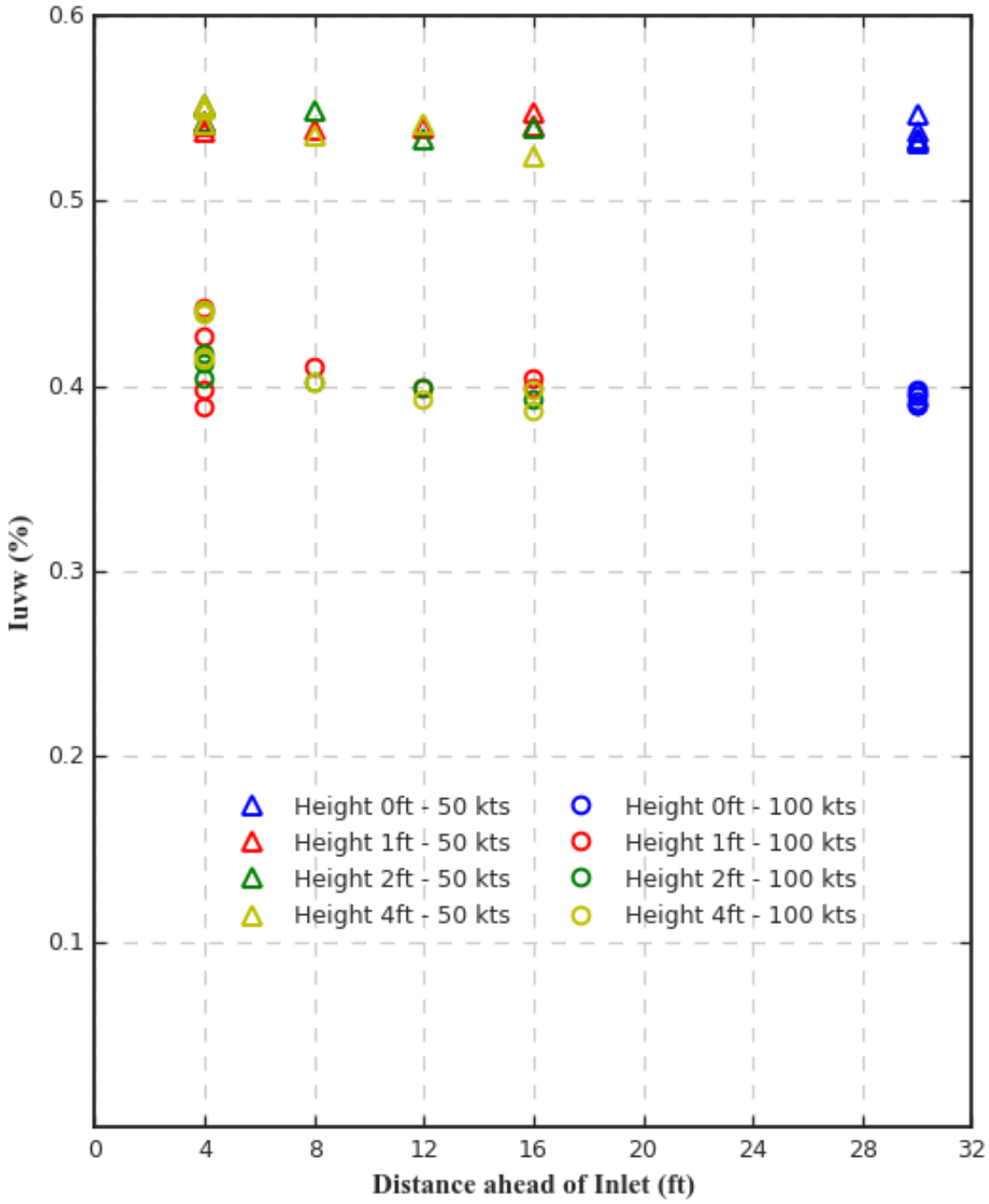

Figure B6. Relative turbulence intensity measurements at location 7 for various 2D blockages ahead of inlet.

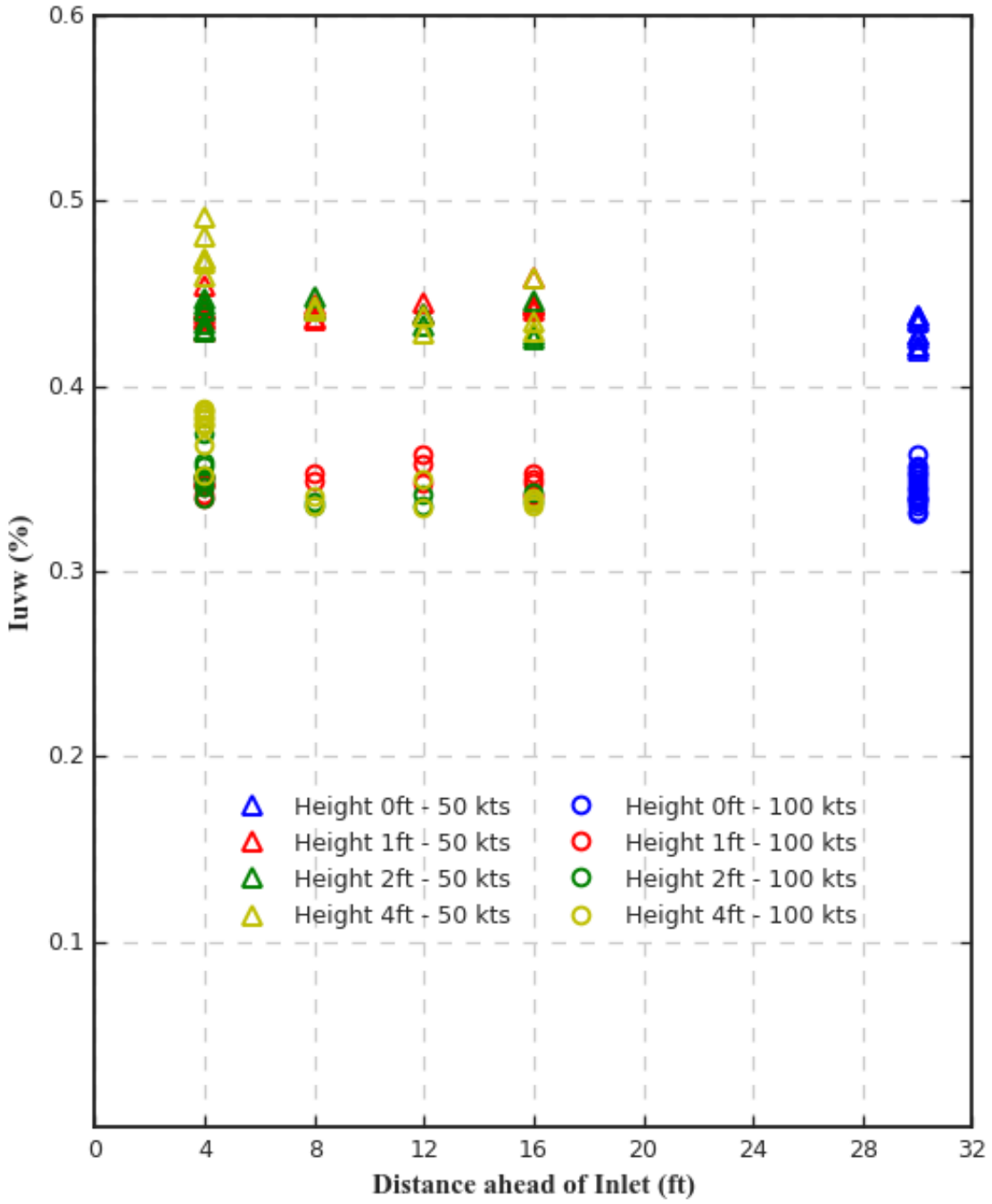

Figure B7. Relative turbulence intensity measurements at location 8 for various 2D blockages ahead of inlet.

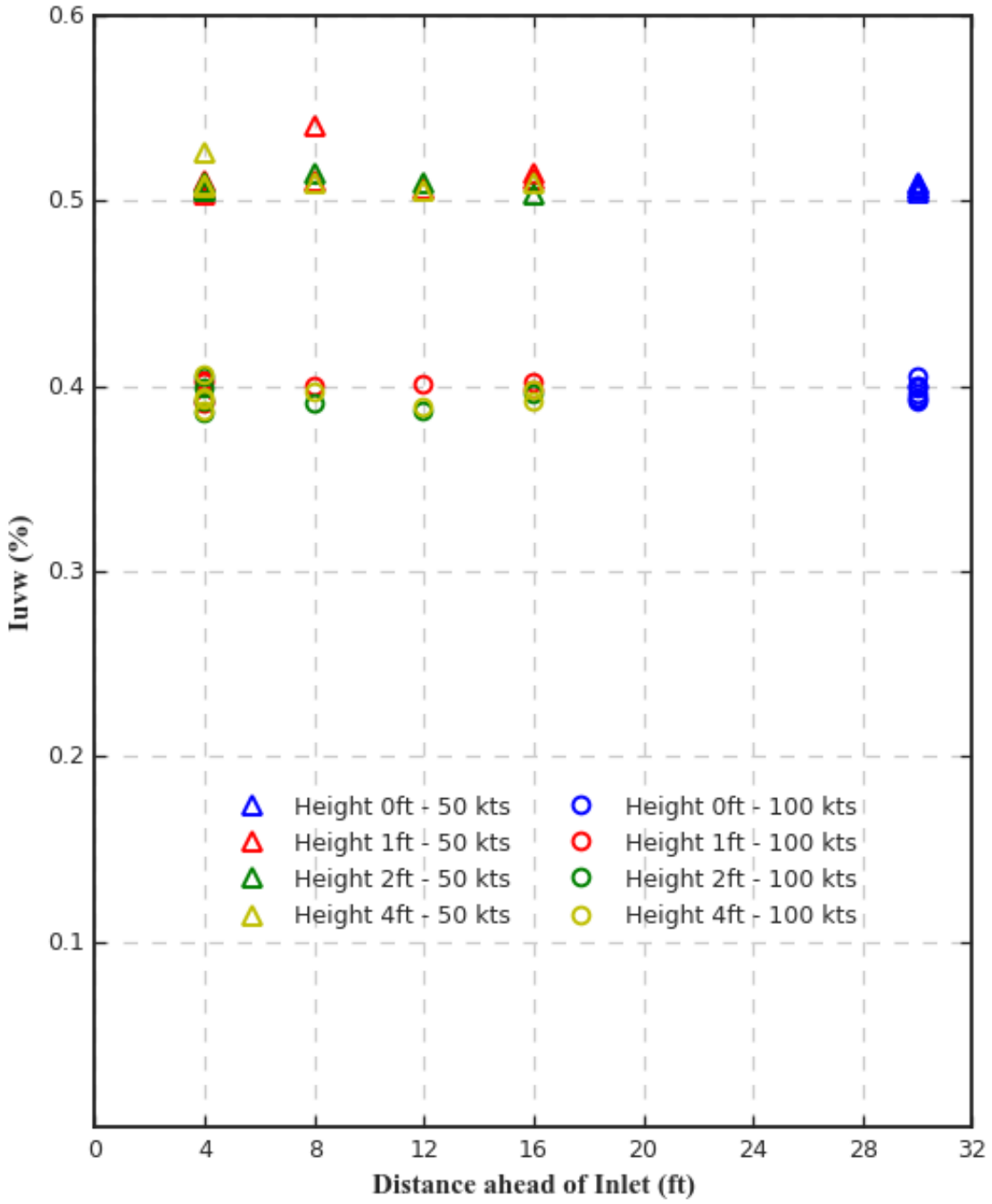

Figure B8. Relative turbulence intensity measurements at location 9 for various 2D blockages ahead of inlet.

APPENDIX C

INLET SPIRE MEASUREMENTS

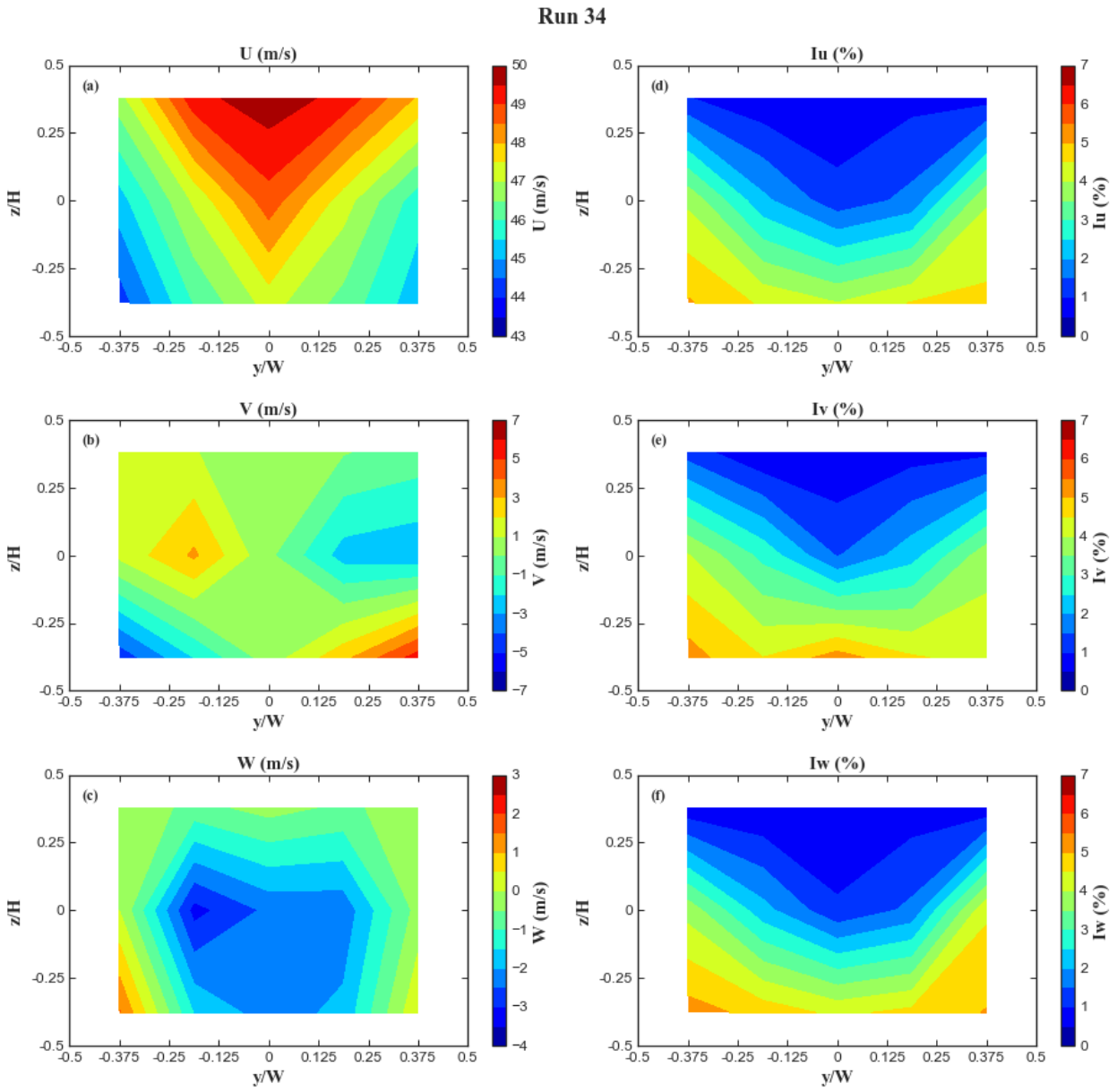

Figure C1. Test section survey at 100 knots with small spires at inlet; pilot view.

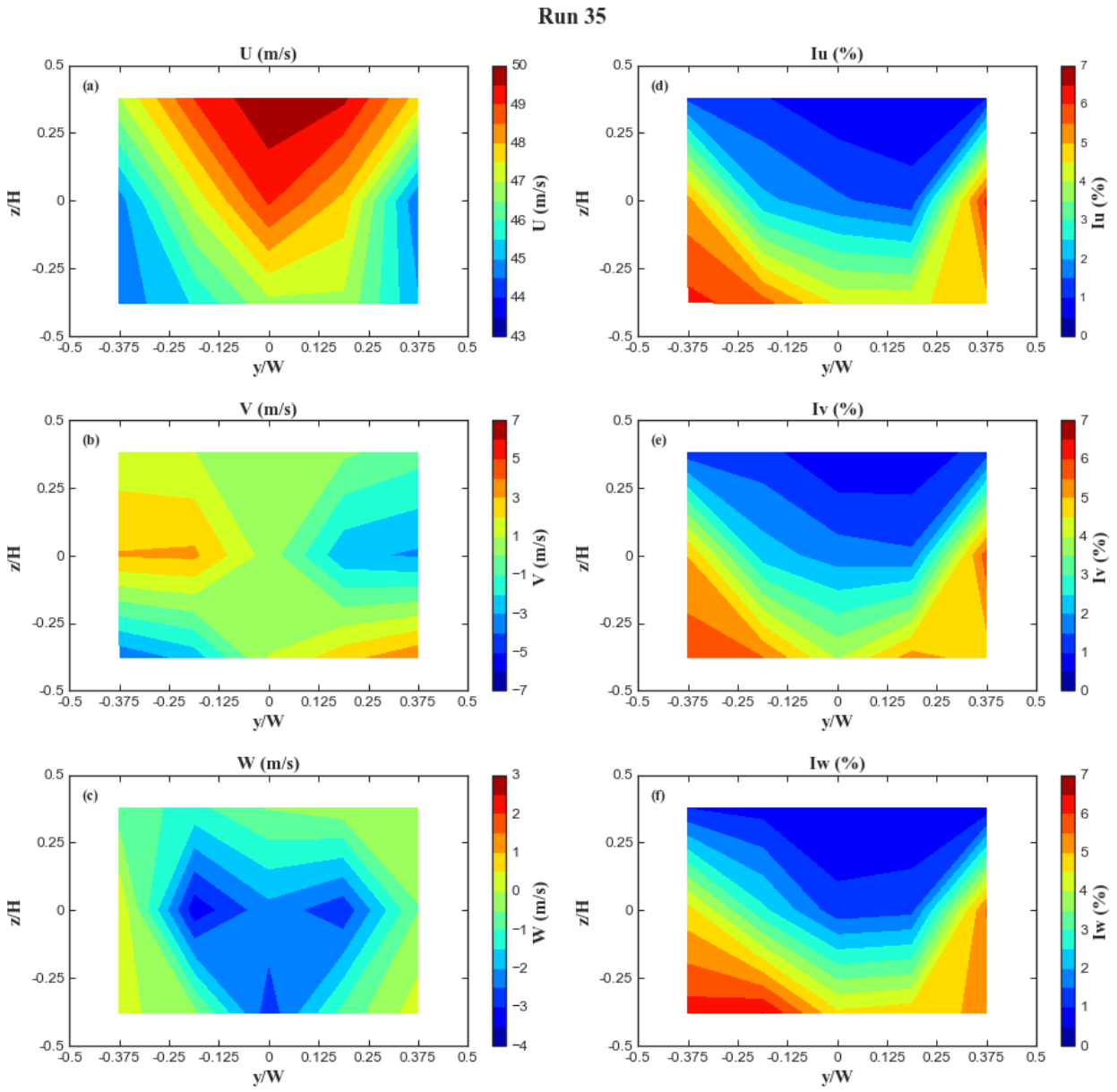

Figure C2. Test section survey at 100 knots with big spires at inlet; pilot view.

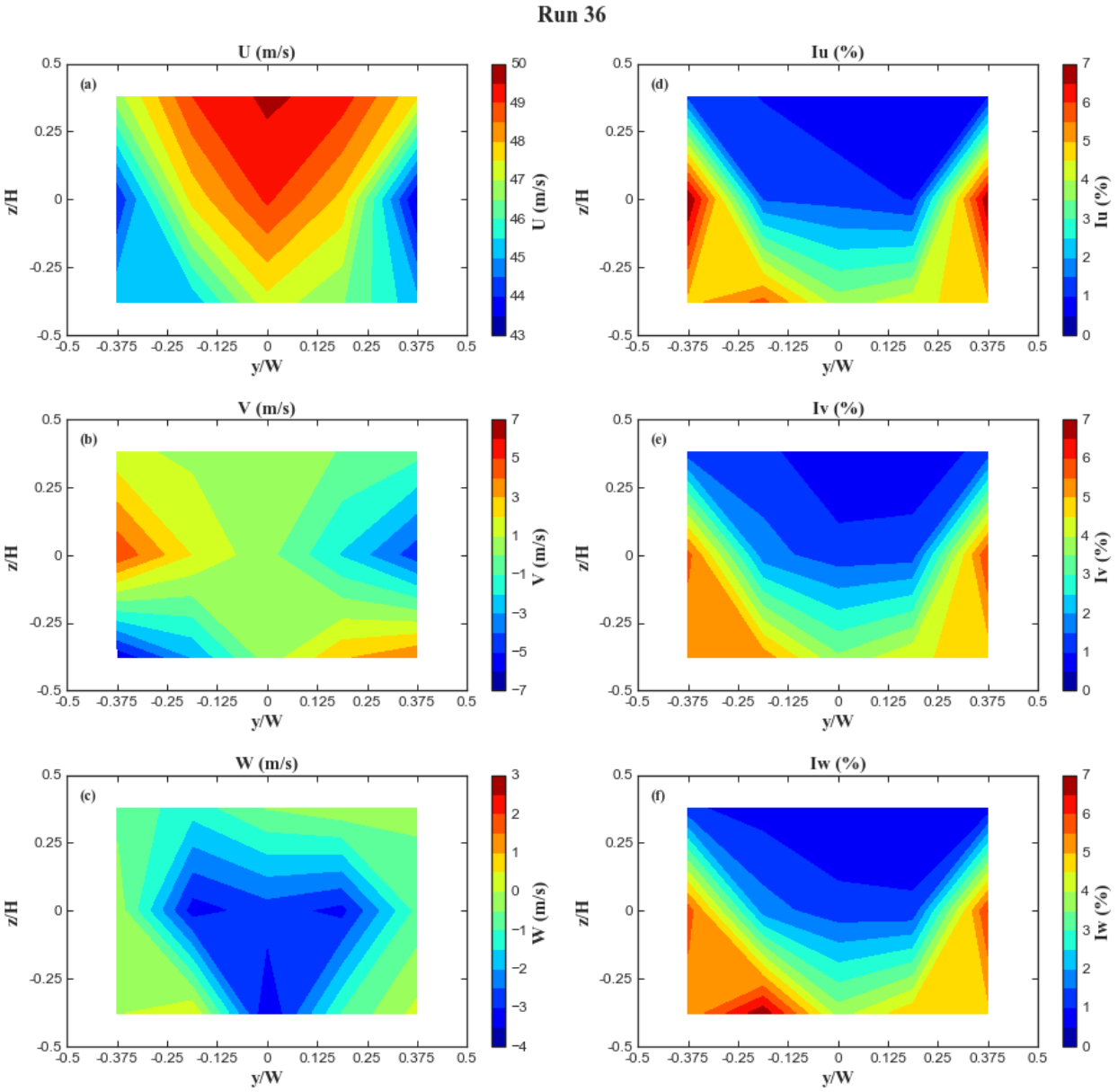

Figure C3. Test section survey at 100 knots with big spires at inlet; pilot view.

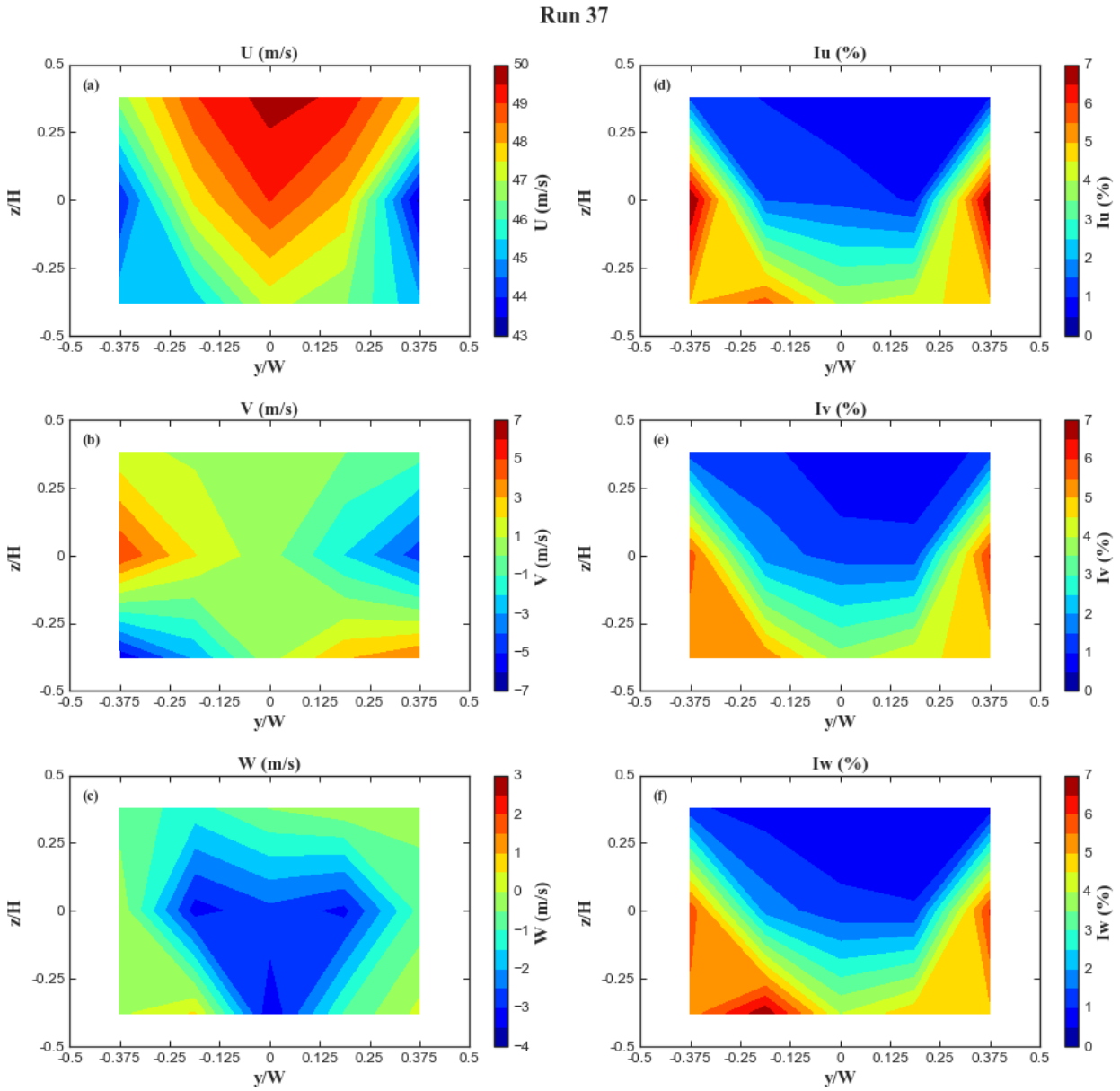

Figure C4. Test section survey at 100 knots with big spires at inlet; pilot view.

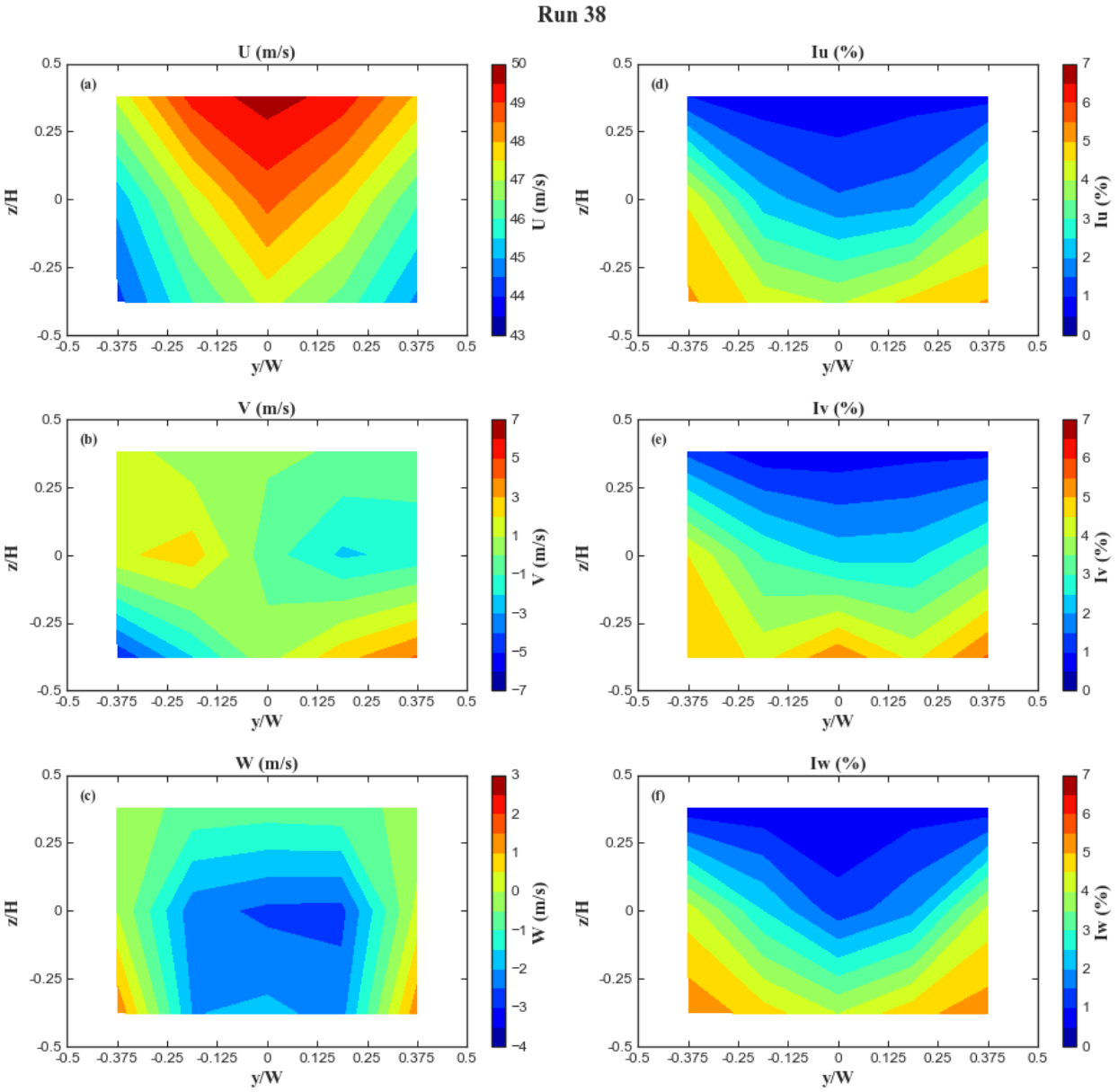

Figure C5. Test section survey at 100 knots with small spires at inlet; pilot view.

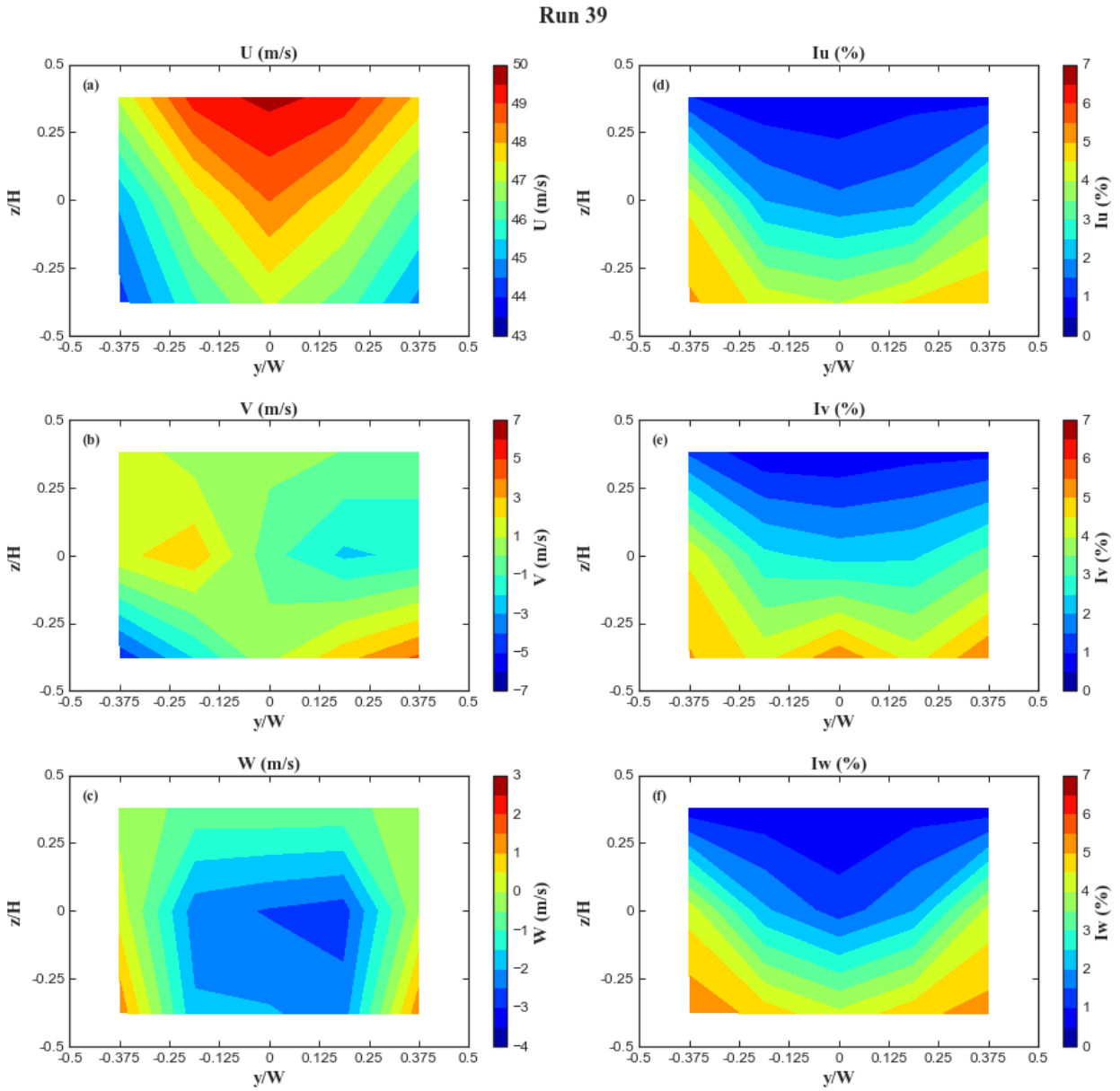

Figure C6. Test section survey at 100 knots with small spires at inlet; pilot view.

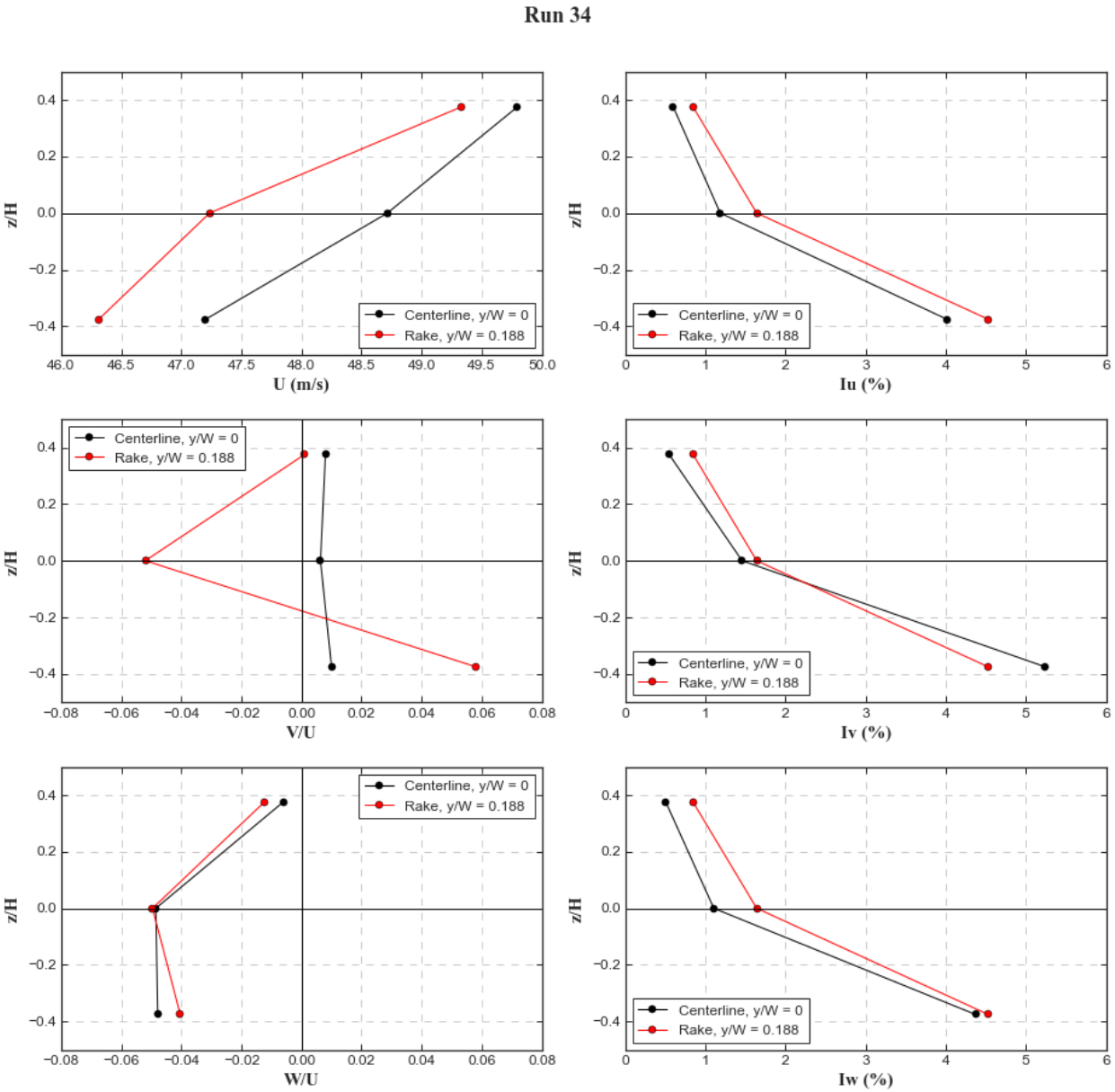

Figure C7. Test section line surveys with big spires at inlet.

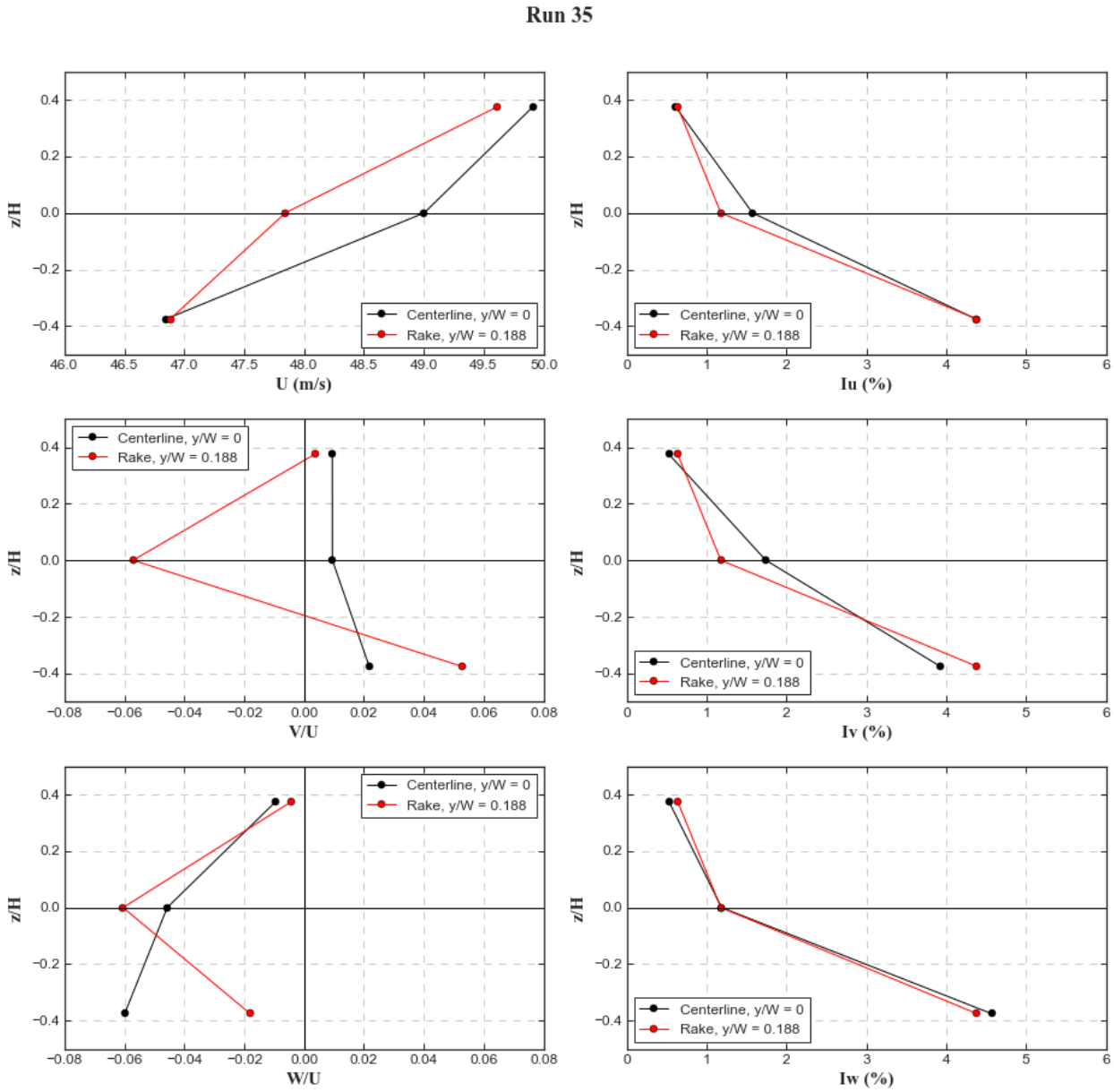

Figure C8. Test section line surveys with big spires at inlet.

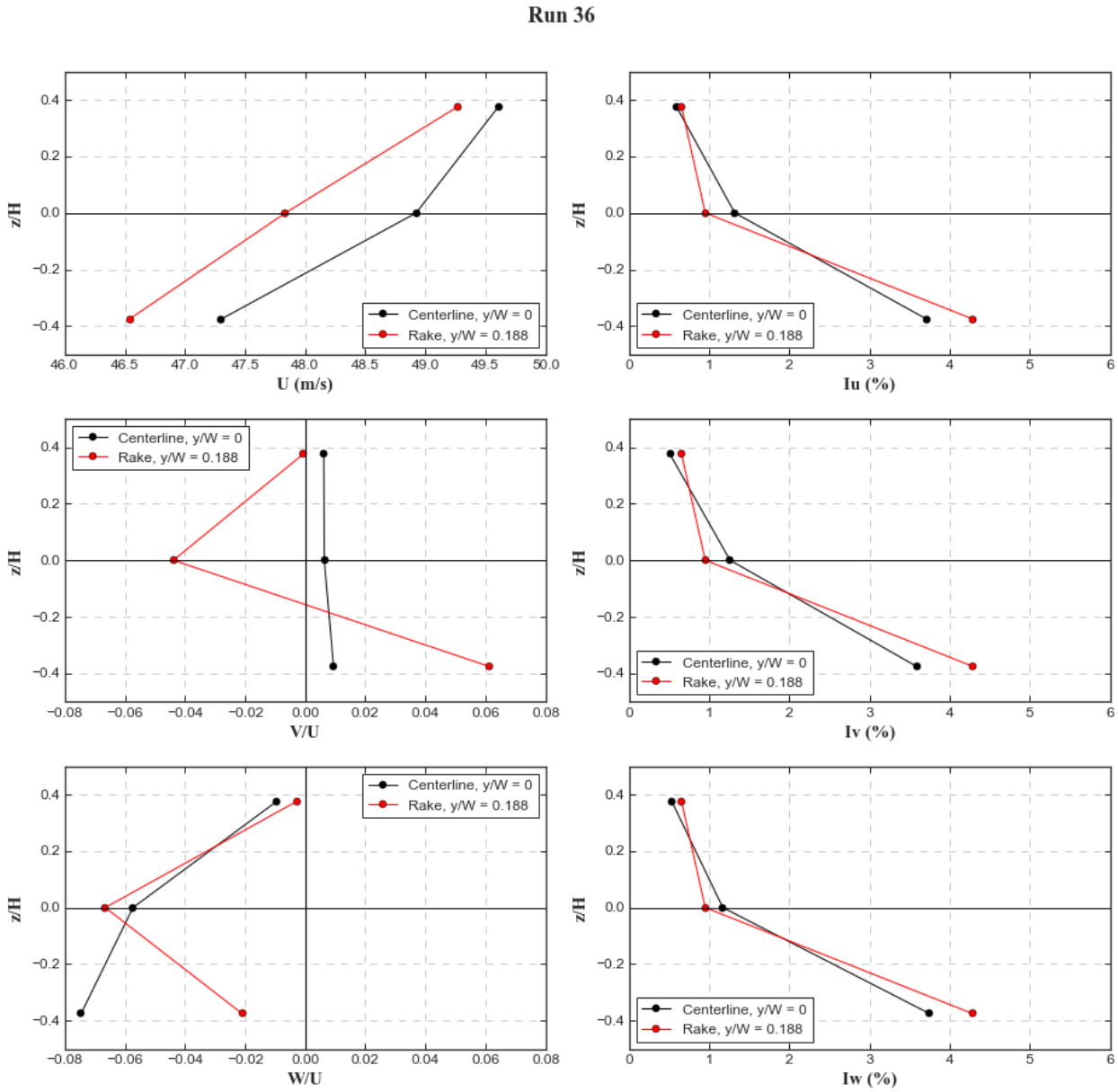

Figure C9. Test section line surveys with big spires at inlet.

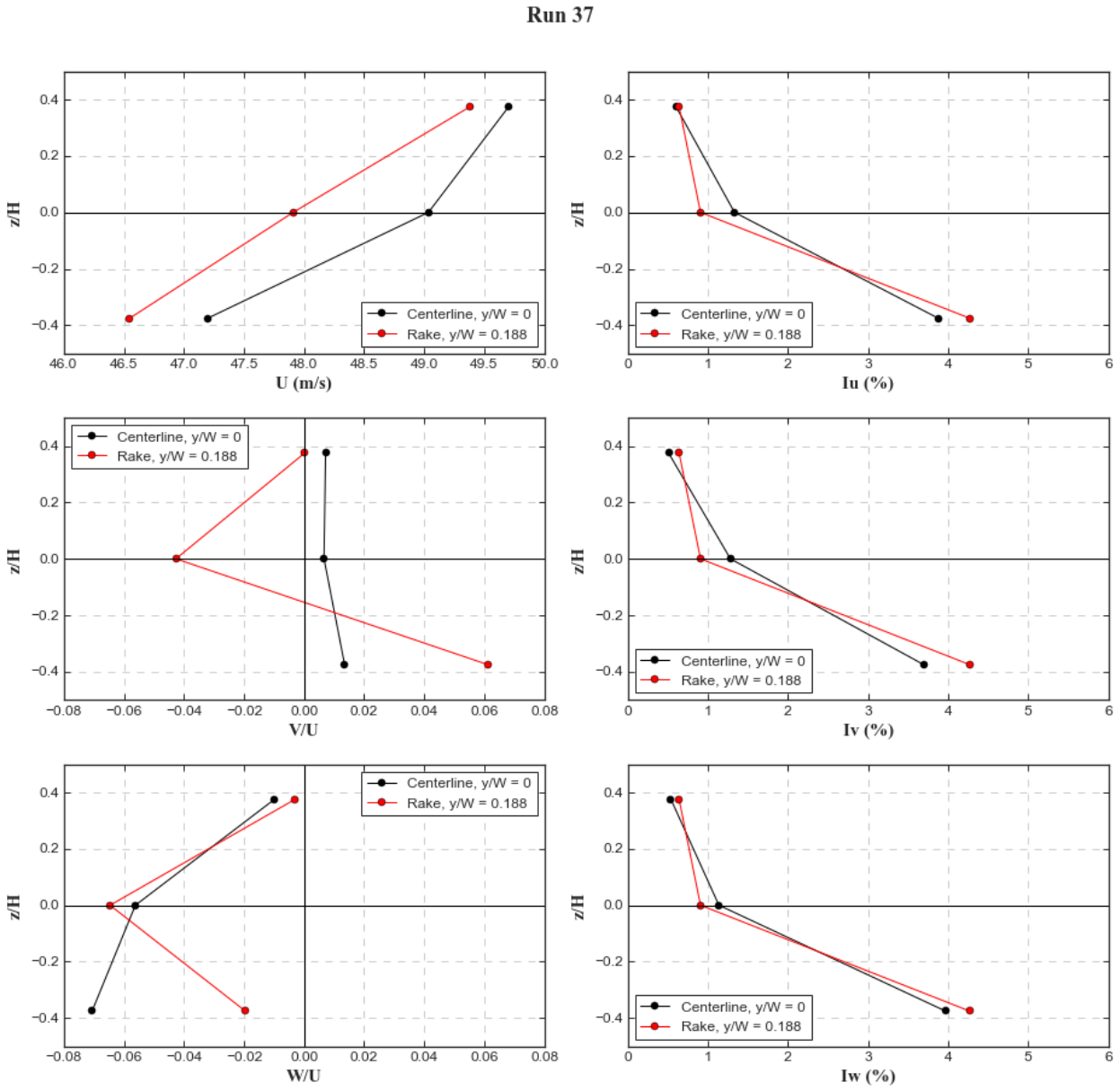

Figure C10. Test section line surveys with big spires at inlet.

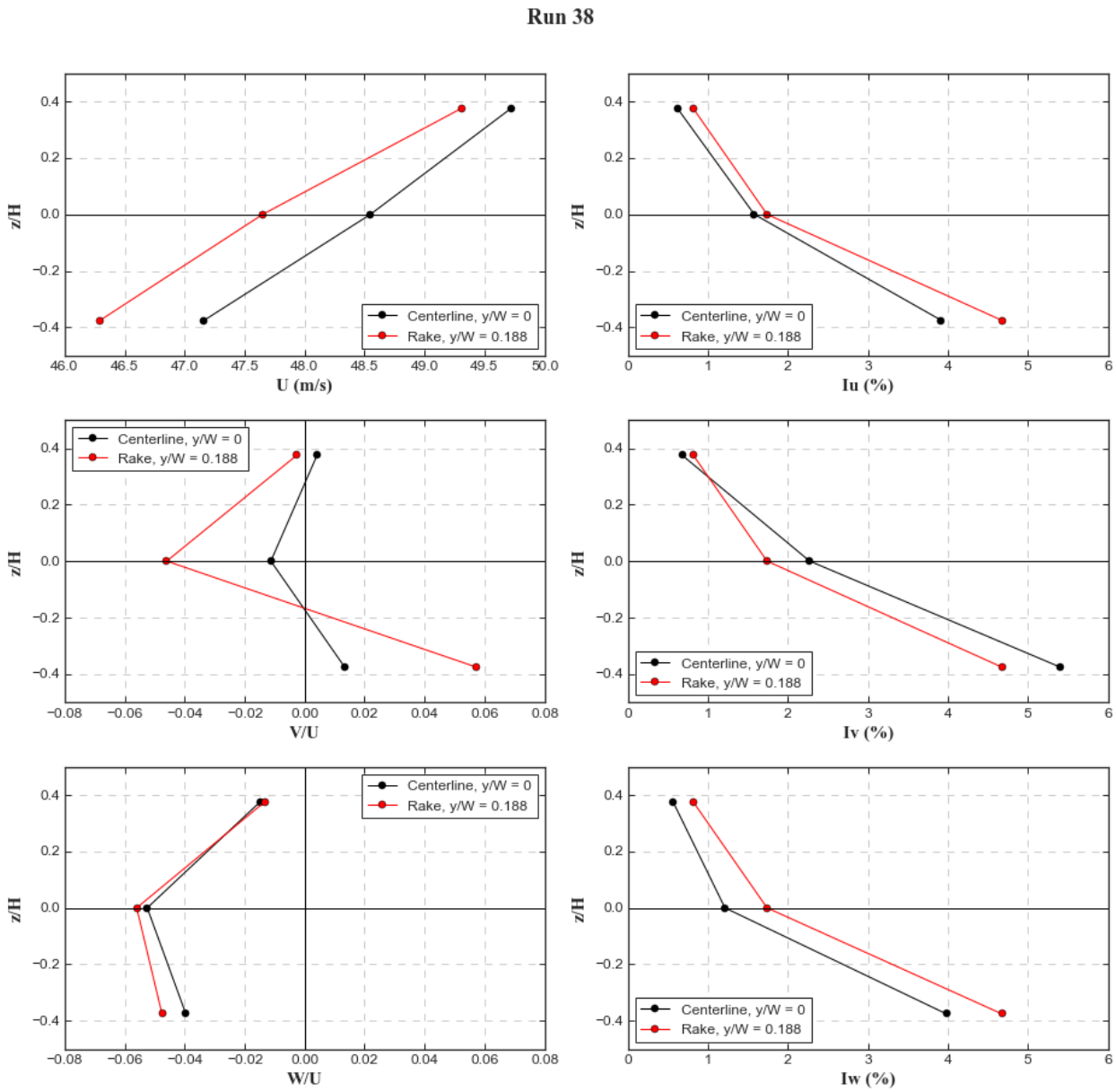

Figure C11. Test section line surveys with small spires at inlet.

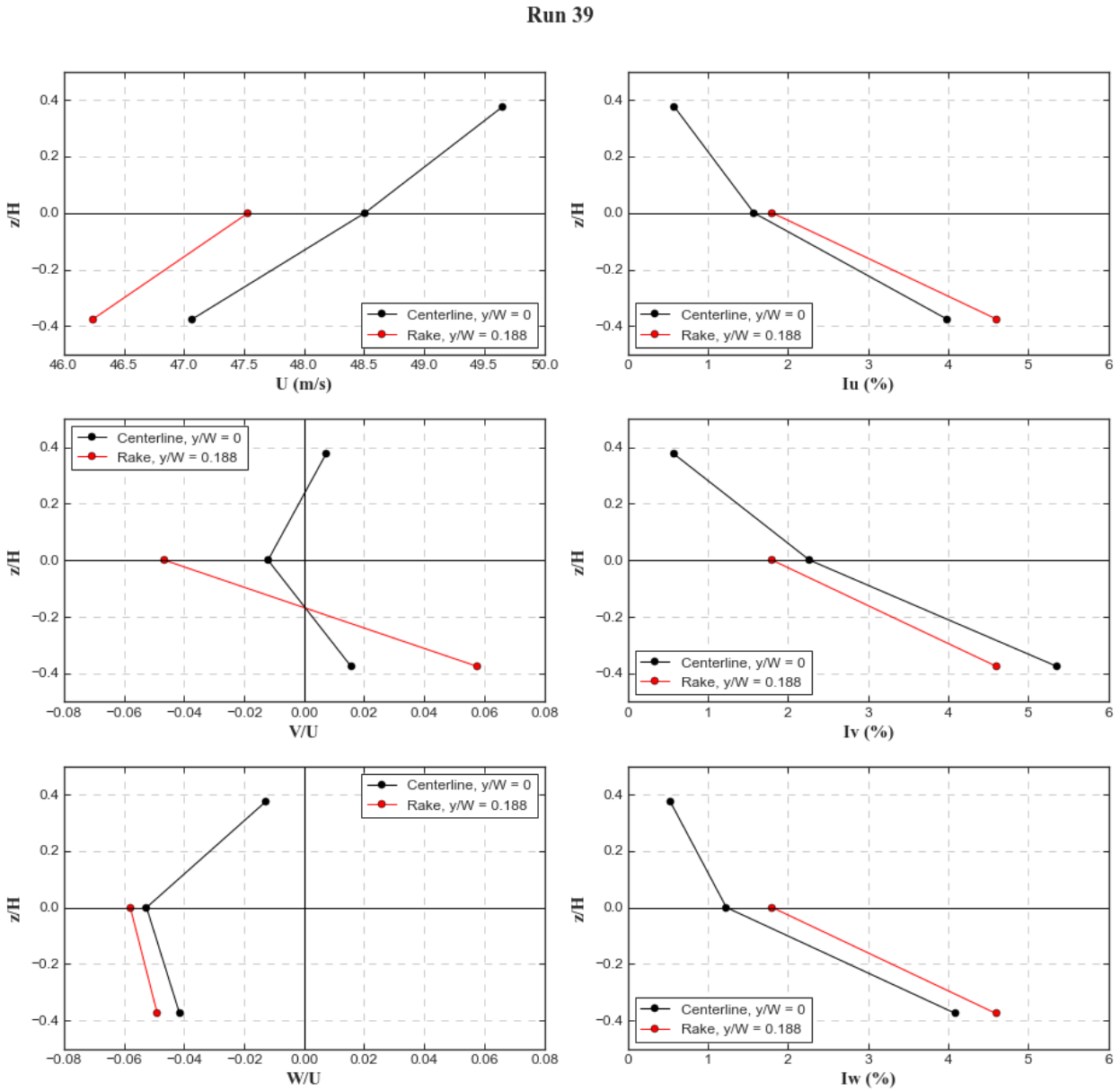

Figure C12. Test section line surveys with small spires at inlet.

Table C1. Rake Nomenclature

Parameter Description	**Tag Name**	**Units**
Tunnel static ring pressure	PSREF – PA	psfd
Tunnel total pressure	PTOTAL – PA	psfd
Tunnel total temperature	TTF	deg F
Dew point temperature	DPT	deg F
Tunnel barometric pressure	BARO (PA)	psia
Atmospheric temperature	ATEMP	deg F
Atmospheric pressure	ABARO	psia
Total pressure at centerline	PT	psfa
Static pressure at centerline	PS	psfa
Centerline Q, corrected	Q	psf
Test section velocity	VKTS	knots
External rake total 1 (height = 15.375")	PTBLR24	psid
External rake total 2 (height = 17.375")	PTBLR25	psid
External rake total 3 (height = 19.25")	PTBLR26	psid
External rake static (height = 3")	PSBLR31	psid
Model rake total 1 (height = 8")	PTRAK1	psid
Model rake total 2 (height = 7.125")	PTRAK2	psid
Model rake total 3 (height = 6.25")	PTRAK3	psid
Model rake total 4 (height = 5.25")	PTRAK4	psid
Model rake total 5 (height = 4.125")	PTRAK5	psid
Model rake total 6 (height = 3.25")	PTRAK6	psid
Model rake total 7 (height = 2.25")	PTRAK7	psid
Model rake total 8 (height = 1.5")	PTRAK8	psid
Model rake total 9 (height = 1.125”)	PTRAK9	psid
Model rake total 10 (height = 0.625")	PTRAK10	psid
Model rake static (height = 1")	PSRAK11	psid

Table C2. Test Section Rake Data

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
28	2	11/18/2014	007:036:031	3.588E-01	8.938E-03	5.003E+01	3.988E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	7.819E-05	5.725E-05	5.725E-05	5.694E-05	1.173E-04	4.813E-05	9.763E-05	4.550E-05	2.699E-04	-2.288E-05	5.719E-05
28	3	11/18/2014	007:041:037	3.613E-01	1.908E-02	4.975E+01	4.002E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-4.411E-02	-4.344E-02	-4.344E-02	-4.329E-02	-4.219E-02	-4.128E-02	-4.102E-02	-4.037E-02	-3.952E-02	-3.834E-02	-4.219E-02
28	4	11/18/2014	007:042:053	3.607E-01	2.024E-02	4.972E+01	4.005E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-4.334E-02	-4.296E-02	-4.296E-02	-4.256E-02	-4.192E-02	-4.094E-02	-4.077E-02	-4.050E-02	-3.927E-02	-3.781E-02	-4.173E-02
28	5	11/18/2014	007:043:053	3.622E-01	2.411E-02	4.972E+01	4.007E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-4.386E-02	-4.324E-02	-4.324E-02	-4.288E-02	-4.218E-02	-4.133E-02	-4.110E-02	-4.065E-02	-3.935E-02	-3.825E-02	-4.265E-02
28	6	11/18/2014	007:045:000	3.624E-01	2.976E-02	4.972E+01	4.009E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-4.389E-02	-4.338E-02	-4.338E-02	-4.303E-02	-4.201E-02	-4.114E-02	-4.082E-02	-4.032E-02	-3.948E-02	-3.805E-02	-4.243E-02
28	7	11/18/2014	007:046:003	3.617E-01	2.555E-02	4.972E+01	4.011E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.067E-01	-1.089E-01	-1.089E-01	-5.889E-02	-4.574E-02	-5.404E-02	-6.316E-02	-4.097E-02	-3.925E-02	-3.811E-02	-4.161E-02
28	8	11/18/2014	007:047:005	3.595E-01	1.885E-02	4.975E+01	4.013E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-4.389E-02	-4.327E-02	-4.327E-02	-4.307E-02	-4.196E-02	-4.102E-02	-4.098E-02	-4.064E-02	-3.929E-02	-3.791E-02	-4.128E-02
28	9	11/18/2014	007:048:010	3.591E-01	1.736E-02	4.979E+01	4.015E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-4.372E-02	-4.309E-02	-4.309E-02	-4.280E-02	-4.171E-02	-4.125E-02	-4.103E-02	-4.061E-02	-3.886E-02	-3.780E-02	-4.115E-02
28	10	11/18/2014	007:049:014	3.592E-01	1.662E-02	4.982E+01	4.017E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-4.332E-02	-4.273E-02	-4.273E-02	-4.235E-02	-4.138E-02	-4.064E-02	-4.048E-02	-4.009E-02	-3.878E-02	-3.735E-02	-3.906E-02
28	11	11/18/2014	007:050:012	3.586E-01	1.453E-02	4.986E+01	4.018E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-4.383E-02	-4.335E-02	-4.335E-02	-4.303E-02	-4.196E-02	-4.149E-02	-4.117E-02	-4.076E-02	-3.933E-02	-3.807E-02	-4.136E-02
28	12	11/18/2014	007:051:016	3.582E-01	1.022E-02	4.985E+01	4.020E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-4.409E-02	-4.367E-02	-4.367E-02	-4.341E-02	-4.208E-02	-4.158E-02	-4.122E-02	-4.099E-02	-3.967E-02	-3.824E-02	-4.182E-02
28	13	11/18/2014	007:052:018	3.487E-01	6.340E-03	4.987E+01	4.021E+01	1.479E+01	2.125E+03	2.125E+03	5.031E-06
	-4.335E-02	-4.276E-02	-4.276E-02	-4.240E-02	-4.133E-02	-4.085E-02	-4.055E-02	-4.012E-02	-3.882E-02	-3.750E-02	-3.970E-02
28	14	11/18/2014	007:053:054	3.560E-01	7.141E-03	4.991E+01	4.022E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-4.399E-02	-4.338E-02	-4.338E-02	-4.306E-02	-4.208E-02	-4.133E-02	-4.095E-02	-4.045E-02	-3.935E-02	-3.835E-02	-4.214E-02
28	15	11/18/2014	007:055:001	3.579E-01	3.719E-03	4.996E+01	4.024E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-4.435E-02	-4.397E-02	-4.397E-02	-4.327E-02	-4.241E-02	-4.135E-02	-4.102E-02	-4.062E-02	-3.964E-02	-3.852E-02	-4.149E-02
28	16	11/18/2014	007:056:001	3.555E-01	2.365E-03	4.996E+01	4.025E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-4.378E-02	-4.317E-02	-4.317E-02	-4.284E-02	-4.174E-02	-4.082E-02	-4.055E-02	-3.999E-02	-3.894E-02	-3.799E-02	-3.994E-02
28	17	11/18/2014	007:056:057	3.549E-01	5.114E-03	4.993E+01	4.027E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-4.410E-02	-4.370E-02	-4.370E-02	-4.330E-02	-4.230E-02	-4.136E-02	-4.108E-02	-4.061E-02	-3.889E-02	-3.794E-02	-4.146E-02
28	18	11/18/2014	007:057:059	3.563E-01	7.266E-03	5.012E+01	4.028E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-4.395E-02	-4.330E-02	-4.330E-02	-4.316E-02	-4.213E-02	-4.129E-02	-4.111E-02	-4.061E-02	-3.930E-02	-3.818E-02	-4.305E-02

Table C2. Test Section Rake Data (cont.)

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
28	19	11/18/2014	007:059:004	3.565E-01	3.860E-03	5.015E+01	4.030E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-4.406E-02	-4.350E-02	-4.350E-02	-4.321E-02	-4.227E-02	-4.150E-02	-4.104E-02	-4.059E-02	-3.956E-02	-3.807E-02	-4.082E-02
29	1	11/18/2014	008:020:026	3.637E-01	2.152E-02	5.037E+01	4.048E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-4.371E-02	-4.313E-02	-4.313E-02	-4.305E-02	-4.178E-02	-4.104E-02	-4.076E-02	-4.023E-02	-3.920E-02	-3.788E-02	-3.950E-02
29	2	11/18/2014	008:021:023	3.622E-01	1.797E-02	5.040E+01	4.050E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-4.317E-02	-4.258E-02	-4.258E-02	-4.225E-02	-4.155E-02	-4.059E-02	-4.060E-02	-4.040E-02	-3.891E-02	-3.754E-02	-4.212E-02
29	3	11/18/2014	008:022:024	3.589E-01	1.109E-02	5.040E+01	4.050E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-4.365E-02	-4.332E-02	-4.332E-02	-4.307E-02	-4.208E-02	-4.120E-02	-4.094E-02	-4.039E-02	-3.953E-02	-3.828E-02	-4.114E-02
29	4	11/18/2014	008:023:035	3.570E-01	5.398E-03	5.043E+01	4.051E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.405E-02	-4.350E-02	-4.350E-02	-4.339E-02	-4.206E-02	-4.150E-02	-4.120E-02	-4.101E-02	-3.934E-02	-3.815E-02	-4.206E-02
29	5	11/18/2014	008:024:034	3.562E-01	5.233E-03	5.048E+01	4.052E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-9.470E-02	-1.064E-01	-1.064E-01	-5.949E-02	-4.647E-02	-5.383E-02	-6.831E-02	-4.079E-02	-3.929E-02	-3.817E-02	-4.140E-02
29	6	11/18/2014	008:025:035	3.585E-01	7.340E-03	5.051E+01	4.053E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.401E-02	-4.368E-02	-4.368E-02	-4.331E-02	-4.198E-02	-4.134E-02	-4.121E-02	-4.068E-02	-3.945E-02	-3.827E-02	-4.003E-02
29	7	11/18/2014	008:026:029	3.601E-01	9.845E-03	5.059E+01	4.053E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.354E-02	-4.305E-02	-4.305E-02	-4.281E-02	-4.173E-02	-4.102E-02	-4.050E-02	-4.012E-02	-3.900E-02	-3.797E-02	-4.067E-02
29	8	11/18/2014	008:027:034	3.588E-01	7.293E-03	5.064E+01	4.054E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.343E-02	-4.309E-02	-4.309E-02	-4.304E-02	-4.194E-02	-4.138E-02	-4.102E-02	-4.071E-02	-3.950E-02	-3.828E-02	-3.928E-02
29	9	11/18/2014	008:028:028	3.581E-01	2.788E-03	5.070E+01	4.054E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.398E-02	-4.352E-02	-4.352E-02	-4.321E-02	-4.209E-02	-4.134E-02	-4.123E-02	-4.065E-02	-3.963E-02	-3.841E-02	-3.975E-02
29	10	11/18/2014	008:029:026	3.566E-01	3.006E-03	5.073E+01	4.055E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.375E-02	-4.337E-02	-4.337E-02	-4.318E-02	-4.217E-02	-4.161E-02	-4.135E-02	-4.069E-02	-3.907E-02	-3.830E-02	-4.035E-02
29	11	11/18/2014	008:030:034	3.583E-01	7.473E-04	5.074E+01	4.056E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.375E-02	-4.355E-02	-4.355E-02	-4.320E-02	-4.210E-02	-4.150E-02	-4.119E-02	-4.064E-02	-3.950E-02	-3.845E-02	-3.976E-02
29	12	11/18/2014	008:031:034	3.576E-01	5.112E-03	5.074E+01	4.057E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.335E-02	-4.308E-02	-4.308E-02	-4.269E-02	-4.167E-02	-4.118E-02	-4.110E-02	-4.036E-02	-3.883E-02	-3.809E-02	-3.950E-02
29	13	11/18/2014	008:032:026	3.583E-01	6.256E-03	5.082E+01	4.058E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.364E-02	-4.333E-02	-4.333E-02	-4.311E-02	-4.202E-02	-4.155E-02	-4.142E-02	-4.090E-02	-3.939E-02	-3.829E-02	-4.115E-02
29	14	11/18/2014	008:033:028	3.599E-01	1.012E-02	5.090E+01	4.059E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.361E-02	-4.328E-02	-4.328E-02	-4.268E-02	-4.156E-02	-4.103E-02	-4.079E-02	-4.027E-02	-3.876E-02	-3.793E-02	-3.979E-02
29	15	11/18/2014	008:034:033	3.600E-01	1.760E-02	5.095E+01	4.059E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.339E-02	-4.300E-02	-4.300E-02	-4.285E-02	-4.188E-02	-4.124E-02	-4.076E-02	-4.031E-02	-3.913E-02	-3.804E-02	-3.988E-02
29	16	11/18/2014	008:035:028	3.602E-01	1.909E-02	5.098E+01	4.060E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.381E-02	-4.345E-02	-4.345E-02	-4.312E-02	-4.219E-02	-4.147E-02	-4.103E-02	-4.048E-02	-3.905E-02	-3.832E-02	-4.098E-02

Table C2. Test Section Rake Data (cont.)

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
29	17	11/18/2014	008:036:039	3.616E-01	1.570E-02	5.102E+01	4.061E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.356E-02	-4.336E-02	-4.336E-02	-4.311E-02	-4.211E-02	-4.141E-02	-4.091E-02	-4.029E-02	-3.942E-02	-3.853E-02	-4.071E-02
30	1	11/18/2014	008:037:057	3.608E-01	8.504E-03	5.109E+01	4.063E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.359E-02	-4.312E-02	-4.312E-02	-4.287E-02	-4.192E-02	-4.115E-02	-4.108E-02	-4.052E-02	-3.927E-02	-3.793E-02	-4.077E-02
30	2	11/18/2014	008:038:055	3.603E-01	9.790E-03	5.115E+01	4.063E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.288E-02	-4.233E-02	-4.233E-02	-4.233E-02	-4.155E-02	-4.062E-02	-4.067E-02	-4.015E-02	-3.859E-02	-3.760E-02	-3.887E-02
30	3	11/18/2014	008:039:046	3.637E-01	1.384E-02	5.121E+01	4.064E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.374E-02	-4.316E-02	-4.316E-02	-4.313E-02	-4.197E-02	-4.115E-02	-4.073E-02	-4.036E-02	-3.924E-02	-3.822E-02	-4.046E-02
30	4	11/18/2014	008:040:040	3.663E-01	1.907E-02	5.125E+01	4.064E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.392E-02	-4.338E-02	-4.338E-02	-4.302E-02	-4.196E-02	-4.132E-02	-4.084E-02	-4.055E-02	-3.930E-02	-3.814E-02	-4.129E-02
30	5	11/18/2014	008:041:039	3.664E-01	2.348E-02	5.132E+01	4.066E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-1.041E-01	-9.773E-02	-9.773E-02	-5.532E-02	-4.579E-02	-5.351E-02	-6.542E-02	-4.039E-02	-3.922E-02	-3.794E-02	-4.123E-02
30	6	11/18/2014	008:042:057	3.677E-01	2.822E-02	5.141E+01	4.067E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.357E-02	-4.331E-02	-4.331E-02	-4.310E-02	-4.200E-02	-4.125E-02	-4.097E-02	-4.044E-02	-3.902E-02	-3.802E-02	-4.050E-02
30	7	11/18/2014	008:043:056	3.662E-01	1.894E-02	5.141E+01	4.068E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.394E-02	-4.373E-02	-4.373E-02	-4.315E-02	-4.228E-02	-4.142E-02	-4.127E-02	-4.084E-02	-3.940E-02	-3.832E-02	-4.132E-02
30	8	11/18/2014	008:044:049	3.655E-01	1.646E-02	5.146E+01	4.068E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.351E-02	-4.298E-02	-4.298E-02	-4.285E-02	-4.170E-02	-4.095E-02	-4.079E-02	-4.028E-02	-3.898E-02	-3.796E-02	-3.981E-02
30	9	11/18/2014	008:045:041	3.625E-01	1.642E-02	5.152E+01	4.069E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.393E-02	-4.355E-02	-4.355E-02	-4.311E-02	-4.231E-02	-4.153E-02	-4.111E-02	-4.062E-02	-3.944E-02	-3.870E-02	-4.114E-02
30	10	11/18/2014	008:046:043	3.634E-01	1.652E-02	5.154E+01	4.070E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.359E-02	-4.328E-02	-4.328E-02	-4.294E-02	-4.180E-02	-4.115E-02	-4.080E-02	-4.027E-02	-3.932E-02	-3.805E-02	-4.001E-02
30	11	11/18/2014	008:047:039	3.655E-01	2.017E-02	5.162E+01	4.070E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.356E-02	-4.309E-02	-4.309E-02	-4.290E-02	-4.184E-02	-4.104E-02	-4.061E-02	-4.016E-02	-3.900E-02	-3.818E-02	-3.939E-02
30	12	11/18/2014	008:048:031	3.641E-01	2.090E-02	5.169E+01	4.071E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.389E-02	-4.342E-02	-4.342E-02	-4.313E-02	-4.204E-02	-4.095E-02	-4.072E-02	-4.019E-02	-3.927E-02	-3.833E-02	-3.971E-02
30	13	11/18/2014	008:049:027	3.646E-01	2.310E-02	5.175E+01	4.072E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.366E-02	-4.345E-02	-4.345E-02	-4.321E-02	-4.206E-02	-4.142E-02	-4.110E-02	-4.075E-02	-3.936E-02	-3.858E-02	-4.012E-02
30	14	11/18/2014	008:050:025	3.644E-01	1.828E-02	5.178E+01	4.073E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.312E-02	-4.294E-02	-4.294E-02	-4.258E-02	-4.140E-02	-4.083E-02	-4.053E-02	-3.989E-02	-3.869E-02	-3.787E-02	-3.956E-02
30	15	11/18/2014	008:051:021	3.623E-01	1.370E-02	5.186E+01	4.073E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.336E-02	-4.285E-02	-4.285E-02	-4.249E-02	-4.136E-02	-4.053E-02	-4.028E-02	-3.961E-02	-3.852E-02	-3.752E-02	-3.854E-02
30	16	11/18/2014	008:052:021	3.636E-01	1.134E-02	5.193E+01	4.075E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.385E-02	-4.329E-02	-4.329E-02	-4.309E-02	-4.191E-02	-4.133E-02	-4.123E-02	-4.036E-02	-3.939E-02	-3.840E-02	-4.043E-02

Table C2. Test Section Rake Data (cont.)

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
30	17	11/18/2014	008:054:042	3.646E-01	1.679E-02	5.204E+01	4.077E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.344E-02	-4.297E-02	-4.297E-02	-4.277E-02	-4.165E-02	-4.074E-02	-4.057E-02	-4.004E-02	-3.907E-02	-3.776E-02	-3.998E-02
30	18	11/18/2014	009:001:006	3.642E-01	8.219E-03	5.222E+01	4.081E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-6.427E-04	-6.857E-04	-6.857E-04	-6.301E-04	-5.723E-04	-6.149E-04	-6.429E-04	-6.331E-04	-5.775E-04	-7.709E-04	-7.179E-04
30	20	11/18/2014	009:019:034	3.602E-01	-2.560E-03	5.275E+01	4.094E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.355E-02	-4.290E-02	-4.290E-02	-4.271E-02	-4.167E-02	-4.065E-02	-4.067E-02	-4.002E-02	-3.875E-02	-3.763E-02	-4.006E-02
31	1	11/18/2014	009:024:001	3.578E-01	-1.465E-02	5.275E+01	4.095E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-4.361E-02	-4.351E-02	-4.351E-02	-4.318E-02	-4.209E-02	-4.134E-02	-4.096E-02	-4.021E-02	-3.924E-02	-3.831E-02	-4.032E-02
31	2	11/18/2014	009:025:010	3.585E-01	-9.125E-03	5.268E+01	4.096E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-4.314E-02	-4.292E-02	-4.292E-02	-4.280E-02	-4.207E-02	-4.103E-02	-4.108E-02	-4.067E-02	-3.941E-02	-3.824E-02	-4.141E-02
31	3	11/18/2014	009:026:021	3.505E-01	-2.869E-02	5.268E+01	4.096E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-4.360E-02	-4.313E-02	-4.313E-02	-4.297E-02	-4.209E-02	-4.105E-02	-4.085E-02	-4.032E-02	-3.935E-02	-3.832E-02	-4.132E-02
31	4	11/18/2014	009:027:020	3.585E-01	-1.454E-02	5.273E+01	4.096E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.418E-02	-4.382E-02	-4.382E-02	-4.345E-02	-4.224E-02	-4.137E-02	-4.125E-02	-4.053E-02	-3.946E-02	-3.853E-02	-4.109E-02
31	5	11/18/2014	009:028:020	3.637E-01	2.203E-03	5.281E+01	4.097E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-8.483E-02	-1.098E-01	-1.098E-01	-7.087E-02	-4.384E-02	-5.087E-02	-5.169E-02	-4.056E-02	-3.925E-02	-3.816E-02	-4.134E-02
31	6	11/18/2014	009:029:018	3.638E-01	7.546E-03	5.293E+01	4.097E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.310E-02	-4.278E-02	-4.278E-02	-4.258E-02	-4.169E-02	-4.101E-02	-4.080E-02	-4.022E-02	-3.896E-02	-3.782E-02	-4.009E-02
31	7	11/18/2014	009:030:016	3.634E-01	6.394E-03	5.299E+01	4.098E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.333E-02	-4.308E-02	-4.308E-02	-4.287E-02	-4.162E-02	-4.078E-02	-4.038E-02	-3.995E-02	-3.916E-02	-3.795E-02	-3.965E-02
31	8	11/18/2014	009:031:018	3.604E-01	-1.076E-03	5.312E+01	4.097E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.348E-02	-4.301E-02	-4.301E-02	-4.274E-02	-4.171E-02	-4.107E-02	-4.067E-02	-4.018E-02	-3.904E-02	-3.808E-02	-3.963E-02
31	9	11/18/2014	009:032:022	3.638E-01	1.103E-02	5.319E+01	4.098E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.390E-02	-4.340E-02	-4.340E-02	-4.319E-02	-4.217E-02	-4.129E-02	-4.102E-02	-4.035E-02	-3.949E-02	-3.841E-02	-4.063E-02
31	10	11/18/2014	009:033:020	3.610E-01	-6.979E-05	5.323E+01	4.098E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.347E-02	-4.336E-02	-4.336E-02	-4.273E-02	-4.218E-02	-4.127E-02	-4.100E-02	-4.048E-02	-3.915E-02	-3.827E-02	-4.089E-02
31	11	11/18/2014	009:034:021	3.546E-01	-1.636E-02	5.330E+01	4.099E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.378E-02	-4.364E-02	-4.364E-02	-4.327E-02	-4.202E-02	-4.149E-02	-4.112E-02	-4.027E-02	-3.968E-02	-3.874E-02	-3.951E-02
31	12	11/18/2014	009:035:019	3.524E-01	-3.002E-02	5.342E+01	4.100E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.351E-02	-4.313E-02	-4.313E-02	-4.298E-02	-4.191E-02	-4.104E-02	-4.102E-02	-4.027E-02	-3.914E-02	-3.806E-02	-3.937E-02
31	13	11/18/2014	009:036:021	3.522E-01	-2.595E-02	5.342E+01	4.100E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.391E-02	-4.348E-02	-4.348E-02	-4.307E-02	-4.220E-02	-4.138E-02	-4.139E-02	-4.082E-02	-3.953E-02	-3.850E-02	-4.059E-02
31	14	11/18/2014	009:037:018	3.524E-01	-2.501E-02	5.336E+01	4.100E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.404E-02	-4.363E-02	-4.363E-02	-4.330E-02	-4.222E-02	-4.161E-02	-4.104E-02	-4.048E-02	-3.947E-02	-3.877E-02	-3.929E-02

Table C2. Test Section Rake Data (cont.)

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
31	15	11/18/2014	009:038:022	3.534E-01	-2.467E-02	5.324E+01	4.102E+01	1.480E+01	2.126E+03	2.126E+03	1.000E-06
	-4.386E-02	-4.342E-02	-4.342E-02	-4.310E-02	-4.215E-02	-4.128E-02	-4.113E-02	-4.034E-02	-3.960E-02	-3.831E-02	-4.022E-02
31	16	11/18/2014	009:039:039	3.548E-01	-1.584E-02	5.325E+01	4.102E+01	1.480E+01	2.126E+03	2.126E+03	1.000E-06
	-4.384E-02	-4.379E-02	-4.379E-02	-4.336E-02	-4.272E-02	-4.193E-02	-4.177E-02	-4.115E-02	-3.959E-02	-3.860E-02	-4.105E-02
31	17	11/18/2014	009:040:046	3.564E-01	-1.594E-02	5.342E+01	4.103E+01	1.480E+01	2.126E+03	2.126E+03	1.000E-06
	-4.408E-02	-4.376E-02	-4.376E-02	-4.352E-02	-4.246E-02	-4.162E-02	-4.133E-02	-4.091E-02	-3.940E-02	-3.891E-02	-3.992E-02
32	1	11/18/2014	009:042:005	3.610E-01	-8.892E-03	5.374E+01	4.103E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.360E-02	-4.309E-02	-4.309E-02	-4.291E-02	-4.186E-02	-4.111E-02	-4.083E-02	-4.052E-02	-3.908E-02	-3.806E-02	-3.884E-02
32	2	11/18/2014	009:043:007	3.605E-01	-5.174E-03	5.384E+01	4.104E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.306E-02	-4.261E-02	-4.261E-02	-4.233E-02	-4.178E-02	-4.060E-02	-4.043E-02	-3.996E-02	-3.901E-02	-3.754E-02	-4.133E-02
32	3	11/18/2014	009:044:010	3.581E-01	-1.405E-02	5.385E+01	4.105E+01	1.480E+01	2.126E+03	2.126E+03	1.000E-06
	-4.368E-02	-4.321E-02	-4.321E-02	-4.283E-02	-4.197E-02	-4.109E-02	-4.094E-02	-4.026E-02	-3.914E-02	-3.791E-02	-4.117E-02
32	4	11/18/2014	009:045:011	8.848E-01	-1.723E-02	5.377E+01	4.106E+01	1.480E+01	2.126E+03	2.127E+03	1.841E-05
	-4.347E-02	-4.318E-02	-4.318E-02	-4.297E-02	-4.169E-02	-4.105E-02	-4.075E-02	-4.012E-02	-3.903E-02	-3.792E-02	-4.037E-02
32	5	11/18/2014	009:046:017	3.603E-01	-2.052E-02	5.377E+01	4.106E+01	1.480E+01	2.126E+03	2.127E+03	1.000E-06
	-8.181E-02	-1.090E-01	-1.090E-01	-6.475E-02	-4.463E-02	-5.116E-02	-5.275E-02	-4.007E-02	-3.864E-02	-3.766E-02	-4.110E-02
32	6	11/18/2014	009:047:022	7.659E-01	-2.081E-02	5.384E+01	4.108E+01	1.480E+01	2.126E+03	2.127E+03	1.785E-06
	-4.356E-02	-4.319E-02	-4.319E-02	-4.290E-02	-4.191E-02	-4.128E-02	-4.083E-02	-4.032E-02	-3.918E-02	-3.827E-02	-3.973E-02
32	7	11/18/2014	009:048:019	8.272E-01	-1.761E-02	5.387E+01	4.108E+01	1.480E+01	2.126E+03	2.127E+03	1.000E-06
	-4.397E-02	-4.354E-02	-4.354E-02	-4.321E-02	-4.212E-02	-4.126E-02	-4.127E-02	-4.063E-02	-3.924E-02	-3.836E-02	-3.975E-02
32	8	11/18/2014	009:049:022	7.439E-01	-2.349E-02	5.386E+01	4.109E+01	1.480E+01	2.126E+03	2.127E+03	1.000E-06
	-4.324E-02	-4.291E-02	-4.291E-02	-4.256E-02	-4.158E-02	-4.112E-02	-4.072E-02	-4.012E-02	-3.891E-02	-3.782E-02	-4.002E-02
32	9	11/18/2014	009:050:018	7.369E-01	-2.336E-02	5.384E+01	4.109E+01	1.480E+01	2.126E+03	2.127E+03	1.000E-06
	-4.357E-02	-4.327E-02	-4.327E-02	-4.298E-02	-4.209E-02	-4.141E-02	-4.126E-02	-4.070E-02	-3.937E-02	-3.833E-02	-4.113E-02
32	10	11/18/2014	009:051:015	7.757E-01	-3.078E-02	5.397E+01	4.110E+01	1.480E+01	2.126E+03	2.127E+03	1.839E-06
	-4.388E-02	-4.370E-02	-4.370E-02	-4.323E-02	-4.228E-02	-4.173E-02	-4.167E-02	-4.099E-02	-3.945E-02	-3.857E-02	-4.086E-02
32	11	11/18/2014	009:052:014	3.567E-01	-3.011E-02	5.408E+01	4.111E+01	1.480E+01	2.126E+03	2.126E+03	1.000E-06
	-4.349E-02	-4.332E-02	-4.332E-02	-4.310E-02	-4.233E-02	-4.148E-02	-4.111E-02	-4.051E-02	-3.908E-02	-3.798E-02	-3.871E-02
32	12	11/18/2014	009:053:014	9.020E-01	-3.143E-02	5.414E+01	4.112E+01	1.479E+01	2.126E+03	2.127E+03	1.000E-06
	-4.411E-02	-4.367E-02	-4.367E-02	-4.337E-02	-4.226E-02	-4.145E-02	-4.113E-02	-4.078E-02	-3.973E-02	-3.850E-02	-3.934E-02
32	13	11/18/2014	009:054:016	6.828E-01	-3.637E-02	5.422E+01	4.113E+01	1.479E+01	2.126E+03	2.127E+03	1.000E-06
	-4.364E-02	-4.323E-02	-4.323E-02	-4.297E-02	-4.210E-02	-4.133E-02	-4.105E-02	-4.047E-02	-3.912E-02	-3.797E-02	-3.965E-02
32	14	11/18/2014	009:056:057	7.102E-01	-3.451E-02	5.437E+01	4.115E+01	1.480E+01	2.126E+03	2.127E+03	1.000E-06
	-4.363E-02	-4.311E-02	-4.311E-02	-4.294E-02	-4.189E-02	-4.124E-02	-4.079E-02	-4.020E-02	-3.902E-02	-3.796E-02	-4.029E-02

Table C2. Test Section Rake Data (cont.)

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
32	15	11/18/2014	009:058:047	4.457E-01	-3.752E-02	5.445E+01	4.116E+01	1.480E+01	2.126E+03	2.127E+03	1.000E-06
	-4.326E-02	-4.302E-02	-4.302E-02	-4.254E-02	-4.158E-02	-4.100E-02	-4.058E-02	-3.998E-02	-3.873E-02	-3.763E-02	-4.001E-02
32	16	11/18/2014	010:000:007	4.862E-01	-2.326E-02	5.460E+01	4.117E+01	1.480E+01	2.126E+03	2.127E+03	1.000E-06
	-4.378E-02	-4.340E-02	-4.340E-02	-4.317E-02	-4.193E-02	-4.107E-02	-4.061E-02	-4.025E-02	-3.894E-02	-3.810E-02	-4.056E-02
32	17	11/18/2014	010:001:012	7.532E-01	-2.943E-02	5.469E+01	4.118E+01	1.480E+01	2.126E+03	2.127E+03	1.000E-06
	-4.390E-02	-4.359E-02	-4.359E-02	-4.331E-02	-4.244E-02	-4.142E-02	-4.117E-02	-4.064E-02	-3.923E-02	-3.837E-02	-4.116E-02
33	1	11/18/2014	010:005:037	4.786E-01	-3.438E-02	5.475E+01	4.122E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.335E-02	-4.285E-02	-4.285E-02	-4.258E-02	-4.171E-02	-4.091E-02	-4.066E-02	-3.996E-02	-3.865E-02	-3.773E-02	-4.028E-02
33	2	11/18/2014	010:006:056	3.582E-01	-2.944E-02	5.482E+01	4.123E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.361E-02	-4.319E-02	-4.319E-02	-4.313E-02	-4.209E-02	-4.117E-02	-4.068E-02	-4.026E-02	-3.937E-02	-3.827E-02	-4.164E-02
33	3	11/18/2014	010:007:054	3.637E-01	-1.591E-02	5.483E+01	4.124E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.334E-02	-4.281E-02	-4.281E-02	-4.259E-02	-4.142E-02	-4.074E-02	-4.045E-02	-4.016E-02	-3.882E-02	-3.766E-02	-4.090E-02
33	4	11/18/2014	010:008:054	7.767E-01	-1.289E-02	5.488E+01	4.125E+01	1.479E+01	2.126E+03	2.127E+03	1.000E-06
	-4.363E-02	-4.329E-02	-4.329E-02	-4.284E-02	-4.202E-02	-4.138E-02	-4.113E-02	-4.057E-02	-3.899E-02	-3.828E-02	-4.060E-02
33	5	11/18/2014	010:009:051	1.066E+00	-2.436E-02	5.494E+01	4.126E+01	1.479E+01	2.126E+03	2.127E+03	9.742E-06
	-9.113E-02	-1.136E-01	-1.136E-01	-6.976E-02	-4.445E-02	-5.004E-02	-5.133E-02	-4.046E-02	-3.923E-02	-3.800E-02	-4.241E-02
33	6	11/18/2014	010:010:049	7.624E-01	-2.989E-02	5.503E+01	4.126E+01	1.479E+01	2.126E+03	2.127E+03	1.000E-06
	-4.348E-02	-4.298E-02	-4.298E-02	-4.298E-02	-4.179E-02	-4.096E-02	-4.076E-02	-4.043E-02	-3.911E-02	-3.778E-02	-4.055E-02
33	7	11/18/2014	010:011:046	7.563E-01	-3.422E-02	5.515E+01	4.128E+01	1.479E+01	2.126E+03	2.127E+03	1.000E-06
	-4.364E-02	-4.339E-02	-4.339E-02	-4.309E-02	-4.217E-02	-4.150E-02	-4.115E-02	-4.068E-02	-3.924E-02	-3.820E-02	-4.121E-02
33	8	11/18/2014	010:012:058	5.530E-01	-2.351E-02	5.519E+01	4.128E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.366E-02	-4.310E-02	-4.310E-02	-4.314E-02	-4.182E-02	-4.098E-02	-4.053E-02	-4.026E-02	-3.954E-02	-3.837E-02	-3.929E-02
33	9	11/18/2014	010:013:056	3.581E-01	-2.672E-02	5.520E+01	4.129E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.377E-02	-4.325E-02	-4.325E-02	-4.300E-02	-4.183E-02	-4.115E-02	-4.089E-02	-4.050E-02	-3.931E-02	-3.816E-02	-4.029E-02
33	10	11/18/2014	010:014:056	3.576E-01	-2.979E-02	5.525E+01	4.130E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.348E-02	-4.297E-02	-4.297E-02	-4.273E-02	-4.187E-02	-4.120E-02	-4.092E-02	-4.027E-02	-3.902E-02	-3.784E-02	-4.177E-02
33	11	11/18/2014	010:016:004	3.567E-01	-3.467E-02	5.534E+01	4.130E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.315E-02	-4.281E-02	-4.281E-02	-4.278E-02	-4.174E-02	-4.096E-02	-4.065E-02	-4.002E-02	-3.858E-02	-3.770E-02	-3.917E-02
33	12	11/18/2014	010:017:008	3.562E-01	-3.286E-02	5.527E+01	4.132E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.351E-02	-4.341E-02	-4.341E-02	-4.303E-02	-4.209E-02	-4.121E-02	-4.096E-02	-4.026E-02	-3.914E-02	-3.817E-02	-4.046E-02
33	13	11/18/2014	010:018:007	3.536E-01	-3.779E-02	5.535E+01	4.133E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.348E-02	-4.325E-02	-4.325E-02	-4.306E-02	-4.210E-02	-4.136E-02	-4.096E-02	-4.045E-02	-3.915E-02	-3.817E-02	-4.201E-02
33	14	11/18/2014	010:019:008	3.534E-01	-4.359E-02	5.542E+01	4.134E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.331E-02	-4.305E-02	-4.305E-02	-4.269E-02	-4.184E-02	-4.113E-02	-4.071E-02	-3.996E-02	-3.906E-02	-3.805E-02	-3.852E-02

Table C2. Test Section Rake Data (cont.)

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
33	15	11/18/2014	010:020:009	3.521E-01	-4.371E-02	5.549E+01	4.134E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.344E-02	-4.316E-02	-4.316E-02	-4.281E-02	-4.159E-02	-4.096E-02	-4.051E-02	-4.019E-02	-3.911E-02	-3.813E-02	-3.979E-02
33	16	11/18/2014	010:021:006	3.547E-01	-3.839E-02	5.556E+01	4.136E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.365E-02	-4.322E-02	-4.322E-02	-4.301E-02	-4.209E-02	-4.146E-02	-4.134E-02	-4.075E-02	-3.928E-02	-3.818E-02	-4.137E-02
33	17	11/18/2014	010:022:006	3.533E-01	-3.904E-02	5.562E+01	4.137E+01	1.479E+01	2.126E+03	2.126E+03	1.000E-06
	-4.324E-02	-4.304E-02	-4.304E-02	-4.274E-02	-4.169E-02	-4.135E-02	-4.083E-02	-4.032E-02	-3.931E-02	-3.806E-02	-3.968E-02
34	1	11/18/2014	010:031:033	3.653E-01	-1.885E-02	5.634E+01	4.146E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-1.346E-01	-1.350E-01	-1.350E-01	-1.336E-01	-1.334E-01	-1.346E-01	-1.387E-01	-1.427E-01	-1.447E-01	-1.432E-01	-1.502E-01
34	2	11/18/2014	010:032:052	3.623E-01	-2.505E-02	5.640E+01	4.147E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-1.349E-01	-1.357E-01	-1.357E-01	-1.341E-01	-1.350E-01	-1.371E-01	-1.375E-01	-1.443E-01	-1.438E-01	-1.473E-01	-1.494E-01
34	3	11/18/2014	010:034:006	3.618E-01	-2.041E-02	5.641E+01	4.149E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-1.355E-01	-1.375E-01	-1.375E-01	-1.346E-01	-1.345E-01	-1.345E-01	-1.369E-01	-1.423E-01	-1.440E-01	-1.484E-01	-1.509E-01
34	4	11/18/2014	010:035:016	3.603E-01	-3.058E-02	5.638E+01	4.150E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-1.370E-01	-1.356E-01	-1.356E-01	-1.342E-01	-1.346E-01	-1.374E-01	-1.361E-01	-1.434E-01	-1.455E-01	-1.459E-01	-1.526E-01
34	5	11/18/2014	010:036:034	3.658E-01	-1.590E-02	5.654E+01	4.151E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-1.744E-01	-1.742E-01	-1.742E-01	-1.854E-01	-1.420E-01	-1.452E-01	-1.563E-01	-1.465E-01	-1.460E-01	-1.451E-01	-1.498E-01
34	6	11/18/2014	010:038:005	3.622E-01	-2.296E-02	5.668E+01	4.153E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-1.351E-01	-1.344E-01	-1.344E-01	-1.331E-01	-1.335E-01	-1.362E-01	-1.381E-01	-1.404E-01	-1.418E-01	-1.441E-01	-1.460E-01
34	7	11/18/2014	010:039:003	3.692E-01	-1.142E-03	5.660E+01	4.153E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-1.364E-01	-1.342E-01	-1.342E-01	-1.336E-01	-1.323E-01	-1.366E-01	-1.362E-01	-1.439E-01	-1.446E-01	-1.474E-01	-1.540E-01
34	8	11/18/2014	010:040:001	3.691E-01	-3.992E-03	5.676E+01	4.155E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-1.342E-01	-1.328E-01	-1.328E-01	-1.317E-01	-1.342E-01	-1.364E-01	-1.416E-01	-1.426E-01	-1.436E-01	-1.412E-01	-1.434E-01
34	9	11/18/2014	010:040:059	3.706E-01	-3.369E-03	5.681E+01	4.155E+01	1.479E+01	2.125E+03	2.126E+03	1.000E-06
	-1.349E-01	-1.345E-01	-1.345E-01	-1.330E-01	-1.335E-01	-1.371E-01	-1.379E-01	-1.387E-01	-1.377E-01	-1.395E-01	-1.460E-01
34	10	11/18/2014	010:042:007	3.710E-01	2.590E-03	5.684E+01	4.157E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.360E-01	-1.350E-01	-1.350E-01	-1.327E-01	-1.331E-01	-1.351E-01	-1.373E-01	-1.426E-01	-1.404E-01	-1.446E-01	-1.465E-01
34	11	11/18/2014	010:043:018	3.764E-01	1.775E-02	5.685E+01	4.157E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.326E-01	-1.340E-01	-1.340E-01	-1.319E-01	-1.324E-01	-1.352E-01	-1.359E-01	-1.408E-01	-1.420E-01	-1.429E-01	-1.475E-01
34	12	11/18/2014	010:044:021	3.752E-01	1.324E-02	5.690E+01	4.158E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.356E-01	-1.352E-01	-1.352E-01	-1.341E-01	-1.320E-01	-1.341E-01	-1.345E-01	-1.382E-01	-1.423E-01	-1.440E-01	-1.458E-01
34	13	11/18/2014	010:045:016	3.704E-01	-1.496E-03	5.683E+01	4.159E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.359E-01	-1.366E-01	-1.366E-01	-1.352E-01	-1.346E-01	-1.348E-01	-1.401E-01	-1.436E-01	-1.426E-01	-1.419E-01	-1.458E-01
34	14	11/18/2014	010:046:016	3.675E-01	-9.039E-03	5.683E+01	4.160E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.348E-01	-1.339E-01	-1.339E-01	-1.326E-01	-1.322E-01	-1.328E-01	-1.380E-01	-1.430E-01	-1.434E-01	-1.459E-01	-1.489E-01

Table C2. Test Section Rake Data (cont.)

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
34	15	11/18/2014	010:047:014	3.649E-01	-9.141E-03	5.684E+01	4.161E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.359E-01	-1.336E-01	-1.336E-01	-1.329E-01	-1.344E-01	-1.358E-01	-1.379E-01	-1.356E-01	-1.358E-01	-1.379E-01	-1.423E-01
34	16	11/18/2014	010:048:028	3.792E-01	2.665E-02	5.693E+01	4.162E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.356E-01	-1.341E-01	-1.341E-01	-1.318E-01	-1.323E-01	-1.351E-01	-1.383E-01	-1.387E-01	-1.405E-01	-1.418E-01	-1.493E-01
34	17	11/18/2014	010:049:030	3.752E-01	2.278E-02	5.695E+01	4.163E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.362E-01	-1.349E-01	-1.349E-01	-1.343E-01	-1.334E-01	-1.338E-01	-1.351E-01	-1.425E-01	-1.454E-01	-1.487E-01	-1.516E-01
35	1	11/18/2014	010:056:025	3.642E-01	-1.790E-02	5.745E+01	4.170E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.359E-01	-1.390E-01	-1.390E-01	-1.352E-01	-1.305E-01	-1.330E-01	-1.395E-01	-1.414E-01	-1.416E-01	-1.429E-01	-1.474E-01
35	2	11/18/2014	010:057:046	3.785E-01	1.835E-02	5.756E+01	4.171E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.358E-01	-1.389E-01	-1.389E-01	-1.365E-01	-1.295E-01	-1.339E-01	-1.376E-01	-1.387E-01	-1.375E-01	-1.398E-01	-1.445E-01
35	3	11/18/2014	010:058:048	3.724E-01	6.088E-03	5.761E+01	4.172E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.353E-01	-1.377E-01	-1.377E-01	-1.353E-01	-1.301E-01	-1.321E-01	-1.410E-01	-1.411E-01	-1.383E-01	-1.411E-01	-1.471E-01
35	4	11/18/2014	010:059:044	3.693E-01	-3.276E-03	5.761E+01	4.173E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.370E-01	-1.421E-01	-1.421E-01	-1.344E-01	-1.311E-01	-1.347E-01	-1.398E-01	-1.406E-01	-1.414E-01	-1.418E-01	-1.452E-01
35	5	11/18/2014	011:001:001	3.707E-01	7.360E-03	5.774E+01	4.174E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.677E-01	-1.869E-01	-1.869E-01	-1.768E-01	-1.436E-01	-1.525E-01	-1.650E-01	-1.443E-01	-1.413E-01	-1.408E-01	-1.484E-01
35	6	11/18/2014	011:002:010	3.674E-01	2.309E-03	5.780E+01	4.175E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.354E-01	-1.394E-01	-1.394E-01	-1.359E-01	-1.311E-01	-1.359E-01	-1.401E-01	-1.408E-01	-1.446E-01	-1.453E-01	-1.492E-01
35	7	11/18/2014	011:003:006	3.802E-01	4.573E-02	5.787E+01	4.176E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.355E-01	-1.394E-01	-1.394E-01	-1.380E-01	-1.308E-01	-1.365E-01	-1.376E-01	-1.408E-01	-1.423E-01	-1.438E-01	-1.468E-01
35	8	11/18/2014	011:004:004	3.848E-01	5.940E-02	5.788E+01	4.177E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.354E-01	-1.417E-01	-1.417E-01	-1.365E-01	-1.286E-01	-1.304E-01	-1.394E-01	-1.436E-01	-1.427E-01	-1.418E-01	-1.458E-01
35	9	11/18/2014	011:005:002	3.848E-01	6.032E-02	5.784E+01	4.178E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.364E-01	-1.393E-01	-1.393E-01	-1.352E-01	-1.282E-01	-1.320E-01	-1.378E-01	-1.382E-01	-1.365E-01	-1.371E-01	-1.411E-01
35	10	11/18/2014	011:006:001	3.840E-01	5.805E-02	5.784E+01	4.179E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.367E-01	-1.422E-01	-1.422E-01	-1.361E-01	-1.293E-01	-1.313E-01	-1.386E-01	-1.388E-01	-1.420E-01	-1.422E-01	-1.495E-01
35	11	11/18/2014	011:007:002	3.952E-01	8.945E-02	5.777E+01	4.179E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.339E-01	-1.365E-01	-1.365E-01	-1.326E-01	-1.278E-01	-1.324E-01	-1.385E-01	-1.391E-01	-1.384E-01	-1.375E-01	-1.439E-01
35	12	11/18/2014	011:007:056	3.937E-01	8.279E-02	5.793E+01	4.180E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.364E-01	-1.376E-01	-1.376E-01	-1.349E-01	-1.287E-01	-1.302E-01	-1.365E-01	-1.380E-01	-1.407E-01	-1.419E-01	-1.443E-01
35	13	11/18/2014	011:009:000	3.887E-01	7.931E-02	5.774E+01	4.181E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.365E-01	-1.414E-01	-1.414E-01	-1.374E-01	-1.299E-01	-1.340E-01	-1.360E-01	-1.401E-01	-1.391E-01	-1.402E-01	-1.431E-01
35	14	11/18/2014	011:010:006	3.930E-01	9.688E-02	5.778E+01	4.182E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.341E-01	-1.375E-01	-1.375E-01	-1.347E-01	-1.282E-01	-1.336E-01	-1.336E-01	-1.377E-01	-1.384E-01	-1.410E-01	-1.486E-01

Table C2. Test Section Rake Data (cont.)

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
35	15	11/18/2014	011:011:004	3.780E-01	4.882E-02	5.775E+01	4.182E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.332E-01	-1.375E-01	-1.375E-01	-1.361E-01	-1.311E-01	-1.335E-01	-1.364E-01	-1.381E-01	-1.383E-01	-1.413E-01	-1.444E-01
35	16	11/18/2014	011:012:001	3.776E-01	4.536E-02	5.771E+01	4.184E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.349E-01	-1.365E-01	-1.365E-01	-1.356E-01	-1.300E-01	-1.319E-01	-1.370E-01	-1.397E-01	-1.377E-01	-1.375E-01	-1.440E-01
35	17	11/18/2014	011:013:012	3.792E-01	5.399E-02	5.762E+01	4.184E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	-1.357E-01	-1.392E-01	-1.392E-01	-1.388E-01	-1.279E-01	-1.314E-01	-1.370E-01	-1.389E-01	-1.397E-01	-1.406E-01	-1.478E-01
35	18	11/18/2014	011:018:036	3.693E-01	5.094E-03	5.764E+01	4.188E+01	1.479E+01	2.125E+03	2.125E+03	1.000E-06
	5.165E-04	4.948E-04	4.948E-04	4.506E-04	6.266E-04	5.893E-04	6.119E-04	5.604E-04	5.756E-04	3.708E-04	3.773E-04
36	1	11/18/2014	012:048:026	3.778E-01	3.377E-02	5.981E+01	4.267E+01	1.477E+01	2.123E+03	2.123E+03	1.000E-06
	-1.312E-01	-1.339E-01	-1.339E-01	-1.372E-01	-1.380E-01	-1.286E-01	-1.344E-01	-1.428E-01	-1.418E-01	-1.449E-01	-1.564E-01
36	2	11/18/2014	012:049:033	3.730E-01	2.550E-02	5.969E+01	4.268E+01	1.477E+01	2.123E+03	2.123E+03	1.000E-06
	-1.326E-01	-1.358E-01	-1.358E-01	-1.401E-01	-1.374E-01	-1.290E-01	-1.342E-01	-1.419E-01	-1.403E-01	-1.426E-01	-1.483E-01
36	3	11/18/2014	012:050:035	3.675E-01	2.492E-03	5.966E+01	4.269E+01	1.477E+01	2.123E+03	2.123E+03	1.000E-06
	-1.322E-01	-1.340E-01	-1.340E-01	-1.369E-01	-1.358E-01	-1.281E-01	-1.339E-01	-1.391E-01	-1.429E-01	-1.426E-01	-1.500E-01
36	4	11/18/2014	012:051:040	3.648E-01	-3.183E-03	5.967E+01	4.270E+01	1.477E+01	2.123E+03	2.123E+03	1.000E-06
	-1.318E-01	-1.339E-01	-1.339E-01	-1.380E-01	-1.325E-01	-1.323E-01	-1.362E-01	-1.381E-01	-1.399E-01	-1.429E-01	-1.548E-01
36	5	11/18/2014	012:052:044	3.646E-01	3.651E-03	5.963E+01	4.271E+01	1.477E+01	2.123E+03	2.123E+03	1.000E-06
	-1.713E-01	-1.762E-01	-1.762E-01	-1.772E-01	-1.401E-01	-1.492E-01	-1.630E-01	-1.412E-01	-1.416E-01	-1.434E-01	-1.503E-01
36	6	11/18/2014	012:053:050	3.633E-01	-2.662E-04	5.954E+01	4.272E+01	1.477E+01	2.123E+03	2.123E+03	1.000E-06
	-1.316E-01	-1.338E-01	-1.338E-01	-1.389E-01	-1.373E-01	-1.298E-01	-1.343E-01	-1.398E-01	-1.392E-01	-1.394E-01	-1.479E-01
36	7	11/18/2014	012:054:049	3.737E-01	3.588E-02	5.966E+01	4.273E+01	1.477E+01	2.123E+03	2.123E+03	1.000E-06
	-1.335E-01	-1.354E-01	-1.354E-01	-1.379E-01	-1.343E-01	-1.275E-01	-1.341E-01	-1.375E-01	-1.395E-01	-1.411E-01	-1.487E-01
36	8	11/18/2014	012:055:052	3.770E-01	4.233E-02	5.979E+01	4.274E+01	1.477E+01	2.123E+03	2.123E+03	1.000E-06
	-1.323E-01	-1.348E-01	-1.348E-01	-1.370E-01	-1.356E-01	-1.314E-01	-1.319E-01	-1.398E-01	-1.395E-01	-1.379E-01	-1.435E-01
36	9	11/18/2014	012:056:052	3.764E-01	3.629E-02	5.973E+01	4.275E+01	1.477E+01	2.123E+03	2.123E+03	1.000E-06
	-1.319E-01	-1.349E-01	-1.349E-01	-1.356E-01	-1.362E-01	-1.298E-01	-1.344E-01	-1.396E-01	-1.423E-01	-1.471E-01	-1.592E-01
36	10	11/18/2014	012:057:048	3.715E-01	2.231E-02	5.968E+01	4.276E+01	1.477E+01	2.123E+03	2.123E+03	1.000E-06
	-1.324E-01	-1.354E-01	-1.354E-01	-1.385E-01	-1.362E-01	-1.293E-01	-1.340E-01	-1.422E-01	-1.410E-01	-1.403E-01	-1.508E-01
36	11	11/18/2014	012:058:053	3.726E-01	1.689E-02	5.984E+01	4.277E+01	1.477E+01	2.123E+03	2.123E+03	1.000E-06
	-1.301E-01	-1.326E-01	-1.326E-01	-1.361E-01	-1.369E-01	-1.269E-01	-1.311E-01	-1.387E-01	-1.405E-01	-1.440E-01	-1.529E-01
36	12	11/18/2014	012:059:056	3.754E-01	2.777E-02	5.986E+01	4.278E+01	1.477E+01	2.123E+03	2.123E+03	1.000E-06
	-1.303E-01	-1.323E-01	-1.323E-01	-1.358E-01	-1.371E-01	-1.307E-01	-1.353E-01	-1.442E-01	-1.461E-01	-1.451E-01	-1.477E-01
36	13	11/18/2014	013:000:058	3.780E-01	2.609E-02	5.981E+01	4.280E+01	1.477E+01	2.122E+03	2.123E+03	1.000E-06
	-1.321E-01	-1.354E-01	-1.354E-01	-1.367E-01	-1.337E-01	-1.306E-01	-1.349E-01	-1.416E-01	-1.365E-01	-1.412E-01	-1.491E-01

Table C2. Test Section Rake Data (cont.)

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
36	14	11/18/2014	013:002:004	3.762E-01	3.615E-02	5.984E+01	4.281E+01	1.477E+01	2.122E+03	2.123E+03	1.000E-06
	-1.314E-01	-1.344E-01	-1.344E-01	-1.370E-01	-1.325E-01	-1.282E-01	-1.368E-01	-1.407E-01	-1.425E-01	-1.438E-01	-1.531E-01
36	15	11/18/2014	013:003:003	3.761E-01	7.683E-03	5.983E+01	4.282E+01	1.477E+01	2.122E+03	2.123E+03	1.000E-06
	-1.310E-01	-1.343E-01	-1.343E-01	-1.367E-01	-1.344E-01	-1.298E-01	-1.366E-01	-1.415E-01	-1.418E-01	-1.425E-01	-1.489E-01
36	16	11/18/2014	013:004:001	3.788E-01	4.096E-02	5.977E+01	4.283E+01	1.477E+01	2.122E+03	2.123E+03	1.000E-06
	-1.323E-01	-1.346E-01	-1.346E-01	-1.352E-01	-1.357E-01	-1.314E-01	-1.339E-01	-1.404E-01	-1.432E-01	-1.455E-01	-1.535E-01
36	17	11/18/2014	013:005:002	3.781E-01	4.638E-02	5.997E+01	4.285E+01	1.477E+01	2.122E+03	2.123E+03	1.000E-06
	-1.302E-01	-1.329E-01	-1.329E-01	-1.345E-01	-1.368E-01	-1.288E-01	-1.339E-01	-1.398E-01	-1.418E-01	-1.434E-01	-1.520E-01
37	1	11/18/2014	013:006:028	3.769E-01	3.193E-02	6.001E+01	4.287E+01	1.477E+01	2.122E+03	2.122E+03	1.000E-06
	-1.319E-01	-1.335E-01	-1.335E-01	-1.371E-01	-1.346E-01	-1.309E-01	-1.345E-01	-1.384E-01	-1.372E-01	-1.397E-01	-1.450E-01
37	2	11/18/2014	013:007:031	3.781E-01	1.296E-02	6.005E+01	4.289E+01	1.477E+01	2.122E+03	2.122E+03	1.000E-06
	-1.309E-01	-1.334E-01	-1.334E-01	-1.344E-01	-1.336E-01	-1.271E-01	-1.297E-01	-1.373E-01	-1.392E-01	-1.408E-01	-1.502E-01
37	3	11/18/2014	013:008:034	3.723E-01	-2.948E-03	5.998E+01	4.289E+01	1.477E+01	2.122E+03	2.122E+03	1.000E-06
	-1.315E-01	-1.353E-01	-1.353E-01	-1.374E-01	-1.368E-01	-1.288E-01	-1.332E-01	-1.370E-01	-1.368E-01	-1.397E-01	-1.492E-01
37	4	11/18/2014	013:009:040	3.725E-01	1.125E-02	6.015E+01	4.291E+01	1.477E+01	2.122E+03	2.122E+03	1.000E-06
	-1.319E-01	-1.357E-01	-1.357E-01	-1.389E-01	-1.375E-01	-1.276E-01	-1.348E-01	-1.393E-01	-1.413E-01	-1.416E-01	-1.503E-01
37	5	11/18/2014	013:010:042	3.726E-01	2.354E-02	6.026E+01	4.293E+01	1.477E+01	2.122E+03	2.122E+03	1.000E-06
	-1.746E-01	-1.764E-01	-1.764E-01	-1.763E-01	-1.464E-01	-1.507E-01	-1.628E-01	-1.438E-01	-1.393E-01	-1.401E-01	-1.507E-01
37	6	11/18/2014	013:011:047	3.737E-01	2.625E-02	6.022E+01	4.294E+01	1.477E+01	2.122E+03	2.122E+03	1.000E-06
	-1.334E-01	-1.350E-01	-1.350E-01	-1.409E-01	-1.356E-01	-1.310E-01	-1.356E-01	-1.404E-01	-1.420E-01	-1.430E-01	-1.478E-01
37	7	11/18/2014	013:012:046	3.739E-01	2.242E-02	6.017E+01	4.295E+01	1.477E+01	2.122E+03	2.122E+03	1.000E-06
	-1.318E-01	-1.362E-01	-1.362E-01	-1.395E-01	-1.361E-01	-1.259E-01	-1.374E-01	-1.419E-01	-1.426E-01	-1.437E-01	-1.540E-01
37	8	11/18/2014	013:013:054	3.690E-01	2.965E-03	6.028E+01	4.296E+01	1.476E+01	2.122E+03	2.122E+03	1.000E-06
	-1.315E-01	-1.332E-01	-1.332E-01	-1.351E-01	-1.327E-01	-1.294E-01	-1.320E-01	-1.380E-01	-1.414E-01	-1.413E-01	-1.459E-01
37	9	11/18/2014	013:014:048	3.695E-01	-1.384E-03	6.033E+01	4.298E+01	1.476E+01	2.122E+03	2.122E+03	1.000E-06
	-1.312E-01	-1.334E-01	-1.334E-01	-1.378E-01	-1.337E-01	-1.272E-01	-1.327E-01	-1.378E-01	-1.421E-01	-1.444E-01	-1.514E-01
37	10	11/18/2014	013:015:053	3.632E-01	-1.078E-02	6.037E+01	4.299E+01	1.476E+01	2.122E+03	2.122E+03	1.000E-06
	-1.327E-01	-1.347E-01	-1.347E-01	-1.406E-01	-1.356E-01	-1.296E-01	-1.344E-01	-1.404E-01	-1.423E-01	-1.433E-01	-1.502E-01
37	11	11/18/2014	013:017:000	3.627E-01	-1.371E-02	6.027E+01	4.301E+01	1.476E+01	2.121E+03	2.122E+03	1.000E-06
	-1.330E-01	-1.368E-01	-1.368E-01	-1.375E-01	-1.342E-01	-1.282E-01	-1.336E-01	-1.388E-01	-1.421E-01	-1.431E-01	-1.515E-01
37	12	11/18/2014	013:017:055	3.600E-01	-1.638E-02	6.031E+01	4.302E+01	1.476E+01	2.121E+03	2.122E+03	1.000E-06
	-1.322E-01	-1.341E-01	-1.341E-01	-1.358E-01	-1.343E-01	-1.293E-01	-1.340E-01	-1.423E-01	-1.434E-01	-1.431E-01	-1.490E-01
37	13	11/18/2014	013:018:057	3.601E-01	-1.793E-02	6.049E+01	4.303E+01	1.476E+01	2.121E+03	2.122E+03	1.000E-06
	-1.310E-01	-1.340E-01	-1.340E-01	-1.353E-01	-1.328E-01	-1.336E-01	-1.363E-01	-1.417E-01	-1.413E-01	-1.435E-01	-1.490E-01

Table C2. Test Section Rake Data (cont.)

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
37	14	11/18/2014	013:020:003	3.613E-01	-1.953E-02	6.058E+01	4.305E+01	1.476E+01	2.121E+03	2.122E+03	1.000E-06
	-1.324E-01	-1.340E-01	-1.340E-01	-1.385E-01	-1.341E-01	-1.299E-01	-1.318E-01	-1.392E-01	-1.414E-01	-1.444E-01	-1.513E-01
37	15	11/18/2014	013:021:047	3.677E-01	-3.634E-04	6.066E+01	4.308E+01	1.476E+01	2.121E+03	2.122E+03	1.000E-06
	-1.317E-01	-1.345E-01	-1.345E-01	-1.378E-01	-1.347E-01	-1.271E-01	-1.334E-01	-1.389E-01	-1.423E-01	-1.429E-01	-1.507E-01
37	16	11/18/2014	013:022:043	3.679E-01	-1.528E-02	6.072E+01	4.309E+01	1.476E+01	2.121E+03	2.122E+03	1.000E-06
	-1.316E-01	-1.327E-01	-1.327E-01	-1.339E-01	-1.344E-01	-1.279E-01	-1.348E-01	-1.383E-01	-1.428E-01	-1.470E-01	-1.540E-01
37	17	11/18/2014	013:023:055	3.636E-01	-2.268E-02	6.066E+01	4.311E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.323E-01	-1.338E-01	-1.338E-01	-1.380E-01	-1.338E-01	-1.283E-01	-1.364E-01	-1.408E-01	-1.420E-01	-1.414E-01	-1.463E-01
38	1	11/18/2014	013:031:051	3.626E-01	-3.875E-02	6.147E+01	4.324E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.290E-01	-1.300E-01	-1.300E-01	-1.318E-01	-1.327E-01	-1.353E-01	-1.375E-01	-1.369E-01	-1.392E-01	-1.384E-01	-1.418E-01
38	2	11/18/2014	013:033:003	3.592E-01	-3.206E-02	6.161E+01	4.326E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.304E-01	-1.312E-01	-1.312E-01	-1.322E-01	-1.311E-01	-1.313E-01	-1.351E-01	-1.372E-01	-1.360E-01	-1.383E-01	-1.436E-01
38	3	11/18/2014	013:034:001	3.648E-01	-4.730E-03	6.168E+01	4.328E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.293E-01	-1.313E-01	-1.313E-01	-1.327E-01	-1.321E-01	-1.357E-01	-1.383E-01	-1.420E-01	-1.458E-01	-1.451E-01	-1.445E-01
38	4	11/18/2014	013:035:000	3.582E-01	-2.465E-02	6.183E+01	4.329E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.295E-01	-1.305E-01	-1.305E-01	-1.307E-01	-1.310E-01	-1.336E-01	-1.355E-01	-1.395E-01	-1.388E-01	-1.407E-01	-1.450E-01
38	5	11/18/2014	013:036:008	3.650E-01	-1.433E-02	6.193E+01	4.331E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.743E-01	-1.745E-01	-1.745E-01	-1.824E-01	-1.405E-01	-1.461E-01	-1.635E-01	-1.460E-01	-1.419E-01	-1.411E-01	-1.423E-01
38	6	11/18/2014	013:037:011	3.633E-01	-1.553E-02	6.199E+01	4.333E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.302E-01	-1.303E-01	-1.303E-01	-1.301E-01	-1.315E-01	-1.314E-01	-1.353E-01	-1.408E-01	-1.419E-01	-1.399E-01	-1.428E-01
38	7	11/18/2014	013:038:027	3.693E-01	6.144E-03	6.207E+01	4.335E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.272E-01	-1.284E-01	-1.284E-01	-1.311E-01	-1.308E-01	-1.344E-01	-1.357E-01	-1.425E-01	-1.434E-01	-1.449E-01	-1.470E-01
38	8	11/18/2014	013:039:030	3.656E-01	-1.566E-02	6.208E+01	4.337E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.291E-01	-1.304E-01	-1.304E-01	-1.316E-01	-1.316E-01	-1.315E-01	-1.335E-01	-1.397E-01	-1.412E-01	-1.420E-01	-1.411E-01
38	9	11/18/2014	013:040:027	3.638E-01	-3.837E-02	6.208E+01	4.338E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.291E-01	-1.305E-01	-1.305E-01	-1.313E-01	-1.319E-01	-1.344E-01	-1.363E-01	-1.420E-01	-1.440E-01	-1.414E-01	-1.436E-01
38	10	11/18/2014	013:041:028	3.733E-01	-2.997E-02	6.207E+01	4.341E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.300E-01	-1.311E-01	-1.311E-01	-1.328E-01	-1.331E-01	-1.336E-01	-1.350E-01	-1.357E-01	-1.321E-01	-1.315E-01	-1.394E-01
38	11	11/18/2014	013:042:030	3.740E-01	-8.640E-03	6.193E+01	4.343E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.306E-01	-1.311E-01	-1.311E-01	-1.305E-01	-1.300E-01	-1.304E-01	-1.351E-01	-1.390E-01	-1.406E-01	-1.358E-01	-1.354E-01
38	12	11/18/2014	013:043:027	3.757E-01	3.083E-02	6.197E+01	4.345E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.296E-01	-1.306E-01	-1.306E-01	-1.302E-01	-1.302E-01	-1.318E-01	-1.343E-01	-1.367E-01	-1.357E-01	-1.328E-01	-1.360E-01
38	13	11/18/2014	013:044:021	3.751E-01	3.322E-02	6.204E+01	4.346E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.295E-01	-1.312E-01	-1.312E-01	-1.307E-01	-1.316E-01	-1.375E-01	-1.389E-01	-1.401E-01	-1.389E-01	-1.392E-01	-1.445E-01

Table C2. Test Section Rake Data (cont.)

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
38	14	11/18/2014	013:045:018	3.710E-01	1.219E-02	6.220E+01	4.348E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.280E-01	-1.297E-01	-1.297E-01	-1.291E-01	-1.307E-01	-1.330E-01	-1.354E-01	-1.403E-01	-1.385E-01	-1.399E-01	-1.468E-01
38	15	11/18/2014	013:046:012	3.746E-01	3.010E-02	6.215E+01	4.350E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.289E-01	-1.306E-01	-1.306E-01	-1.319E-01	-1.324E-01	-1.295E-01	-1.349E-01	-1.360E-01	-1.366E-01	-1.368E-01	-1.403E-01
38	16	11/18/2014	013:047:008	3.836E-01	8.449E-02	6.229E+01	4.351E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.277E-01	-1.271E-01	-1.271E-01	-1.305E-01	-1.309E-01	-1.345E-01	-1.354E-01	-1.374E-01	-1.372E-01	-1.382E-01	-1.428E-01
38	17	11/18/2014	013:048:016	3.782E-01	5.889E-02	6.226E+01	4.353E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.281E-01	-1.285E-01	-1.285E-01	-1.299E-01	-1.288E-01	-1.303E-01	-1.350E-01	-1.361E-01	-1.402E-01	-1.398E-01	-1.442E-01
39	1	11/18/2014	013:049:032	3.785E-01	5.394E-02	6.227E+01	4.356E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.309E-01	-1.325E-01	-1.325E-01	-1.314E-01	-1.314E-01	-1.323E-01	-1.341E-01	-1.381E-01	-1.396E-01	-1.398E-01	-1.408E-01
39	2	11/18/2014	013:050:029	3.696E-01	2.215E-03	6.229E+01	4.357E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.288E-01	-1.284E-01	-1.284E-01	-1.300E-01	-1.297E-01	-1.301E-01	-1.361E-01	-1.414E-01	-1.438E-01	-1.436E-01	-1.459E-01
39	3	11/18/2014	013:051:026	3.703E-01	-2.545E-02	6.220E+01	4.358E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.303E-01	-1.322E-01	-1.322E-01	-1.333E-01	-1.344E-01	-1.344E-01	-1.391E-01	-1.444E-01	-1.386E-01	-1.407E-01	-1.426E-01
39	4	11/18/2014	013:052:019	3.601E-01	-5.426E-02	6.224E+01	4.360E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.297E-01	-1.318E-01	-1.318E-01	-1.335E-01	-1.332E-01	-1.337E-01	-1.354E-01	-1.387E-01	-1.388E-01	-1.364E-01	-1.418E-01
39	5	11/18/2014	013:053:016	3.550E-01	-4.680E-02	6.235E+01	4.361E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.587E-01	-1.786E-01	-1.786E-01	-1.765E-01	-1.410E-01	-1.400E-01	-1.540E-01	-1.465E-01	-1.366E-01	-1.373E-01	-1.405E-01
39	6	11/18/2014	013:054:016	3.703E-01	-2.404E-03	6.236E+01	4.364E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.313E-01	-1.321E-01	-1.321E-01	-1.307E-01	-1.314E-01	-1.332E-01	-1.338E-01	-1.369E-01	-1.381E-01	-1.393E-01	-1.476E-01
39	7	11/18/2014	013:055:009	3.814E-01	4.698E-02	6.239E+01	4.365E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.274E-01	-1.297E-01	-1.297E-01	-1.307E-01	-1.332E-01	-1.353E-01	-1.337E-01	-1.360E-01	-1.388E-01	-1.401E-01	-1.458E-01
39	8	11/18/2014	013:056:040	3.849E-01	6.697E-02	6.250E+01	4.367E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.297E-01	-1.315E-01	-1.315E-01	-1.316E-01	-1.306E-01	-1.303E-01	-1.318E-01	-1.391E-01	-1.388E-01	-1.372E-01	-1.384E-01
39	9	11/18/2014	013:057:031	3.787E-01	2.380E-02	6.245E+01	4.369E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.262E-01	-1.286E-01	-1.286E-01	-1.281E-01	-1.285E-01	-1.302E-01	-1.342E-01	-1.372E-01	-1.378E-01	-1.405E-01	-1.423E-01
39	10	11/18/2014	013:058:022	3.708E-01	5.131E-03	6.241E+01	4.371E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.291E-01	-1.297E-01	-1.297E-01	-1.315E-01	-1.335E-01	-1.347E-01	-1.389E-01	-1.427E-01	-1.422E-01	-1.426E-01	-1.468E-01
39	11	11/18/2014	013:059:017	3.695E-01	3.521E-05	6.249E+01	4.372E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.268E-01	-1.289E-01	-1.289E-01	-1.297E-01	-1.301E-01	-1.325E-01	-1.347E-01	-1.374E-01	-1.388E-01	-1.395E-01	-1.422E-01
39	12	11/18/2014	014:000:009	3.552E-01	-4.040E-02	6.253E+01	4.373E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.292E-01	-1.283E-01	-1.283E-01	-1.298E-01	-1.314E-01	-1.315E-01	-1.348E-01	-1.342E-01	-1.344E-01	-1.351E-01	-1.426E-01
39	13	11/18/2014	014:001:003	3.694E-01	-1.516E-03	6.256E+01	4.375E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.295E-01	-1.299E-01	-1.299E-01	-1.318E-01	-1.325E-01	-1.343E-01	-1.372E-01	-1.415E-01	-1.396E-01	-1.388E-01	-1.398E-01

Table C2. Test Section Rake Data (cont.)

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
39	14	11/18/2014	014:002:001	3.692E-01	-2.786E-03	6.271E+01	4.377E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.282E-01	-1.299E-01	-1.299E-01	-1.270E-01	-1.284E-01	-1.278E-01	-1.326E-01	-1.357E-01	-1.362E-01	-1.363E-01	-1.403E-01
39	15	11/18/2014	014:002:059	3.725E-01	1.179E-02	6.294E+01	4.379E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.285E-01	-1.280E-01	-1.280E-01	-1.287E-01	-1.281E-01	-1.278E-01	-1.318E-01	-1.400E-01	-1.423E-01	-1.421E-01	-1.433E-01
39	16	11/18/2014	014:003:051	3.822E-01	3.378E-02	6.302E+01	4.381E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.297E-01	-1.298E-01	-1.298E-01	-1.312E-01	-1.318E-01	-1.344E-01	-1.352E-01	-1.392E-01	-1.388E-01	-1.379E-01	-1.413E-01
39	17	11/18/2014	014:004:044	3.668E-01	-1.149E-02	6.300E+01	4.381E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-1.294E-01	-1.299E-01	-1.299E-01	-1.305E-01	-1.309E-01	-1.336E-01	-1.382E-01	-1.388E-01	-1.386E-01	-1.401E-01	-1.457E-01
40	1	11/18/2014	014:013:039	3.790E-01	1.084E-02	6.370E+01	4.398E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.325E-02	-4.263E-02	-4.263E-02	-4.265E-02	-4.148E-02	-4.030E-02	-4.021E-02	-3.975E-02	-3.861E-02	-3.722E-02	-4.281E-02
40	2	11/18/2014	014:015:010	3.849E-01	2.312E-02	6.372E+01	4.401E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.258E-02	-4.220E-02	-4.220E-02	-4.208E-02	-4.120E-02	-4.042E-02	-4.041E-02	-3.981E-02	-3.829E-02	-3.683E-02	-4.089E-02
40	3	11/18/2014	014:016:058	3.907E-01	4.174E-02	6.367E+01	4.403E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.270E-02	-4.213E-02	-4.213E-02	-4.205E-02	-4.086E-02	-4.001E-02	-3.993E-02	-3.942E-02	-3.802E-02	-3.691E-02	-4.262E-02
40	4	11/18/2014	014:017:056	4.155E-01	1.025E-01	6.377E+01	4.406E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.313E-02	-4.250E-02	-4.250E-02	-4.246E-02	-4.120E-02	-4.011E-02	-3.990E-02	-3.928E-02	-3.793E-02	-3.682E-02	-4.167E-02
40	5	11/18/2014	014:018:052	4.104E-01	9.413E-02	6.379E+01	4.408E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-8.859E-02	-1.106E-01	-1.106E-01	-6.693E-02	-4.357E-02	-4.905E-02	-5.181E-02	-3.963E-02	-3.780E-02	-3.698E-02	-4.214E-02
40	6	11/18/2014	014:019:042	3.923E-01	4.781E-02	6.390E+01	4.409E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.297E-02	-4.243E-02	-4.243E-02	-4.223E-02	-4.107E-02	-4.007E-02	-3.994E-02	-3.942E-02	-3.779E-02	-3.692E-02	-4.088E-02
40	7	11/18/2014	014:020:043	3.882E-01	3.471E-02	6.409E+01	4.411E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.322E-02	-4.273E-02	-4.273E-02	-4.259E-02	-4.156E-02	-4.049E-02	-4.054E-02	-4.023E-02	-3.864E-02	-3.712E-02	-4.349E-02
40	8	11/18/2014	014:021:045	3.961E-01	6.087E-02	6.407E+01	4.412E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.288E-02	-4.260E-02	-4.260E-02	-4.237E-02	-4.132E-02	-4.031E-02	-3.990E-02	-3.964E-02	-3.809E-02	-3.733E-02	-4.068E-02
40	9	11/18/2014	014:022:044	4.130E-01	1.081E-01	6.422E+01	4.414E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.322E-02	-4.272E-02	-4.272E-02	-4.231E-02	-4.093E-02	-4.001E-02	-3.997E-02	-3.953E-02	-3.837E-02	-3.724E-02	-4.224E-02
40	10	11/18/2014	014:023:059	4.111E-01	1.126E-01	6.425E+01	4.416E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.270E-02	-4.247E-02	-4.247E-02	-4.226E-02	-4.109E-02	-4.040E-02	-4.009E-02	-3.953E-02	-3.802E-02	-3.692E-02	-4.170E-02
40	11	11/18/2014	014:024:054	4.095E-01	1.076E-01	6.401E+01	4.418E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.250E-02	-4.219E-02	-4.219E-02	-4.206E-02	-4.102E-02	-4.028E-02	-3.993E-02	-3.937E-02	-3.772E-02	-3.695E-02	-4.125E-02
40	12	11/18/2014	014:025:044	3.926E-01	6.273E-02	6.380E+01	4.419E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.234E-02	-4.177E-02	-4.177E-02	-4.161E-02	-4.092E-02	-3.971E-02	-3.968E-02	-3.923E-02	-3.726E-02	-3.635E-02	-4.045E-02
40	13	11/18/2014	014:026:039	3.809E-01	3.670E-02	6.396E+01	4.421E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.317E-02	-4.252E-02	-4.252E-02	-4.208E-02	-4.109E-02	-4.034E-02	-4.014E-02	-3.971E-02	-3.801E-02	-3.695E-02	-4.093E-02

Table C2. Test Section Rake Data (cont.)

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
40	14	11/18/2014	014:027:041	3.768E-01	2.967E-02	6.393E+01	4.423E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.274E-02	-4.225E-02	-4.225E-02	-4.180E-02	-4.110E-02	-4.006E-02	-3.988E-02	-3.935E-02	-3.799E-02	-3.735E-02	-3.996E-02
40	15	11/18/2014	014:028:032	3.910E-01	5.810E-02	6.410E+01	4.424E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.251E-02	-4.219E-02	-4.219E-02	-4.199E-02	-4.082E-02	-4.000E-02	-3.959E-02	-3.912E-02	-3.767E-02	-3.669E-02	-4.209E-02
40	16	11/18/2014	014:029:022	4.032E-01	8.887E-02	6.409E+01	4.425E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.317E-02	-4.264E-02	-4.264E-02	-4.211E-02	-4.125E-02	-4.036E-02	-4.032E-02	-3.977E-02	-3.841E-02	-3.734E-02	-4.144E-02
40	17	11/18/2014	014:030:012	3.913E-01	5.429E-02	6.397E+01	4.426E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.289E-02	-4.241E-02	-4.241E-02	-4.228E-02	-4.123E-02	-3.996E-02	-3.973E-02	-3.931E-02	-3.804E-02	-3.707E-02	-4.200E-02
41	1	11/18/2014	014:034:059	4.046E-01	8.419E-02	6.391E+01	4.434E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.290E-02	-4.252E-02	-4.252E-02	-4.264E-02	-4.141E-02	-4.049E-02	-4.040E-02	-3.955E-02	-3.832E-02	-3.765E-02	-4.167E-02
41	2	11/18/2014	014:035:054	3.976E-01	6.614E-02	6.383E+01	4.436E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.240E-02	-4.160E-02	-4.160E-02	-4.147E-02	-4.063E-02	-3.953E-02	-3.932E-02	-3.878E-02	-3.762E-02	-3.662E-02	-3.995E-02
41	3	11/18/2014	014:036:048	3.941E-01	5.743E-02	6.390E+01	4.437E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.302E-02	-4.243E-02	-4.243E-02	-4.233E-02	-4.128E-02	-4.019E-02	-4.014E-02	-3.981E-02	-3.827E-02	-3.687E-02	-4.075E-02
41	4	11/18/2014	014:037:038	4.066E-01	9.276E-02	6.416E+01	4.439E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.308E-02	-4.238E-02	-4.238E-02	-4.250E-02	-4.126E-02	-4.021E-02	-4.011E-02	-3.961E-02	-3.838E-02	-3.732E-02	-4.171E-02
41	5	11/18/2014	014:038:029	4.068E-01	9.355E-02	6.418E+01	4.440E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-8.436E-02	-1.087E-01	-1.087E-01	-7.029E-02	-4.347E-02	-4.756E-02	-4.940E-02	-3.932E-02	-3.776E-02	-3.703E-02	-4.205E-02
41	6	11/18/2014	014:039:018	3.920E-01	5.520E-02	6.404E+01	4.442E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.331E-02	-4.245E-02	-4.245E-02	-4.231E-02	-4.124E-02	-4.040E-02	-4.011E-02	-3.978E-02	-3.833E-02	-3.703E-02	-4.127E-02
41	7	11/18/2014	014:040:007	3.995E-01	7.518E-02	6.400E+01	4.443E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.326E-02	-4.267E-02	-4.267E-02	-4.230E-02	-4.109E-02	-4.002E-02	-3.985E-02	-3.923E-02	-3.811E-02	-3.679E-02	-4.104E-02
41	8	11/18/2014	014:040:059	4.103E-01	9.809E-02	6.400E+01	4.445E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.244E-02	-4.188E-02	-4.188E-02	-4.158E-02	-4.056E-02	-3.951E-02	-3.939E-02	-3.899E-02	-3.764E-02	-3.629E-02	-4.117E-02
41	9	11/18/2014	014:041:047	4.032E-01	8.593E-02	6.414E+01	4.446E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.293E-02	-4.215E-02	-4.215E-02	-4.208E-02	-4.101E-02	-4.004E-02	-4.003E-02	-3.944E-02	-3.796E-02	-3.691E-02	-3.994E-02
41	10	11/18/2014	014:042:037	4.002E-01	7.766E-02	6.414E+01	4.447E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.281E-02	-4.233E-02	-4.233E-02	-4.234E-02	-4.118E-02	-4.011E-02	-3.997E-02	-3.938E-02	-3.803E-02	-3.673E-02	-4.051E-02
41	11	11/18/2014	014:043:028	4.087E-01	1.060E-01	6.401E+01	4.448E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.236E-02	-4.189E-02	-4.189E-02	-4.175E-02	-4.081E-02	-3.993E-02	-3.977E-02	-3.892E-02	-3.745E-02	-3.672E-02	-3.948E-02
41	12	11/18/2014	014:044:016	4.091E-01	1.025E-01	6.408E+01	4.450E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.292E-02	-4.233E-02	-4.233E-02	-4.196E-02	-4.117E-02	-3.999E-02	-3.984E-02	-3.939E-02	-3.795E-02	-3.685E-02	-4.279E-02
41	13	11/18/2014	014:045:006	3.958E-01	6.960E-02	6.404E+01	4.451E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.260E-02	-4.209E-02	-4.209E-02	-4.199E-02	-4.099E-02	-4.011E-02	-4.017E-02	-3.938E-02	-3.766E-02	-3.661E-02	-4.066E-02

Table C2. Test Section Rake Data (cont.)

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
41	14	11/18/2014	014:045:053	4.152E-01	1.174E-01	6.400E+01	4.452E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.193E-02	-4.133E-02	-4.133E-02	-4.133E-02	-4.031E-02	-3.921E-02	-3.906E-02	-3.854E-02	-3.718E-02	-3.587E-02	-3.931E-02
41	15	11/18/2014	014:046:047	4.037E-01	8.272E-02	6.408E+01	4.454E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.271E-02	-4.207E-02	-4.207E-02	-4.206E-02	-4.077E-02	-3.976E-02	-3.947E-02	-3.926E-02	-3.782E-02	-3.661E-02	-3.947E-02
41	16	11/18/2014	014:047:036	4.030E-01	8.700E-02	6.400E+01	4.455E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.283E-02	-4.248E-02	-4.248E-02	-4.245E-02	-4.131E-02	-4.007E-02	-3.995E-02	-3.970E-02	-3.830E-02	-3.723E-02	-4.121E-02
41	17	11/18/2014	014:048:028	4.016E-01	8.179E-02	6.410E+01	4.457E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.321E-02	-4.255E-02	-4.255E-02	-4.223E-02	-4.132E-02	-4.034E-02	-4.020E-02	-3.973E-02	-3.821E-02	-3.695E-02	-4.239E-02
42	1	11/18/2014	014:052:023	4.068E-01	9.750E-02	6.382E+01	4.462E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.303E-02	-4.226E-02	-4.226E-02	-4.224E-02	-4.109E-02	-4.005E-02	-4.002E-02	-3.935E-02	-3.840E-02	-3.714E-02	-4.122E-02
42	2	11/18/2014	014:053:015	4.081E-01	1.052E-01	6.389E+01	4.464E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.250E-02	-4.158E-02	-4.158E-02	-4.152E-02	-4.077E-02	-3.956E-02	-3.960E-02	-3.924E-02	-3.798E-02	-3.665E-02	-4.367E-02
42	3	11/18/2014	014:054:002	3.977E-01	8.245E-02	6.411E+01	4.465E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.272E-02	-4.202E-02	-4.202E-02	-4.206E-02	-4.082E-02	-3.997E-02	-3.983E-02	-3.953E-02	-3.828E-02	-3.690E-02	-4.165E-02
42	4	11/18/2014	014:054:049	4.103E-01	1.171E-01	6.403E+01	4.466E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.278E-02	-4.218E-02	-4.218E-02	-4.213E-02	-4.076E-02	-3.976E-02	-3.945E-02	-3.894E-02	-3.813E-02	-3.677E-02	-4.219E-02
42	5	11/18/2014	014:055:040	4.073E-01	1.111E-01	6.379E+01	4.468E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-8.395E-02	-1.180E-01	-1.180E-01	-7.206E-02	-4.171E-02	-4.927E-02	-4.948E-02	-3.889E-02	-3.747E-02	-3.612E-02	-4.155E-02
42	6	11/18/2014	014:056:038	3.920E-01	7.660E-02	6.400E+01	4.470E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.271E-02	-4.215E-02	-4.215E-02	-4.211E-02	-4.114E-02	-4.022E-02	-4.012E-02	-3.938E-02	-3.821E-02	-3.695E-02	-4.177E-02
42	7	11/18/2014	014:057:025	3.893E-01	7.287E-02	6.398E+01	4.471E+01	1.476E+01	2.121E+03	2.121E+03	1.000E-06
	-4.269E-02	-4.200E-02	-4.200E-02	-4.196E-02	-4.075E-02	-3.987E-02	-3.972E-02	-3.918E-02	-3.777E-02	-3.640E-02	-4.162E-02
42	8	11/18/2014	014:058:015	3.824E-01	5.404E-02	6.394E+01	4.472E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.236E-02	-4.178E-02	-4.178E-02	-4.186E-02	-4.080E-02	-4.005E-02	-3.968E-02	-3.919E-02	-3.785E-02	-3.680E-02	-4.220E-02
42	9	11/18/2014	014:059:004	3.851E-01	6.205E-02	6.379E+01	4.473E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.292E-02	-4.202E-02	-4.202E-02	-4.206E-02	-4.086E-02	-4.011E-02	-3.997E-02	-3.939E-02	-3.800E-02	-3.673E-02	-4.293E-02
42	10	11/18/2014	014:059:050	3.914E-01	7.719E-02	6.376E+01	4.474E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.302E-02	-4.230E-02	-4.230E-02	-4.224E-02	-4.103E-02	-3.993E-02	-3.997E-02	-3.955E-02	-3.836E-02	-3.683E-02	-4.271E-02
42	11	11/18/2014	015:000:042	3.872E-01	7.039E-02	6.392E+01	4.476E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.223E-02	-4.183E-02	-4.183E-02	-4.168E-02	-4.045E-02	-3.985E-02	-3.969E-02	-3.903E-02	-3.763E-02	-3.654E-02	-4.145E-02
42	12	11/18/2014	015:001:027	3.889E-01	7.937E-02	6.391E+01	4.477E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.274E-02	-4.218E-02	-4.218E-02	-4.206E-02	-4.108E-02	-4.016E-02	-3.996E-02	-3.950E-02	-3.827E-02	-3.693E-02	-4.311E-02
42	13	11/18/2014	015:002:017	3.884E-01	7.629E-02	6.370E+01	4.479E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.294E-02	-4.223E-02	-4.223E-02	-4.224E-02	-4.120E-02	-4.043E-02	-4.033E-02	-3.979E-02	-3.833E-02	-3.717E-02	-4.146E-02

Table C2. Test Section Rake Data (concluded)

RUN	POINT	DATE	TIME	PSREF - PA	PTOTAL - PA	TTF	DPT	BARO (PA)	PT	PS	Q
	PTRAK 01	PTRAK 02	PTRAK 03	PTRAK 04	PTRAK 05	PTRAK 06	PTRAK 07	PTRAK 08	PTRAK 09	PTRAK 10	PSRAK 11
42	14	11/18/2014	015:003:008	3.858E-01	7.494E-02	6.355E+01	4.480E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.197E-02	-4.149E-02	-4.149E-02	-4.135E-02	-4.024E-02	-3.942E-02	-3.909E-02	-3.867E-02	-3.720E-02	-3.620E-02	-4.045E-02
42	15	11/18/2014	015:003:057	3.817E-01	6.470E-02	6.351E+01	4.481E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.260E-02	-4.204E-02	-4.204E-02	-4.192E-02	-4.096E-02	-4.013E-02	-3.978E-02	-3.939E-02	-3.793E-02	-3.699E-02	-4.177E-02
42	16	11/18/2014	015:004:047	3.873E-01	8.207E-02	6.356E+01	4.482E+01	1.476E+01	2.120E+03	2.121E+03	1.000E-06
	-4.311E-02	-4.255E-02	-4.255E-02	-4.228E-02	-4.093E-02	-4.038E-02	-4.009E-02	-3.958E-02	-3.841E-02	-3.709E-02	-4.161E-02
42	17	11/18/2014	015:005:039	3.880E-01	7.811E-02	6.379E+01	4.484E+01	1.475E+01	2.120E+03	2.121E+03	1.000E-06
	-4.252E-02	-4.186E-02	-4.186E-02	-4.181E-02	-4.071E-02	-3.989E-02	-3.988E-02	-3.934E-02	-3.783E-02	-3.660E-02	-4.359E-02