MAE 4273: EXPERIMENTAL FLUID DYNAMICS

Lab Report

Fall 2019

Wind Tunnel Performance Characterization

School of Mechanical and Aerospace Engineering

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ABSTRACT

The Oklahoma State University Endeavor Wind Tunnel allows for evaluation of test articles in low velocity (<36m/s) airflows. Quality of a wind tunnel's flow in terms of constant velocity throughout the cross section can vary, and presence of boundary layer effects may be prevalent. This laboratory will not only calibrate the wind tunnel's pressure transducer to properly obtain velocity measurements, but also create a velocity profile to determine if any velocity gradients or unsteadiness occurs. A pitot probe and traverse were used to take pressure measurements at four different flow speeds ranging from 3-18m/s and spanning a quadrant of the wind tunnel test section, approximately 0.093m^2. These results not only calibrated the tunnel's pressure transducer for calculating velocity measurements, but also determined that while some velocity variances do occur throughout the test section, they are less than 10% of the slowest observed flow speed of 3.1m/s and less than 1% at the highest observed flow speed of 18m/s. With these findings, the Endeavor Wind Tunnel flow may be assumed to be uniform at elevated flow velocities of 18m/s. At lower velocities (<5m/s), the velocity gradient introduces more flow variance and resulting tests done in this flow realm should consider such gradients.

1. INTRODUCTION

Wind tunnels accelerate air either through an open or closed-loop system to simulate elevated flow velocities, often external flows over an object such as an aircraft wing or even internal flows through a jet engine. Flow speeds can reach hundreds of kilometers per hour, depending on the system, but the quality of this flow is vital to performing experiments and understanding quantities like drag coefficient and drag force. Evaluating the quality of the flow to find velocity gradients and pressure fluctuations is a necessary part of running wind tunnel tests.

NASA has worked on transonic wind tunnels and discovered that stream turbulences in the flow can be expected from the tunnel drive system and test section contraction [1]. Acoustical disturbances also come from the drive system as well as tunnel walls and diffuser. Given each of these effects on flow, properly characterizing the specific wind tunnel of interest is a necessary procedure.

Timely testing of a wind tunnel is also vital because operational parts wear down with time. Lindgren and Johansson state “it is commonly known that the maximum speed of a wind-tunnel is usually decreasing with time,” but they were able to determine their wind tunnel of interest was still operating nominally after ten years of operation [2].

The objectives for this lab are as stated:

1. Calibrate the OSU Endeavor Wind Tunnel’s pressure transducer using a manometer to obtain corrected pressure measurements and calculate velocity given the tunnel fan’s rotational speed between 0 and 720 RPM.
2. Determine the presence and magnitude (in percentage of flow velocity) of velocity gradients in the test section’s flow to assess flow uniformity and quality throughout the test section for free stream speeds less than 19m/s.

2. EXPERIMENTAL ARRANGEMENTS

Materials:

This laboratory primarily used test equipment and did not measure samples, other than the air in the closed-circuit wind tunnel. The inclined manometer used a red gage fluid, with a specific gravity of 0.827. The wind tunnel and manometer equipment are discussed in the following subsection.

Facilities and Equipment:

The equipment used for this laboratory exercise was the Aerolab closed-circuit wind tunnel (Aerolab, LLC, Jessup, MD, USA) and LabView 2018 (National Instruments, Austin, TX, USA) software suite located in Endeavor 140 at Oklahoma State University. The tunnel is capable of fan speeds of 880 RPM to generate airflow velocities up to 133 km/h in a closed-loop system [3]. Due to the closed-loop nature of the tunnel, it utilizes a M1-3A refrigerant system (Advantage Engineering, Greenwood, IN, USA) to maintain the air at a constant temperature throughout wind tunnel operation. The test section features clear panes for viewing test articles and measures 1.22m in length (x-direction), 0.61m in depth (y-direction), and 0.61m in height (z-direction). Due to a manufacturer-installed load cell section that raised concerns about flow behavior, a portion of the tunnel was removed and replaced with an acrylic cover to maximize the test section volume and mitigate unwanted air flow patterns. The cover induces a slight cross-section change in the test section by ramping up at 6° from the test section entrance and ramping back down at the test section exit. This assembly with the pitot-static probe in its calibration starting position is shown in Figure 1. This starting position is discussed further in the following subsection.

The wind tunnel is controlled and operated by a virtual instrument (VI) coded in LabView that Aerolab provided with the tunnel. Their included traverse system is integrated into the VI and allows for motion control of an instrument (in this case, a pitot-static probe) inside the test section, and data acquisition during tunnel operation. This VI interface can be seen in Figure 2. The interface allows monitoring of the traverse and live data, as well as buttons for operating the tunnel and data acquisition on the far right. Data may be collected continuously or manually in bursts to record traverse position, fan RPM, static pressure, and many flow properties. These data are written to a .CSV file which can be opened in Excel and manipulated like any other spreadsheet for data analysis.

In addition to the data collection being handled by the VI, an inclined tube differential manometer was also installed with the pitot-static probe to provide a manual measurement reading for calibration and validation purposes (discussed later). It measured change in pressure by hundredths of an inch.

The pitot-static probe was 5mm in diameter with a tapered head and static slots 2.54cm from the head tip and an overall length of 31.75cm. The Aerolab VI had built-in displacement limits to prevent the probe from extending too close to any of the test section walls. The probe was connected to the manometer and a digital pressure transducer.

Experimental protocols:

This laboratory exercise was divided into two procedures: calibration of pressure transducer and free stream velocity, and tunnel flow quality assessment. They are each addressed separately below.

I. Calibration of Pressure Transducer and Free Stream Velocity

The pitot-static probe's initial position in the tunnel was recorded using cartesian coordinates in relation to the test section entrance ramp up (x-direction), far back wall of the wind tunnel test section (y-direction) and test section base (z-direction). Its initial location is as follows: (747.8mm, 285.75mm, 320.675mm) in the (x, y, z) directions, respectively. With the tunnel fan turned off and zero airspeed, the ambient conditions were recorded using the Aerolab VI. A burst of 50 samples was recorded for one second to represent the tunnel airspeed at zero. The manometer fluid position was also recorded by manually reading the gage and typing its position into a spreadsheet.

Beginning with 75 RPM fan speed control input via VI, the fan speed indicator was allowed to reach steady state, 50 data samples recorded, manometer reading recorded, and CSV file name changed to reflect the current fan speed. This process is repeated in intervals of 75 RPM, all the way up to 675 RPM. After recording data at 675 RPM, the same intervals are repeated by decreasing the fan speed 75 RPM each time until 0 RPM is reached and the tunnel shut back off, at which point the final data recordings take place.

To study repeatability and hysteresis, this entire ramp up-ramp down process was completed a second time for additional data points and validating the digital data and manometer readings, as studying the ticks on the manometer took some operator practice.

II. Tunnel Flow Quality Assessment

Flow quality of the wind tunnel was evaluated by 3 different pitot-static probe positions along the *y* axis, probing the *x*-*z* plane. A .CSV file script was pre-programmed and loaded into the Aerolab VI to dictate the probe position and record samples throughout, effectively automating the entire profile for a given RPM. The laboratory operators defined 4 fan RPMs (120, 360, 540, and 720) at which to run each of the three *x*-*z* planes, for a total of 12 profiles. These combinations are listed in Table 1.

The intent of this assessment was to gather information about boundary layer effects and flow uniformity throughout the square cross section of the test section. Only one quadrant of the tunnel was examined, and the assumption made that the remaining quadrants were symmetrical about their respective axes.

Calculated quantities:

The data of interest obtained from calibration and tunnel flow quality evaluation include model and dynamic pressure, and fan speed (RPM). Other parameters obtained from ambient conditions include $P_{air} = 0.984\ bar$, $T_{air} = 295.93\ K$, and $R_g = 287.1\ \frac{J}{kg \cdot K}$.

The ideal gas equation is used to find density from air pressure P, the gas constant for air R_g, and air temperature, T.

$$\rho = \frac{P}{R_g T}$$

To obtain flow velocity from total and static pressure as measured by the pressure transducer and pitot-static probe, Bernoulli's equation is utilized where P is pressure, ρ is density, V is flow velocity, g is gravitational acceleration, and h is elevation. The equality between subscripts 1 and 2 indicate a conservation of energy between two states.

$$P_1 + \frac{1}{2}\rho V_1^2 + \rho g h_1 = P_2 + \frac{1}{2}\rho V_2^2 + \rho g h_2$$

Reducing the equation by eliminating the potential energy terms and assuming a $V_1 = 0\ m/s$ for total pressure yields:

$$V_2 = \sqrt{\frac{2(P_1 - P_2)}{\rho}}$$

Defining $P_1 = P_t$ for total pressure and $P_2 = P_s$ for static pressure, results in the following equation that allows for the calculation of flow velocity.

$$V_2 = \sqrt{\frac{2(P_t - P_s)}{\rho}}$$

For V as freestream velocity, x as test section length to pitot probe, and μ as dynamic viscosity, Reynolds Number is calculated by:

$$Re = \frac{\rho V x}{\mu}$$

Errors are found by dividing the difference of true and calculated values by the true value.

$$Error = \frac{true\ value - measured\ value}{true\ value}$$

3. RESULTS AND DISCUSSION

3.1. Summary:

This experiment first calibrated the Aerolab wind tunnel pressure measurements for freestream velocity using a manometer to validate the tunnel's pressure transducer. It was found that freestream velocity of the tunnel varies linearly with fan RPM, and as a result, the freestream velocity can be calculated for a new fan RPM. Following calibration, the cross-sectional profile of the wind tunnel test section was mapped to locate velocity gradients resulting from boundary layer effects. It was found that there is wide variance in velocity nearest the bottom of the test section, then a general increase, and followed by a decrease in velocity nearing the middle of the tunnel. These decreases however are limited to 0.3 m/s or less, so the cross section can be reasonable assumed as constant velocity throughout.

3.2. Calibration of Pressure Transducer and Free Stream Velocity

For calibrating the wind tunnel's pressure transducer, a manometer was used to compare pressure data. These data are shown in Figure 3 and feature 3 different data series: ramp up to 675 RPM fan speed, ramp back down to zero RPM, and a second ramp up to 675 RPM. Hysteresis was also studied for this: the effect of approaching value from above or below. With these points plotted, a best-fit trendline was generated and the point-slope equation form displayed on the graph with the R^2 value.

These trendlines correspond very well to the data, with R^2 values over 0.997 or better. Each trendline is overlapping the others, with error bars covering similar ranges of manometer pressure, meaning the data is consistent from ramp up 1, ramp down 1, and ramp up 2.

For the equations defined by the above trendlines, the model pressure may be corrected and used for calculation of the tunnel's horizontal velocity. The velocity is calculated from the reduced form of Bernoulli's equation as defined in the previous section. These velocities are plotted in Figure 4 as a result of fan RPM.

The best-fit trendlines equations are displayed on the above figure, and the slope of the slope-intercept equation form was used to calculate the freestream speed. The figure for slope, 0.0259, was used for remaining freestream speed calculations by multiplying it by the fan speed RPM to obtain the flow velocity at a given fan speed.

Errors have been quantified in Tables 2 and 3 based upon pressure and velocity. Most errors are less than 5%, but some outliers exist, at 300 RPM ramp up and 75 RPM ramp down, for example. The #DIV/0! cells are a result of a true value of 0 inches observed on the manometer (indiscernible pressure rise).

An identical table for velocity measurements, Table 3, contains error values that are even less for the velocity calculations.

Additionally, hysteresis and repeatability were also studied for the ramp up – ramp down and ramp up 1 and 2, respectively. These results are tabulated in Table 4.

The #NUM! cells are a result of negative pressure transducer measurements near zero fan speed, and the negatives are not calculated when under the square root of the velocity calculation. For hysteresis and repeatability, the minimum and maximum values are indicated in green and red, respectively.

These hysteresis data indicate that the lengthy time spent between reaching 75 RPM on the ramp up and down allows for some instrumentation error when approached from below and above. The velocities are less repeatable when approached multiple times from zero fan speed to the max of 675 RPM in this experiment.

These calibration data allow for a valuable observation and calibration calculation. It appears that there is a linear relationship between fan speed and the resulting freestream velocity. With the following calibration equation of $U_\infty = 0.0259$ (RPM), the tunnel's velocity may be calculated for any given fan speed between 0 and 720 RPM which are used in the next phase of the laboratory.

3.3. Tunnel Flow Quality Assessment

For this portion of the experiment, the *y* and *z* probe locations were varied to map a 2D velocity profile of the tunnel test section. 3 *y* locations starting at *y=0 in (0 m)*, *y=3.5in (0.0889 m)*, and *y=7in (0.1778 m)* were selected and are plotted in Figure 5 for varying z locations. The *z=0* location is the bottom of the wind tunnel test section and rises from there towards the center.

There is not a significant difference in velocities between the *y* locations, and this could be the result of the low airspeed at 3.11 m/s. There is actually a reduction in measured airspeed further from the bottom floor of the tunnel, but this slowdown is 0.3 m/s or less, still less than 10% of the flow speed.

For a maximum operating fan speed of 720 RPM (corresponding to 18.65 m/s), the observed velocity changes in the *y* and *z* directions are more distinctive, as seen in Figure 8. The higher velocity occurs at the center of the tunnel for $y=0\ m$ and exhibits some varying behavior in the *z* direction. The slowest velocities are observed nearest the tunnel floor, then increases to a max around 0.05m in height, but then slows down again nearest the center of the tunnel. This may be due to the higher number of samples collected nearest the tunnel floor.

The reason for the bulge could be due to the installed plate that exhibits the 6° ramp as explained in the previous section. However, much like the behavior in Figure 5, the difference in velocity is only about 0.2 m/s, which for a calibrated airspeed of 18.65 m/s, this is a slowdown of only 1% of the tunnel's speed. The intermediate plots at 9.3 m/s and 13.99 m/s are shown in the appendix.

These plots and analysis allude to higher flow speeds and largest degree of velocity uniformity nearest the center of the tunnel.

Following the above analysis, a non-dimensional assessment was also made of velocities and displacements as a scaled function of the tunnel airspeed and tunnel height, respectively. Figure 9 shows these data for the center of the tunnel at $y=0\ m$.

The significance of this plot is it shows the horizontal velocity plotted as a fraction of the free stream speed. The proximity to $u/U\infty=1$ indicates a horizontal air velocity as matching the free stream speed. The higher tunnel speeds approach 1 closer than the lower tunnel speeds. As the probe approaches the center of the tunnel and z/H increases, the flow experiences fewer boundary layer effects than near the bottom of the tunnel. This is supported also by Figure 11 which is the same plot, but displaying the values associated with $y=0.1778\ m$, closest to the tunnel wall. The intermediate plot for $y=0.0889\ m$ is shown in Figure 10.

Reynolds number is also calculated for each of the 12 test points and is included in the appendix.

3.4. Limitations:

The primary assumption made in this study is that airflow is incompressible throughout all parts of the tunnel and therefore constant density during the tests. It was also assumed that air temperature outside the tunnel was identical to the air temperature inside being used during tests. The refrigerant system was also not enabled, so constant temperature throughout the lab experiment was also used.

The largest limitation was the inability to map velocities nearest the tunnel walls. The traverse had built-in displacement limits that prevented moving the probe within several centimeters of the walls. It is within those bounds that the largest velocity gradients may exist, but unfortunately, they cannot be tested with the current setup.

4. CONCLUSIONS

1. Wind tunnel freestream speed as a function of fan rotational velocity is obtained. This enables future testing without recalibrating pressure transducer.
2. Higher flow velocities occur near the middle of the tunnel and experience a slowdown near the walls.
3. Velocity gradients in the OSU Endeavor Wind Tunnel are more prevalent as a percentage of the flow speed for low flow velocities. Flow quality is most uniform near the middle of the test section.

REFERENCES

[1] Harvey, William D., Stainback, P. Calvin., Owen, Kevin F. "Evaluation of Flow Quality in Two Large NASA Wind Tunnels and Transonic Speeds." NASA. December 1980.
[2] Lindgren, Bjorn & Johansson, Arne. "Evaluation of the Flow Quality in the MTL Wind Tunnel." Department of Mechanics. Royal Institute of Technology. Stockholm, Sweden. October 2002.
[3] Patel, Havya. "Oklahoma State University Endeavor Lab Wind Tunnel Operations Manual." *Aerolab LLC*. June 13, 2018.

TABLES

Pitot-Static Probe Location	Fan RPM 1	Fan RPM 2	Fan RPM 3	Fan RPM 4
y + 0cm	120	360	540	720
y + 8.89cm	120	360	540	720
y + 17.78cm	120	360	540	720

Table 1: Listing of the 12 Samples Taken at Varying Probe Location and Fan RPM

RPM	ΔP_{mano} (Pa)	$\Delta P_{cal,eqn}$ (Pa)	Error
0	0.00	0.22	#DIV/0!
75	0.00	1.29	#DIV/0!
150	4.98	5.12	-2.8%
225	11.84	11.43	3.4%
300	15.57	19.95	-28.1%
375	32.39	30.99	4.3%
450	44.85	44.07	1.7%
525	59.80	58.28	2.6%
600	74.75	75.16	-0.5%
675	89.70	91.42	-1.9%
600	74.75	74.58	0.2%
525	59.80	56.91	4.8%
450	44.85	42.93	4.3%
375	29.90	30.59	-2.3%
300	19.93	19.41	2.6%
225	9.97	10.91	-9.5%
150	4.98	4.63	7.0%
75	1.87	0.66	64.8%
0	0.00	-0.11	#DIV/0!

Table 2: List of Pressure Errors for Ramp Up 1 and Ramp Down 1

RPM	**U∞_ΔPmano (m/s)**	**U∞_cal,eqn (m/s)**	**Error**
0	0.00	0.00	#DIV/0!
75	0.00	1.94	#DIV/0!
150	4.15	3.89	6.4%
225	6.39	5.83	8.9%
300	7.33	7.77	-5.9%
375	10.58	9.71	8.2%
450	12.45	11.66	6.4%
525	14.37	13.60	5.4%
600	16.07	15.54	3.3%
675	17.60	17.48	0.7%
600	16.07	16.08	-0.1%
525	14.37	14.07	2.1%
450	12.45	12.06	3.1%
375	10.16	10.05	1.1%
300	8.30	8.04	3.1%
225	5.87	6.03	-2.8%
150	4.15	4.02	3.1%
75	2.54	2.01	20.9%
0	0.00	0.00	#DIV/0!

Table 3: Errors for Velocity.

RPM	$U\infty_{rampup1}$	$U\infty_{rampdown1}$	Hysteresis	$U\infty_{rampup2}$	Repeatability
0	0.867	#NUM!	#NUM!	#NUM!	0.000
75	2.112	1.508	0.603	1.393	0.083
150	4.206	4.000	0.206	4.083	0.165
225	6.284	6.139	0.145	6.170	0.248
300	8.302	8.189	0.113	8.274	0.330
375	10.346	10.279	0.067	10.351	0.413
450	12.339	16.050	0.162	12.309	0.495
525	14.188	14.021	0.167	14.184	0.578
600	16.113	12.177	0.063	16.161	0.660
675	17.771	17.749	0.022	17.809	0.743

Table 4: Hysteresis and Repeatability of Horizontal Velocity

FIGURES

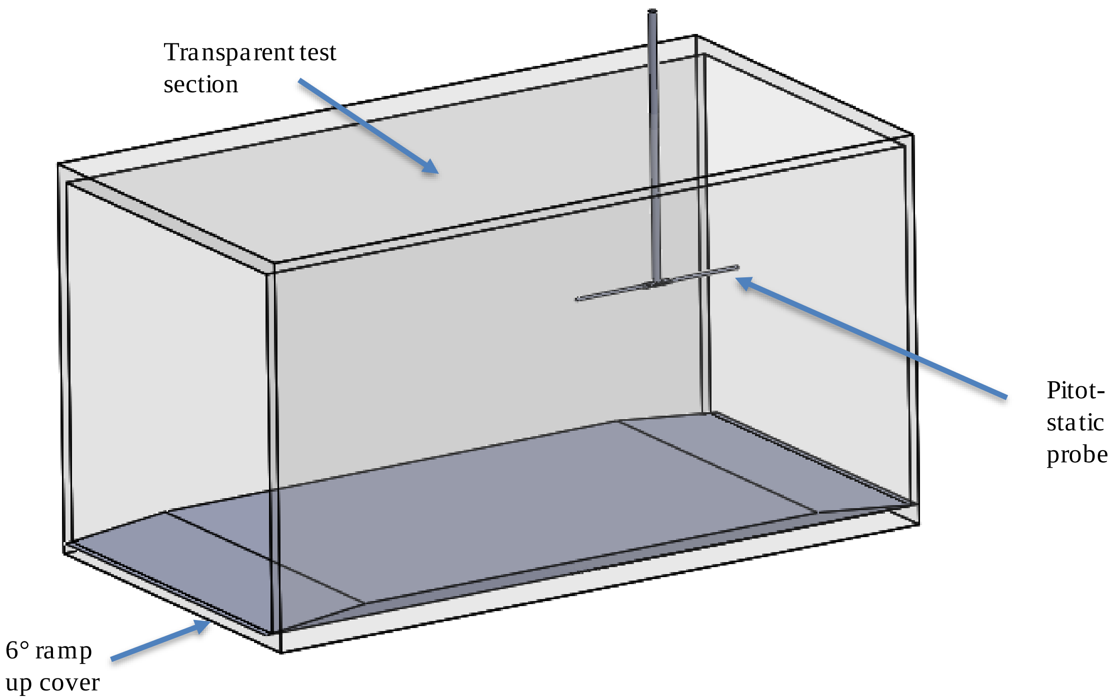

Figure 1: Schematic of Aerolab Wind Tunnel Test Section with Installed Pitot-Static Probe.

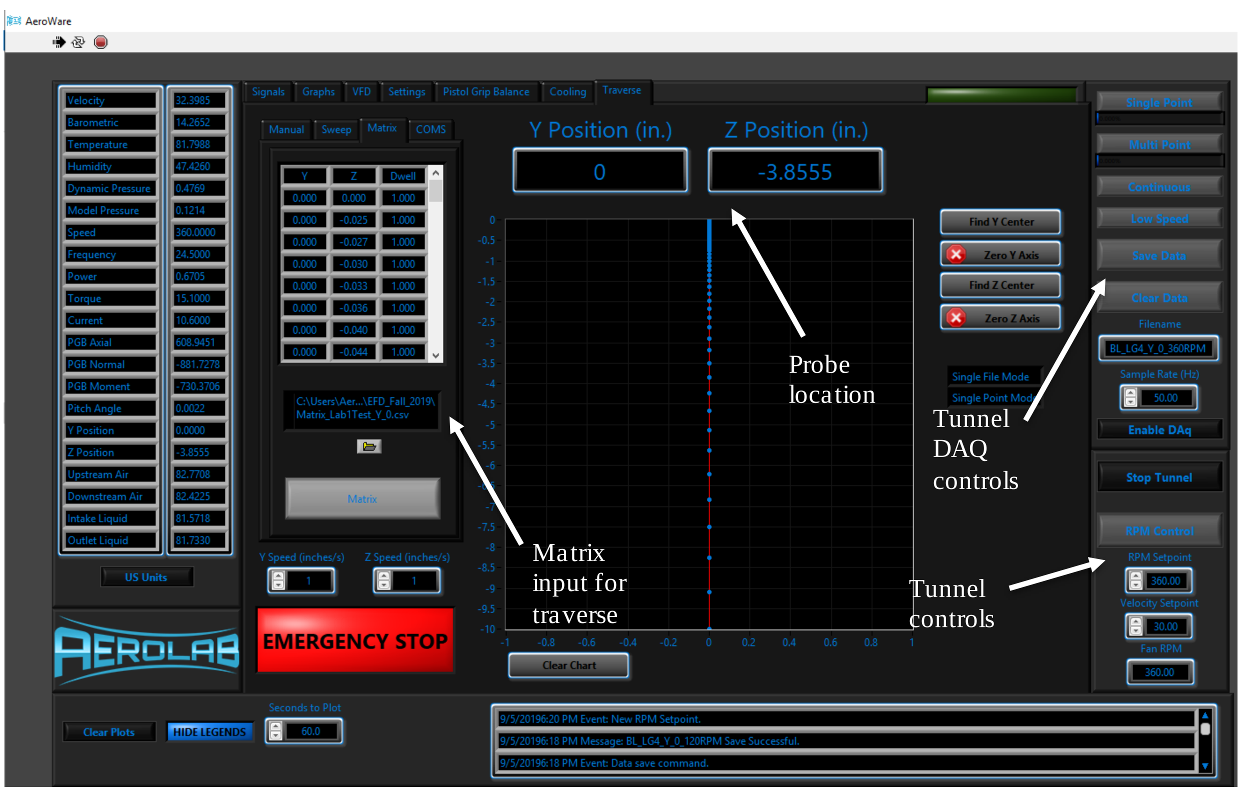

Figure 2: Screenshot of the Aerolab Wind Tunnel VI, with Buttons Labeled.

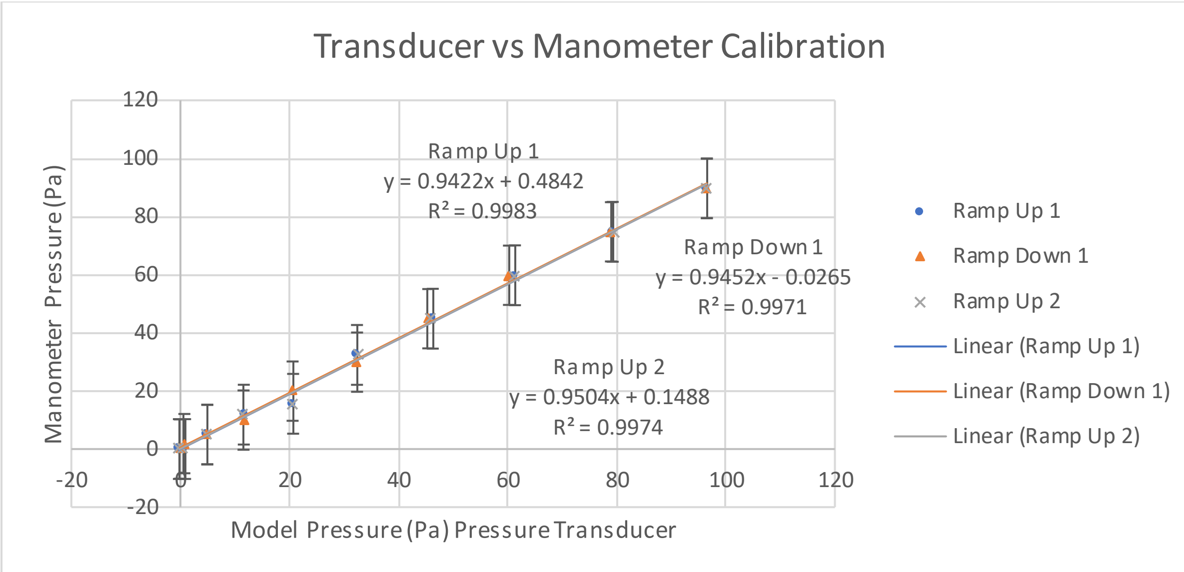

Figure 3: Graph Displaying Transducer Calibration with Best-Fit Lines and Linear Equations

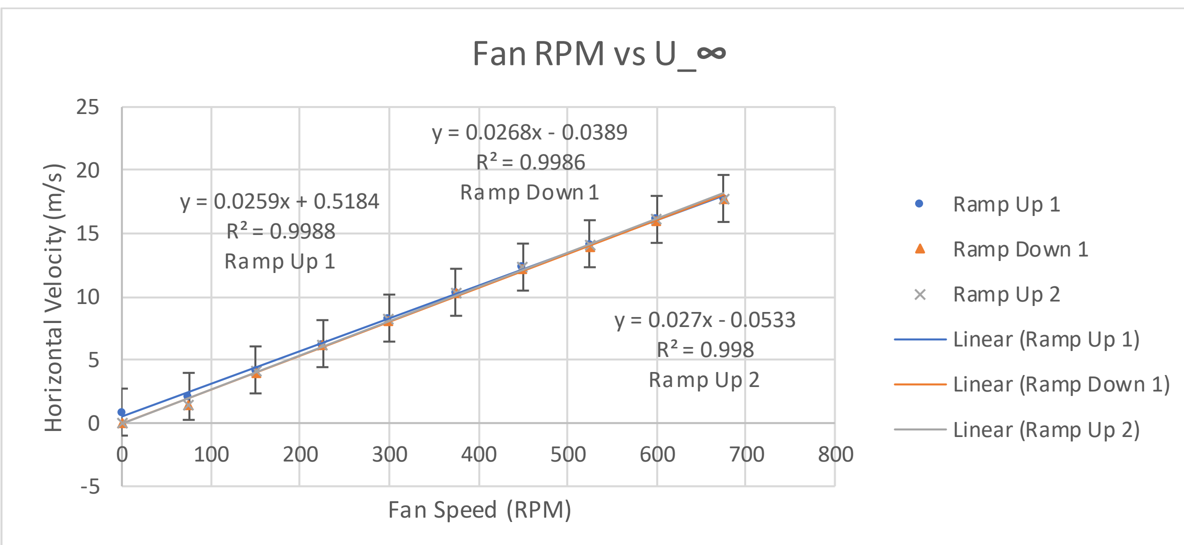

Figure 4: Fan RPM vs Horizontal Velocity with Best-Fit Lines and Linear Equations.

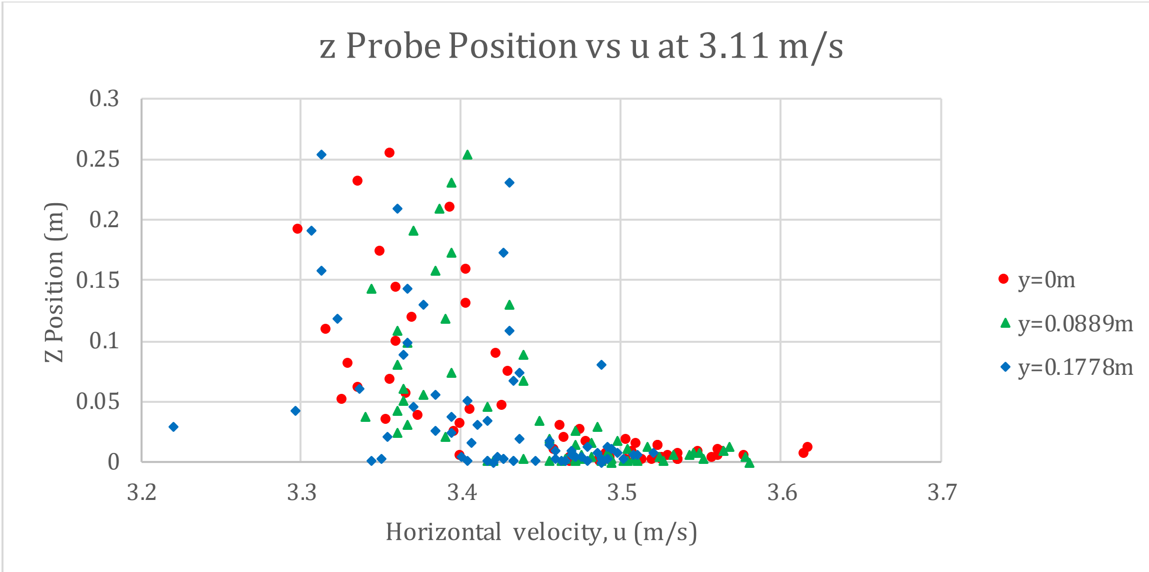

Figure 5: Probe Position and Resulting Horizontal Velocity at 120 RPM Fan Speed.

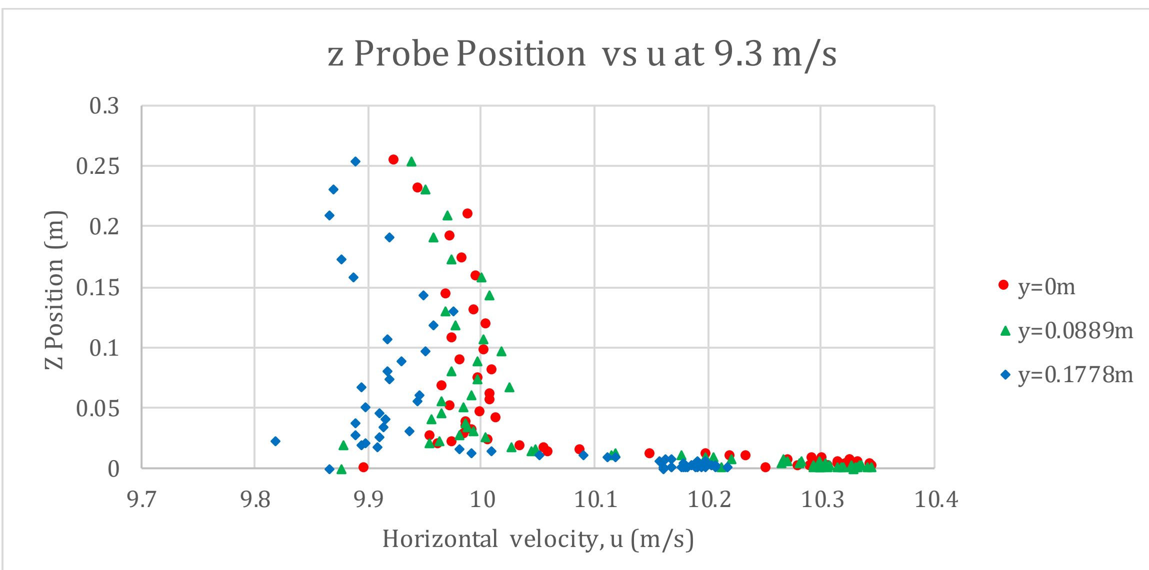

Figure 6: Probe Position and Resulting Horizontal Velocity at 360 RPM Fan Speed.

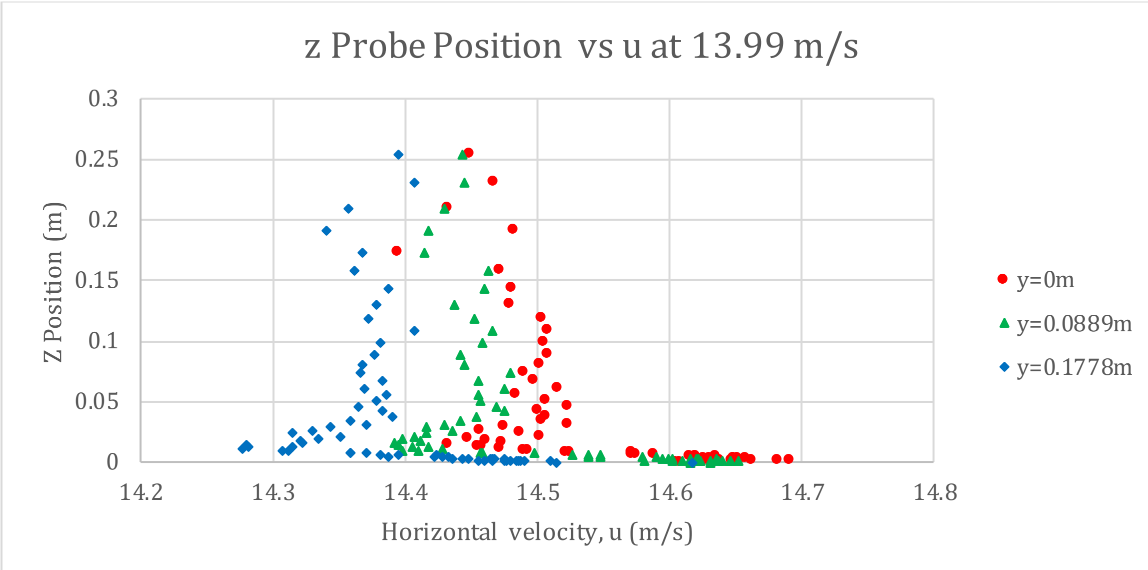

Figure 7: Probe Position and Resulting Horizontal Velocity at 540 RPM Fan Speed.

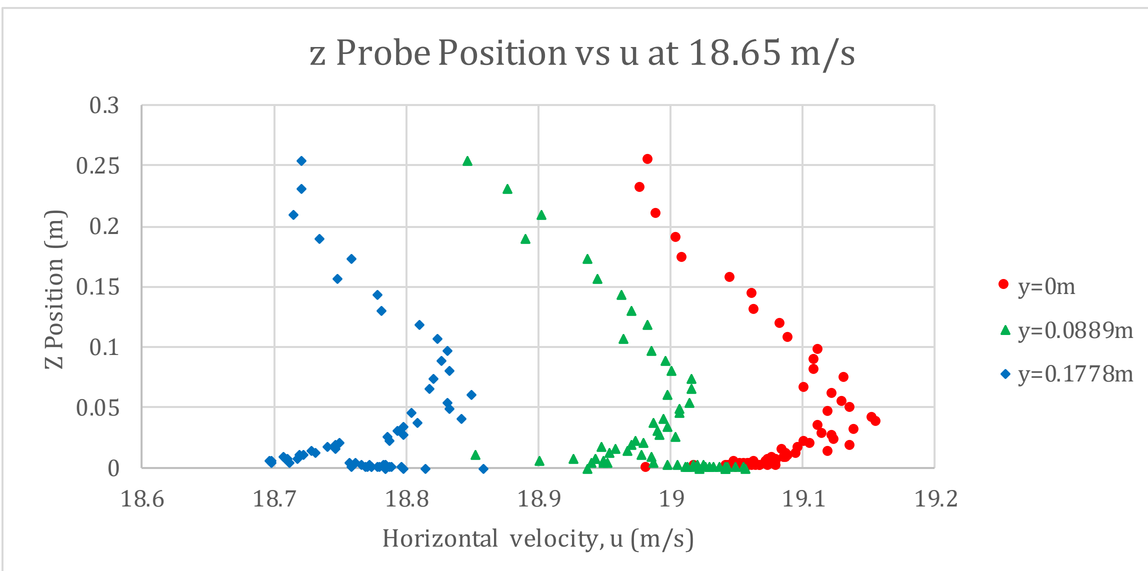

Figure 8: Probe Position and Resulting Horizontal Velocity at 720 RPM Fan Speed.

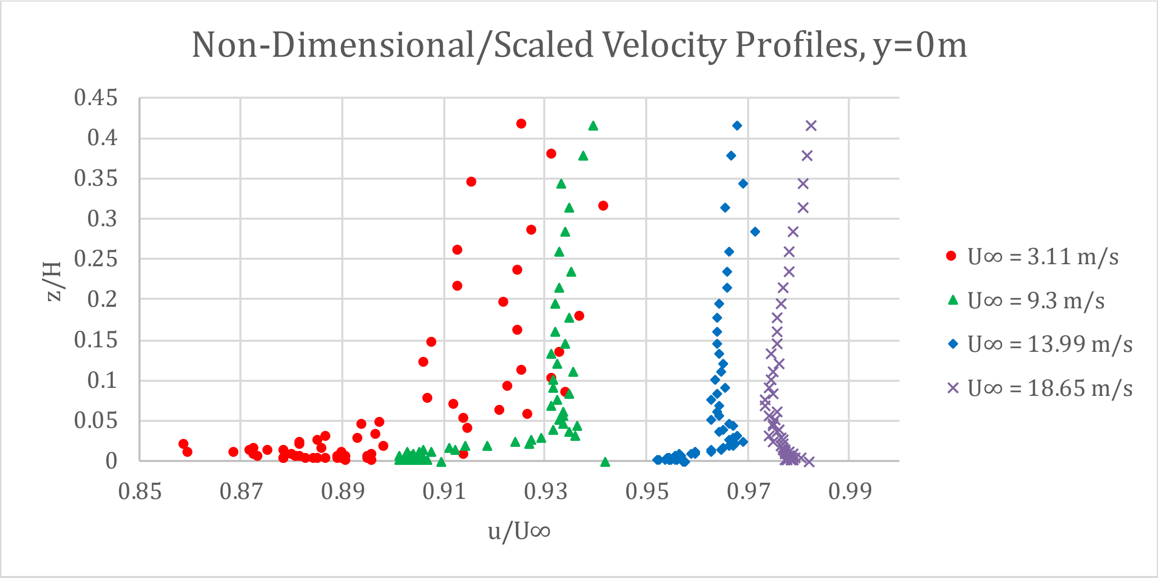

Figure 9: Non-Dimensional Plots for Varying Free Stream Speeds.

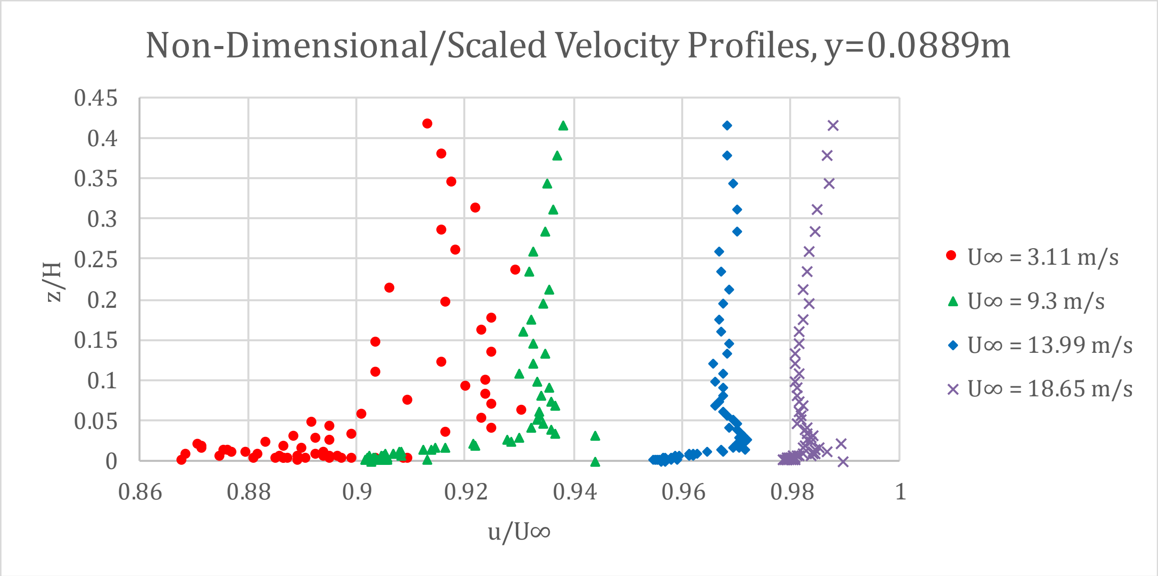

Figure 10: Non-Dimensional Plots for Varying Free Stream Speeds Closest to the *y-direction* Wall.

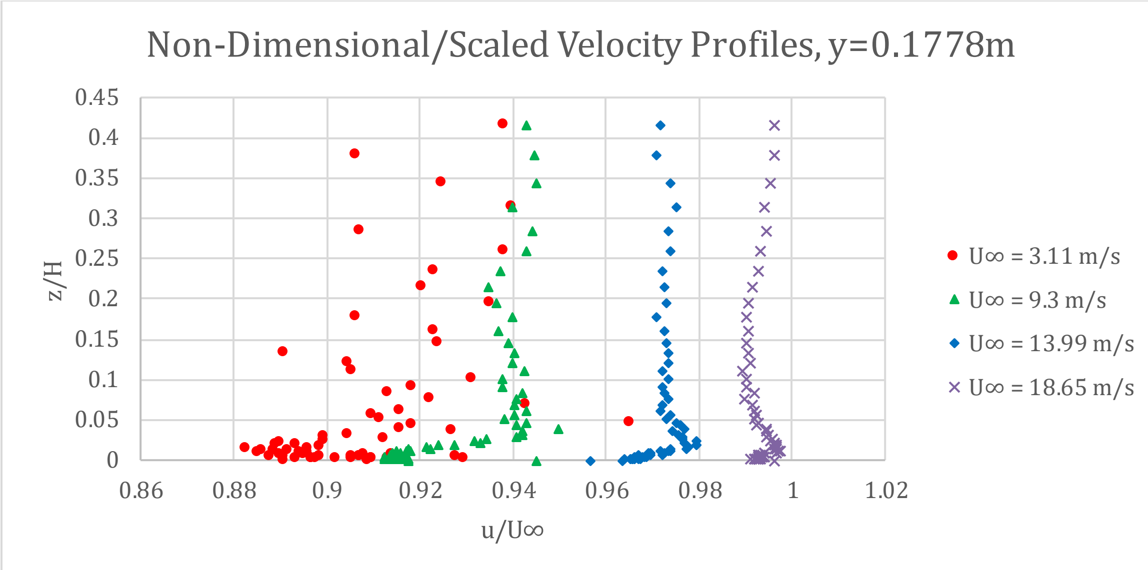

Figure 11: Non-Dimensional Plots for Varying Free Stream Speeds Closest to the *y-direction* Wall.

RAW DATA (expand)

PressureTransducer		Ramp 1 Transducer		Ramp 2 Transducer		Manometer	
RPM	Q	Model P (in H2O)	Model P (Pa)	Model P (in H2O)	Model P (Pa)	ΔP_mano (Pa)	U_inf
0	0.00108	-0.0011357	-0.282986912	-0.0008864	-0.220867834	0	0
75	0.0140609	0.0034358	0.856112029	0.0017455	0.434933217	0	0
150	0.071031	0.0197561	4.922706461	0.0197561	4.922706461	4.98348	4.148987017
225	0.174745	0.0466324	11.61958164	0.0459119	11.44005177	11.835765	6.394018416
300	0.326739	0.0829301	20.66402474	0.0830686	20.69853534	15.573375	7.334442136
375	0.528228	0.1299231	32.37345852	0.1303388	32.47704015	32.39262	10.57788288
450	0.780616	0.1856717	46.26456018	0.1845905	45.99515325	44.85132	12.44696105
525	1.0867633	0.2461578	61.33612366	0.2453267	61.12903515	59.80176	14.37251263
600	1.4427298	0.318088	79.25925931	0.318642	79.39730171	74.7522	16.06895762
675	1.8465179	0.387358	96.51954229	0.3871087	96.45742321	89.70264	17.60266113
600	1.4383845	0.3167579	78.92783297	0.3157325	78.67232996	74.7522	16.06895762
525	1.085441	0.2417525	60.23843744	0.2419741	60.29365439	59.80176	14.37251263
450	0.7812099	0.1823744	45.44295875	0.181681	45.27018149	44.85132	12.44696105
375	0.5276345	0.1299784	32.38723784	0.129313	32.22143746	29.90088	10.16290114
300	0.326307	0.0825423	20.56739506	0.0831517	20.7192417	19.93392	8.297974033
225	0.174718	0.0464382	11.57119205	0.0468822	11.6818253	9.96696	5.867553709
150	0.071517	0.0197838	4.929608581	0.0198669	4.950314941	4.98348	4.148987017
75	0.0161926	0.0029095	0.724971753	0.0041837	1.042469264	1.868805	2.540725285
0	0.006315	-0.0003601	-0.089727557	-0.0013296	-0.33130175	0	0

P_corr RU1 (Pa)	P_corr error	u (m/s)	U∞ (m/s)	U∞ error	P_corr RD1 (Pa)	P_corr error	u (m/s)	U∞ (m/s)	U∞ error
0.217569732	#DIV/0!	0.866911879	0	#DIV/0!					
1.290828754	#DIV/0!	2.111592114	1.9425	#DIV/0!					
5.122374028	-0.027870891	4.206407658	3.885	0.06362686					
11.43216982	0.034099628	6.284056042	5.8275	0.088601311					
19.95384411	-0.28127937	8.302119942	7.77	-0.05938528					
30.98647262	0.043409498	10.34574539	9.7125	0.081810594					
44.0746686	0.017316133	12.33872383	11.655	0.06362686					
58.27509571	0.025528752	14.18787043	13.5975	0.053923252					
75.16227412	-0.00548578	16.11297272	15.54	0.03291798					
91.42491275	-0.0191998	17.77084149	17.4825	0.006826305	91.20377137	-0.016734528	17.74933615	18.09	-0.027685523
					74.57608773	0.002355948	16.05001765	16.08	-0.000687187
					56.91087106	0.048341202	14.02081737	14.07	0.021047999
					42.92618461	0.042922603	12.17690339	12.06	0.031088797
					30.58591721	-0.022910269	10.27865928	10.05	0.011109145
					19.41380181	0.026092118	8.189002654	8.04	0.031088797
					10.91059072	-0.094675881	6.139031311	6.03	-0.027685523
					4.632966031	0.070335181	4.00041709	4.02	0.031088797
					0.658743301	0.647505598	1.508460081	2.01	0.208887316
					-0.111310487	#DIV/0!	#NUM!	0	#DIV/0!

P_corr RU2 (Pa)	P_corr error	u (m/s)	U∞ (m/s)	U∞ error	Hysteresis	Repeatability
-0.061112789	#DIV/0!	#NUM!	0	#DIV/0!	#NUM!	0
0.562160529	#DIV/0!	1.393496527	2.025	#DIV/0!	0.603132	0.0825
4.827340221	0.031331475	4.083472827	4.05	0.023858117	0.2059906	0.165
11.0214252	0.068803309	6.170133984	6.075	0.049893259	0.1450247	0.2475
19.82068798	-0.272729128	8.274372693	8.1	-0.104378472	0.1131173	0.33
31.01497896	0.042529472	10.35050314	10.125	0.042814133	0.0670861	0.4125
43.86259365	0.022044532	12.30900279	12.15	0.023858117	0.1618204	0.495
58.245835	0.026018047	14.18430802	14.175	0.013742387	0.1670531	0.5775
75.60799554	-0.011448433	16.16067804	16.2	-0.008155002	0.0629551	0.66
91.82193502	-0.023625782	17.80938557	18.225	-0.035354818	0.0215053	0.7425

Speed (RPM)	Tunnel Speed	Model P (in)	Model P (Pa)	P corrected (Pa)	u (m/s)	Z Position (in)	Z position (m)		Figures					U∞ (m/s)	u/U∞	z/H	Re
120	3.108	0.0129399	3.224286643	3.522122875	3.488011976	0	0		Density	1.158	kg/m^3			3.108	0.891052	0	174268.6
120	3.108	0.0129953	3.238090882	3.535129229	3.494446237	-0.02475	0.00062865		H	0.61	m			3.108	0.889411	0.001031	174590
120	3.108	0.0133554	3.32781844	3.619670534	3.53598356	-0.02725	0.00069215		Mu	0.00001825	kg/(m-s)			3.108	0.878963	0.001135	176665.3
120	3.108	0.0131338	3.272601481	3.567645116	3.510480295	-0.02975	0.00075565		x (entrance to probe)	0.7874	m			3.108	0.885349	0.001239	175391.1
120	3.108	0.0128014	3.189776044	3.489606988	3.471874155	-0.03275	0.00083185							3.108	0.895194	0.001364	173462.3
120	3.108	0.0133554	3.32781844	3.619670534	3.53598356	-0.03625	0.00092075							3.108	0.878963	0.001509	176665.3
120	3.108	0.0133554	3.32781844	3.619670534	3.53598356	-0.03975	0.00100965							3.108	0.878963	0.001655	176665.3
120	3.108	0.0131615	3.279503601	3.574148293	3.513678326	-0.04375	0.00111125							3.108	0.884543	0.001822	175550.9
120	3.108	0.0129676	3.231188762	3.528626052	3.491230589	-0.048	0.0012192							3.108	0.890231	0.001999	174429.4
120	3.108	0.0130784	3.258797242	3.554638761	3.504075476	-0.053	0.0013462							3.108	0.886967	0.002207	175071.1
120	3.108	0.0132169	3.293307841	3.587154647	3.520065673	-0.05825	0.00147955							3.108	0.882938	0.002425	175870
120	3.108	0.0132723	3.30711208	3.600161002	3.52644145	-0.064	0.0016256							3.108	0.881342	0.002665	176188.6
120	3.108	0.0129399	3.224286643	3.522122875	3.488011976	-0.0705	0.0017907							3.108	0.891052	0.002936	174268.6
120	3.108	0.0135493	3.376133278	3.665192775	3.55814897	-0.0775	0.0019685							3.108	0.873488	0.003227	177772.8
120	3.108	0.0129953	3.238090882	3.535129229	3.494446237	-0.08525	0.00216535							3.108	0.889411	0.00355	174590
120	3.108	0.0128014	3.189776044	3.489606988	3.471874155	-0.09375	0.00238125							3.108	0.895194	0.003904	173462.3
120	3.108	0.0132723	3.30711208	3.600161002	3.52644145	-0.103	0.0026162							3.108	0.881342	0.004289	176188.6
120	3.108	0.0132446	3.30020996	3.593657825	3.523255003	-0.1135	0.0028829							3.108	0.882139	0.004726	176029.4
120	3.108	0.0127737	3.182873924	3.483103811	3.468637581	-0.12475	0.00316865							3.108	0.896029	0.005195	173300.6
120	3.108	0.0133	3.3140142	3.606664179	3.529625019	-0.13725	0.00348615							3.108	0.880547	0.005715	176347.6
120	3.108	0.013577	3.383035398	3.671695952	3.561304195	-0.151	0.0038354							3.108	0.872714	0.006288	177930.4
120	3.108	0.0121916	3.037829738	3.34644318	3.399910178	-0.166	0.0042164							3.108	0.914142	0.006912	169866.8
120	3.108	0.0137155	3.417545997	3.704211838	3.577038575	-0.1825	0.0046355							3.108	0.868875	0.007599	178716.5
120	3.108	0.0140479	3.500371435	3.782249966	3.614521645	-0.20075	0.00509905							3.108	0.859865	0.008359	180589.3
120	3.108	0.0129676	3.231188762	3.528626052	3.491230589	-0.221	0.0056134							3.108	0.890231	0.009202	174429.4
120	3.108	0.0133554	3.32781844	3.619670534	3.53598356	-0.243	0.0061722							3.108	0.878963	0.010118	176665.3
120	3.108	0.0136047	3.389937518	3.678199129	3.564456628	-0.26725	0.00678815							3.108	0.871942	0.011128	178087.9
120	3.108	0.0134662	3.355426919	3.645683243	3.548666461	-0.294	0.0074676							3.108	0.875822	0.012242	177299
120	3.108	0.0131061	3.265699361	3.561141938	3.507279348	-0.3235	0.0082169							3.108	0.886157	0.01347	175231.2
120	3.108	0.013577	3.383035398	3.671695952	3.561304195	-0.35575	0.00903605							3.108	0.872714	0.014813	177930.4
120	3.108	0.0126903	3.162092812	3.463523848	3.45887452	-0.3915	0.0099441							3.108	0.898558	0.016302	172812.8
120	3.108	0.0140756	3.507273554	3.788753143	3.617627703	-0.4305	0.0109347							3.108	0.859127	0.017926	180744.5
120	3.108	0.0132446	3.30020996	3.593657825	3.523255003	-0.4735	0.0120269							3.108	0.882139	0.019716	176029.4
120	3.108	0.0132446	3.30020996	3.593657825	3.523255003	-0.521	0.0132334							3.108	0.882139	0.021694	176029.4
120	3.108	0.0131338	3.272601481	3.567645116	3.510480295	-0.573	0.0145542							3.108	0.885349	0.023859	175391.1
120	3.108	0.0128568	3.203580283	3.502613343	3.478338268	-0.6305	0.0160147							3.108	0.89353	0.026254	173785.3
120	3.108	0.0130784	3.258797242	3.554638761	3.504075476	-0.6935	0.0176149							3.108	0.886967	0.028877	175071.1
120	3.108	0.012746	3.175971804	3.476600634	3.465397984	-0.76275	0.01937385							3.108	0.896867	0.03176	173138.7
120	3.108	0.0085062	2.119523879	2.481215399	2.927574461	-0.839	0.0213106							3.108	1.06163	0.034935	146267.9
120	3.108	0.0121642	3.031002371	3.340010434	3.396640845	-0.923	0.0234442							3.108	0.915022	0.038433	169703.5
120	3.108	0.0128291	3.196678163	3.496110166	3.475107715	-1.01525	0.02578735							3.108	0.894361	0.042274	173623.8
120	3.108	0.0127183	3.169069684	3.470097456	3.462155356	-1.11675	0.02836545							3.108	0.897707	0.046501	172976.7
120	3.108	0.0121919	3.037904491	3.346513611	3.399945957	-1.2285	0.0312039							3.108	0.914132	0.051154	169868.6
120	3.108	0.0118032	2.941050557	3.255257835	3.353269142	-1.35125	0.03432175							3.108	0.926857	0.056265	167536.5
120	3.108	0.0119697	2.982538028	3.29434733	3.373342274	-1.4865	0.0377571							3.108	0.921341	0.061897	168539.4
120	3.108	0.0122473	3.05170873	3.359519966	3.40654656	-1.635	0.041529							3.108	0.912361	0.06808	170198.4
120	3.108	0.0124136	3.093146366	3.398562506	3.426283911	-1.7985	0.0456819							3.108	0.907105	0.074888	171184.5
120	3.108	0.0115816	2.885833598	3.203232416	3.326365299	-1.9785	0.0502539							3.108	0.934353	0.082383	166192.4
120	3.108	0.011914	2.968659036	3.281270544	3.36664044	-2.17625	0.05527675							3.108	0.923176	0.090618	168204.6
120	3.108	0.0116647	2.906539958	3.222741948	3.336479663	-2.394	0.0608076							3.108	0.931521	0.099685	166697.7
120	3.108	0.0118309	2.947952677	3.261761012	3.35661696	-2.63325	0.06688455							3.108	0.925932	0.109647	167703.8
120	3.108	0.0124413	3.100048486	3.405065684	3.429560455	-2.8965	0.0735711							3.108	0.906239	0.120608	171348.2
120	3.108	0.0116093	2.892735718	3.209735594	3.329740167	-3.18625	0.08093075							3.108	0.933406	0.132673	166361
120	3.108	0.0123859	3.086244247	3.392059329	3.42300423	-3.505	0.089027							3.108	0.907974	0.145946	171020.6
120	3.108	0.0118587	2.954879714	3.268287666	3.35997351	-3.8555	0.0979297							3.108	0.925007	0.16054	167871.5
120	3.108	0.0114985	2.865127239	3.183722885	3.316220087	-4.241	0.1077214							3.108	0.937212	0.176592	165685.5
120	3.108	0.0119418	2.975586073	3.287797198	3.369987007	-4.665	0.118491							3.108	0.922259	0.194248	168371.8
120	3.108	0.0122196	3.04480661	3.353016788	3.403247859	-5.1315	0.1303401							3.108	0.913245	0.213672	170033.6
120	3.108	0.0118586	2.954854796	3.268264189	3.359961443	-5.64475	0.14337665							3.108	0.925011	0.235044	167870.9
120	3.108	0.0122197	3.044831528	3.353040265	3.403259773	-6.20925	0.15771495							3.108	0.913242	0.258549	170034.2
120	3.108	0.0117756	2.934173354	3.248778135	3.349930082	-6.83	0.173482							3.108	0.927781	0.284397	167369.7
120	3.108	0.01136	2.83061664	3.151206998	3.299242075	-7.513	0.1908302							3.108	0.942035	0.312836	164837.2
120	3.108	0.0121364	3.024075334	3.333483779	3.393320565	-8.2645	0.2099183							3.108	0.915917	0.344128	169537.6
120	3.108	0.0116647	2.906539958	3.222741948	3.336479663	-9.091	0.2309114							3.108	0.931521	0.378543	166697.7
120	3.108	0.0118309	2.947952677	3.261761012	3.35661696	-10	0.254							3.108	0.925932	0.416393	167703.8
120	3.108	0.0127737	3.182873924	3.483103811	3.468637581	0	0							3.108	0.896029	0	173300.6

Speed (RPM)	Tunnel Speed	Model P (in)	Model P (Pa)	P corrected (Pa)	u (m/s)	Z Position (in)	Z position (m)	U∞ (m/s)	u/U∞	z/H	Re
360	9.324	0.1275401	31.77967688	30.42701155	10.25192371	0	0	9.324	0.909488	0	512208.1
360	9.324	0.129313	32.22143746	30.84323838	10.32180621	-0.02475	0.00062865	9.324	0.90333	0.001031	515699.6
360	9.324	0.129396	32.2421189	30.86272443	10.32506624	-0.02725	0.00069215	9.324	0.903045	0.001135	515862.5
360	9.324	0.1289251	32.12478287	30.75217042	10.30655683	-0.02975	0.00075565	9.324	0.904667	0.001239	514937.7
360	9.324	0.1282879	31.96600919	30.60257386	10.28145771	-0.03275	0.00083185	9.324	0.906875	0.001364	513683.7
360	9.324	0.1299231	32.37345852	30.98647262	10.34574539	-0.03625	0.00092075	9.324	0.90124	0.001509	516895.7
360	9.324	0.1289251	32.12478287	30.75217042	10.30655683	-0.03975	0.00100965	9.324	0.904667	0.001655	514937.7
360	9.324	0.1289251	32.12478287	30.75217042	10.30655683	-0.04375	0.00111125	9.324	0.904667	0.001822	514937.7
360	9.324	0.1294237	32.24902102	30.86922761	10.326154	-0.048	0.0012192	9.324	0.90295	0.001999	515916.8
360	9.324	0.1295068	32.26972738	30.88873714	10.32941657	-0.053	0.0013462	9.324	0.902665	0.002207	516079.8
360	9.324	0.1287589	32.08337015	30.71315135	10.30001616	-0.05825	0.00147955	9.324	0.905241	0.002425	514610.9
360	9.324	0.1292852	32.21451042	30.83671172	10.32071407	-0.064	0.0016256	9.324	0.903426	0.002665	515645
360	9.324	0.1294514	32.25592314	30.87573079	10.32724164	-0.0705	0.0017907	9.324	0.902855	0.002936	515971.2
360	9.324	0.1285373	32.02815319	30.66112594	10.29128879	-0.0775	0.0019685	9.324	0.906009	0.003227	514174.9
360	9.324	0.1294514	32.25592314	30.87573079	10.32724164	-0.08525	0.00216535	9.324	0.902855	0.00355	515971.2
360	9.324	0.1293406	32.22831466	30.84971808	10.32289038	-0.09375	0.00238125	9.324	0.903235	0.003904	515753.8
360	9.324	0.1293683	32.23521678	30.85622125	10.32397837	-0.103	0.0026162	9.324	0.90314	0.004289	515808.1
360	9.324	0.1293406	32.22831466	30.84971808	10.32289038	-0.1135	0.0028829	9.324	0.903235	0.004726	515753.8
360	9.324	0.1291744	32.18690195	30.81069901	10.31636007	-0.12475	0.00316865	9.324	0.903807	0.005195	515427.5
360	9.324	0.1298675	32.35960445	30.97341931	10.34356605	-0.13725	0.00348615	9.324	0.90143	0.005715	516786.8
360	9.324	0.1292298	32.20070619	30.82370537	10.3185373	-0.151	0.0038354	9.324	0.903616	0.006288	515536.3
360	9.324	0.1296179	32.29741061	30.91482028	10.33377685	-0.166	0.0042164	9.324	0.902284	0.006912	516297.7
360	9.324	0.1286204	32.04885955	30.68063547	10.29456242	-0.1825	0.0046355	9.324	0.905721	0.007599	514338.5
360	9.324	0.1291467	32.17999983	30.80419584	10.31527128	-0.20075	0.00509905	9.324	0.903903	0.008359	515373.1
360	9.324	0.1294515	32.25594806	30.87575426	10.32724556	-0.221	0.0056134	9.324	0.902854	0.009202	515971.4
360	9.324	0.1294237	32.24902102	30.86922761	10.326154	-0.243	0.0061722	9.324	0.90295	0.010118	515916.8
360	9.324	0.1280387	31.90391503	30.54406874	10.27162511	-0.26725	0.00678815	9.324	0.907743	0.011128	513192.5
360	9.324	0.1288143	32.09717439	30.72615771	10.30219684	-0.294	0.0074676	9.324	0.90505	0.012242	514719.9
360	9.324	0.128565	32.03505531	30.66762911	10.29238012	-0.3235	0.0082169	9.324	0.905913	0.01347	514229.4
360	9.324	0.1267366	31.57946557	30.23837246	10.22009475	-0.35575	0.00903605	9.324	0.91232	0.014813	510617.9
360	9.324	0.1270969	31.66924296	30.32296072	10.23437952	-0.3915	0.0099441	9.324	0.911047	0.016302	511331.6
360	9.324	0.1262097	31.44817579	30.11467123	10.19916879	-0.4305	0.0109347	9.324	0.914192	0.017926	509572.4
360	9.324	0.1249907	31.14443268	29.82848447	10.15059056	-0.4735	0.0120269	9.324	0.918567	0.019716	507145.3
360	9.324	0.122746	30.5851118	29.30149234	10.06052364	-0.521	0.0132334	9.324	0.926791	0.021694	502645.4
360	9.324	0.1234395	30.75791397	29.46430655	10.08843565	-0.573	0.0145542	9.324	0.924227	0.023859	504039.9
360	9.324	0.1226352	30.55750332	29.27547963	10.05605698	-0.6305	0.0160147	9.324	0.927202	0.026254	502422.2
360	9.324	0.1221089	30.42636305	29.15191926	10.0348132	-0.6935	0.0176149	9.324	0.929165	0.028877	501360.8
360	9.324	0.1203361	29.98462738	28.73571592	9.96292192	-0.76275	0.01937385	9.324	0.93587	0.03176	497769
360	9.324	0.1206408	30.0605507	28.80725087	9.975315106	-0.839	0.0213106	9.324	0.934707	0.034935	498388.2
360	9.324	0.1214441	30.26071217	28.99584301	10.00791449	-0.923	0.0234442	9.324	0.931663	0.038433	500016.9
360	9.324	0.1201699	29.94321466	28.69669686	9.956155499	-1.01525	0.02578735	9.324	0.936506	0.042274	497430.9
360	9.324	0.1208901	30.12266978	28.86577946	9.985443544	-1.11675	0.02836545	9.324	0.933759	0.046501	498894.2
360	9.324	0.121084	30.17098462	28.91130171	9.993314122	-1.2285	0.0312039	9.324	0.933024	0.051154	499287.4
360	9.324	0.1209455	30.13647402	28.87878582	9.987692914	-1.35125	0.03432175	9.324	0.933549	0.056265	499006.6
360	9.324	0.1209455	30.13647402	28.87878582	9.987692914	-1.4865	0.0377571	9.324	0.933549	0.061897	499006.6
360	9.324	0.1215826	30.29522277	29.0283589	10.01352434	-1.635	0.041529	9.324	0.931141	0.06808	500297.2
360	9.324	0.1212502	30.21239733	28.95032077	10.0000554	-1.7985	0.0456819	9.324	0.932395	0.074888	499624.2
360	9.324	0.1205854	30.04674646	28.79424451	9.973062945	-1.9785	0.0502539	9.324	0.934918	0.082383	498275.6
360	9.324	0.1214718	30.26761429	29.00234619	10.00903671	-2.17625	0.05527675	9.324	0.931558	0.090618	500073
360	9.324	0.1214718	30.26761429	29.00234619	10.00903671	-2.394	0.0608076	9.324	0.931558	0.099685	500073
360	9.324	0.1204192	30.00533374	28.75522545	9.966303408	-2.63325	0.06688455	9.324	0.935552	0.109647	497937.9
360	9.324	0.1212225	30.20549522	28.94381759	9.99893217	-2.8965	0.0735711	9.324	0.9325	0.120608	499568.1
360	9.324	0.1215272	30.28141853	29.01535254	10.01128078	-3.18625	0.08093075	9.324	0.931349	0.132673	500185.1
360	9.324	0.1208347	30.10886554	28.85277311	9.983193668	-3.505	0.089027	9.324	0.93397	0.145946	498781.8
360	9.324	0.1213333	30.23310369	28.9698303	10.00342434	-3.8555	0.0979297	9.324	0.932081	0.16054	499792.6
360	9.324	0.1206408	30.0605507	28.80725087	9.975315106	-4.241	0.1077214	9.324	0.934707	0.176592	498388.2
360	9.324	0.1213887	30.24690793	28.98283666	10.00566966	-4.665	0.118491	9.324	0.931872	0.194248	499904.7
360	9.324	0.1211394	30.18478886	28.92430806	9.99556172	-5.1315	0.1303401	9.324	0.932814	0.213672	499399.7
360	9.324	0.1205023	30.0260401	28.77473498	9.96968375	-5.64475	0.14337665	9.324	0.935235	0.235044	498106.8
360	9.324	0.1211671	30.19169098	28.93081124	9.996685329	-6.20925	0.15771495	9.324	0.932709	0.258549	499455.9
360	9.324	0.1208624	30.11576766	28.85927629	9.98431867	-6.83	0.173482	9.324	0.933864	0.284397	498838
360	9.324	0.1205854	30.04674646	28.79424451	9.973062945	-7.513	0.1908302	9.324	0.934918	0.312836	498275.6
360	9.324	0.1209732	30.14337614	28.885289	9.988817408	-8.2645	0.2099183	9.324	0.933444	0.344128	499062.8
360	9.324	0.1199206	29.88109558	28.63816826	9.945997235	-9.091	0.2309114	9.324	0.937463	0.378543	496923.4
360	9.324	0.1193657	29.74282893	28.50789342	9.923349311	-10	0.254	9.324	0.939602	0.416393	495791.8
360	9.324	0.1187562	29.59095738	28.36480004	9.898413202	0	0	9.324	0.941969	0	494546

Figures		
Density	1.158	kg/m^3
H	0.61	m
Mu	0.00001825	kg/(m-s)
x (entrance to probe)	0.7874	m

Speed (RPM)	Tunnel Spee	Model P (in)	Model P (Pa)	P corrected (	u (m/s)	Z Position (in)	Z position (m)		**Figures**				U∞ (m/s)	u/U∞	z/H	Re
540	13.986	0.2610926	65.05748751	61.78136473	14.60846098	0	0		Density	1.158	kg/m^3		13.986	0.95739	0	729870.1
540	13.986	0.2640847	65.80304104	62.48382527	14.6912761	-0.02475	0.000629		H	0.61	m		13.986	0.951994	0.001031	734007.7
540	13.986	0.2630875	65.55456473	62.24971088	14.66372763	-0.02725	0.000692		Mu	0.00001825	kg/(m-s)		13.986	0.953782	0.001135	732631.3
540	13.986	0.2625058	65.40962021	62.11314416	14.64763377	-0.02975	0.000756		x (entrance to probe)	0.7874	m		13.986	0.95483	0.001239	731827.2
540	13.986	0.2627551	65.47173929	62.17167276	14.6545333	-0.03275	0.000832						13.986	0.95438	0.001364	732172
540	13.986	0.2620626	65.29918629	62.00909332	14.6353599	-0.03625	0.000921						13.986	0.955631	0.001509	731214
540	13.986	0.2625612	65.42342445	62.12615052	14.64916728	-0.03975	0.00101						13.986	0.95473	0.001655	731903.9
540	13.986	0.261813	65.23699246	61.9504943	14.628443	-0.04375	0.001111						13.986	0.956083	0.001822	730868.4
540	13.986	0.26378	65.72711772	62.41229032	14.68286399	-0.048	0.001219						13.986	0.952539	0.001999	733587.4
540	13.986	0.2627551	65.47173929	62.17167276	14.6545333	-0.053	0.001346						13.986	0.95438	0.002207	732172
540	13.986	0.2626166	65.43722869	62.13915687	14.65070063	-0.05825	0.00148						13.986	0.95463	0.002425	731980.5
540	13.986	0.2621734	65.32679477	62.03510603	14.63842933	-0.064	0.001626						13.986	0.95543	0.002665	731367.4
540	13.986	0.2625612	65.42342445	62.12615052	14.64916728	-0.0705	0.001791						13.986	0.95473	0.002936	731903.9
540	13.986	0.2626997	65.45793505	62.1586664	14.65300035	-0.0775	0.001969						13.986	0.95448	0.003227	732095.4
540	13.986	0.2620903	65.30608841	62.0155965	14.63612732	-0.08525	0.002165						13.986	0.955581	0.00355	731252.4
540	13.986	0.2628936	65.50624989	62.20418864	14.65836497	-0.09375	0.002381						13.986	0.954131	0.003904	732363.4
540	13.986	0.2625889	65.43032657	62.13265369	14.64993397	-0.103	0.002616						13.986	0.95468	0.004289	731942.2
540	13.986	0.2617301	65.21633594	61.93103172	14.62614496	-0.1135	0.002883						13.986	0.956233	0.004726	730753.6
540	13.986	0.2619241	65.26467569	61.97657744	14.6315222	-0.12475	0.003169						13.986	0.955881	0.005195	731022.3
540	13.986	0.2615359	65.16794635	61.88543905	14.6207602	-0.13725	0.003486						13.986	0.956585	0.005715	730484.6
540	13.986	0.2613695	65.12648379	61.84637303	14.6161447	-0.151	0.003835						13.986	0.956887	0.006288	730254
540	13.986	0.2620626	65.29918629	62.00909332	14.6353599	-0.166	0.004216						13.986	0.955631	0.006912	731214
540	13.986	0.2615361	65.16799618	61.885486	14.62076575	-0.1825	0.004636						13.986	0.956585	0.007599	730484.9
540	13.986	0.2603719	64.87790781	61.61216474	14.58844324	-0.20075	0.005099						13.986	0.958704	0.008359	728870
540	13.986	0.2598733	64.75366965	61.49510755	14.57457833	-0.221	0.005613						13.986	0.959616	0.009202	728177.2
540	13.986	0.2597625	64.72606118	61.46909484	14.57149545	-0.243	0.006172						13.986	0.959819	0.010118	728023.2
540	13.986	0.2597902	64.73296329	61.47559802	14.57226623	-0.26725	0.006788						13.986	0.959768	0.011128	728061.7
540	13.986	0.2581279	64.31876135	61.08533695	14.52593856	-0.294	0.007468						13.986	0.962829	0.012242	725747.1
540	13.986	0.2580167	64.29105321	61.05923033	14.52283418	-0.3235	0.008217						13.986	0.963035	0.01347	725592
540	13.986	0.2569638	64.0286979	60.81203916	14.49340737	-0.35575	0.009036						13.986	0.96499	0.014813	724121.8
540	13.986	0.2568807	64.00799154	60.79252963	14.49108232	-0.3915	0.009944						13.986	0.965145	0.016302	724005.6
540	13.986	0.2562159	63.84234067	60.63645338	14.47246846	-0.4305	0.010935						13.986	0.966387	0.017926	723075.6
540	13.986	0.2557173	63.71810251	60.51939619	14.45849234	-0.4735	0.012027						13.986	0.967321	0.019716	722377.3
540	13.986	0.2556342	63.69739615	60.49988665	14.45616167	-0.521	0.013233						13.986	0.967477	0.021694	722260.9
540	13.986	0.2548031	63.49030764	60.30476786	14.43283149	-0.573	0.014554						13.986	0.969041	0.023859	721095.3
540	13.986	0.2562713	63.85614491	60.64945973	14.47402053	-0.6305	0.016015						13.986	0.966283	0.026254	723153.2
540	13.986	0.2558558	63.75261311	60.55191207	14.46237595	-0.6935	0.017615						13.986	0.967061	0.028877	722571.4
540	13.986	0.2553572	63.62837495	60.43485488	14.44839006	-0.76275	0.019374						13.986	0.967997	0.03176	721872.6
540	13.986	0.2572962	64.11152334	60.89007729	14.50270385	-0.839	0.021311						13.986	0.964372	0.034935	724586.2
540	13.986	0.2567422	63.97348094	60.76001374	14.4872064	-0.923	0.023444						13.986	0.965404	0.038433	723811.9
540	13.986	0.2556896	63.71120039	60.51289301	14.45771549	-1.01525	0.025787						13.986	0.967373	0.042274	722338.5
540	13.986	0.256299	63.86304703	60.65596291	14.4747965	-1.11675	0.028365						13.986	0.966231	0.046501	723191.9
540	13.986	0.2580445	64.29798024	61.06575698	14.52361034	-1.2285	0.031204						13.986	0.962984	0.051154	725630.8
540	13.986	0.2573239	64.11842546	60.89658047	14.50347829	-1.35125	0.034322						13.986	0.96432	0.056265	724624.9
540	13.986	0.2574624	64.15293606	60.92909635	14.50734986	-1.4865	0.037757						13.986	0.964063	0.061897	724818.4
540	13.986	0.2572408	64.0977191	60.87707094	14.50115485	-1.635	0.041529						13.986	0.964475	0.06808	724508.8
540	13.986	0.2580723	64.30490728	61.07228364	14.52438645	-1.7985	0.045682						13.986	0.962932	0.074888	725669.5
540	13.986	0.2574347	64.14603394	60.92259318	14.50657562	-1.9785	0.050254						13.986	0.964115	0.082383	724779.7
540	13.986	0.2566591	63.95277458	60.74050421	14.48488036	-2.17625	0.055277						13.986	0.965559	0.090618	723695.7
540	13.986	0.2577671	64.22885938	61.0006313	14.51586367	-2.394	0.060808						13.986	0.963498	0.099685	725243.7
540	13.986	0.25713	64.07011062	60.85105823	14.49805636	-2.63325	0.066885						13.986	0.964681	0.109647	724354
540	13.986	0.2568807	64.00799154	60.79252963	14.49108232	-2.8965	0.073571						13.986	0.965145	0.120608	724005.6
540	13.986	0.2572685	64.10462122	60.88357411	14.50192937	-3.18625	0.080931						13.986	0.964423	0.132673	724547.5
540	13.986	0.2574901	64.15983818	60.93559953	14.50812405	-3.505	0.089027						13.986	0.964012	0.145946	724857
540	13.986	0.2573793	64.1322297	60.90958682	14.50502704	-3.8555	0.09793						13.986	0.964217	0.16054	724702.3
540	13.986	0.2574904	64.15991293	60.93566996	14.50813243	-4.241	0.107721						13.986	0.964011	0.176592	724857.5
540	13.986	0.2573516	64.12532758	60.90308364	14.50425268	-4.665	0.118491						13.986	0.964269	0.194248	724663.6
540	13.986	0.2564652	63.90445974	60.69498197	14.47945146	-5.1315	0.13034						13.986	0.965921	0.213672	723424.5
540	13.986	0.2565206	63.91826398	60.70798833	14.48100278	-5.64475	0.143377						13.986	0.965817	0.235044	723502
540	13.986	0.2561882	63.83543855	60.6299502	14.47169236	-6.20925	0.157715						13.986	0.966438	0.258549	723036.8
540	13.986	0.2534728	63.15883147	59.99245101	14.39540934	-6.83	0.173482						13.986	0.97156	0.284397	719225.6
540	13.986	0.2566037	63.93897034	60.72749786	14.48332945	-7.513	0.19083						13.986	0.965662	0.312836	723618.2
540	13.986	0.2548309	63.49723468	60.31129451	14.43361248	-8.2645	0.209918						13.986	0.968988	0.344128	721134.3
540	13.986	0.2560497	63.80092795	60.59743431	14.46781125	-9.091	0.230911						13.986	0.966698	0.378543	722842.9
540	13.986	0.2553849	63.63527707	60.44135806	14.44916741	-10	0.254						13.986	0.967945	0.416393	721911.4
540	13.986	0.2609813	65.02975445	61.75523464	14.60537136	0	0						13.986	0.957593	0	729715.7

Speed (RPM)	Tunnel Speed	Model P (in)	Model P (Pa)	P corrected (Pa)	u (m/s)	Z Position (in)	Z position (m)		**Figures**				U∞ (m/s)	u/U∞	z/H	Re
720	18.648	0.445822	111.087251	105.1506079	19.05818814	0	0		Density	1.158	kg/m^3		18.648	0.978477	0	952188
720	18.648	0.4454618	110.9974986	105.0660431	19.05052306	-0.02475	0.00062865		H	0.61	m		18.648	0.978871	0.001031	951805.1
720	18.648	0.4457389	111.0665447	105.1310984	19.05642004	-0.02725	0.00069215		Mu	0.00001825	kg/(m-s)		18.648	0.978568	0.001135	952099.7
720	18.648	0.4454617	110.9974736	105.0660197	19.05052093	-0.02975	0.00075565		x (entrance to probe)	0.7874	m		18.648	0.978871	0.001239	951804.9
720	18.648	0.4468746	111.3495316	105.3977287	19.08056989	-0.03275	0.00083185						18.648	0.977329	0.001364	953306.3
720	18.648	0.4463483	111.2183913	105.2741683	19.0693823	-0.03625	0.00092075						18.648	0.977903	0.001509	952747.3
720	18.648	0.4457112	111.0596425	105.1245952	19.05583064	-0.03975	0.00100965						18.648	0.978598	0.001655	952070.2
720	18.648	0.4456557	111.0458134	105.1115654	19.05464965	-0.04375	0.00111125						18.648	0.978659	0.001822	952011.2
720	18.648	0.4465976	111.2805104	105.3326969	19.0746825	-0.048	0.0012192						18.648	0.977631	0.001999	953012.1
720	18.648	0.4452121	110.9352798	105.0074206	19.04520762	-0.053	0.0013462						18.648	0.979144	0.002207	951539.5
720	18.648	0.4455727	111.0251319	105.0920793	19.05288335	-0.05825	0.00147955						18.648	0.978749	0.002425	951923
720	18.648	0.4462098	111.1838807	105.2416524	19.0664371	-0.064	0.0016256						18.648	0.978054	0.002665	952600.2
720	18.648	0.4460159	111.1355659	105.1961302	19.06231307	-0.0705	0.0017907						18.648	0.978265	0.002936	952394.1
720	18.648	0.4451013	110.9076713	104.9814079	19.0428485	-0.0775	0.0019685						18.648	0.979265	0.003227	951421.6
720	18.648	0.4439928	110.6314619	104.7211634	19.01923065	-0.08525	0.00216535						18.648	0.980481	0.00355	950241.6
720	18.648	0.4463483	111.2183913	105.2741683	19.0693823	-0.09375	0.00238125						18.648	0.977903	0.003904	952747.3
720	18.648	0.4456558	111.0458383	105.1115889	19.05465177	-0.103	0.0026162						18.648	0.978659	0.004289	952011.3
720	18.648	0.4457943	111.0803489	105.1441047	19.05759879	-0.1135	0.0028829						18.648	0.978507	0.004726	952158.6
720	18.648	0.4460436	111.142468	105.2026333	19.06290227	-0.12475	0.00316865						18.648	0.978235	0.005195	952423.5
720	18.648	0.4459051	111.1079574	105.1701175	19.05995607	-0.13725	0.00348615						18.648	0.978386	0.005715	952276.3
720	18.648	0.4459882	111.1286637	105.189627	19.06172385	-0.151	0.0038354						18.648	0.978296	0.006288	952364.7
720	18.648	0.4454062	110.9836445	105.0529898	19.04933961	-0.166	0.0042164						18.648	0.978932	0.006912	951745.9
720	18.648	0.4465699	111.2736083	105.3261937	19.07409366	-0.1825	0.0046355						18.648	0.977661	0.007599	952982.7
720	18.648	0.44693	111.3633358	105.410735	19.08174715	-0.20075	0.00509905						18.648	0.977269	0.008359	953365.1
720	18.648	0.4461544	111.1700765	105.228646	19.0652589	-0.221	0.0056134						18.648	0.978114	0.009202	952541.3
720	18.648	0.4469023	111.3564337	105.4042318	19.08115853	-0.243	0.0061722						18.648	0.977299	0.010118	953335.7
720	18.648	0.4466253	111.2874125	105.3392001	19.07527132	-0.26725	0.00678815						18.648	0.977601	0.011128	953041.5
720	18.648	0.4471793	111.4254549	105.4692636	19.08704392	-0.294	0.0074676						18.648	0.976998	0.012242	953629.7
720	18.648	0.4467361	111.315021	105.3652128	19.07762642	-0.3235	0.0082169						18.648	0.97748	0.01347	953159.2
720	18.648	0.4472347	111.4392591	105.48227	19.08822078	-0.35575	0.00903605						18.648	0.976938	0.014813	953688.5
720	18.648	0.4473455	111.4668676	105.5082827	19.09057428	-0.3915	0.0099441						18.648	0.976817	0.016302	953806.1
720	18.648	0.4475948	111.5289867	105.5668113	19.09586861	-0.4305	0.0109347						18.648	0.976546	0.017926	954070.6
720	18.648	0.4472901	111.4530634	105.4952763	19.08939757	-0.4735	0.0120269						18.648	0.976877	0.019716	953747.3
720	18.648	0.4487868	111.8260021	105.8466592	19.12116255	-0.521	0.0132334						18.648	0.975255	0.021694	955334.4
720	18.648	0.4471516	111.4185528	105.4627604	19.08645546	-0.573	0.0145542						18.648	0.977028	0.023859	953600.3
720	18.648	0.4476782	111.5497678	105.5863912	19.09763942	-0.6305	0.0160147						18.648	0.976456	0.026254	954159.1
720	18.648	0.4495071	112.0054821	106.0157653	19.13643093	-0.6935	0.0176149						18.648	0.974476	0.028877	956097.2
720	18.648	0.4481488	111.6670291	105.6968748	19.10762851	-0.76275	0.01937385						18.648	0.975945	0.03176	954658.2
720	18.648	0.4479272	111.6118121	105.6448494	19.10292542	-0.839	0.0213106						18.648	0.976186	0.034935	954423.2
720	18.648	0.4489808	111.8743419	105.8922049	19.12527602	-0.923	0.0234442						18.648	0.975045	0.038433	955539.9
720	18.648	0.44887	111.8467334	105.8661922	19.12292678	-1.01525	0.02578735						18.648	0.975165	0.042274	955422.5
720	18.648	0.448565	111.7707353	105.7945868	19.11645854	-1.11675	0.02836545						18.648	0.975494	0.046501	955099.3
720	18.648	0.449701	112.053797	106.0612875	19.140539	-1.2285	0.0312039						18.648	0.974267	0.051154	956302.4
720	18.648	0.448371	111.7223956	105.7490411	19.11234318	-1.35125	0.03432175						18.648	0.975705	0.056265	954893.7
720	18.648	0.4504766	112.2470563	106.2433765	19.15696246	-1.4865	0.0377571						18.648	0.973432	0.061897	957123
720	18.648	0.4503104	112.2056436	106.2043574	19.15344433	-1.635	0.041529						18.648	0.973611	0.06808	956947.2
720	18.648	0.4487867	111.8259772	105.8466357	19.12116043	-1.7985	0.0456819						18.648	0.975255	0.074888	955334.2
720	18.648	0.4495071	112.0054821	106.0157653	19.13643093	-1.9785	0.0502539						18.648	0.974476	0.082383	956097.2
720	18.648	0.4492578	111.9433631	105.9572367	19.13114784	-2.17625	0.05527675						18.648	0.974745	0.090618	955833.2
720	18.648	0.4489254	111.8605376	105.8791985	19.12410144	-2.394	0.0608076						18.648	0.975105	0.099685	955481.2
720	18.648	0.4478718	111.5980079	105.631843	19.10174946	-2.63325	0.06688455						18.648	0.976246	0.109647	954364.4
720	18.648	0.4493132	111.9571673	105.970243	19.13232198	-2.8965	0.0735711						18.648	0.974686	0.120608	955891.9
720	18.648	0.4482598	111.6946874	105.7229345	19.10998387	-3.18625	0.08093075						18.648	0.975825	0.132673	954775.8
720	18.648	0.4482321	111.6877853	105.7164313	19.10939612	-3.505	0.089027						18.648	0.975855	0.145946	954746.5
720	18.648	0.4483707	111.7223208	105.7489707	19.11233681	-3.8555	0.0979297						18.648	0.975705	0.16054	954893.4
720	18.648	0.4473178	111.4599655	105.5017795	19.08998594	-4.241	0.1077214						18.648	0.976847	0.176592	953776.7
720	18.648	0.4470131	111.3840422	105.4302445	19.0835129	-4.665	0.118491						18.648	0.977179	0.194248	953453.3
720	18.648	0.4461544	111.1700765	105.228646	19.0652589	-5.1315	0.1303401						18.648	0.978114	0.213672	952541.3
720	18.648	0.4460159	111.1355659	105.1961302	19.06231307	-5.64475	0.14337665						18.648	0.978265	0.235044	952394.1
720	18.648	0.4452398	110.9421819	105.0139238	19.04579735	-6.20925	0.15771495						18.648	0.979114	0.258549	951568.9
720	18.648	0.4435496	110.521028	104.6171126	19.00977956	-6.83	0.173482						18.648	0.980969	0.284397	949769.4
720	18.648	0.4433557	110.4727132	104.5715904	19.00564323	-7.513	0.1908302						18.648	0.981182	0.312836	949562.8
720	18.648	0.4426632	110.3001602	104.4090109	18.99086326	-8.2645	0.2099183						18.648	0.981946	0.344128	948824.3
720	18.648	0.4420815	110.1552157	104.2724442	18.9784392	-9.091	0.2309114						18.648	0.982589	0.378543	948203.6
720	18.648	0.4423862	110.231139	104.3439792	18.98494806	-10	0.254						18.648	0.982252	0.416393	948528.8
720	18.648	0.4423031	110.2104326	104.3244696	18.98317314	0	0						18.648	0.982344	0	948440.1

Figures		
Density	1.158	kg/m^3
H	0.61	m
Mu	0.00001825	kg/(m-s)
x (entrance to probe)	0.7874	m

Speed (RPM)	Tunnel Speed	Model P (in)	Model P (Pa)	P corrected (Pa)	u (m/s)	Z Position (in)	Z position (m)	U∞ (m/s)	u/U∞	z/H	Re
120	3.108	0.0129953	3.238090882	3.535129229	3.494446237	0	0	3.108	0.889411	0	174590
120	3.108	0.0130784	3.258797242	3.554638761	3.504075476	-0.02475	0.00062865	3.108	0.886967	0.001031	175071.1
120	3.108	0.0126629	3.155265445	3.457091102	3.455660972	-0.02725	0.00069215	3.108	0.899394	0.001135	172652.2
120	3.108	0.0132723	3.30711208	3.600161002	3.52644145	-0.02975	0.00075565	3.108	0.881342	0.001239	176188.6
120	3.108	0.0130784	3.258797242	3.554638761	3.504075476	-0.03275	0.00083185	3.108	0.886967	0.001364	175071.1
120	3.108	0.0129399	3.224286643	3.522122875	3.488011976	-0.03625	0.00092075	3.108	0.891052	0.001509	174268.6
120	3.108	0.0127183	3.169069684	3.470097456	3.462155356	-0.03975	0.00100965	3.108	0.897707	0.001655	172976.7
120	3.108	0.0123305	3.072440007	3.379052975	3.416435423	-0.04375	0.00111125	3.108	0.90972	0.001822	170692.5
120	3.108	0.0123582	3.079342127	3.385556152	3.419721404	-0.048	0.0012192	3.108	0.908846	0.001999	170856.6
120	3.108	0.0130507	3.251895122	3.548135584	3.500868673	-0.053	0.0013462	3.108	0.88778	0.002207	174910.9
120	3.108	0.0131338	3.272601481	3.567645116	3.510480295	-0.05825	0.00147955	3.108	0.885349	0.002425	175391.1
120	3.108	0.0128014	3.189776044	3.489606988	3.471874155	-0.064	0.0016256	3.108	0.895194	0.002665	173462.3
120	3.108	0.0125244	3.120754846	3.424575216	3.439371361	-0.0705	0.0017907	3.108	0.903654	0.002936	171838.4
120	3.108	0.0129953	3.238090882	3.535129229	3.494446237	-0.0775	0.0019685	3.108	0.889411	0.003227	174590
120	3.108	0.0128291	3.196678163	3.496110166	3.475107715	-0.08525	0.00216535	3.108	0.894361	0.00355	173623.8
120	3.108	0.012746	3.175971804	3.476600634	3.465397984	-0.09375	0.00238125	3.108	0.896867	0.003904	173138.7
120	3.108	0.0128014	3.189776044	3.489606988	3.471874155	-0.103	0.0026162	3.108	0.895194	0.004289	173462.3
120	3.108	0.0131061	3.265699361	3.561141938	3.507279348	-0.1135	0.0028829	3.108	0.886157	0.004726	175231.2
120	3.108	0.0134939	3.362329039	3.65218642	3.55183011	-0.12475	0.00316865	3.108	0.875042	0.005195	177457.1
120	3.108	0.0128845	3.210482403	3.50911652	3.481565824	-0.13725	0.00348615	3.108	0.892702	0.005715	173946.5
120	3.108	0.0132446	3.30020996	3.593657825	3.523255003	-0.151	0.0038354	3.108	0.882139	0.006288	176029.4
120	3.108	0.0137155	3.417545997	3.704211838	3.577038575	-0.166	0.0042164	3.108	0.868875	0.006912	178716.5
120	3.108	0.0128291	3.196678163	3.496110166	3.475107715	-0.1825	0.0046355	3.108	0.894361	0.007599	173623.8
120	3.108	0.0134108	3.341622679	3.632676888	3.542330687	-0.20075	0.00509905	3.108	0.877388	0.008359	176982.4
120	3.108	0.0128291	3.196678163	3.496110166	3.475107715	-0.221	0.0056134	3.108	0.894361	0.009202	173623.8
120	3.108	0.0133277	3.32091632	3.613167357	3.53280572	-0.243	0.0061722	3.108	0.879754	0.010118	176506.6
120	3.108	0.0134385	3.348524799	3.639180066	3.545499989	-0.26725	0.00678815	3.108	0.876604	0.011128	177140.8
120	3.108	0.0134662	3.355426919	3.645683243	3.548666461	-0.294	0.0074676	3.108	0.875822	0.012242	177299
120	3.108	0.0129676	3.231188762	3.528626052	3.491230589	-0.3235	0.0082169	3.108	0.890231	0.01347	174429.4
120	3.108	0.0136047	3.389937518	3.678199129	3.564456628	-0.35575	0.00903605	3.108	0.871942	0.014813	178087.9
120	3.108	0.0136047	3.389937518	3.678199129	3.564456628	-0.3915	0.0099441	3.108	0.871942	0.016302	178087.9
120	3.108	0.0130784	3.258797242	3.554638761	3.504075476	-0.4305	0.0109347	3.108	0.886967	0.017926	175071.1
120	3.108	0.0136324	3.396839638	3.684702307	3.567606275	-0.4735	0.0120269	3.108	0.871172	0.019716	178245.3
120	3.108	0.0131892	3.286405721	3.58065147	3.51687345	-0.521	0.0132334	3.108	0.88374	0.021694	175710.6
120	3.108	0.0128014	3.189776044	3.489606988	3.471874155	-0.573	0.0145542	3.108	0.895194	0.023859	173462.3
120	3.108	0.0128845	3.210482403	3.50911652	3.481565824	-0.6305	0.0160147	3.108	0.892702	0.026254	173946.5
120	3.108	0.013023	3.244993002	3.541632406	3.497658929	-0.6935	0.0176149	3.108	0.888594	0.028877	174750.6
120	3.108	0.0126629	3.155265445	3.457091102	3.455660972	-0.76275	0.01937385	3.108	0.899394	0.03176	172652.2
120	3.108	0.0121086	3.017148296	3.326957125	3.389997032	-0.839	0.0213106	3.108	0.916815	0.034935	169371.5
120	3.108	0.0118586	2.954854796	3.268264189	3.359961443	-0.923	0.0234442	3.108	0.925011	0.038433	167870.9
120	3.108	0.0128014	3.189776044	3.489606988	3.471874155	-1.01525	0.02578735	3.108	0.895194	0.042274	173462.3
120	3.108	0.0129122	3.217384523	3.515619697	3.484790391	-1.11675	0.02836545	3.108	0.891876	0.046501	174107.6
120	3.108	0.0119141	2.968683953	3.281294021	3.366652484	-1.2285	0.0312039	3.108	0.923172	0.051154	168205.2
120	3.108	0.0126075	3.141461205	3.444084747	3.449154359	-1.35125	0.03432175	3.108	0.90109	0.056265	172327.2
120	3.108	0.0116924	2.913442078	3.229245126	3.339844311	-1.4865	0.0377571	3.108	0.930582	0.061897	166865.8
120	3.108	0.0118587	2.954879714	3.268287666	3.35997351	-1.635	0.041529	3.108	0.925007	0.06808	167871.5
120	3.108	0.0123305	3.072440007	3.379052975	3.416435423	-1.7985	0.0456819	3.108	0.90972	0.074888	170692.5
120	3.108	0.0118863	2.961756916	3.274767366	3.363302599	-1.9785	0.0502539	3.108	0.924092	0.082383	168037.8
120	3.108	0.0119974	2.989440148	3.300850507	3.376670191	-2.17625	0.05527675	3.108	0.920433	0.090618	168705.7
120	3.108	0.0118863	2.961756916	3.274767366	3.363302599	-2.394	0.0608076	3.108	0.924092	0.099685	168037.8
120	3.108	0.0125244	3.120754846	3.424575216	3.439371361	-2.63325	0.06688455	3.108	0.903654	0.109647	171838.4
120	3.108	0.0121364	3.024075334	3.333483779	3.393320565	-2.8965	0.0735711	3.108	0.915917	0.120608	169537.6
120	3.108	0.0118586	2.954854796	3.268264189	3.359961443	-3.18625	0.08093075	3.108	0.925011	0.132673	167870.9
120	3.108	0.0125244	3.120754846	3.424575216	3.439371361	-3.505	0.089027	3.108	0.903654	0.145946	171838.4
120	3.108	0.0119142	2.968708871	3.281317498	3.366664528	-3.8555	0.0979297	3.108	0.923169	0.16054	168205.8
120	3.108	0.0118586	2.954854796	3.268264189	3.359961443	-4.241	0.1077214	3.108	0.925011	0.176592	167870.9
120	3.108	0.0121085	3.017123379	3.326933648	3.389985071	-4.665	0.118491	3.108	0.916818	0.194248	169370.9
120	3.108	0.0124413	3.100048486	3.405065684	3.429560455	-5.1315	0.1303401	3.108	0.906239	0.213672	171348.2
120	3.108	0.0117201	2.920344197	3.235748303	3.343205572	-5.64475	0.14337665	3.108	0.929647	0.235044	167033.7
120	3.108	0.0120531	3.003319139	3.313927293	3.383352158	-6.20925	0.15771495	3.108	0.918616	0.258549	169039.5
120	3.108	0.0121364	3.024075334	3.333483779	3.393320565	-6.83	0.173482	3.108	0.915917	0.284397	169537.6
120	3.108	0.0119418	2.975586073	3.287797198	3.369987007	-7.513	0.1908302	3.108	0.922259	0.312836	168371.8
120	3.108	0.0120808	3.010221259	3.32043047	3.386670238	-8.2645	0.2099183	3.108	0.917716	0.344128	169205.3
120	3.108	0.0121363	3.024050416	3.333460302	3.393308615	-9.091	0.2309114	3.108	0.91592	0.378543	169537
120	3.108	0.0122196	3.04480661	3.353016788	3.403247859	-10	0.254	3.108	0.913245	0.416393	170033.6
120	3.108	0.0137432	3.424448117	3.710715016	3.580177153	0	0	3.108	0.868113	0	178873.3

Figures		
Density	1.158	kg/m^3
H	0.61	m
Mu	0.00001825	kg/(m-s)
x (entrance to probe)	0.7874	m

Speed (RPM)	Tunnel Speed	Model P (in)	Model P (Pa)	P corrected (Pa)	u (m/s)	Z Position (in)	Z position (m)	U∞ (m/s)	u/U∞	z/H	Re
360	9.324	0.1294792	32.26285018	30.88225744	10.32833309	0	0	9.324	0.902759	0	516025.7
360	9.324	0.1287312	32.07646803	30.70664818	10.29892564	-0.02475	0.00062865	9.324	0.905337	0.001031	514556.4
360	9.324	0.1285927	32.04195743	30.67413229	10.29347133	-0.02725	0.00069215	9.324	0.905817	0.001135	514283.9
360	9.324	0.1287035	32.06956591	30.700145	10.29783501	-0.02975	0.00075565	9.324	0.905433	0.001239	514502
360	9.324	0.1298674	32.35957953	30.97339583	10.34356213	-0.03275	0.00083185	9.324	0.90143	0.001364	516786.6
360	9.324	0.1292023	32.1938539	30.81724914	10.3174566	-0.03625	0.00092075	9.324	0.903711	0.001509	515482.3
360	9.324	0.129119	32.17309771	30.79769266	10.31418237	-0.03975	0.00100965	9.324	0.903998	0.001655	515318.7
360	9.324	0.1295622	32.28353162	30.9017435	10.33159106	-0.04375	0.00111125	9.324	0.902475	0.001822	516188.5
360	9.324	0.1265146	31.52414894	30.18625313	10.21128319	-0.048	0.0012192	9.324	0.913108	0.001999	510177.6
360	9.324	0.129812	32.34577529	30.96038948	10.34139016	-0.053	0.0013462	9.324	0.90162	0.002207	516678.1
360	9.324	0.1295346	32.27665442	30.89526379	10.3305078	-0.05825	0.00147955	9.324	0.902569	0.002425	516134.4
360	9.324	0.1288974	32.11788075	30.74566724	10.30546701	-0.064	0.0016256	9.324	0.904762	0.002665	514883.3
360	9.324	0.1287589	32.08337015	30.71315135	10.30001616	-0.0705	0.0017907	9.324	0.905241	0.002936	514610.9
360	9.324	0.1294239	32.24907086	30.86927456	10.32616185	-0.0775	0.0019685	9.324	0.902949	0.003227	515917.2
360	9.324	0.1292575	32.20760831	30.83020854	10.31962574	-0.08525	0.00216535	9.324	0.903521	0.00355	515590.7
360	9.324	0.1285927	32.04195743	30.67413229	10.29347133	-0.09375	0.00238125	9.324	0.905817	0.003904	514283.9
360	9.324	0.1294237	32.24902102	30.86922761	10.326154	-0.103	0.0026162	9.324	0.90295	0.004289	515916.8
360	9.324	0.1296732	32.31118994	30.92780316	10.33594649	-0.1135	0.0028829	9.324	0.902094	0.004726	516406.1
360	9.324	0.1287035	32.06956591	30.700145	10.29783501	-0.12475	0.00316865	9.324	0.905433	0.005195	514502
360	9.324	0.1289528	32.13168499	30.75867359	10.30764654	-0.13725	0.00348615	9.324	0.904571	0.005715	514992.2
360	9.324	0.1296179	32.29741061	30.91482028	10.33377685	-0.151	0.0038354	9.324	0.902284	0.006288	516297.7
360	9.324	0.1288697	32.11097863	30.73916406	10.30437707	-0.166	0.0042164	9.324	0.904858	0.006912	514828.8
360	9.324	0.1278725	31.86250232	30.50504968	10.26506218	-0.1825	0.0046355	9.324	0.908324	0.007599	512864.6
360	9.324	0.128288	31.96603411	30.60259734	10.28146165	-0.20075	0.00509905	9.324	0.906875	0.008359	513683.9
360	9.324	0.1287035	32.06956591	30.700145	10.29783501	-0.221	0.0056134	9.324	0.905433	0.009202	514502
360	9.324	0.1283157	31.97293623	30.60910052	10.28255402	-0.243	0.0061722	9.324	0.906779	0.010118	513738.5
360	9.324	0.1279833	31.89011079	30.53106239	10.26943793	-0.26725	0.00678815	9.324	0.907937	0.011128	513083.2
360	9.324	0.1279279	31.87630655	30.51805604	10.26725029	-0.294	0.0074676	9.324	0.90813	0.012242	512973.9
360	9.324	0.1267645	31.58641752	30.24492259	10.22120161	-0.3235	0.0082169	9.324	0.912222	0.01347	510673.2
360	9.324	0.1263483	31.4827113	30.14721059	10.20467748	-0.35575	0.00903605	9.324	0.913699	0.014813	509847.6
360	9.324	0.1261541	31.43432171	30.10161792	10.19695812	-0.3915	0.0099441	9.324	0.91439	0.016302	509461.9
360	9.324	0.1256555	31.31008356	29.98456073	10.17711217	-0.4305	0.0109347	9.324	0.916173	0.017926	508470.4
360	9.324	0.1240766	30.91666273	29.61387962	10.11400978	-0.4735	0.0120269	9.324	0.92189	0.019716	505317.7
360	9.324	0.1241874	30.94427121	29.63989233	10.11845086	-0.521	0.0132334	9.324	0.921485	0.021694	505539.5
360	9.324	0.1223305	30.48158001	29.20394468	10.04376342	-0.573	0.0145542	9.324	0.928337	0.023859	501808
360	9.324	0.1224413	30.50918849	29.22995739	10.04823555	-0.6305	0.0160147	9.324	0.927924	0.026254	502031.4
360	9.324	0.121915	30.37804821	29.10639702	10.02697519	-0.6935	0.0176149	9.324	0.929892	0.028877	500969.2
360	9.324	0.1182576	29.46671922	28.24774285	9.877967467	-0.76275	0.01937385	9.324	0.943919	0.03176	493524.5
360	9.324	0.1201145	29.92941042	28.6836905	9.953899003	-0.839	0.0213106	9.324	0.936718	0.034935	497318.2
360	9.324	0.1203361	29.98462738	28.73571592	9.96292192	-0.923	0.0234442	9.324	0.93587	0.038433	497769
360	9.324	0.1213333	30.23310369	28.9698303	10.00342434	-1.01525	0.02578735	9.324	0.932081	0.042274	499792.6
360	9.324	0.1207516	30.08815918	28.83326358	9.979817903	-1.11675	0.02836545	9.324	0.934286	0.046501	498613.1
360	9.324	0.1210563	30.1640825	28.90479853	9.992190133	-1.2285	0.0312039	9.324	0.933129	0.051154	499231.3
360	9.324	0.1209455	30.13647402	28.87878582	9.987692914	-1.35125	0.03432175	9.324	0.933549	0.056265	499006.6
360	9.324	0.1209178	30.1295719	28.87228264	9.986568292	-1.4865	0.0377571	9.324	0.933654	0.061897	498950.4
360	9.324	0.1201699	29.94321466	28.69669686	9.956155499	-1.635	0.041529	9.324	0.936506	0.06808	497430.9
360	9.324	0.1203638	29.9915295	28.7422191	9.964049211	-1.7985	0.0456819	9.324	0.935764	0.074888	497825.3
360	9.324	0.1208624	30.11576766	28.85927629	9.98431867	-1.9785	0.0502539	9.324	0.933864	0.082383	498838
360	9.324	0.1203915	29.99843162	28.74872227	9.965176373	-2.17625	0.05527675	9.324	0.935658	0.090618	497881.6
360	9.324	0.1210286	30.15718038	28.89829535	9.991066018	-2.394	0.0608076	9.324	0.933234	0.099685	499175.1
360	9.324	0.1218596	30.36424397	29.09339067	10.02473464	-2.63325	0.06688455	9.324	0.930099	0.109647	500857.3
360	9.324	0.1211671	30.19169098	28.93081124	9.996685329	-2.8965	0.0735711	9.324	0.932709	0.120608	499455.9
360	9.324	0.1206131	30.05364858	28.80074769	9.974189089	-3.18625	0.08093075	9.324	0.934813	0.132673	498331.9
360	9.324	0.1211671	30.19169098	28.93081124	9.996685329	-3.505	0.089027	9.324	0.932709	0.145946	499455.9
360	9.324	0.1216934	30.32283125	29.05437161	10.01800997	-3.8555	0.0979297	9.324	0.930724	0.16054	500521.3
360	9.324	0.1213056	30.22620157	28.96332712	10.00230148	-4.241	0.1077214	9.324	0.932185	0.176592	499736.5
360	9.324	0.1206962	30.07435494	28.82025722	9.977566759	-4.665	0.118491	9.324	0.934496	0.194248	498500.7
360	9.324	0.1204469	30.01223586	28.76172863	9.967430316	-5.1315	0.1303401	9.324	0.935447	0.213672	497994.2
360	9.324	0.1214441	30.26071217	28.99584301	10.00791449	-5.64475	0.14337665	9.324	0.931663	0.235044	500016.9
360	9.324	0.1212502	30.21239733	28.95032077	10.0000554	-6.20925	0.15771495	9.324	0.932395	0.258549	499624.2
360	9.324	0.1205854	30.04674646	28.79424451	9.973062945	-6.83	0.173482	9.324	0.934918	0.284397	498275.6
360	9.324	0.1202253	29.9570189	28.70970321	9.958411483	-7.513	0.1908302	9.324	0.936294	0.312836	497543.6
360	9.324	0.1205023	30.0260401	28.77473498	9.96968375	-8.2645	0.2099183	9.324	0.935235	0.344128	498106.8
360	9.324	0.1200314	29.90870406	28.66418097	9.950513299	-9.091	0.2309114	9.324	0.937037	0.378543	497149
360	9.324	0.1197266	29.83275583	28.59262254	9.938085105	-10	0.254	9.324	0.938209	0.416393	496528.1
360	9.324	0.1182022	29.45291498	28.2347365	9.875693106	0	0	9.324	0.944136	0	493410.8

Speed (RPM)	Tunnel Speed	Model P (in)	Model P (Pa)	P corrected (Pa)	u (m/s)	Z Position (in)	Z position (m)		**Figures**				U∞ (m/s)	u/U∞	z/H	Re
540	13.986	0.2618964	65.25777357	61.97007426	14.63075454	0	0		Density	1.158	kg/m^3		13.986	0.955932	0	730983.9
540	13.986	0.2624781	65.40271809	62.10664098	14.64686695	-0.02475	0.00062865		H	0.61	m		13.986	0.95488	0.001031	731788.9
540	13.986	0.2600949	64.80888661	61.54713297	14.58074214	-0.02725	0.00069215		Mu	0.00001825	kg/(m-s)		13.986	0.95921	0.001135	728485.2
540	13.986	0.262672	65.45103293	62.15216322	14.65223382	-0.02975	0.00075565		x (entrance to probe)	0.7874	m		13.986	0.95453	0.001239	732057.1
540	13.986	0.2616193	65.18872746	61.90501901	14.62307295	-0.03275	0.00083185						13.986	0.956434	0.001364	730600.1
540	13.986	0.2624504	65.39581597	62.10013781	14.6461001	-0.03625	0.00092075						13.986	0.95493	0.001509	731750.6
540	13.986	0.2611476	65.07119208	61.79427718	14.6099875	-0.03975	0.00100965						13.986	0.95729	0.001655	729946.4
540	13.986	0.2622288	65.34059901	62.04811239	14.6399638	-0.04375	0.00111125						13.986	0.95533	0.001822	731444
540	13.986	0.262118	65.31299053	62.02209968	14.63689469	-0.048	0.0012192						13.986	0.955531	0.001999	731290.7
540	13.986	0.2615638	65.1748983	61.89198918	14.62153393	-0.053	0.0013462						13.986	0.956534	0.002207	730523.2
540	13.986	0.2608706	65.00217088	61.72924541	14.60229776	-0.05825	0.00147955						13.986	0.957794	0.002425	729562.2
540	13.986	0.2619241	65.26467569	61.97657744	14.6315222	-0.064	0.0016256						13.986	0.955881	0.002665	731022.3
540	13.986	0.2620903	65.30608841	62.0155965	14.63612732	-0.0705	0.0017907						13.986	0.955581	0.002936	731252.4
540	13.986	0.2608706	65.00217088	61.72924541	14.60229776	-0.0775	0.0019685						13.986	0.957794	0.003227	729562.2
540	13.986	0.2615915	65.18180042	61.89849236	14.62230208	-0.08525	0.00216535						13.986	0.956484	0.00355	730561.6
540	13.986	0.2607877	64.98151436	61.70978283	14.5999956	-0.09375	0.00238125						13.986	0.957945	0.003904	729447.1
540	13.986	0.2615083	65.16106914	61.87895935	14.61999475	-0.103	0.0026162						13.986	0.956635	0.004289	730446.3
540	13.986	0.2613419	65.11960659	61.83989333	14.615379	-0.1135	0.0028829						13.986	0.956937	0.004726	730215.7
540	13.986	0.2605935	64.93312477	61.66419016	14.59460119	-0.12475	0.00316865						13.986	0.9583	0.005195	729177.6
540	13.986	0.2604551	64.89863909	61.63169775	14.59075555	-0.13725	0.00348615						13.986	0.958552	0.005715	728985.5
540	13.986	0.2600395	64.79508237	61.53412661	14.57920143	-0.151	0.0038354						13.986	0.959312	0.006288	728408.2
540	13.986	0.2585991	64.43617214	61.19596139	14.53908572	-0.166	0.0042164						13.986	0.961959	0.006912	726404
540	13.986	0.2589038	64.51209546	61.26749634	14.54758096	-0.1825	0.0046355						13.986	0.961397	0.007599	726828.4
540	13.986	0.2589315	64.51899758	61.27399952	14.54835301	-0.20075	0.00509905						13.986	0.961346	0.008359	726867
540	13.986	0.258599	64.43614723	61.19593792	14.53908293	-0.221	0.0056134						13.986	0.961959	0.009202	726403.8
540	13.986	0.2581554	64.32561364	61.09179317	14.52670618	-0.243	0.0061722						13.986	0.962778	0.010118	725785.4
540	13.986	0.25713	64.07011062	60.85105823	14.49805636	-0.26725	0.00678815						13.986	0.964681	0.011128	724354
540	13.986	0.2556896	63.71120039	60.51289301	14.45771549	-0.294	0.0074676						13.986	0.967373	0.012242	722338.5
540	13.986	0.255745	63.72500463	60.52589936	14.45926914	-0.3235	0.0082169						13.986	0.967269	0.01347	722416.1
540	13.986	0.2535557	63.17948799	60.01191359	14.39774421	-0.35575	0.00903605						13.986	0.971402	0.014813	719342.2
540	13.986	0.2539989	63.28992191	60.11596442	14.41022047	-0.3915	0.0099441						13.986	0.970561	0.016302	719965.6
540	13.986	0.2546643	63.45572229	60.27218154	14.42893149	-0.4305	0.0109347						13.986	0.969303	0.017926	720900.4
540	13.986	0.2538327	63.24850919	60.07694536	14.40554314	-0.4735	0.0120269						13.986	0.970876	0.019716	719731.9
540	13.986	0.254276	63.35896802	60.18101967	14.41801546	-0.521	0.0132334						13.986	0.970036	0.021694	720355
540	13.986	0.2534449	63.15187951	59.98590088	14.39462345	-0.573	0.0145542						13.986	0.971613	0.023859	719186.3
540	13.986	0.2533618	63.13117315	59.96639134	14.39228244	-0.6305	0.0160147						13.986	0.971771	0.026254	719069.3
540	13.986	0.2540543	63.30372615	60.12897078	14.41177924	-0.6935	0.0176149						13.986	0.970456	0.028877	720043.4
540	13.986	0.2535834	63.18639011	60.01841676	14.39852429	-0.76275	0.01937385						13.986	0.97135	0.03176	719381.2
540	13.986	0.2538881	63.26231343	60.08995171	14.40710242	-0.839	0.0213106						13.986	0.970771	0.034935	719809.8
540	13.986	0.2541933	63.33836133	60.16160405	14.4156895	-0.923	0.0234442						13.986	0.970193	0.038433	720238.8
540	13.986	0.2549417	63.52484316	60.33730722	14.43672481	-1.01525	0.02578735						13.986	0.968779	0.042274	721289.8
540	13.986	0.2542209	63.34523854	60.16808375	14.4164658	-1.11675	0.02836545						13.986	0.970141	0.046501	720277.6
540	13.986	0.2547198	63.46955145	60.28521137	14.43049106	-1.2285	0.0312039						13.986	0.969198	0.051154	720978.3
540	13.986	0.2551356	63.57315799	60.38282946	14.44216977	-1.35125	0.03432175						13.986	0.968414	0.056265	721561.8
540	13.986	0.2555788	63.68359191	60.4868803	14.45460768	-1.4865	0.0377571						13.986	0.967581	0.061897	722183.2
540	13.986	0.256299	63.86304703	60.65596291	14.4747965	-1.635	0.041529						13.986	0.966231	0.06808	723191.9
540	13.986	0.2560774	63.80783007	60.60393749	14.46858756	-1.7985	0.0456819						13.986	0.966646	0.074888	722881.7
540	13.986	0.2556619	63.70429827	60.50638983	14.4569386	-1.9785	0.0502539						13.986	0.967425	0.082383	722299.7
540	13.986	0.2556342	63.69739615	60.49988665	14.45616167	-2.17625	0.05527675						13.986	0.967477	0.090618	722260.9
540	13.986	0.256299	63.86304703	60.65596291	14.4747965	-2.394	0.0608076						13.986	0.966231	0.099685	723191.9
540	13.986	0.2556342	63.69739615	60.49988665	14.45616167	-2.63325	0.06688455						13.986	0.967477	0.109647	722260.9
540	13.986	0.2564929	63.91136186	60.70148515	14.48022714	-2.8965	0.0735711						13.986	0.965869	0.120608	723463.3
540	13.986	0.2552464	63.60076647	60.40884217	14.44528025	-3.18625	0.08093075						13.986	0.968206	0.132673	721717.2
540	13.986	0.2551079	63.56625587	60.37632629	14.44139204	-3.505	0.089027						13.986	0.968466	0.145946	721523
540	13.986	0.2557173	63.71810251	60.51939619	14.45849234	-3.8555	0.0979297						13.986	0.967321	0.16054	722377.3
540	13.986	0.256022	63.79402583	60.59093114	14.4670349	-4.241	0.1077214						13.986	0.96675	0.176592	722804.1
540	13.986	0.2555234	63.66978767	60.47387394	14.45305353	-4.665	0.118491						13.986	0.967685	0.194248	722105.6
540	13.986	0.2549694	63.53174528	60.3438104	14.43750279	-5.1315	0.1303401						13.986	0.968727	0.213672	721328.7
540	13.986	0.2558004	63.73880887	60.53890572	14.46082263	-5.64475	0.14337665						13.986	0.967165	0.235044	722493.8
540	13.986	0.2559112	63.76641735	60.56491843	14.4639291	-6.20925	0.15771495						13.986	0.966957	0.258549	722649
540	13.986	0.2541651	63.33133463	60.15498349	14.41489628	-6.83	0.173482						13.986	0.970246	0.284397	720199.2
540	13.986	0.2542484	63.35209082	60.17453997	14.41723925	-7.513	0.1908302						13.986	0.970089	0.312836	720316.2
540	13.986	0.2546921	63.46264933	60.27870819	14.4297127	-8.2645	0.2099183						13.986	0.96925	0.344128	720939.4
540	13.986	0.2552464	63.60076647	60.40884217	14.44528025	-9.091	0.2309114						13.986	0.968206	0.378543	721717.2
540	13.986	0.2551633	63.58006011	60.38933264	14.44294745	-10	0.254						13.986	0.968362	0.416393	721600.7
540	13.986	0.2613697	65.12653363	61.84641998	14.61615024	0	0						13.986	0.956887	0	730254.3

Speed (RPM)	Tunnel Speed	Model P (in)	Model P (Pa)	P corrected (Pa)	u (m/s)	Z Position (in)	Z position (m)	**Figures**			U∞ (m/s)	u/U∞	z/H	Re
720	18.648	0.4457389	111.0665447	105.1310984	19.05642004	0	0	Density	1.158	kg/m^3	18.648	0.978568	0	952099.7
720	18.648	0.4450458	110.8938422	104.9683781	19.04166671	-0.02475	0.00062865	H	0.61	m	18.648	0.979326	0.001031	951362.6
720	18.648	0.444159	110.6728747	104.7601825	19.0227736	-0.02725	0.00069215	Mu	0.00001825	kg/(m-s)	18.648	0.980299	0.001135	950418.6
720	18.648	0.4450458	110.8938422	104.9683781	19.04166671	-0.02975	0.00075565	x (entrance to probe)	0.7874	m	18.648	0.979326	0.001239	951362.6
720	18.648	0.4451013	110.9076713	104.9814079	19.0428485	-0.03275	0.00083185				18.648	0.979265	0.001364	951421.6
720	18.648	0.4457112	111.0596425	105.1245952	19.05583064	-0.03625	0.00092075				18.648	0.978598	0.001509	952070.2
720	18.648	0.4453788	110.9768171	105.0465571	19.04875638	-0.03975	0.00100965				18.648	0.978962	0.001655	951716.8
720	18.648	0.4450181	110.88694	104.9618749	19.04107685	-0.04375	0.00111125				18.648	0.979356	0.001822	951333.1
720	18.648	0.4443252	110.7142874	104.7992016	19.02631589	-0.048	0.0012192				18.648	0.980116	0.001999	950595.6
720	18.648	0.4436881	110.5555386	104.6496285	19.01273353	-0.053	0.0013462				18.648	0.980816	0.002207	949917
720	18.648	0.4439374	110.6176577	104.7081571	19.01804952	-0.05825	0.00147955				18.648	0.980542	0.002425	950182.6
720	18.648	0.4446022	110.7833086	104.8642333	19.03221824	-0.064	0.0016256				18.648	0.979812	0.002665	950890.5
720	18.648	0.4448515	110.8454277	104.9227619	19.03752879	-0.0705	0.0017907				18.648	0.979539	0.002936	951155.8
720	18.648	0.4444914	110.7557001	104.8382206	19.02985752	-0.0775	0.0019685				18.648	0.979934	0.003227	950772.6
720	18.648	0.4436327	110.5417344	104.6366221	19.011552	-0.08525	0.00216535				18.648	0.980877	0.00355	949858
720	18.648	0.4450456	110.8937923	104.9683311	19.04166245	-0.09375	0.00238125				18.648	0.979326	0.003904	951362.4
720	18.648	0.4442698	110.7004831	104.7861952	19.0251352	-0.103	0.0026162				18.648	0.980177	0.004289	950536.6
720	18.648	0.4440759	110.6521683	104.740673	19.02100221	-0.1135	0.0028829				18.648	0.98039	0.004726	950330.1
720	18.648	0.4429956	110.3829856	104.4870491	18.99795908	-0.12475	0.00316865				18.648	0.981579	0.005195	949178.8
720	18.648	0.4439374	110.6176577	104.7081571	19.01804952	-0.13725	0.00348615				18.648	0.980542	0.005715	950182.6
720	18.648	0.4433557	110.4727132	104.5715904	19.00564323	-0.151	0.0038354				18.648	0.981182	0.006288	949562.8
720	18.648	0.4408894	109.8581754	103.9925728	18.95295264	-0.166	0.0042164				18.648	0.98391	0.006912	946930.2
720	18.648	0.4424693	110.2518454	104.3634887	18.98672281	-0.1825	0.0046355				18.648	0.98216	0.007599	948617.5
720	18.648	0.4406955	109.8098605	103.9470506	18.94880391	-0.20075	0.00509905				18.648	0.984125	0.008359	946722.9
720	18.648	0.44028	109.7063287	103.8495029	18.9399107	-0.221	0.0056134				18.648	0.984588	0.009202	946278.6
720	18.648	0.4407232	109.8167626	103.9535538	18.94939664	-0.243	0.0061722				18.648	0.984095	0.010118	946752.6
720	18.648	0.4384793	109.2576411	103.4267494	18.90132083	-0.26725	0.00678815				18.648	0.986598	0.011128	944350.6
720	18.648	0.4404462	109.7477414	103.888522	18.94346848	-0.294	0.0074676				18.648	0.984403	0.012242	946456.4
720	18.648	0.4404462	109.7477414	103.888522	18.94346848	-0.3235	0.0082169				18.648	0.984403	0.01347	946456.4
720	18.648	0.4396983	109.5613842	103.7129362	18.92745319	-0.35575	0.00903605				18.648	0.985236	0.014813	945656.2
720	18.648	0.4424139	110.2380411	104.3504823	18.98553966	-0.3915	0.0099441				18.648	0.982221	0.016302	948558.3
720	18.648	0.4420538	110.1483136	104.265941	18.97784737	-0.4305	0.0109347				18.648	0.982619	0.017926	948174
720	18.648	0.4362071	108.6914679	102.8933011	18.85251376	-0.4735	0.0120269				18.648	0.989152	0.019716	941912.1
720	18.648	0.4409726	109.8789066	104.0121058	18.95473253	-0.521	0.0132334				18.648	0.983818	0.021694	947019.2
720	18.648	0.4415548	110.0239757	104.1487899	18.96718282	-0.573	0.0145542				18.648	0.983172	0.023859	947641.2
720	18.648	0.4411665	109.9272215	104.0576281	18.95887997	-0.6305	0.0160147				18.648	0.983602	0.026254	947226.4
720	18.648	0.4406678	109.8029584	103.9405474	18.94821116	-0.6935	0.0176149				18.648	0.984156	0.028877	946693.3
720	18.648	0.441749	110.0723653	104.1943826	18.97133394	-0.76275	0.01937385				18.648	0.982957	0.03176	947848.6
720	18.648	0.4421368	110.168995	104.2854271	18.97962066	-0.839	0.0213106				18.648	0.982528	0.034935	948262.6
720	18.648	0.4418597	110.0999489	104.2203718	18.97369981	-0.923	0.0234442				18.648	0.982834	0.038433	947966.8
720	18.648	0.4432726	110.4520068	104.5520808	19.00387024	-1.01525	0.02578735				18.648	0.981274	0.042274	949474.2
720	18.648	0.4426909	110.3070623	104.4155141	18.99145468	-1.11675	0.02836545				18.648	0.981915	0.046501	948853.9
720	18.648	0.4426632	110.3001602	104.4090109	18.99086326	-1.2285	0.0312039				18.648	0.981946	0.051154	948824.3
720	18.648	0.4429679	110.3760835	104.4805459	18.99736786	-1.35125	0.03432175				18.648	0.98161	0.056265	949149.3
720	18.648	0.4425247	110.2656496	104.3764951	18.98790589	-1.4865	0.0377571				18.648	0.982099	0.061897	948676.6
720	18.648	0.4428848	110.3553772	104.4610364	18.9955941	-1.635	0.041529				18.648	0.981701	0.06808	949060.7
720	18.648	0.4434111	110.4865174	104.5845967	19.00682513	-1.7985	0.0456819				18.648	0.981121	0.074888	949621.8
720	18.648	0.4434388	110.4934196	104.5910999	19.00741605	-1.9785	0.0502539				18.648	0.981091	0.082383	949651.3
720	18.648	0.4437712	110.576245	104.669138	19.01450569	-2.17625	0.05527675				18.648	0.980725	0.090618	950005.5
720	18.648	0.4430233	110.3898878	104.4935522	18.99855028	-2.394	0.0608076				18.648	0.981549	0.099685	949208.4
720	18.648	0.4438543	110.5969513	104.6886476	19.01627769	-2.63325	0.06688455				18.648	0.980634	0.109647	950094.1
720	18.648	0.4438543	110.5969513	104.6886476	19.01627769	-2.8965	0.0735711				18.648	0.980634	0.120608	950094.1
720	18.648	0.4431341	110.4174962	104.519565	19.00091489	-3.18625	0.08093075				18.648	0.981426	0.132673	949326.5
720	18.648	0.4429402	110.3691814	104.4740427	18.99677663	-3.505	0.089027				18.648	0.98164	0.145946	949119.8
720	18.648	0.4424139	110.2380411	104.3504823	18.98553966	-3.8555	0.0979297				18.648	0.982221	0.16054	948558.3
720	18.648	0.4414437	109.9962925	104.1227068	18.96480759	-4.241	0.1077214				18.648	0.983295	0.176592	947522.5
720	18.648	0.4423031	110.2104326	104.3244696	18.98317314	-4.665	0.118491				18.648	0.982344	0.194248	948440.1
720	18.648	0.4417213	110.0654632	104.1878794	18.9707419	-5.1315	0.1303401				18.648	0.982987	0.213672	947819
720	18.648	0.4413881	109.9824384	104.1096535	18.96361879	-5.64475	0.14337665				18.648	0.983357	0.235044	947463.1
720	18.648	0.4405016	109.7615457	103.9015283	18.94465426	-6.20925	0.15771495				18.648	0.984341	0.258549	946515.6
720	18.648	0.4401415	109.6718181	103.816987	18.93694537	-6.83	0.173482				18.648	0.984742	0.284397	946130.5
720	18.648	0.4380079	109.1401805	103.316078	18.89120548	-7.513	0.1908302				18.648	0.987126	0.312836	943845.2
720	18.648	0.4385072	109.2645931	103.4332996	18.90191934	-8.2645	0.2099183				18.648	0.986566	0.344128	944380.5
720	18.648	0.4373705	108.981357	103.1664345	18.87751946	-9.091	0.2309114				18.648	0.987842	0.378543	943161.4
720	18.648	0.4359301	108.6224467	102.8282693	18.84655513	-10	0.254				18.648	0.989465	0.416393	941614.4
720	18.648	0.4401692	109.6787202	103.8234902	18.93753847	0	0				18.648	0.984711	0	946160.1

Speed (RPM)	Tunnel Speed	Model P (in)	Model P (Pa)	P corrected (Pa)	u (m/s)	Z Position (in)	Z position (m)		Figures				U∞ (m/s)	u/U∞	z/H	Re
120	3.108	0.0123582	3.079342127	3.385556152	3.419721404	0	0		Density	1.158	kg/m^3		3.108	0.908846	0	170856.6
120	3.108	0.0122197	3.044831528	3.353040265	3.403259773	-0.02475	0.00062865		H	0.61	m		3.108	0.913242	0.001031	170034.2
120	3.108	0.0127183	3.169069684	3.470097456	3.462155356	-0.02725	0.00069215		Mu	0.00001825	kg/(m-s)		3.108	0.897707	0.001135	172976.7
120	3.108	0.0123305	3.072440007	3.379052975	3.416435423	-0.02975	0.00075565		x (entrance to probe)	0.7874	m		3.108	0.90972	0.001239	170692.5
120	3.108	0.0123305	3.072440007	3.379052975	3.416435423	-0.03275	0.00083185						3.108	0.90972	0.001364	170692.5
120	3.108	0.0128568	3.203580283	3.502613343	3.478338268	-0.03625	0.00092075						3.108	0.89353	0.001509	173785.3
120	3.108	0.012746	3.175971804	3.476600634	3.465397984	-0.03975	0.00100965						3.108	0.896867	0.001655	173138.7
120	3.108	0.012469	3.106950606	3.411568861	3.432833873	-0.04375	0.00111125						3.108	0.905374	0.001822	171511.8
120	3.108	0.0117203	2.920394032	3.235795257	3.343229829	-0.048	0.0012192						3.108	0.92964	0.001999	167034.9
120	3.108	0.0125798	3.134559085	3.43758157	3.445896446	-0.053	0.0013462						3.108	0.901942	0.002207	172164.4
120	3.108	0.012746	3.175971804	3.476600634	3.465397984	-0.05825	0.00147955						3.108	0.896867	0.002425	173138.7
120	3.108	0.012469	3.106950606	3.411568861	3.432833873	-0.064	0.0016256						3.108	0.905374	0.002665	171511.8
120	3.108	0.0129399	3.224286643	3.522122875	3.488011976	-0.0705	0.0017907						3.108	0.891052	0.002936	174268.6
120	3.108	0.0124136	3.093146366	3.398562506	3.426283911	-0.0775	0.0019685						3.108	0.907105	0.003227	171184.5
120	3.108	0.0124136	3.093146366	3.398562506	3.426283911	-0.08525	0.00216535						3.108	0.907105	0.00355	171184.5
120	3.108	0.0126906	3.162167564	3.463594279	3.458909688	-0.09375	0.00238125						3.108	0.898549	0.003904	172814.6
120	3.108	0.0130507	3.251895122	3.548135584	3.500868673	-0.103	0.0026162						3.108	0.88778	0.004289	174910.9
120	3.108	0.0117757	2.934198272	3.248801612	3.349942186	-0.1135	0.0028829						3.108	0.927777	0.004726	167370.3
120	3.108	0.0129676	3.231188762	3.528626052	3.491230589	-0.12475	0.00316865						3.108	0.890231	0.005195	174429.4
120	3.108	0.0128014	3.189776044	3.489606988	3.471874155	-0.13725	0.00348615						3.108	0.895194	0.005715	173462.3
120	3.108	0.012192	3.037929408	3.346537088	3.399957883	-0.151	0.0038354						3.108	0.914129	0.006288	169869.2
120	3.108	0.0123859	3.086244247	3.392059329	3.42300423	-0.166	0.0042164						3.108	0.907974	0.006912	171020.6
120	3.108	0.0128291	3.196678163	3.496110166	3.475107715	-0.1825	0.0046355						3.108	0.894361	0.007599	173623.8
120	3.108	0.0131338	3.272601481	3.567645116	3.510480295	-0.20075	0.00509905						3.108	0.885349	0.008359	175391.1
120	3.108	0.0127737	3.182873924	3.483103811	3.468637581	-0.221	0.0056134						3.108	0.896029	0.009202	173300.6
120	3.108	0.0131061	3.265699361	3.561141938	3.507279348	-0.243	0.0061722						3.108	0.886157	0.010118	175231.2
120	3.108	0.0129122	3.217384523	3.515619697	3.484790391	-0.26725	0.00678815						3.108	0.891876	0.011128	174107.6
120	3.108	0.013023	3.244993002	3.541632406	3.497658929	-0.294	0.0074676						3.108	0.888594	0.012242	174750.6
120	3.108	0.0132169	3.293307841	3.587154647	3.520065673	-0.3235	0.0082169						3.108	0.882938	0.01347	175870
120	3.108	0.0127737	3.182873924	3.483103811	3.468637581	-0.35575	0.00903605						3.108	0.896029	0.014813	173300.6
120	3.108	0.0126906	3.162167564	3.463594279	3.458909688	-0.3915	0.0099441						3.108	0.898549	0.016302	172814.6
120	3.108	0.0129953	3.238090882	3.535129229	3.494446237	-0.4305	0.0109347						3.108	0.889411	0.017926	174590
120	3.108	0.0128568	3.203580283	3.502613343	3.478338268	-0.4735	0.0120269						3.108	0.89353	0.019716	173785.3
120	3.108	0.0129676	3.231188762	3.528626052	3.491230589	-0.521	0.0132334						3.108	0.890231	0.021694	174429.4
120	3.108	0.0126629	3.155265445	3.457091102	3.455660972	-0.573	0.0145542						3.108	0.899394	0.023859	172652.2
120	3.108	0.0122472	3.051683813	3.359496488	3.406534657	-0.6305	0.0160147						3.108	0.912364	0.026254	170197.8
120	3.108	0.0126629	3.155265445	3.457091102	3.455660972	-0.6935	0.0176149						3.108	0.899394	0.028877	172652.2
120	3.108	0.0124967	3.113852726	3.418072038	3.436104171	-0.76275	0.01937385						3.108	0.904513	0.03176	171675.1
120	3.108	0.0118032	2.941050557	3.255257835	3.353269142	-0.839	0.0213106						3.108	0.926857	0.034935	167536.5
120	3.108	0.0121364	3.024075334	3.333483779	3.393320565	-0.923	0.0234442						3.108	0.915917	0.038433	169537.6
120	3.108	0.012053	3.003294222	3.313903816	3.383340173	-1.01525	0.02578735						3.108	0.918619	0.042274	169038.9
120	3.108	0.0107229	2.671867885	3.001633921	3.21999041	-1.11675	0.02836545						3.108	0.96522	0.046501	160877.6
120	3.108	0.0122748	3.058561015	3.365976189	3.409818288	-1.2285	0.0312039						3.108	0.911486	0.051154	170361.8
120	3.108	0.0123305	3.072440007	3.379052975	3.416435423	-1.35125	0.03432175						3.108	0.90972	0.056265	170692.5
120	3.108	0.0121362	3.024025499	3.333436825	3.393296666	-1.4865	0.0377571						3.108	0.915923	0.061897	169536.4
120	3.108	0.0113323	2.82371452	3.144703821	3.295835977	-1.635	0.041529						3.108	0.943008	0.06808	164667
120	3.108	0.011942	2.975635908	3.287844153	3.370011071	-1.7985	0.0456819						3.108	0.922252	0.074888	168373
120	3.108	0.0122196	3.04480661	3.353016788	3.403247859	-1.9785	0.0502539						3.108	0.913245	0.082383	170033.6
120	3.108	0.012053	3.003294222	3.313903816	3.383340173	-2.17625	0.05527675						3.108	0.918619	0.090618	169038.9
120	3.108	0.0116647	2.906539958	3.222741948	3.336479663	-2.394	0.0608076						3.108	0.931521	0.099685	166697.7
120	3.108	0.012469	3.106950606	3.411568861	3.432833873	-2.63325	0.06688455						3.108	0.905374	0.109647	171511.8
120	3.108	0.0124967	3.113852726	3.418072038	3.436104171	-2.8965	0.0735711						3.108	0.904513	0.120608	171675.1
120	3.108	0.0129399	3.224286643	3.522122875	3.488011976	-3.18625	0.08093075						3.108	0.891052	0.132673	174268.6
120	3.108	0.0118863	2.961756916	3.274767366	3.363302599	-3.505	0.089027						3.108	0.924092	0.145946	168037.8
120	3.108	0.011914	2.968659036	3.281270544	3.36664044	-3.8555	0.0979297						3.108	0.923176	0.16054	168204.6
120	3.108	0.0124413	3.100048486	3.405065684	3.429560455	-4.241	0.1077214						3.108	0.906239	0.176592	171348.2
120	3.108	0.0115539	2.878931479	3.196729239	3.322987003	-4.665	0.118491						3.108	0.935303	0.194248	166023.6
120	3.108	0.0119975	2.989465065	3.300873984	3.376682199	-5.1315	0.1303401						3.108	0.92043	0.213672	168706.3
120	3.108	0.0119141	2.968683953	3.281294021	3.366652484	-5.64475	0.14337665						3.108	0.923172	0.235044	168205.2
120	3.108	0.0114708	2.858225119	3.177219707	3.312831445	-6.20925	0.15771495						3.108	0.93817	0.258549	165516.2
120	3.108	0.0124136	3.093146366	3.398562506	3.426283911	-6.83	0.173482						3.108	0.907105	0.284397	171184.5
120	3.108	0.0114154	2.84442088	3.164213353	3.306043742	-7.513	0.1908302						3.108	0.940096	0.312836	165177
120	3.108	0.0118586	2.954854796	3.268264189	3.359961443	-8.2645	0.2099183						3.108	0.925011	0.344128	167870.9
120	3.108	0.0124413	3.100048486	3.405065684	3.429560455	-9.091	0.2309114						3.108	0.906239	0.378543	171348.2
120	3.108	0.0114708	2.858225119	3.177219707	3.312831445	-10	0.254						3.108	0.93817	0.416393	165516.2
120	3.108	0.0129399	3.224286643	3.522122875	3.488011976	0	0						3.108	0.891052	0	174268.6

Speed (RPM)	Tunnel Speed	Model P (in)	Model P (Pa)	P corrected (Pa)	u (m/s)	Z Position (in)	Z position (m)		Figures				U∞ (m/s)	u/U∞	z/H	Re
360	9.324	0.12524	31.20655176	29.88701307	10.16054428	0	0		Density	1.158	kg/m^3		9.324	0.917667	0	507642.6
360	9.324	0.1261541	31.43432171	30.10161792	10.19695812	-0.02475	0.00062865		H	0.61	m		9.324	0.91439	0.001031	509461.9
360	9.324	0.125794	31.34459416	30.01707661	10.18262881	-0.02725	0.00069215		Mu	0.00001825	kg/(m-s)		9.324	0.915677	0.001135	508746
360	9.324	0.1256556	31.31010847	29.9845842	10.17711616	-0.02975	0.00075565		x (entrance to probe)	0.7874	m		9.324	0.916173	0.001239	508470.6
360	9.324	0.1260987	31.42051747	30.08861156	10.19475492	-0.03275	0.00083185						9.324	0.914588	0.001364	509351.9
360	9.324	0.1264039	31.49656538	30.1602639	10.20688648	-0.03625	0.00092075						9.324	0.913501	0.001509	509958
360	9.324	0.1254339	31.2548666	29.93253531	10.16827932	-0.03975	0.00100965						9.324	0.916969	0.001655	508029.1
360	9.324	0.1254339	31.2548666	29.93253531	10.16827932	-0.04375	0.00111125						9.324	0.916969	0.001822	508029.1
360	9.324	0.1259602	31.38600687	30.05609568	10.18924484	-0.048	0.0012192						9.324	0.915083	0.001999	509076.6
360	9.324	0.12524	31.20655176	29.88701307	10.16054428	-0.053	0.0013462						9.324	0.917667	0.002207	507642.6
360	9.324	0.1266811	31.56563641	30.22534263	10.21789257	-0.05825	0.00147955						9.324	0.912517	0.002425	510507.9
360	9.324	0.1259879	31.39290899	30.06259885	10.1903471	-0.064	0.0016256						9.324	0.914984	0.002665	509131.6
360	9.324	0.1257109	31.3238878	29.99756708	10.17931919	-0.0705	0.0017907						9.324	0.915975	0.002936	508580.7
360	9.324	0.1266536	31.55878413	30.2188864	10.21680123	-0.0775	0.0019685						9.324	0.912614	0.003227	510453.3
360	9.324	0.1256832	31.31698568	29.9910639	10.17821574	-0.08525	0.00216535						9.324	0.916074	0.00355	508525.5
360	9.324	0.1258494	31.3583984	30.03008297	10.18483463	-0.09375	0.00238125						9.324	0.915479	0.003904	508856.2
360	9.324	0.1263759	31.48958851	30.15369029	10.20577409	-0.103	0.0026162						9.324	0.9136	0.004289	509902.4
360	9.324	0.1259325	31.37910476	30.0495925	10.18814247	-0.1135	0.0028829						9.324	0.915182	0.004726	509021.5
360	9.324	0.1258494	31.3583984	30.03008297	10.18483463	-0.12475	0.00316865						9.324	0.915479	0.005195	508856.2
360	9.324	0.1262927	31.46885723	30.13415728	10.202468	-0.13725	0.00348615						9.324	0.913897	0.005715	509737.2
360	9.324	0.1263204	31.47575935	30.14066046	10.20356883	-0.151	0.0038354						9.324	0.913798	0.006288	509792.2
360	9.324	0.1261542	31.43434663	30.1016414	10.19696209	-0.166	0.0042164						9.324	0.91439	0.006912	509462.1
360	9.324	0.1256832	31.31698568	29.9910639	10.17821574	-0.1825	0.0046355						9.324	0.916074	0.007599	508525.5
360	9.324	0.1259602	31.38600687	30.05609568	10.18924484	-0.20075	0.00509905						9.324	0.915083	0.008359	509076.6
360	9.324	0.1261818	31.44122383	30.1081211	10.19805954	-0.221	0.0056134						9.324	0.914292	0.009202	509517
360	9.324	0.1259879	31.39290899	30.06259885	10.1903471	-0.243	0.0061722						9.324	0.914984	0.010118	509131.6
360	9.324	0.1251569	31.1858454	29.86750354	10.15722745	-0.26725	0.00678815						9.324	0.917967	0.011128	507476.9
360	9.324	0.1254339	31.2548666	29.93253531	10.16827932	-0.294	0.0074676						9.324	0.916969	0.012242	508029.1
360	9.324	0.1252954	31.220356	29.90001942	10.16275489	-0.3235	0.0082169						9.324	0.917468	0.01347	507753.1
360	9.324	0.1239935	30.89595637	29.59437009	10.11067769	-0.35575	0.00903605						9.324	0.922193	0.014813	505151.2
360	9.324	0.1241874	30.94427121	29.63989233	10.11845086	-0.3915	0.0099441						9.324	0.921485	0.016302	505539.5
360	9.324	0.1234672	30.76481609	29.47080972	10.08954892	-0.4305	0.0109347						9.324	0.924125	0.017926	504095.5
360	9.324	0.1225244	30.52989485	29.24946692	10.05158834	-0.4735	0.0120269						9.324	0.927615	0.019716	502198.9
360	9.324	0.1210286	30.15718038	28.89829535	9.991066018	-0.521	0.0132334						9.324	0.933234	0.021694	499175.1
360	9.324	0.1214718	30.26761429	29.00234619	10.00903671	-0.573	0.0145542						9.324	0.931558	0.023859	500073
360	9.324	0.1207516	30.08815918	28.83326358	9.979817903	-0.6305	0.0160147						9.324	0.934286	0.026254	498613.1
360	9.324	0.1190056	29.65310137	28.42335211	9.90862434	-0.6935	0.0176149						9.324	0.940998	0.028877	495056.2
360	9.324	0.1186731	29.57025102	28.34529051	9.895008513	-0.76275	0.01937385						9.324	0.942293	0.03176	494375.9
360	9.324	0.1187562	29.59095738	28.36480004	9.898413202	-0.839	0.0213106						9.324	0.941969	0.034935	494546
360	9.324	0.1167895	29.10090687	27.90307446	9.817518876	-0.923	0.0234442						9.324	0.949731	0.038433	490504.3
360	9.324	0.1190332	29.65997858	28.42983182	9.909753716	-1.01525	0.02578735						9.324	0.940891	0.042274	495112.6
360	9.324	0.1185069	29.5288383	28.30627145	9.888195619	-1.11675	0.02836545						9.324	0.942943	0.046501	494035.5
360	9.324	0.1196712	29.81895159	28.57961619	9.935824505	-1.2285	0.0312039						9.324	0.938422	0.051154	496415.1
360	9.324	0.119144	29.68758706	28.45584452	9.914286289	-1.35125	0.03432175						9.324	0.940461	0.056265	495339
360	9.324	0.1185346	29.53574042	28.31277462	9.889331427	-1.4865	0.0377571						9.324	0.942834	0.061897	494092.2
360	9.324	0.1191717	29.69448918	28.4623477	9.915419109	-1.635	0.041529						9.324	0.940354	0.06808	495395.6
360	9.324	0.1190609	29.6668807	28.43633499	9.910887053	-1.7985	0.0456819						9.324	0.940784	0.074888	495169.2
360	9.324	0.1187562	29.59095738	28.36480004	9.898413202	-1.9785	0.0502539						9.324	0.941969	0.082383	494546
360	9.324	0.1198652	29.86729134	28.62516191	9.943738434	-2.17625	0.05527675						9.324	0.937676	0.090618	496810.5
360	9.324	0.1198929	29.87419346	28.63166508	9.944867899	-2.394	0.0608076						9.324	0.937569	0.099685	496867
360	9.324	0.1186454	29.5633489	28.33878733	9.893873356	-2.63325	0.06688455						9.324	0.942401	0.109647	494319.2
360	9.324	0.1192549	29.71522045	28.48188071	9.918820879	-2.8965	0.0735711						9.324	0.940031	0.120608	495565.6
360	9.324	0.1191994	29.7013913	28.46885088	9.916551799	-3.18625	0.08093075						9.324	0.940246	0.132673	495452.2
360	9.324	0.1195322	29.7843164	28.54698291	9.930150337	-3.505	0.089027						9.324	0.938959	0.145946	496131.6
360	9.324	0.1200314	29.90870406	28.66418097	9.950513299	-3.8555	0.0979297						9.324	0.937037	0.16054	497149
360	9.324	0.1192271	29.70829342	28.47535406	9.91768436	-4.241	0.1077214						9.324	0.940139	0.176592	495508.8
360	9.324	0.1202253	29.9570189	28.70970321	9.958411483	-4.665	0.118491						9.324	0.936294	0.194248	497543.6
360	9.324	0.1206408	30.0605507	28.80725087	9.975315106	-5.1315	0.1303401						9.324	0.934707	0.213672	498388.2
360	9.324	0.119976	29.89489982	28.65117461	9.948255523	-5.64475	0.14337665						9.324	0.93725	0.235044	497036.2
360	9.324	0.1184792	29.52193618	28.29976827	9.88705968	-6.20925	0.15771495						9.324	0.943051	0.258549	493978.7
360	9.324	0.1182299	29.4598171	28.24123967	9.876830352	-6.83	0.173482						9.324	0.944028	0.284397	493467.7
360	9.324	0.1192549	29.71522045	28.48188071	9.918820879	-7.513	0.1908302						9.324	0.940031	0.312836	495565.6
360	9.324	0.1179806	29.39769802	28.18271108	9.866590419	-8.2645	0.2099183						9.324	0.945007	0.344128	492956.1
360	9.324	0.118036	29.41150226	28.19571743	9.868866878	-9.091	0.2309114						9.324	0.944789	0.378543	493069.8
360	9.324	0.1185346	29.53574042	28.31277462	9.889331427	-10	0.254						9.324	0.942834	0.416393	494092.2
360	9.324	0.1179806	29.39769802	28.18271108	9.866590419	0	0						9.324	0.945007	0	492956.1

Speed (RPM)	Tunnel Speed	Model P (in)	Model P (Pa)	P corrected (Pa)	u (m/s)	Z Position (in)	Z position (m)	U∞ (m/s)	u/U∞	z/H	Re
540	13.986	0.2577117	64.21505514	60.98762495	14.51431608	0	0	13.986	0.9636	0	725166.4
540	13.986	0.2575733	64.18056945	60.95513254	14.51044916	-0.02475	0.00062865	13.986	0.963857	0.001031	724973.2
540	13.986	0.2566591	63.95277458	60.74050421	14.48488036	-0.02725	0.00069215	13.986	0.965559	0.001135	723695.7
540	13.986	0.2568807	64.00799154	60.79252963	14.49108232	-0.02975	0.00075565	13.986	0.965145	0.001239	724005.6
540	13.986	0.2564652	63.90445974	60.69498197	14.47945146	-0.03275	0.00083185	13.986	0.965921	0.001364	723424.5
540	13.986	0.2556342	63.69739615	60.49988665	14.45616167	-0.03625	0.00092075	13.986	0.967477	0.001509	722260.9
540	13.986	0.2566868	63.9596767	60.74700739	14.48565575	-0.03975	0.00100965	13.986	0.965507	0.001655	723734.5
540	13.986	0.2567699	63.98038306	60.76651692	14.48798167	-0.04375	0.00111125	13.986	0.965352	0.001822	723850.7
540	13.986	0.2563821	63.88375339	60.67547244	14.47712417	-0.048	0.0012192	13.986	0.966076	0.001999	723308.2
540	13.986	0.2557727	63.73190675	60.53240254	14.46004591	-0.053	0.0013462	13.986	0.967217	0.002207	722455
540	13.986	0.2563267	63.86994915	60.66246609	14.47557243	-0.05825	0.00147955	13.986	0.966179	0.002425	723230.7
540	13.986	0.256022	63.79402583	60.59093114	14.4670349	-0.064	0.0016256	13.986	0.96675	0.002665	722804.1
540	13.986	0.2559666	63.78022159	60.57792478	14.46548209	-0.0705	0.0017907	13.986	0.966853	0.002936	722726.6
540	13.986	0.2549417	63.52484316	60.33730722	14.43672481	-0.0775	0.0019685	13.986	0.968779	0.003227	721289.8
540	13.986	0.2563267	63.86994915	60.66246609	14.47557243	-0.08525	0.00216535	13.986	0.966179	0.00355	723230.7
540	13.986	0.2560497	63.80092795	60.59743431	14.46781125	-0.09375	0.00238125	13.986	0.966698	0.003904	722842.9
540	13.986	0.255191	63.58696223	60.39583582	14.44372509	-0.103	0.0026162	13.986	0.96831	0.004289	721639.5
540	13.986	0.2553295	63.62147283	60.4283517	14.44761267	-0.1135	0.0028829	13.986	0.968049	0.004726	721833.8
540	13.986	0.2559943	63.78712371	60.58442796	14.46625852	-0.12475	0.00316865	13.986	0.966801	0.005195	722765.3
540	13.986	0.2548308	63.49720976	60.31127104	14.43360967	-0.13725	0.00348615	13.986	0.968988	0.005715	721134.1
540	13.986	0.2544425	63.4004555	60.22010917	14.42269718	-0.151	0.0038354	13.986	0.969722	0.006288	720588.9
540	13.986	0.2531956	63.08976043	59.92737228	14.38759928	-0.166	0.0042164	13.986	0.972087	0.006912	718835.4
540	13.986	0.2546645	63.45577212	60.27222849	14.42893711	-0.1825	0.0046355	13.986	0.969302	0.007599	720900.7
540	13.986	0.2544979	63.41425973	60.23311552	14.42425461	-0.20075	0.00509905	13.986	0.969617	0.008359	720666.7
540	13.986	0.252974	63.03454348	59.87534686	14.38135269	-0.221	0.0056134	13.986	0.972509	0.009202	718523.3
540	13.986	0.2534726	63.15878163	59.99240405	14.39540371	-0.243	0.0061722	13.986	0.97156	0.010118	719225.3
540	13.986	0.2525862	62.9379138	59.78430238	14.37041463	-0.26725	0.00678815	13.986	0.97325	0.011128	717976.8
540	13.986	0.2521984	62.84128412	59.6932579	14.35946823	-0.294	0.0074676	13.986	0.973992	0.012242	717429.9
540	13.986	0.2521984	62.84128412	59.6932579	14.35946823	-0.3235	0.0082169	13.986	0.973992	0.01347	717429.9
540	13.986	0.2505077	62.42000564	59.29632931	14.31164717	-0.35575	0.00903605	13.986	0.977246	0.014813	715040.6
540	13.986	0.2503415	62.37859292	59.25731025	14.30693761	-0.3915	0.0099441	13.986	0.977568	0.016302	714805.3
540	13.986	0.2493166	62.12321449	59.01669269	14.27786101	-0.4305	0.0109347	13.986	0.979558	0.017926	713352.6
540	13.986	0.2494551	62.15772509	59.04920858	14.28179374	-0.4735	0.0120269	13.986	0.979289	0.019716	713549.1
540	13.986	0.2506185	62.44761412	59.32234202	14.31478601	-0.521	0.0132334	13.986	0.977032	0.021694	715197.5
540	13.986	0.249372	62.13701873	59.02969905	14.27943423	-0.573	0.0145542	13.986	0.979451	0.023859	713431.2
540	13.986	0.2508958	62.51671007	59.38744423	14.3226386	-0.6305	0.0160147	13.986	0.976496	0.026254	715589.8
540	13.986	0.2508126	62.49597879	59.36791122	14.320283	-0.6935	0.0176149	13.986	0.976657	0.028877	715472.1
540	13.986	0.2513119	62.62039137	59.48513275	14.33441367	-0.76275	0.01937385	13.986	0.975694	0.03176	716178.1
540	13.986	0.2519214	62.77226292	59.62822613	14.35164426	-0.839	0.0213106	13.986	0.974522	0.034935	717039
540	13.986	0.2506185	62.44761412	59.32234202	14.31478601	-0.923	0.0234442	13.986	0.977032	0.038433	715197.5
540	13.986	0.2511452	62.57885406	59.4459963	14.32969745	-1.01525	0.02578735	13.986	0.976015	0.042274	715942.5
540	13.986	0.2516167	62.69633961	59.55669118	14.34303297	-1.11675	0.02836545	13.986	0.975108	0.046501	716608.7
540	13.986	0.2526139	62.94481592	59.79080556	14.37119619	-1.2285	0.0312039	13.986	0.973197	0.051154	718015.8
540	13.986	0.2521707	62.834382	59.68675472	14.35868602	-1.35125	0.03432175	13.986	0.974045	0.056265	717390.8
540	13.986	0.2532787	63.11046679	59.94688181	14.38994105	-1.4865	0.0377571	13.986	0.971929	0.061897	718952.4
540	13.986	0.2530571	63.05524984	59.89485639	14.38369548	-1.635	0.041529	13.986	0.972351	0.06808	718640.3
540	13.986	0.2523923	62.88959896	59.73878014	14.36494247	-1.7985	0.0456819	13.986	0.97362	0.074888	717703.4
540	13.986	0.2528632	63.006935	59.84933415	14.37822838	-1.9785	0.0502539	13.986	0.972721	0.082383	718367.2
540	13.986	0.2531679	63.08285831	59.9208691	14.38681861	-2.17625	0.05527675	13.986	0.97214	0.090618	718796.4
540	13.986	0.2525585	62.93101168	59.7777992	14.36963302	-2.394	0.0608076	13.986	0.973303	0.099685	717937.7
540	13.986	0.2530571	63.05524984	59.89485639	14.38369548	-2.63325	0.06688455	13.986	0.972351	0.109647	718640.3
540	13.986	0.25242	62.89650108	59.74528332	14.36572433	-2.8965	0.0735711	13.986	0.973567	0.120608	717742.4
540	13.986	0.2525031	62.91720744	59.76479285	14.36806967	-3.18625	0.08093075	13.986	0.973408	0.132673	717859.6
540	13.986	0.2528078	62.99313076	59.8363278	14.37666597	-3.505	0.089027	13.986	0.972826	0.145946	718289.1
540	13.986	0.252974	63.03454348	59.87534686	14.38135269	-3.8555	0.0979297	13.986	0.972509	0.16054	718523.3
540	13.986	0.2539158	63.26921555	60.09645489	14.40788199	-4.241	0.1077214	13.986	0.970719	0.176592	719848.7
540	13.986	0.2526416	62.95171804	59.79730874	14.37197772	-4.665	0.118491	13.986	0.973144	0.194248	718054.9
540	13.986	0.2528909	63.01383712	59.85583733	14.37900952	-5.1315	0.1303401	13.986	0.972668	0.213672	718406.2
540	13.986	0.2531956	63.08976043	59.92737228	14.38759928	-5.64475	0.14337665	13.986	0.972087	0.235044	718835.4
540	13.986	0.2523092	62.8688926	59.71927061	14.36259662	-6.20925	0.15771495	13.986	0.973779	0.258549	717586.2
540	13.986	0.2525031	62.91720744	59.76479285	14.36806967	-6.83	0.173482	13.986	0.973408	0.284397	717859.6
540	13.986	0.2515336	62.67563325	59.53718164	14.34068354	-7.513	0.1908302	13.986	0.975267	0.312836	716491.4
540	13.986	0.252143	62.82747988	59.68025154	14.35790378	-8.2645	0.2099183	13.986	0.974098	0.344128	717351.7
540	13.986	0.2538881	63.26231343	60.08995171	14.40710242	-9.091	0.2309114	13.986	0.970771	0.378543	719809.8
540	13.986	0.2534449	63.15187951	59.98590088	14.39462345	-10	0.254	13.986	0.971613	0.416393	719186.3
540	13.986	0.2613972	65.13338591	61.85287621	14.61691312	0	0	13.986	0.956837	0	730292.4

Figures		
Density	1.158	kg/m^3
H	0.61	m
Mu	0.00001825	kg/(m-s)
x (entrance to probe)	0.7874	m

Speed (RPM)	Tunnel Speed	Model P (in)	Model P (Pa)	P corrected (Pa)	u (m/s)	Z Position (in)	Z position (m)		**Figures**				U∞ (m/s)	u/U∞	z/H	Re
720	18.648	0.4330206	107.897475	102.1452009	18.78385381	0	0		Density	1.158	kg/m^3		18.648	0.992768	0	938481.7
720	18.648	0.4337131	108.070028	102.3077804	18.79879653	-0.02475	0.00062865		H	0.61	m		18.648	0.991978	0.001031	939228.3
720	18.648	0.4344335	108.2495329	102.4769099	18.81432867	-0.02725	0.00069215		Mu	0.00001825	kg/(m-s)		18.648	0.991159	0.001135	940004.3
720	18.648	0.433076	107.9112792	102.1582073	18.78504966	-0.02975	0.00075565		x (entrance to probe)	0.7874	m		18.648	0.992704	0.001239	938541.4
720	18.648	0.4330483	107.9043771	102.1517041	18.78445174	-0.03275	0.00083185						18.648	0.992736	0.001364	938511.6
720	18.648	0.4332699	107.9595941	102.2037295	18.78923455	-0.03625	0.00092075						18.648	0.992483	0.001509	938750.5
720	18.648	0.4336023	108.0424195	102.2817677	18.79640649	-0.03975	0.00100965						18.648	0.992105	0.001655	939108.8
720	18.648	0.4332145	107.9457898	102.1907232	18.78803897	-0.04375	0.00111125						18.648	0.992546	0.001822	938690.8
720	18.648	0.4325497	107.7801389	102.0346469	18.77368596	-0.048	0.0012192						18.648	0.993305	0.001999	937973.7
720	18.648	0.4330483	107.9043771	102.1517041	18.78445174	-0.053	0.0013462						18.648	0.992736	0.002207	938511.6
720	18.648	0.4325497	107.7801389	102.0346469	18.77368596	-0.05825	0.00147955						18.648	0.993305	0.002425	937973.7
720	18.648	0.4324112	107.7456283	102.002131	18.77069437	-0.064	0.0016256						18.648	0.993464	0.002665	937824.2
720	18.648	0.4323558	107.7318241	101.9891247	18.7694976	-0.0705	0.0017907						18.648	0.993527	0.002936	937764.4
720	18.648	0.4327436	107.8284538	102.0801692	18.77787339	-0.0775	0.0019685						18.648	0.993084	0.003227	938182.9
720	18.648	0.4328544	107.8560623	102.1061819	18.78026579	-0.08525	0.00216535						18.648	0.992957	0.00355	938302.4
720	18.648	0.4318571	107.607561	101.872044	18.75872108	-0.09375	0.00238125						18.648	0.994098	0.003904	937226
720	18.648	0.4329652	107.8836707	102.1321946	18.78265788	-0.103	0.0026162						18.648	0.992831	0.004289	938421.9
720	18.648	0.4324943	107.7663347	102.0216406	18.77248939	-0.1135	0.0028829						18.648	0.993369	0.004726	937913.9
720	18.648	0.4330483	107.9043771	102.1517041	18.78445174	-0.12475	0.00316865						18.648	0.992736	0.005195	938511.6
720	18.648	0.433076	107.9112792	102.1582073	18.78504966	-0.13725	0.00348615						18.648	0.992704	0.005715	938541.4
720	18.648	0.4321896	107.6904114	101.9501056	18.76590684	-0.151	0.0038354						18.648	0.993717	0.006288	937585
720	18.648	0.4320234	107.6489987	101.9110865	18.76231538	-0.166	0.0042164						18.648	0.993907	0.006912	937405.6
720	18.648	0.4317741	107.5868796	101.852558	18.75692691	-0.1825	0.0046355						18.648	0.994193	0.007599	937136.4
720	18.648	0.4296956	107.0689714	101.3645849	18.71194098	-0.20075	0.00509905						18.648	0.996583	0.008359	934888.8
720	18.648	0.4290862	106.9171248	101.221515	18.69873094	-0.221	0.0056134						18.648	0.997287	0.009202	934228.8
720	18.648	0.4290862	106.9171248	101.221515	18.69873094	-0.243	0.0061722						18.648	0.997287	0.010118	934228.8
720	18.648	0.4289754	106.8895163	101.1955023	18.69632811	-0.26725	0.00678815						18.648	0.997415	0.011128	934108.7
720	18.648	0.4300003	107.1448948	101.4361198	18.71854251	-0.294	0.0074676						18.648	0.996231	0.012242	935218.6
720	18.648	0.4295571	107.0344608	101.332069	18.70893952	-0.3235	0.0082169						18.648	0.996743	0.01347	934738.8
720	18.648	0.4296402	107.0551672	101.3515785	18.71074046	-0.35575	0.00903605						18.648	0.996647	0.014813	934828.8
720	18.648	0.429474	107.0137545	101.3125595	18.70713841	-0.3915	0.0099441						18.648	0.996839	0.016302	934648.8
720	18.648	0.4300557	107.158699	101.4491262	18.71974254	-0.4305	0.0109347						18.648	0.996168	0.017926	935278.5
720	18.648	0.4301665	107.1863075	101.4751389	18.72214236	-0.4735	0.0120269						18.648	0.99604	0.019716	935398.4
720	18.648	0.430582	107.2898393	101.5726866	18.73113896	-0.521	0.0132334						18.648	0.995561	0.021694	935847.9
720	18.648	0.4304712	107.2622308	101.5466738	18.72874029	-0.573	0.0145542						18.648	0.995689	0.023859	935728.1
720	18.648	0.4313306	107.4763709	101.7484367	18.7473371	-0.6305	0.0160147						18.648	0.994701	0.026254	936657.2
720	18.648	0.4309977	107.3934209	101.6702812	18.74013557	-0.6935	0.0176149						18.648	0.995084	0.028877	936297.4
720	18.648	0.4313305	107.476346	101.7484132	18.74733494	-0.76275	0.01937385						18.648	0.994701	0.03176	936657.1
720	18.648	0.4314137	107.4970773	101.7679462	18.74913435	-0.839	0.0213106						18.648	0.994606	0.034935	936747
720	18.648	0.4331868	107.9388877	102.18422	18.78744114	-0.923	0.0234442						18.648	0.992578	0.038433	938660.9
720	18.648	0.4331314	107.9250835	102.1712136	18.78624544	-1.01525	0.02578735						18.648	0.992641	0.042274	938601.2
720	18.648	0.4336854	108.0631259	102.3012772	18.79819905	-1.11675	0.02836545						18.648	0.99201	0.046501	939198.4
720	18.648	0.4334915	108.014811	102.2557549	18.79401615	-1.2285	0.0312039						18.648	0.992231	0.051154	938989.4
720	18.648	0.4337131	108.070028	102.3077804	18.79879653	-1.35125	0.03432175						18.648	0.991978	0.056265	939228.3
720	18.648	0.4341565	108.1805117	102.4118782	18.80835795	-1.4865	0.0377571						18.648	0.991474	0.061897	939706
720	18.648	0.4357085	108.5672298	102.7762439	18.84178687	-1.635	0.041529						18.648	0.989715	0.06808	941376.1
720	18.648	0.4339347	108.1252449	102.3598058	18.80357569	-1.7985	0.0456819						18.648	0.991726	0.074888	939467
720	18.648	0.4352653	108.4567959	102.6721931	18.83224672	-1.9785	0.0502539						18.648	0.990216	0.082383	940899.5
720	18.648	0.4352099	108.4429916	102.6591867	18.83105386	-2.17625	0.05527675						18.648	0.990279	0.090618	940839.9
720	18.648	0.4360409	108.6500552	102.854282	18.8489388	-2.394	0.0608076						18.648	0.98934	0.099685	941733.5
720	18.648	0.4345723	108.2841183	102.5094962	18.81731979	-2.63325	0.06688455						18.648	0.991002	0.109647	940153.7
720	18.648	0.4347666	108.3325328	102.5551124	18.82150613	-2.8965	0.0735711						18.648	0.990781	0.120608	940362.9
720	18.648	0.4352652	108.4567709	102.6721696	18.83224457	-3.18625	0.08093075						18.648	0.990217	0.132673	940899.4
720	18.648	0.4349883	108.3877747	102.6071613	18.82628168	-3.505	0.089027						18.648	0.99053	0.145946	940601.5
720	18.648	0.4352376	108.4498937	102.6656899	18.8316503	-3.8555	0.0979297						18.648	0.990248	0.16054	940869.7
720	18.648	0.4349052	108.3670683	102.5876518	18.8244918	-4.241	0.1077214						18.648	0.990624	0.176592	940512
720	18.648	0.4342395	108.2011932	102.4313642	18.81014721	-4.665	0.118491						18.648	0.99138	0.194248	939795.4
720	18.648	0.4329375	107.8767686	102.1256914	18.78205988	-5.1315	0.1303401						18.648	0.992862	0.213672	938392.1
720	18.648	0.4327713	107.8353559	102.0866723	18.77847152	-5.64475	0.14337665						18.648	0.993052	0.235044	938212.8
720	18.648	0.4313582	107.4832481	101.7549164	18.74793404	-6.20925	0.15771495						18.648	0.99467	0.258549	936687.1
720	18.648	0.4318572	107.607586	101.8720675	18.75872324	-6.83	0.173482						18.648	0.994098	0.284397	937226.1
720	18.648	0.4307759	107.3381541	101.6182088	18.73533589	-7.513	0.1908302						18.648	0.995338	0.312836	936057.6
720	18.648	0.4298341	107.103482	101.3971008	18.71494196	-8.2645	0.2099183						18.648	0.996423	0.344128	935038.7
720	18.648	0.4301388	107.1794054	101.4686357	18.72154243	-9.091	0.2309114						18.648	0.996072	0.378543	935368.5
720	18.648	0.4300834	107.1656011	101.4556294	18.72034252	-10	0.254						18.648	0.996136	0.416393	935308.5
720	18.648	0.4365118	108.7673913	102.964836	18.85906607	0	0						18.648	0.988808	0	942239.4