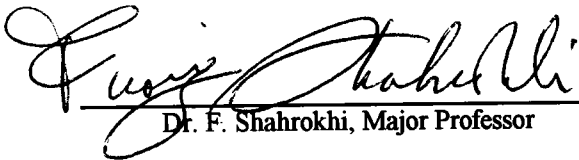
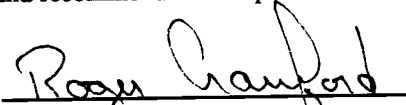
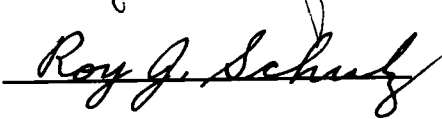


To the Graduate Council:

I am submitting herewith a thesis written by Thomas James Miller entitled "Analytical Investigation of Evaporation Effects of Water Ingested in an Axial-Flow Compressor." I have examined the final copy of this thesis for form and content and recommend that it be accepted in partial fulfillment of the requirements for the degree of Master of Science, with a major in Mechanical Engineering.


Dr. F. Shahrokhi, Major Professor

We have read this thesis
and recommend its acceptance:

Accepted for the Council:


Associated Vice Chancellor
and Dean of the Graduate School

**ANALYTICAL INVESTIGATION OF EVAPORATION EFFECTS
OF WATER INGESTED IN AN AXIAL- FLOW COMPRESSOR**

A Thesis

Presented for the

Master of Science

Degree

The University of Tennessee, Knoxville

Thomas James Miller

December 1996

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ABSTRACT

The problem of water ingestion into gas turbine engines installed on an aircraft is known to have serious consequences. Reducing the stall margin, changes in component efficiencies, blade and casing wall clearance problems, combustor and after-burner flame-out are but a few of these problems [1,2]. To study this problem, an analytical model (AFCWWI FORTRAN CODE) to simulate the thermodynamics of water evaporation in an axial-flow compressor, using idealized assumptions and conditions, was developed by Curtis Stephen Mashburn. The simulated compressor represents a compressor that was mounted on a constant speed compressor test rig, fitted with a bell mouth inlet, and a variable area throttle valve that was held choked for all test conditions. The analytical model of the compressor flow was a two-phase, one-dimensional model in which the compressor two-phase flow was assumed to be in equilibrium and isentropic.

This thesis is an extension of Mashburn's study and attempts to simulate non-equilibrium conditions in the compression process by reducing evaporation rates of the water droplets in the compressor. This was accomplished by applying a bias of 2, 4, 6, 8, 10, 20, and 30 percent to the original water vapor saturation pressure curve and generating pseudo false water vapor saturation pressure curves which were then applied to cases of 2, 4, 6, 8, and 10% water ingestion rates. These new curves forced the AFCWWI FORTRAN code to pseudo-equilibrium conditions at each stage within the compressor. But since the new saturation pressure curves are biased, the reduced rates of water droplet evaporation actually represent non-equilibrium cases. The same engine, compressor conditions, and simulated mass fraction of ingested water used in the study performed by Mashburn were used in this study.

In analyzing the data generated by reducing the evaporation rate of the water droplets ingested into the compressor, the following results were obtained:

- 1) The bias applied to the saturation pressure decreased the amount of water vapor throughout the compressor where 6% or less liquid water by mass was ingested. When more than 6% liquid water was

ingested, the water vapor present at each stage decreased in the first five stages of the compressor, but increased in the last two stages. This change resulted from forcing the liquid droplet evaporation to lag the original equilibrium case which increased the air flow temperature and liquid present throughout the compressor. Since the air flow was not cooled through evaporation as much as the baseline, the increased temperature and liquid water present in the later stages resulted in an increase in water vapor, even with a bias subtracted from the saturation pressure. If full evaporation was achieved (which is evident in the 2% water ingestion case) the difference from the baseline for both the liquid and vapor present at each stage within the compressor goes to zero.

2) As the percentage of water ingested by the compressor increased, the total and static temperatures and pressures all decreased. Where 4% or more liquid water was ingested into the compressor, and the saturation bias increased, so did the difference in the total and static pressures and temperatures when compared to the baseline case. In addition, the difference in static density, blade row diffusion factor, and input power used to drive the compressor also increased. The only exception was the 2% water ingestion case. This case was different because with a bias applied to PSAT, it was the only condition which still fully evaporated the ingested water within the compressor. Once full evaporation of the ingested water had taken place, the value of the parameters just mentioned, when subtracted from the baseline case, decreased rather than increased.

3) The axial velocity increased when a bias was applied to the 2% water ingestion case and subtracted from the baseline. The difference in axial velocity then decreased for all cases where 4% or more of liquid water was ingested.

4) A good rule of thumb in ensuring normal operation within a compressor requires that a value of 0.6 for the diffusion factor be considered the upper limit for this parameter. During this investigation, the diffusion factor was marginal for the original unbiased 6, 8, and 10% water ingestion cases. The effects of water ingestion and the lags induced on the water droplet evaporation for this study had an unfavorable influence on this parameter. These unfavorable effects coupled with the fact that as the bias subtracted

from the saturation pressure increased, the diffusion factor also increased, makes it likely that the compressor would stall. The following conclusions may be drawn from these results:

- i) Water ingestion effects dominated the bias effects.
- ii) The total and static temperatures and pressures decreased, the axial velocity increased the first three stages and decreased the remaining stages, and the blade row diffusion factor decreased the first three stages and increased the remaining stages.
- iii) Subtracting a bias from the baseline saturation pressure and generating new saturation pressure curves had the effect of forcing the evaporation to lag the baseline case resulting in increasing the MDOTL and decreasing the MDOTV throughout the system when compared to the baseline, increasing the air flow total and static temperatures and pressures until ingested water fully evaporated, and increased the diffusion factor where 4% or more liquid water was ingested.

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LIST OF ABBREVIATIONS

BRD	Blade Row Diffusion
CA	Axial Component of Velocity Relative to Stator (m/s)
C_p	Constant Pressure Specific Heat of Mixture (J/kg-K)
CW	Tangential Component of Velocity (m/s)
h	Enthalpy of Mixture (J/kg-K)
h_o	Total Enthalpy of Mixture (J/kg-K)
h_{ref}	Reference Enthalpy of Mixture (J/kg-K)
M	Mach Number of Gas
M_{air}	Molecular Weight of Air (kg/kgmol)
$\dot{m}_{air}$	Mass Flow of Air (kg/s)
MDOTL	Mass Flow of Liquid (Kg/s)
$\dot{m}_{mix}$	Total Mass Flow (air plus vapor plus liquid) (kg/s)
MDOTV ($\dot{m}_{vapor}$)	Mass Flow of Vapor (Kg/s)
M_{vapor}	Molecular Weight of Water Vapor (kg/kgmol)
P	Static Pressure (Pa)
P_{ref}	Reference Pressure (Pa)
PSAT	Saturation Pressure (Pa)
PT	Total Pressure of Gas (Pa)
PTCR	Total Pressure of Gas Relative to Rotor as Calculated From $S_{o_{mix}}$ (pa)
PTR	Total Pressure of Gas Relative to Rotor (Pa)
PV	Partial Pressure of Water Vapor in Gas (Pa)
R	Specific Gas Constant of Gas (J/kg-K)

ρ	Density of Gas (Kg/m ³)
$S_{ref_{mix}}$	Reference Entropy of Mixture (J/kg-K)
$S_{o_{mix}}$	Total Entropy of Mixture (J/kg-K)
T_{ref}	Reference Temperature (K)
T	Static Temperature (K)
T_T	Total Temperature of Gas (K)
V	Velocity (m/s)
W_{DOT}	Stage Power Input (KW)
γ	Ratio of Specific Heats of Gas
σ	Solidity

1. INTRODUCTION

Reduced compressor stall margins, changed efficiencies, changed blade clearances, and combustor or after-burner flame-outs are some of the possible problems encountered with severe water ingestion by an aircraft engine during flight. Any or all of these effects could result in loss of power or non-steady behavior in the engine. Three typical causes of water ingestion are: water spray generated by the aircraft wheels running through puddles on the runway during takeoff or landing; rain, sometimes mixed with hail, entering the engine while the aircraft is flying through rain storms; and the third is water condensation resulting from humid air traveling through the inlet into the compressor [1-14].

The worst possible time for any aircraft to ingest water is during takeoff and landing. It is during this period that the aircraft is the most vulnerable, and the reason this is an important topic.

This thesis was a continuation of the research done by Curtis Mashburn, titled: "Analytical Investigation of the Effects of Water Ingestion on the Performance of an Axial-Flow Compressor" [1]. May 1995. His thesis attempted to determine the effects of water ingestion on the performance of an axial-flow compressor by developing an analytical model to simulate the steady-state aerothermodynamics of a compressor. Several idealized or simplifying conditions were imposed in order to make the simulation tractable:

- 1) Flow in the inlet, compressor, and variable-area throttle valve was isentropic.
- 2) Blade deviation angles were constant.
- 3) Liquid water was ingested in small droplets at the inlet and were in kinetic and thermal equilibrium with the gas, that is, there were no velocity and temperature lags, with respect to the gas phase.
- 4) The flow was steady, and one-dimensional.
- 5) When liquid water was present, its saturation pressure was in equilibrium with the water vapor partial pressure.

The simulated compressor represents a compressor that was mounted on a constant-speed compressor test rig. The assumed compressor was a seven stage, constant-mean radius design of 0.1959 meters. It had a design mass flow, rotation speed, and choked throttle area of 20.00123 kg/s, 15000 rpm, and $0.1755E-01 \text{ m}^2$, respectively, sea level standard conditions. Air fed to the compressor entered a bell-mouth inlet with a variable-area throttle valve downstream of the compressor that was varied to achieve the design choking area of the system for all test conditions. The inlet had a capture area of 4.7983 m^2 and an exit area of 0.1450 m^2 . The bell-mouth inlet was designed to swallow the design mass flow with a free stream Mach number of 0.01, at sea level, on a standard day. See Table A-1 and Table A-2 for additional compressor design information. The compressor station numbering scheme is depicted in figure 1.1.

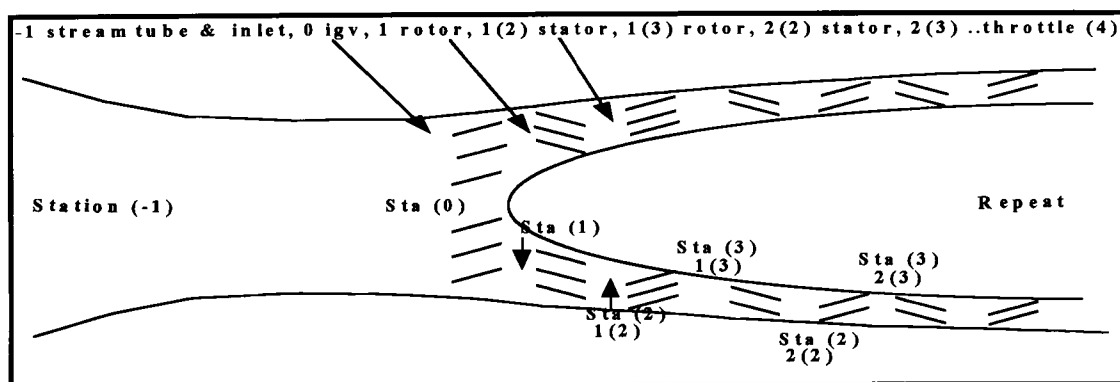


Figure 1.1 Station Numbering Scheme

The effects of water ingestion on compressor performance were determined by Mashburn when he compared the gas phase static and total properties, axial velocity, stage power input, and blade row diffusion factor for a test case, to a dry air reference case. The reference condition assumed dry air conditions with no humidity or liquid water ingestion. For the test cases, the compressor was assumed to ingest saturated air, and 2,4,6,8, or 10 percent liquid water by mass. The main conclusions drawn from Mashburn's study were:

- 1) The compressor total pressure ratio, and the compressor total temperature ratio decreased with the ingestion of liquid water.
- 2) The compressor power input decreased with the ingestion of small amounts of liquid water, but increased with the ingestion of larger amounts of liquid water.
- 3) The axial velocity decreased rapidly, and the blade row diffusion increased rapidly, in the later stages of the compressor, when liquid water was ingested. This may lead to blade row stall in the later stages of the compressor [1].

One of the recommendations outlined in Curtis's thesis was to incorporate velocity and temperature lags for the water droplets. He stated that by lagging the droplet velocity and temperature, a parametric study of the losses associated with the two-phase flow could be performed. After giving careful consideration to this thought, it was believed that the water droplet temperature, lagging or otherwise, would have little effect on the performance of the compressor. The water droplet temperature would heat up and cool down as it went through the compressor rotor and stator stages. The net temperature change of the droplets through the compressor would be minor in comparison to the effect that the phase changes of the droplets from liquid to vapor would have. The energy required to evaporate the liquid droplets would have a more dramatic effect on compressor performance than the net temperature change of the ingested liquid droplets. It was therefore determined that the study of different evaporation rates for the liquid droplets would be of more importance.

To further develop the Mashburn model dealing with water ingestion into a compressor, this thesis studied the effect of varying evaporation rates of the water droplets as the droplets traveled through the compressor. If the air flow through the compressor is sufficiently fast, equilibrium between the air flow and water droplets would not have time to be fully realized. To simulate this effect in a simple way, the equilibrium constraint associated at each stage within the compressor code was kept, but the water vapor pressure function was modified, to generate false saturation pressure curves. For this simulation, the water droplet evaporation lagged full equilibrium where the saturation pressure was not adjusted.

2. METHOD AND SCOPE OF INVESTIGATION

2.1 Background

This investigation was a continuation of the study performed in reference 1. The same engine and compressor conditions as well as simulated mass fraction of ingested liquid water were used for the present investigation. This study simulated a reduced evaporation rate for the liquid droplets entering the compressor. Or stated another way, this analytical investigation studied the effects of water droplet evaporation lagging the unbiased (equilibrium) saturated air flow case within the compressor, hence represents an attempt to model non-equilibrium effects.

To simulate reduced evaporation rates for the water droplets through the compressor, the computer code used in reference 1 was modified to generate fictitious saturation pressure curves. Use of these fictitious curves resulted in less water droplet evaporation than the baseline (equilibrium) case at each stage within the compressor until full evaporation had been achieved. Since heat addition (hence, liquid evaporation) through compression from station (-1) to station (1) was insignificant in relation to that later in the stages in the compressor, no attempt was made in this study to bias the saturation pressure over this region. Thus, only stages 2-7 had the saturation pressure adjusted. Since the air stream temperature was dependent upon the mass flow of liquid and vapor within the compressor, and the relative velocity of the air stream to the rotor was dependent upon this temperature; by changing the saturation point within each stage of the compressor; the temperature, pressure, and velocity of the gas phase were all affected. The small water droplets were still assumed to be in thermal and dynamic equilibrium with the gas phase.

2.2 Modified Saturation Pressure Curves

In shifting the saturation pressure by a fixed bias of 2, 4, 6, 8, 10, 20, and 30 percent, the effects of the new saturation pressure curves through the compressor (Figure 2.1 & Table 2-1) could be studied

and provide direct insight into the influence of reduced water droplet evaporation rates. Rather than show all the saturation pressure curves generated for this study, only those using a bias shift of 0, 10, 20, and 30 percent applied to the baseline (non-biased) saturation pressure are shown for a water ingestion rate of 10%. Please note, for this study, a zero bias shift applied to the saturation pressure was determined to be the baseline. See Appendix B for information on all bias cases.

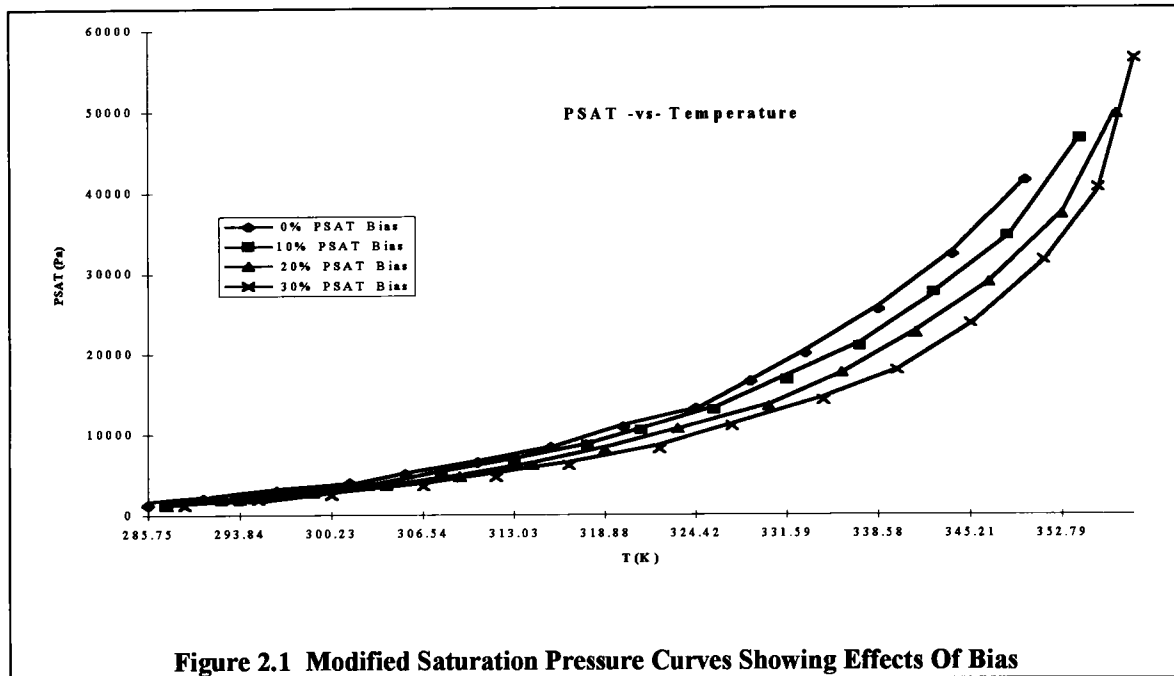


Figure 2.1 Modified Saturation Pressure Curves Showing Effects Of Bias

Table 2-1 Saturation Pressure (PSAT) -Vs- Temperature (T)

<u>Sta#</u>	<u>0% Bias</u>		<u>10.0% Bias</u>		<u>20.0% Bias</u>		<u>30.0% Bias</u>	
	<u>T</u>	<u>PSAT</u>	<u>T</u>	<u>PSAT</u>	<u>T</u>	<u>PSAT</u>	<u>T</u>	<u>PSAT</u>
1(2)	285.75	1330.75	287.74	1384.50	287.74	1230.66	289.72	1242.92
1(3)	291.77	2055.25	291.91	1867.81	293.84	1898.47	295.90	1906.90
2(2)	297.76	3075.42	297.95	2803.00	299.96	2826.64	300.23	2515.72
2(3)	301.94	3989.35	302.22	3651.29	304.32	3673.41	306.54	3652.37
3(2)	306.23	5125.33	308.39	5208.39	308.86	4750.99	311.27	4740.44
3(3)	310.68	6559.43	313.03	6692.71	313.67	6156.01	316.35	6189.77
4(2)	315.38	8410.67	317.99	8651.20	318.88	8044.33	321.92	8187.38
4(3)	320.44	10869.42	321.79	10460.97	324.61	10672.71	328.13	11045.31
5(2)	324.42	13218.20	326.27	13000.62	329.49	13459.87	333.60	14247.20
5(3)	329.11	16531.01	331.59	16697.36	335.32	17604.98	338.69	17915.86
6(2)	333.25	20031.36	336.52	20908.99	340.88	22546.70	345.21	23783.25
6(3)	338.58	25468.81	342.81	27589.30	346.56	28796.22	352.00	31594.17
7(2)	344.01	32279.32	348.10	34552.55	352.79	37284.38	358.22	40549.20
7(3)	349.93	41448.09	355.40	46616.19	359.96	49603.24	366.87	56460.34

2.3 Saturation Pressure of Water Vapor (PSAT) Calculation

Before a description is given into what changes were made to generate the new saturation pressure curves, it is helpful to cover how the baseline (unbiased) saturation pressure curves were calculated.

Within the AFCWWI FORTRAN code, the saturation pressure of water vapor (PSAT) was determined by first calculating the temperature from the relationships of an ideal gas with constant specific heats (equation 1) and enthalpy stagnation properties for air flow through an adiabatic duct (equation 2).

$$h - h_{ref} = C_p(T - T_{ref}) \quad (1)$$

$$h = h_o - 1/2V^2 \quad (2)$$

$$T = T_{ref} + (h_o - h_{ref} - 1/2V^2)/C_p \quad (3)$$

With the calculated temperature, a curve fit was applied to the data tabulated in reference 16 to determine the saturation pressure. Once the saturation pressure (PSAT) was determined, a comparison was made to a calculated partial pressure of the water vapor in gas (PV) calculated from the definition of partial pressures. If the two pressure were equal; the water droplets within the system were in equilibrium with their surrounding and the air flow was saturated.

$$PV = P^* \left[\frac{\frac{\dot{m}_{vapor}}{M_{vapor}}}{\frac{\dot{m}_{vapor}}{M_{vapor}} + \frac{\dot{m}_{air}}{M_{air}}} \right] = P^* \left[\frac{\dot{m}_{vapor}}{\frac{M_{vapor}}{M_{air}} * \dot{m}_{air} + \dot{m}_{vapor}} \right] \quad (4)$$

To ensure that the correct partial pressure of water vapor was used; the relative velocity of the air stream to the rotor was adjusted in an iterative process while a comparison was being made between the calculated total pressure of the gas phase relative to the rotor using two different methods. The first method used the definition of isentropic total pressure relations for a perfect gas to calculate the total pressure of gas relative to the rotor (PTR). The definition of mixture total entropy was used for the second

method to calculate the total pressure of gas relative to rotor as calculated from the total entropy of mixture relative to rotor (PTCR).

$$M = \frac{V}{\sqrt{RT\gamma}} \quad (5)$$

$$PTR = P * \left[1.0 + \frac{\gamma - 1.0}{2.0} * M^2 \right]^{\frac{\gamma}{\gamma - 1.0}} \quad (6)$$

$$PTCR = P_{ref} * \exp \left[\frac{S_{ref_{mix}} - S_{o_{mix}}}{\frac{\dot{m}_{gas}}{\dot{m}_{mix}} + R} \right] \quad (7)$$

Once convergence was reached between these two methods, the correct partial pressure of the water vapor (PV) could be calculated and compared to the saturation pressure of water vapor (PSAT). If after convergence, the saturation pressure was not equal to the calculated partial pressure of the water vapor, the liquid to vapor mass flow ratio was adjusted and the process repeated until agreement was reached. Once the ingested liquid has been evaporated, this iterative process was no longer used.

The partial pressure (PV) was calculated using the liquid to vapor mass flows, the molecular weight ratios of water to air, and the static pressure determined when PTR and PTCR converged.

New saturation pressure curves were generated for each combination of conditions outlined below using the iterative process just discussed within this section. These new curves were generated by subtracting a fixed bias of 2, 4, 6, 8, 10, 20, or 30%, using the equation shown below

$$PSAT = PSAT * (1.0 - \text{Bias}), \quad \text{Bias} = 0.02, 0.04, 0.06, 0.08, 0.10, 0.20, 0.30 \quad (8)$$

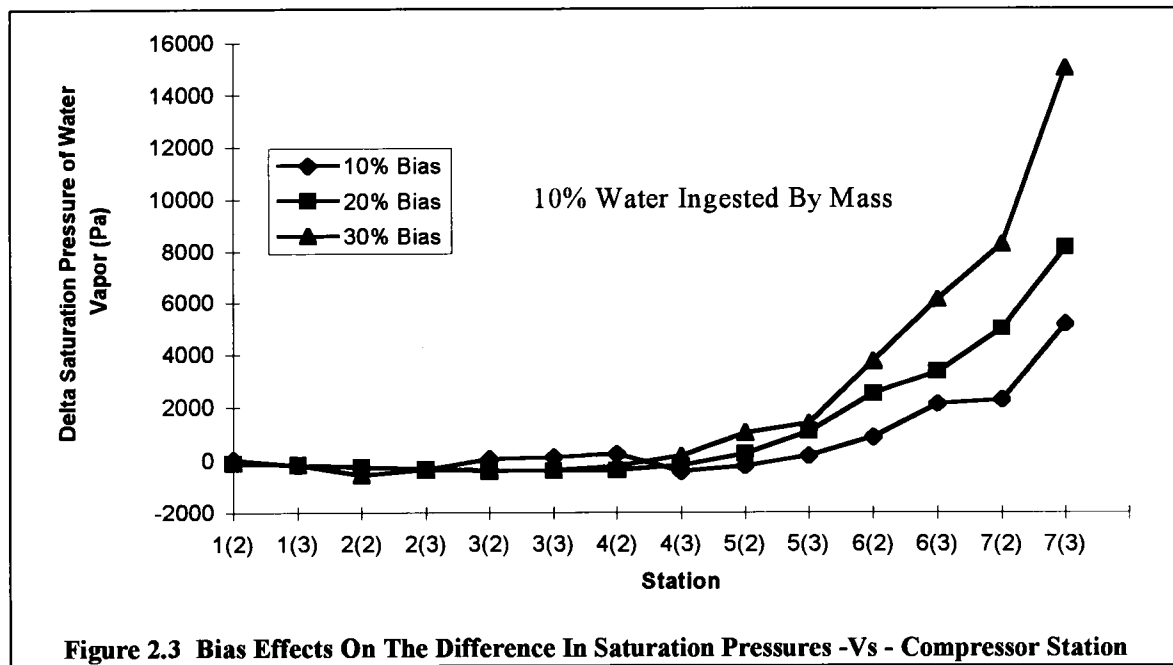
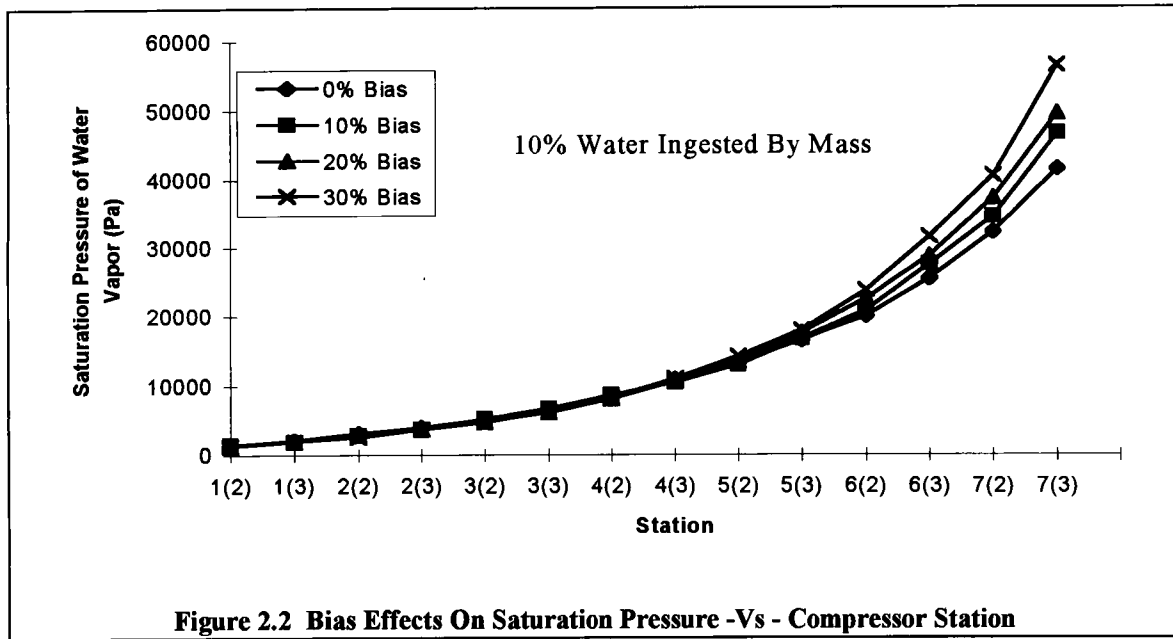
from the saturation pressure for each of the 2, 4, 6, 8, or 10% water ingestion cases prior to comparing it to the partial pressure (PV) used in the iterative process discussed above. Once full evaporation had taken place, the bias applied to PSAT had no additional effect on the compressor.

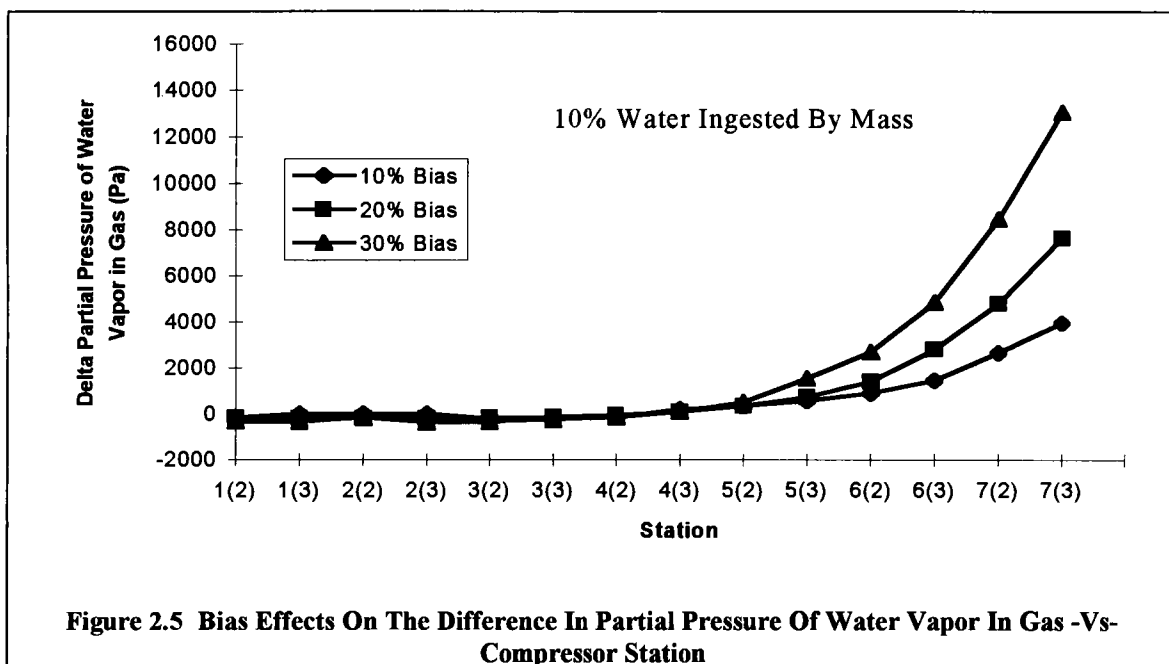
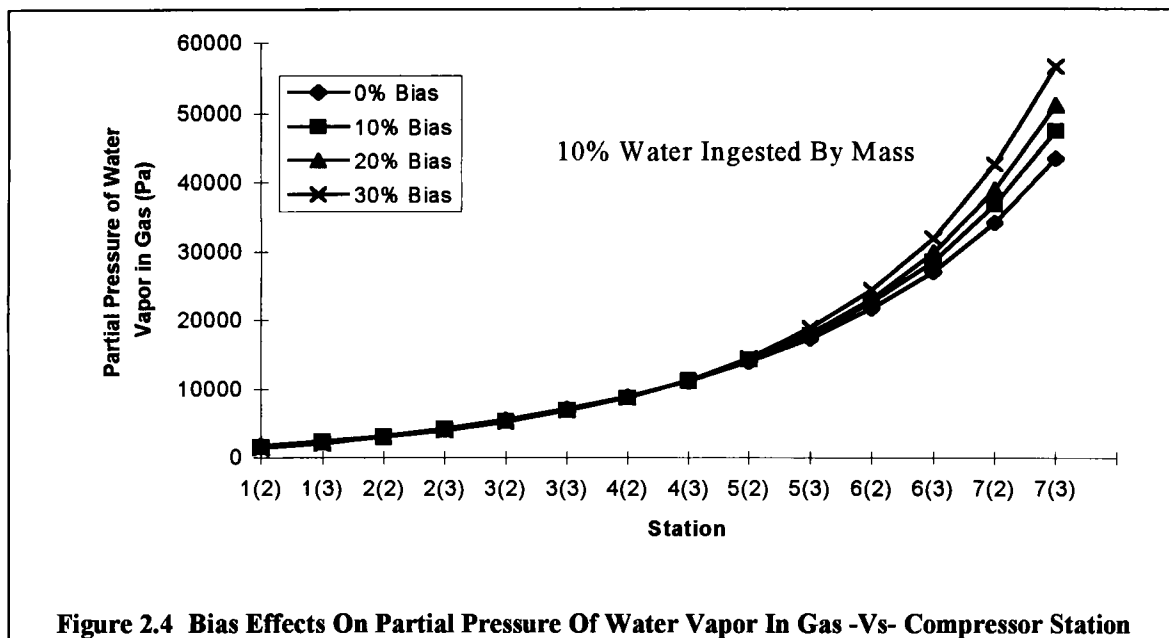
2.4 Variation of The Saturation and Partial Pressure Along The Compressor

With the compressor ingesting 10% liquid water by mass and operating at its nominal speed and air flow rate, calculations were made of the conditions through the compressor by varying the bias subtracted from the saturation pressure.

The baseline (zero bias) saturation pressure gradually increased from station 1(2) through station 7(3) where it peaked at 41,448 Pa (Figure 2.2). All the other saturation pressure curves increased as the bias was increased. The deviation from this baseline for the 10, 20, and 30% bias cases are shown in figure 2.3. As can be seen from this graph, shifting the saturation pressure had little effect from station 1(2) through 4(3). For compressor stations 4(3) through 7(3), as the bias applied to PSAT increased, so did the saturation pressure at that stage within the compressor.

The increase in saturation pressure when a bias of 10, 20, or 30% was subtracted from PSAT during the iterative process discussed earlier in this chapter was not expected. To explain this result, what was happening within the compressor must be considered. With the liquid droplet evaporation lagging at each stage within the compressor, there was more liquid present at higher air flow temperatures at that stage when compared to the equilibrium case. By forcing the saturation pressure equilibrium to be reached early, the air flow temperature was not cooled through evaporation as much as the equilibrium case. Thus, the air flow temperature was higher throughout the compressor until full evaporation had taken place. For the energy equations and equilibrium checks used in the FORTRAN code to be satisfied with higher air flow temperatures, the saturation pressure had to increase. Since the partial pressure must agree with the saturation pressure before equilibrium can exist within each stage, the trends observed for PSAT were also observed for the partial pressure (Figures 2.4 and 2.5).





3. ANALYTICAL RESULTS

3.1 Mass Flow of Water Vapor

Figure 3.1 is the baseline (equilibrium case) for the mass flow of water vapor within the compressor (MDOTV). And as expected, when the amount of ingested liquid water increased, so did MDOTV. In looking at the figure below for a given percent of water ingestion, the decrease in MDOTV as the air flow passed through the inlet and inlet guide vane (Station -1 through station 1) was the result of water condensation. The corresponding increase through the rest of the compressor (Station 1 through 7(3)) was the result of water droplet evaporation as power was inputted to drive the compressor and heat generated through compression across the rotor rows. Changes observed in the mass flow of water vapor for a bias of 10, 20, and 30 percent applied to the saturation pressure are shown in the next few figures. See Appendix B for additional information of bias effects for 2, 4, 6, 8, 10, 20, and 30 percent.

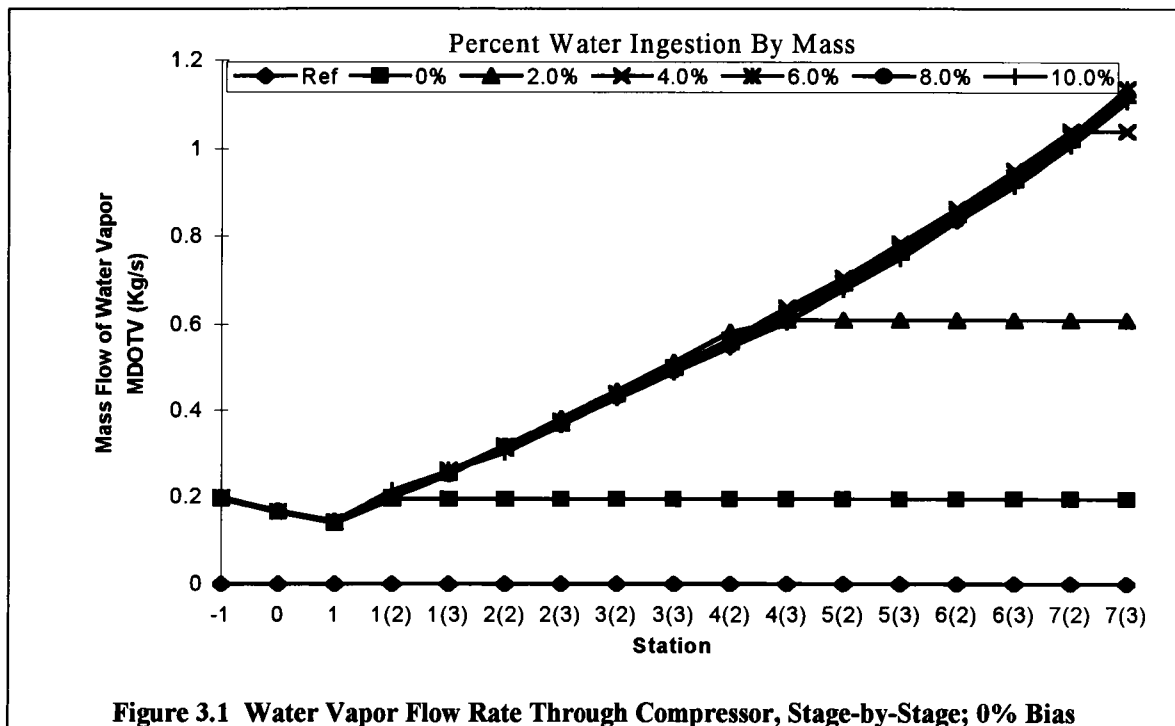
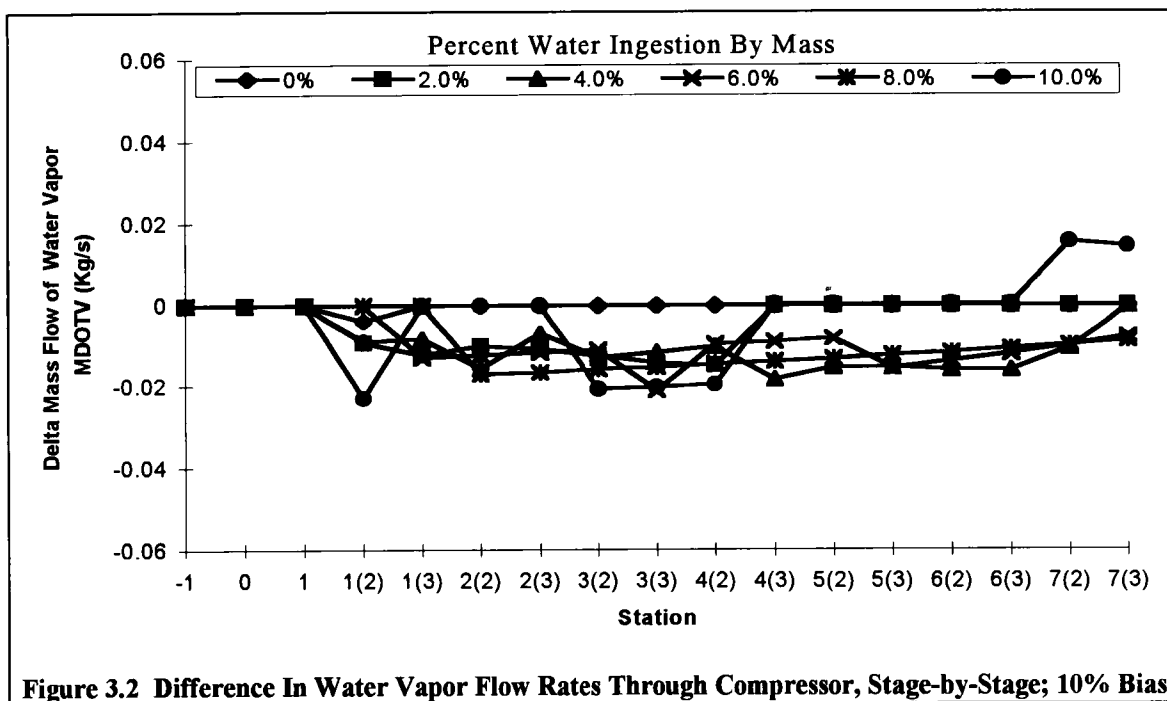
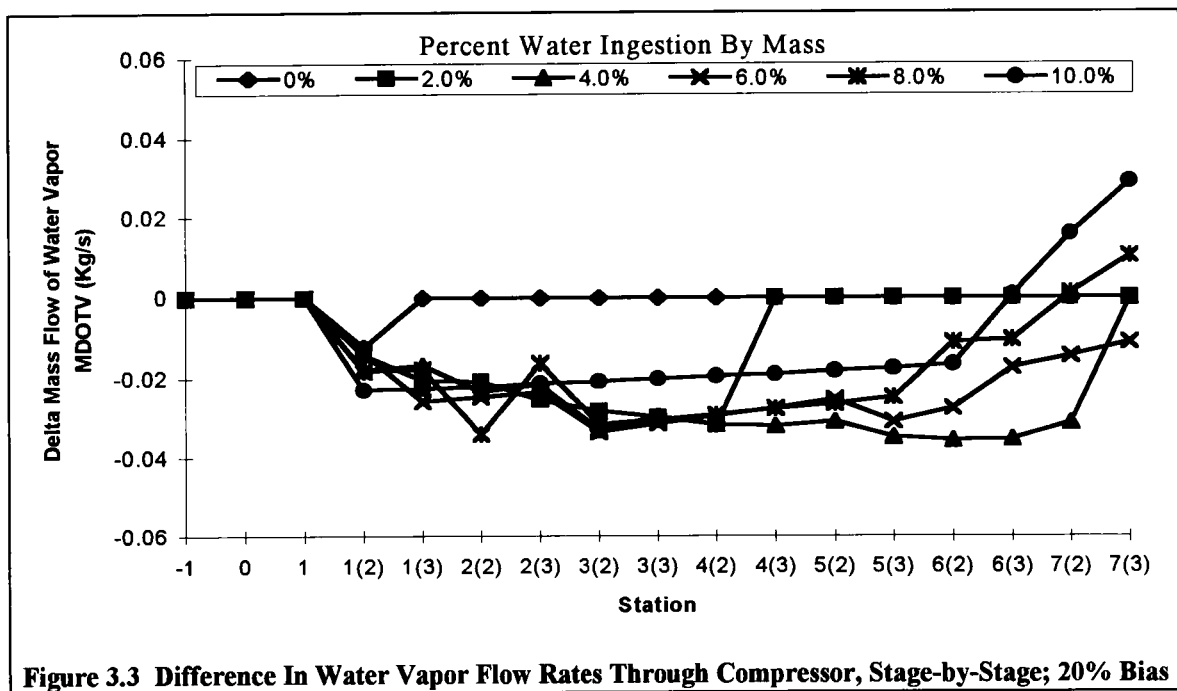


Figure 3.1 Water Vapor Flow Rate Through Compressor, Stage-by-Stage; 0% Bias

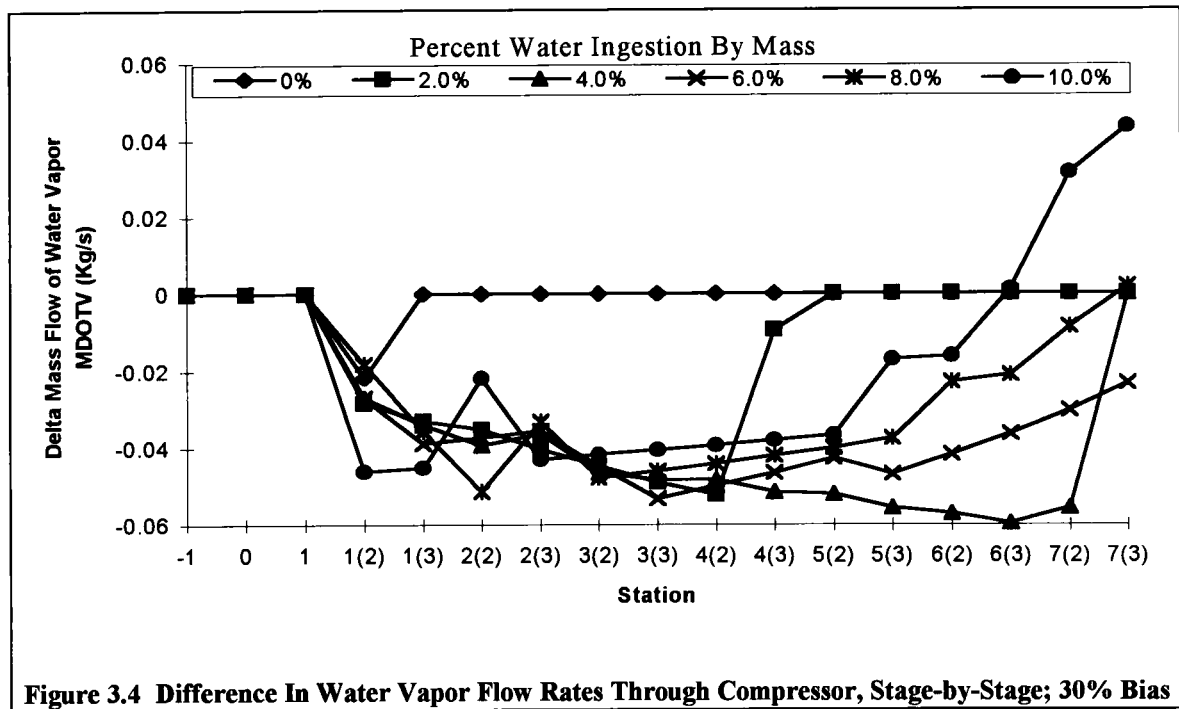
With a bias of 10% applied to the saturation pressure (Figure 3.2), the 2% water ingestion case showed a decrease in the vapor mass flow from stations 1 through 4(3) at which time the liquid water had fully evaporated. The 4% case was fully evaporated at station 7(3); the 6, and 8% water ingestion cases showed a decrease in the mass flow of water from station 1 through the end of the compressor. The 10% water ingestion case was a little puzzling, it showed a decrease in vapor mass flow from stations 1 to 1(3) and 2(3) to 4(3), and an increase from station 6(3) through the end of the compressor. This can be explained if one remembers that this is the difference from the baseline. In the baseline case all the moisture within the air stream had condensed from station -1 to station 1 where it entered the compressor. From station 1 through 1(3) the moisture fully evaporated again. Now with the 10% bias case, the air stream temperature remained higher due to the forced lagging evaporation of the added liquid water. With higher air temperature and pressure, the air flow could hold more moisture in comparison to the baseline. Thus, as the 10% liquid water evaporated towards the back end of the compressor at higher temperature and pressure, the gas flow can hold more vapor than the baseline case. This was illustrated by the positive difference at station 6(3) to 7(3) for the 10% water ingestion case shown below.



With a bias of 20% applied to the saturation pressure (Figure 3.3), the 2, 4, and 6% water ingestion cases all had the same trends observed for the 10% bias case shown in figure 3.2. The main difference between these two cases was the magnitude of the decrease of the mass flow of water vapor within the compressor. The 8% water ingestion case showed a decrease from stations 1 to 7(2) and an increase from station 7(2) through the end of the compressor. The 10% water ingestion case showed a decrease from stations 1 to 6(3), and an increase from station 6(3) through the end of the compressor. The positive increase in the later stages for MDOTV where the compressor ingested 8 and 10% liquid water can be explained as follows: The evaporation of the ingested liquid water was forced to lag the equilibrium case. With the decrease in water vapor in the later stages, there was more liquid water that could evaporate. The increased temperature, pressure, and liquid water present in the later stages enabled the water vapor to indicate an increase when subtracted from the baseline case

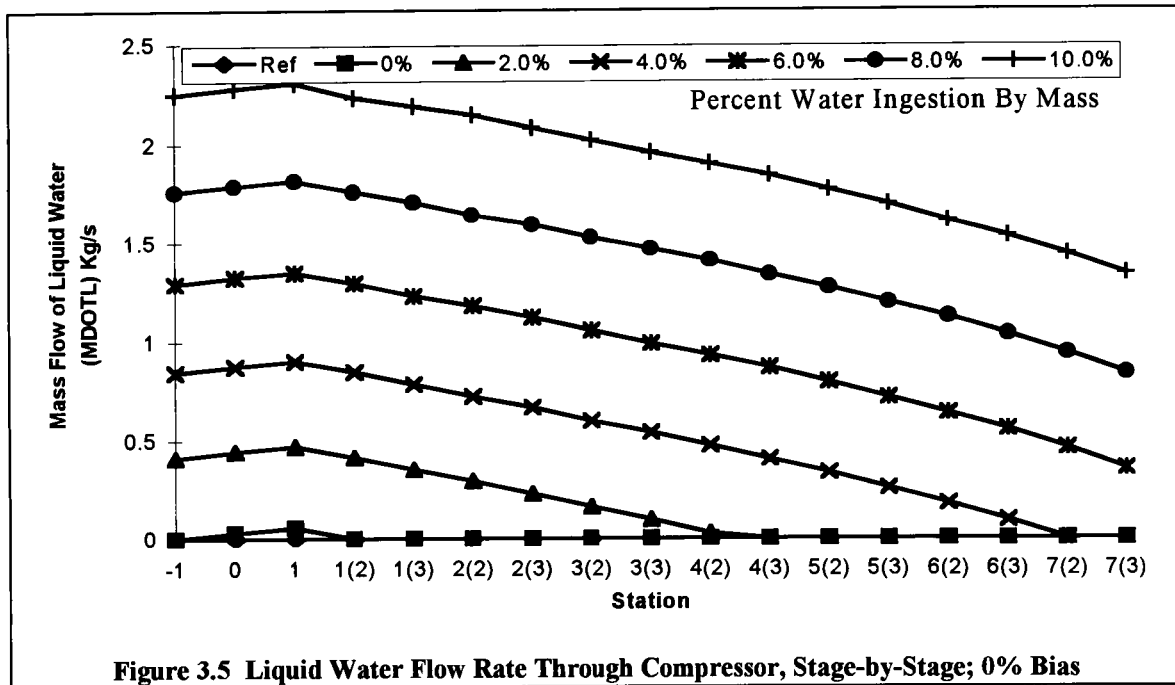


With a bias of 30% applied to the saturation pressure (Figure 3.4), the 4, 6, and 10% water ingestion cases all had the same trends observed for the 20% bias case shown in figure 3.3. Once again the main difference between these two cases was the magnitude of the decrease of the mass flow of water vapor within the compressor. Full evaporation of the 2% water ingestion case was shifted one station from 4(3) to 5(2). The 8% case crossed the axis at station 7(3) instead of 7(2). This shift resulted in decreasing the MDOTV differences between the baseline and the 30% bias case.



3.2 Mass Flow of Liquid Water

For all bias cases, the mass flow of liquid water showed an increase from stations -1 through station 1 where moisture condensed as it entered the compressor. And from stations 1 through the end of the compressor or until full evaporation took place, the mass flow of liquid water decreased. The baseline for the mass flow of liquid water (MDOTL) is shown in figure 3.5, this figure shows that the 2% water ingestion case was fully evaporated by station 4(3) and the 4% case was evaporated by station 7(2). The



remaining 6, 8, and 10% water ingestion cases did not fully evaporate the liquid water prior to the air stream exiting the compressor.

With a bias of 10% applied to the saturation pressure (Figure 3.6), the 2% water ingestion case showed an increase in the mass flow of liquid water when compared to the baseline till station 4(3) where full evaporation had taken place. The 4, 6, and 8% water ingestion cases all showed an increase in the mass flow of liquid water. Full evaporation took place at station 7(3) for the 4% water ingestion case. Once again the 10% water ingestion case wandered between increasing and decreasing. For the most part, there was an increase from stations 1 through 4(3) and a decrease from 6(3) until the air flow exited the compressor.

Where a 20% bias was applied to the saturation pressure (Figure 3.7), the basic trends were the same as the 10% bias case except the magnitudes of the differences. The 8% case increased from station 1 to 7(2) where it decreased until the air stream exited the compressor. The 10% water ingestion case increased from 1 until 6(3) then decreased from 6(3) to 7(3). These trends were observed in the MDOTV bias cases. Where MDOTV increased, MDOTL decreased for the same reasons discussed earlier.

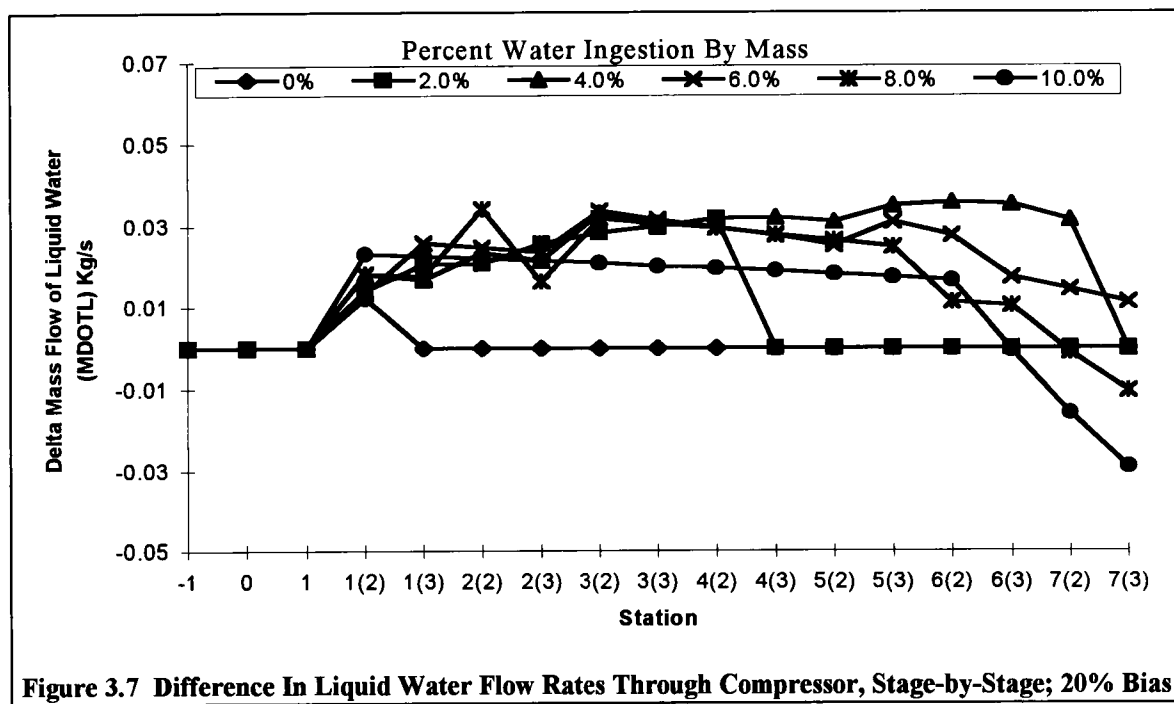
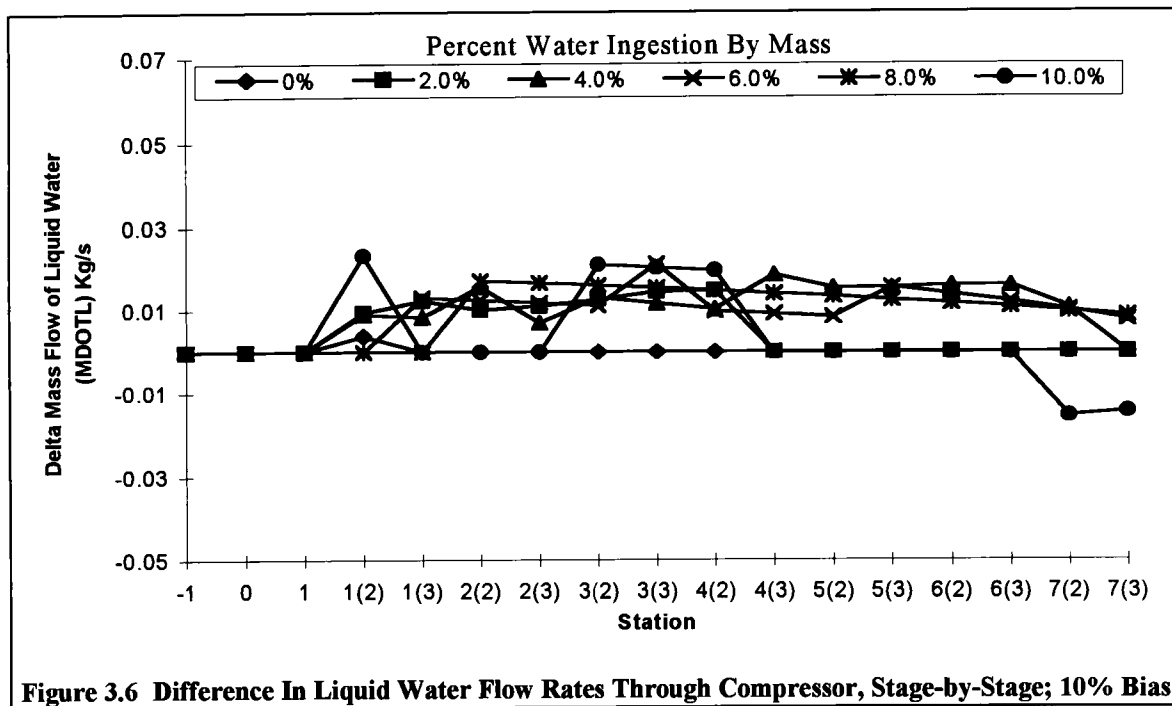
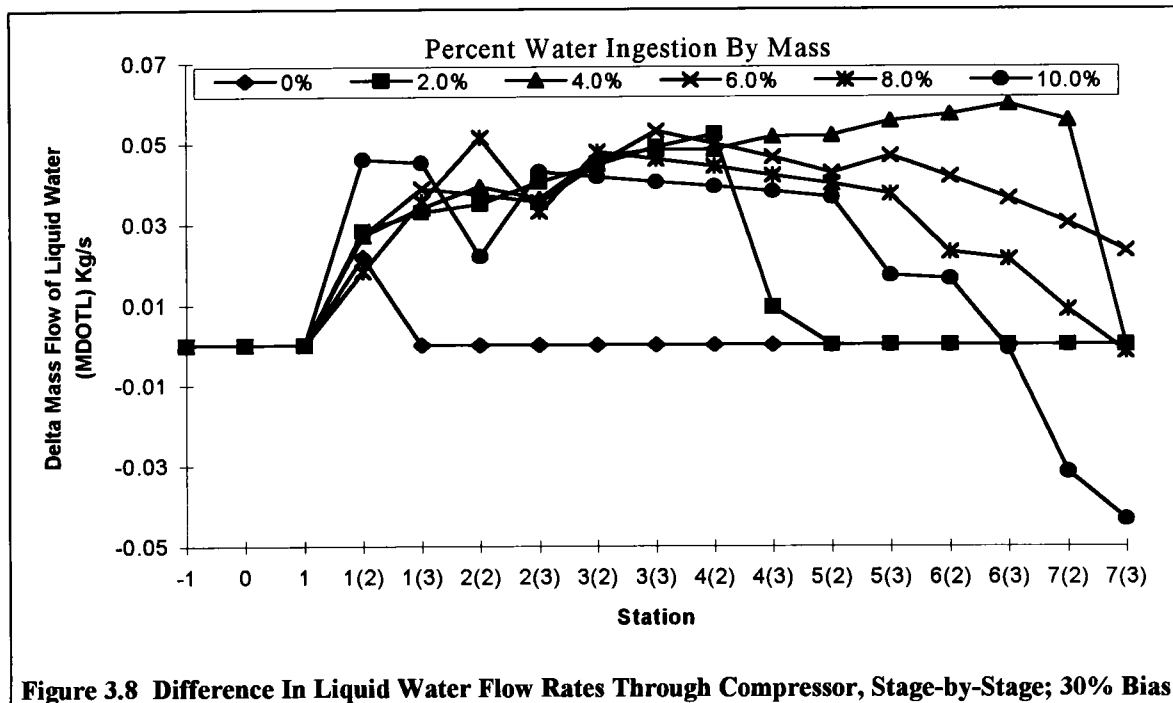
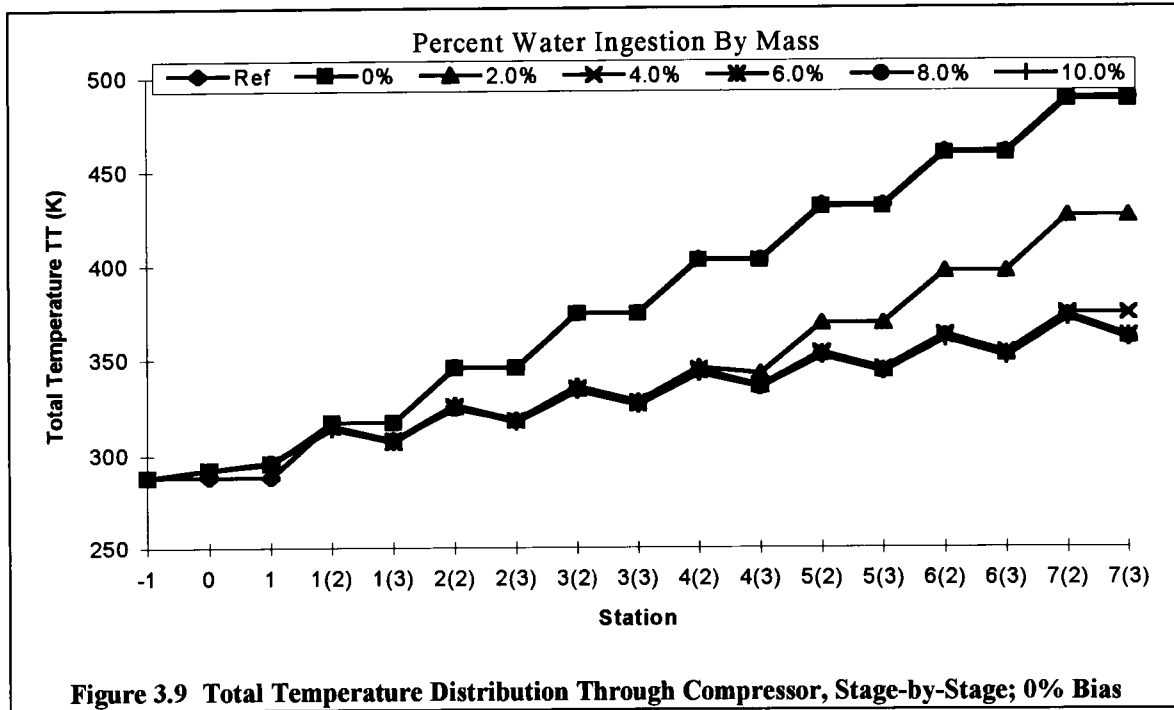


Figure 3.8 represents MDOTL where a 30% bias was applied. The trends observed are similar to the 10 and 20 percent bias cases. Once again the main difference was the magnitude of the difference from the baseline. Some additional differences from the 20% bias case were: The 2% ingested water case reached full evaporation at station 5(2) instead of 4(3), and the 8% ingested water case crossed the axis at 7(3) instead of 7(2). This trend was also mirrored in the MDOTV 30% bias case.



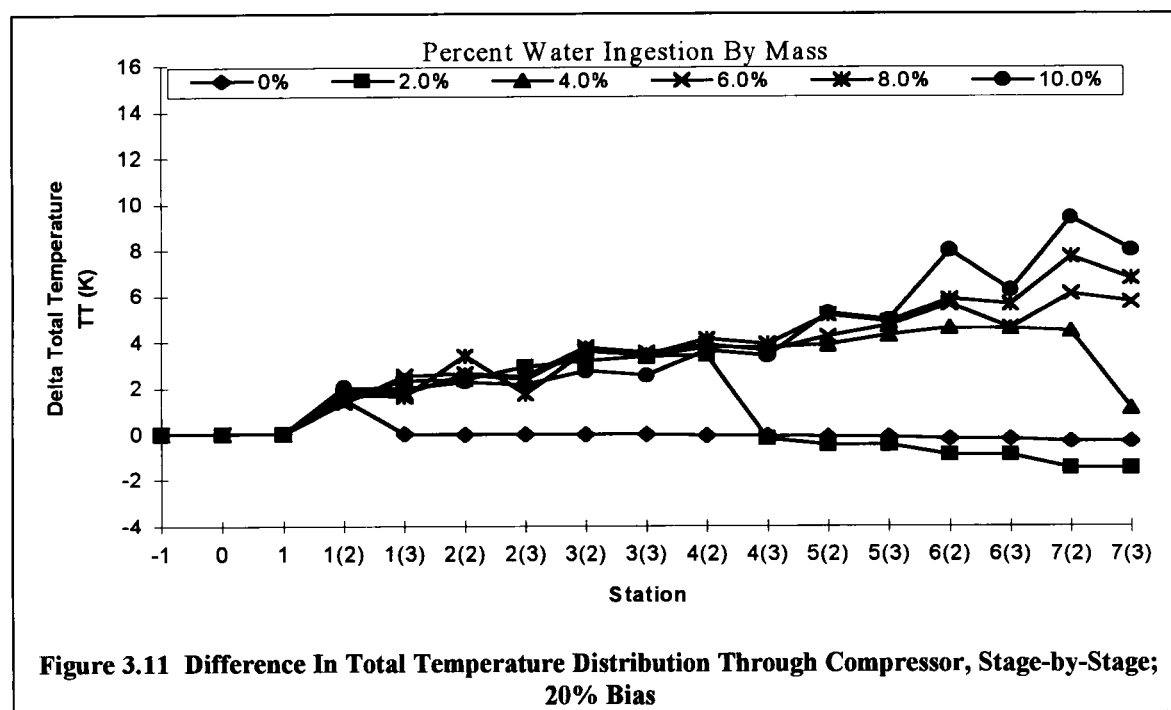
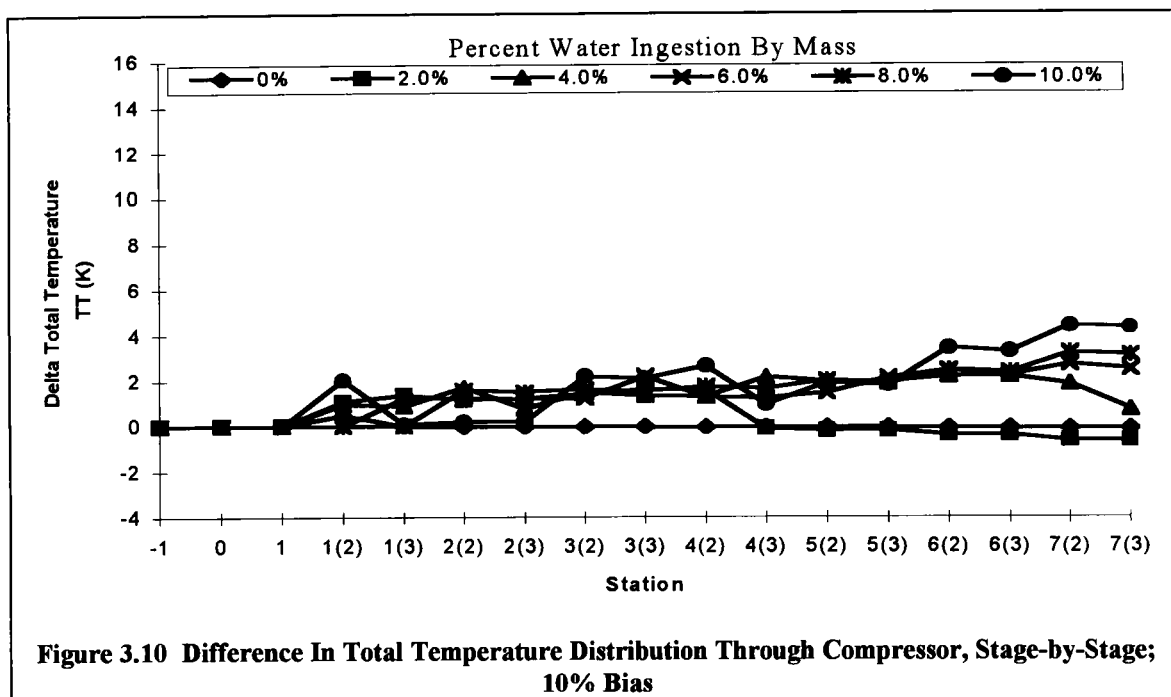
3.3 Total Temperature

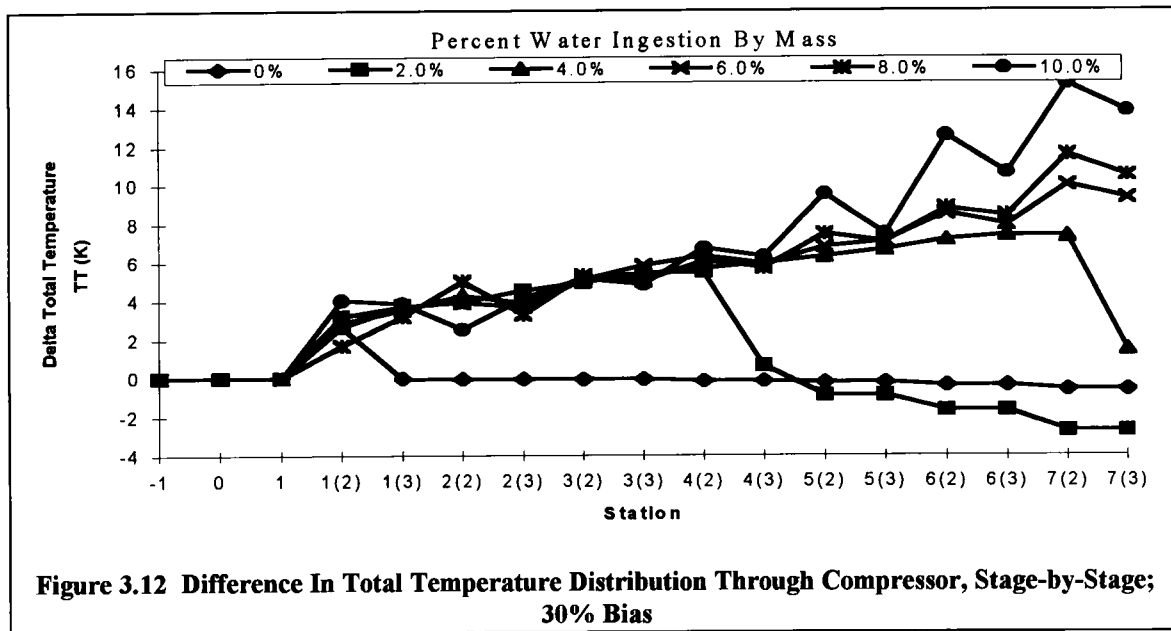
Figure 3.9 is the baseline for the total temperature (TT) within the compressor. One should observe that the total temperature decreased when the amount of ingested liquid water increased. The saw-tooth action observed was the result of the total temperature increasing across the rotor rows as power was inputted to drive the compressor. The total temperature then decrease across the stator rows when the ingested liquid water evaporated and cooled the air flow. Once the ingested liquid had fully evaporated, there was no temperature change across the stator.



With a bias of 10% applied to the saturation pressure (Figure 3.10), the difference from the baseline for the 2% water ingestion case showed an elevation in temperature from station 1 through station 4(3) at which time the liquid water had fully evaporated causing a decrease in the temperature when subtracted from the baseline. The 4% water ingestion case followed the same trend as the 2% case except the temperature difference started to decrease at station 6(3) instead of 4(3). The remaining 6, 8, and 10 percent water ingestion cases all showed an increase until station 7(2) at which time the temperature difference started to decrease. The rise in temperature can be attributed to the liquid water being forced to lag the air stream, thus, not as much liquid water was allowed to evaporate and cool the surrounding air stream.

The trends observed for the 20 and 30 percent bias cases (Figure 3.11 and Figure 3.12) showed the same trends as those observed for the 10% bias case. It should be pointed out that as the bias increased, so did the power requirements to operate the compressor and the amount of liquid water present in the later stages. These increases resulted in greater temperature swings (saw-tooth) between the rotor and stator rows for the reasons discussed at the beginning of this section.



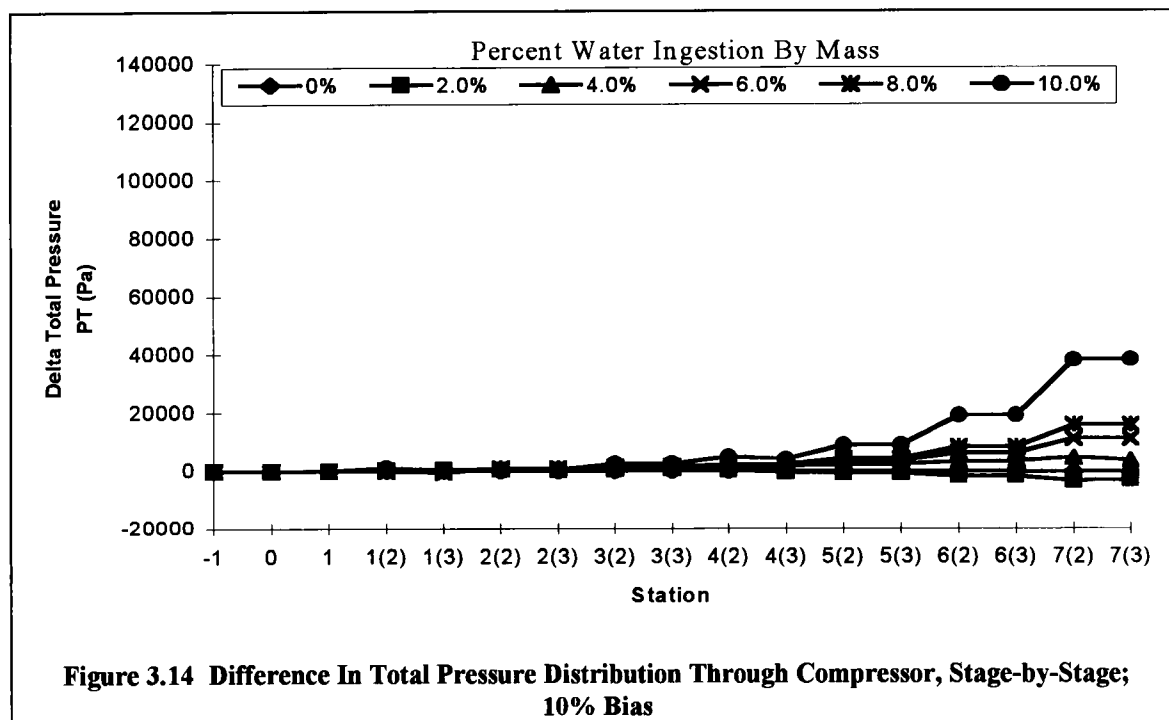
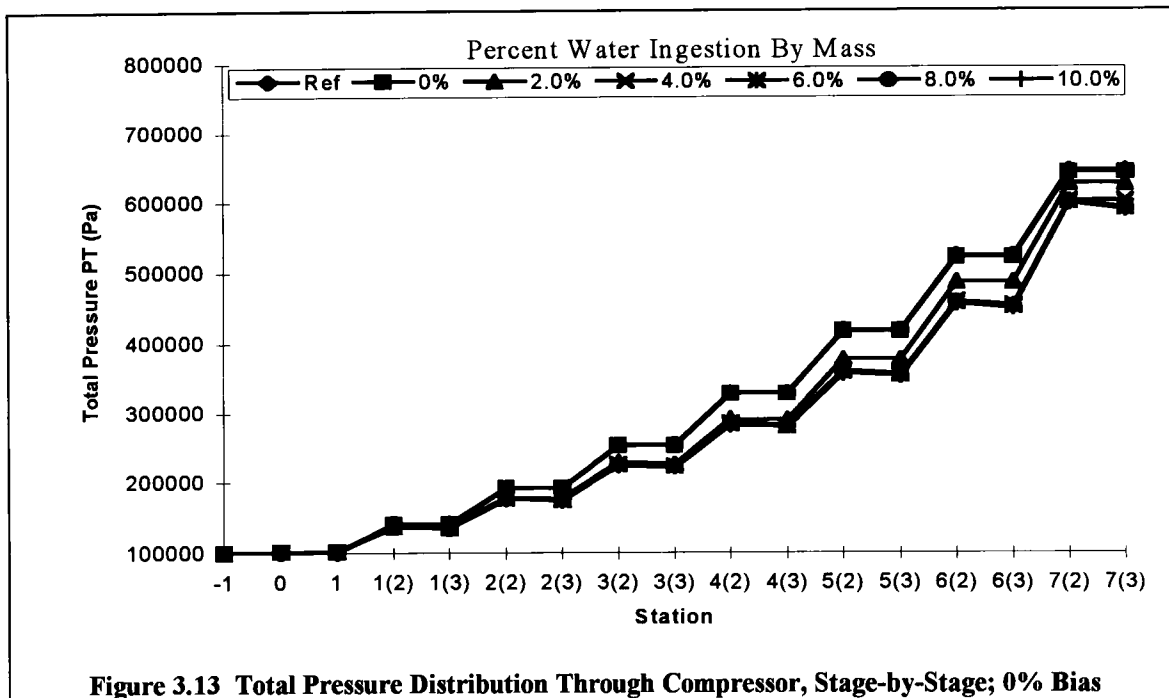


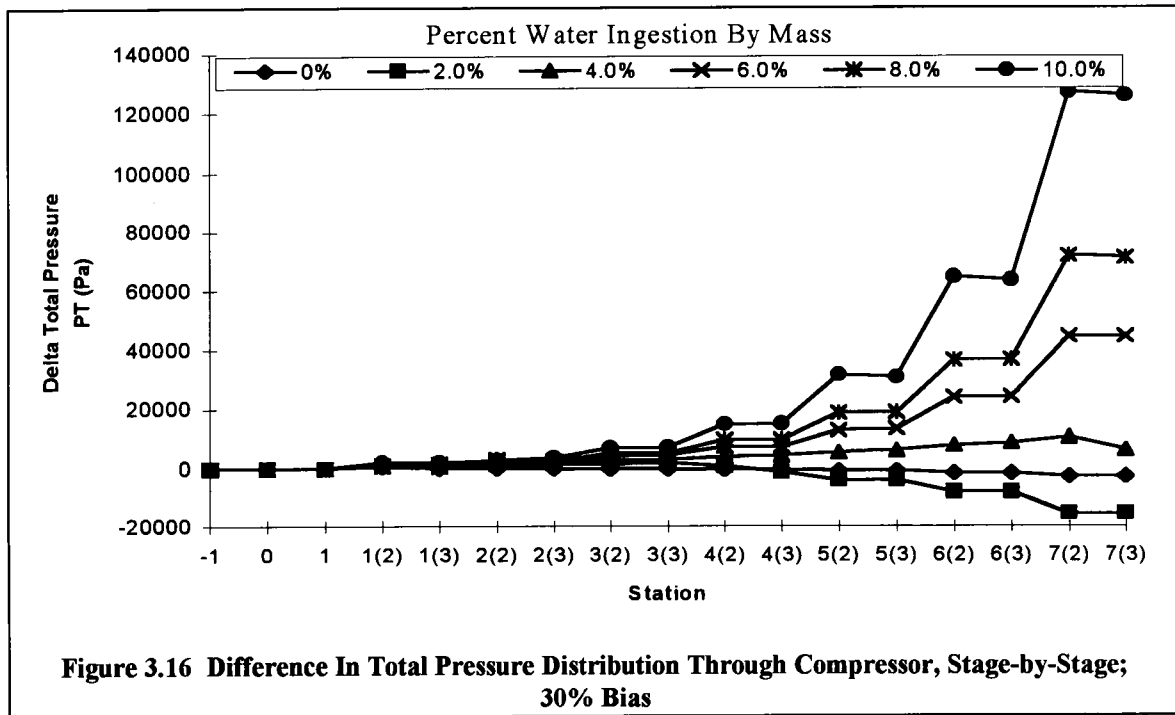
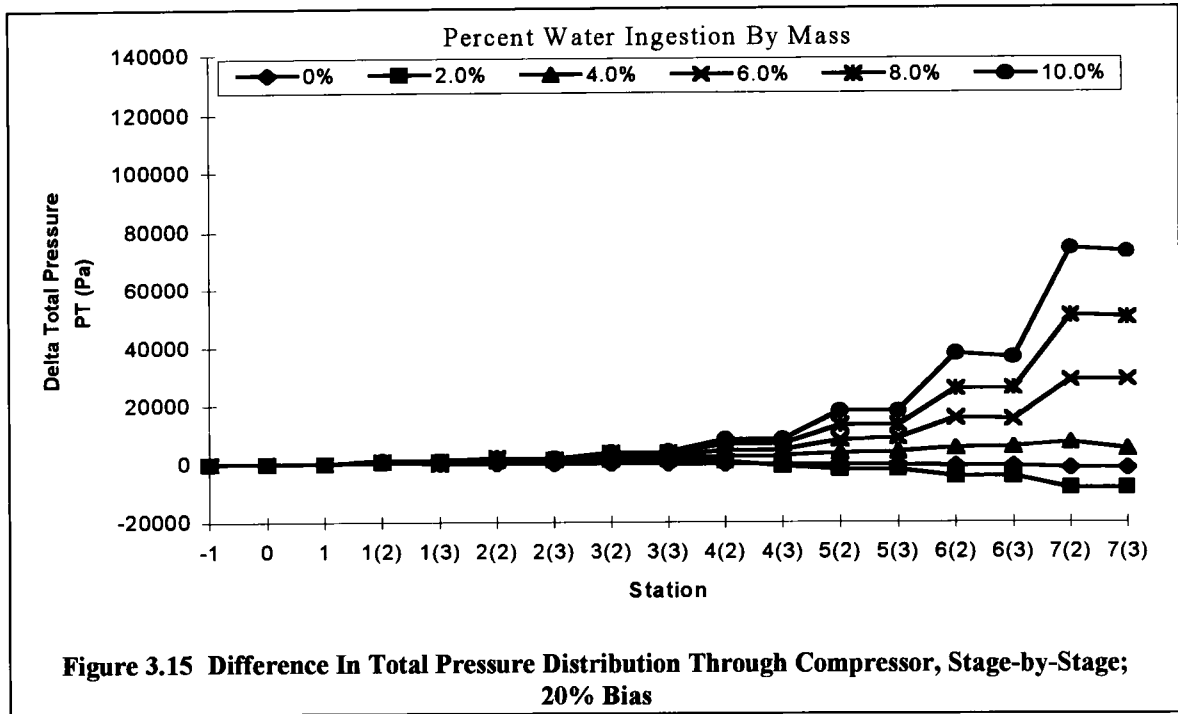
3.4 Total Pressure

Figure 3.13 represents the baseline for the total pressure (PT) where the total pressure decreases with increased water ingestion. The total pressure increased through compression across the rotor rows and remained constant across the stator rows for the case without liquid injection, and decreased slightly for cases with liquid injection due to inter-phase heat transfer taking some energy from the gas, resulting in the lowering of total pressure. This was the same effect observed for the total temperature discussed in section 3.3. Figures 3.14 through 3.16 depict the changes observed for a bias of 10, 20, and 30 percent.

For the 10% bias case (Figure 3.14), the 2% water ingestion case showed an increase from station 1(2) to 4(3) in total pressure as a result of the bias applied to the saturation pressure. At station 4(3) where full evaporation took place, the difference in total pressure decreased until the air stream exited the compressor. The remaining 4, 6, 8, and 10 percent water ingestion cases all showed an increase in the difference in total pressure throughout the compressor. The magnitude of the 4% water ingestion case started to decrease at station 7(3).

With a bias of 20 and 30 percent applied to the saturation pressure (Figure 3.15 and Figure 3.16), the 2, 4, 6, 8, and 10 percent water ingestion cases all had the same trends observed in the 10% bias case shown in figure 3.14.



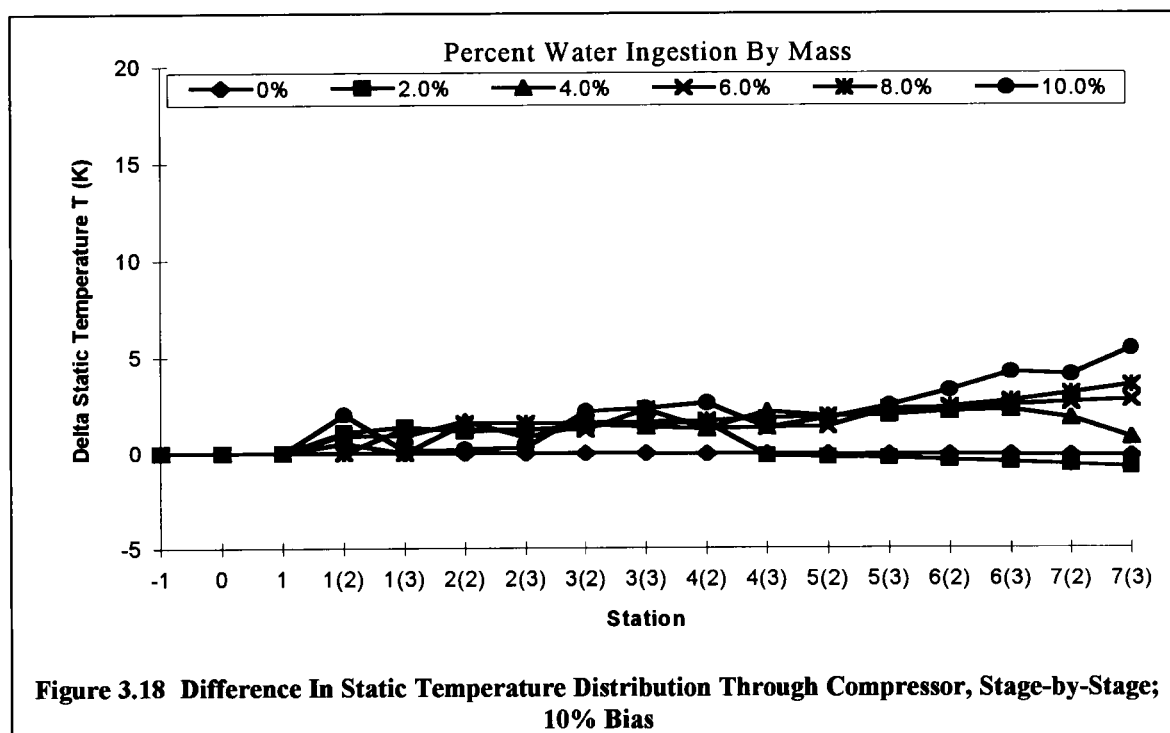
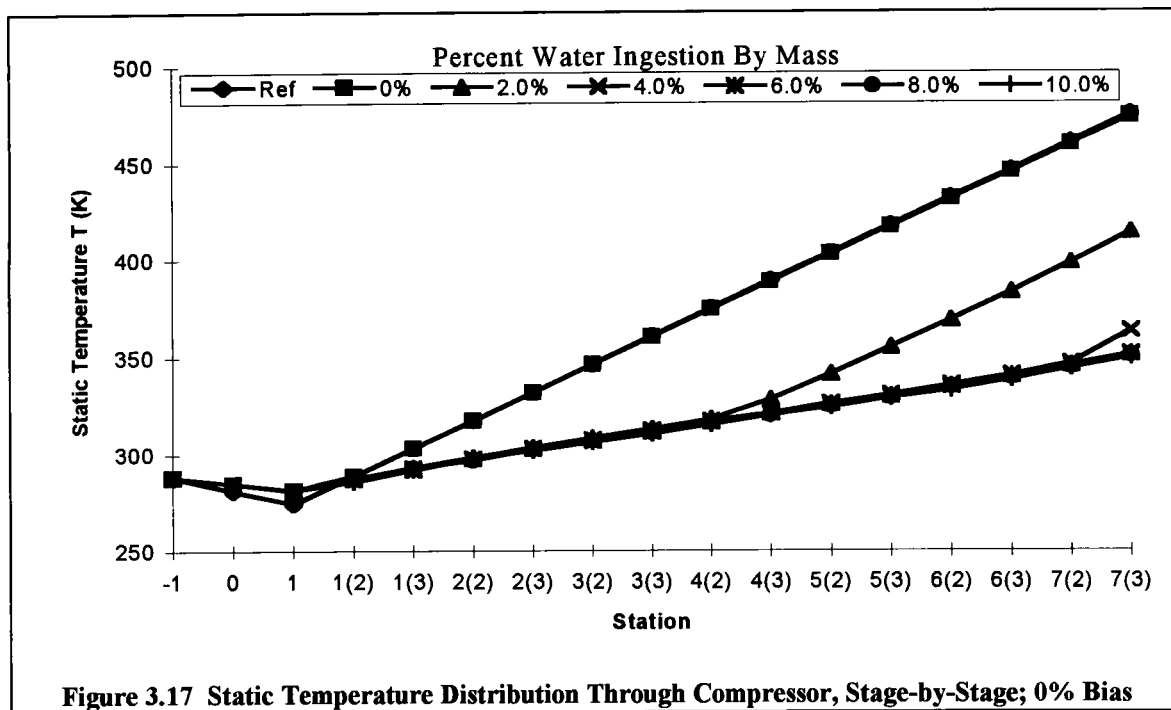


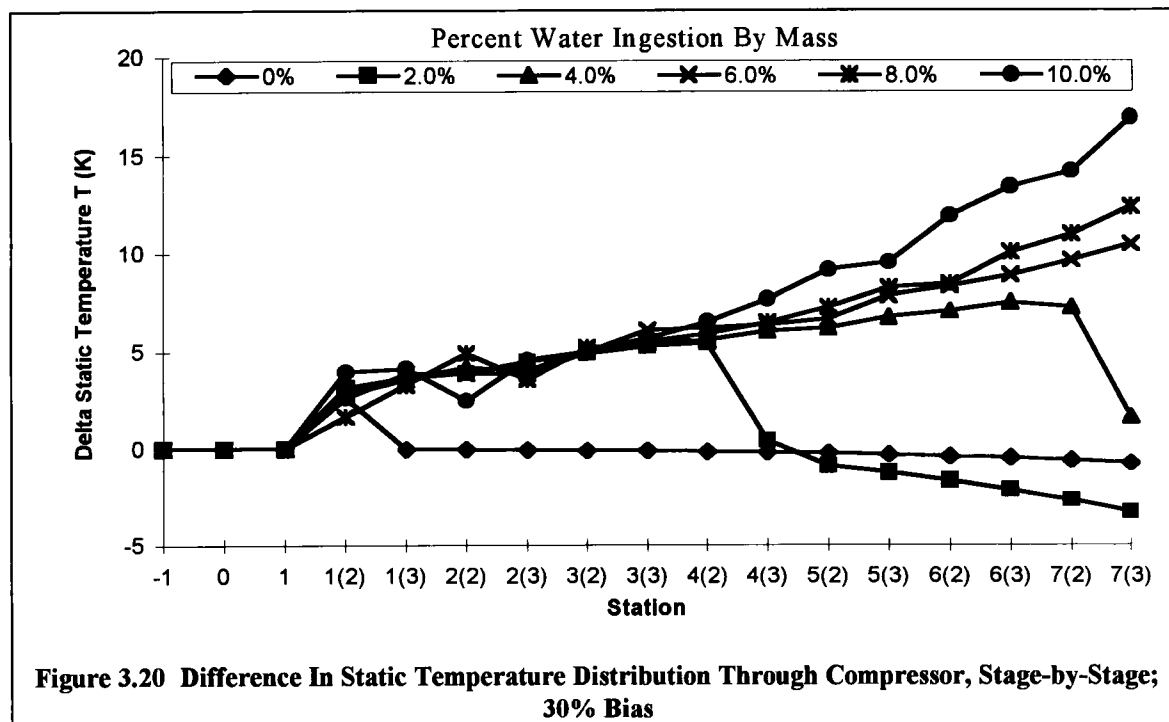
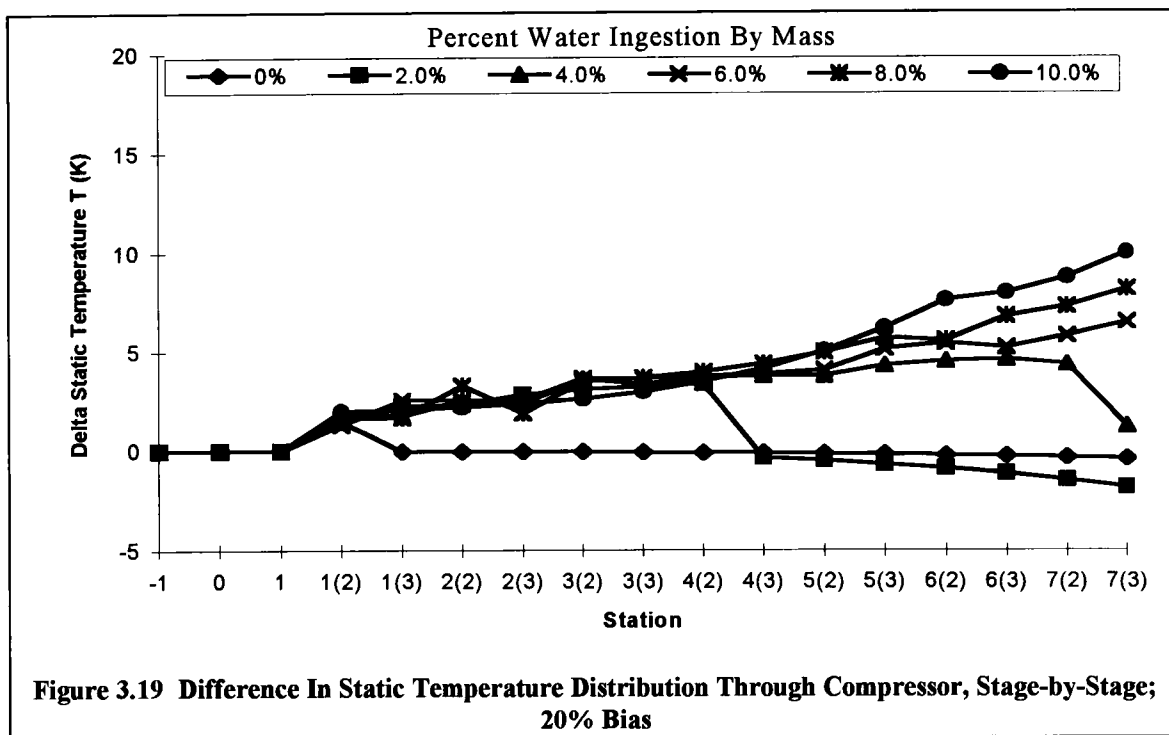
3.5 Static Temperature

Figure 3.17 represents the baseline for the static temperature (T). Once again, as the amount of ingested water increased, the static temperature decreased. Figures 3.18 through 3.20 depict the changes from the baseline with a bias of 10, 20, and 30 percent applied to the saturation pressure. In looking at figure 3.18 you will notice a hump at station 1(2) where 10% liquid water by mass was ingested along with saturated air. To understand what caused the hump, one must remember that moisture within the air stream condensed from station -1 to station 1 as the static temperature decreased; the released energy was then converted to kinetic energy in the form of increased air flow velocity. This saturated mixture along with the additional ingested water then entered the rotor stage (Station 1). Through the rotor stage, the bias applied to the saturation pressure reduced the evaporation rate of the liquid water resulting in higher air flow static temperatures. With this in mind, the hump was the direct result of subtracting the baseline case from the 10% bias case where the evaporation of the liquid water within the system was forced to lag the baseline case.

With a bias of 10% applied to the saturation pressure (Figure 3.18), the 2% water ingestion case showed an increase in static temperature from station 1 through 4(3). Once the ingested liquid water evaporated at station 4(3), the static temperature decreased until the air flow exited the compressor. For the 4% water ingestion case, the static temperature slowly increased from station 1 through 7(2), at this station the static temperature started to drop off when the ingested water had fully evaporated. For the remaining 6, 8, and 10% cases, the temperature increased from station 1 all the way through the compressor.

The same trend was observed for the 20 and 30 percent bias cases. The only differences were the magnitudes of the static temperature change. The higher the bias, the greater the temperature differences.





3.6 Static Pressure

Figure 3.21 represents the baseline for the static pressure (P) where increased ingested water resulted in lowered static pressures through the compressor. Once the ingested water had fully evaporated, the static pressure increased at a faster rate than the cases where full evaporation had not taken place. Figures 3.22 through 3.24 depict the changes from the baseline or differences between biased cases and the baseline for biases of 10, 20, and 30 percent applied to the saturation pressure. The 10, 20, and 30 percent bias cases all follow the same trends. The only differences was that of magnitude; the greater the bias, the greater the difference in static pressure. Where a bias of 10% was applied to PSAT, the 2% ingested water case showed a rise in pressure from station 1 through 4(3), at this station where all the ingested water was evaporated, the static pressure difference started to decline. The 4, 6, 8, and 10% ingested water cases all show a rise of varying magnitudes in static pressure throughout the compressor.

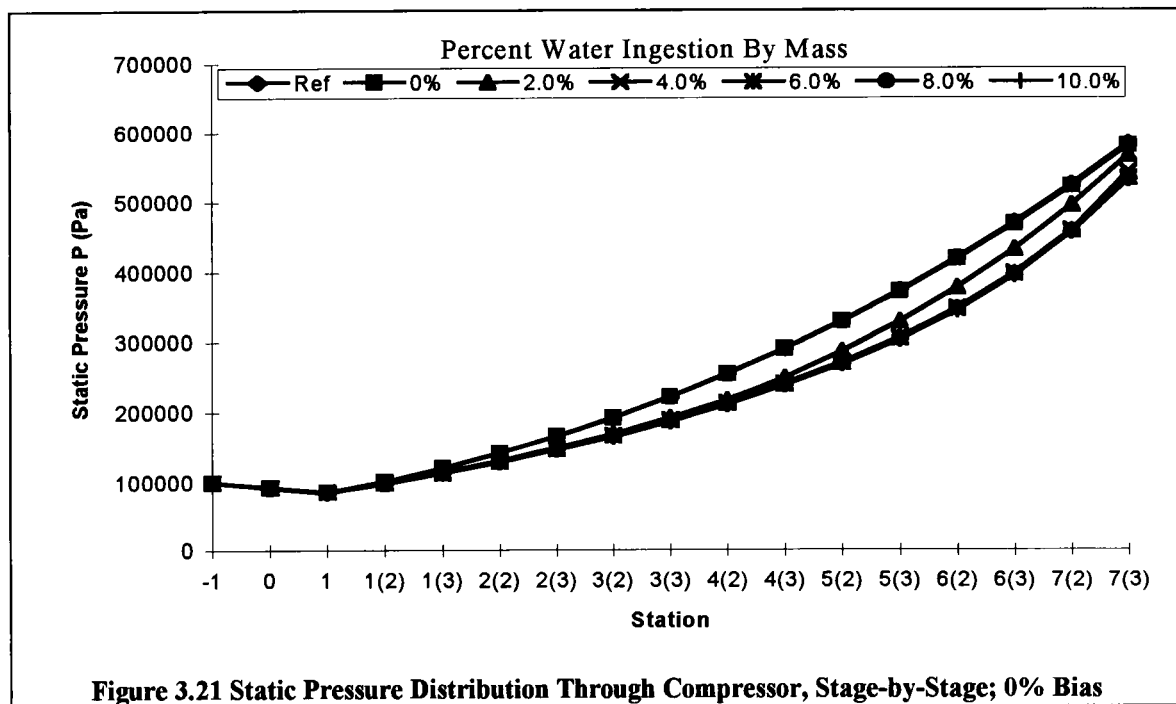
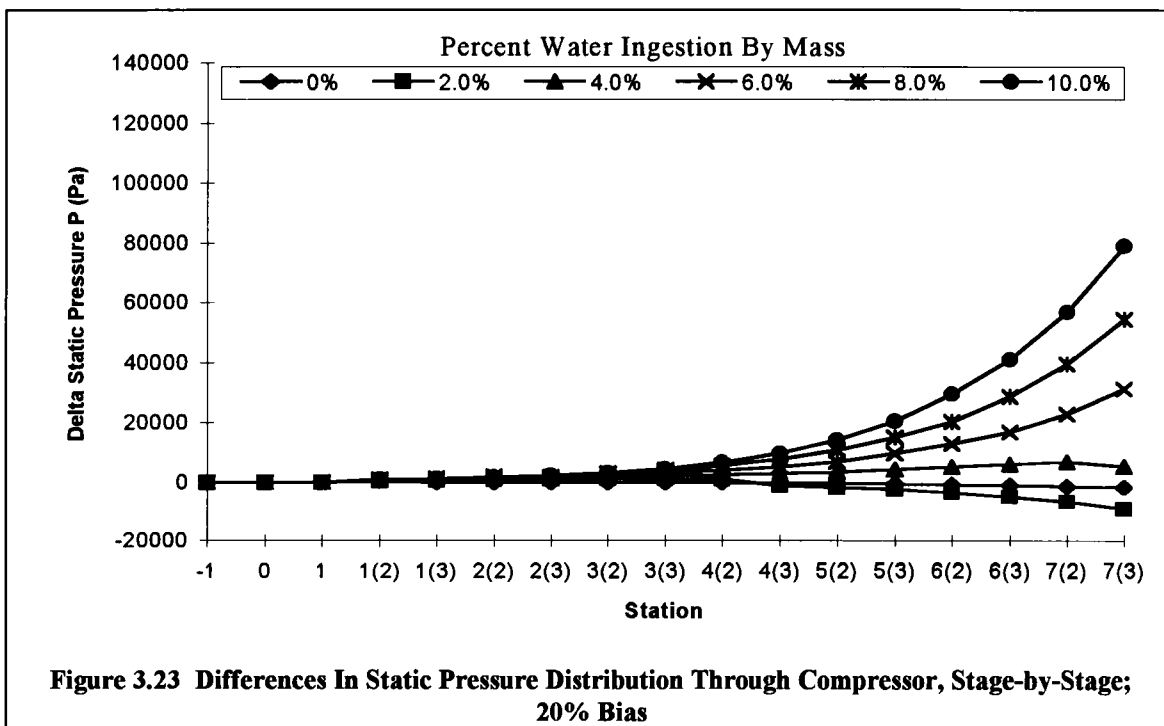
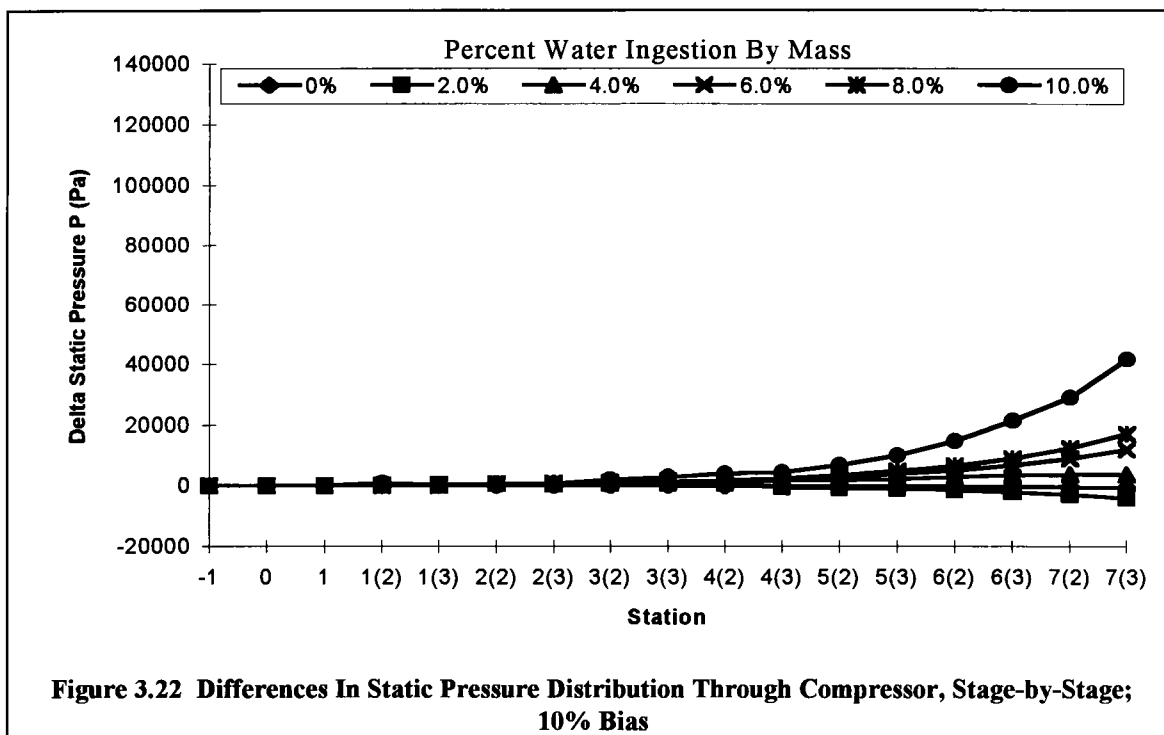
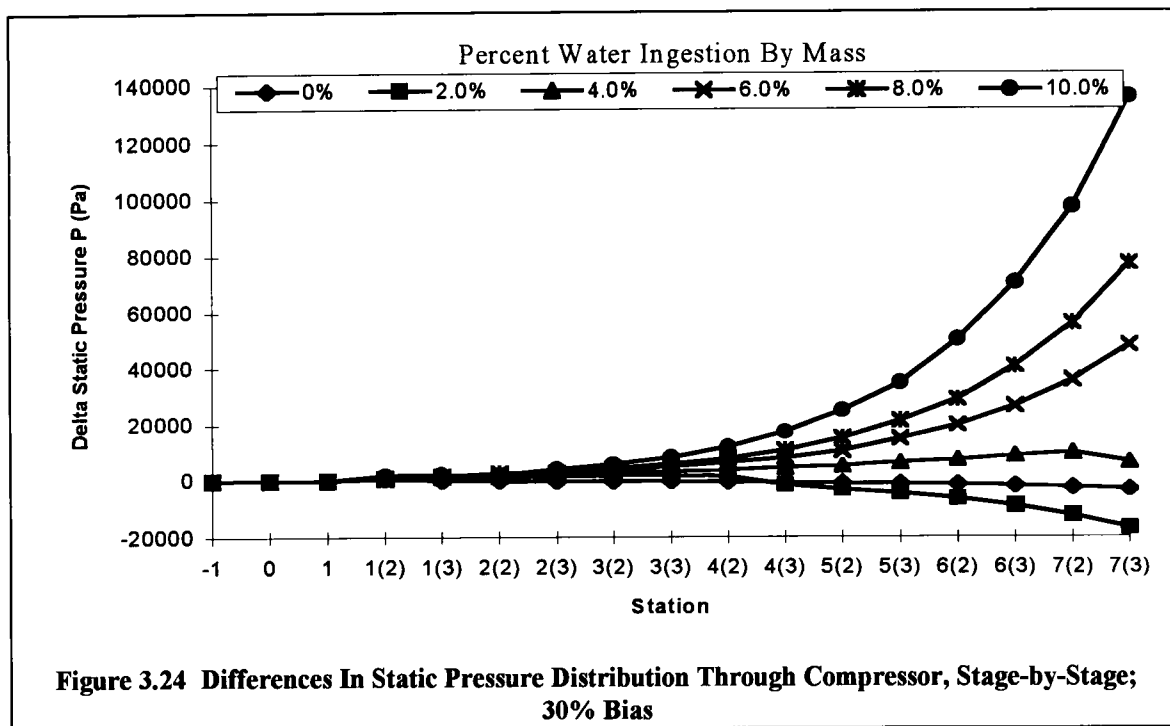


Figure 3.21 Static Pressure Distribution Through Compressor, Stage-by-Stage; 0% Bias





3.7 Static Density

Figure 3.25 represents the baseline for the Static Density (ρ) where the static density increases through the compressor with increased water ingestion. Figures 3.26 through 3.28 depict the changes from the baseline where a bias of 10, 20, and 30 percent was applied to the saturation pressure. The simulations using a 10, 20, and 30 percent bias on the saturation pressure all displayed the same trends throughout the compressor. Once again the 2% water ingestion case showed a decrease in static density once the liquid water which was ingested into the compressor had fully evaporated. The remaining 4, 6, 8, and 10% water ingestion cases all had a rise in static density.

3.8 Axial Velocity

Figure 3.29 represents the baseline for the Axial Velocity (CA). Figures 3.30 through 3.32 depict the changes from this baseline. With a 10, 20, and 30 percent bias applied to the saturation pressure, the axial velocity followed the same trends but different magnitudes. The axial velocity for the 2% water ingestion case increased through the compressor where the 4, 6, 8, and 10% water ingestion cases all decreased.

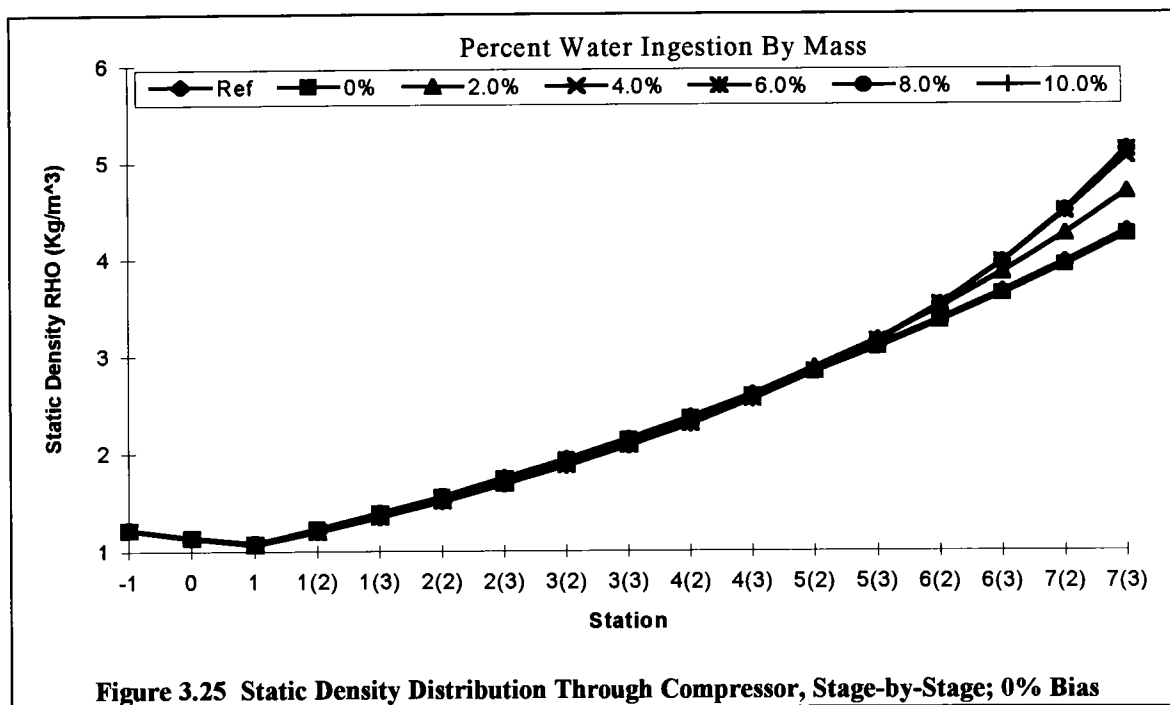


Figure 3.25 Static Density Distribution Through Compressor, Stage-by-Stage; 0% Bias

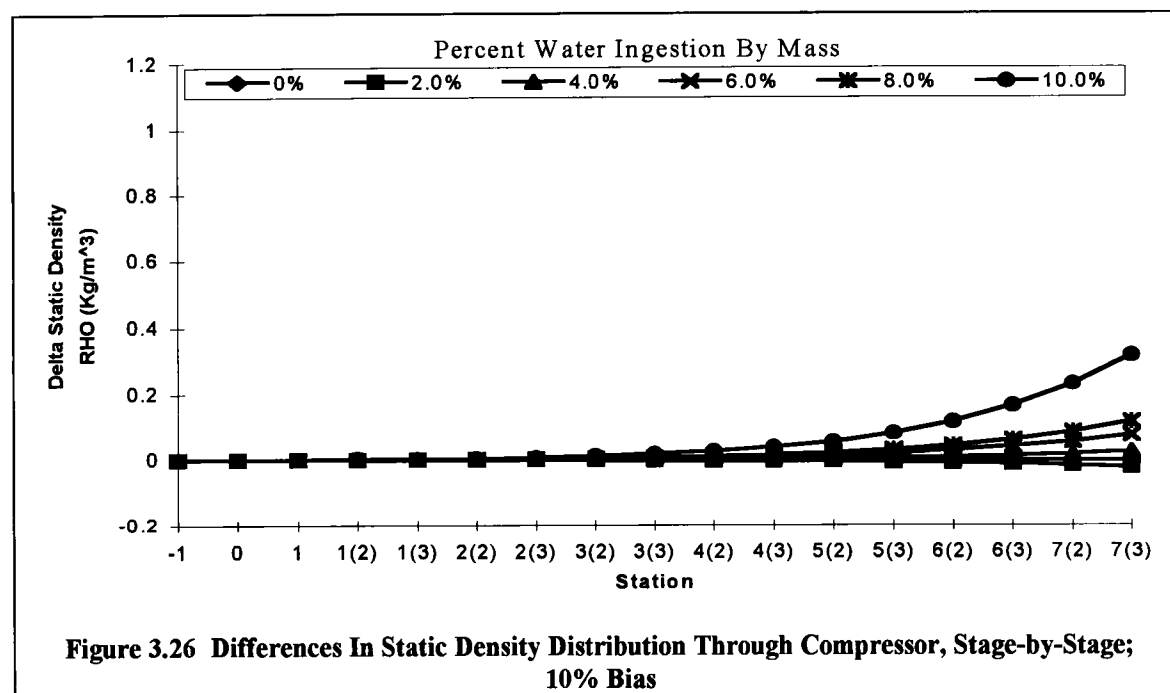
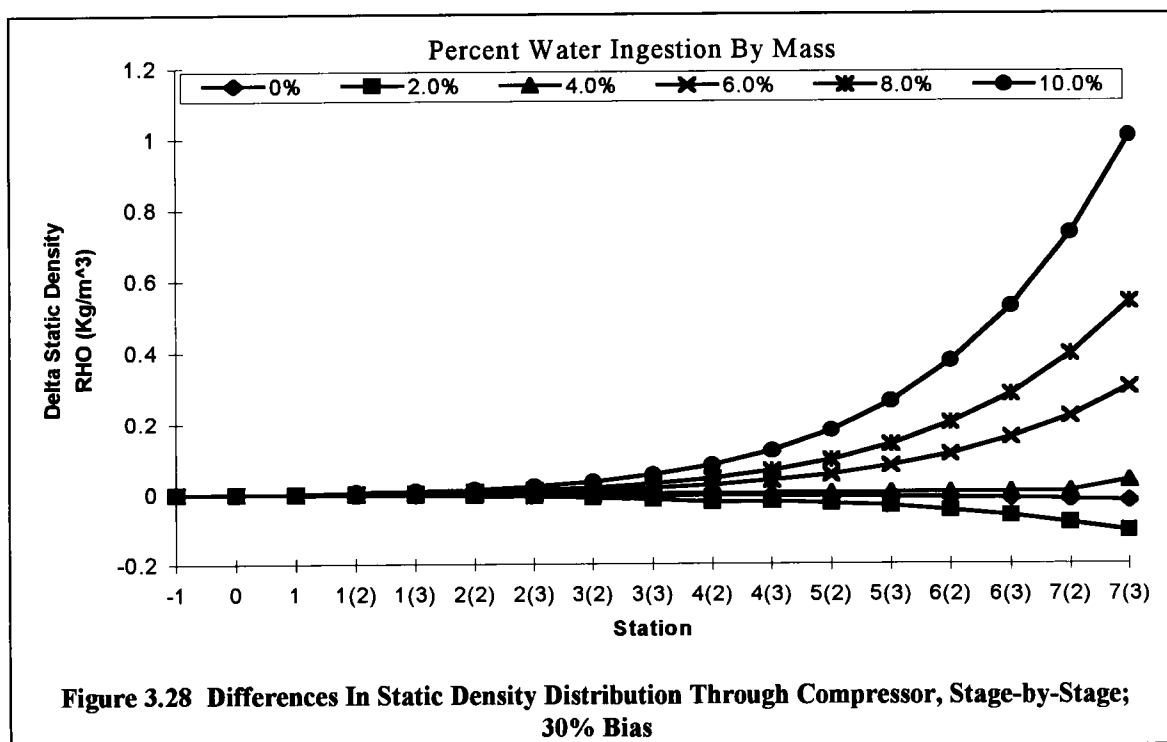
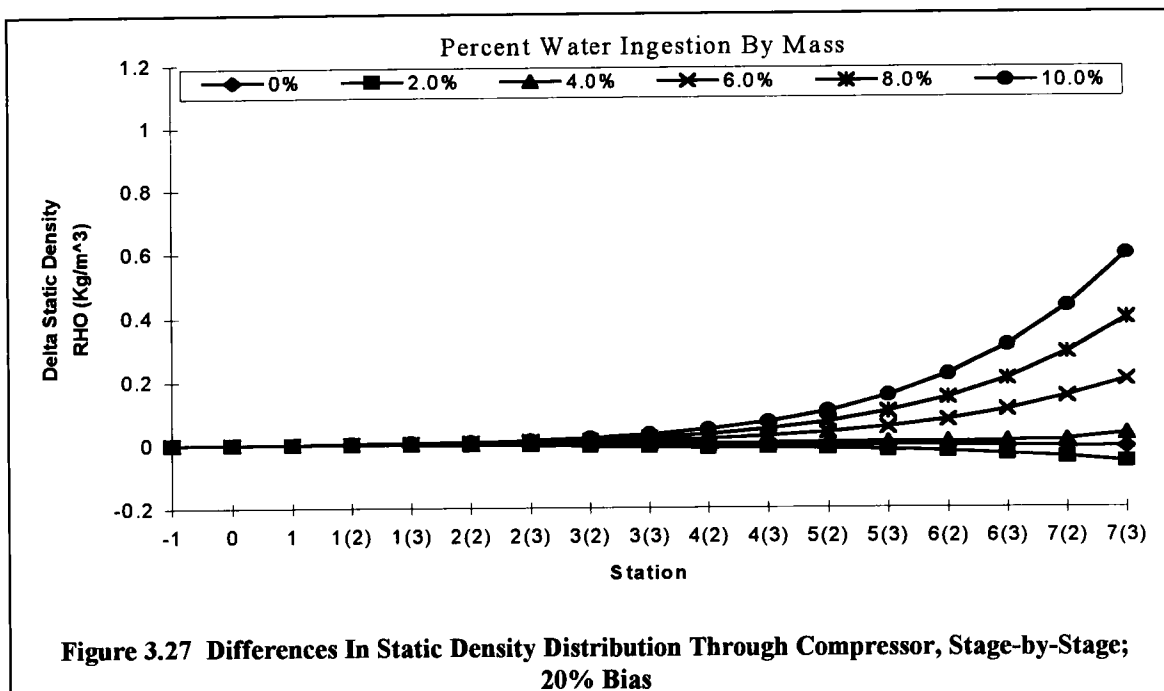
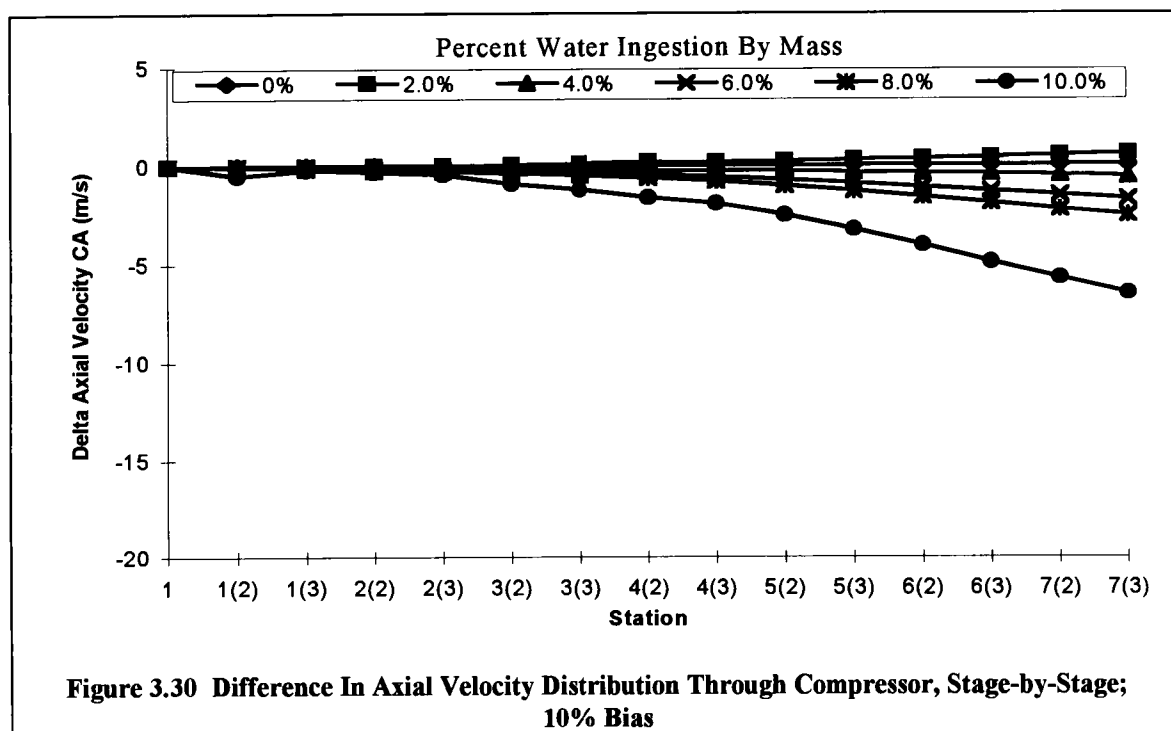
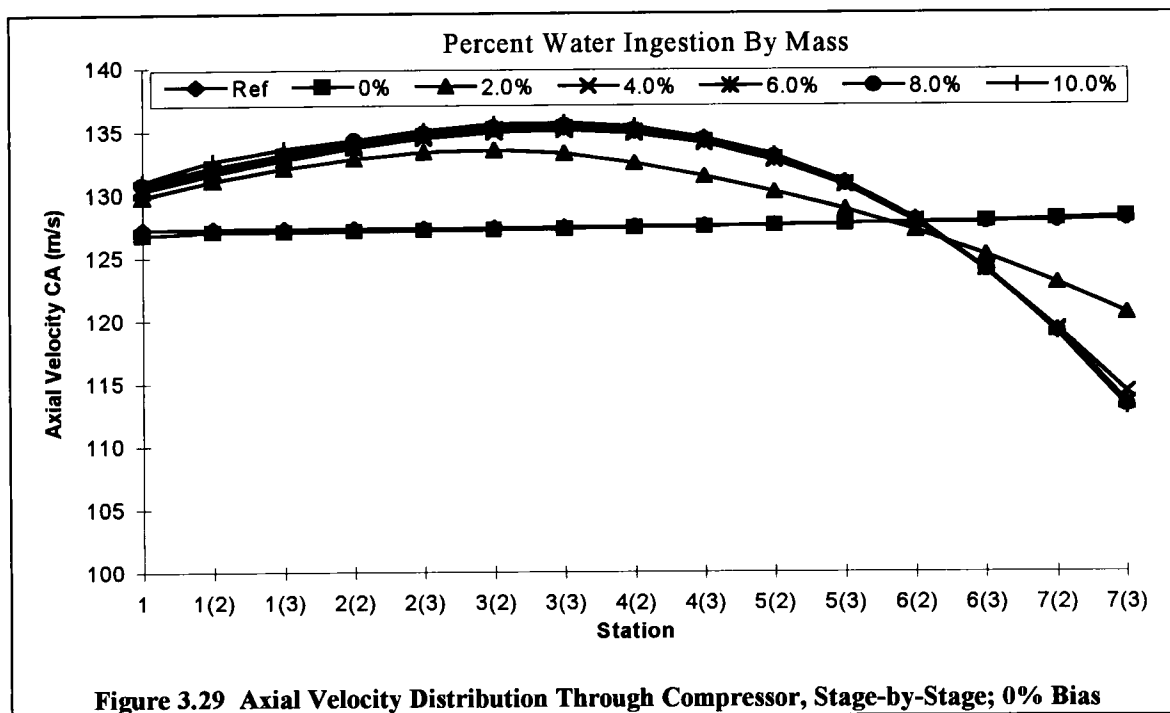


Figure 3.26 Differences In Static Density Distribution Through Compressor, Stage-by-Stage; 10% Bias





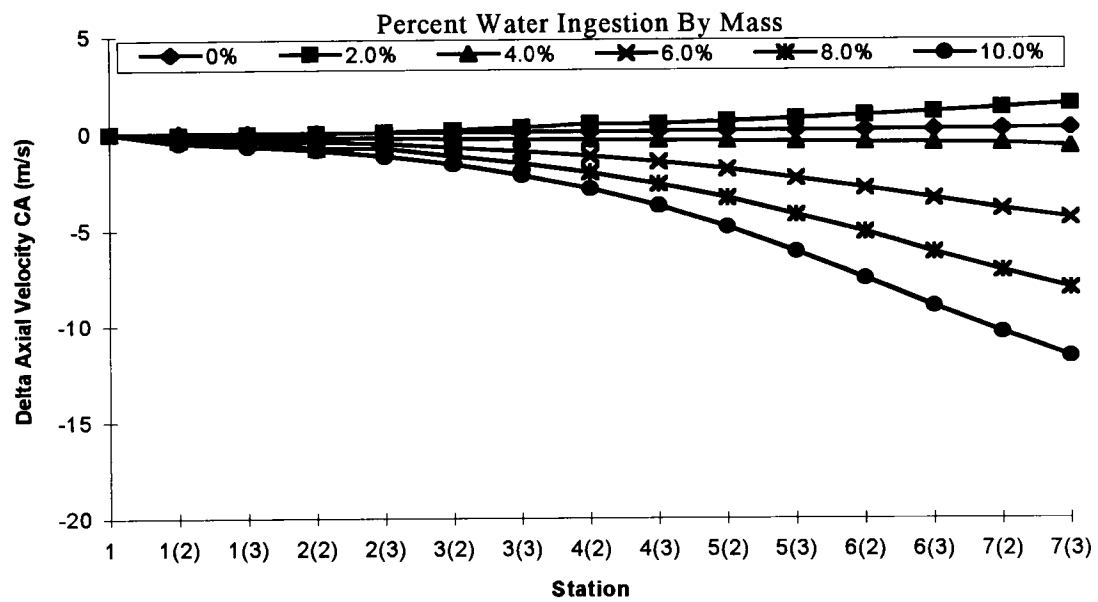


Figure 3.31 Difference In Axial Velocity Distribution Through Compressor, Stage-by-Stage; 20% Bias

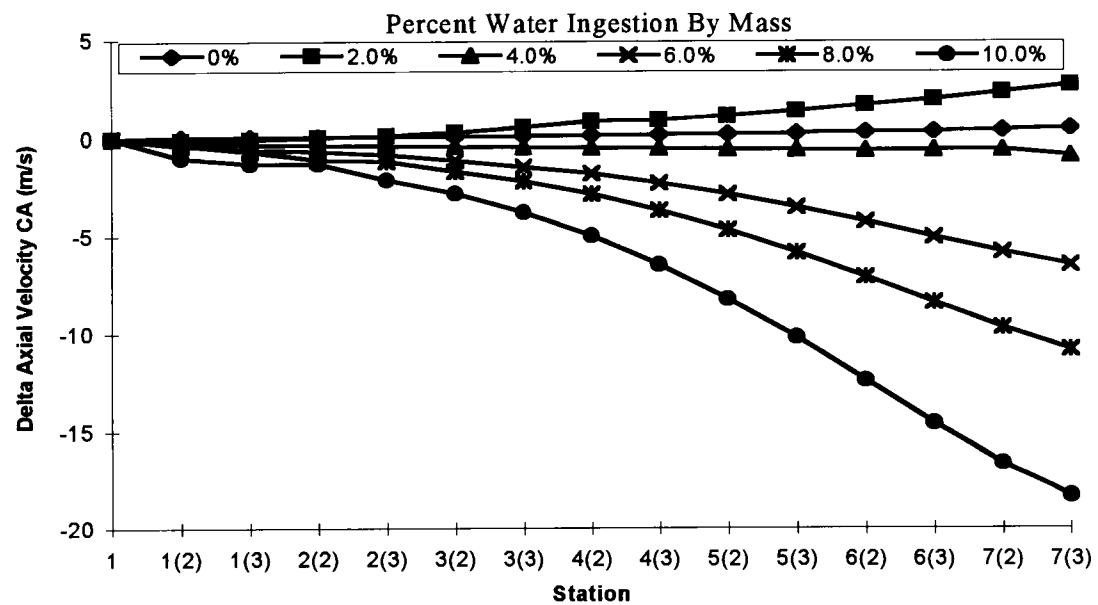


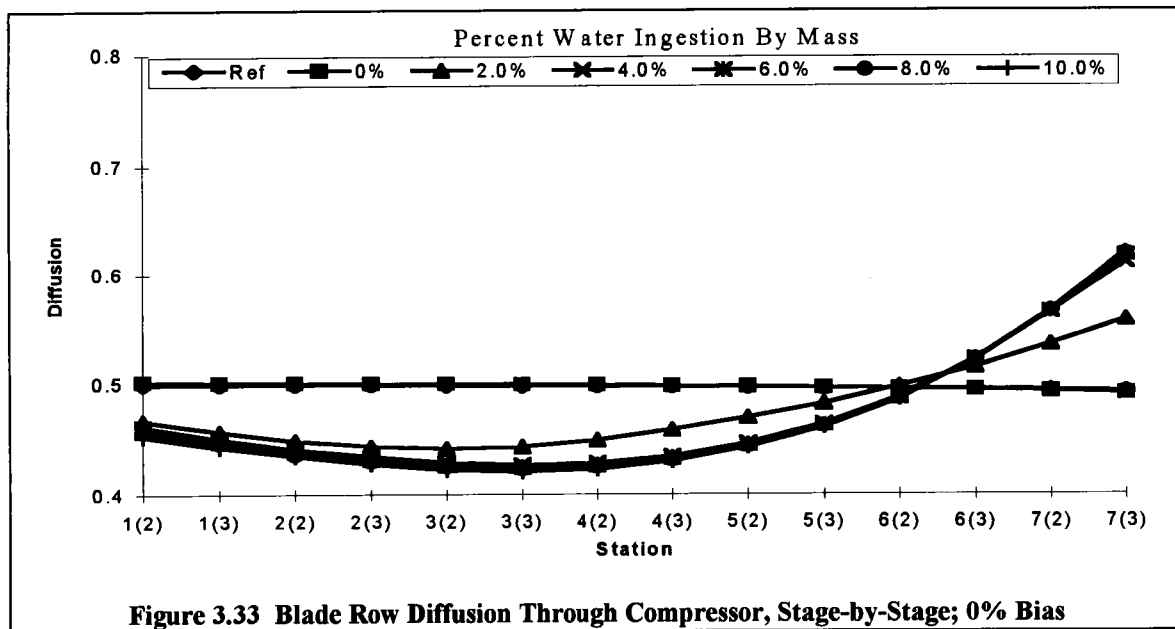
Figure 3.32 Difference In Axial Velocity Distribution Through Compressor, Stage-by-Stage; 30% Bias

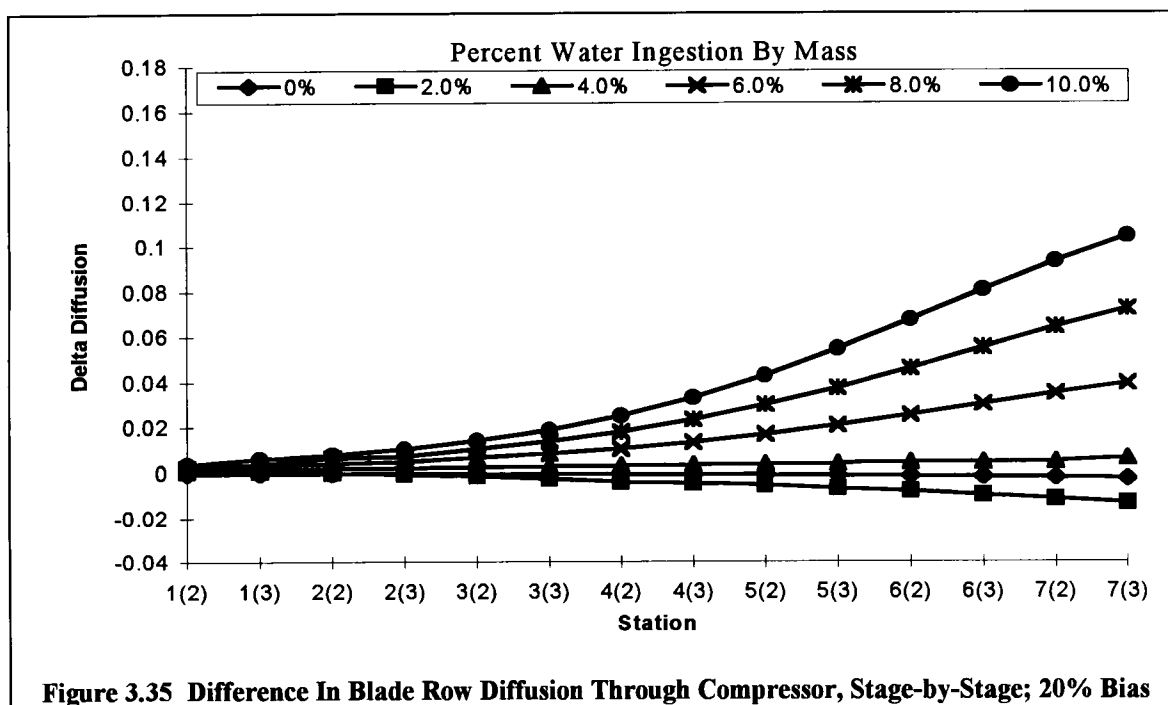
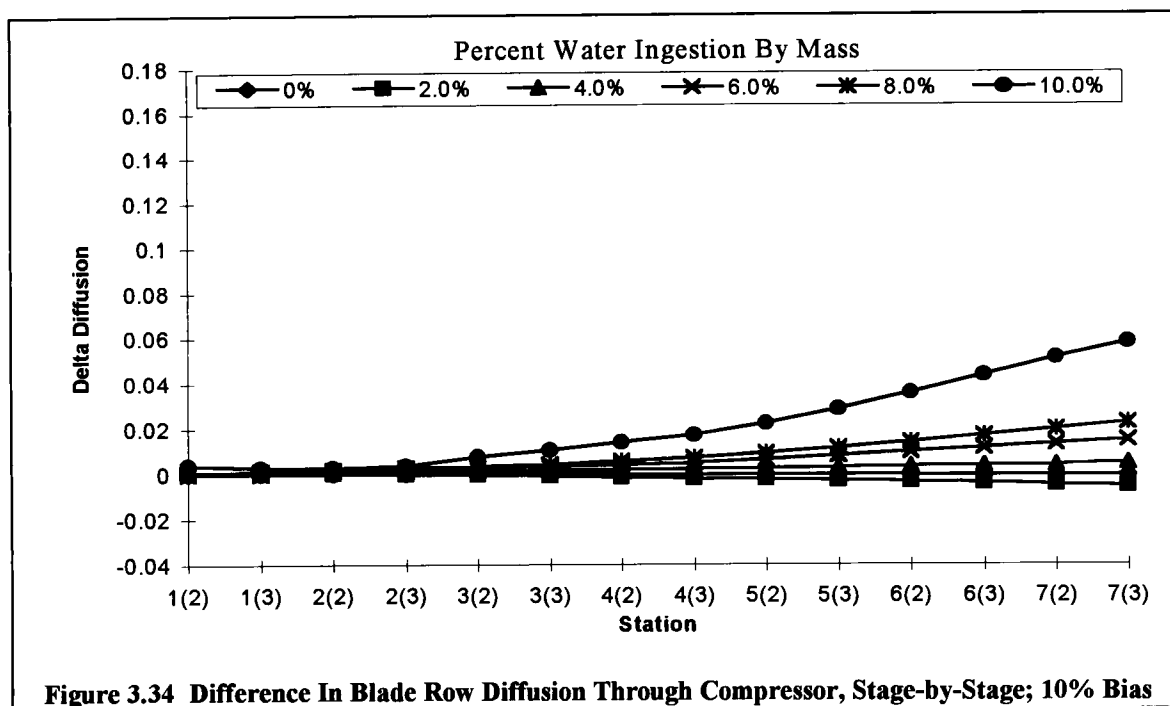
3.9 Blade Row Diffusion

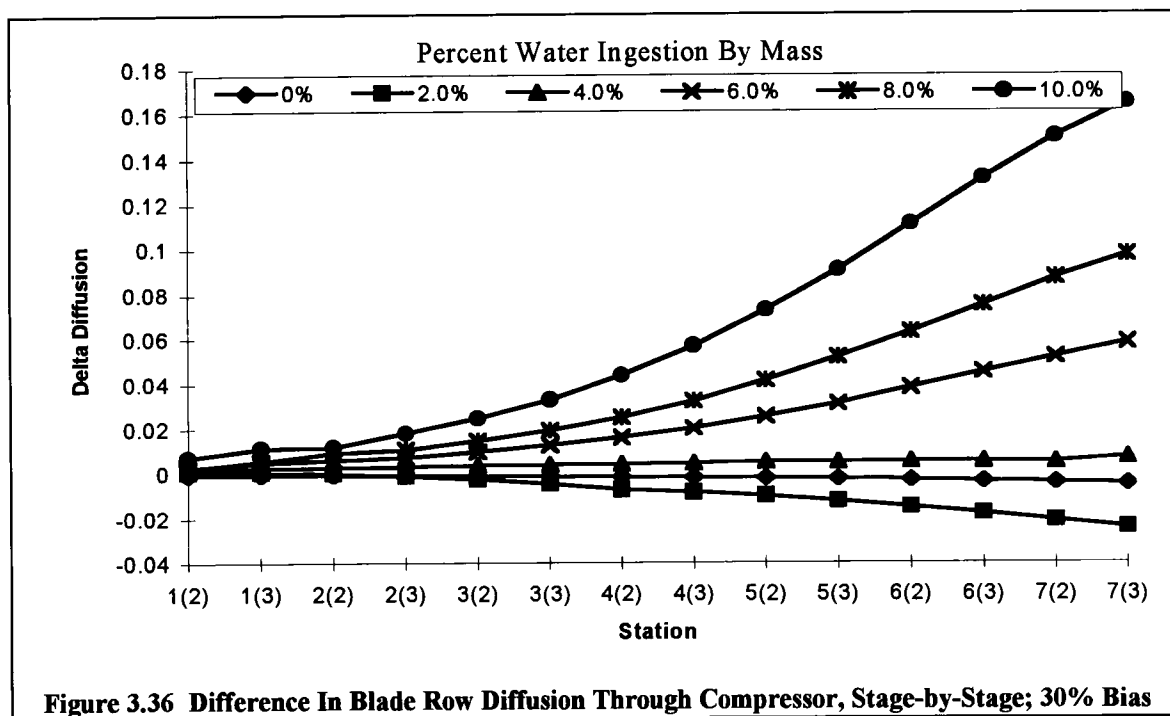
Figure 3.33 represents the baseline for the Blade Row Diffusion. Increased water ingestion decreased the diffusion factor for the first five stages of the compressor. It then increased through the sixth stage all the way to the back end of the compressor. Figures 3.34 through 3.36 depict the changes from that baseline. The diffusion factor is an NACA developed parameter used as a criterion for placing a limit of 0.6 on the permissible diffusion on the suction side of the blades. Using cascade data, a direct correlation between the total pressure loss and the deceleration of the upper side of the blades can be shown. The diffusion factor is defined using this correlation [15,18] and given by

$$D = 1 - \frac{V_e}{V_i} + \frac{|CW_i - CW_e|}{2\sigma V_i}; \quad \text{Subscripts "i" and "e" refer to inlet and exit respectively} \quad (9)$$

The diffusion factor for the baseline case with 6, 8, and 10% water ingestion all reached as high as 0.62 within the last stage of the compressor. As stated above, these values are above the permissible value of 0.6 and could be an indication of compressor stall conditions. As shown in figures 3.34 through 3.36, the changes from the baseline for the 10, 20, and 30 percent bias cases all follow the same trends but different magnitudes. The diffusion factor increased for the 4, 6, 8, and 10% water ingestion cases, and actually decreased for the 2% water ingestion case.







3.10 Stage Power Input

Figure 3.37 represents the baseline for the Stage Power Input (WDOT). The magnitude of the decrease in the first half of the compressor and the corresponding increase through the second half was a direct result of increasing water ingestion. Figures 3.38 through 3.40 depict the changes from the baseline due to biases of 10, 20, and 30% applied to the saturation pressure. Once again the trends were the same for all three bias cases, the only difference being the magnitude of the power input requirements for each of the bias cases. As the bias was increased for the 4, 6, 8, and 10% water ingestion cases, so did the power requirements. For the 2% liquid water ingestion case, the power requirements continued to decrease as the bias was increased to the saturation pressure.

3.11 Compressor Characteristics

Figure 3.41 illustrates the 10, 20, and 30% bias effects expressed by the corrected mass flow of the gases entering the compressor versus the total pressure ratio. As can be seen, the pressure ratio increases when the lags applied to the evaporation of the liquid droplets increases.

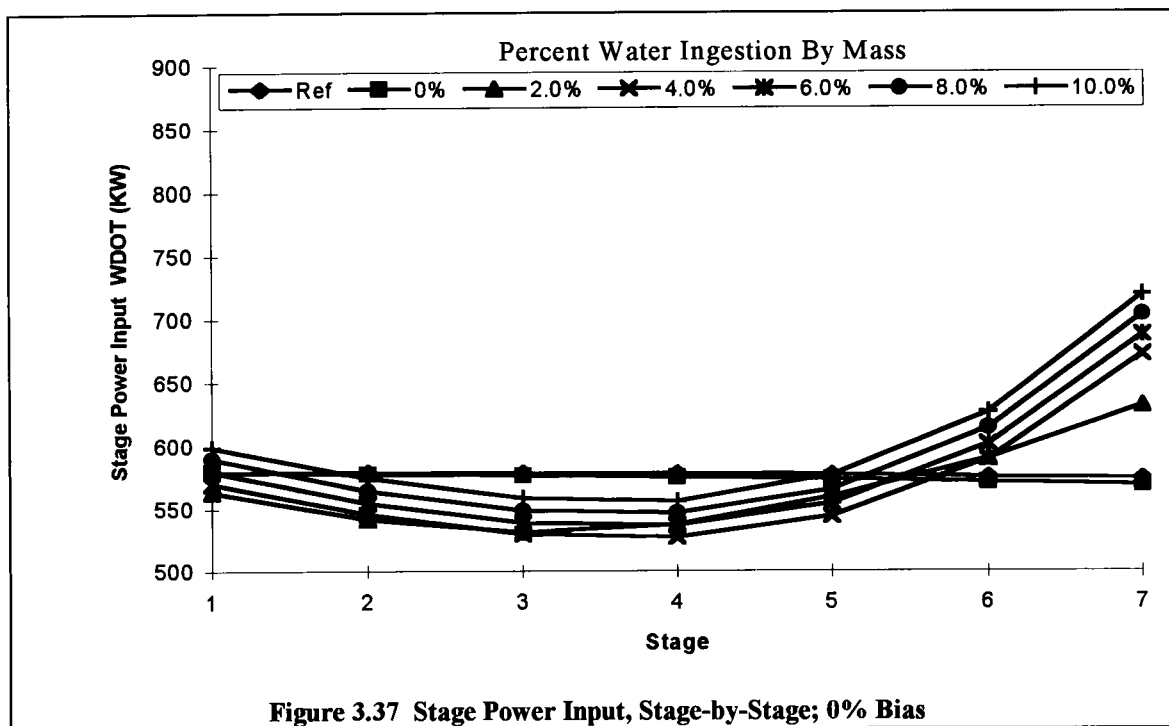


Figure 3.37 Stage Power Input, Stage-by-Stage; 0% Bias

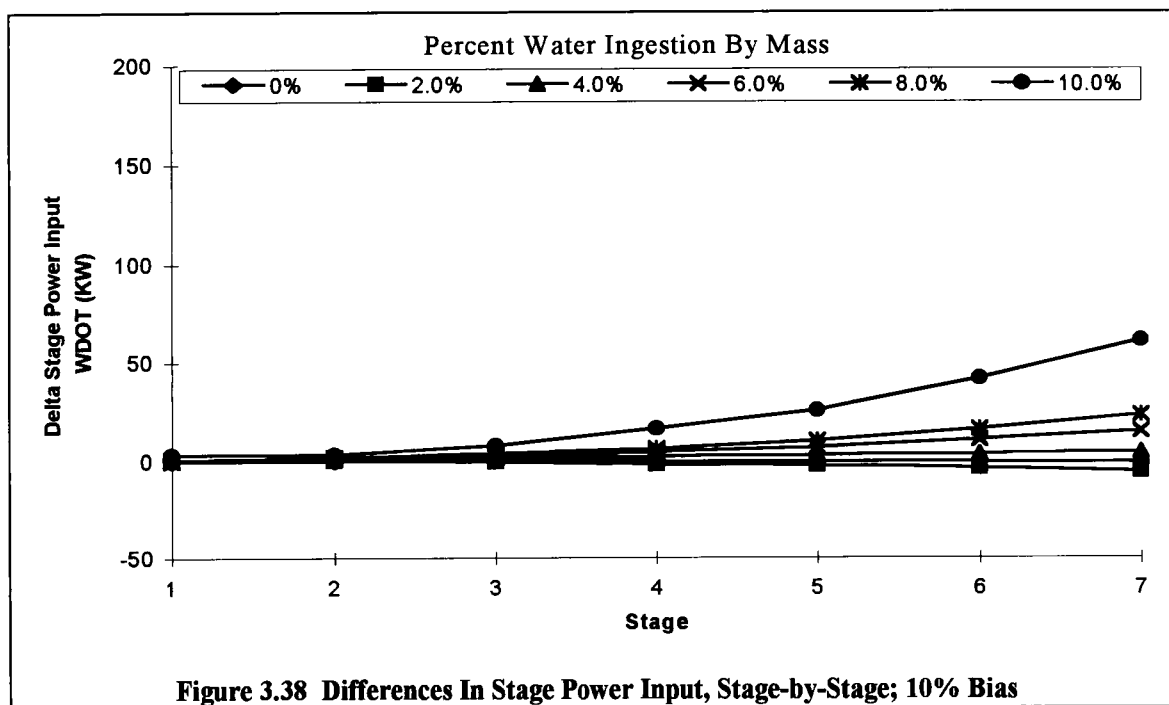
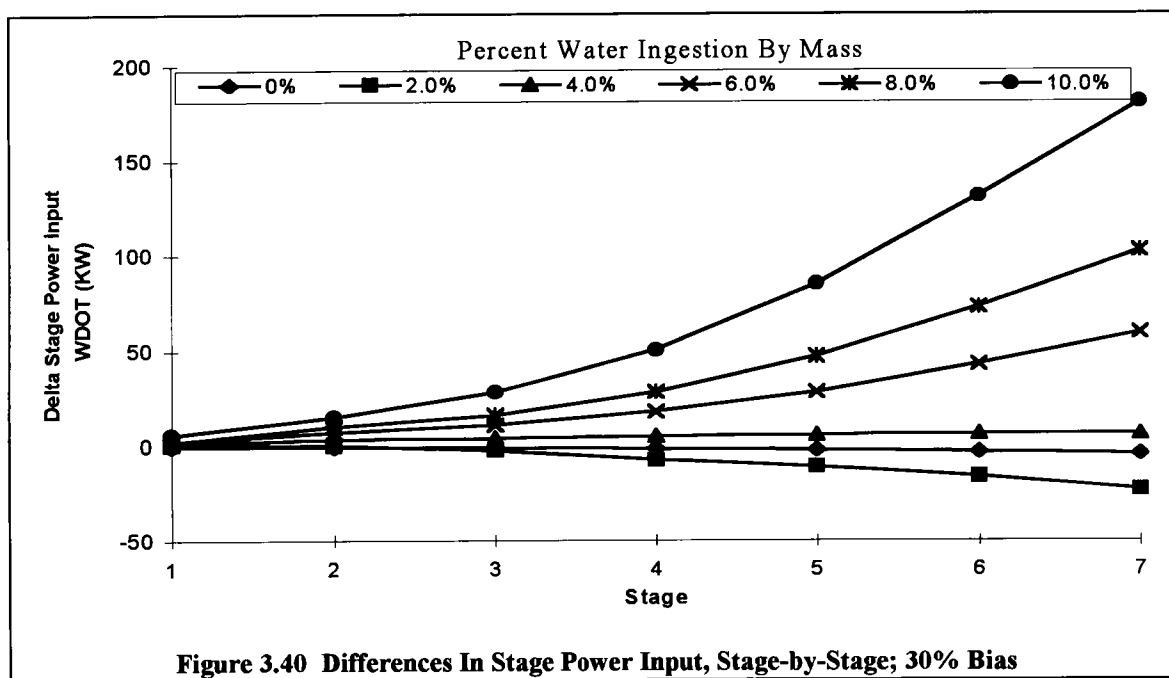
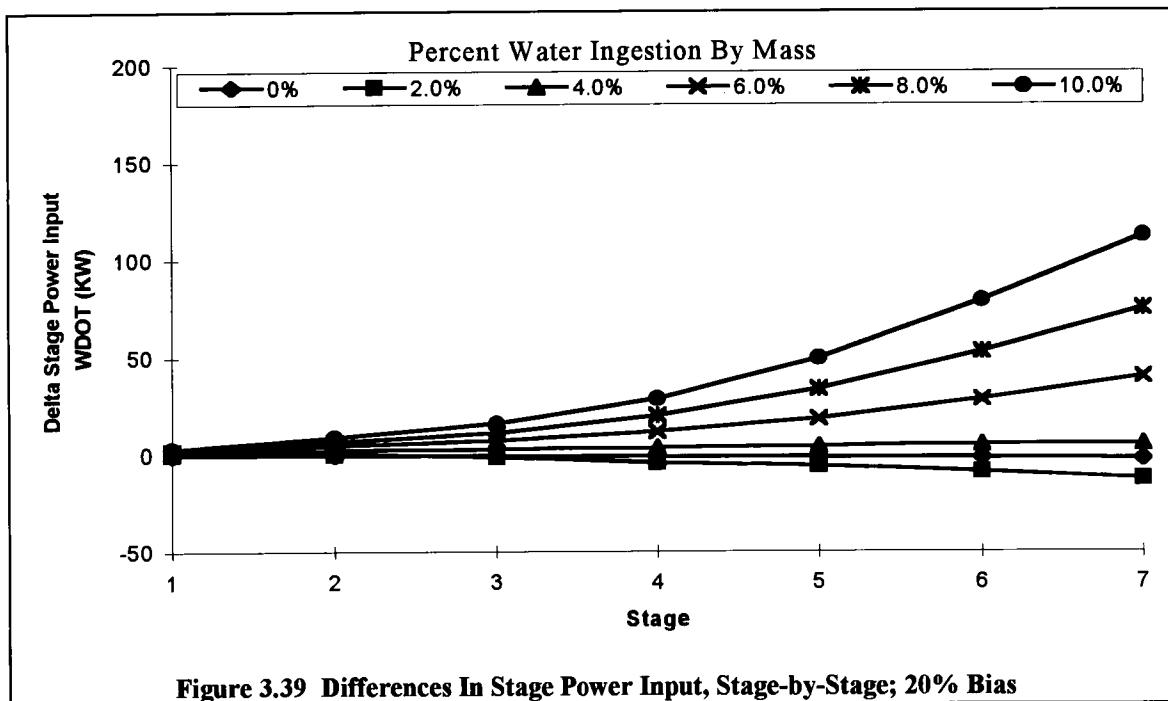
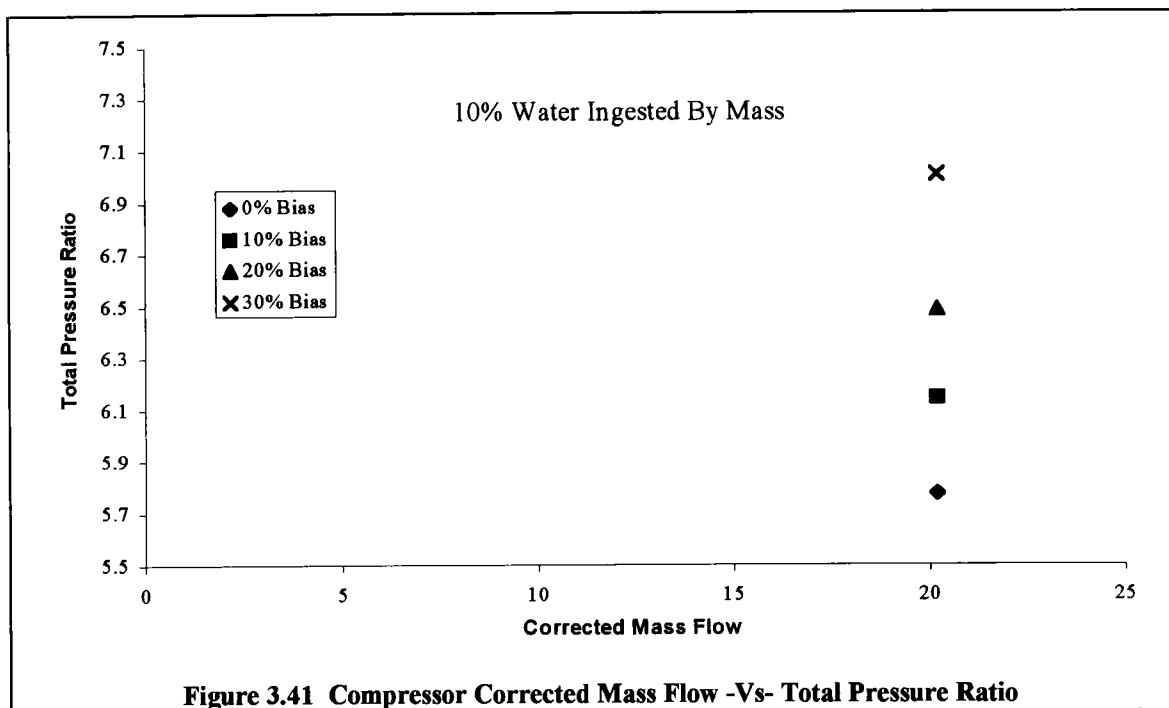


Figure 3.38 Differences In Stage Power Input, Stage-by-Stage; 10% Bias





4. CONCLUSIONS

This study examined the effects of non-equilibrium water evaporation on compressor performance for various rates of liquid water ingestion. Increasing water ingestion resulted in increasing mass flow of water vapor (MDOTV) and liquid (MDOTL) throughout the compressor. The blade row diffusion factors were heavily influenced by the effects of water ingestion and the biased water droplet evaporation rates. For example, a value of .6 for the diffusion factor is a good rule of thumb in ensuring normal operations. However, in this investigation, for the baseline, the diffusion factor was marginal (Greater than 0.6) for the 4, 6, 8, and 10% water ingestion cases. For reduced evaporation rates obtained by biasing the saturation pressure, the diffusion factor increased with greater bias, such that it is doubtful that the compressor would actually operate.

The trends observed in the data generated for this study lend themselves to the following conclusions:

1. In looking at what happened to the mass flow of liquid (MDOTL) in comparison to the mass flow of vapor (MDOTV) one would observe that: For all cases, more of the liquid droplets remained in a liquid state longer as a result of the bias applied to PSAT. Since the evaporation of the liquid droplets lagged in comparison to the baseline, there was more liquid present at each stage to evaporate. It was not surprising then to see that the MDOTV decreased when compared to the baseline. Once full evaporation was achieved during the compression process (which is evident in the 2% water ingestion case) the difference from the baseline for both MDOTL and MDOTV went to zero.

The random behavior of the higher liquid droplet cases for both MDOTL and MDOTV can be understood if one remembers that what was graphed is the difference of MDOTV and MDOTL from the baseline where 0% liquid water was added but the air flow was saturated. With the evaporation of the liquid droplets lagging the equilibrium case, there was more liquid at each stage within the compressor that could evaporate. Thus, as the air flow was heated during the compression process there was more

liquid present to evaporate or cool the air present at that stage. However, by forcing the saturation pressure to be reached early, the air flow temperature was not cooled through evaporation as much as the equilibrium case. The resultant higher delta temperatures and pressures enable the air flow to hold more moisture; thus, for the cases where 8 or 10% liquid water was ingested and a bias was applied to PSAT, the air flow showed an increase in MDOTV and a decrease in MDOTL in the later stages when compared to the baseline case.

2. Where 4% or more liquid water was ingested along with saturated air into an axial-flow compressor, the total and static temperatures and pressures all decreased as the amount of ingested water increased. And when the bias that was initially subtracted from the saturation pressure increased, these parameters all increased. But the increase in temperature and pressure as a result of the bias did not offset the decrease produced by the ingested water. The 2% water ingestion case was different because with a bias applied to PSAT, it was the only condition which the liquid droplets fully evaporated within the compressor. Once full evaporation of the ingested water had taken place, the total and static temperatures and pressures decreased rather than increased when the bias applied to PSAT increased.

3. Where 4% or more liquid water was ingested, the axial velocity (CA) increased in the first five stages within the compressor but decreased in the last two stages. The magnitude of the increase and the corresponding decrease was a direct result of increasing water ingestion. The bias subtracted from PSAT decreased the axial velocity throughout the compressor where 4% or more liquid water was ingested. This effect was amplified as the bias increased. The only exception once again was the 2% water ingestion case. The axial velocity increased slightly throughout the compressor.

4. For the compressor used in this study, the diffusion factor was the most important parameter used in determining whether or not this compressor would continue to operate. Where 4% or more liquid water was ingested, the diffusion factor decreased in the first three stages and increased in the remaining stages. Once again, the magnitude of the decrease and the corresponding increase was a direct result of increasing water ingestion. This trend in the diffusion factor was then amplified as the bias subtracted from the saturation pressure increased. Since the diffusion factor in this investigation indicated that this

compressor probably would not operate where 4% or more liquid water was ingested along with saturated air. And the reduced evaporation rates obtained by biasing the saturation pressure resulted in further increasing the diffusion factor, it is doubtful that this compressor could actually operate were 4% or more liquid water was ingested.

5. RECOMMENDATIONS

Please keep in mind that this was a simplistic study, and the conclusions drawn from this study may not reflect reality when the compressor is combined with the combustor and turbine. Thus, it is recommended that the methodology used in this investigation be incorporated into a complete engine code which takes into account the effects of the combustor, turbine, and nozzle to rematch the engine for each simulated condition. It would also be useful if this model were improved by using a more modern, higher stage compressor. The resultant higher pressures and temperatures exiting the compressor should enable all the ingested liquid water, with reduced evaporation rates, to evaporate prior to exiting the compressor. This information would be beneficial in understanding what is actually happening to the higher water ingestion cases towards the back end of the compressor.

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BIBLIOGRAPHY

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APPENDIXES

APPENDIX A . SIMULATED REFERENCE COMPRESSOR

Table A-1 Freestream, Inlet Exit, and IGV Design Configuration

PARAMETER	STATION		
	FREESTREAM (-1)	INLET EXIT (0)	IGV EXIT (1)
A (m/s)	340.31	336.06	332.11
C (m/s)	3.40	119.92	166.08
M	0.0100	0.3568	0.5001
AA (m ²)	4.7983	0.145	0.1450
RHO (kg/m ³)	1.2249	1.1503	1.0842
T (K)	288.16	281.01	274.44
P (Pa)	101325	92795	85420
TT (K)	288.17	288.17	288.17
PT (Pa)	101332	101332	101332
ALPHA (deg)			40.00
BETA (deg)			57.66
U (m/s)			307.72
CA (m/s)			127.23
CW (m/s)			106.75
VR (m/s)			237.85
MR			0.7162
TTR (K)			302.59
PTR (Pa)			120227
SIGIGV			1.00
DIGV			0.0601

Table A-2 Compressor Design Configuration

PARAMETER				STAGE			
	1	2	3	4	5	6	7
		ROTOR EXIT (STATION 2)					
WDOT (KW)	579.542	579.198	578.723	577.905	576.939	575.269	573.817
A (m/s)	340.72	357.32	373.16	388.34	402.92	416.96	430.50
C (m/s)	237.84	237.84	237.83	237.82	237.80	237.77	237.75
M	0.6981	0.6656	0.6373	0.6124	0.5902	0.5702	0.5523
AA (m^2)	0.1275	0.1005	0.0809	0.0662	0.0550	0.0463	0.0394
RHO (kg/m^3)	1.2322	1.5630	1.9417	2.3701	2.8498	3.3820	3.9681
T (K)	288.85	317.67	346.47	375.23	403.95	432.58	461.14
P (Pa)	102181	142540	193129	255304	330472	419982	525302
TT (K)	317.00	345.82	374.62	403.38	432.09	460.71	489.27
PT (Pa)	141490	191865	253849	328848	418312	523607	646260
ALPHA (deg)	57.64	57.64	57.62	57.6	57.57	57.51	57.47
BETA (deg)	40.00	40.00	40.00	40.00	40.00	40.00	40.00
U (m/s)	307.72	307.72	307.72	307.72	307.72	307.72	307.72
CA (m/s)	127.29	127.30	127.36	127.44	127.53	127.72	127.85
CW (m/s)	200.92	200.91	200.86	200.79	200.71	200.55	200.44
VR (m/s)	166.16	166.17	166.25	166.36	166.48	166.72	166.90
MR	0.4877	0.4651	0.4455	0.4284	0.4132	0.3999	0.3877
TTR (K)	302.59	331.42	360.23	389.01	417.74	446.41	475.00
PTR (Pa)	120227	165313	221322	289633	371679	468896	582674
SIGR	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DR	0.4994	0.4992	0.4986	0.4979	0.4970	0.4954	0.4941
		STATOR EXIT (STATION 3)					
A (m/s)	349.12	365.33	380.83	395.70	410.01	423.79	437.10
C (m/s)	166.16	166.20	166.30	166.42	166.60	166.79	167.10
M	0.4759	0.4549	0.4367	0.4206	0.4063	0.3936	0.3823
AA (m^2)	0.1129	0.0900	0.0730	0.0603	0.0504	0.0427	0.0365
RHO (kg/m^3)	1.3918	1.7463	2.1496	2.6034	3.1093	3.6682	4.2814
T (K)	303.27	332.08	360.86	389.60	418.28	446.87	475.37
P (Pa)	121165	166474	222682	291174	373352	470575	584270
TT (K)	317.00	345.82	374.62	403.38	432.09	460.71	489.27
PT (Pa)	141490	191865	253849	328848	418312	523607	646260
ALPHA (deg)	40.00	40.00	40.00	40.00	40.00	40.00	40.00
BETA (deg)	57.65	57.64	57.61	57.58	57.54	57.49	57.42
U (m/s)	307.72	307.72	307.72	307.72	307.72	307.72	307.72
CA (m/s)	127.28	127.31	127.39	127.48	127.62	127.77	128.01
CW (m/s)	106.80	106.83	106.89	106.97	107.09	107.21	107.41
VR (m/s)	237.84	237.84	237.82	237.81	237.78	237.76	237.72
MR	0.6813	0.6510	0.6245	0.6010	0.5800	0.5610	0.5439
TTR (K)	331.42	360.23	389.01	417.74	446.41	475.00	503.49
PTR (Pa)	165313	221322	289633	371679	468896	582674	714455
SIGS	1.00	1.00	1.00	1.00	1.00	1.00	1.00
DS	0.4993	0.4990	0.4983	0.4975	0.4963	0.4948	0.4928

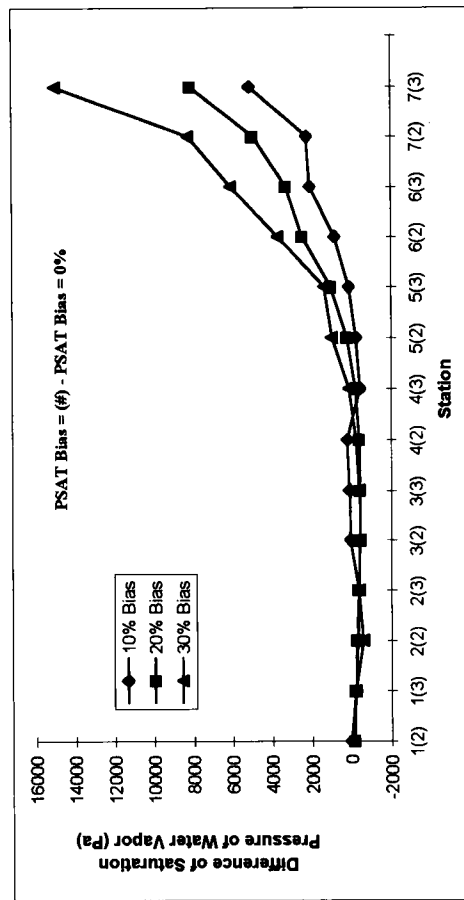
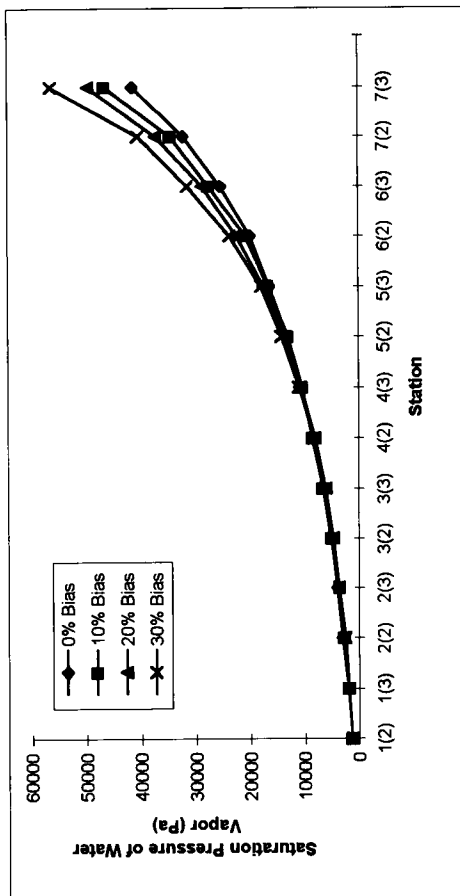
APPENDIX B . DETAILED BIAS INFORMATION

Bias Effects on PSAT With 10% Water Added

Sta#	0% Bias	10% Bias	20% Bias	30% Bias
1(2)	1330.75	1384.5	1230.66	1242.92
1(3)	2055.25	1867.81	1898.47	1906.9
2(2)	3075.42	2803	2826.64	2515.72
2(3)	3989.35	3651.29	3673.41	3652.37
3(2)	5125.33	5208.39	4750.99	4740.44
3(3)	6559.43	6692.71	6156.01	6189.77
4(2)	8410.67	8651.2	8044.33	8187.38
4(3)	10869.42	10460.97	10672.71	11045.31
5(2)	13218.2	13000.62	13459.87	14247.2
5(3)	16531.01	16697.36	17604.98	17915.86
6(2)	20031.36	20908.99	22546.7	23783.25
6(3)	25468.81	27589.3	28796.22	31594.17
7(2)	32279.32	34552.55	37284.38	40549.2
7(3)	41448.09	46616.19	49603.24	56460.34

Difference of Bias Effects on PSAT With 10% Water Added

Sta#	10% Bias	20% Bias	30% Bias
1(2)	53.75	-100.09	-87.83
1(3)	-187.44	-156.78	-148.35
2(2)	-272.42	-248.78	-559.7
2(3)	-338.06	-315.94	-336.98
3(2)	83.06	-374.34	-384.89
3(3)	133.28	-403.42	-369.66
4(2)	240.53	-366.34	-223.29
4(3)	-408.45	-196.71	175.89
5(2)	-217.58	241.67	1029
5(3)	166.35	1073.97	1384.85
6(2)	877.63	2515.34	3751.89
6(3)	2120.49	3327.41	6125.36
7(2)	2273.23	5005.06	8269.88
7(3)	5168.1	8155.15	15012.25

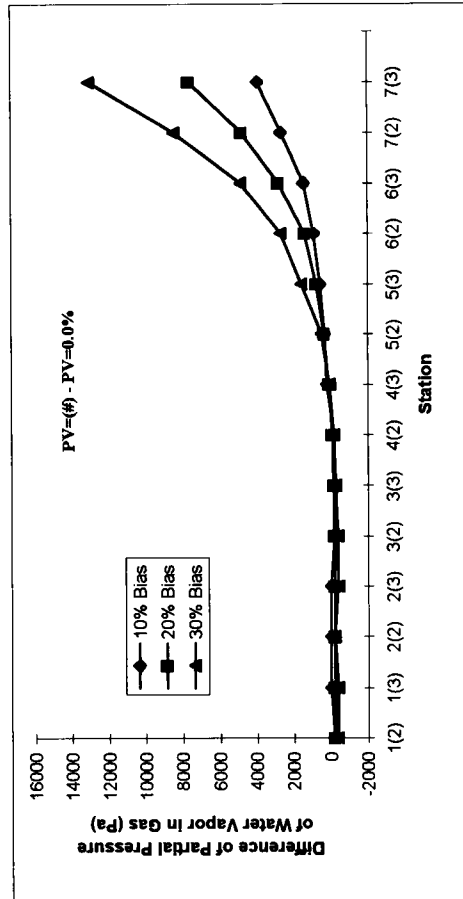
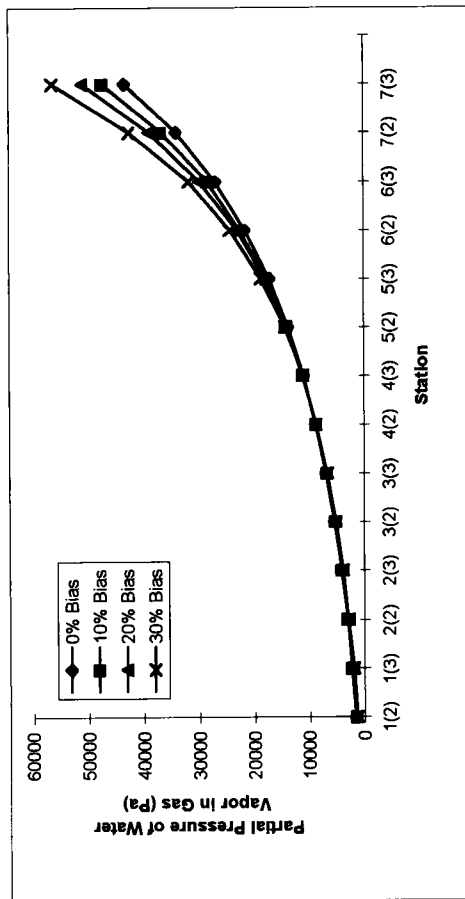


Bias Effects on PV With 10% Water Added

Sta#	0% Bias	10% Bias	20% Bias	30% Bias
1(2)	1670.14	1506.73	1506.73	1339.16
1(3)	2311.66	2316.51	2135.69	1954.26
2(2)	3081.78	3090.83	2896.39	2911.01
2(3)	4210.76	4228.09	4030.82	3834.9
3(2)	5538.23	5342.7	5378.09	5191.99
3(3)	7093.9	6914.33	6977	6817.4
4(2)	8917.21	8773.3	8880.97	8774.16
4(3)	11062.64	11271.73	11165.05	11151.32
5(2)	13900.78	14250.3	14256.23	14418.28
5(3)	17278.89	17848.65	18034.82	18843.27
6(2)	21688.13	22613.03	23103.56	24395.79
6(3)	27070.62	28531.93	29880.97	31925.14
7(2)	34139.09	36825.04	38944.67	42601.72
7(3)	43441.82	47395.16	51093.49	56491.83

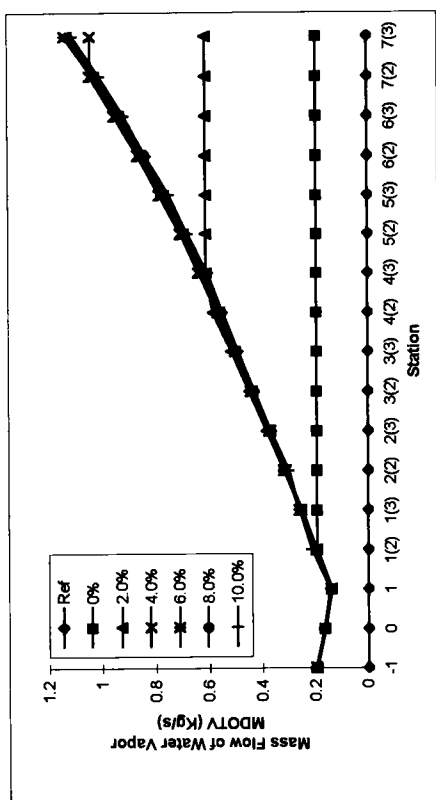
Difference of Bias Effects on PV With 10% Water Added

Sta#	10% Bias	20% Bias	30% Bias
1(2)	-163.41	-163.41	-330.98
1(3)	4.85	-175.97	-357.4
2(2)	9.05	-185.39	-170.77
2(3)	17.33	-179.94	-375.86
3(2)	-195.53	-160.14	-346.24
3(3)	-179.57	-116.9	-276.5
4(2)	-143.91	-36.24	-143.05
4(3)	209.09	102.41	88.68
5(2)	349.52	355.45	517.5
5(3)	569.76	755.93	1564.38
6(2)	924.9	1415.43	2707.66
6(3)	1461.31	2810.35	4854.52
7(2)	2685.95	4805.58	8462.63
7(3)	3953.34	7651.67	13050.01



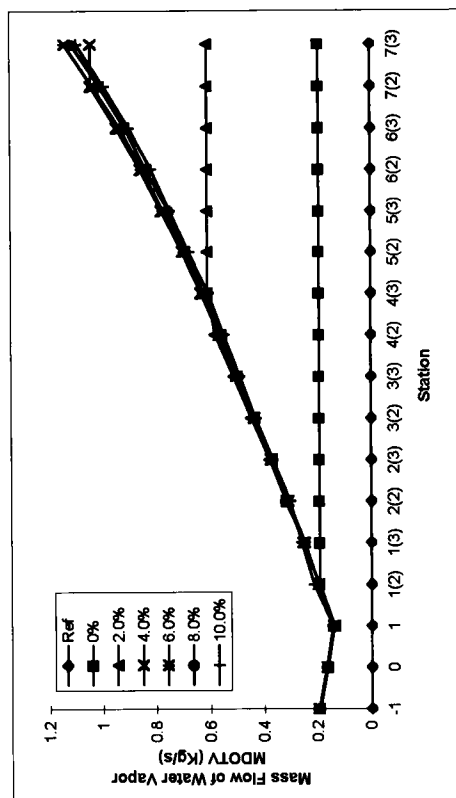
Station Mass Flow of Water Vapor (MDOTV) Kg/s, PSAT Bias=>0.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0.1946	0.1979	0.1982	0.1983	0.1985	0.1985
0	0	0.1634	0.1662	0.1665	0.1666	0.1687	0.1687
1	0	0.1389	0.1396	0.1415	0.1433	0.1434	0.1451
1(2)	0	0.1946	0.1961	0.1955	0.1972	0.1979	0.2142
1(3)	0	0.1946	0.2582	0.2548	0.2619	0.2508	0.2589
2(2)	0	0.1946	0.318	0.3177	0.311	0.3191	0.3027
2(3)	0	0.1946	0.3822	0.3756	0.37	0.3684	0.3671
3(2)	0	0.1946	0.4483	0.4422	0.4373	0.432	0.4296
3(3)	0	0.1946	0.5146	0.5021	0.5005	0.4932	0.4902
4(2)	0	0.1946	0.5843	0.5668	0.5599	0.5518	0.549
4(3)	0	0.1946	0.6101	0.638	0.6251	0.6223	0.606
5(2)	0	0.1946	0.6101	0.7066	0.6943	0.6892	0.6798
5(3)	0	0.1946	0.6101	0.7837	0.774	0.7654	0.7506
6(2)	0	0.1946	0.6101	0.8636	0.8528	0.8371	0.8355
6(3)	0	0.1946	0.6101	0.9508	0.9357	0.927	0.9162
7(2)	0	0.1946	0.6101	1.0415	1.0301	1.0199	1.0082
7(3)	0	0.1946	0.6101	1.0415	1.1361	1.1234	1.1091

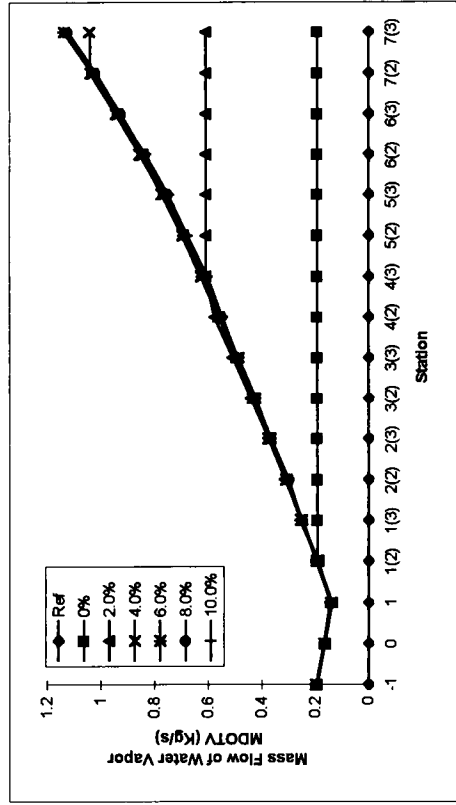


Station Mass Flow of Water Vapor (MDOTV) Kg/s, PSAT Bias=>2.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0.1946	0.1979	0.1982	0.1983	0.1985	0.1985
0	0	0.1634	0.1662	0.1665	0.1666	0.1687	0.1687
1	0	0.1389	0.1396	0.1415	0.1433	0.1434	0.1451
1(2)	0	0.1946	0.1961	0.1955	0.1972	0.1979	0.2142
1(3)	0	0.1946	0.254	0.2548	0.2489	0.2508	0.2589
2(2)	0	0.1946	0.3181	0.3177	0.311	0.3191	0.3027
2(3)	0	0.1946	0.3794	0.3756	0.37	0.3684	0.3671
3(2)	0	0.1946	0.4463	0.4355	0.4373	0.432	0.4296
3(3)	0	0.1946	0.5118	0.5022	0.5005	0.4932	0.4902
4(2)	0	0.1946	0.5816	0.5669	0.5599	0.5518	0.549
4(3)	0	0.1946	0.6101	0.6334	0.6251	0.6223	0.606
5(2)	0	0.1946	0.6101	0.7027	0.6943	0.6892	0.6798
5(3)	0	0.1946	0.6101	0.7807	0.774	0.7527	0.7506
6(2)	0	0.1946	0.6101	0.8589	0.8528	0.8372	0.8185
6(3)	0	0.1946	0.6101	0.9466	0.9357	0.9158	0.9001
7(2)	0	0.1946	0.6101	1.0415	1.0357	1.0098	0.9931
7(3)	0	0.1946	0.6101	1.0415	1.1403	1.1144	1.085

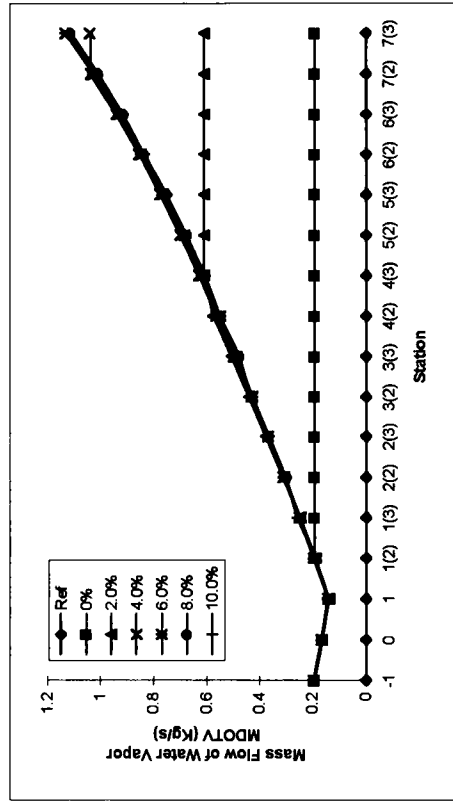


Station Mass Flow of Water Vapor (MDOTV) Kg/s, PSAT Bias > 4.0%									
Stat#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%		
-1	0	0.1946	0.1979	0.1982	0.1983	0.1985	0.1985		
0	0	0.1634	0.1662	0.1665	0.1666	0.1687	0.1687		
1	0	0.1389	0.1396	0.1415	0.1433	0.1434	0.1451		
1(2)	0	0.1946	0.1914	0.1955	0.1972	0.1979	0.1912		
1(3)	0	0.1946	0.2542	0.2548	0.2489	0.2508	0.2589		
2(2)	0	0.1946	0.3147	0.3098	0.3111	0.302	0.3027		
2(3)	0	0.1946	0.3767	0.3757	0.37	0.3684	0.3671		
3(2)	0	0.1946	0.442	0.4356	0.426	0.432	0.4296		
3(3)	0	0.1946	0.5093	0.4962	0.4899	0.4932	0.4902		
4(2)	0	0.1946	0.5788	0.5616	0.56	0.5518	0.549		
4(3)	0	0.1946	0.6101	0.6288	0.6251	0.6082	0.606		
5(2)	0	0.1946	0.6101	0.699	0.6944	0.6893	0.6798		
5(3)	0	0.1946	0.6101	0.7743	0.7661	0.7528	0.7506		
6(2)	0	0.1946	0.6101	0.8572	0.8458	0.8374	0.8355		
6(3)	0	0.1946	0.6101	0.9438	0.9361	0.9272	0.9324		
7(2)	0	0.1946	0.6101	1.0386	1.0304	1.0202	1.0234		
7(3)	0	0.1946	0.6101	1.0415	1.1363	1.1236	1.1375		



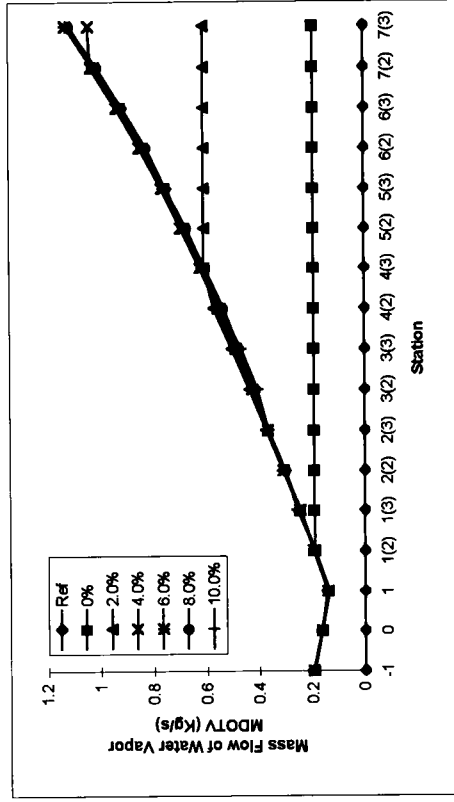
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Station Mass Flow of Water Vapor (MDOTV) Kg/s, PSAT Bias > 6.0%									
Stat#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%		
-1	0	0.1946	0.1979	0.1982	0.1983	0.1985	0.1985		
0	0	0.1634	0.1662	0.1665	0.1666	0.1687	0.1687		
1	0	0.1389	0.1396	0.1415	0.1433	0.1434	0.1451		
1(2)	0	0.194	0.1914	0.1955	0.1972	0.1979	0.1912		
1(3)	0	0.1946	0.25	0.2463	0.2489	0.2508	0.2589		
2(2)	0	0.1946	0.3112	0.3099	0.3111	0.302	0.3027		
2(3)	0	0.1946	0.3769	0.3684	0.37	0.3684	0.3671		
3(2)	0	0.1946	0.4399	0.429	0.426	0.432	0.4296		
3(3)	0	0.1946	0.5063	0.4964	0.4899	0.4779	0.4902		
4(2)	0	0.1946	0.5758	0.5618	0.55	0.552	0.549		
4(3)	0	0.1946	0.6101	0.629	0.6158	0.6083	0.606		
5(2)	0	0.1946	0.6101	0.6991	0.6858	0.6759	0.6798		
5(3)	0	0.1946	0.6101	0.7744	0.7663	0.753	0.7506		
6(2)	0	0.1946	0.6101	0.8545	0.846	0.8375	0.8355		
6(3)	0	0.1946	0.6101	0.9405	0.9298	0.9161	0.9162		
7(2)	0	0.1946	0.6101	1.0365	1.0252	1.01	1.0236		
7(3)	0	0.1946	0.6101	1.0415	1.1323	1.1146	1.1234		



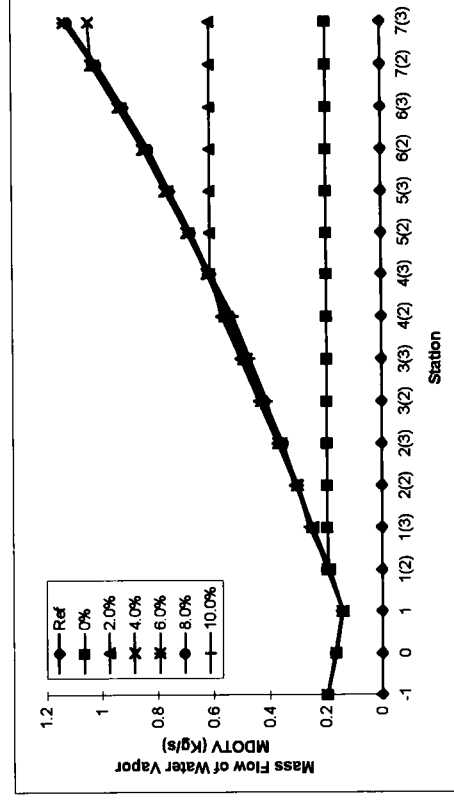
Station Mass Flow of Water Vapor (MDOTV) Kg/s, PSAT Bias=>8.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0.1946	0.1979	0.1982	0.1983	0.1985	0.1985
0	0	0.1634	0.1662	0.1665	0.1666	0.1667	0.1687
1	0	0.1389	0.1396	0.1415	0.1433	0.1434	0.1451
1(2)	0	0.1923	0.1914	0.1955	0.1972	0.1979	0.1912
1(3)	0	0.1946	0.25	0.2463	0.2489	0.2508	0.2589
2(2)	0	0.1946	0.3112	0.3099	0.311	0.302	0.3027
2(3)	0	0.1946	0.374	0.3684	0.37	0.3684	0.3671
3(2)	0	0.1946	0.4377	0.429	0.426	0.4161	0.4068
3(3)	0	0.1946	0.5032	0.4903	0.4899	0.4779	0.47
4(2)	0	0.1946	0.5727	0.5564	0.55	0.5372	0.5492
4(3)	0	0.1946	0.6101	0.6243	0.6158	0.6063	0.6062
5(2)	0	0.1946	0.6101	0.6552	0.6858	0.6759	0.68
5(3)	0	0.1946	0.6101	0.768	0.7583	0.753	0.7507
6(2)	0	0.1946	0.6101	0.85	0.8389	0.8254	0.8357
6(3)	0	0.1946	0.6101	0.9362	0.9236	0.9162	0.9164
7(2)	0	0.1946	0.6101	1.032	1.02	1.0101	1.0237
7(3)	0	0.1946	0.6101	1.0415	1.1283	1.1147	1.1235



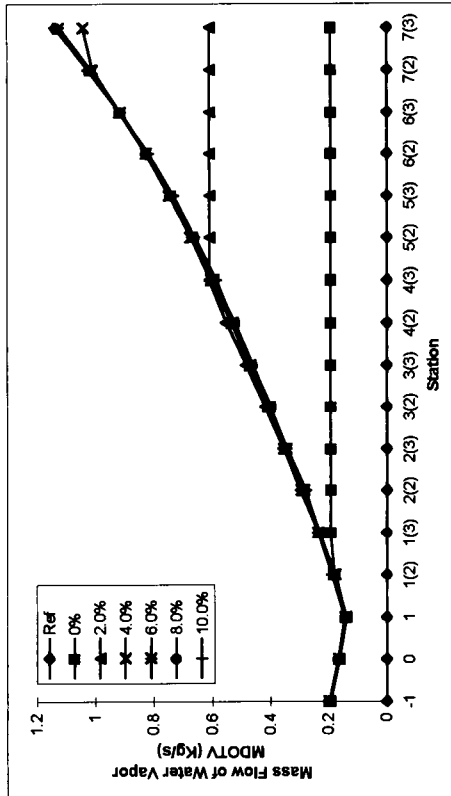
Station Mass Flow of Water Vapor (MDOTV) Kg/s, PSAT Bias=>10.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0.1946	0.1979	0.1982	0.1983	0.1985	0.1985
0	0	0.1634	0.1662	0.1665	0.1666	0.1667	0.1687
1	0	0.1389	0.1396	0.1415	0.1433	0.1434	0.1451
1(2)	0	0.1907	0.1867	0.1865	0.1972	0.1979	0.1912
1(3)	0	0.1946	0.2459	0.2464	0.2489	0.2508	0.2589
2(2)	0	0.1946	0.3078	0.302	0.2986	0.302	0.3027
2(3)	0	0.1946	0.3713	0.3686	0.3682	0.3518	0.3671
3(2)	0	0.1946	0.4358	0.4292	0.4262	0.4161	0.4088
3(3)	0	0.1946	0.5003	0.4904	0.4794	0.4779	0.47
4(2)	0	0.1946	0.5694	0.5565	0.5502	0.5372	0.5294
4(3)	0	0.1946	0.6101	0.6196	0.616	0.6063	0.6062
5(2)	0	0.1946	0.6101	0.6913	0.686	0.6759	0.68
5(3)	0	0.1946	0.6101	0.7683	0.7584	0.753	0.7507
6(2)	0	0.1946	0.6101	0.8476	0.839	0.8254	0.8357
6(3)	0	0.1946	0.6101	0.9348	0.9237	0.9162	0.9164
7(2)	0	0.1946	0.6101	1.0308	1.0201	1.0101	1.0237
7(3)	0	0.1946	0.6101	1.0415	1.1284	1.1147	1.1235



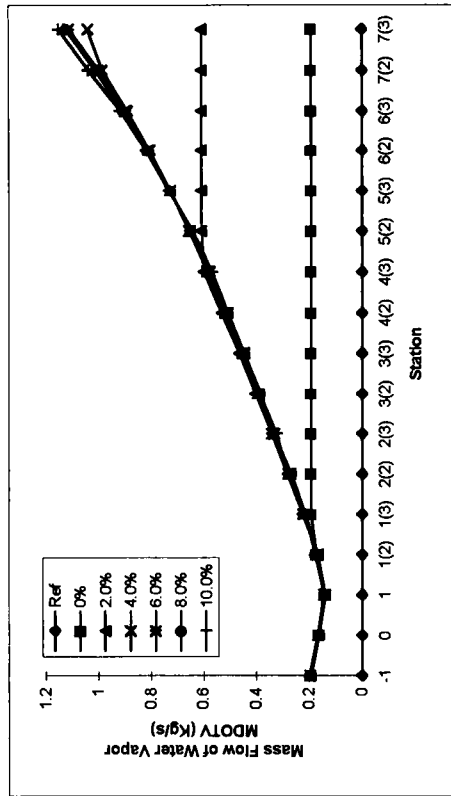
Station Mass Flow of Water Vapor (MDOTV) Kg/s, PSAT Bias=>20.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0.1946	0.1979	0.1982	0.1983	0.1985	0.1985
0	0	0.1634	0.1662	0.1665	0.1666	0.1687	0.1687
1	0	0.1389	0.1396	0.1415	0.1433	0.1434	0.1451
1(2)	0	0.1823	0.1819	0.1775	0.1837	0.1797	0.1912
1(3)	0	0.1946	0.2376	0.238	0.236	0.2331	0.2363
2(2)	0	0.1946	0.2972	0.2943	0.2862	0.2846	0.2806
2(3)	0	0.1946	0.3566	0.354	0.3464	0.352	0.3457
3(2)	0	0.1946	0.42	0.409	0.4036	0.4002	0.4068
3(3)	0	0.1946	0.4846	0.4723	0.4689	0.4626	0.47
4(2)	0	0.1946	0.5524	0.5349	0.5302	0.5225	0.5294
4(3)	0	0.1946	0.6101	0.6058	0.5974	0.5944	0.587
5(2)	0	0.1946	0.6101	0.6755	0.6689	0.6627	0.6615
5(3)	0	0.1946	0.6101	0.7487	0.7429	0.7405	0.733
6(2)	0	0.1946	0.6101	0.8278	0.8251	0.8259	0.8189
6(3)	0	0.1946	0.6101	0.9154	0.9183	0.9166	0.9167
7(2)	0	0.1946	0.6101	1.01	1.0156	1.021	1.024
7(3)	0	0.1946	0.6101	1.0415	1.1249	1.1337	1.1381



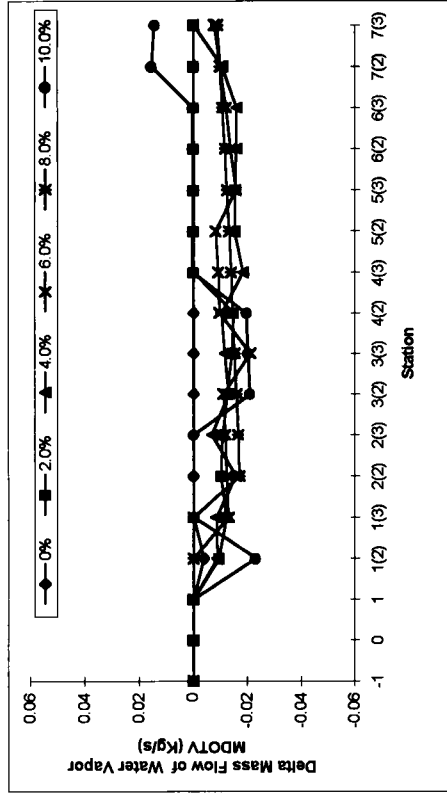
56 Station Mass Flow of Water Vapor (MDOTV) Kg/s, PSAT Bias=>30.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0.1946	0.1979	0.1982	0.1983	0.1985	0.1985
0	0	0.1634	0.1662	0.1665	0.1666	0.1687	0.1687
1	0	0.1389	0.1396	0.1415	0.1433	0.1434	0.1451
1(2)	0	0.1729	0.1678	0.1685	0.1702	0.1797	0.1681
1(3)	0	0.1946	0.2253	0.2209	0.2231	0.2153	0.2138
2(2)	0	0.1946	0.283	0.2784	0.2738	0.2677	0.2808
2(3)	0	0.1946	0.3419	0.3394	0.3346	0.3354	0.3242
3(2)	0	0.1946	0.4036	0.3956	0.3924	0.3841	0.388
3(3)	0	0.1946	0.4655	0.4537	0.4473	0.4472	0.4498
4(2)	0	0.1946	0.532	0.5184	0.51	0.5077	0.5098
4(3)	0	0.1946	0.6007	0.5864	0.5786	0.5803	0.568
5(2)	0	0.1946	0.6101	0.6546	0.6516	0.6493	0.6433
5(3)	0	0.1946	0.6101	0.7281	0.7271	0.728	0.7336
6(2)	0	0.1946	0.6101	0.8065	0.8111	0.8142	0.8194
6(3)	0	0.1946	0.6101	0.8911	0.8995	0.9059	0.9172
7(2)	0	0.1946	0.6101	0.9858	1.0000	1.0113	1.0398
7(3)	0	0.1946	0.6101	1.0415	1.1129	1.1252	1.1526



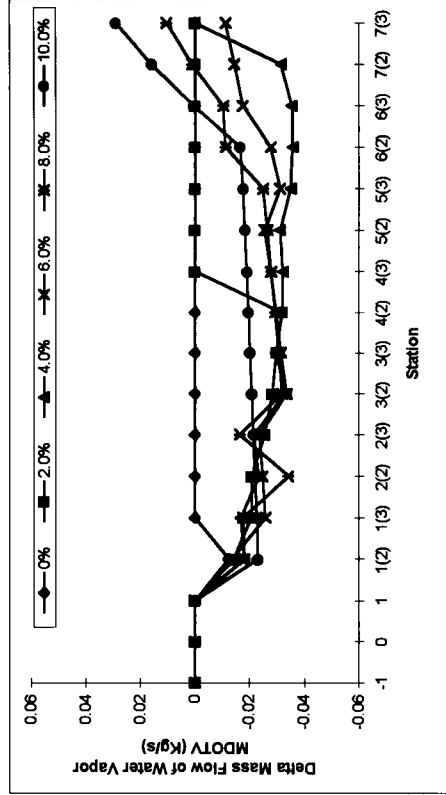
MDOTV Bias Effects (PSAT Bias=10% - PSAT Bias=0.0%)

Stat#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0	0	0	0
0	0	0	0	0	0	0
1	0	0	0	0	0	0
1(2)	-0.0039	-0.0094	-0.009	0	0	-0.023
1(3)	0	-0.0123	-0.0084	-0.013	0	0
2(2)	0	-0.0102	-0.0157	-0.0124	-0.0171	0
2(3)	0	-0.0109	-0.007	-0.0118	-0.0166	0
3(2)	0	-0.0125	-0.013	-0.0111	-0.0159	-0.0208
3(3)	0	-0.0143	-0.0117	-0.0211	-0.0153	-0.0202
4(2)	0	-0.0149	-0.0103	-0.0097	-0.0146	-0.0196
4(3)	0	0	-0.0184	-0.0091	-0.014	0.0002
5(2)	0	0	-0.0153	-0.0083	-0.0133	0.0002
5(3)	0	0	-0.0154	-0.0156	-0.0124	1E-04
6(2)	0	0	-0.016	-0.0138	-0.0117	0.0002
6(3)	0	0	-0.016	-0.012	-0.0108	0.0002
7(2)	0	0	-0.0107	-0.01	-0.0098	0.0155
7(3)	0	0	0	-0.0077	-0.0087	0.0144

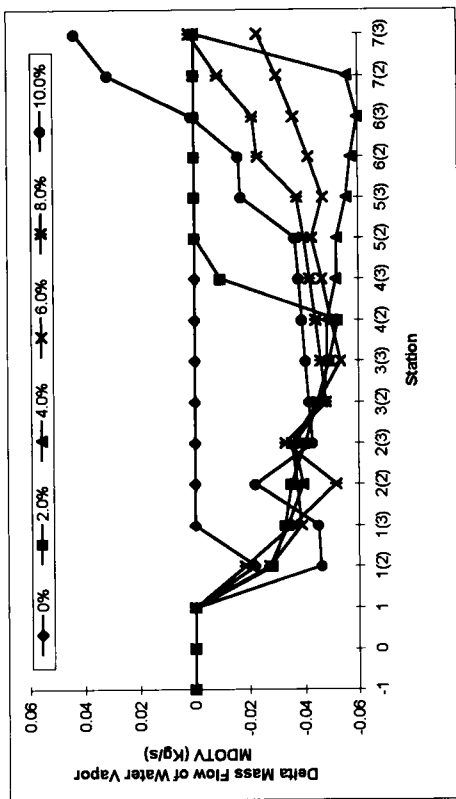


MDOTV Bias Effects (PSAT Bias=20% - PSAT Bias=0.0%)

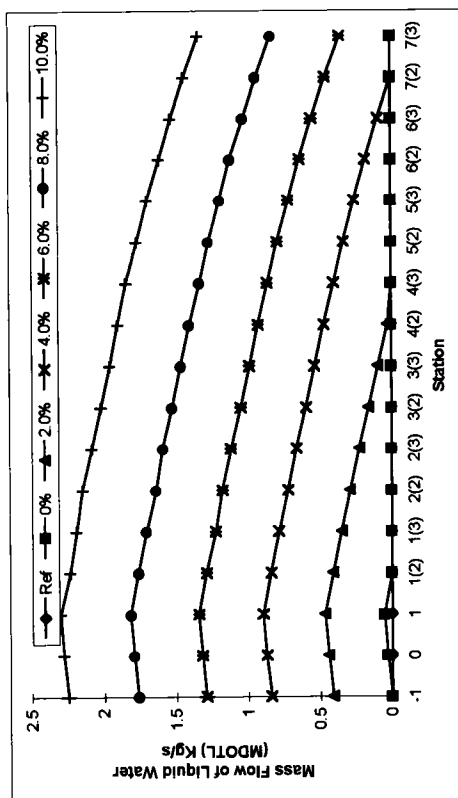
Stat#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0	0	0	0
0	0	0	0	0	0	0
1	0	0	0	0	0	0
1(2)	-0.0123	-0.0142	-0.018	-0.0135	-0.0182	-0.023
1(3)	0	-0.0206	-0.0168	-0.0259	-0.0177	-0.0226
2(2)	0	-0.0208	-0.0234	-0.0248	-0.0342	-0.0221
2(3)	0	-0.0256	-0.0216	-0.0236	-0.0164	-0.0214
3(2)	0	-0.0283	-0.0332	-0.0337	-0.0318	-0.0208
3(3)	0	-0.03	-0.0298	-0.0316	-0.0306	-0.0202
4(2)	0	-0.0319	-0.0319	-0.0297	-0.0293	-0.0196
4(3)	0	0	-0.0322	-0.0277	-0.0279	-0.019
5(2)	0	0	-0.0311	-0.0254	-0.0265	-0.0183
5(3)	0	0	-0.035	-0.0311	-0.0249	-0.0176
6(2)	0	0	-0.0358	-0.0277	-0.0112	-0.0166
6(3)	0	0	-0.0354	-0.0174	-0.0104	0.0005
7(2)	0	0	-0.0315	-0.0145	0.0011	0.0158
7(3)	0	0	0	-0.0112	0.0103	0.029



MDOTV Bias Effects (PSAT Bias=30% - PSAT Bias=0.0%)	0%	2.0%	4.0%	6.0%	8.0%	10.0%
Stat#						
-1	0	0	0	0	0	0
0	0	0	0	0	0	0
1	0	0	0	0	0	0
1(2)	-0.0217	-0.0283	-0.027	-0.027	-0.0182	-0.0461
1(3)	0	-0.0329	-0.0339	-0.0388	-0.0355	-0.0451
2(2)	0	-0.035	-0.0393	-0.0372	-0.0514	-0.0219
2(3)	0	-0.0403	-0.0362	-0.0354	-0.033	-0.0429
3(2)	0	-0.0447	-0.0466	-0.0449	-0.0479	-0.0416
3(3)	0	-0.0491	-0.0484	-0.0532	-0.046	-0.0404
4(2)	0	-0.0523	-0.0484	-0.0499	-0.0441	-0.0392
4(3)	0	-0.0094	-0.0516	-0.0465	-0.042	-0.038
5(2)	0	0	-0.052	-0.0427	-0.0399	-0.0365
5(3)	0	0	-0.0556	-0.0469	-0.0374	-0.017
6(2)	0	0	-0.0571	-0.0417	-0.0229	-0.0161
6(3)	0	0	-0.0597	-0.0362	-0.0211	0.001
7(2)	0	0	-0.0557	-0.0301	-0.0086	0.0316
7(3)	0	0	0	-0.0232	0.0018	0.0435

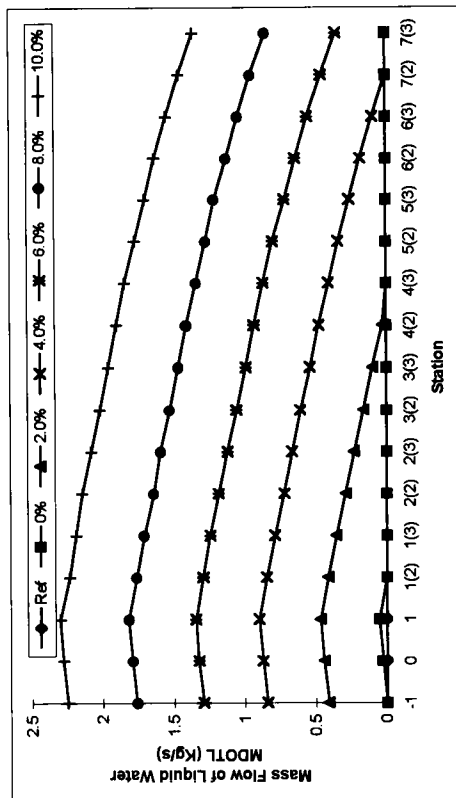


Station Mass Flow of Liquid Water (MDOTL) Kg/s, PSAT Bias=>0.0%									
Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%		
-1	0	0	0.4122	0.8433	1.2924	1.7617	2.2512		
0	0	0.0311	0.4439	0.875	1.3242	1.7915	2.281		
1	0	0.0556	0.4705	0.9	1.3475	1.8168	2.3046		
1(2)	0	0	0.414	0.846	1.2936	1.7623	2.2354		
1(3)	0	0	0.3519	0.7867	1.2289	1.7094	2.1907		
2(2)	0	0	0.2921	0.7238	1.1798	1.641	2.1469		
2(3)	0	0	0.2278	0.6659	1.1208	1.5918	2.0825		
3(2)	0	0	0.1618	0.5993	1.0535	1.5281	2.02		
3(3)	0	0	0.0954	0.5394	0.9903	1.467	1.9594		
4(2)	0	0	0.0258	0.4747	0.9309	1.4083	1.9006		
4(3)	0	0	0	0.4035	0.8657	1.3379	1.8436		
5(2)	0	0	0	0.3349	0.7965	1.271	1.7689		
5(3)	0	0	0	0.2578	0.7168	1.1948	1.6991		
6(2)	0	0	0	0.1779	0.638	1.1231	1.6141		
6(3)	0	0	0	0.0907	0.555	1.0332	1.5334		
7(2)	0	0	0	0	0.4607	0.9402	1.4414		
7(3)	0	0	0	0	0.3547	0.8368	1.3405		



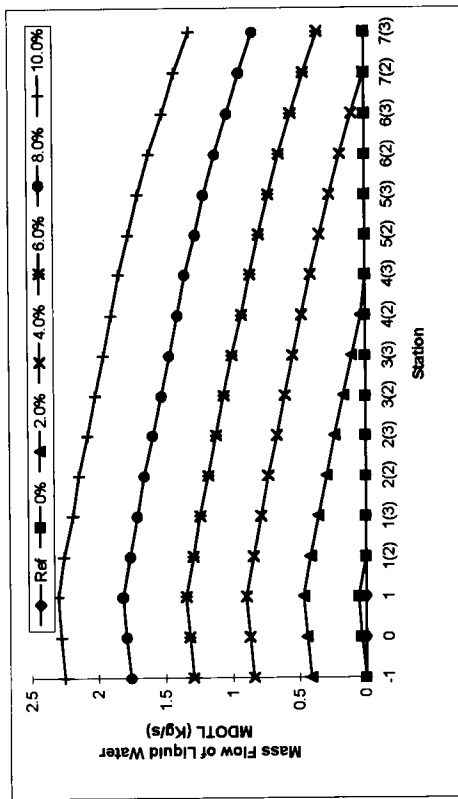
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Station Mass Flow of Liquid Water (MDOTL) Kg/s, PSAT Bias=>2.0%									
Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%		
-1	0	0	0.4122	0.8433	1.2924	1.7617	2.2512		
0	0	0.0311	0.4439	0.875	1.3242	1.7915	2.281		
1	0	0.0556	0.4705	0.9	1.3475	1.8168	2.3046		
1(2)	0	0	0.414	0.846	1.2936	1.7623	2.2354		
1(3)	0	0	0.356	0.7867	1.2419	1.7094	2.1907		
2(2)	0	0	0.292	0.7238	1.1798	1.641	2.1469		
2(3)	0	0	0.2306	0.6659	1.1208	1.5918	2.0825		
3(2)	0	0	0.1638	0.606	1.0535	1.5281	2.02		
3(3)	0	0	0.0983	0.5393	0.9903	1.467	1.9594		
4(2)	0	0	0.0285	0.4746	0.9309	1.4083	1.9006		
4(3)	0	0	0	0.4061	0.8657	1.3379	1.8436		
5(2)	0	0	0	0.3388	0.7965	1.271	1.7689		
5(3)	0	0	0	0.2608	0.7168	1.2075	1.6991		
6(2)	0	0	0	0.1826	0.638	1.123	1.6311		
6(3)	0	0	0	0.0949	0.555	1.0443	1.5496		
7(2)	0	0	0	0	0.4551	0.9504	1.4566		
7(3)	0	0	0	0	0.3505	0.8458	1.3546		



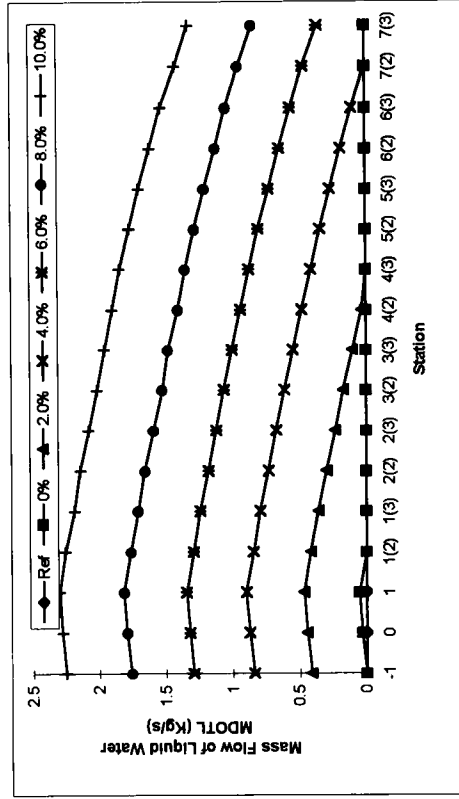
Station Mass Flow of Liquid Water (MDOTL) Kg/s, PSAT Bias=>4.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0.4122	0.8433	1.2924	1.7617	2.2512
0	0	0.0311	0.4439	0.875	1.3242	1.7915	2.281
1	0	0.0556	0.4705	0.9	1.3475	1.8168	2.3046
1(2)	0	0	0.4187	0.846	1.2936	1.7623	2.2585
1(3)	0	0	0.3559	0.7867	1.2419	1.7084	2.1907
2(2)	0	0	0.2954	0.7317	1.1798	1.6581	2.1469
2(3)	0	0	0.2334	0.6658	1.1208	1.5918	2.0825
3(2)	0	0	0.168	0.6059	1.0647	1.5281	2.02
3(3)	0	0	0.1008	0.5453	1.0009	1.467	1.9594
4(2)	0	0	0.0313	0.4799	0.9308	1.4083	1.9006
4(3)	0	0	0	0.4127	0.8656	1.352	1.8436
5(2)	0	0	0	0.3425	0.7964	1.2709	1.7699
5(3)	0	0	0	0.2672	0.7247	1.2073	1.6991
6(2)	0	0	0	0.1843	0.645	1.1228	1.6141
6(3)	0	0	0	0.0977	0.5547	1.033	1.5173
7(2)	0	0	0	0.0029	0.4604	0.94	1.4262
7(3)	0	0	0	0	0.3545	0.8366	1.3121

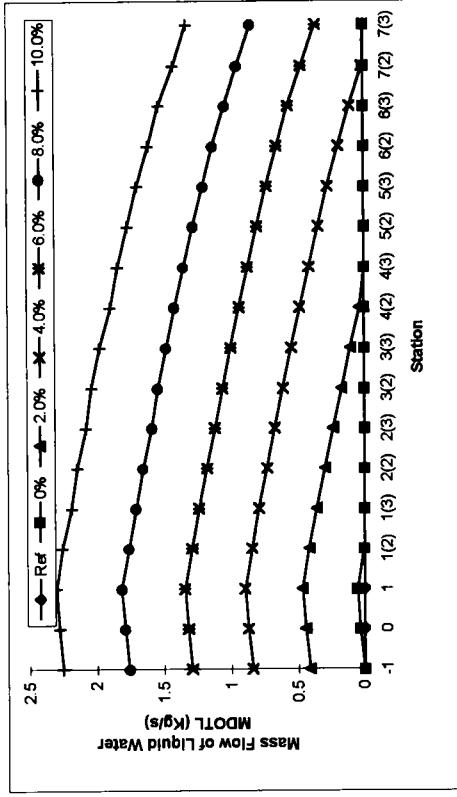


Station Mass Flow of Liquid Water (MDOTL) Kg/s, PSAT Bias=>6.0%

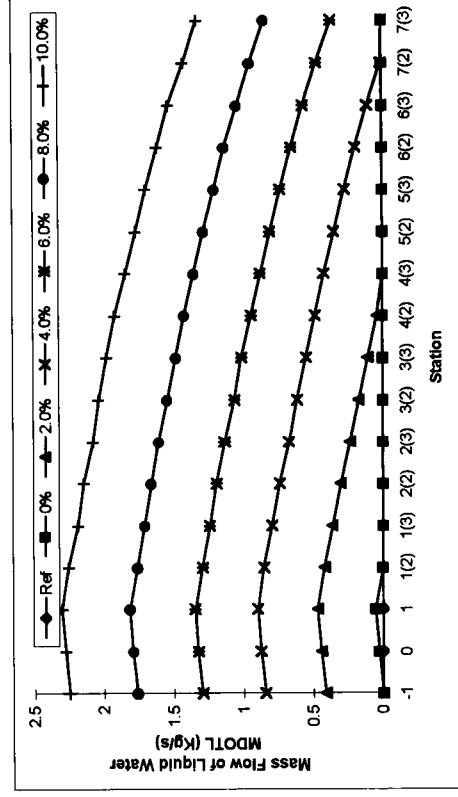
Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0.4122	0.8433	1.2924	1.7617	2.2512
0	0	0.0311	0.4439	0.875	1.3242	1.7915	2.281
1	0	0.0556	0.4705	0.9	1.3475	1.8168	2.3046
1(2)	0	0.0006	0.4187	0.846	1.2936	1.7623	2.2585
1(3)	0	0	0.3601	0.7952	1.2419	1.7094	2.1907
2(2)	0	0	0.2989	0.7316	1.1798	1.6581	2.1469
2(3)	0	0	0.2331	0.6731	1.1208	1.5918	2.0825
3(2)	0	0	0.1702	0.6125	1.0647	1.5281	2.02
3(3)	0	0	0.1038	0.5451	1.0009	1.4623	1.9594
4(2)	0	0	0.0343	0.4797	0.9408	1.4082	1.9006
4(3)	0	0	0	0.4125	0.8749	1.3519	1.8436
5(2)	0	0	0	0.3424	0.805	1.2843	1.7699
5(3)	0	0	0	0.2671	0.7245	1.2072	1.6991
6(2)	0	0	0	0.187	0.6448	1.1227	1.6141
6(3)	0	0	0	0.101	0.5609	1.0441	1.5334
7(2)	0	0	0	0.006	0.4656	0.9501	1.4261
7(3)	0	0	0	0	0.3585	0.8456	1.3263



Station Mass Flow of Liquid Water (MDOTL) Kg/s, PSAT Bias=>8.0%									
Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%		
-1	0	0	0.4122	0.8433	1.2924	1.7617	2.2512		
0	0	0.0311	0.4439	0.875	1.3242	1.7915	2.281		
1	0	0.0556	0.4705	0.9	1.3475	1.8168	2.3046		
1(2)	0	0.0022	0.4187	0.846	1.2936	1.7623	2.2585		
1(3)	0	0	0.3601	0.7952	1.2419	1.7094	2.1907		
2(2)	0	0	0.2989	0.7316	1.1798	1.6581	2.1469		
2(3)	0	0	0.2361	0.6731	1.1208	1.5918	2.0825		
3(2)	0	0	0.1724	0.6125	1.0647	1.5441	2.0409		
3(3)	0	0	0.1069	0.5512	1.0009	1.4823	1.9796		
4(2)	0	0	0.0374	0.4851	0.9408	1.423	1.9004		
4(3)	0	0	0	0.4172	0.8749	1.3519	1.8434		
5(2)	0	0	0	0.3463	0.805	1.2843	1.7697		
5(3)	0	0	0	0.2735	0.7325	1.2072	1.6989		
6(2)	0	0	0	0.1915	0.6519	1.1348	1.614		
6(3)	0	0	0	0.1053	0.5672	1.044	1.5333		
7(2)	0	0	0	0.0095	0.4708	0.95	1.4259		
7(3)	0	0	0	0	0.3625	0.8455	1.3261		

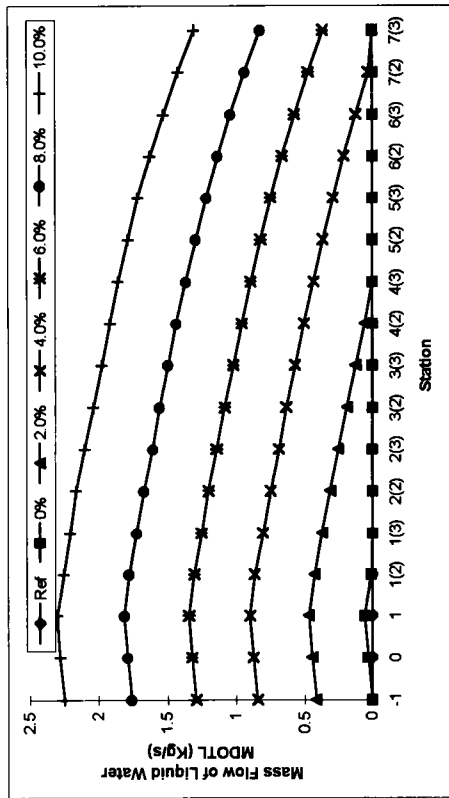


Station Mass Flow of Liquid Water (MDOTL) Kg/s, PSAT Bias=>10.0%									
Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%		
-1	0	0	0.4122	0.8433	1.2924	1.7617	2.2512		
0	0	0.0311	0.4439	0.875	1.3242	1.7915	2.281		
1	0	0.0556	0.4705	0.9	1.3475	1.8168	2.3046		
1(2)	0	0.0039	0.4234	0.855	1.2936	1.7623	2.2585		
1(3)	0	0	0.3641	0.7951	1.2419	1.7094	2.1907		
2(2)	0	0	0.3022	0.7395	1.1922	1.6581	2.1469		
2(3)	0	0	0.2388	0.6729	1.1326	1.6084	2.0825		
3(2)	0	0	0.1743	0.6123	1.0646	1.5441	2.0409		
3(3)	0	0	0.1096	0.5511	1.0114	1.4823	1.9796		
4(2)	0	0	0.0406	0.485	0.9406	1.423	1.9202		
4(3)	0	0	0	0.4219	0.8748	1.3519	1.8434		
5(2)	0	0	0	0.3502	0.8048	1.2843	1.7697		
5(3)	0	0	0	0.2732	0.7323	1.2072	1.6989		
6(2)	0	0	0	0.1939	0.6518	1.1348	1.614		
6(3)	0	0	0	0.1067	0.5671	1.044	1.5333		
7(2)	0	0	0	0.0107	0.4701	0.95	1.4259		
7(3)	0	0	0	0	0.3624	0.8455	1.3261		



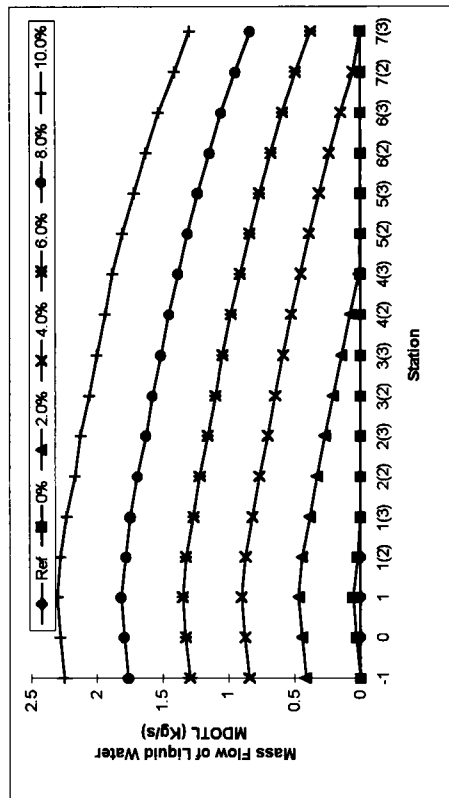
Station Mass Flow of Liquid Water (MDOTL) Kg/s, PSAT Bias=>20.0%

Stat#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0.4122	0.8433	1.2924	1.7617	2.2512
0	0	0.0311	0.4439	0.875	1.3242	1.7915	2.281
1	0	0.0556	0.4705	0.9	1.3475	1.8168	2.3046
1(2)	0	0.0122	0.4281	0.864	1.3071	1.7805	2.2585
1(3)	0	0	0.3725	0.8035	1.2548	1.727	2.2133
2(2)	0	0	0.3129	0.7472	1.2046	1.6752	2.169
2(3)	0	0	0.2534	0.6875	1.1444	1.6082	2.104
3(2)	0	0	0.1901	0.6325	1.0872	1.56	2.0409
3(3)	0	0	0.1254	0.5692	1.0219	1.4976	1.9796
4(2)	0	0	0.0577	0.5066	0.9606	1.4377	1.9202
4(3)	0	0	0	0.4357	0.8934	1.3658	1.8626
5(2)	0	0	0	0.366	0.8219	1.2975	1.7881
5(3)	0	0	0	0.2928	0.7479	1.2197	1.7166
6(2)	0	0	0	0.2137	0.6657	1.1343	1.6308
6(3)	0	0	0	0.1261	0.5725	1.0435	1.5329
7(2)	0	0	0	0.0315	0.4751	0.9392	1.4256
7(3)	0	0	0	0	0.3659	0.8265	1.3116

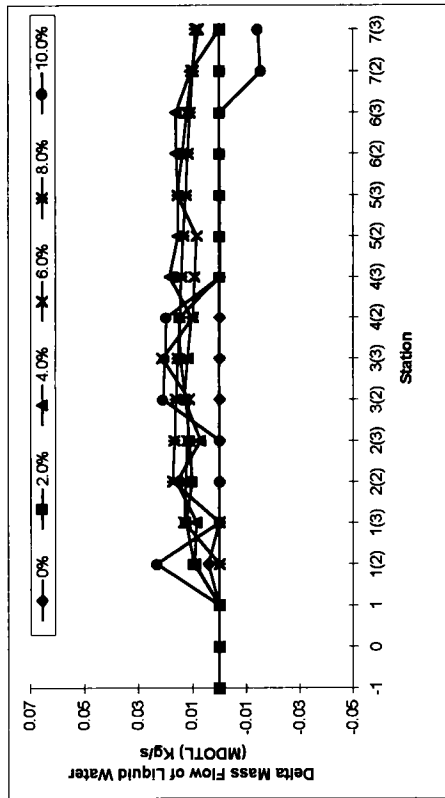


Station Mass Flow of Liquid Water (MDOTL) Kg/s, PSAT Bias=>30.0%

Stat#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0.4122	0.8433	1.2924	1.7617	2.2512
0	0	0.0311	0.4439	0.875	1.3242	1.7915	2.281
1	0	0.0556	0.4705	0.9	1.3475	1.8168	2.3046
1(2)	0	0.0217	0.4422	0.873	1.3206	1.7805	2.2815
1(3)	0	0	0.3847	0.8206	1.2677	1.7449	2.2359
2(2)	0	0	0.327	0.7631	1.217	1.6925	2.1688
2(3)	0	0	0.2682	0.7021	1.1562	1.6248	2.1254
3(2)	0	0	0.2065	0.6459	1.0984	1.5761	2.0617
3(3)	0	0	0.1445	0.5878	1.0434	1.513	1.9998
4(2)	0	0	0.0781	0.5231	0.9808	1.4525	1.9398
4(3)	0	0	0.0094	0.4551	0.9122	1.3799	1.8816
5(2)	0	0	0	0.3869	0.8392	1.3109	1.8064
5(3)	0	0	0	0.3134	0.7637	1.2322	1.7161
6(2)	0	0	0	0.235	0.6797	1.146	1.6303
6(3)	0	0	0	0.1504	0.5913	1.0543	1.5324
7(2)	0	0	0	0.0557	0.4908	0.9489	1.4098
7(3)	0	0	0	0	0.3779	0.836	1.2971

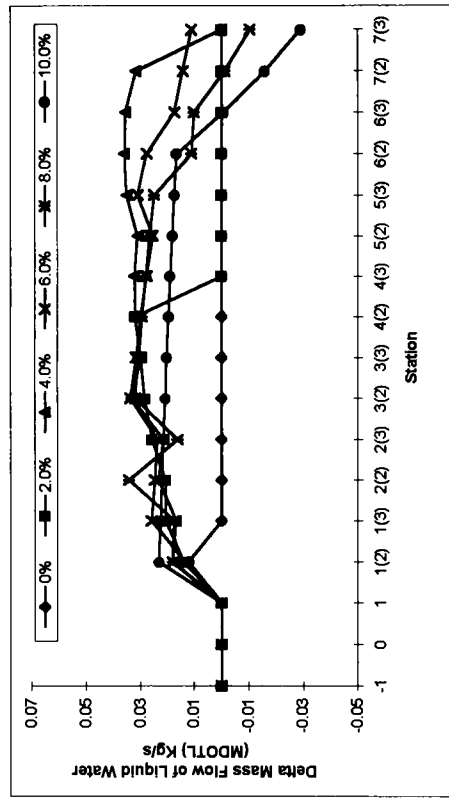


MDOTL Bias Effects (PSAT Bias=10% - PSAT Bias=0.0%)									
Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%			
-1	0	0	0	0	0	0			
0	0	0	0	0	0	0			
1	0	0	0	0	0	0			
1(2)	0.0039	0.0094	0.0084	0	0	0.0231			
1(3)	0	0.0122	0.0084	0.013	0	0			
2(2)	0	0.0101	0.0157	0.0124	0.0171	0			
2(3)	0	0.011	0.007	0.0118	0.0166	0			
3(2)	0	0.0125	0.013	0.0111	0.016	0.0209			
3(3)	0	0.0144	0.0117	0.0211	0.0153	0.0202			
4(2)	0	0.0148	0.0103	0.0097	0.0147	0.0196			
4(3)	0	0	0.0184	0.0091	0.014	-0.0002			
5(2)	0	0	0.0153	0.0083	0.0133	-0.0002			
5(3)	0	0	0.0154	0.0155	0.0124	-0.0002			
6(2)	0	0	0.016	0.0138	0.0117	-1E-04			
6(3)	0	0	0.016	0.0121	0.0108	-1E-04			
7(2)	0	0	0.0107	0.01	0.0098	-0.0155			
7(3)	0	0	0	0.0077	0.0087	-0.0144			

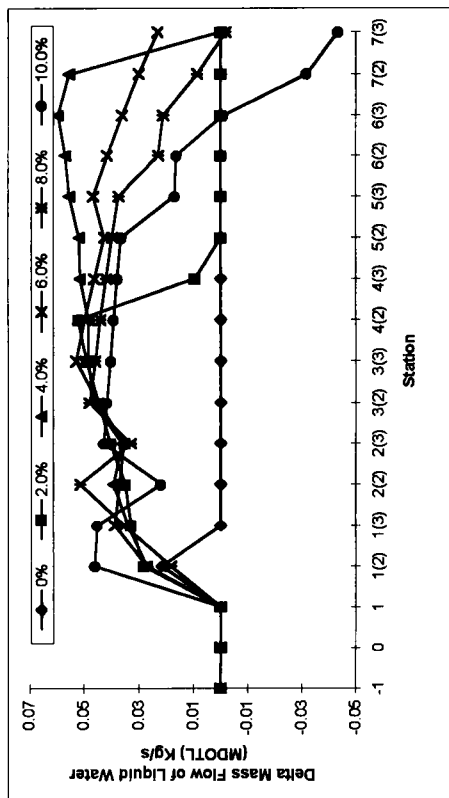


3

MDOTL Bias Effects (PSAT Bias=20% - PSAT Bias=0.0%)									
Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%			
-1	0	0	0	0	0	0			
0	0	0	0	0	0	0			
1	0	0	0	0	0	0			
1(2)	0.0122	0.0141	0.018	0.0135	0.0182	0.0231			
1(3)	0	0.0206	0.0168	0.0259	0.0176	0.0226			
2(2)	0	0.0208	0.0234	0.0248	0.0342	0.0221			
2(3)	0	0.0256	0.0216	0.0236	0.0164	0.0215			
3(2)	0	0.0283	0.0332	0.0337	0.0319	0.0209			
3(3)	0	0	0.0298	0.0316	0.0306	0.0202			
4(2)	0	0.0319	0.0319	0.0297	0.0294	0.0196			
4(3)	0	0	0.0322	0.0277	0.0279	0.019			
5(2)	0	0	0.0311	0.0254	0.0265	0.0182			
5(3)	0	0	0.035	0.0311	0.0249	0.0175			
6(2)	0	0	0.0358	0.0277	0.0112	0.0167			
6(3)	0	0	0.0354	0.0175	0.0103	-0.0005			
7(2)	0	0	0.0315	0.0144	-0.001	-0.0158			
7(3)	0	0	0	0.0112	-0.0103	-0.0289			

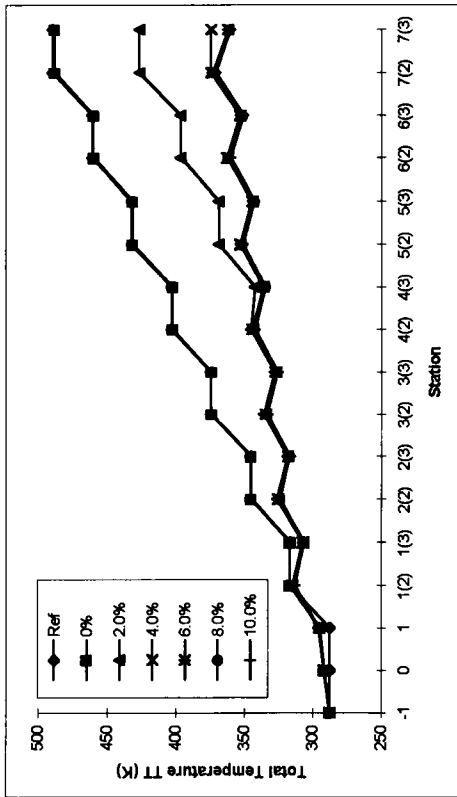


MDOTL Bias Effects (PSAT Bias=30% - PSAT Bias=0.0%)									
Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%			
-1	0	0	0	0	0	0			
0	0	0	0	0	0	0			
1	0	0	0	0	0	0			
1(2)	0.0217	0.0282	0.027	0.027	0.0182	0.0461			
1(3)	0	0.0328	0.0339	0.0388	0.0355	0.0452			
2(2)	0	0.0349	0.0393	0.0372	0.0515	0.0219			
2(3)	0	0.0404	0.0362	0.0354	0.033	0.0429			
3(2)	0	0.0447	0.0466	0.0449	0.048	0.0417			
3(3)	0	0.0491	0.0484	0.0531	0.046	0.0404			
4(2)	0	0.0523	0.0484	0.0499	0.0442	0.0392			
4(3)	0	0.0094	0.0516	0.0465	0.042	0.038			
5(2)	0	0	0.052	0.0427	0.0399	0.0365			
5(3)	0	0	0.0556	0.0469	0.0374	0.017			
6(2)	0	0	0.0571	0.0417	0.0229	0.0162			
6(3)	0	0	0.0597	0.0363	0.0211	-0.001			
7(2)	0	0	0.0557	0.0301	0.0087	-0.0316			
7(3)	0	0	0	0.0232	-0.0018	-0.0434			



Station Total Temperature TT (K), PSAT Bias=>0.0%

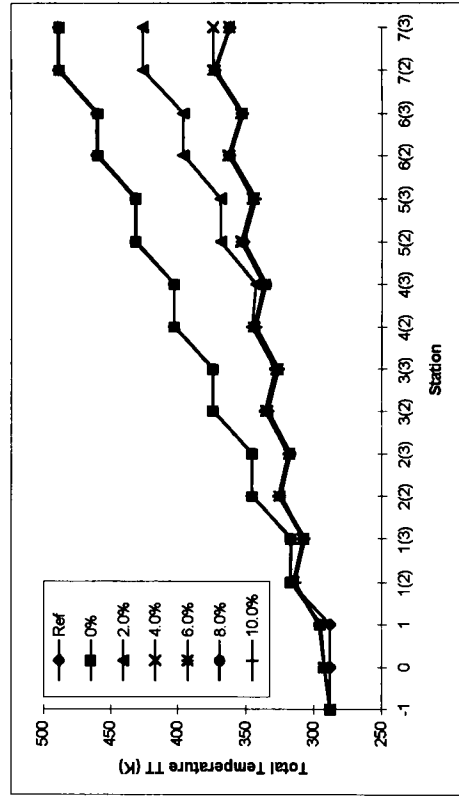
Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.17	288.17	288.17	288.17	288.17	288.17	288.17
0	288.17	292	292.14	292.26	292.37	292.3	292.41
1	288.17	295.06	295.55	295.64	295.74	295.98	296.06
1(2)	317	316.94	315.38	315.25	315.02	314.91	313.45
1(3)	317	316.94	307.7	307.73	306.82	307.65	306.74
2(2)	345.82	345.63	326.23	325.38	325.54	324.35	325.31
2(3)	345.82	345.63	318.53	318.22	318.11	317.67	317.18
3(2)	374.62	374.27	335.95	334.86	334.49	334.19	333.6
3(3)	374.62	374.27	328.22	327.68	326.85	326.63	325.98
4(2)	403.38	402.85	345.58	344.45	343.91	343.53	342.63
4(3)	403.38	402.85	342.85	336.28	336.22	335.25	335.39
5(2)	432.09	431.35	368.99	353.45	353.14	352.19	351.6
5(3)	432.09	431.35	368.99	344.83	344.16	343.44	343.21
6(2)	460.71	459.73	396.77	362.9	362.18	361.97	360.44
6(3)	460.71	459.73	396.77	353.41	352.97	351.99	351.14
7(2)	489.27	487.99	426.51	374.18	373.25	372.3	371.43
7(3)	489.27	487.99	426.51	374.18	361.95	361.1	360.3



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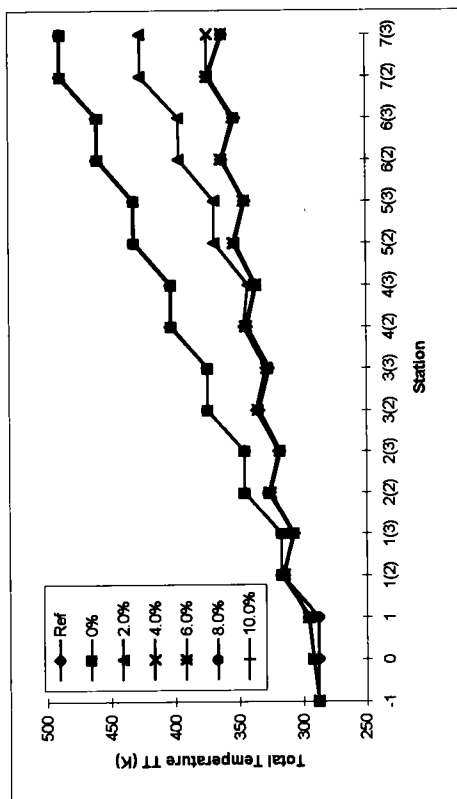
Station Total Temperature TT (K), PSAT Bias=>2.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.17	288.17	288.17	288.17	288.17	288.17	288.17
0	288.17	292	292.14	292.26	292.37	292.3	292.41
1	288.17	295.06	295.55	295.65	295.74	295.98	296.06
1(2)	317	316.94	315.38	315.25	315.02	314.91	313.45
1(3)	317	316.94	308.17	307.73	308.05	307.65	306.74
2(2)	345.82	345.63	326.22	325.38	325.59	324.35	325.31
2(3)	345.82	345.63	318.85	318.22	318.16	317.67	317.18
3(2)	374.62	374.27	336.17	335.56	334.58	334.19	333.6
3(3)	374.62	374.27	328.54	327.68	326.93	326.63	325.98
4(2)	403.38	402.85	345.88	344.45	344.07	343.53	342.63
4(3)	403.38	402.85	342.63	336.77	336.38	335.25	335.39
5(2)	432.09	431.35	368.95	353.86	353.43	352.19	351.6
5(3)	432.09	431.35	368.95	345.14	344.44	344.58	343.21
6(2)	460.71	459.73	396.7	363.38	362.68	361.97	361.89
6(3)	460.71	459.73	396.7	353.84	353.47	353.01	352.51
7(2)	489.27	487.99	426.4	374.13	373.53	373.25	372.78
7(3)	489.27	487.99	426.4	374.13	362.35	361.94	361.55



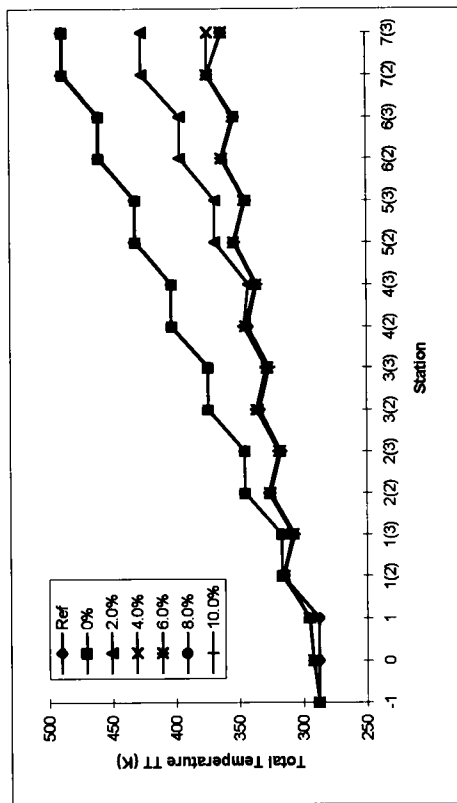
Station Total Temperature TT (K), PSAT Bias=>4.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.17	288.17	288.17	288.17	288.17	288.17	288.17
0	288.17	292	292.14	292.26	292.37	292.3	292.41
1	288.17	295.06	295.55	295.64	295.74	295.98	296.06
1(2)	317	316.94	315.92	315.25	315.02	314.91	315.48
1(3)	317	316.94	308.16	307.73	308.05	307.65	306.83
2(2)	345.82	345.63	326.61	326.21	325.59	326.94	325.51
2(3)	345.82	345.63	319.16	318.22	318.16	317.72	317.37
3(2)	374.62	374.27	336.65	335.56	335.68	334.29	334.01
3(3)	374.62	374.27	328.83	328.32	327.96	326.72	326.35
4(2)	403.38	402.85	346.17	345.03	344.11	343.71	343.43
4(3)	403.38	402.85	342.62	337.27	336.41	336.68	336.13
5(2)	432.09	431.35	368.91	354.29	353.49	352.55	353.12
5(3)	432.09	431.35	368.91	345.84	345.27	344.92	344.63
6(2)	460.71	459.73	396.62	363.59	363.48	362.61	363.16
6(3)	460.71	459.73	396.62	354.16	353.55	352.61	352.38
7(2)	489.27	487.99	426.27	374.47	374.23	373.37	374.65
7(3)	489.27	487.99	426.27	374.16	362.93	362.16	362.28



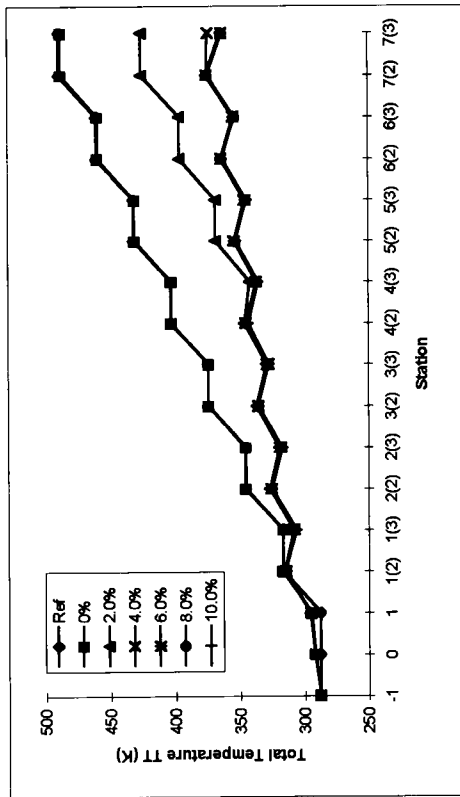
Station Total Temperature TT (K), PSAT Bias=>6.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.17	288.17	288.17	288.17	288.17	288.17	288.17
0	288.17	292	292.14	292.26	292.37	292.3	292.41
1	288.17	295.06	295.55	295.64	295.74	295.98	296.06
1(2)	317	317.01	315.92	315.25	315.02	314.91	315.48
1(3)	317	316.94	308.62	308.6	308.05	307.65	306.83
2(2)	345.82	345.63	327.01	326.22	325.59	325.94	325.51
2(3)	345.82	345.63	319.14	318.99	318.16	317.72	317.37
3(2)	374.62	374.27	336.89	336.29	335.68	334.29	334.01
3(3)	374.62	374.27	329.16	328.34	327.96	328.07	326.35
4(2)	403.38	402.85	346.49	345.08	345.08	343.74	343.43
4(3)	403.38	402.85	342.6	337.32	337.32	336.71	336.13
5(2)	432.09	431.34	368.87	354.38	354.35	353.84	353.12
5(3)	432.09	431.34	368.87	345.94	345.27	344.99	344.63
6(2)	460.71	459.72	396.54	364.04	363.49	362.74	363.16
6(3)	460.71	459.72	396.54	354.68	354.19	353.75	353.73
7(2)	489.27	487.98	426.13	374.96	374.77	374.53	374.66
7(3)	489.27	487.98	426.13	374.43	363.36	363.21	363.48



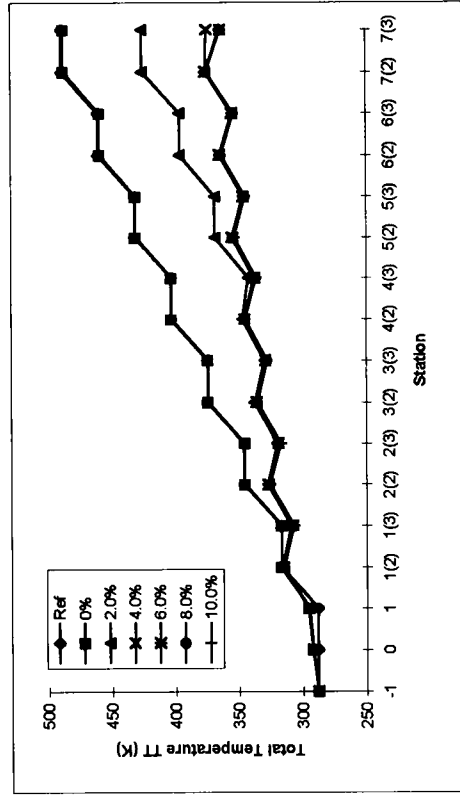
Station Total Temperature TT (K), PSAT Bias=>8.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.17	288.17	288.17	288.17	288.17	288.17	288.17
0	288.17	292	292.14	292.26	292.37	292.3	292.41
1	288.17	295.06	295.55	295.64	295.74	295.98	296.06
1(2)	317	317.21	315.92	315.25	315.02	314.91	315.48
1(3)	317	316.94	308.62	308.6	308.05	307.65	306.83
2(2)	345.82	345.62	327.01	326.22	325.59	325.94	325.51
2(3)	345.82	345.62	319.47	318.99	318.16	317.72	317.37
3(2)	374.62	374.26	337.14	336.29	335.68	335.75	335.81
3(3)	374.62	374.26	329.5	328.97	327.96	328.11	328.07
4(2)	403.38	402.84	346.83	345.64	345.08	345.16	343.6
4(3)	403.38	402.84	342.58	337.8	337.32	336.79	336.28
5(2)	432.09	431.33	368.83	354.77	354.35	354	353.44
5(3)	432.09	431.33	368.83	346.6	346.05	345.15	344.93
6(2)	460.71	459.69	396.47	364.48	364.19	364.11	363.74
6(3)	460.71	459.69	396.47	355.09	354.79	354.02	354.27
7(2)	489.27	487.93	426.01	375.33	375.26	374.98	375.6
7(3)	489.27	487.93	426.01	374.32	363.73	363.65	364.4



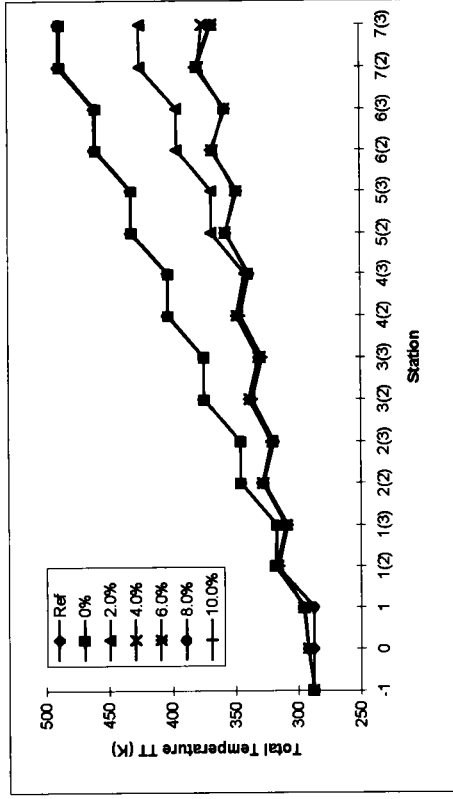
Station Total Temperature TT (K), PSAT Bias=>10.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.17	288.17	288.17	288.17	288.17	288.17	288.17
0	288.17	292	292.14	292.26	292.37	292.3	292.41
1	288.17	295.06	295.55	295.64	295.74	295.98	296.06
1(2)	317	317.42	316.45	316.21	315.02	314.91	315.48
1(3)	317	316.94	309.08	308.61	308.05	307.65	306.83
2(2)	345.82	345.62	327.39	327.08	326.81	325.94	325.51
2(3)	345.82	345.62	319.78	319.01	319.31	319.18	317.37
3(2)	374.62	374.26	337.36	336.35	335.74	335.81	335.81
3(3)	374.62	374.26	329.84	329.03	329.04	328.16	328.07
4(2)	403.38	402.82	347.18	345.75	345.21	345.27	345.3
4(3)	403.38	402.82	342.56	338.42	337.44	336.89	336.33
5(2)	432.09	431.31	368.79	355.41	354.59	354.2	353.52
5(3)	432.09	431.31	368.79	346.78	346.29	345.33	345.01
6(2)	460.71	459.66	396.39	365.1	364.62	364.45	363.87
6(3)	460.71	459.66	396.39	355.6	355.22	354.35	354.41
7(2)	489.27	487.89	425.88	376.03	375.97	375.53	375.82
7(3)	489.27	487.89	425.88	374.9	364.44	364.2	364.62



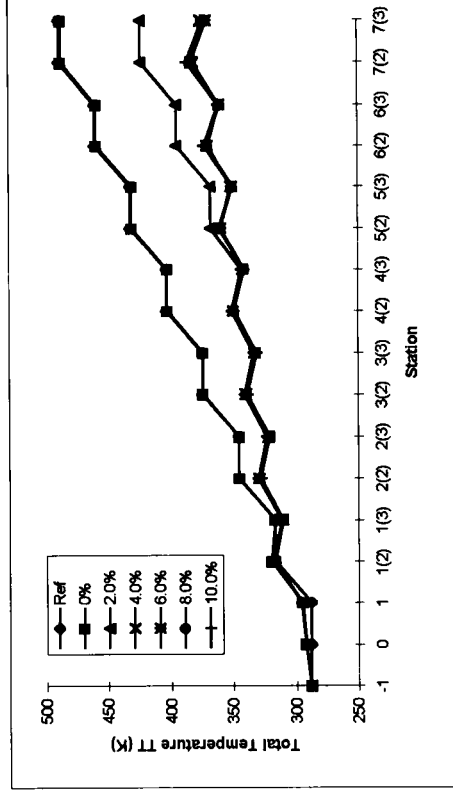
Station Total Temperature TT (K), PSAT Bias=>20.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.17	288.17	288.17	288.17	288.17	288.17	288.17
0	288.17	292	292.14	292.26	292.37	292.3	292.41
1	288.17	295.06	295.55	295.64	295.74	295.98	296.06
1(2)	317	318.44	316.98	317.16	316.36	316.6	315.48
1(3)	317	316.93	310.01	309.49	309.32	309.27	308.68
2(2)	345.82	345.61	328.59	327.94	328.14	327.72	327.56
2(3)	345.82	345.61	321.42	320.57	320.57	319.41	319.31
3(2)	374.62	374.23	339.1	338.55	338.23	337.76	336.3
3(3)	374.62	374.23	331.56	331.02	330.36	330.01	328.51
4(2)	403.38	402.77	348.97	348.19	347.75	347.64	346.23
4(3)	403.38	402.77	342.42	340.03	339.82	339.13	338.76
5(2)	432.09	431.21	368.49	368.49	367.31	367.34	366.85
5(3)	432.09	431.21	368.49	368.49	367.5	367.8	368.42
6(2)	460.71	459.51	395.85	395.85	395.97	395.56	395.38
6(3)	460.71	459.51	395.85	395.85	397.97	397.56	397.38
7(2)	489.27	487.66	425	378.63	379.32	380.02	380.83
7(3)	489.27	487.66	425	375.28	367.69	367.87	368.3



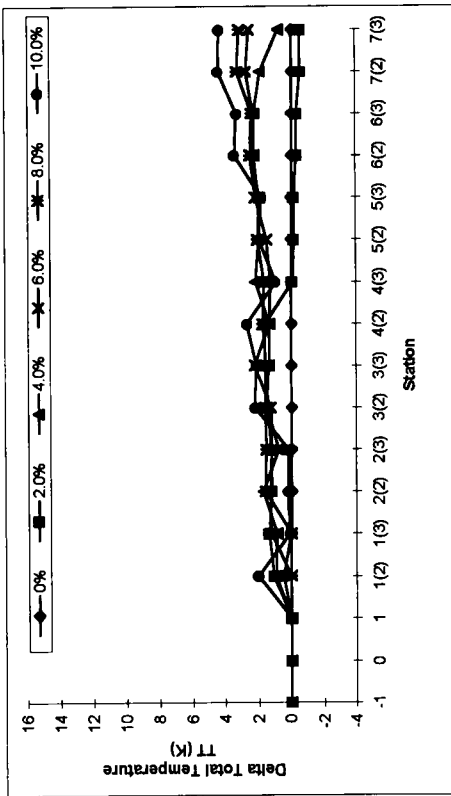
Station Total Temperature TT (K), PSAT Bias=>30.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.17	288.17	288.17	288.17	288.17	288.17	288.17
0	288.17	292	292.14	292.26	292.37	292.3	292.41
1	288.17	295.06	295.55	295.64	295.74	295.98	296.06
1(2)	317	316.93	311.39	311.26	310.59	310.84	310.61
1(3)	317	316.93	311.39	311.26	310.59	310.84	310.61
2(2)	345.82	345.59	330.19	329.66	329.47	329.38	327.85
2(3)	345.82	345.59	323.08	322.15	321.82	320.98	321.33
3(2)	374.62	374.19	340.91	340.08	339.59	339.5	338.77
3(3)	374.62	374.19	333.66	333.07	332.68	331.66	330.83
4(2)	403.38	402.7	351.07	350.1	350.24	349.58	349.36
4(3)	403.38	402.7	343.28	342.24	342.14	340.96	341.7
5(2)	432.09	431.1	368.06	359.75	359.95	359.67	361.12
5(3)	432.09	431.1	368.06	351.49	351.29	350.52	350.69
6(2)	460.71	459.33	395.09	370.07	370.72	370.77	373.01
6(3)	460.71	459.33	395.09	360.84	360.92	360.43	361.79
7(2)	489.27	487.39	423.76	381.54	383.26	383.91	386.71
7(3)	489.27	487.39	423.76	375.66	371.28	371.61	374.13



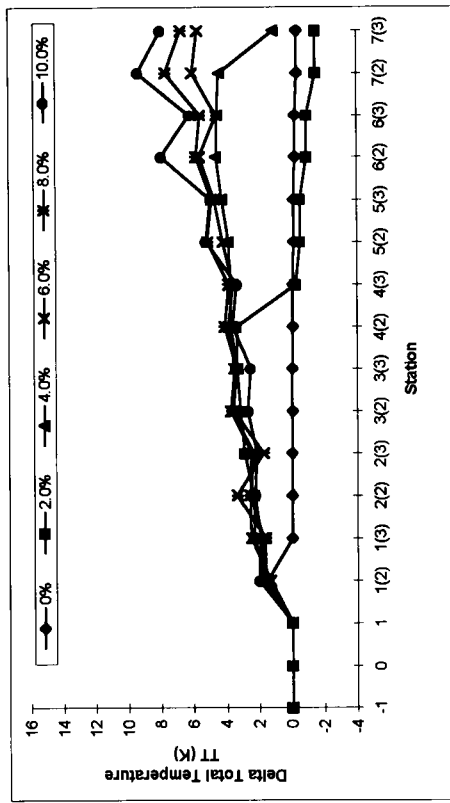
TT Bias Effects (PSAT Bias=10% - PSAT Bias=0.0%)

Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0	0	0	0
0	0	0	0	0	0	0
1	0	0	0	0	0	0
1(2)	0.48	1.07	0.96	0	0	2.03
1(3)	0	1.38	0.88	1.23	0	0.09
2(2)	-0.01	1.16	1.7	1.27	1.59	0.2
2(3)	-0.01	1.25	0.79	1.2	1.51	0.19
3(2)	-0.01	1.41	1.49	1.25	1.62	2.21
3(3)	-0.01	1.62	1.35	2.19	1.53	2.09
4(2)	-0.03	1.6	1.3	1.3	1.74	2.67
4(3)	-0.03	-0.09	2.14	1.22	1.64	0.94
5(2)	-0.04	-0.2	1.96	1.45	2.01	1.92
5(3)	-0.04	-0.2	1.95	2.13	1.89	1.8
6(2)	-0.07	-0.38	2.2	2.44	2.48	3.43
6(3)	-0.07	-0.38	2.19	2.25	2.36	3.27
7(2)	-0.1	-0.63	1.85	2.72	3.23	4.39
7(3)	-0.1	-0.63	0.72	2.49	3.1	4.32

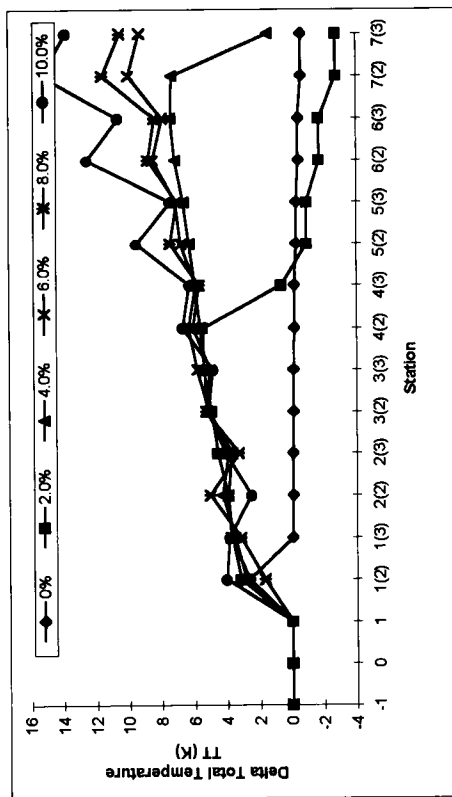


TT Bias Effects (PSAT Bias=20% - PSAT Bias=0.0%)

Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0	0	0	0
0	0	0	0	0	0	0
1	0	0	0	0	0	0
1(2)	1.5	1.6	1.91	1.34	1.69	2.03
1(3)	-0.01	2.31	1.76	2.5	1.62	1.94
2(2)	-0.02	2.36	2.56	2.6	3.37	2.25
2(3)	-0.02	2.89	2.35	2.46	1.74	2.13
3(2)	-0.04	3.15	3.69	3.74	3.57	2.7
3(3)	-0.04	3.34	3.34	3.51	3.38	2.53
4(2)	-0.08	3.39	3.74	3.84	4.11	3.6
4(3)	-0.08	-0.23	3.75	3.6	3.88	3.37
5(2)	-0.14	-0.5	3.86	4.2	5.15	5.25
5(3)	-0.14	-0.5	4.25	4.69	4.87	4.93
6(2)	-0.22	-0.92	4.6	5.62	5.83	7.98
6(3)	-0.22	-0.92	4.56	4.59	5.61	6.24
7(2)	-0.33	-1.51	4.45	6.07	7.72	9.4
7(3)	-0.33	-1.51	1.1	5.74	6.77	8

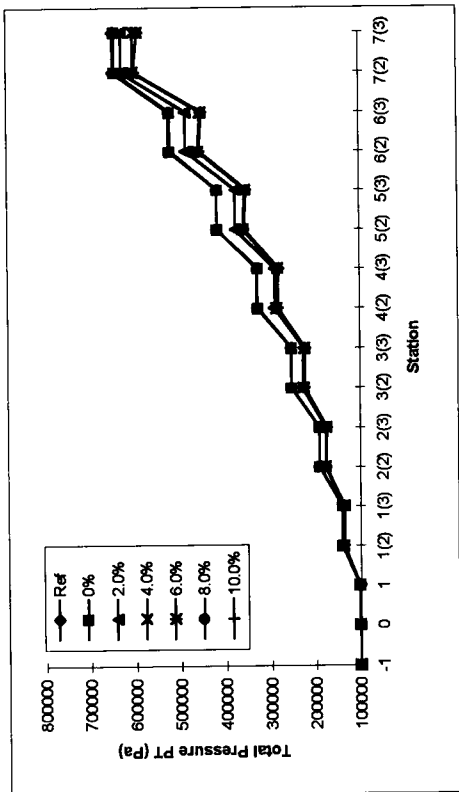


TT Bias Effects (PSAT Bias=30% - PSAT Bias=0.0%)									
Stat#	0%	2.0%	4.0%	6.0%	8.0%	10.0%			
-1	0	0	0	0	0	0			
0	0	0	0	0	0	0			
1	0	0	0	0	0	0			
1(2)	2.66	3.19	2.85	2.67	1.99	4.05			
1(3)	-0.01	3.69	3.53	3.77	3.19	3.87			
2(2)	-0.04	3.96	4.28	3.93	5.03	2.54			
2(3)	-0.04	4.55	3.93	3.71	3.31	4.15			
3(2)	-0.08	4.96	5.22	5.1	5.31	5.17			
3(3)	-0.08	5.44	5.39	5.83	5.03	4.85			
4(2)	-0.15	5.49	5.65	6.33	6.05	6.73			
4(3)	-0.15	0.63	5.96	5.92	5.71	6.31			
5(2)	-0.25	-0.93	6.3	6.81	7.48	9.52			
5(3)	-0.25	-0.93	6.66	7.13	7.08	7.48			
6(2)	-0.4	-1.68	7.17	8.54	8.8	12.57			
6(3)	-0.4	-1.68	7.43	7.95	8.44	10.65			
7(2)	-0.6	-2.75	7.36	10.01	11.61	15.28			
7(3)	-0.6	-2.75	1.48	9.33	10.51	13.83			



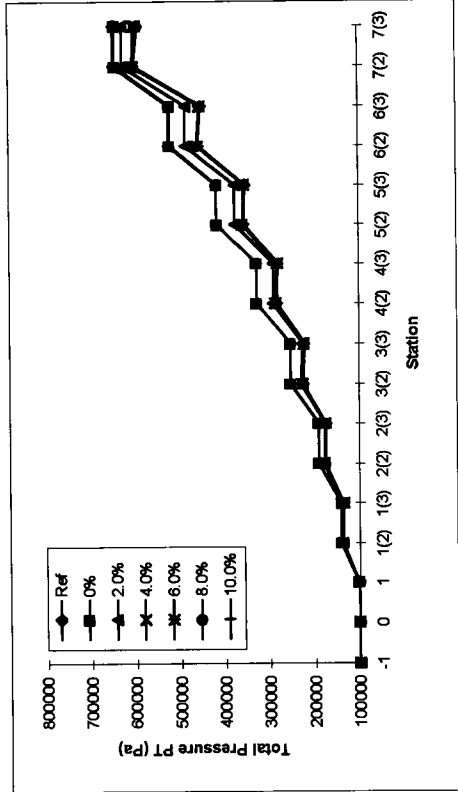
Station Total Pressure PT (Pa), PSAT Bias=>0.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101332	101332	101332	101332	101332	101332	101332
0	101332	102346	102343	102340	102338	102273	102271
1	101332	103109	103148	103087	103026	103016	102955
1(2)	141490	141433	136679	138266	138002	137772	136929
1(3)	141490	141433	136667	136373	136921	136129	135569
2(2)	191865	191691	179587	178358	178153	177416	177558
2(3)	191865	191691	177175	176207	175980	175633	175174
3(2)	253849	253472	229294	226617	226093	225629	224901
3(3)	253849	253472	226397	224028	223350	222283	222283
4(2)	328848	328138	291441	285781	285058	284467	283356
4(3)	328848	328138	290186	282192	281792	280901	280533
5(2)	418312	417077	376786	360227	359510	358459	357401
5(3)	418312	417078	376786	355674	354780	353902	353191
6(2)	523607	521571	486677	459482	458465	457923	456007
6(3)	523607	521571	486678	453329	452594	451505	450205
7(2)	646260	643022	627977	601912	601087	600353	599190
7(3)	646260	643022	627976	601911	591865	591250	590232



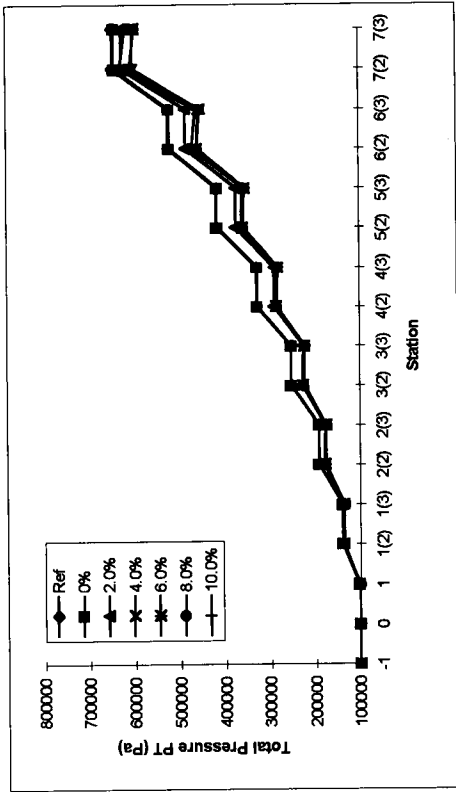
Station Total Pressure PT (Pa), PSAT Bias=>2.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101332	101332	101332	101332	101332	101332	101332
0	101332	102346	102343	102340	102338	102273	102271
1	101332	103109	103148	103087	103026	103016	102955
1(2)	141490	141433	136679	138266	138002	137772	136929
1(3)	141490	141433	136811	136373	136386	136129	135569
2(2)	191865	191691	179582	178358	178247	177416	177558
2(3)	191865	191691	177289	176207	176074	175633	175174
3(2)	253849	253472	229360	226905	226314	225629	224901
3(3)	253849	253472	226512	224027	223572	222992	222283
4(2)	328848	328138	291495	285781	285566	284467	283356
4(3)	328848	328138	290110	282452	282302	280901	280533
5(2)	418312	417077	376616	360415	360639	358459	357401
5(3)	418312	417078	376616	355835	355915	354748	353191
6(2)	523607	521571	486332	459654	460880	457968	457362
6(3)	523607	521571	486332	453515	454021	452442	451616
7(2)	646260	643022	627324	601564	605605	601313	600906
7(3)	646260	643022	627324	601564	596456	592231	592014



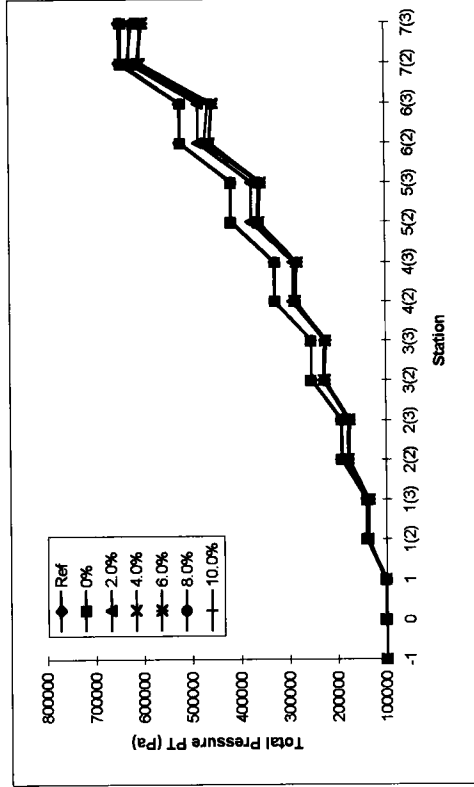
Station Total Pressure PT (Pa), PSAT Bias=>4.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101332	101332	101332	101332	101332	101332	101332
0	101332	102346	102343	102340	102338	102273	102271
1	101332	103109	103148	103087	103026	103016	102955
1(2)	141490	141433	138831	138266	138002	137772	137930
1(3)	141490	141433	136810	136373	136386	136129	135768
2(2)	191865	191691	179709	178665	178247	178200	178052
2(3)	191865	191691	177401	176218	176074	175745	175679
3(2)	253849	253472	229516	226932	226843	225898	226144
3(3)	253849	253472	226611	224340	224115	223262	223529
4(2)	328848	328138	291539	286089	285681	285087	286322
4(3)	328848	328138	290023	282749	282418	282331	283508
5(2)	418312	417077	376421	360689	360892	359967	364202
5(3)	418312	417078	376421	356301	356690	356261	360011
6(2)	523607	521571	485931	459818	461869	461243	470945
6(3)	523607	521571	485931	453775	455506	454838	463852
7(2)	646260	643022	626560	601790	607023	607245	628938
7(3)	646260	643022	626560	601563	597840	598171	618537



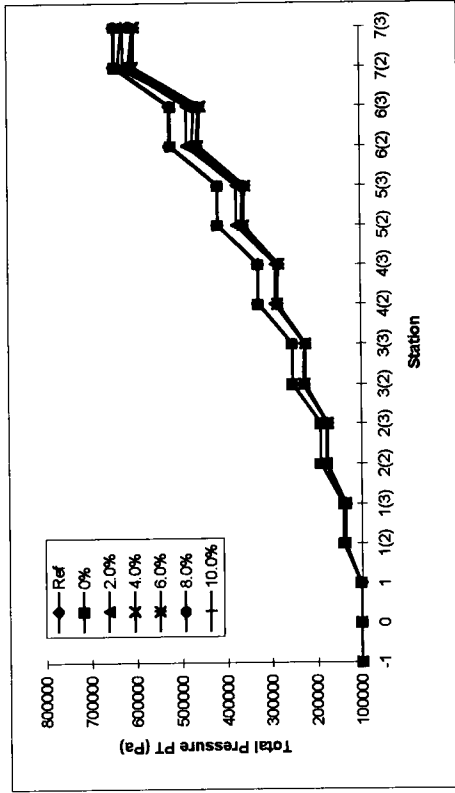
Station Total Pressure PT (Pa), PSAT Bias=>6.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101332	101332	101332	101332	101332	101332	101332
0	101332	102346	102343	102340	102338	102273	102271
1	101332	103109	103148	103087	103026	103016	102955
1(2)	141490	141449	138831	138266	138002	137772	137930
1(3)	141490	141432	136955	136671	136386	136129	135768
2(2)	191865	191688	179829	178692	178247	178200	178062
2(3)	191865	191688	177366	176543	176074	175745	175679
3(2)	253849	253466	229584	227290	226843	225898	226144
3(3)	253849	253466	226730	224411	224115	224006	223529
4(2)	328848	328125	291591	286252	286203	285214	286322
4(3)	328848	328125	289935	282915	282951	282449	283508
5(2)	418312	417053	376225	361050	361434	361101	364202
5(3)	418312	417052	376225	356666	356718	356582	360011
6(2)	523607	521526	485534	460732	461936	461933	470945
6(3)	523607	521526	485534	454771	456075	459422	465182
7(2)	646260	642943	625812	603368	607519	608620	629012
7(3)	646260	642943	625812	602978	598300	600475	620074



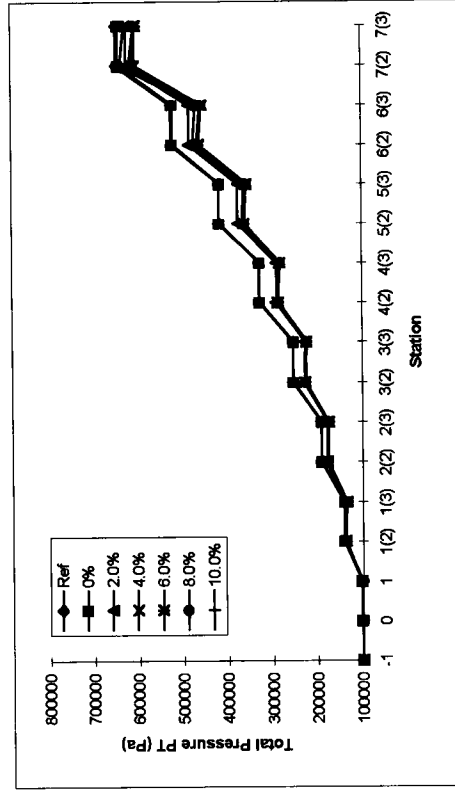
Station Total Pressure PT (Pa), PSAT Bias=>8.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101332	101332	101332	101332	101332	101332	101332
0	101332	102346	102343	102340	102338	102273	102271
1	101332	103109	103148	103087	103026	103016	102955
1(2)	141490	141498	138831	138266	138002	137772	137930
1(3)	141490	141429	136855	136671	136386	136129	135768
2(2)	191865	191690	179829	178692	178200	178062	178052
2(3)	191865	191680	177506	176543	176074	175745	175679
3(2)	253849	253448	229656	227290	226843	226710	227282
3(3)	253849	253448	226853	224696	224115	224099	224704
4(2)	328848	328089	291658	286492	286203	286270	286968
4(3)	328848	328089	289854	283145	282951	282738	284156
5(2)	418312	416986	376048	361174	361434	361742	365676
5(3)	418312	416985	376049	356983	357238	357225	361489
6(2)	523607	521405	485179	460730	462381	464176	474159
6(3)	523607	521406	485179	454803	456514	457812	468405
7(2)	646260	642736	625144	602974	607767	612369	635680
7(3)	646260	642737	625143	602244	598510	603339	626762



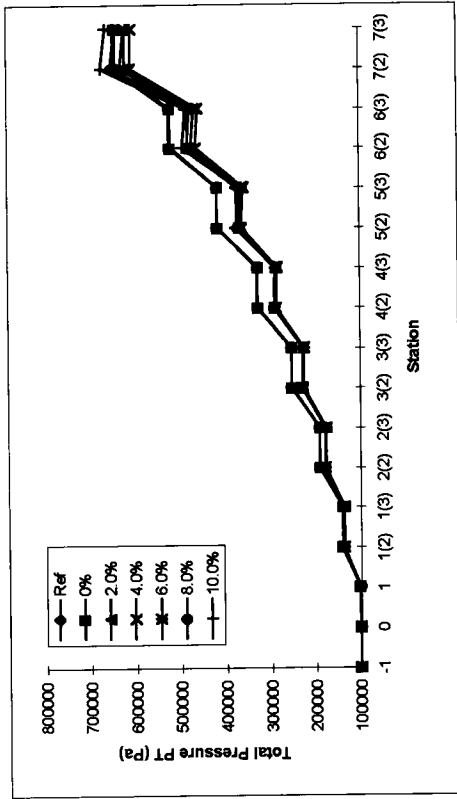
Station Total Pressure PT (Pa), PSAT Bias=>10.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101332	101332	101332	101332	101332	101332	101332
0	101332	102346	102343	102340	102338	102273	102271
1	101332	103109	103148	103087	103026	103016	102955
1(2)	141490	141546	138982	138583	138002	137772	137930
1(3)	141490	141425	137098	136694	136386	136129	135768
2(2)	191865	191672	179950	179056	178770	178200	178062
2(3)	191865	191672	177612	176611	176610	176498	175679
3(2)	253849	253430	229717	227452	227021	226864	227282
3(3)	253849	253430	226970	224859	224798	224255	224704
4(2)	328848	328052	291718	286862	286642	286629	288179
4(3)	328848	328052	289766	283776	283392	283098	284310
5(2)	418312	416915	375846	362163	362411	362548	366021
5(3)	418312	416915	375846	357735	358220	358035	361836
6(2)	523607	521279	484762	462479	464463	465916	474905
6(3)	523607	521279	484762	456506	458607	459559	469153
7(2)	646260	642518	624349	606212	612004	615951	637218
7(3)	646260	642518	624660	605394	602774	606937	628306



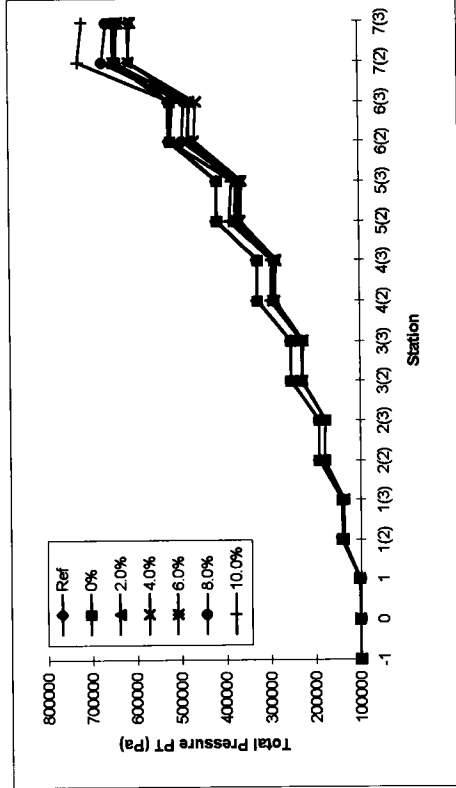
Station Total Pressure PT (Pa), PSAT Bias=>20.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101332	101332	101332	101332	101332	101332	101332
0	101332	102346	102343	102340	102338	102273	102271
1	101332	103109	103148	103087	103026	103016	102955
1(2)	141490	141786	139132	138895	138514	138506	137930
1(3)	141490	141409	137386	137010	136909	136882	136593
2(2)	191865	191630	180312	179436	179528	179442	179419
2(3)	191865	191630	178174	177291	177384	177016	177073
3(2)	253849	253339	230197	228515	228800	229053	228734
3(3)	253849	253339	227524	225919	226105	226476	226162
4(2)	328848	327869	291912	288293	289524	290999	291602
4(3)	328848	327869	289183	284917	286309	287514	288840
5(2)	418312	416568	374565	363716	367536	371552	375219
5(3)	418312	416568	374565	359650	363362	367104	371108
6(2)	523607	520653	482177	464762	474031	483519	493728
6(3)	523607	520653	482177	458966	467719	477236	486771
7(2)	646260	641437	619477	609176	629721	651105	673300
7(3)	646260	641437	619477	606812	620581	641317	663051



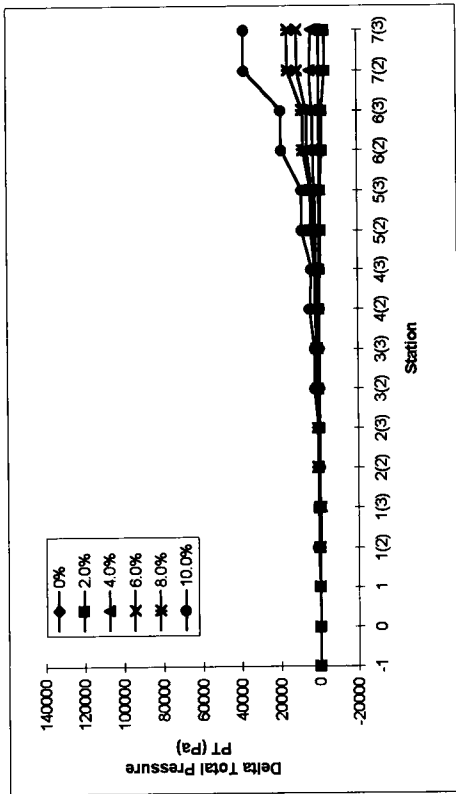
Station Total Pressure PT (Pa), PSAT Bias=>30.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101332	101332	101332	101332	101332	101332	101332
0	101332	102346	102343	102340	102338	102273	102271
1	101332	103109	103148	103087	103026	103016	102955
1(2)	141490	142050	139570	139201	139014	138506	138902
1(3)	141490	141388	137805	137618	137422	137508	137587
2(2)	191865	191579	180776	180124	180259	180361	180160
2(3)	191865	191579	178715	177985	178131	177963	178717
3(2)	253849	253227	230636	229319	229990	230602	231909
3(3)	253849	253227	228161	227010	227813	228058	229382
4(2)	328848	327644	292044	289515	292170	293850	298191
4(3)	328848	327644	288886	286388	288993	290408	295487
5(2)	418312	416144	372776	366543	372105	377085	388992
5(3)	418312	416144	372776	361619	367993	372694	383786
6(2)	523607	519892	478562	467092	482347	494390	520623
6(3)	523607	519892	478562	461762	476581	488191	513760
7(2)	646260	640124	612651	612137	645421	672125	726355
7(3)	646260	640124	612651	608075	636299	662479	716234



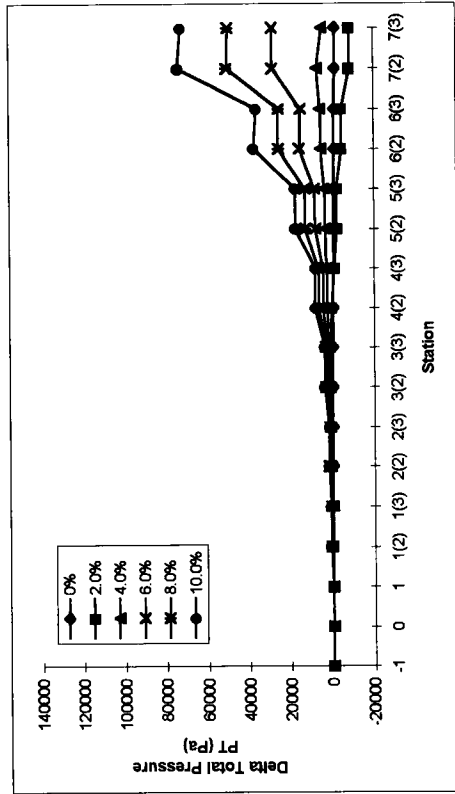
PT Bias Effects (PSAT Bias=10% - PSAT Bias=0.0%)

Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0	0	0	0
0	0	0	0	0	0	0
1	0	0	0	0	0	0
1(2)	113	303	317	0	0	1001
1(3)	-8	431	321	-535	0	199
2(2)	-19	363	698	617	784	504
2(3)	-19	437	404	630	805	505
3(2)	-42	423	835	928	1235	2381
3(3)	-42	573	831	1448	1263	2421
4(2)	-86	277	1081	1584	2162	4823
4(3)	-96	-420	1584	1600	2197	3777
5(2)	-162	-940	1936	2901	4089	8620
5(3)	-163	-940	2061	3440	4133	8645
6(2)	-292	-1915	2997	5998	7993	18898
6(3)	-292	-1916	3177	6013	8054	18948
7(2)	-504	-3628	4300	10917	15598	38028
7(3)	-504	-3326	3483	10909	15687	38074

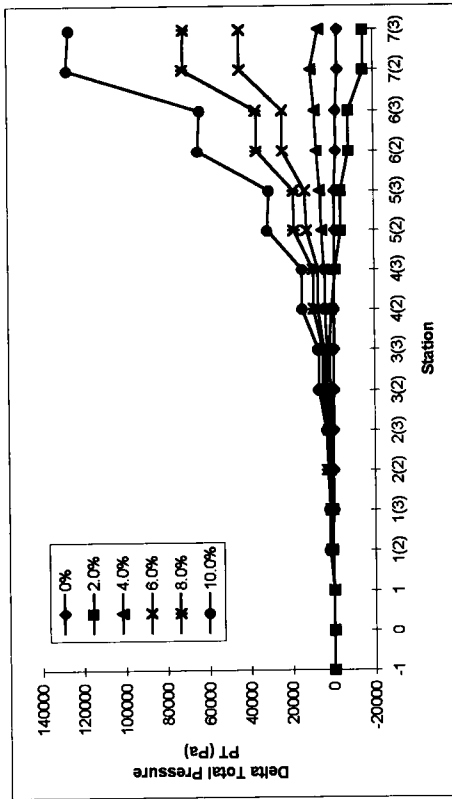


PT Bias Effects (PSAT Bias=20% - PSAT Bias=0.0%)

Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0	0	0	0
0	0	0	0	0	0	0
1	0	0	0	0	0	0
1(2)	353	453	629	512	734	1001
1(3)	-24	719	637	-12	753	1024
2(2)	-61	725	1078	1375	2026	1861
2(3)	-61	999	1084	1404	1383	1899
3(2)	-133	903	1898	2707	3424	3833
3(3)	-133	1127	1891	2755	3484	3879
4(2)	-269	471	2512	4466	6532	8246
4(3)	-269	-1003	2725	4517	6613	8307
5(2)	-509	-2221	3489	8026	13093	17818
5(3)	-510	-2221	3976	8602	13202	17917
6(2)	-918	-4500	5280	15566	25596	37721
6(3)	-918	-4501	5657	15125	25731	38566
7(2)	-1585	-8500	7264	28634	50752	74110
7(3)	-1585	-8499	4901	28716	50067	72819

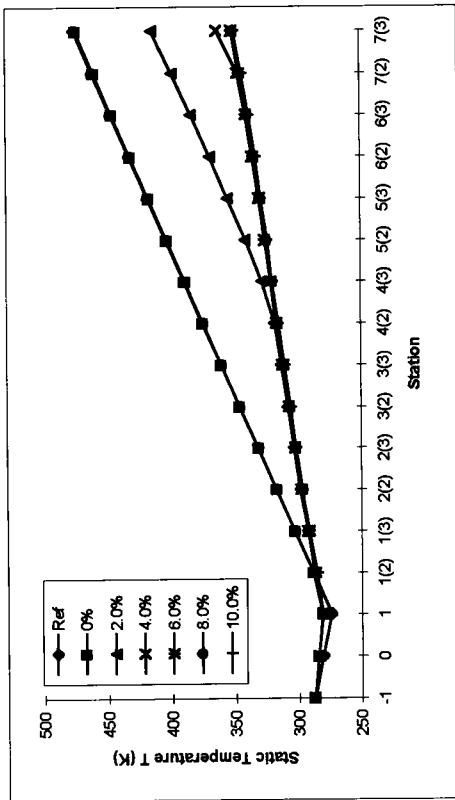


PT Bias Effects (PSAT Bias=30% - PSAT Bias=0.0%)									
Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%			
-1	0	0	0	0	0	0			
0	0	0	0	0	0	0			
1	0	0	0	0	0	0			
1(2)	617	891	935	1012	734	1973			
1(3)	-45	1138	1245	501	1379	2018			
2(2)	-112	1189	1766	2106	2945	2602			
2(3)	-112	1540	1778	2151	2330	3543			
3(2)	-245	1342	2702	3897	4973	7008			
3(3)	-245	1764	2982	4463	5066	7099			
4(2)	-494	603	3734	7112	9383	14835			
4(3)	-494	-1300	4196	7201	9507	14954			
5(2)	-933	-4010	5316	12595	18626	31591			
5(3)	-934	-4010	5945	13213	18792	30595			
6(2)	-1679	-8115	7610	23882	36467	64616			
6(3)	-1679	-8115	8433	23987	36686	63555			
7(2)	-2898	-15326	10225	44334	71172	127165			
7(3)	-2898	-15325	6164	44434	71229	126002			



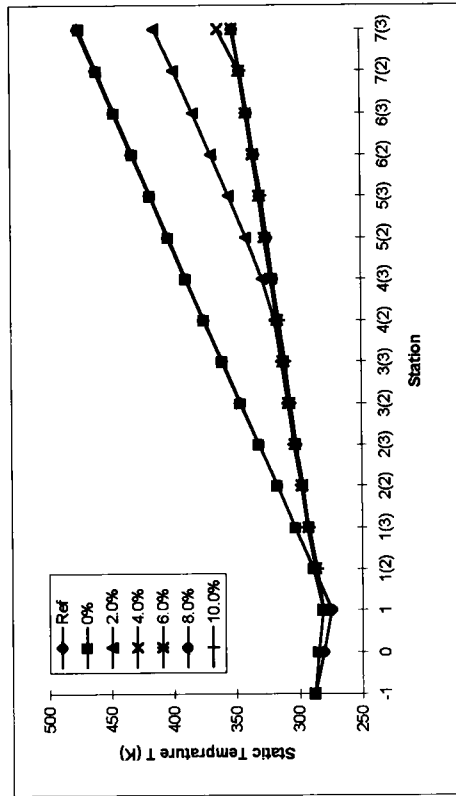
Station Static Temperature T (K), PSAT Bias=>0.0

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.16	288.16	288.16	288.16	288.16	288.16	288.16
0	281.01	284.92	284.77	284.85	284.95	284.86	284.95
1	274.44	281.51	281.34	281.33	281.36	281.55	281.59
1(2)	288.85	289.01	287.61	287.5	287.28	287.17	285.75
1(3)	303.27	303.36	293.07	292.94	291.96	292.77	291.77
2(2)	317.67	317.7	298.66	297.83	297.99	296.82	297.76
2(3)	332.04	303.69	303.13	302.98	302.48	301.94	301.94
3(2)	346.47	346.35	308.54	307.48	307.12	306.81	306.23
3(3)	360.86	360.65	313.48	312.54	311.66	311.38	310.68
4(2)	375.23	374.94	318.29	317.21	316.67	316.28	315.38
4(3)	389.6	389.2	328.37	321.44	321.34	320.33	320.44
5(2)	403.95	403.44	341.65	326.3	325.98	325.03	324.42
5(3)	418.28	417.66	355.28	330.81	330.11	329.37	329.11
6(2)	432.58	431.83	369.31	335.74	335.01	334.78	333.25
6(3)	446.87	445.99	383.82	340.86	340.42	339.44	338.58
7(2)	461.14	460.11	398.87	346.81	345.86	344.9	344.01
7(3)	475.37	474.18	414.51	363.56	351.53	350.71	349.93



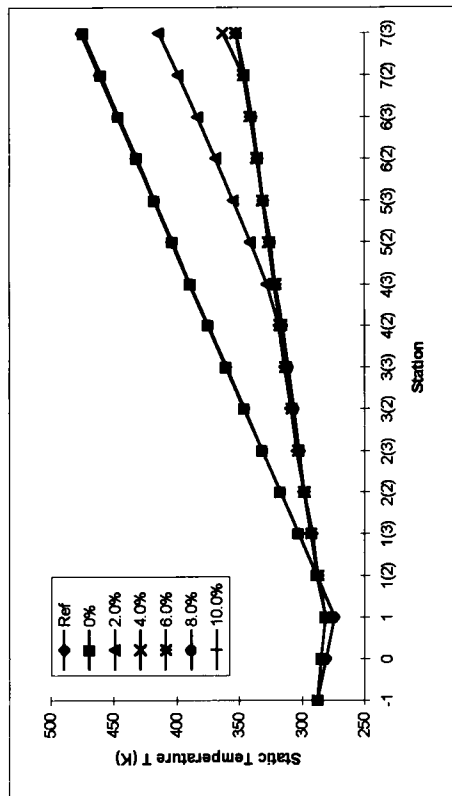
Station Static Temperature T (K), PSAT Bias=>2.0

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.16	288.16	288.16	288.16	288.16	288.16	288.16
0	281.01	284.92	284.77	284.85	284.95	284.86	284.95
1	274.44	281.51	281.34	281.33	281.36	281.55	281.59
1(2)	288.85	289.01	287.61	287.5	287.28	287.17	285.75
1(3)	303.27	303.36	293.53	292.94	293.22	292.77	291.77
2(2)	317.67	317.7	298.65	297.83	298.03	296.82	297.76
2(3)	332.08	332.04	304.01	303.13	303.04	302.48	301.94
3(2)	346.47	346.35	308.76	308.17	307.2	306.81	306.23
3(3)	360.86	360.65	313.79	312.54	311.77	311.38	310.68
4(2)	375.23	374.94	318.58	317.21	316.82	316.28	315.38
4(3)	389.6	389.2	328.34	321.93	321.55	320.33	320.44
5(2)	403.95	403.44	341.61	326.7	326.25	325.03	324.42
5(3)	418.28	417.66	355.23	331.12	330.48	330.51	329.11
6(2)	432.58	431.83	369.24	336.21	335.49	334.79	334.68
6(3)	446.87	445.99	383.73	341.28	341.04	340.46	339.96
7(2)	461.14	460.11	398.76	346.77	346.11	345.83	345.34
7(3)	475.37	474.18	414.37	363.51	352.09	351.56	351.2



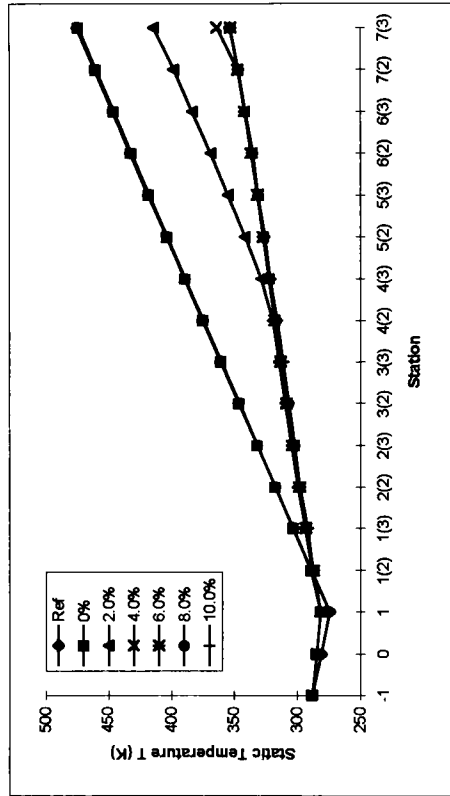
Station Static Temperature T (K), PSAT Bias=>4.0

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.16	288.16	288.16	288.16	288.16	288.16	288.16
0	281.01	284.92	284.77	284.85	284.95	284.86	284.95
1	274.44	281.51	281.34	281.33	281.36	281.55	281.59
1(2)	288.85	289.01	288.14	287.5	287.28	287.17	287.74
1(3)	303.27	303.36	293.52	292.94	293.22	292.77	291.91
2(2)	317.67	317.7	299.03	298.65	298.03	298.38	297.95
2(3)	332.08	332.04	304.32	303.14	302.55	302.22	302.22
3(2)	346.47	346.35	309.24	308.18	308.28	306.91	306.82
3(3)	360.86	360.65	314.07	313.17	312.81	311.51	311.24
4(2)	375.23	374.94	318.88	317.78	316.85	316.46	316.16
4(3)	389.6	389.2	328.32	322.42	321.6	321.84	321.51
5(2)	403.95	403.44	341.58	327.12	326.32	325.37	325.88
5(3)	418.28	417.66	355.17	331.81	331.33	330.97	331.07
6(2)	432.58	431.83	369.17	336.43	336.28	335.39	335.85
6(3)	446.87	445.99	383.64	341.6	341.15	340.24	340.59
7(2)	461.14	460.11	398.64	347.1	346.8	345.91	346.99
7(3)	475.37	474.18	414.22	363.53	352.7	351.98	352.85



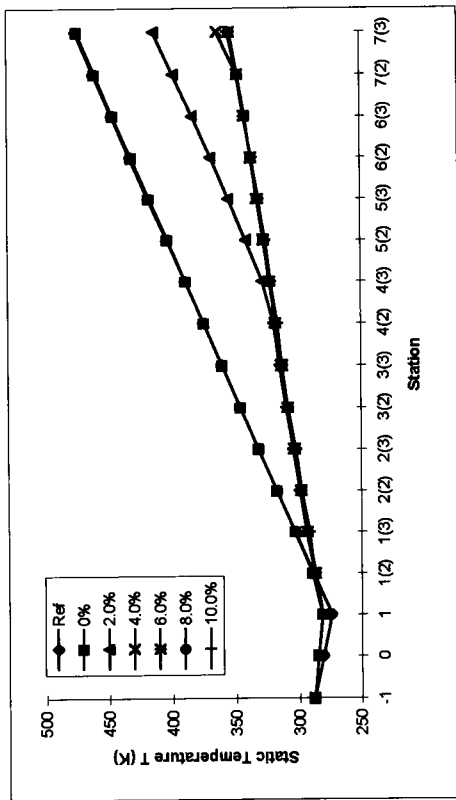
Station Static Temperature T (K), PSAT Bias=>6.0

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.16	288.16	288.16	288.16	288.16	288.16	288.16
0	281.01	284.92	284.77	284.85	284.95	284.86	284.95
1	274.44	281.51	281.34	281.33	281.36	281.55	281.59
1(2)	288.85	289.08	288.14	287.5	287.28	287.17	287.74
1(3)	303.27	303.36	293.99	293.82	293.22	292.77	291.91
2(2)	317.67	317.7	299.42	298.66	298.03	298.38	297.95
2(3)	332.08	332.04	304.29	303.91	303.04	302.55	302.22
3(2)	346.47	346.35	309.48	308.9	308.28	306.91	306.82
3(3)	360.86	360.65	314.4	313.21	312.81	312.89	311.24
4(2)	375.23	374.93	319.2	317.83	317.82	316.48	316.16
4(3)	389.6	389.2	328.29	322.49	322.5	321.88	321.51
5(2)	403.95	403.44	341.53	327.22	327.16	326.64	325.88
5(3)	418.28	417.65	355.12	331.93	331.33	331.07	331.07
6(2)	432.58	431.82	369.09	336.87	336.29	335.52	335.85
6(3)	446.87	445.97	383.54	342.15	341.79	341.41	341.94
7(2)	461.14	460.09	398.51	347.58	347.33	347.05	347.347
7(3)	475.37	474.16	414.06	363.84	353.12	353.07	354.05



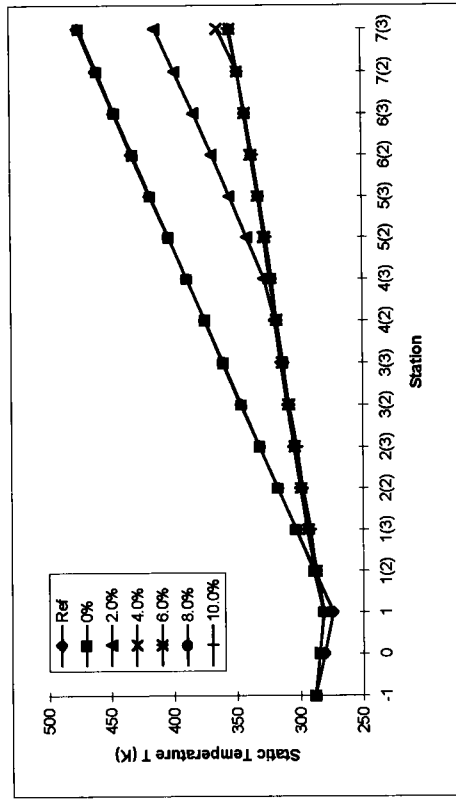
Station Static Temperature T (K), PSAT Bias=>8.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.16	288.16	288.16	288.16	288.16	288.16	288.16
0	281.01	284.92	284.77	284.85	284.95	284.86	284.95
1	274.44	281.51	281.34	281.33	281.36	281.55	281.59
1(2)	288.85	289.28	288.14	287.5	287.28	287.17	287.74
1(3)	303.27	303.36	293.99	293.82	293.22	292.77	291.91
2(2)	317.67	317.7	299.42	298.66	298.03	298.38	297.95
2(3)	332.08	332.03	304.62	303.91	303.04	302.55	302.22
3(2)	346.47	346.35	309.72	308.9	308.28	308.35	308.39
3(3)	360.86	360.64	314.73	313.84	312.81	312.94	313.03
4(2)	375.23	374.92	319.53	318.38	317.82	317.88	316.32
4(3)	389.6	389.18	328.26	322.97	322.5	322.00	321.73
5(2)	403.95	403.42	341.49	327.6	327.16	326.80	326.19
5(3)	418.28	417.63	355.06	332.58	332.1	331.27	331.49
6(2)	432.58	431.8	369.02	337.3	336.98	336.87	336.39
6(3)	446.87	445.94	383.44	342.54	342.38	341.75	342.64
7(2)	461.14	460.05	398.39	347.95	347.82	347.47	347.89
7(3)	475.37	474.11	413.92	363.71	363.49	363.60	365.15



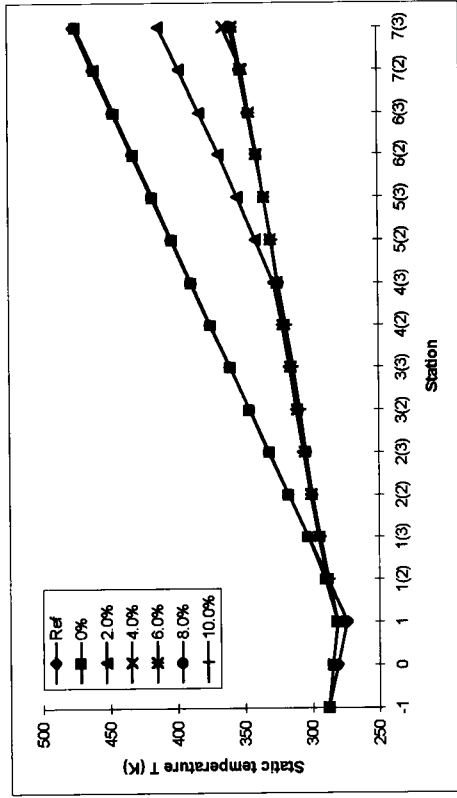
Station Static Temperature T (K), PSAT Bias=>10.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.16	288.16	288.16	288.16	288.16	288.16	288.16
0	281.01	284.92	284.77	284.85	284.95	284.86	284.95
1	274.44	281.51	281.34	281.33	281.36	281.55	281.59
1(2)	288.85	289.49	288.66	288.44	287.28	287.17	287.74
1(3)	303.27	303.36	294.45	293.83	293.22	292.77	291.91
2(2)	317.67	317.7	299.8	299.5	299.24	298.38	297.95
2(3)	332.08	332.03	304.92	303.95	304.21	304.05	302.22
3(2)	346.47	346.34	309.94	308.95	308.34	308.4	308.39
3(3)	360.86	360.64	315.06	313.92	313.92	313.02	313.03
4(2)	375.23	374.91	319.88	318.49	317.94	317.98	317.99
4(3)	389.6	389.17	328.24	323.62	322.68	322.14	321.79
5(2)	403.95	403.4	341.45	328.23	327.39	326.98	326.27
5(3)	418.28	417.6	355.01	332.81	332.42	331.52	331.59
6(2)	432.58	431.77	368.94	337.91	337.39	337.19	336.52
6(3)	446.87	445.9	383.34	343.13	342.91	342.16	342.81
7(2)	461.14	460	398.26	348.63	348.49	348	348.1
7(3)	475.37	474.05	413.75	364.38	364.32	364.25	365.4



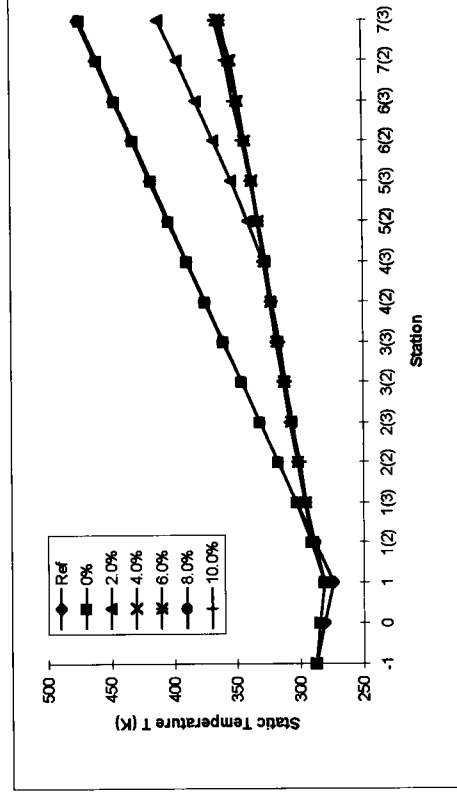
Station Static Temperature T (K), PSAT Bias=>20.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.16	288.16	288.16	288.16	288.16	288.16	288.16
0	281.01	284.92	284.77	284.85	284.95	284.86	284.95
1	274.44	281.51	281.34	281.33	281.36	281.55	281.59
1(2)	288.85	290.5	289.19	289.38	288.59	288.83	287.74
1(3)	303.27	303.35	295.38	294.72	294.53	294.46	293.84
2(2)	317.67	317.69	300.99	300.36	300.55	300.13	299.96
2(3)	332.08	332.01	306.55	305.52	305.54	304.38	304.32
3(2)	346.47	346.31	311.67	311.13	310.79	310.31	308.86
3(3)	360.86	360.6	316.74	315.92	315.35	315.09	313.67
4(2)	375.23	374.86	321.66	320.9	320.44	320.29	318.88
4(3)	389.6	389.1	328.03	325.25	325.25	324.76	324.61
5(2)	403.95	403.31	341.17	330.11	330.08	330.03	329.49
5(3)	418.28	417.49	354.61	335.13	335.28	335.11	335.32
6(2)	432.58	431.62	368.43	340.29	340.48	340.38	340.88
6(3)	446.87	445.73	382.67	345.51	345.66	346.25	346.56
7(2)	461.14	459.79	397.42	351.2	351.7	352.2	352.79
7(3)	475.37	473.79	412.7	364.8	358.05	358.91	359.96



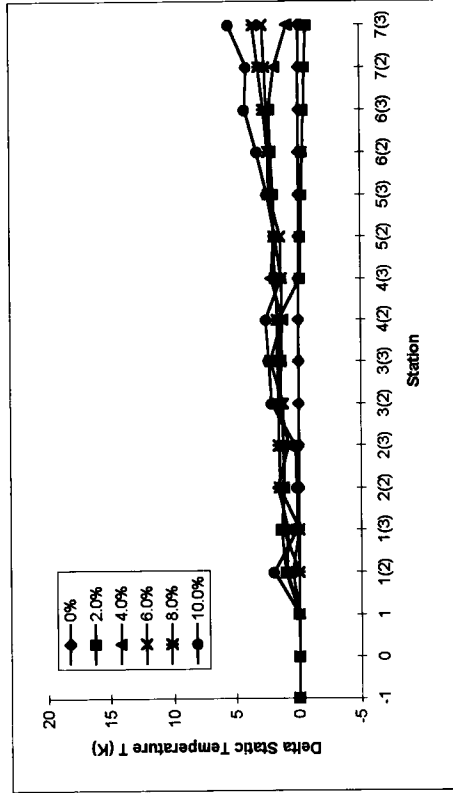
Station Static Temperature T (K), PSAT Bias=>30.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	288.16	288.16	288.16	288.16	288.16	288.16	288.16
0	281.01	284.92	284.77	284.85	284.95	284.86	284.95
1	274.44	281.51	281.34	281.33	281.36	281.55	281.59
1(2)	288.85	291.65	290.76	290.31	289.9	288.83	289.72
1(3)	303.27	303.34	296.75	296.51	295.84	296.07	295.9
2(2)	317.67	317.67	302.57	302.05	301.85	301.76	300.23
2(3)	332.08	331.98	308.18	307.12	306.85	306.04	306.54
3(2)	346.47	346.27	313.46	312.64	312.13	312.02	311.27
3(3)	360.86	360.55	318.77	317.99	317.77	316.88	316.35
4(2)	375.23	374.79	323.75	322.79	322.88	322.2	321.92
4(3)	389.6	389.01	328.79	327.49	327.73	326.82	328.13
5(2)	403.95	403.2	340.76	332.53	332.65	332.3	333.6
5(3)	418.28	417.35	354.06	337.56	337.97	337.65	338.69
6(2)	432.58	431.45	367.69	342.82	343.33	343.25	345.21
6(3)	446.87	445.51	381.73	348.39	349.35	349.51	352
7(2)	461.14	459.52	396.22	354.09	355.91	355.91	358.22
7(3)	475.37	473.46	411.21	365.2	362.01	363.12	366.87



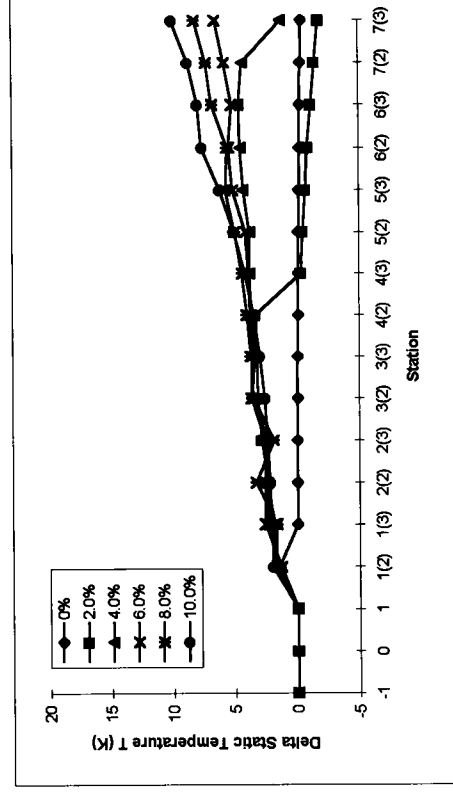
T Bias Effects (PSAT Bias=10% - PSAT Bias=0.0%)

Stat#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0	0	0	0
0	0	0	0	0	0	0
1	0	0	0	0	0	0
1(2)	0.48	1.05	0.94	0	0	1.99
1(3)	0	1.38	0.89	1.26	0	0.14
2(2)	0	1.14	1.67	1.25	1.56	0.19
2(3)	-0.01	1.23	0.82	1.23	1.57	0.28
3(2)	-0.01	1.4	1.47	1.22	1.59	2.16
3(3)	-0.01	1.58	1.38	2.26	1.64	2.35
4(2)	-0.03	1.59	1.28	1.27	1.7	2.61
4(3)	-0.03	-0.13	2.18	1.34	1.81	1.35
5(2)	-0.04	-0.2	1.93	1.41	1.95	1.85
5(3)	-0.06	-0.27	2	2.31	2.15	2.48
6(2)	-0.06	-0.37	2.17	2.38	2.41	3.27
6(3)	-0.09	-0.48	2.27	2.49	2.72	4.23
7(2)	-0.11	-0.61	1.82	2.63	3.1	4.09
7(3)	-0.13	-0.76	0.82	2.79	3.54	5.47

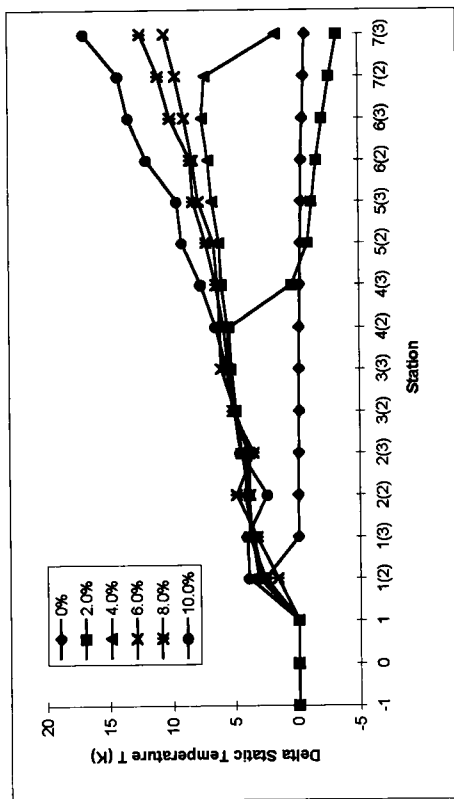


T Bias Effects (PSAT Bias=20% - PSAT Bias=0.0%)

Stat#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0	0	0	0
0	0	0	0	0	0	0
1	0	0	0	0	0	0
1(2)	1.49	1.58	1.88	1.31	1.66	1.99
1(3)	-0.01	2.31	1.78	2.57	1.69	2.07
2(2)	-0.01	2.33	2.53	2.56	3.31	2.2
2(3)	-0.03	2.86	2.39	2.56	1.9	2.38
3(2)	-0.04	3.13	3.65	3.67	3.5	2.63
3(3)	-0.05	3.26	3.38	3.69	3.71	2.99
4(2)	-0.08	3.37	3.69	3.77	4.01	3.5
4(3)	-0.1	-0.34	3.81	3.91	4.43	4.17
5(2)	-0.13	-0.48	3.81	4.1	5	5.07
5(3)	-0.17	-0.67	4.32	5.17	5.74	6.21
6(2)	-0.21	-0.88	4.55	5.47	5.6	7.63
6(3)	-0.26	-1.15	4.65	5.24	6.81	7.98
7(2)	-0.32	-1.45	4.39	5.84	7.3	7.98
7(3)	-0.39	-1.81	1.24	6.52	8.2	10.03

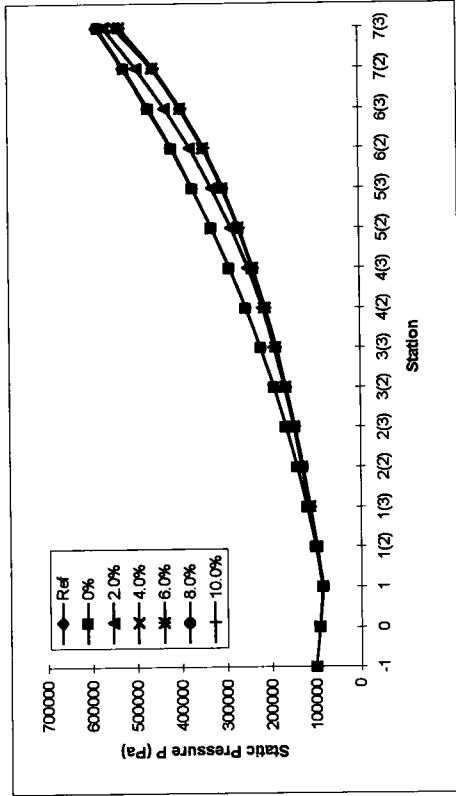


T Bias Effects (PSAT Bias=30% - PSAT Bias=0.0%)									
Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%			
-1	0	0	0	0	0	0			
0	0	0	0	0	0	0			
1	0	0	0	0	0	0			
1(2)	2.64	3.15	2.81	2.62	1.66	3.97			
1(3)	-0.02	3.88	3.57	3.88	3.3	4.13			
2(2)	-0.03	3.91	4.22	3.86	4.94	2.47			
2(3)	-0.06	4.49	3.99	3.87	3.56	4.6			
3(2)	-0.08	4.92	5.16	5.01	5.21	5.04			
3(3)	-0.1	5.29	5.45	6.11	5.5	5.67			
4(2)	-0.15	5.46	5.58	6.21	5.92	6.54			
4(3)	-0.19	0.42	6.05	6.39	6.49	7.69			
5(2)	-0.24	-0.89	6.23	6.67	7.27	9.18			
5(3)	-0.31	-1.22	6.75	7.86	8.28	9.58			
6(2)	-0.38	-1.62	7.08	8.32	8.47	11.96			
6(3)	-0.48	-2.09	7.53	8.93	10.07	13.42			
7(2)	-0.59	-2.65	7.28	9.65	11.01	14.21			
7(3)	-0.72	-3.3	1.64	10.48	12.41	16.94			



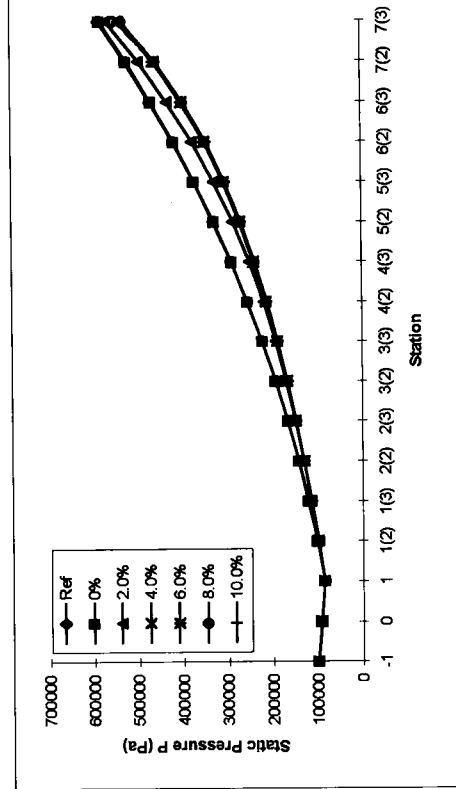
Station Static Pressure P (Pa), PSAT Bias=>0.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101325	101325	101325	101325	101325	101325	101325
0	92795	93900	93571	93525	93508	93425	93418
1	85420	87441	86787	86619	86510	86456	86367
1(2)	102181	102330	100355	100065	99861	99693	98963
1(3)	121165	121296	115175	114714	114180	114371	113723
2(2)	142540	142639	131675	130703	130574	129904	130114
2(3)	166474	166524	149808	148543	148262	147847	147331
3(2)	193129	193108	169846	167859	167416	167028	166405
3(3)	222682	222564	192568	189639	188878	188455	187675
4(2)	255304	255057	218080	213780	213116	212597	211607
4(3)	291174	290758	249740	240664	240213	239233	238860
5(2)	330472	329837	287217	271662	271034	270028	269087
5(3)	373352	372440	329691	307158	306212	305274	304560
6(2)	419982	418722	377944	348982	347988	347478	345613
6(3)	470575	468880	432955	398890	398161	397062	395772
7(2)	525302	523068	495839	459894	458879	457929	456682
7(3)	584270	581375	567855	543565	533639	533118	532211



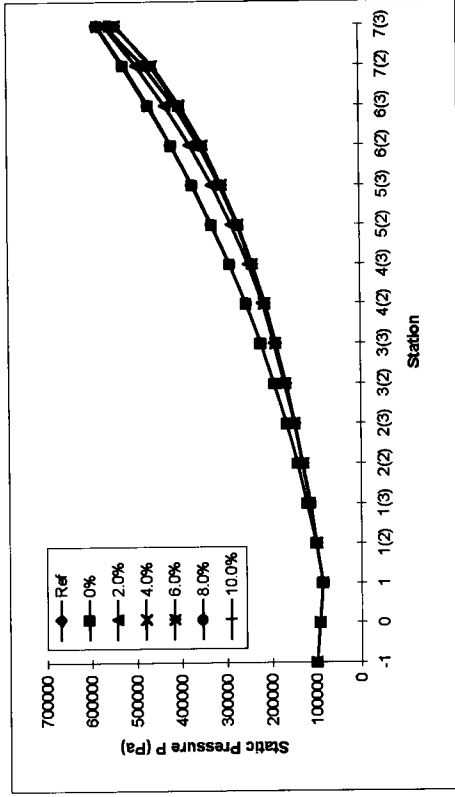
Station Static Pressure P (Pa), PSAT Bias=>2.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101325	101325	101325	101325	101325	101325	101325
0	92795	93900	93571	93525	93508	93425	93418
1	85420	87441	86787	86619	86510	86456	86367
1(2)	102181	102330	100355	100065	99861	99693	98963
1(3)	121165	121296	115328	114714	114693	114371	113723
2(2)	142540	142639	131670	130703	130646	129904	130114
2(3)	166474	166524	149927	148543	148374	147847	147331
3(2)	193129	193108	170029	168170	167588	167028	166405
3(3)	222682	222564	192683	189638	189141	188455	187675
4(2)	255304	255057	218174	213760	213513	212597	211607
4(3)	291174	290758	249651	240935	240810	239233	238860
5(2)	330472	329837	287084	271889	271921	270028	269087
5(3)	373352	372440	329497	307318	307517	306183	304560
6(2)	419982	418722	377688	349237	349886	347512	346977
6(3)	470575	468880	432570	399062	400889	398054	397291
7(2)	525302	523068	495311	459626	462259	458947	458376
7(3)	584270	581375	567142	543183	538689	534138	534099



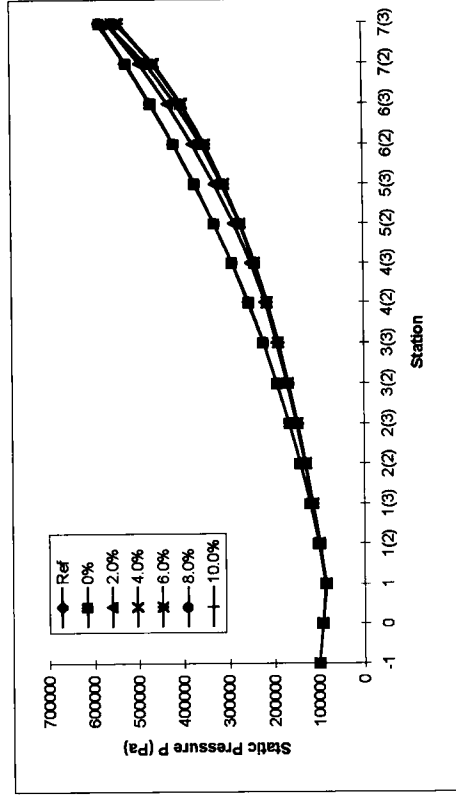
Station Static Pressure P (Pa), PSAT Bias=>4.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101325	101325	101325	101325	101325	101325	101325
0	92795	93900	93571	93525	93508	93425	93418
1	85420	87441	86787	86619	86510	86456	86367
1(2)	102181	102330	100517	100065	99861	99693	99662
1(3)	121165	121296	115326	114714	114693	114371	113962
2(2)	142540	142639	131810	131024	130646	130663	130496
2(3)	166474	166524	150043	148556	148374	147981	147937
3(2)	193129	193108	170215	168191	168131	167235	167358
3(3)	222682	222564	192780	189971	189730	188775	189161
4(2)	255304	255057	218261	214087	213603	213087	213901
4(3)	291174	290758	249550	241250	240945	240845	242360
5(2)	330472	329837	286932	272182	272121	271205	274369
5(3)	373352	372440	329274	307802	308356	307930	312436
6(2)	419982	418722	377349	349416	350825	350072	357212
6(3)	470575	468880	432123	399328	401434	400817	411210
7(2)	525302	523068	494695	459909	463532	463299	479324
7(3)	584270	581275	566307	543177	540170	540696	563269



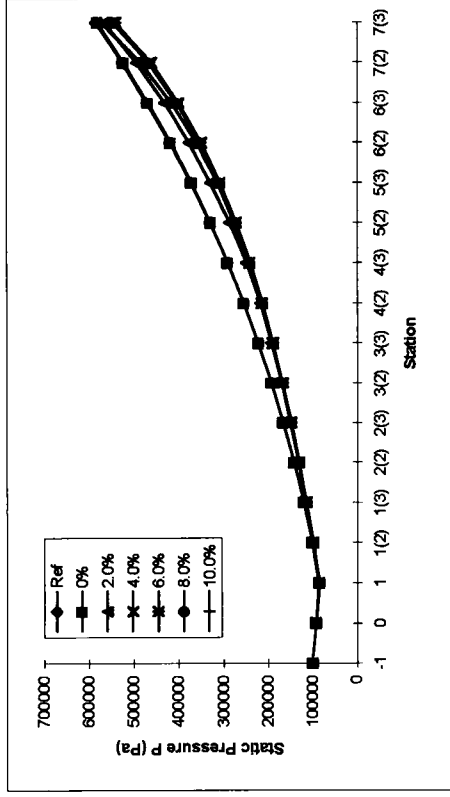
Station Static Pressure P (Pa), PSAT Bias=>6.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101325	101325	101325	101325	101325	101325	101325
0	92795	93900	93571	93525	93508	93425	93418
1	85420	87441	86787	86619	86510	86456	86367
1(2)	102181	102349	100517	100065	99861	99693	99662
1(3)	121165	121295	115479	115036	114693	114371	113962
2(2)	142540	142636	131945	131045	130646	130653	130496
2(3)	166474	166520	150027	148906	148374	147981	147937
3(2)	193129	193103	170301	168557	168131	167235	167358
3(3)	222682	222557	192898	190055	189730	189595	189161
4(2)	255304	255047	218359	214215	214156	213177	213901
4(3)	291174	290743	249447	241442	241514	240984	242360
5(2)	330472	329817	286779	272467	272700	272308	274369
5(3)	373352	372412	329052	308220	308389	308299	312436
6(2)	419982	418685	377033	350207	350875	350611	357212
6(3)	470575	468830	431681	400416	402028	402535	412628
7(2)	525302	523003	494090	461229	464080	465346	479380
7(3)	584270	581290	565489	544718	540641	543161	564877



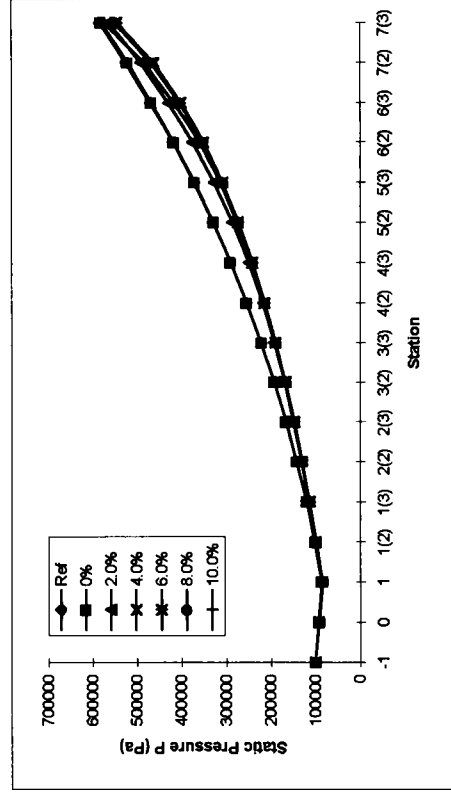
Station Static Pressure P (Pa), PSAT Bias=>8.0%

Stat#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101325	101325	101325	101325	101325	101325	101325
0	92795	93900	93571	93525	93508	93425	93418
1	85420	87441	86787	86619	86510	86456	86367
1(2)	102181	102405	100517	100065	99861	99693	99862
1(3)	121165	121291	115479	115036	114693	114371	113962
2(2)	142540	142631	131945	131045	130646	130653	130496
2(3)	166474	166511	150151	148906	148374	147981	147937
3(2)	193129	193090	170390	168557	168131	168032	168435
3(3)	222682	222537	193021	190355	189730	189706	190488
4(2)	255304	255019	218470	214490	214156	214192	214399
4(3)	291174	290704	249353	241678	241514	241322	243119
5(2)	330472	329762	286640	272643	272700	272810	275511
5(3)	373352	372338	328851	308532	308936	309038	314134
6(2)	419982	418585	376749	350322	351387	352612	359703
6(3)	470575	468689	431286	400413	402478	404097	416232
7(2)	525302	522829	493548	461070	464430	467568	484528
7(3)	584270	581064	564758	543913	540840	546287	572136



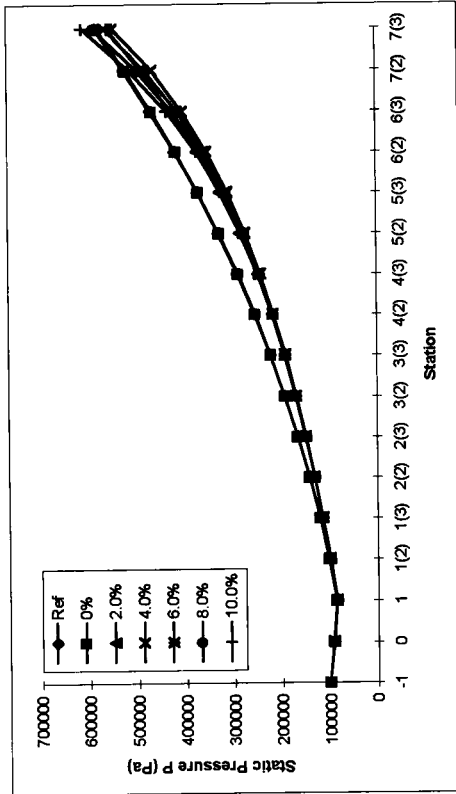
Station Static Pressure P (Pa), PSAT Bias=>10.0%

Stat#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101325	101325	101325	101325	101325	101325	101325
0	92795	93900	93571	93525	93508	93425	93418
1	85420	87441	86787	86619	86510	86456	86367
1(2)	102181	102461	100678	100385	99861	99693	99862
1(3)	121165	121287	115631	115064	114693	114371	113962
2(2)	142540	142624	132080	131410	131167	130653	130496
2(3)	166474	166501	150262	148987	148964	148752	147937
3(2)	193129	193075	170467	168683	168268	168152	168435
3(3)	222682	222516	193137	190547	190485	189890	190488
4(2)	255304	254989	218579	214780	214498	214473	215573
4(3)	291174	290662	249249	242380	242030	241744	243299
5(2)	330472	329705	286482	273504	273467	273440	275780
5(3)	373352	372260	328620	309395	310062	309970	314531
6(2)	419982	418481	376418	351770	353023	353972	360283
6(3)	470575	468560	430821	402308	404824	406057	417067
7(2)	525302	522647	492907	463672	467753	470359	485717
7(3)	584270	580826	563889	547344	545492	550213	573809



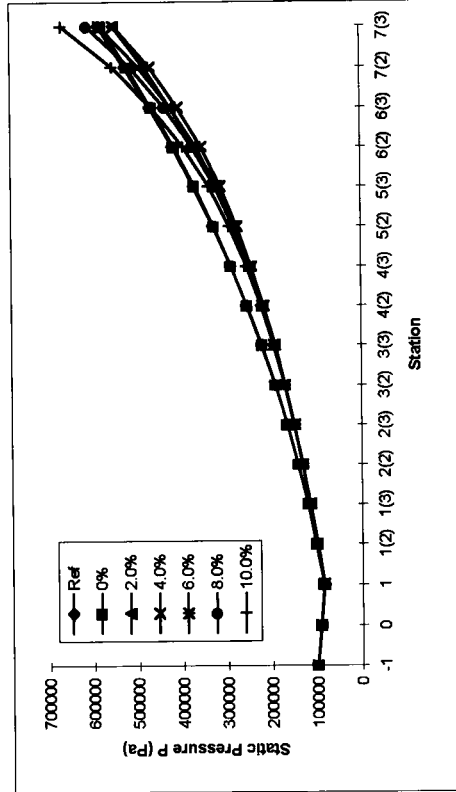
Station Static Pressure P (Pa), PSAT Bias=>20.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101325	101325	101325	101325	101325	101325	101325
0	92795	93900	93571	93525	93508	93425	93418
1	85420	87441	86787	86619	86510	86456	86367
1(2)	102181	102738	100838	100700	100354	100374	99862
1(3)	121165	121267	115934	115408	115275	115225	114903
2(2)	142540	142593	132488	131787	131870	131751	131704
2(3)	166474	166454	150841	149723	149835	149440	149544
3(2)	193129	193004	171079	169777	169917	170012	169551
3(3)	222682	222413	193677	191687	191974	192455	192215
4(2)	255304	254842	219050	216258	217045	218064	218218
4(3)	291174	290457	248570	243609	245321	246833	248515
5(2)	330472	329422	285476	275055	277806	280685	283186
5(3)	373352	371875	327163	311431	315869	320290	325049
6(2)	419982	417964	374350	354091	360871	367702	375181
6(3)	470575	467872	427940	404911	414962	425784	436638
7(2)	525302	521742	488958	466731	481797	497400	513530
7(3)	584270	579546	558557	548866	564815	587588	611331

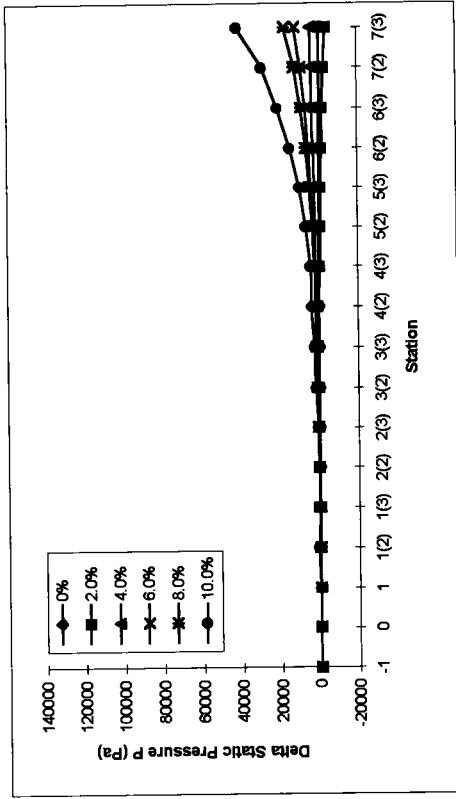


86 Station Static Pressure P (Pa), PSAT Bias=>30.0%

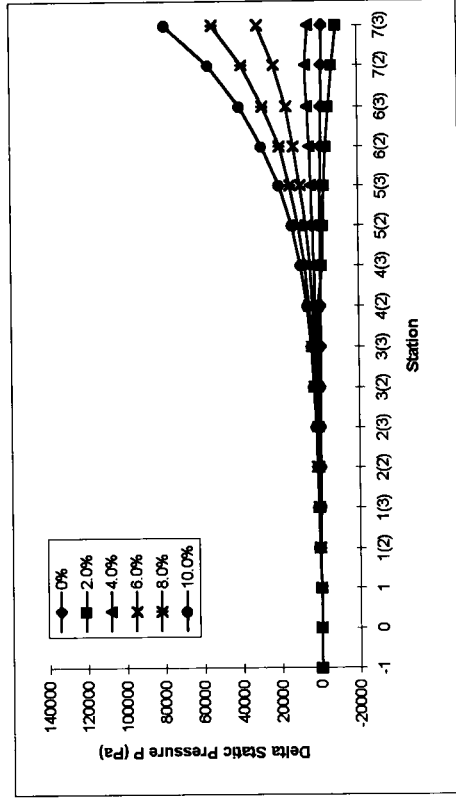
Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	101325	101325	101325	101325	101325	101325	101325
0	92795	93900	93571	93525	93508	93425	93418
1	85420	87441	86787	86619	86510	86456	86367
1(2)	102181	103047	101309	101011	100838	100374	100739
1(3)	121165	121243	116375	116065	115845	115925	116044
2(2)	142540	142555	133019	132489	132552	132804	132265
2(3)	166474	166395	151395	150474	150673	150511	151443
3(2)	193129	192917	171699	170584	170975	171382	172191
3(3)	222682	222287	194290	192861	193878	194256	195946
4(2)	255304	254663	219530	217490	219411	220479	223543
4(3)	291174	290206	248147	245184	248331	250129	256141
5(2)	330472	329077	284069	276923	281713	285225	294120
5(3)	373352	371406	325126	313518	321021	326580	339380
6(2)	419982	417334	371457	356487	367739	376426	395930
6(3)	470575	467036	423906	407807	424686	437849	466277
7(2)	525302	520642	483422	469897	494599	514007	553874
7(3)	584270	578212	551072	550216	581725	610300	668120



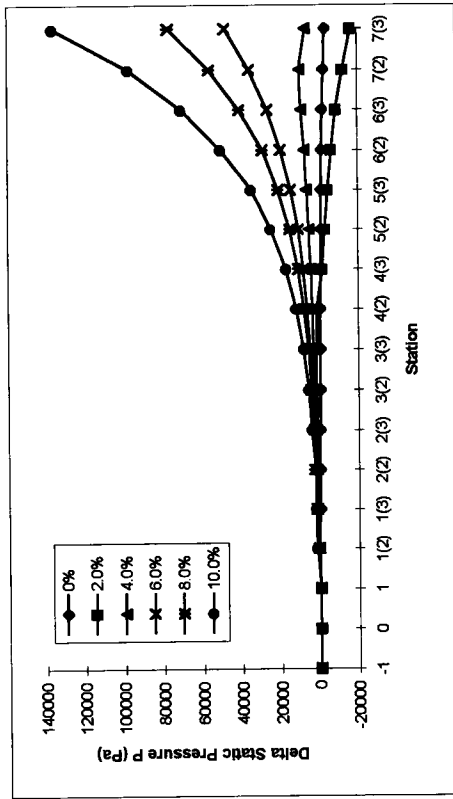
P Bias Effects (PSAT Bias=10% - PSAT Bias=0.0%)						
Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0	0	0	0
0	0	0	0	0	0	0
1	0	0	0	0	0	0
1(2)	131	323	320	513	0	899
1(3)	-9	456	350	593	749	382
2(2)	-15	405	707	593	905	606
2(3)	-23	454	444	702	852	2030
3(2)	-33	521	824	852	1124	2813
3(3)	-48	569	908	1607	1435	3966
4(2)	-68	499	1020	1382	1876	4439
4(3)	-96	-491	1716	1817	2511	6693
5(2)	-132	-735	1842	2433	3412	9971
5(3)	-180	-1071	2237	3850	4696	14670
6(2)	-241	-1526	2788	5035	6494	21295
6(3)	-320	-2134	3418	6663	8895	29035
7(2)	-421	-2932	3778	8874	12430	41598
7(3)	-549	-3966	3779	11853	17095	



P Bias Effects (PSAT Bias=20% - PSAT Bias=0.0%)						
Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0	0	0	0
0	0	0	0	0	0	0
1	0	0	0	0	0	0
1(2)	408	483	635	493	681	899
1(3)	-29	759	694	1095	854	1180
2(2)	-46	813	1084	1296	1847	1590
2(3)	-70	1033	1180	1573	1593	2213
3(2)	-104	1133	1918	2501	2984	3146
3(3)	-151	1109	2048	3096	4000	4540
4(2)	-215	970	2498	3929	5467	6611
4(3)	-301	-1170	2945	5108	7600	9655
5(2)	-415	-1741	3393	6772	10657	14099
5(3)	-565	-2528	4273	9657	15016	20489
6(2)	-758	-3594	5109	12883	20224	29568
6(3)	-1008	-5015	6021	16801	28722	40866
7(2)	-1326	-6881	6837	22918	39471	56848
7(3)	-1729	-9298	5301	31176	54470	79120

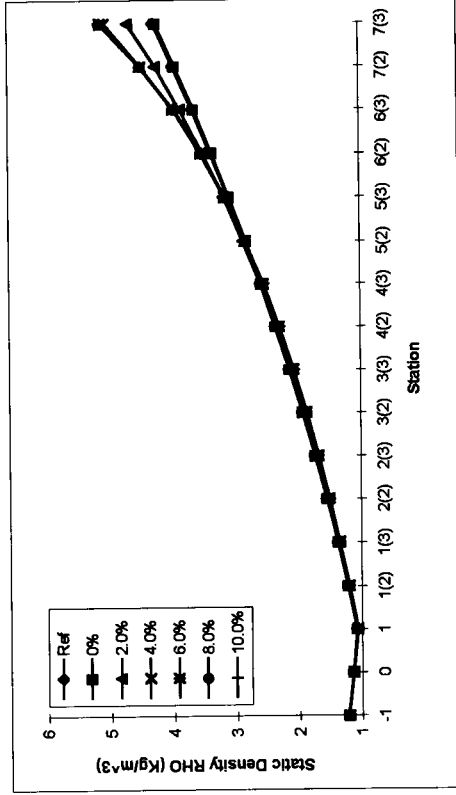


P Bias Effects (PSAT Bias=30% - PSAT Bias=0.0%)									
Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%			
-1	0	0	0	0	0	0			
0	0	0	0	0	0	0			
1	0	0	0	0	0	0			
1(2)	717	954	946	977	681	1776			
1(3)	-53	1200	1351	1665	1554	2321			
2(2)	-84	1344	1786	1978	2700	2151			
2(3)	-129	1587	1931	2411	2664	4112			
3(2)	-191	1723	2725	3559	4354	5786			
3(3)	-277	1722	3222	5000	5801	8271			
4(2)	-394	1450	3730	6295	7882	11936			
4(3)	-552	-1593	4520	8118	10896	17281			
5(2)	-760	-3148	5261	10679	15197	25033			
5(3)	-1034	-4565	6360	14809	21306	34820			
6(2)	-1388	-6487	7505	19751	28948	50317			
6(3)	-1844	-9049	8917	26525	40787	70505			
7(2)	-2426	-12417	10003	35720	56078	97192			
7(3)	-3163	-16783	6651	48086	77182	135909			



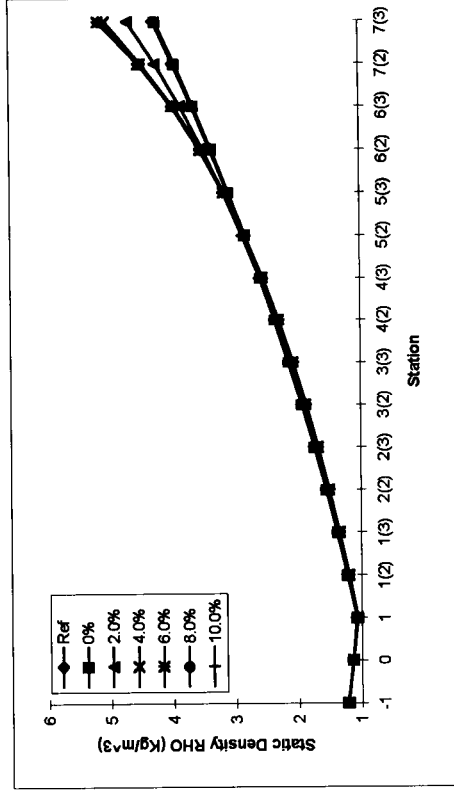
Station Static Density RHO (Kg/m³), PSAT Bias=>0.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	1.2249	1.2176	1.2176	1.2176	1.2176	1.2176	1.2176
0	1.1503	1.1423	1.1389	1.138	1.1374	1.1367	1.1362
1	1.0842	1.0774	1.07	1.068	1.0665	1.0651	1.0638
1(2)	1.2322	1.2261	1.2083	1.2053	1.2038	1.2022	1.1987
1(3)	1.3918	1.3846	1.3584	1.3538	1.3517	1.3507	1.3473
2(2)	1.563	1.5547	1.5213	1.5143	1.5123	1.5102	1.5066
2(3)	1.7463	1.7367	1.699	1.6881	1.6861	1.6842	1.6813
3(2)	1.9417	1.9307	1.8935	1.877	1.8746	1.8724	1.8691
3(3)	2.1496	2.1369	2.1077	2.0827	2.0803	2.0779	2.0742
4(2)	2.3701	2.3556	2.3462	2.3088	2.3063	2.304	2.3
4(3)	2.6034	2.5869	2.6025	2.5601	2.557	2.5548	2.5512
5(2)	2.8498	2.831	2.8767	2.8414	2.8386	2.8367	2.8328
5(3)	3.1093	3.0879	3.1754	3.1621	3.1589	3.1581	3.1544
6(2)	3.382	3.3577	3.5019	3.5322	3.5309	3.5296	3.5269
6(3)	3.6882	3.6406	3.8599	3.9672	3.9688	3.9683	3.9665
7(2)	3.9681	3.9367	4.2538	4.4847	4.4884	4.4929	4.4937
7(3)	4.2814	4.2457	4.6878	5.0563	5.1211	5.1298	5.1345



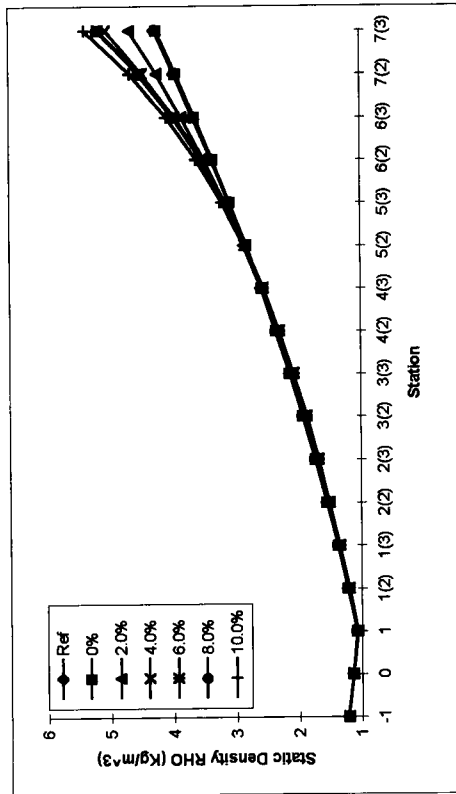
Station Static Density RHO (Kg/m³), PSAT Bias=>2.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	1.2249	1.2176	1.2176	1.2176	1.2176	1.2176	1.2176
0	1.1503	1.1423	1.1389	1.138	1.1374	1.1367	1.1362
1	1.0842	1.0774	1.07	1.068	1.0665	1.0651	1.0638
1(2)	1.2322	1.2261	1.2083	1.2053	1.2038	1.2022	1.1987
1(3)	1.3918	1.3846	1.3583	1.3538	1.3525	1.3507	1.3473
2(2)	1.563	1.5547	1.5213	1.5143	1.513	1.5102	1.5066
2(3)	1.7463	1.7367	1.6987	1.6881	1.687	1.6842	1.6813
3(2)	1.9417	1.9307	1.8931	1.8767	1.876	1.8724	1.8691
3(3)	2.1496	2.1369	2.1071	2.0827	2.0825	2.0779	2.0742
4(2)	2.3701	2.3556	2.3453	2.3088	2.3094	2.304	2.300
4(3)	2.6034	2.5869	2.6018	2.5594	2.5617	2.5548	2.5512
5(2)	2.8498	2.831	2.8757	2.8405	2.8454	2.8367	2.8328
5(3)	3.1093	3.0879	3.174	3.161	3.1698	3.1576	3.1544
6(2)	3.382	3.3577	3.4999	3.5302	3.545	3.5299	3.5274
6(3)	3.6882	3.6406	3.8574	3.9646	3.9646	3.9675	3.9673
7(2)	3.9681	3.9367	4.2504	4.4826	4.5176	4.4919	4.4948
7(3)	4.2814	4.2457	4.6834	5.0535	5.1607	5.1285	5.136



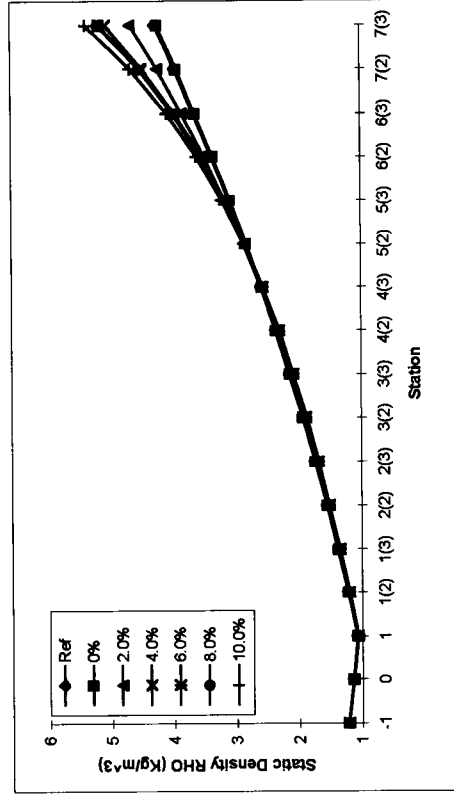
Station Static Density RHO (Kg/m³), PSAT Bias=>4.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	1.2249	1.2176	1.2176	1.2176	1.2176	1.2176	1.2176
0	1.1503	1.1423	1.1389	1.138	1.1374	1.1367	1.1362
1	1.0842	1.0774	1.07	1.068	1.0665	1.0651	1.0638
1(2)	1.2322	1.2261	1.2082	1.2053	1.2038	1.2022	1.2021
1(3)	1.3918	1.3846	1.3583	1.3538	1.3525	1.3507	1.3495
2(2)	1.563	1.5547	1.5211	1.5143	1.513	1.5117	1.512
2(3)	1.7463	1.7367	1.6984	1.6882	1.687	1.6853	1.6867
3(2)	1.9417	1.9307	1.8925	1.8768	1.8761	1.8741	1.8774
3(3)	2.1496	2.1369	2.1064	2.0825	2.0827	2.0806	2.0869
4(2)	2.3701	2.3556	2.3442	2.3085	2.3102	2.308	2.3192
4(3)	2.6034	2.5869	2.6009	2.5591	2.5627	2.561	2.5799
5(2)	2.8498	2.831	2.8745	2.8402	2.847	2.8461	2.8755
5(3)	3.1093	3.0879	3.1724	3.16	3.171	3.1712	3.2168
6(2)	3.382	3.3577	3.4977	3.5299	3.5468	3.5495	3.6172
6(3)	3.6682	3.6406	3.8544	3.9638	3.9908	3.9964	4.0952
7(2)	3.9681	3.9367	4.2464	4.4814	4.5217	4.5322	4.674
7(3)	4.2814	4.2457	4.6783	5.0532	5.1666	5.184	5.3852



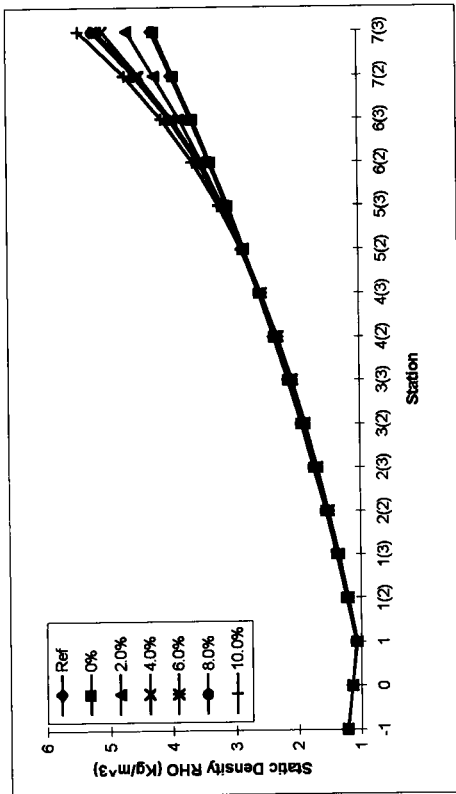
Station Static Density RHO (Kg/m³), PSAT Bias=>6.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	1.2249	1.2176	1.2176	1.2176	1.2176	1.2176	1.2176
0	1.1503	1.1423	1.1389	1.138	1.1374	1.1367	1.1362
1	1.0842	1.0774	1.07	1.068	1.0665	1.0651	1.0638
1(2)	1.2322	1.226	1.2082	1.2053	1.2038	1.2022	1.2021
1(3)	1.3918	1.3846	1.3581	1.3539	1.3525	1.3507	1.3495
2(2)	1.563	1.5547	1.5209	1.5144	1.513	1.5117	1.512
2(3)	1.7463	1.7366	1.6984	1.6882	1.687	1.6853	1.6867
3(2)	1.9417	1.9306	1.8921	1.8769	1.8761	1.8741	1.8774
3(3)	2.1496	2.1369	2.1056	2.0832	2.0827	2.0813	2.0869
4(2)	2.3701	2.3556	2.3431	2.3096	2.3098	2.308	2.3192
4(3)	2.6034	2.5868	2.6001	2.5606	2.5622	2.5621	2.5799
5(2)	2.8498	2.8309	2.8733	2.8424	2.8464	2.8476	2.8755
5(3)	3.1093	3.0877	3.1707	3.1631	3.1713	3.1741	3.2168
6(2)	3.382	3.3575	3.4955	3.5335	3.5472	3.5536	3.6172
6(3)	3.6682	3.6403	3.8514	3.9685	3.9899	4.0009	4.0949
7(2)	3.9681	3.9363	4.2426	4.4883	4.5207	4.5386	4.6745
7(3)	4.2814	4.2452	4.6733	5.0632	5.1655	5.1927	5.3842



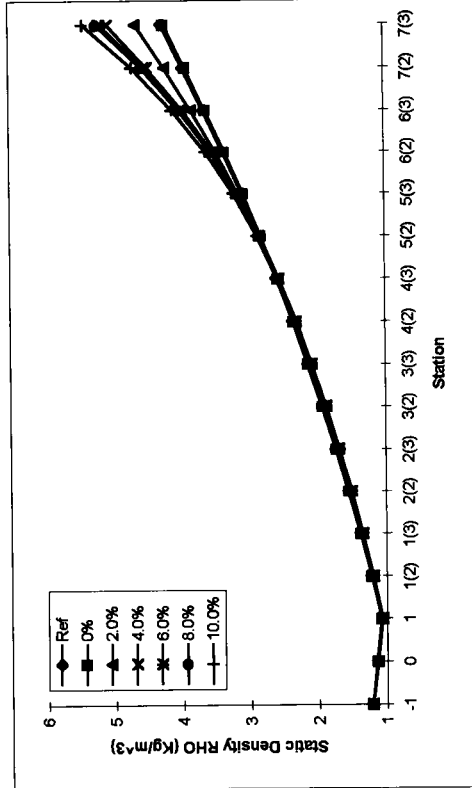
Station Static Density RHO (Kg/m³), PSAT Bias=>8.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	1.2249	1.2176	1.2176	1.2176	1.2176	1.2176	1.2176
0	1.1503	1.1423	1.1389	1.138	1.1374	1.1367	1.1362
1	1.0842	1.0774	1.07	1.068	1.0665	1.0661	1.0638
1(2)	1.2322	1.2259	1.2082	1.2038	1.2022	1.2021	1.2021
1(3)	1.3918	1.3845	1.3681	1.3539	1.3525	1.3507	1.3495
2(2)	1.563	1.5546	1.5209	1.5144	1.513	1.5117	1.512
2(3)	1.7463	1.7366	1.6961	1.6882	1.687	1.6863	1.6867
3(2)	1.9417	1.9305	1.8918	1.8769	1.8761	1.8751	1.8797
3(3)	2.1496	2.1367	2.105	2.0826	2.0827	2.0822	2.0907
4(2)	2.3701	2.3554	2.3421	2.3088	2.3098	2.3106	2.3234
4(3)	2.6034	2.5866	2.5893	2.5597	2.5622	2.5648	2.5862
5(2)	2.8498	2.8306	2.8722	2.8411	2.8464	2.8515	2.8848
5(3)	3.1093	3.0873	3.1693	3.1607	3.1702	3.1797	3.2303
6(2)	3.382	3.3569	3.4935	3.5306	3.5458	3.5607	3.6365
6(3)	3.6682	3.6396	3.8488	3.9644	3.9881	4.0125	4.1221
7(2)	3.9681	3.9354	4.2392	4.4825	4.5183	4.5547	4.7126
7(3)	4.2814	4.244	4.6689	5.0574	5.1625	5.2148	5.4365



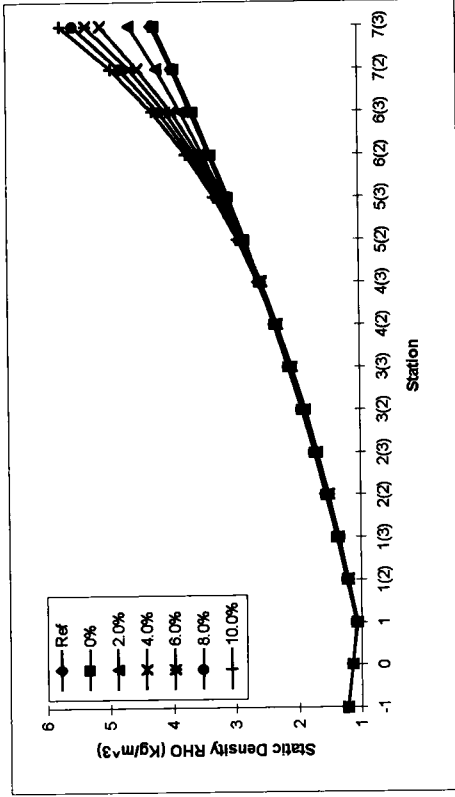
Station Static Density RHO (Kg/m³), PSAT Bias=>10.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	1.2249	1.2176	1.2176	1.2176	1.2176	1.2176	1.2176
0	1.1503	1.1423	1.1389	1.138	1.1374	1.1367	1.1362
1	1.0842	1.0774	1.07	1.068	1.0665	1.0661	1.0638
1(2)	1.2322	1.2258	1.2081	1.2056	1.2038	1.2022	1.2021
1(3)	1.3918	1.3845	1.3579	1.3541	1.3525	1.3507	1.3495
2(2)	1.563	1.5546	1.5206	1.5147	1.5134	1.5117	1.512
2(3)	1.7463	1.7365	1.6978	1.6889	1.6877	1.6865	1.6867
3(2)	1.9417	1.9304	1.8914	1.878	1.8772	1.8761	1.8797
3(3)	2.1496	2.1366	2.1042	2.0842	2.0842	2.0837	2.0907
4(2)	2.3701	2.3552	2.3409	2.3111	2.3125	2.3252	2.352
4(3)	2.6034	2.5863	2.5884	2.5623	2.5683	2.5682	2.5876
5(2)	2.8498	2.8302	2.871	2.845	2.8523	2.8564	2.8869
5(3)	3.1093	3.0868	3.1676	3.1672	3.1788	3.1869	3.2334
6(2)	3.382	3.3563	3.4912	3.5391	3.558	3.571	3.6409
6(3)	3.6682	3.6388	3.8457	3.9766	4.0051	4.027	4.1284
7(2)	3.9681	3.9344	4.2351	4.4991	4.5419	4.5749	4.7213
7(3)	4.2814	4.2428	4.6636	5.08	5.1947	5.2426	5.4485



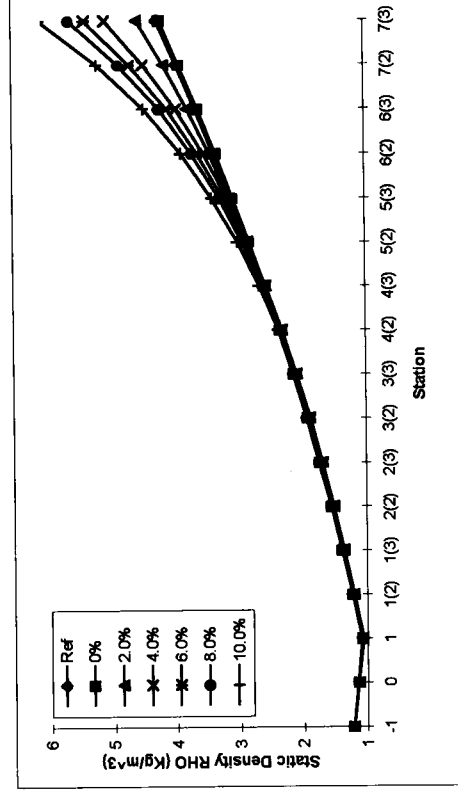
Station Static Density RHO (Kg/m³), PSAT Bias=>20.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	1.2249	1.2176	1.2176	1.2176	1.2176	1.2176	1.2176
0	1.1503	1.1423	1.1389	1.138	1.1374	1.1367	1.1362
1	1.0842	1.0774	1.07	1.068	1.0665	1.0651	1.0638
1(2)	1.2322	1.2251	1.208	1.2058	1.2047	1.2041	1.2021
1(3)	1.3918	1.3843	1.3575	1.3544	1.3538	1.3536	1.3526
2(2)	1.563	1.5543	1.5198	1.5151	1.5154	1.5163	1.5168
2(3)	1.7463	1.7361	1.696	1.6893	1.6908	1.6925	1.6943
3(2)	1.9417	1.9299	1.8885	1.878	1.8819	1.8861	1.8893
3(3)	2.1496	2.1358	2.0998	2.0844	2.0915	2.0989	2.1053
4(2)	2.3701	2.3541	2.3341	2.311	2.3231	2.3356	2.3471
4(3)	2.6034	2.5849	2.593	2.5633	2.582	2.602	2.6215
5(2)	2.8498	2.8284	2.8633	2.8461	2.8753	2.9061	2.9369
5(3)	3.1093	3.0845	3.157	3.1677	3.212	3.2588	3.3059
6(2)	3.382	3.3532	3.4769	3.5394	3.6054	3.6747	3.7447
6(3)	3.6682	3.6349	3.8267	3.9768	4.0734	4.1728	4.2753
7(2)	3.9681	3.9294	4.2101	4.4982	4.6361	4.7788	4.9252
7(3)	4.2814	4.2365	4.6312	5.0883	5.3231	5.5234	5.7291



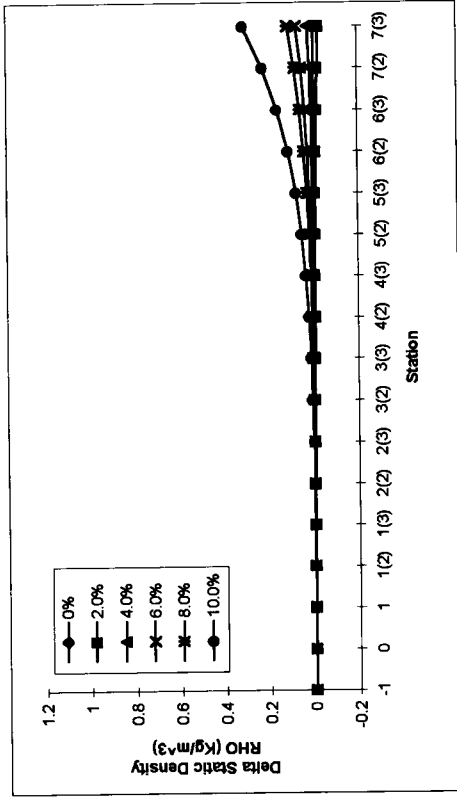
Station Static Density RHO (Kg/m³), PSAT Bias=>30.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	1.2249	1.2176	1.2176	1.2176	1.2176	1.2176	1.2176
0	1.1503	1.1423	1.1389	1.138	1.1374	1.1367	1.1362
1	1.0842	1.0774	1.07	1.068	1.0665	1.0651	1.0638
1(2)	1.2322	1.2243	1.2076	1.2059	1.2055	1.2041	1.2052
1(3)	1.3918	1.3841	1.3569	1.3545	1.355	1.3552	1.3574
2(2)	1.563	1.5539	1.5185	1.5153	1.5172	1.5186	1.5218
2(3)	1.7463	1.7366	1.6939	1.6896	1.6936	1.6962	1.7045
3(2)	1.9417	1.9292	1.8851	1.8785	1.8861	1.8917	1.905
3(3)	2.1496	2.1349	2.0942	2.0847	2.0975	2.1075	2.1292
4(2)	2.3701	2.3529	2.3254	2.3116	2.332	2.3485	2.383
4(3)	2.6034	2.5833	2.5832	2.5637	2.5862	2.6212	2.6745
5(2)	2.8498	2.8262	2.8526	2.8462	2.8947	2.934	3.0142
5(3)	3.1093	3.0816	3.1422	3.1678	3.2399	3.299	3.4173
6(2)	3.382	3.3495	3.4569	3.5391	3.645	3.7317	3.9022
6(3)	3.6682	3.6301	3.8	3.9747	4.1269	4.2522	4.4949
7(2)	3.9681	3.9234	4.175	4.4947	4.7103	4.8882	5.2294
7(3)	4.2814	4.2289	4.5867	5.0952	5.4243	5.6717	6.141



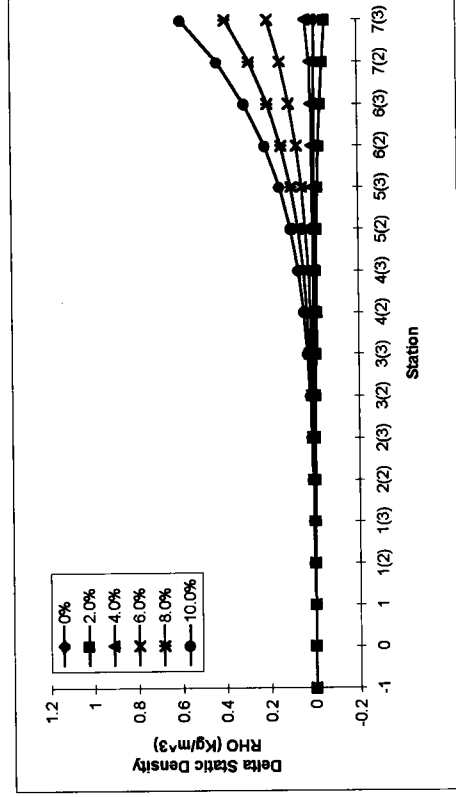
RHO Bias Effects (PSAT Bias=10% - PSAT Bias=0.0%)

Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0	0	0	0
0	0	0	0	0	0	0
1	0	0	0	0	0	0
1(2)	-0.0003	-0.0002	0.0003	0	0	0.0034
1(3)	-1E-04	-0.0005	0.0003	0.0008	0	0.0022
2(2)	-1E-04	-0.0007	0.0004	0.0011	0.0015	0.0034
2(3)	-0.0002	-0.0012	0.0008	0.0016	0.0023	0.0054
3(2)	-0.0003	-0.0021	0.001	0.0026	0.0037	0.0106
3(3)	-0.0003	-0.0035	0.0015	0.0039	0.0058	0.0165
4(2)	-0.0004	-0.0053	0.0023	0.0062	0.0088	0.0252
4(3)	-0.0006	-0.0041	0.0022	0.0093	0.0134	0.0364
5(2)	-0.0008	-0.0057	0.0036	0.0137	0.0197	0.0541
5(3)	-0.0011	-0.0078	0.0051	0.0189	0.0288	0.079
6(2)	-0.0014	-0.0107	0.0069	0.0271	0.0414	0.114
6(3)	-0.0018	-0.0142	0.0094	0.0383	0.0587	0.1619
7(2)	-0.0023	-0.0187	0.0144	0.0535	0.082	0.2276
7(3)	-0.0029	-0.0242	0.0237	0.0736	0.1128	0.314

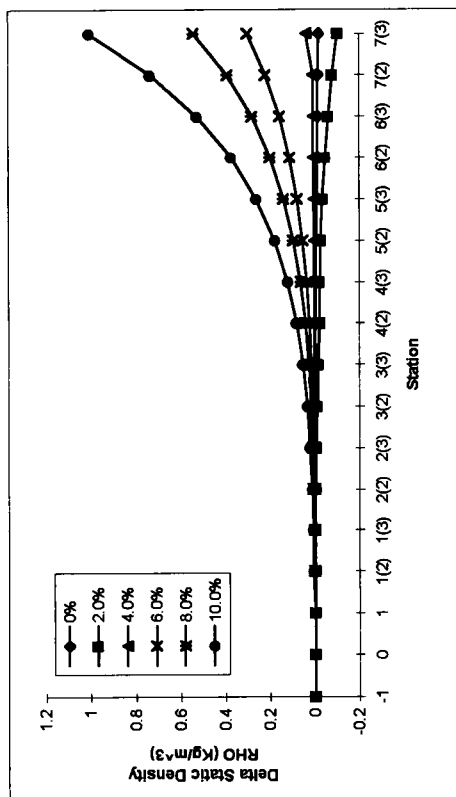


RHO Bias Effects (PSAT Bias=20% - PSAT Bias=0.0%)

Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
-1	0	0	0	0	0	0
0	0	0	0	0	0	0
1	0	0	0	0	0	0
1(2)	-0.001	-0.0003	0.0005	0.0009	0.0019	0.0034
1(3)	-0.0003	-0.0009	0.0006	0.0021	0.0029	0.0053
2(2)	-0.0004	-0.0015	0.0008	0.0031	0.0061	0.0082
2(3)	-0.0006	-0.003	0.0012	0.0047	0.0083	0.013
3(2)	-0.0008	-0.005	0.001	0.0073	0.0137	0.0202
3(3)	-0.0011	-0.0079	0.0017	0.0112	0.021	0.0311
4(2)	-0.0015	-0.0121	0.0022	0.0168	0.0316	0.0471
4(3)	-0.0026	-0.0095	0.0032	0.025	0.0472	0.0703
5(2)	-0.0034	-0.0134	0.0047	0.0367	0.0694	0.1041
5(3)	-0.0045	-0.0184	0.0056	0.0521	0.1007	0.1515
6(2)	-0.0057	-0.025	0.0072	0.0745	0.1451	0.2178
6(3)	-0.0073	-0.0332	0.0096	0.1066	0.2045	0.3088
7(2)	-0.0092	-0.0437	0.0135	0.1477	0.2859	0.4315
7(3)	-0.0092	-0.0566	0.032	0.202	0.3936	0.5946

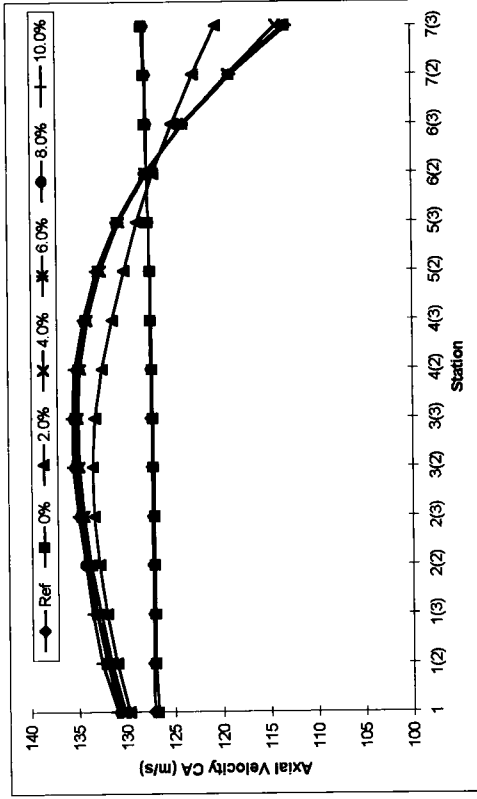


RHO Bias Effects (PSAT Bias=30% - PSAT Bias=0.0%)									
Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%			
-1	0	0	0	0	0	0			
0	0	0	0	0	0	0			
1	0	0	0	0	0	0			
1(2)	-0.0018	-0.0007	0.0006	0.0017	0.0019	0.0065			
1(3)	-0.0005	-0.0015	0.0007	0.0033	0.0045	0.0101			
2(2)	-0.0008	-0.0028	0.001	0.0049	0.0084	0.0132			
2(3)	-0.0011	-0.0051	0.0015	0.0075	0.012	0.0232			
3(2)	-0.0015	-0.0084	0.0015	0.0115	0.0193	0.0369			
3(3)	-0.002	-0.0135	0.002	0.0172	0.0296	0.055			
4(2)	-0.0027	-0.0208	0.0028	0.0257	0.0445	0.083			
4(3)	-0.0036	-0.0193	0.0036	0.0382	0.0664	0.1233			
5(2)	-0.0048	-0.0241	0.0048	0.0561	0.0973	0.1814			
5(3)	-0.0063	-0.0332	0.0057	0.08	0.1409	0.2629			
6(2)	-0.0082	-0.045	0.0069	0.1141	0.2021	0.3753			
6(3)	-0.0105	-0.0599	0.0075	0.1601	0.2839	0.5284			
7(2)	-0.0133	-0.0788	0.01	0.2219	0.3953	0.7357			
7(3)	-0.0168	-0.1021	0.0389	0.3032	0.5419	1.0065			



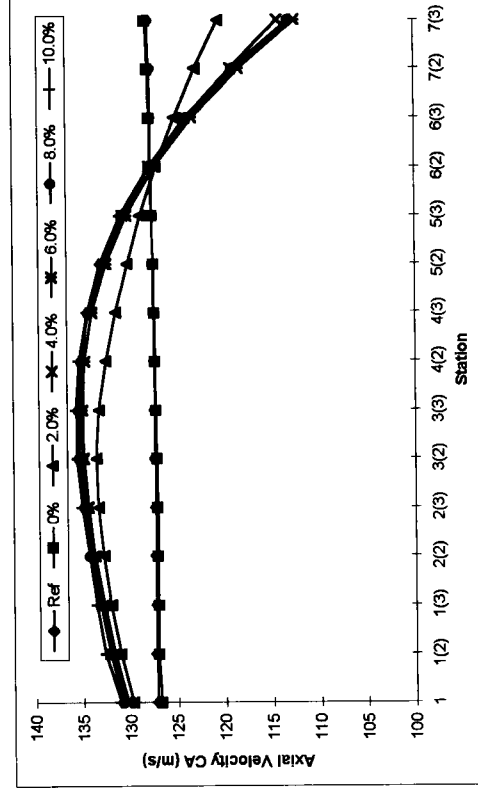
Axial Velocity CA (m/s), PSAT Bias=>0.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	127.23	126.79	129.81	130.33	130.6	130.85	131.03
1(2)	127.29	127.04	131.08	131.66	131.91	132.17	132.67
1(3)	127.28	127.05	132.09	132.78	133.1	133.21	133.6
2(2)	127.3	127.09	132.86	133.74	133.94	134.27	134.31
2(3)	127.31	127.13	133.36	134.44	134.63	134.85	135.08
3(2)	127.36	127.2	133.53	134.92	135.14	135.34	135.58
3(3)	127.39	127.25	133.26	135.04	135.26	135.45	135.69
4(2)	127.44	127.33	132.49	134.79	134.96	135.12	135.35
4(3)	127.48	127.4	131.42	134.03	134.19	134.36	134.46
5(2)	127.53	127.49	130.19	132.68	132.81	132.94	133.08
5(3)	127.62	127.61	128.77	130.66	130.76	130.86	130.94
6(2)	127.72	127.75	127.1	127.81	127.86	127.89	127.99
6(3)	127.77	127.85	125.13	123.99	123.98	123.96	123.97
7(2)	127.85	127.98	122.9	119.23	119.14	119.04	118.97
7(3)	128.01	128.19	120.47	114.24	113.37	113.18	113.02



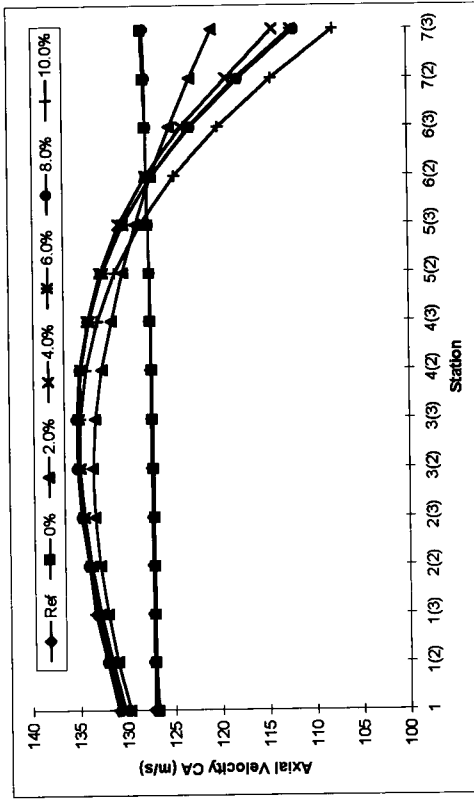
95 Axial Velocity CA (m/s), PSAT Bias=>2.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	127.23	126.79	129.81	130.33	130.6	130.85	131.03
1(2)	127.29	127.04	131.08	131.66	131.91	132.17	132.67
1(3)	127.28	127.05	132.08	132.78	132.94	133.21	133.6
2(2)	127.3	127.09	132.86	133.74	133.89	134.27	134.31
2(3)	127.31	127.13	133.36	134.44	134.56	134.85	135.08
3(2)	127.36	127.2	133.54	134.9	135.04	135.34	135.58
3(3)	127.39	127.25	133.29	135.04	135.12	135.45	135.69
4(2)	127.44	127.33	132.53	134.79	134.78	135.12	135.35
4(3)	127.48	127.4	131.45	134.04	133.94	134.36	134.46
5(2)	127.53	127.49	130.24	132.7	132.49	132.94	133.08
5(3)	127.62	127.61	128.83	130.68	130.35	130.8	130.94
6(2)	127.72	127.75	127.17	127.85	127.35	127.88	127.87
6(3)	127.77	127.85	125.21	124.05	123.36	123.92	123.85
7(2)	127.85	127.98	123	119.29	118.4	119.01	118.85
7(3)	128.01	128.19	120.58	114.3	112.52	113.16	112.91



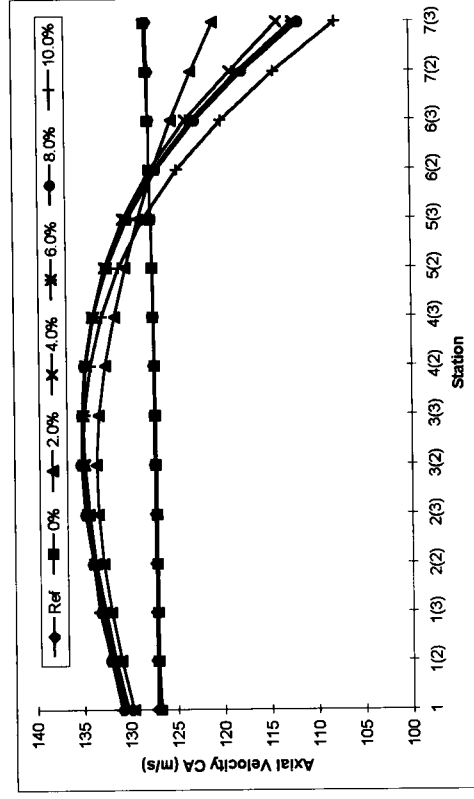
Axial Velocity CA (m/s), PSAT Bias=>4.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	127.23	126.79	129.81	130.33	130.6	130.85	131.03
1(2)	127.29	127.04	131.06	131.66	131.91	132.17	132.15
1(3)	127.28	127.05	132.07	132.78	132.94	133.21	133.39
2(2)	127.3	127.08	132.86	133.69	133.89	134.02	134.01
2(3)	127.31	127.13	133.36	134.43	134.56	134.76	134.65
3(2)	127.36	127.2	133.56	134.89	134.96	135.22	134.98
3(3)	127.39	127.25	133.31	135.02	135.04	135.28	134.86
4(2)	127.44	127.33	132.57	134.77	134.74	134.89	134.23
4(3)	127.48	127.4	131.5	134.03	133.89	133.95	132.97
5(2)	127.53	127.49	130.29	132.69	132.42	132.51	131.11
5(3)	127.62	127.61	128.9	130.68	130.25	130.24	128.39
6(2)	127.72	127.75	127.26	127.85	127.24	127.18	124.8
6(3)	127.77	127.85	125.31	124.05	123.24	123.09	120.17
7(2)	127.85	127.98	123.11	119.3	118.26	118.01	114.46
7(3)	128.01	128.19	120.72	114.31	112.37	112	107.9



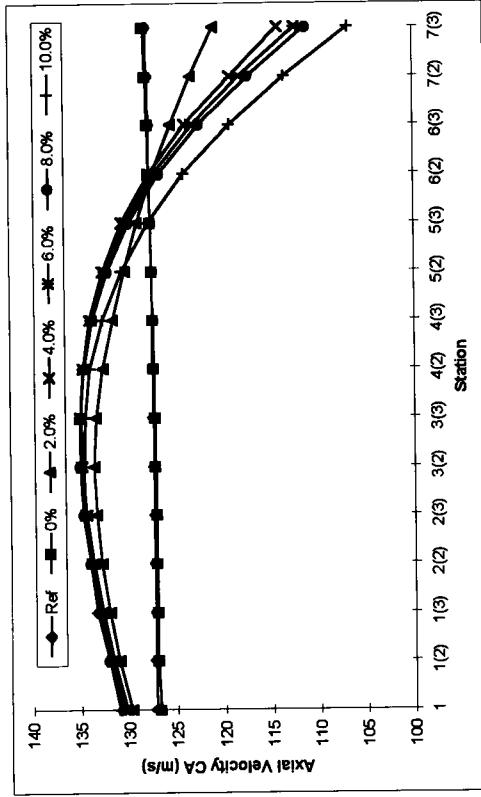
96 Axial Velocity CA (m/s), PSAT Bias=>6.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	127.23	126.79	129.81	130.33	130.6	130.85	131.03
1(2)	127.29	127.04	131.06	131.66	131.91	132.17	132.15
1(3)	127.28	127.06	132.07	132.72	132.94	133.21	133.39
2(2)	127.3	127.09	132.86	133.68	133.89	134.02	134.01
2(3)	127.31	127.13	133.37	134.38	134.56	134.76	134.65
3(2)	127.36	127.2	133.57	134.84	134.96	135.22	134.98
3(3)	127.39	127.26	133.34	134.98	135.04	135.13	134.86
4(2)	127.44	127.33	132.61	134.71	134.69	134.84	134.23
4(3)	127.48	127.4	131.54	133.95	133.85	133.89	132.97
5(2)	127.53	127.49	130.35	132.59	132.39	132.35	131.11
5(3)	127.62	127.62	128.96	130.56	130.24	130.12	128.39
6(2)	127.72	127.76	127.34	127.7	127.23	127.03	124.8
6(3)	127.77	127.86	125.4	123.89	123.23	122.89	120.09
7(2)	127.85	127.99	123.22	119.11	118.26	117.79	114.45
7(3)	128.01	128.2	120.84	114.09	112.37	111.76	107.85



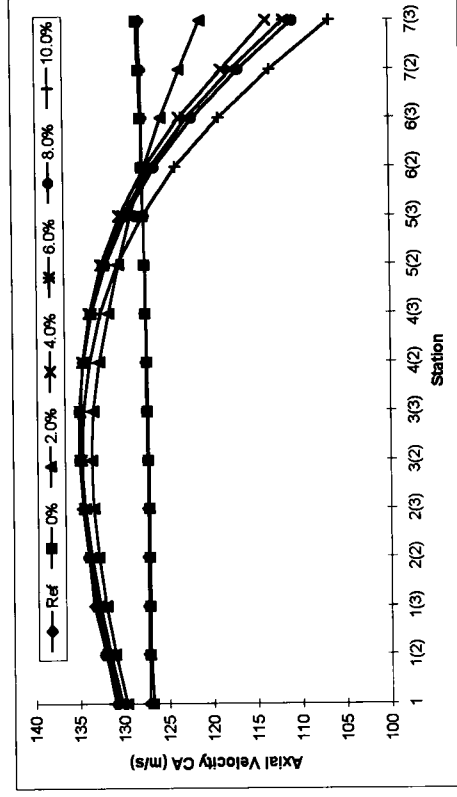
Axial Velocity CA (m/s), PSAT Bias=>8.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	127.23	126.79	129.81	130.33	130.6	130.85	131.03
1(2)	127.29	127.04	131.06	131.66	131.91	132.17	132.15
1(3)	127.28	127.06	132.07	132.72	132.94	133.21	133.39
2(2)	127.3	127.1	132.86	133.68	133.89	134.02	134.01
2(3)	127.31	127.13	133.37	134.38	134.56	134.76	134.65
3(2)	127.36	127.21	133.58	134.84	134.96	135.04	134.67
3(3)	127.39	127.27	133.36	134.97	135.04	135.07	134.48
4(2)	127.44	127.34	132.65	134.72	134.69	134.65	133.99
4(3)	127.48	127.42	131.58	133.97	133.85	133.75	132.65
5(2)	127.53	127.51	130.39	132.62	132.39	132.17	130.69
5(3)	127.62	127.64	129.02	130.62	130.24	129.89	127.86
6(2)	127.72	127.78	127.41	127.78	127.24	126.7	124.14
6(3)	127.77	127.88	125.49	123.99	123.25	122.54	119.29
7(2)	127.85	128.02	123.32	119.24	118.29	117.37	113.53
7(3)	128.01	128.24	120.96	114.22	112.42	111.29	106.81



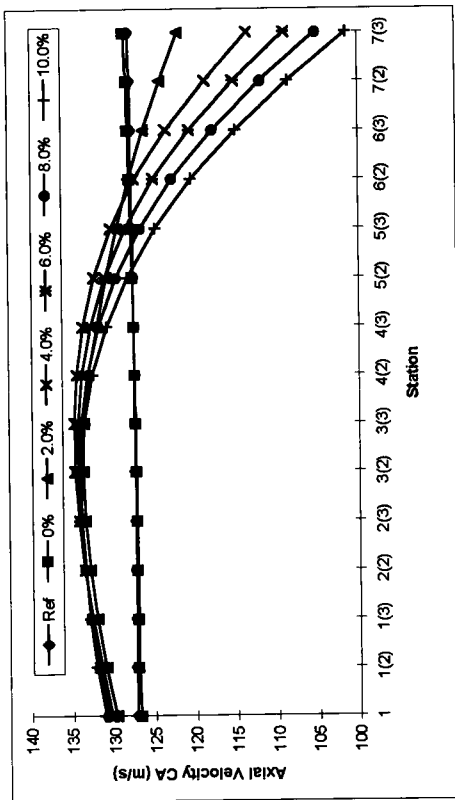
Axial Velocity CA (m/s), PSAT Bias=>10.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	127.23	126.79	129.81	130.33	130.6	130.85	131.03
1(2)	127.29	127.05	131.04	131.58	131.91	132.17	132.15
1(3)	127.28	127.06	132.06	132.69	132.94	133.21	133.39
2(2)	127.3	127.1	132.86	133.6	133.76	134.02	134.01
2(3)	127.31	127.14	133.38	134.32	134.42	134.56	134.65
3(2)	127.36	127.21	133.59	134.77	134.87	134.97	134.67
3(3)	127.39	127.28	133.39	134.87	134.87	134.97	134.48
4(2)	127.44	127.35	132.7	134.58	134.53	134.51	133.76
4(3)	127.48	127.44	131.62	133.8	133.64	133.58	132.57
5(2)	127.53	127.52	130.45	132.42	132.12	131.94	130.59
5(3)	127.62	127.66	129.09	130.35	129.89	129.6	127.74
6(2)	127.72	127.8	127.49	127.46	126.8	126.34	123.99
6(3)	127.77	127.91	125.59	123.6	122.73	122.09	119.11
7(2)	127.85	128.05	123.44	118.79	117.68	116.85	113.32
7(3)	128.01	128.27	121.1	113.71	111.72	110.7	106.58



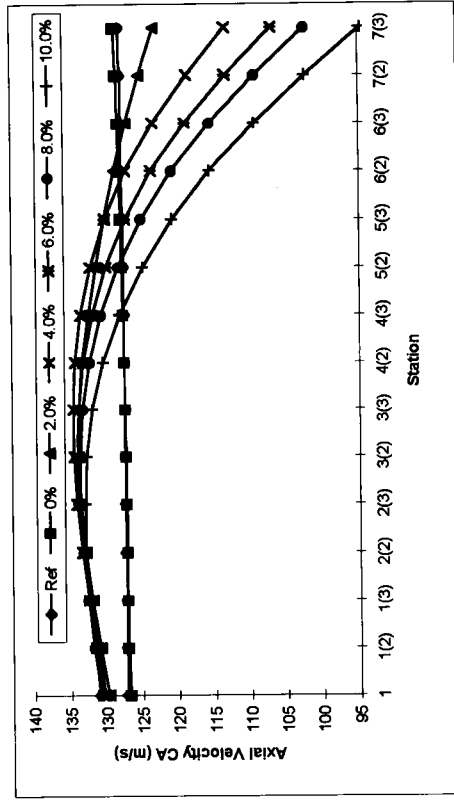
Axial Velocity CA (m/s), PSAT Bias=>20.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	127.23	126.79	129.81	130.33	130.6	130.85	131.03
1(2)	127.29	127.06	131.02	131.5	131.73	131.84	132.15
1(3)	127.28	127.08	132.04	132.61	132.73	132.8	132.94
2(2)	127.3	127.12	132.86	133.52	133.5	133.5	133.44
2(3)	127.31	127.17	133.42	134.2	134.1	134.08	133.91
3(2)	127.36	127.25	133.7	134.63	134.39	134.15	133.99
3(3)	127.39	127.32	133.57	134.74	134.33	133.9	133.55
4(2)	127.44	127.41	132.97	134.45	133.79	133.11	132.51
4(3)	127.48	127.5	131.9	133.66	132.71	131.75	130.74
5(2)	127.53	127.61	130.8	132.27	130.95	129.61	128.25
5(3)	127.62	127.75	129.52	130.21	128.45	126.66	124.83
6(2)	127.72	127.92	128.02	127.33	125.05	122.78	120.46
6(3)	127.77	128.05	126.21	123.48	120.64	117.83	115.02
7(2)	127.85	128.21	124.17	118.7	115.26	111.92	108.63
7(3)	128.01	128.46	121.94	113.52	109.01	105.17	101.43



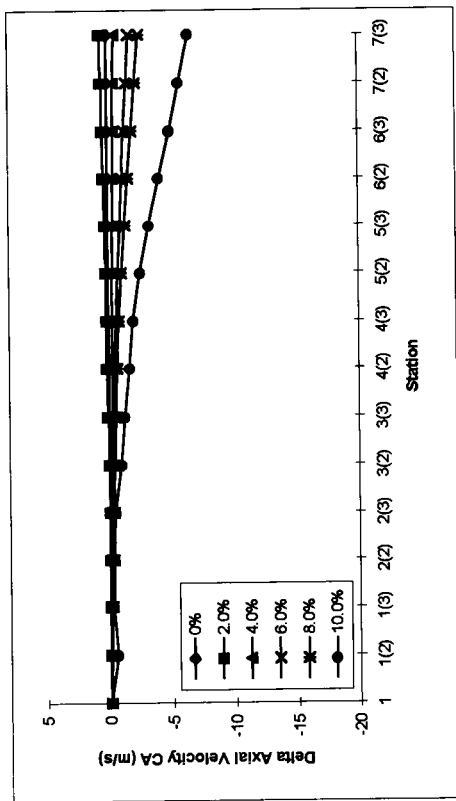
Axial Velocity CA (m/s), PSAT Bias=>30.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	127.23	126.79	129.81	130.33	130.6	130.85	131.03
1(2)	127.29	127.09	130.97	131.42	131.55	131.84	131.66
1(3)	127.28	127.1	132.02	132.48	132.52	132.54	132.31
2(2)	127.3	127.15	132.88	133.39	133.26	133.18	133
2(3)	127.31	127.2	133.49	134.08	133.8	133.68	132.97
3(2)	127.36	127.29	133.83	134.51	134.02	133.65	132.75
3(3)	127.39	127.37	133.8	134.6	133.81	133.25	131.92
4(2)	127.44	127.48	133.34	134.31	133.15	132.28	130.39
4(3)	127.48	127.58	132.34	133.51	131.91	130.7	128.03
5(2)	127.53	127.7	131.29	132.13	129.97	128.29	124.85
5(3)	127.62	127.87	130.13	130.07	127.24	125.05	120.77
6(2)	127.72	128.06	128.76	127.21	123.61	120.83	115.6
6(3)	127.77	128.21	127.1	123.4	118.97	115.57	109.41
7(2)	127.85	128.41	125.22	118.65	113.37	109.37	102.39
7(3)	128.01	128.69	123.15	113.37	106.91	102.38	94.69



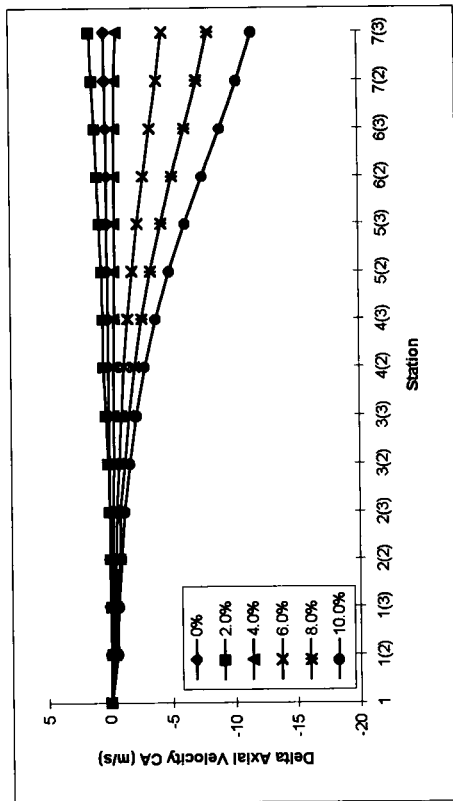
CA Bias Effects (PSAT Bias=10% - PSAT Bias=0.0%)

Stat#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	0	0	0	0	0	0
1(2)	0.01	-0.04	-0.08	0	0	-0.52
1(3)	0.01	-0.03	-0.09	-0.16	0	-0.21
2(2)	0.01	0	-0.14	-0.18	-0.25	-0.3
2(3)	0.01	0.02	-0.12	-0.21	-0.29	-0.43
3(2)	0.01	0.06	-0.15	-0.27	-0.37	-0.91
3(3)	0.03	0.13	-0.17	-0.39	-0.48	-1.21
4(2)	0.02	0.21	-0.21	-0.43	-0.61	-1.59
4(3)	0.04	0.2	-0.23	-0.55	-0.78	-1.89
5(2)	0.03	0.26	-0.26	-0.69	-1	-2.49
5(3)	0.05	0.32	-0.31	-0.87	-1.26	-3.2
6(2)	0.05	0.39	-0.35	-1.06	-1.55	-4
6(3)	0.06	0.46	-0.39	-1.25	-1.87	-4.86
7(2)	0.07	0.54	-0.44	-1.46	-2.19	-5.65
7(3)	0.08	0.63	-0.53	-1.65	-2.48	-6.44

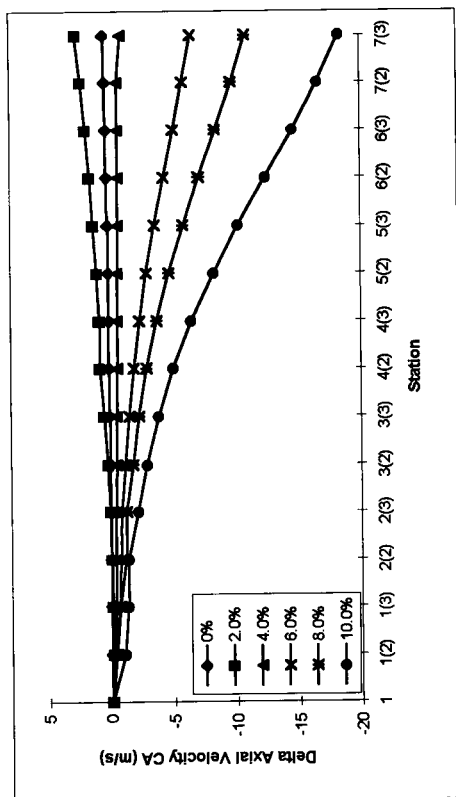


CA Bias Effects (PSAT Bias=20% - PSAT Bias=0.0%)

Stat#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	0	0	0	0	0	0
1(2)	0.02	-0.06	-0.16	-0.18	-0.33	-0.52
1(3)	0.03	-0.05	-0.17	-0.37	-0.41	-0.66
2(2)	0.03	0	-0.22	-0.44	-0.77	-0.87
2(3)	0.04	0.06	-0.24	-0.53	-0.77	-1.17
3(2)	0.05	0.17	-0.29	-0.75	-1.19	-1.59
3(3)	0.07	0.31	-0.3	-0.93	-1.55	-2.14
4(2)	0.08	0.48	-0.34	-1.17	-2.01	-2.84
4(3)	0.1	0.48	-0.37	-1.48	-2.61	-3.72
5(2)	0.12	0.61	-0.41	-1.86	-3.33	-4.83
5(3)	0.14	0.75	-0.45	-2.31	-4.2	-6.11
6(2)	0.17	0.92	-0.48	-2.81	-5.11	-7.53
6(3)	0.2	1.08	-0.51	-3.34	-6.13	-8.95
7(2)	0.23	1.27	-0.53	-3.88	-7.12	-10.34
7(3)	0.27	1.47	-0.72	-4.36	-8.01	-11.59

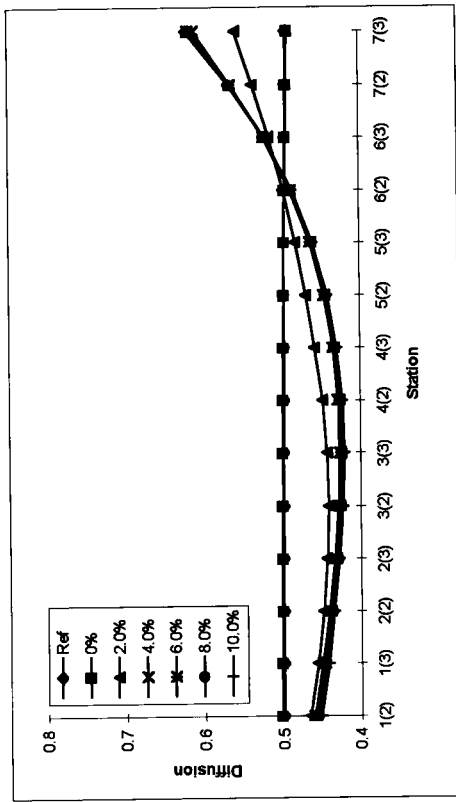


CA Bias Effects (PSAT Bias=30% - PSAT Bias=0.0%)									
Stat#	0%	2.0%	4.0%	6.0%	8.0%	10.0%			
1	0	0	0	0	0	0			
1(2)	0.05	-0.11	-0.24	-0.36	-0.33	-1.01			
1(3)	0.05	-0.07	-0.3	-0.58	-0.67	-1.29			
2(2)	0.06	0.02	-0.35	-0.68	-1.09	-1.31			
2(3)	0.07	0.13	-0.36	-0.83	-1.17	-2.11			
3(2)	0.09	0.3	-0.41	-1.12	-1.69	-2.83			
3(3)	0.12	0.54	-0.44	-1.45	-2.2	-3.77			
4(2)	0.15	0.85	-0.48	-1.81	-2.84	-4.96			
4(3)	0.18	0.92	-0.52	-2.28	-3.66	-6.43			
5(2)	0.21	1.1	-0.55	-2.84	-4.65	-8.23			
5(3)	0.26	1.36	-0.59	-3.52	-5.81	-10.17			
6(2)	0.31	1.66	-0.6	-4.25	-7.06	-12.39			
6(3)	0.36	1.97	-0.59	-5.01	-8.39	-14.56			
7(2)	0.43	2.32	-0.58	-5.77	-9.67	-16.58			
7(3)	0.5	2.68	-0.87	-6.46	-10.8	-18.33			



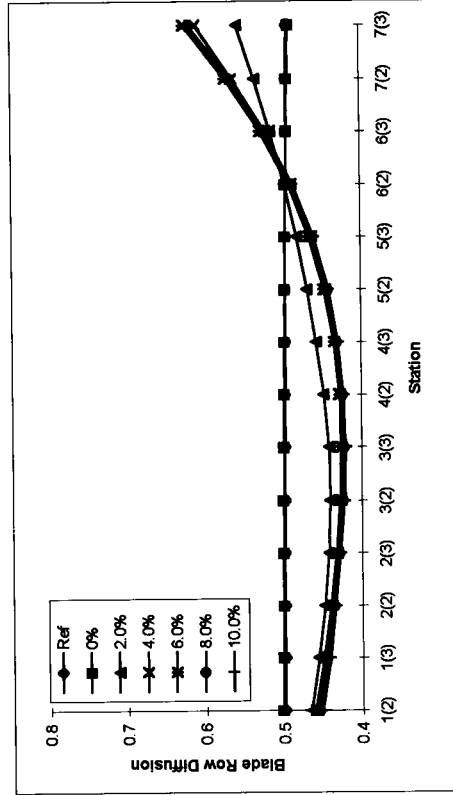
Blade Row Diffusion BRD, PSAT Bias=>0.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1(2)	0.4994	0.5021	0.4663	0.461	0.4586	0.4562	0.4522
1(3)	0.4993	0.5014	0.4563	0.4501	0.4472	0.4459	0.442
2(2)	0.4992	0.5011	0.4486	0.4408	0.4386	0.436	0.4349
2(3)	0.499	0.5008	0.4434	0.4337	0.4318	0.4295	0.4278
3(2)	0.4986	0.5002	0.4411	0.4287	0.4267	0.4248	0.4226
3(3)	0.4983	0.4996	0.4427	0.4288	0.4248	0.423	0.4208
4(2)	0.4979	0.499	0.4488	0.4284	0.4267	0.4251	0.423
4(3)	0.4975	0.4983	0.4583	0.4344	0.433	0.4313	0.4301
5(2)	0.497	0.4975	0.4684	0.4458	0.4446	0.4432	0.442
5(3)	0.4963	0.4964	0.4623	0.4634	0.4624	0.4613	0.4605
6(2)	0.4954	0.4952	0.4974	0.4883	0.4877	0.4873	0.4864
6(3)	0.4948	0.4942	0.5153	0.522	0.522	0.522	0.5218
7(2)	0.4941	0.493	0.5366	0.5646	0.5653	0.566	0.5665
7(3)	0.4928	0.4912	0.5579	0.6107	0.6172	0.6188	0.6201



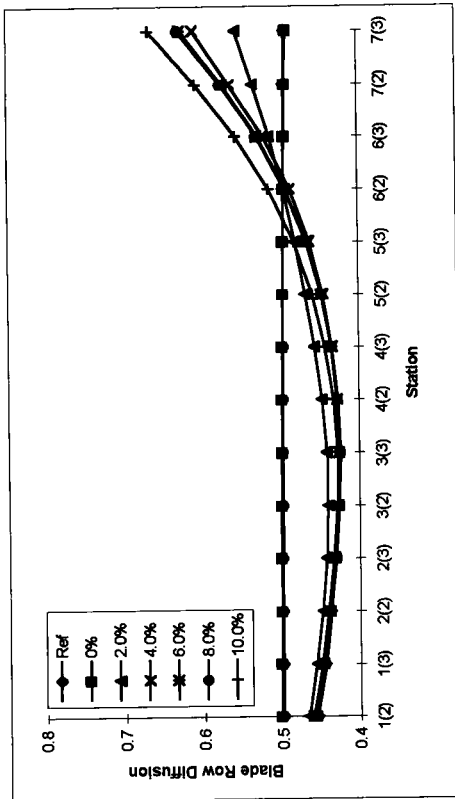
Blade Row Diffusion BRD, PSAT Bias=>2.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1(2)	0.4994	0.5021	0.4663	0.461	0.4586	0.4562	0.4522
1(3)	0.4993	0.5014	0.4564	0.4501	0.4484	0.4459	0.442
2(2)	0.4992	0.5011	0.4486	0.4408	0.4393	0.436	0.4349
2(3)	0.499	0.5008	0.4433	0.4337	0.4325	0.4295	0.4278
3(2)	0.4986	0.5002	0.441	0.4288	0.4276	0.4248	0.4226
3(3)	0.4983	0.4996	0.4425	0.4288	0.426	0.423	0.4208
4(2)	0.4979	0.499	0.4485	0.4284	0.4283	0.4251	0.423
4(3)	0.4975	0.4983	0.4579	0.4344	0.4351	0.4313	0.4301
5(2)	0.497	0.4975	0.469	0.4457	0.4474	0.4432	0.442
5(3)	0.4963	0.4964	0.4818	0.4632	0.466	0.4618	0.4605
6(2)	0.4954	0.4952	0.4968	0.488	0.4923	0.4875	0.4873
6(3)	0.4948	0.4942	0.5145	0.5215	0.5275	0.5224	0.5229
7(2)	0.4941	0.493	0.5347	0.564	0.5719	0.5663	0.5676
7(3)	0.4928	0.4912	0.5569	0.6101	0.6249	0.619	0.6211



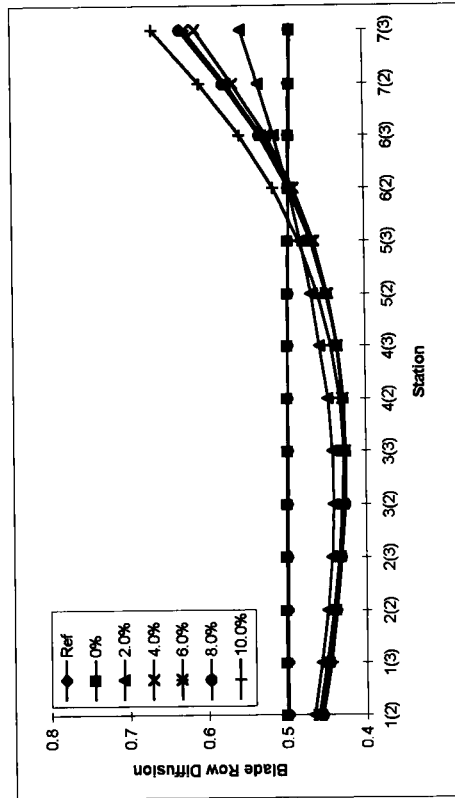
Blade Row Diffusion BRD, PSAT Bias=>4.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1(2)	0.4994	0.5021	0.4665	0.461	0.4586	0.4562	0.456
1(3)	0.4993	0.5014	0.4565	0.4501	0.4484	0.4459	0.4446
2(2)	0.4992	0.5011	0.4486	0.4411	0.4393	0.4378	0.4375
2(3)	0.499	0.5008	0.4433	0.4338	0.4325	0.4307	0.4315
3(2)	0.4986	0.5002	0.4409	0.4289	0.4282	0.4259	0.4278
3(3)	0.4983	0.4996	0.4422	0.427	0.4267	0.4245	0.428
4(2)	0.4979	0.499	0.4482	0.4286	0.4288	0.4272	0.4328
4(3)	0.4975	0.4983	0.4575	0.4345	0.4356	0.4348	0.4434
5(2)	0.497	0.4975	0.4685	0.4458	0.4481	0.4473	0.4595
5(3)	0.4963	0.4964	0.4812	0.4632	0.4669	0.4668	0.4831
6(2)	0.4954	0.4952	0.496	0.488	0.4933	0.4938	0.5149
6(3)	0.4948	0.4942	0.5136	0.5215	0.5287	0.5299	0.5561
7(2)	0.4941	0.493	0.5337	0.5639	0.5732	0.5753	0.6071
7(3)	0.4928	0.4912	0.5557	0.61	0.6262	0.6294	0.6664



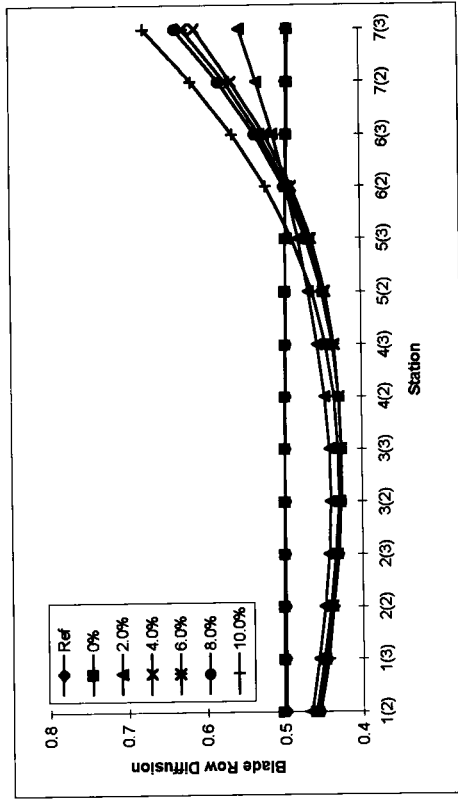
Blade Row Diffusion BRD, PSAT Bias=>6.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1(2)	0.4994	0.5021	0.4665	0.461	0.4586	0.4562	0.456
1(3)	0.4993	0.5014	0.4565	0.4505	0.4484	0.4459	0.4446
2(2)	0.4992	0.5011	0.4486	0.4413	0.4393	0.4378	0.4375
2(3)	0.499	0.5008	0.4433	0.4342	0.4325	0.4307	0.4315
3(2)	0.4986	0.5002	0.4408	0.4294	0.4282	0.4259	0.4278
3(3)	0.4983	0.4996	0.442	0.4274	0.4267	0.4256	0.428
4(2)	0.4979	0.499	0.4478	0.4291	0.4291	0.4278	0.4328
4(3)	0.4975	0.4982	0.4571	0.4362	0.436	0.4354	0.4434
5(2)	0.497	0.4975	0.468	0.4467	0.4483	0.4485	0.4595
5(3)	0.4963	0.4964	0.4806	0.4643	0.467	0.4679	0.4831
6(2)	0.4954	0.4951	0.4953	0.4893	0.4934	0.4951	0.5149
6(3)	0.4948	0.4941	0.5128	0.523	0.5288	0.5317	0.5567
7(2)	0.4941	0.4929	0.5327	0.5657	0.5732	0.5774	0.6074
7(3)	0.4928	0.4911	0.5545	0.6121	0.6262	0.6316	0.6667



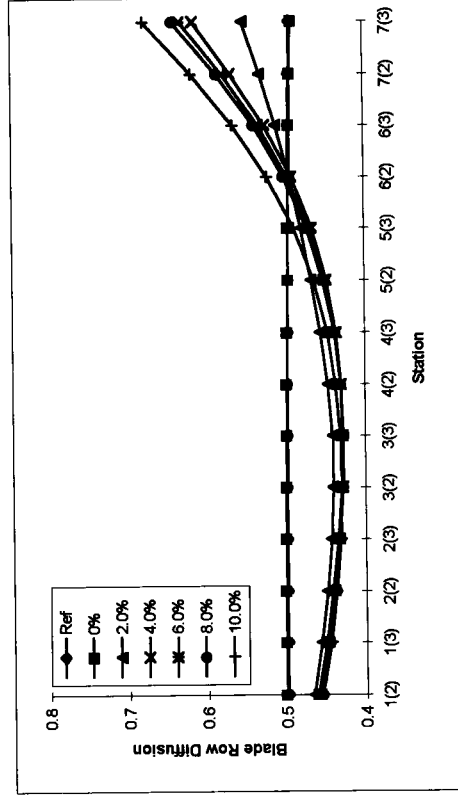
Blade Row Diffusion BRD, PSAT Bias=>8.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1(2)	0.4994	0.5021	0.4665	0.461	0.4586	0.4562	0.456
1(3)	0.4993	0.5014	0.4565	0.4505	0.4484	0.4459	0.4446
2(2)	0.4992	0.5011	0.4486	0.4413	0.4393	0.4378	0.4375
2(3)	0.499	0.5007	0.4432	0.4342	0.4325	0.4307	0.4315
3(2)	0.4986	0.5001	0.4407	0.4294	0.4282	0.4271	0.4301
3(3)	0.4983	0.4995	0.4418	0.4275	0.4267	0.4264	0.4314
4(2)	0.4979	0.4989	0.4474	0.4291	0.4291	0.4294	0.4354
4(3)	0.4975	0.4981	0.4568	0.4351	0.436	0.4368	0.4462
5(2)	0.497	0.4973	0.4676	0.4464	0.4483	0.4501	0.4632
5(3)	0.4963	0.4962	0.48	0.4638	0.467	0.47	0.4879
6(2)	0.4954	0.4949	0.4947	0.4886	0.4934	0.498	0.5208
6(3)	0.4948	0.4936	0.512	0.5221	0.5286	0.5349	0.5638
7(2)	0.4941	0.4926	0.5318	0.5645	0.5729	0.5811	0.6157
7(3)	0.4928	0.4908	0.5535	0.6109	0.6258	0.6359	0.6761



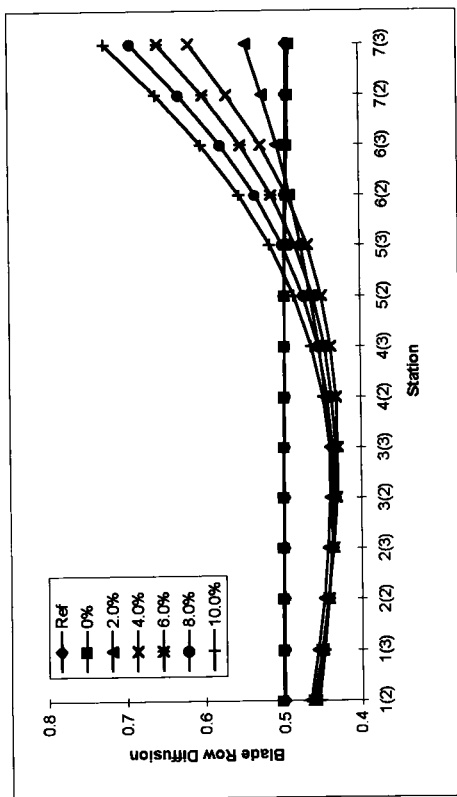
Blade Row Diffusion BRD, PSAT Bias=>10.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1(2)	0.4994	0.502	0.4666	0.4616	0.4586	0.4562	0.456
1(3)	0.4993	0.5014	0.4566	0.4509	0.4484	0.4459	0.4446
2(2)	0.4992	0.5011	0.4487	0.4419	0.4402	0.4378	0.4375
2(3)	0.499	0.5007	0.4432	0.4348	0.4337	0.4322	0.4315
3(2)	0.4986	0.5001	0.4406	0.43	0.4291	0.4281	0.4301
3(3)	0.4983	0.4995	0.4416	0.4284	0.4281	0.4272	0.4314
4(2)	0.4979	0.4988	0.4471	0.4303	0.4306	0.4306	0.437
4(3)	0.4975	0.498	0.4563	0.4365	0.4378	0.4383	0.4472
5(2)	0.497	0.4972	0.4671	0.4483	0.4508	0.4522	0.4641
5(3)	0.4963	0.496	0.4794	0.4662	0.4702	0.4726	0.489
6(2)	0.4954	0.4947	0.4939	0.4915	0.4972	0.5012	0.5222
6(3)	0.4948	0.4936	0.5111	0.5256	0.5333	0.5389	0.5654
7(2)	0.4941	0.4924	0.5307	0.5686	0.5785	0.5868	0.6176
7(3)	0.4928	0.4904	0.5522	0.6155	0.6321	0.6412	0.6782



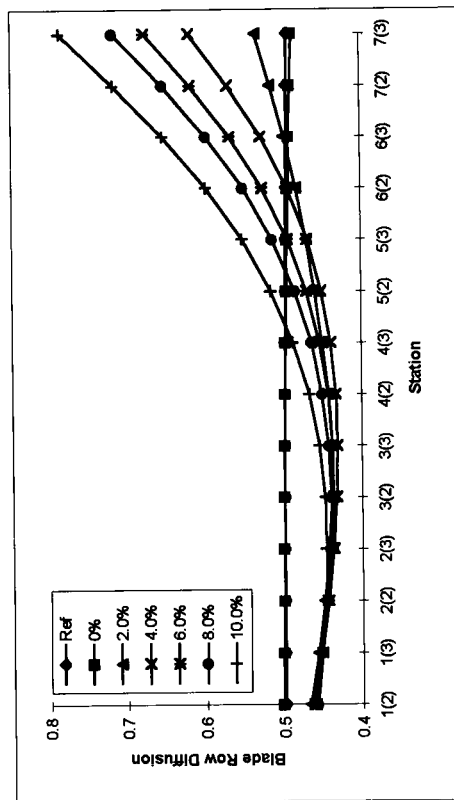
Blade Row Diffusion BRD, PSAT Bias=>20.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1(2)	0.4994	0.5019	0.4688	0.4622	0.46	0.4586	0.456
1(3)	0.4993	0.5012	0.4568	0.4516	0.4503	0.4495	0.4479
2(2)	0.4992	0.5009	0.4487	0.4427	0.4426	0.4424	0.4426
2(3)	0.499	0.5004	0.4429	0.4358	0.4366	0.4367	0.4382
3(2)	0.4986	0.4998	0.4397	0.4313	0.4332	0.435	0.4366
3(3)	0.4983	0.4991	0.4401	0.4296	0.4331	0.4367	0.4396
4(2)	0.4979	0.4983	0.4447	0.4315	0.4371	0.443	0.4481
4(3)	0.4975	0.4974	0.4537	0.4379	0.4461	0.4545	0.4632
5(2)	0.497	0.4965	0.464	0.4496	0.4612	0.473	0.4849
5(3)	0.4963	0.4951	0.4755	0.4675	0.4831	0.4988	0.515
6(2)	0.4954	0.4936	0.4892	0.4928	0.513	0.5333	0.5539
6(3)	0.4948	0.4924	0.5055	0.5267	0.5521	0.5773	0.6025
7(2)	0.4941	0.4909	0.5241	0.5695	0.6003	0.6304	0.66
7(3)	0.4928	0.4887	0.5446	0.617	0.6567	0.6913	0.7248



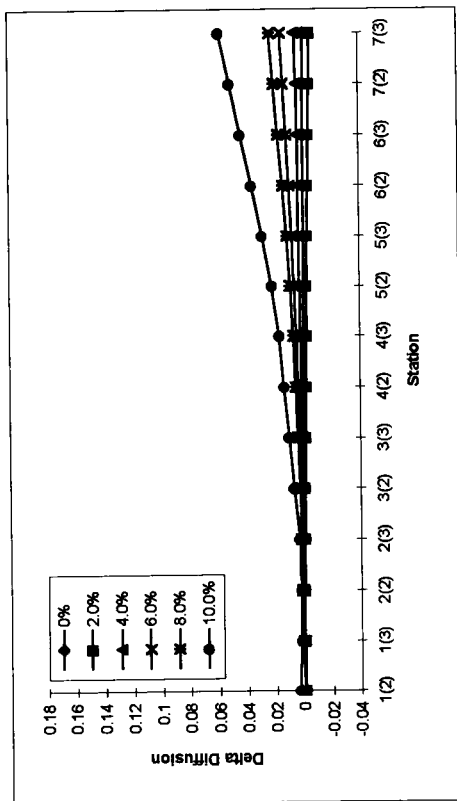
Blade Row Diffusion BRD, PSAT Bias=>30.0%

Sta#	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1(2)	0.4994	0.5017	0.4671	0.4628	0.4613	0.4596	0.4586
1(3)	0.4993	0.501	0.457	0.4527	0.4522	0.4515	0.4535
2(2)	0.4992	0.5006	0.4486	0.4439	0.4447	0.4453	0.4471
2(3)	0.499	0.5001	0.4423	0.437	0.4393	0.4403	0.4459
3(2)	0.4986	0.4994	0.4386	0.4325	0.4366	0.4395	0.4475
3(3)	0.4983	0.4986	0.4381	0.4309	0.4377	0.4425	0.454
4(2)	0.4979	0.4977	0.4415	0.4328	0.4429	0.4504	0.4669
4(3)	0.4975	0.4967	0.4498	0.4392	0.4533	0.4639	0.4873
5(2)	0.497	0.4956	0.4595	0.451	0.47	0.4847	0.5153
5(3)	0.4963	0.4941	0.4701	0.4688	0.4939	0.5134	0.5516
6(2)	0.4954	0.4924	0.4825	0.4939	0.526	0.5507	0.5977
6(3)	0.4948	0.4909	0.4975	0.5275	0.5673	0.5977	0.6532
7(2)	0.4941	0.4891	0.5146	0.57	0.6176	0.6535	0.7164
7(3)	0.4928	0.4866	0.5336	0.6182	0.6758	0.7165	0.7853



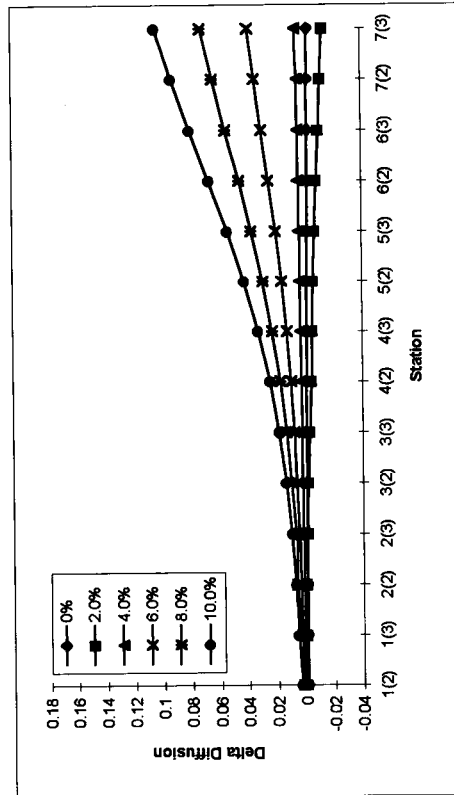
BRD Bias Effects (PSAT Bias=10% - PSAT Bias=0.0%)

Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1(2)	-1E-04	0.0003	0.0006	0	0	0.0038
1(3)	0	0.0003	0.0008	0.0012	0	0.0026
2(2)	0	1E-04	0.0011	0.0016	0.0018	0.0026
2(3)	-1E-04	-0.0002	0.0011	0.0019	0.0027	0.0037
3(2)	-1E-04	-0.0005	0.0013	0.0024	0.0033	0.0075
3(3)	-1E-04	-0.0011	0.0016	0.0033	0.0042	0.0106
4(2)	-0.0002	-0.0017	0.0019	0.0039	0.0055	0.014
4(3)	-0.0003	-0.002	0.0021	0.0048	0.007	0.0171
5(2)	-0.0003	-0.0023	0.0025	0.0062	0.009	0.0221
5(3)	-0.0004	-0.0029	0.0028	0.0078	0.0113	0.0285
6(2)	-0.0005	-0.0035	0.0032	0.0095	0.0139	0.0358
6(3)	-0.0006	-0.0042	0.0036	0.0113	0.0169	0.0436
7(2)	-0.0006	-0.0049	0.004	0.0132	0.0198	0.0511
7(3)	-0.0008	-0.0057	0.0048	0.0149	0.0224	0.0581

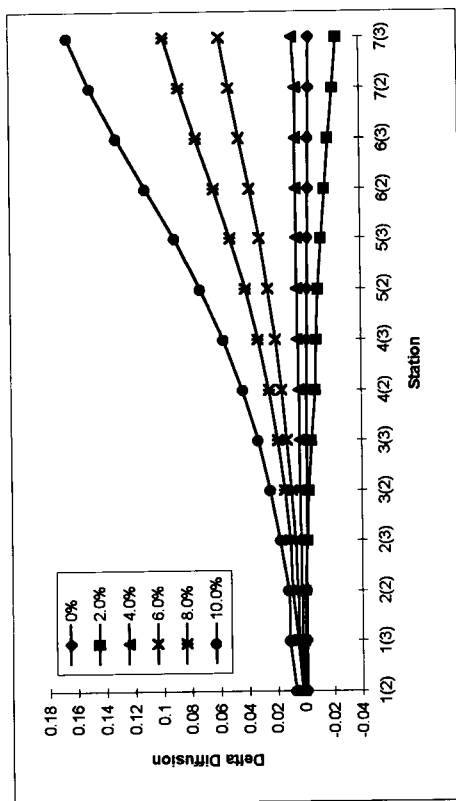


BRD Bias Effects (PSAT Bias=20% - PSAT Bias=0.0%)

Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1(2)	-0.0002	0.0005	0.0012	0.0014	0.0024	0.0038
1(3)	-0.0002	0.0005	0.0015	0.0031	0.0036	0.0059
2(2)	-0.0002	1E-04	0.0019	0.004	0.0064	0.0077
2(3)	-0.0004	-0.0005	0.0021	0.0048	0.0072	0.0104
3(2)	-0.0004	-0.0014	0.0026	0.0065	0.0102	0.014
3(3)	-0.0005	-0.0026	0.0028	0.0083	0.0137	0.0188
4(2)	-0.0007	-0.0041	0.0031	0.0104	0.0179	0.0251
4(3)	-0.0009	-0.0046	0.0035	0.0131	0.0232	0.0331
5(2)	-0.001	-0.0054	0.0038	0.0166	0.0298	0.0429
5(3)	-0.0013	-0.0068	0.0041	0.0207	0.0375	0.0545
6(2)	-0.0016	-0.0082	0.0045	0.0253	0.046	0.0675
6(3)	-0.0018	-0.0098	0.0047	0.0301	0.0553	0.0807
7(2)	-0.0021	-0.0115	0.0049	0.035	0.0644	0.0935
7(3)	-0.0025	-0.0133	0.0063	0.0395	0.0725	0.1047

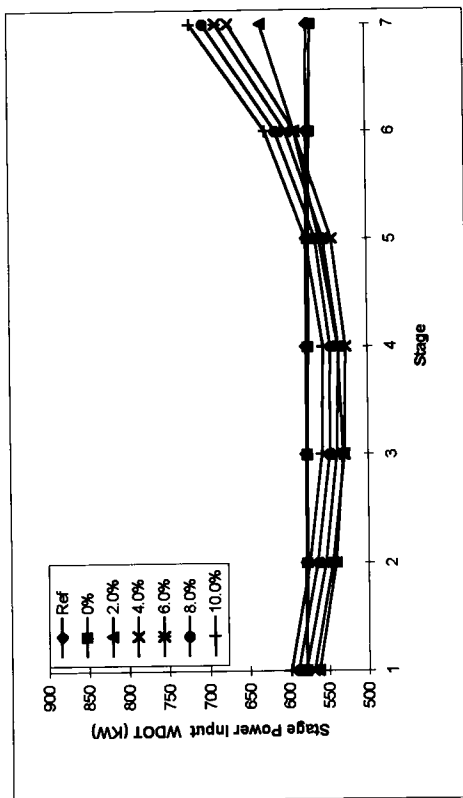


BRD Bias Effects (PSAT Bias=30% - PSAT Bias=0.0%)										
Sta#	0%	2.0%	4.0%	6.0%	8.0%	10.0%				
1(2)	-0.0004	0.0008	0.0018	0.0027	0.0024	0.0074				
1(3)	-0.0004	0.0007	0.0026	0.005	0.0056	0.0115				
2(2)	-0.0005	0	0.0031	0.0061	0.0093	0.0122				
2(3)	-0.0007	-0.0011	0.0033	0.0075	0.0108	0.0181				
3(2)	-0.0008	-0.0025	0.0038	0.0099	0.0147	0.0249				
3(3)	-0.001	-0.0046	0.0041	0.0129	0.0195	0.0332				
4(2)	-0.0013	-0.0073	0.0044	0.0162	0.0253	0.0439				
4(3)	-0.0016	-0.0085	0.0048	0.0203	0.0326	0.0572				
5(2)	-0.0019	-0.0099	0.0052	0.0254	0.0415	0.0733				
5(3)	-0.0023	-0.0122	0.0054	0.0315	0.0521	0.0911				
6(2)	-0.0028	-0.0149	0.0056	0.0383	0.0634	0.1113				
6(3)	-0.0033	-0.0178	0.0055	0.0453	0.0757	0.1314				
7(2)	-0.0039	-0.021	0.0054	0.0523	0.0875	0.1499				
7(3)	-0.0046	-0.0243	0.0075	0.0586	0.0977	0.1652				



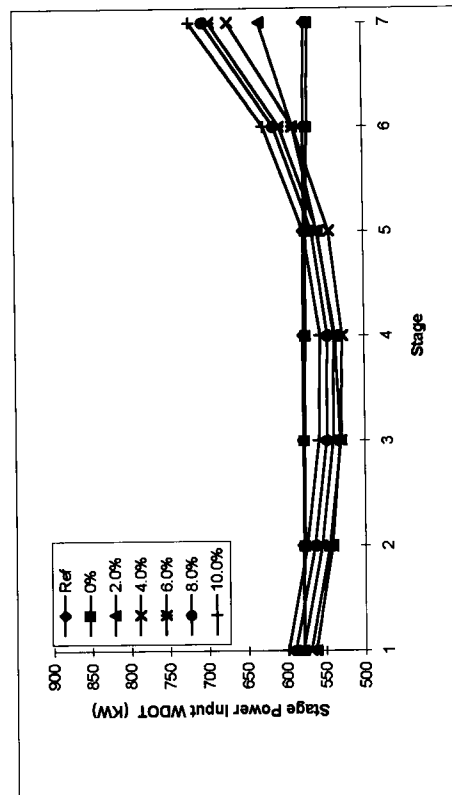
Power Input WDOT (KW), PSAT Bias=>0.0%

Stage	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	579.542	579.04	563.257	570.133	579.668	589.735	598.926
2	579.198	577.408	541.666	545.503	554.477	564.386	574.381
3	578.723	576.488	531.368	530.032	539.284	548.895	558.427
4	577.905	575.156	537.377	527.447	536.767	546.753	556.218
5	576.939	573.573	559.449	544.394	554.719	565.328	576.534
6	575.269	571.161	589.942	589.329	601.306	613.978	626.617
7	573.817	568.798	631.726	672.304	687.515	703.537	719.561



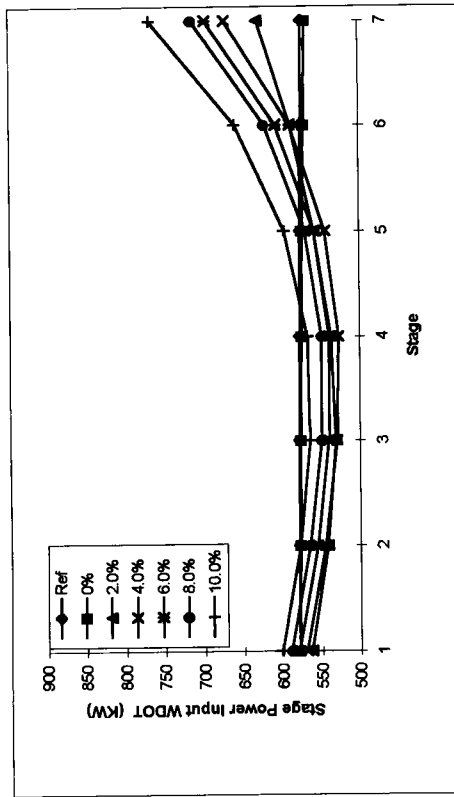
Power Input WDOT (KW), PSAT Bias=>2.0%

Stage	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	579.542	579.04	563.257	570.133	579.668	589.735	598.926
2	579.198	577.408	541.713	545.503	555.655	564.386	574.381
3	578.723	576.488	531.286	530.125	540.267	548.895	558.427
4	577.905	575.156	537.059	527.449	538.573	546.753	556.218
5	576.939	573.573	559.005	544.283	557.869	565.328	576.534
6	575.269	571.161	589.264	588.969	606.424	614.381	627.314
7	573.817	568.798	630.768	671.687	695.061	703.944	720.919



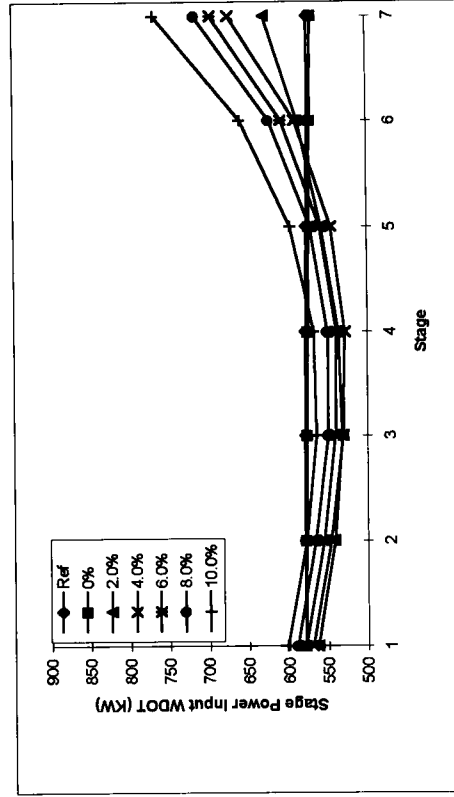
Power Input WDOT (KW), PSAT Bias=>4.0%

Stage	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	579.542	579.04	563.364	570.133	579.688	589.735	601.943
2	579.198	577.408	541.743	545.743	555.655	565.798	577.413
3	578.723	576.488	531.178	530.244	540.704	550.135	564.397
4	577.905	575.156	536.697	527.677	539.252	549.076	567.531
5	576.939	573.573	558.485	544.41	558.566	570.158	596.729
6	575.269	571.161	588.47	588.951	607.56	621.563	659.942
7	573.817	568.798	629.639	671.555	696.509	714.35	767.855



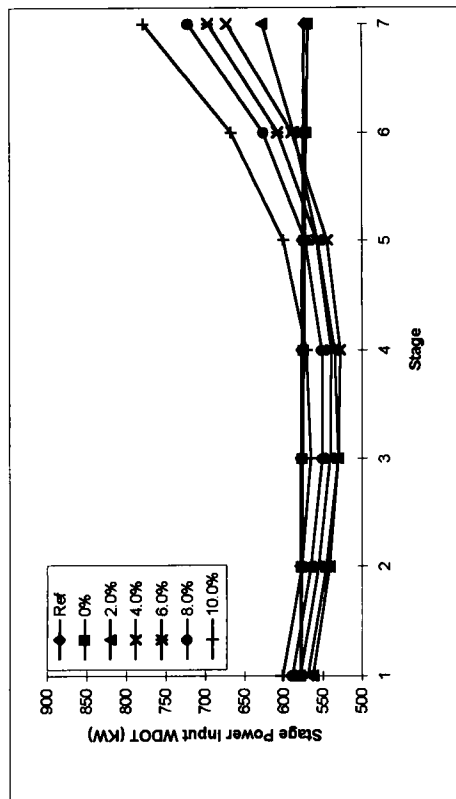
Power Input WDOT (KW), PSAT Bias=>6.0%

Stage	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	579.542	579.036	563.364	570.133	579.688	589.735	601.943
2	579.198	577.394	541.787	546.166	555.655	565.798	577.413
3	578.723	576.464	531.079	530.781	540.704	550.135	564.397
4	577.905	575.119	536.328	528.239	539.484	550.168	567.531
5	576.939	573.518	557.973	545.376	558.9	571.38	596.729
6	575.269	571.081	587.692	590.433	607.699	623.054	659.942
7	573.817	568.686	628.538	673.526	696.579	716.77	768.392



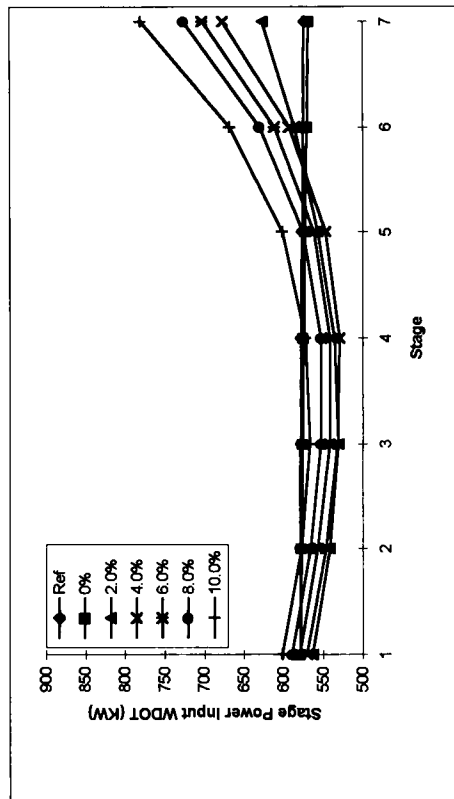
Power Input WDOT (KW), PSAT Bias=>8.0%

Stage	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	579.542	579.021	563.364	570.133	579.668	589.735	601.943
2	579.198	577.355	541.787	546.166	555.655	565.798	577.413
3	578.723	576.4	530.995	530.781	540.704	551.138	566.184
4	577.905	575.02	535.987	528.228	539.484	551.631	571.135
5	576.939	573.373	557.515	545.093	558.9	573.198	601.019
6	575.269	570.872	586.999	589.692	607.689	626.24	666.88
7	573.817	568.394	627.558	672.269	696.285	721.141	778.378

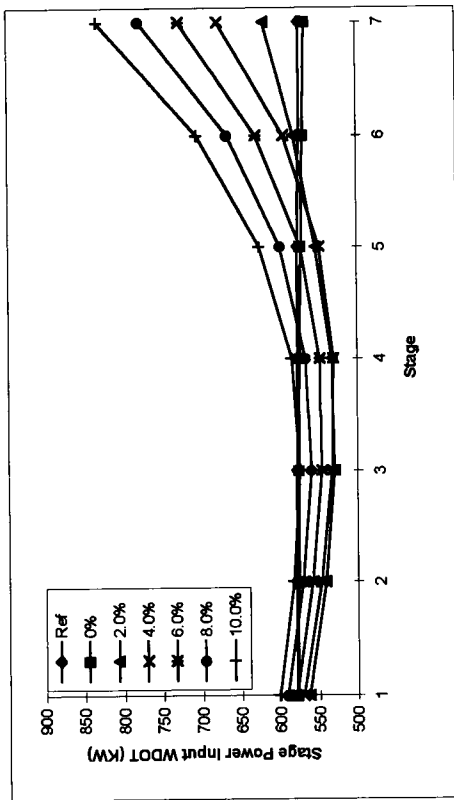


Power Input WDOT (KW), PSAT Bias=>10.0%

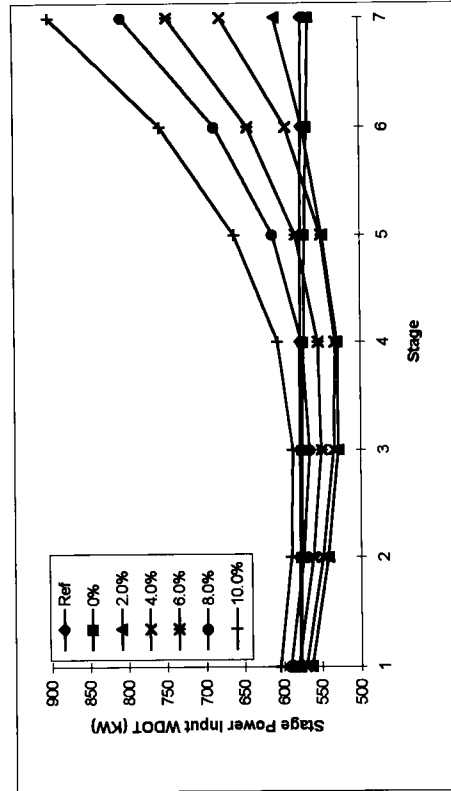
Stage	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%
1	579.542	579.006	563.467	570.589	579.668	589.735	601.943
2	579.198	577.313	541.85	546.71	556.339	565.798	577.413
3	578.723	576.333	530.888	531.483	541.92	552.718	566.184
4	577.905	574.917	535.597	529.495	541.303	552.94	572.469
5	576.939	573.219	556.975	547.119	561.607	575.498	602.008
6	575.269	570.653	586.168	592.895	612.046	629.983	668.468
7	573.817	568.085	626.374	676.81	702.608	726.609	780.647



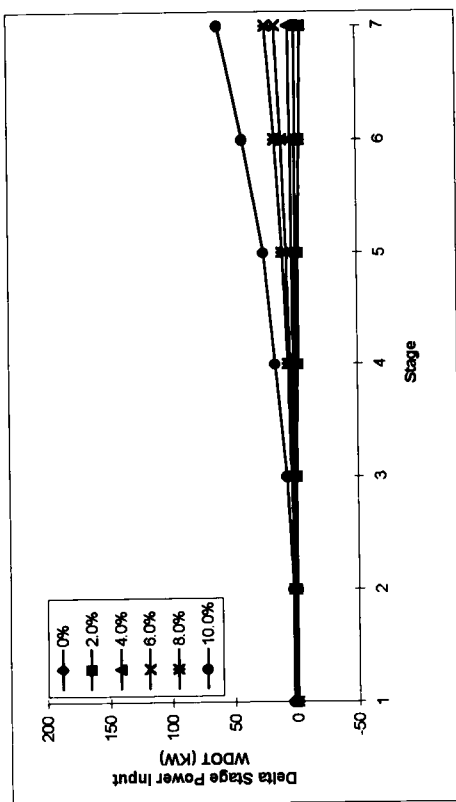
Power Input WDOT (KW), PSAT Bias=>20.0%									
Stage	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%		
1	579.542	578.919	563.563	571.022	580.705	591.588	601.943		
2	579.198	577.109	541.907	547.615	558.974	571.034	583.329		
3	578.723	576.002	530.11	532.87	546.391	560.044	574.499		
4	577.905	574.405	533.192	530.952	548.453	567.027	585.155		
5	576.939	572.461	553.635	548.727	573.271	599.177	626.264		
6	575.269	569.562	581.082	594.394	629.794	686.924	705.912		
7	573.817	566.555	619.151	677.978	727.657	778.857	831.664		



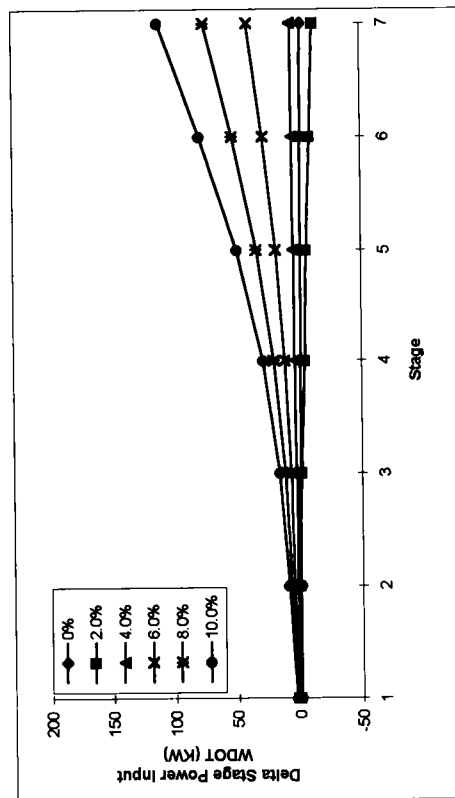
Power Input WDOT (KW), PSAT Bias=>30.0%									
Stage	Ref	0%	2.0%	4.0%	6.0%	8.0%	10.0%		
1	579.542	578.799	563.817	571.431	581.689	591.588	604.791		
2	579.198	576.861	541.903	548.983	561.439	574.351	589.515		
3	578.723	575.598	529.04	534.246	550.13	565.214	587.135		
4	577.905	573.782	530	532.48	554.905	575.409	606.959		
5	576.939	571.537	548.685	550.275	583.172	612.649	661.749		
6	575.269	568.234	573.9	595.749	644.49	687.167	757.768		
7	573.817	564.693	608.88	678.631	747.512	806.232	900.578		



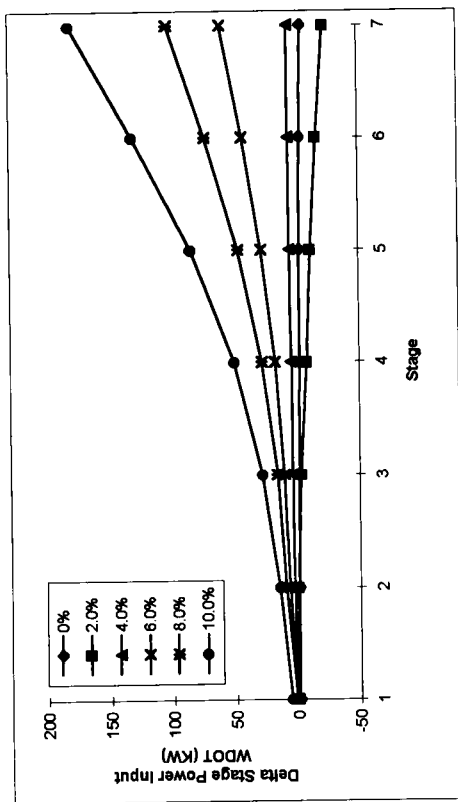
WDOT		Bias Effects (PSAT Bias=10% - PSAT Bias=0.0%)						
Sta#		0%	2.0%	4.0%	6.0%	8.0%	10.0%	
1		-0.034	0.21	0.456	0	0	3.017	
2		-0.095	0.184	1.207	1.862	1.412	3.032	
3		-0.155	-0.48	1.451	2.636	3.823	7.757	
4		-0.239	-1.78	2.048	4.536	6.187	16.251	
5		-0.354	-2.474	2.725	6.888	10.17	25.474	
6		-0.508	-3.774	3.566	10.74	16.005	41.851	
7		-0.713	-5.352	4.506	15.093	23.072	61.086	



WDOT		Bias Effects (PSAT Bias=20% - PSAT Bias=0.0%)						
Sta#		0%	2.0%	4.0%	6.0%	8.0%	10.0%	
1		-0.121	0.306	0.889	1.037	1.853	3.017	
2		-0.299	0.241	2.112	4.497	6.648	8.948	
3		-0.486	-1.258	2.838	7.107	11.149	16.072	
4		-0.751	-4.185	3.505	11.686	20.274	28.937	
5		-1.112	-5.814	4.333	18.552	33.849	49.73	
6		-1.599	-8.86	5.065	28.488	52.946	79.295	
7		-2.243	-12.575	5.674	40.142	75.32	112.103	



WDOT		Bias Effects (PSAT Bias=30% - PSAT Bias=0.0%)									
Sta#		0%	2.0%	4.0%	6.0%	8.0%	10.0%				
1		-0.241	0.56	1.298	2.021	1.853	5.865				
2		-0.547	0.237	3.48	6.962	9.965	15.134				
3		-0.89	-2.328	4.214	10.846	16.319	28.708				
4		-1.374	-7.377	5.033	18.138	28.656	50.741				
5		-2.036	-10.754	5.881	28.453	47.321	85.215				
6		-2.927	-16.042	6.42	43.184	73.189	131.151				
7		-4.105	-22.846	6.327	59.997	102.695	181.017				



VITA

Thomas J. Miller was born in February 1956. He moved to Durango, Colorado in 1971 where he attended and graduated from Durango High School in 1974. Upon graduation, he enlisted in the United States Air Force. He attended night courses throughout his military career and was awarded his Bachelor's Degree in Aerospace Engineering from the University Of Oklahoma in 1985 and his Master's Degree in Mechanical Engineering from the University of Tennessee Space Institute in 1996. The University of Tennessee Space Institute is an off campus graduate center of The University of Tennessee, Knoxville.