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(NASA-CR-165457-Vol-2-Pt-1) AN EXPERIMENTAL INVESTIGATION OF GAPWISE PERIODICITY AND UNSTEADY AERODYNAMIC RESPONSE IN AN OSCILLATING CASCADE. VOLUME 2: DATA REPORT. PART (United Technologies Research G2/02 09158

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AN EXPERIMENTAL INVESTIGATION OF GAPWISE PERIODICITY AND UNSTEADY AERODYNAMIC RESPONSE IN AN OSCILLATING CASCADE  
VOL. II: DATA REPORT

(Part 1: Text and Mode 1 Data)

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16. Abstract Tests were conducted on a linear cascade of airfoils oscillating in pitch to measure the unsteady pressure response on selected blades along the leading edge plane of the cascade, over the chord of the center blade, and on the sidewall in the plane of the leading edge. The tests were conducted for all 96 combinations of 2 mean camberline incidence angles ( $\alpha_{MCL} = 2$ and 6 deg), 2 pitching amplitudes ( $\alpha = 0.5$ and 2 deg), 3 reduced frequencies ( $k = .072, .122, \text{ and } .151$ based on semi chord), and 8 interblade phase angles ( $\sigma = 0, \pm 45, \pm 90, \pm 135, 180$ deg). The pressure data were reduced to Fourier coefficient form for direct comparison, and were also processed to yield integrated loads and, particularly, the aerodynamic damping coefficient.  The experimental results of this program are presented in two volumes. The first volume (NASA CR 3513) describes the test procedure, discusses key results from the experiment, and provides a cursory comparison of experimental data and theoretical predictions. The present volume, in two parts, is a compilation of all data obtained during the test program, reproduced from the printout of the data reduction program. A further description of the contents of this report is found in the text that follows.					
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PERIODICITY AND UNSTEADY AERODYNAMIC  
RESPONSE IN AN OSCILLATING CASCADE  
VOL. II: DATA REPORT

TABLE OF CONTENTS

<u>Part 1:</u>	<u>Page</u>
SUMMARY . . . . .	1
LIST OF SYMBOLS . . . . .	2
DISCUSSION . . . . .	5
REFERENCE . . . . .	9
FIGURES . . . . .	11
 TABLES:	
1. DIMENSIONLESS AIRFOIL COORDINATES IN FRACTION OF CHORD . . . . .	14
2. TRANSDUCER ORIFICE LOCATIONS . . . . .	15
3. BLADE DATA CHANNELS . . . . .	16
4. MODE 1 DATA FOR $\alpha_{MCL} = 2 \text{ deg}, \bar{\alpha} = 0.5 \text{ deg}$ . . . . .	17
5. MODE 1 DATA FOR $\alpha_{MCL} = 2 \text{ deg}, \bar{\alpha} = 2 \text{ deg}$ . . . . .	115
6. MODE 1 DATA FOR $\alpha_{MCL} = 6 \text{ deg}, \bar{\alpha} = 0.5 \text{ deg}$ . . . . .	213
7. MODE 1 DATA FOR $\alpha_{MCL} = 6 \text{ deg}, \bar{\alpha} = 2 \text{ deg}$ . . . . .	311
 <u>Part 2:</u>	
8. MODE 2 DATA FOR $\alpha_{MCL} = 2 \text{ deg}, \bar{\alpha} = 0.5 \text{ deg}$ . . . . .	409
9. MODE 2 DATA FOR $\alpha_{MCL} = 2 \text{ deg}, \bar{\alpha} = 2 \text{ deg}$ . . . . .	507
10. MODE 2 DATA FOR $\alpha_{MCL} = 6 \text{ deg}, \bar{\alpha} = 0.5 \text{ deg}$ . . . . .	605
11. MODE 2 DATA FOR $\alpha_{MCL} = 6 \text{ deg}, \bar{\alpha} = 2 \text{ deg}$ . . . . .	699



## SUMMARY

Tests were conducted on a linear cascade of airfoils oscillating in pitch to measure the unsteady pressure response on selected blades along the leading edge plane of the cascade, over the chord of the center blade, and on the sidewall in the plane of the leading edge. The tests were conducted for all 96 combinations of 2 mean camberline incidence angles ( $\alpha_{MCL} = 2$  and 6 deg), 2 pitching amplitudes ( $\alpha = 0.5$  and 2 deg), 3 reduced frequencies ( $k = .072, .122,$  and  $.151$  based on semi chord), and 8 interblade phase angles ( $\sigma = 0, \pm 45, \pm 90, \pm 135, 180$  deg). The pressure data were reduced to Fourier coefficient form for direct comparison, and were also processed to yield integrated loads and, particularly, the aerodynamic damping coefficient.

The experimental results of this program are presented in two volumes. The first volume (Ref. 1) describes the test procedure, discusses key results from the experiment, and provides a cursory comparison of experimental data and theoretical predictions. The present volume, in two parts, is a compilation of all data obtained during the test program, reproduced from the printout of the data reduction program. A further description of the contents of this report is found in the text that follows.

## LIST OF SYMBOLS

Note: In this tabulation the first column is the heading from the computer printout reproduced herein, the second column is the equivalent physical symbol defined in Ref. 1, and these are followed by a brief definition.

<u>Symbol in this report</u>	<u>Symbol in Ref. 1</u>	<u>Definition</u>
ALPHA-BAR	$\bar{\alpha}$	pitching amplitude, deg
ALPHA-MCL	$\alpha_{MCL}$	mean camberline incidence angle, deg
CMIMAG	$C_{M_I}$	imaginary part of moment coefficient per unit amplitude
CMREAL	$C_{M_R}$	real part of moment coefficient per unit amplitude
CM-MAG	$\bar{C}_M$	magnitude of moment coefficient per unit amplitude
CNIMAG	$C_{N_I}$	imaginary part of normal force coefficient per unit amplitude
CNREAL	$C_{N_R}$	real part of normal force coefficient per unit amplitude
CN-MAG	$\bar{C}_N$	magnitude of normal force coefficient per unit amplitude
CPIMAG	$C_{P_I}$	imaginary part of single surface pressure coefficient per unit amplitude
CPREAL	$C_{P_R}$	real part of single surface pressure coefficient per unit amplitude
CP-MAG	$\bar{C}_P$	magnitude of single surface pressure coefficient per unit amplitude
DELCPI	$\Delta C_{P_I}$	imaginary part of pressure difference coefficient per unit amplitude
DELCPM	$\Delta \bar{C}_P$	magnitude of pressure difference coefficient per unit amplitude
DELCPR	$\Delta C_{P_R}$	real part of pressure difference coefficient per unit amplitude

LIST OF SYMBOLS (Cont'd)

<u>Symbol in this report</u>	<u>Symbol in Ref. 1</u>	<u>Definition</u>
FILE	-	internal file number, used for computer access
K	k	reduced frequency
N	k	harmonic number
PHI	$\phi$	phase angle lead relative to motion
PHIM	$\phi_M$	moment phase angle lead relative to motion
PHIN	$\phi_N$	normal force phase angle lead relative to motion
PDP RUN.PT	-	internal computer reference number
POINT	-	point number assigned during test
Q-COMP	q	dynamic pressure
RUN	-	run number assigned during test
SIGMA	$\sigma$	interblade phase angle
V-REF	V	reference velocity at blade 6
X	$\chi$	dimensionless distance along chord
XI	$\xi$	aerodynamic damping parameter

Supplementary Notes:

- All pressures are normalized with respect to  $Q\text{-COMP} = q$  and  $\text{ALPHA-BAR} = \bar{\alpha}$  (in radians)
- The notation UPPER or LOWER in MODE 1 refers to the blade surface and pertains to the column of numbers beneath this notation
- The notation SUCTION or PRESSURE in MODE 2 refers to the blade surface and pertains to the tabulations to the right of this notation
- UPPER = SUCTION, LOWER = PRESSURE
- The values set equal to  $X = \%$  are the chord fractions at which the measurements were made
- Imaginary part is out of phase and real part is in phase with the pitching motion.

## DISCUSSION

The experimental procedures used and the results obtained from this program are both fully described in the companion technical report volume (Ref. 1). The objective of this data report is to provide full documentation for this experiment, in the form of reproduced computer printout of the data reduction program. However, for completeness, a brief description of the test program, model airfoils, and instrumentation will be included.

### Oscillating Cascade Wind Tunnel

The experimental program was carried out in the UTRC linear subsonic Oscillating Cascade Wind Tunnel (OCWT). The test section of this facility is 25.4 cm (10 in) wide and 68.6 cm (27 in) high, and the sidewall configuration is currently arranged to accept 11 shaft-mounted blades in cascade. The bearing mounts for these blades are equally placed along a line making a 30 deg angle with respect to the tunnel floor, and hence the sidewall stagger angle of the OCWT is nominally 30 deg. The distance between blade shaft centers along the stagger line is 11.43 cm (4.5 in).

### Test Airfoils

The cascade configuration consists of eleven NACA 65-series blades, each having a chord of  $c = 15.24$  cm (6 in) and a span of 25.4 cm (10 in), with a 10 degree circular arc camber and a thickness-to-chord ratio of 0.06. The slant gap, measured along the blade-to-blade stagger line, is  $\tau = 11.43$  cm (4.5 in) so the gap-to-chord ratio is  $\tau/c = 0.75$ .

For these tests the blade stagger angle,  $\beta_1^*$ , measured between the tangent to the blade mean camber line at the leading edge and the leading edge locus line, is 30 deg. The blade inlet angle,  $\beta_1$ , is measured between the inlet velocity,  $V$ , and the leading edge locus line. Hence, the mean camber line incidence angle is defined as  $\alpha_{MCL} = \beta_1^* - \beta_1$ . The blade profile coordinates, in fraction of chord, are contained in Table 1. The entire set of airfoils is coherently driven in a sinusoidal pitching motion with an amplitude of  $\bar{\alpha}$ .

### Instrumentation

Conventional pneumatic wind tunnel instrumentation is used to measure the flow properties in the test section. A pitot probe downstream of the inlet honeycomb measures the total pressure in the tunnel, and sidewall static taps, aligned with the sidewall stagger angle, are used to measure the static pressure along the inlet and exit planes of the cascade. Tunnel speed is set by measuring the inlet plane static pressure at tunnel midheight and referring it to the pitot pressure to calculate the dynamic pressure,  $q$ .

The center airfoil (blade no. 6) was extensively instrumented to provide measurements of several flow parameters. Ten miniature high response pressure transducers were placed on each surface of the airfoil to obtain measurements of unsteady static pressures. This blade is shown schematically in Fig. 1.

Five other blades were also instrumented with miniature transducers. The blades are located in the cascade as shown in the schematic diagram in Fig. 2. Blade no. 6 is the fully instrumented center blade. Partial instrumentation was placed on blades no. 3, 4, 5, 7, and 9. Locations, in chord fraction,  $\chi$ , of all transducer orifices are listed for all blades in Table 2a. As shown, blades 3, 5, 7, and 9 have suction surface orifices at  $\chi = .0120$ , and  $.0622$ , and pressure surface orifices at  $\chi = .0120$ . Blade 4 also has suction surface orifices at  $\chi = .0120$  and  $.0622$  and has additional suction surface orifices at  $\chi = .0050$  and  $.0350$  with no orifice on the pressure surface.

Finally, an array of ten miniature transducers were mounted in the tunnel sidewall in the plane of the blade leading edges, as shown schematically in Fig. 3. (For simplicity these locations are depicted as being slightly forward of the leading edge plane although they were actually coincident with the plane.) The gap fraction location,  $\eta$ , of each transducer relative to the suction surface of blade 6 is listed in Table 2b.

#### Test Plan

A total of 96 test conditions were run. These were comprised of all possible combinations of two mean camber line incidence angles ( $\alpha_{MCL} = 2 \text{ deg}, 6 \text{ deg}$ ), two pitching amplitudes ( $\alpha = 0.5, 2 \text{ deg}$ ) three frequencies ( $f = 9.2, 15.5, 19.2 \text{ Hz}$ , and, for a constant velocity of 61 m/sec, or 200 ft/sec, this was equivalent to reduced frequencies  $k = c\omega/2V = \pi cf/V = .072, .122, .151$ ) and eight interblade phase angles ( $\sigma = 0 \text{ deg}, \pm 45 \text{ deg}, \pm 90 \text{ deg}, \pm 135 \text{ deg}, 180 \text{ deg}$ ). In addition, two data runs were taken at each test condition. This was necessary because the number of desired data locations (47) exceeded the number of available data system channels (26). Hence, a relay was employed to switch between Mode 1, which contained all twenty blade-6 channels, five wall channels, and blade motion, and Mode 2, which contained all nineteen blade leading edge channels, six wall channels, and blade motion. Redundancy between modes was confined to the three leading edge stations on blade 6, one sidewall station, and blade motion. A tabulation of all data channels for each mode is contained in Table 3. In this table, the blade location is coded by a three symbol array denoting blade number, suction or pressure surface, and location sequence from leading edge. Wall stations are numbered consecutively. The numerical value for each location is either blade chord fraction,  $\chi$ , or sidewall gap fraction,  $\eta$ .

## Unsteady Data

The acquisition rate for all unsteady data was set at 1000 samples/sec. Thus, for the three nominal test frequencies,  $f = 9.2, 15.5, 19.2$  Hz, there were 9.4, 15.9, and 19.7 cycles of data available for analysis, or conservatively, there were 9, 15, and 19 full cycles available. Data for each channel were Fourier analyzed, primarily to provide first, second, and third harmonic results for ease in analyses, but also to provide a compact means of data storage for subsequent use. These data have been completely tabulated in this data report. In each case a total of 10 harmonics are displayed for each unsteady channel.

Unsteady data for each pressure channel were reduced to dimensionless time history form by successive multiplications of the raw output (in computer counts) by the calibration constant for each channel (volt/count) and the calibration constant for each transducer (psi/volt); the results were then divided by the wind tunnel free stream dynamic pressure (psi) and by the blade pitching amplitude (rad). All results are harmonically referenced to the blade pitching motion (via Fourier analysis), and are normalized with respect to pitching amplitude.

## Data Tabulations

All unsteady data, in reduced and normalized form, are contained in Tables 4 through 11. Mode 1 data are contained in this part of the data report in Tables 4 through 7, and Mode 2 data are contained in Part 2 of the data report in Tables 8 through 11. The sequence in each mode group is  $\alpha = 2 \pm 0.5$  deg (Tables 4, 8),  $\alpha = 2 \pm 2$  deg (Tables 5, 9),  $\alpha = 6 \pm 0.5$  deg (Tables 6, 10), and  $\alpha = 6 \pm 2$  deg (Tables 7, 11). Within each table are all combinations of interblade phase angle,  $\sigma$ , and reduced frequency,  $k$ , for which data were taken, as listed at the beginning of each table. All notation used in these tables is fully defined in the list of symbols in terms of the original notation of Ref. 1. For each parameter pair ( $\sigma$  and  $k$ ), there are four pages of printout. These are different for each mode, and are described separately below.

Mode 1 tables contain primarily center blade data with integrated loads and some sidewall data on the third and fourth pages. Pages 1 and 2 of each set have single surface pressure data for each chordwise location, with 10 harmonics listed vertically for each item printed ( $N$  is harmonic number). The first page lists real and imaginary parts and the second page lists amplitude and phase angle of these single surface results. Pages 3 and 4 of each set contain differential pressure results for all ten chordwise locations. In addition, there are lists of normal force coefficient, moment coefficient, the integrated aerodynamic damping parameter, and a group of single surface sidewall pressures. The third page has all harmonic lists in real and imaginary form while the fourth page presents these as amplitudes and phase angles.

Mode 2 tabulations are more graphical in that the data arrangement on each pair of pages is akin to the relative locations of the measurement stations in physical space. Pages 1 and 2 of each set contain real and imaginary parts and pages 3 and 4 of each set contain amplitudes and phase angles. For each pair of pages (arranged as facing pages in the tables, for convenience) blade number, and hence cascade location, is distributed lengthwise

on each page, while chordwise position on each blade is distributed crosswise on each page. (Note the isolated data for blade 4 at  $x = .005$  and  $.030$  on the suction surface, and the missing data for this blade at  $x = .012$  on the pressure surface.) A single array of sidewall data is presented at the bottom of the tabulation on each pair of pages. To obtain the complete sidewall distribution for any desired combination of parameters, the reader should arrange the sidewall data from the appropriate pair of Mode 1, Mode 2 printouts in ascending order of gap fraction. (In such a case, it will be found that the run number is identical and the point numbers are consecutive.)



## REFERENCE

1. Carta, F. O.: An Experimental Investigation of Gapwise Periodicity and Unsteady Aerodynamic Response in an Oscillating Cascade. Vol. I: Experimental and Theoretical Results. NASA CR 3513, 1982.

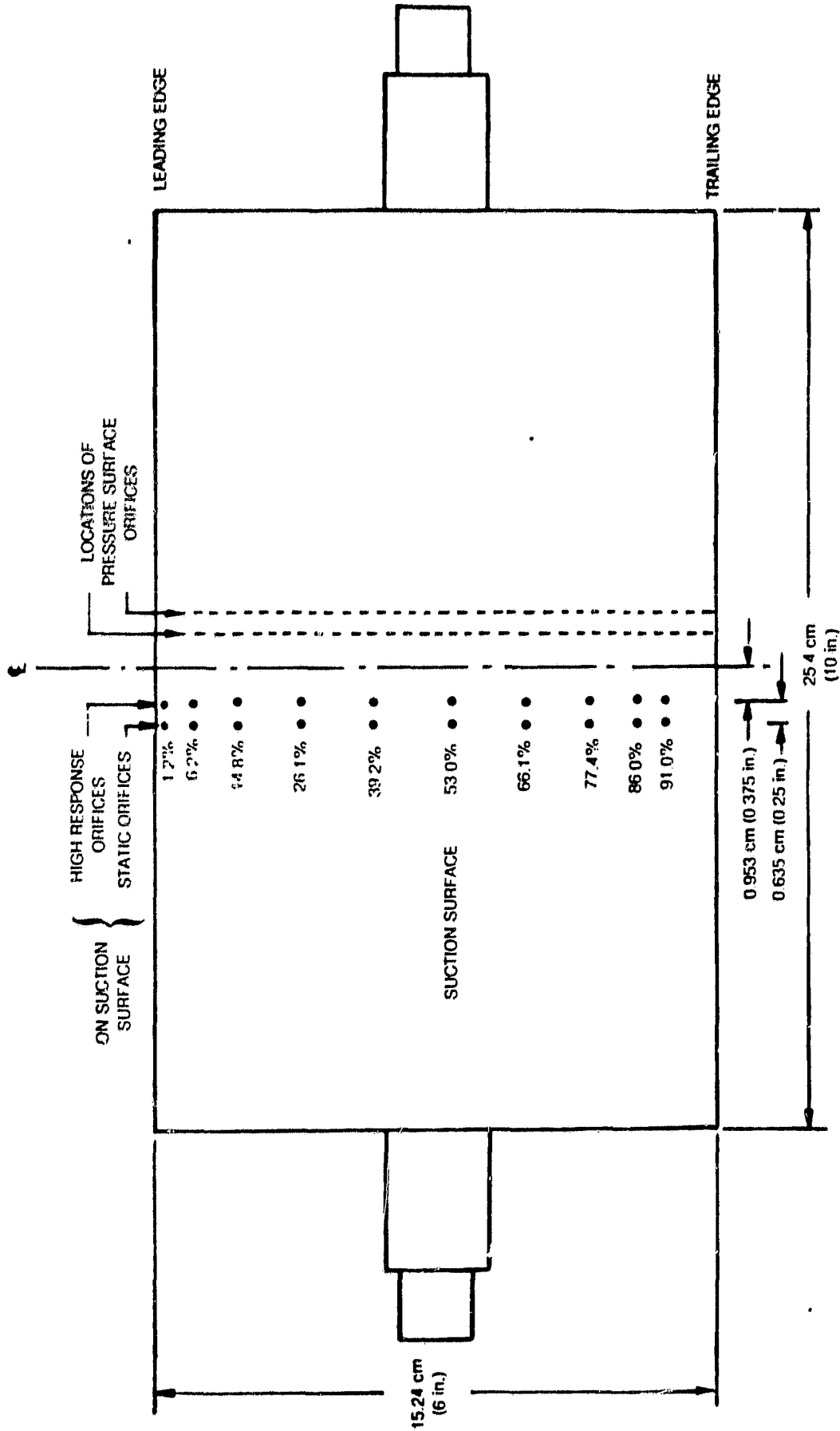
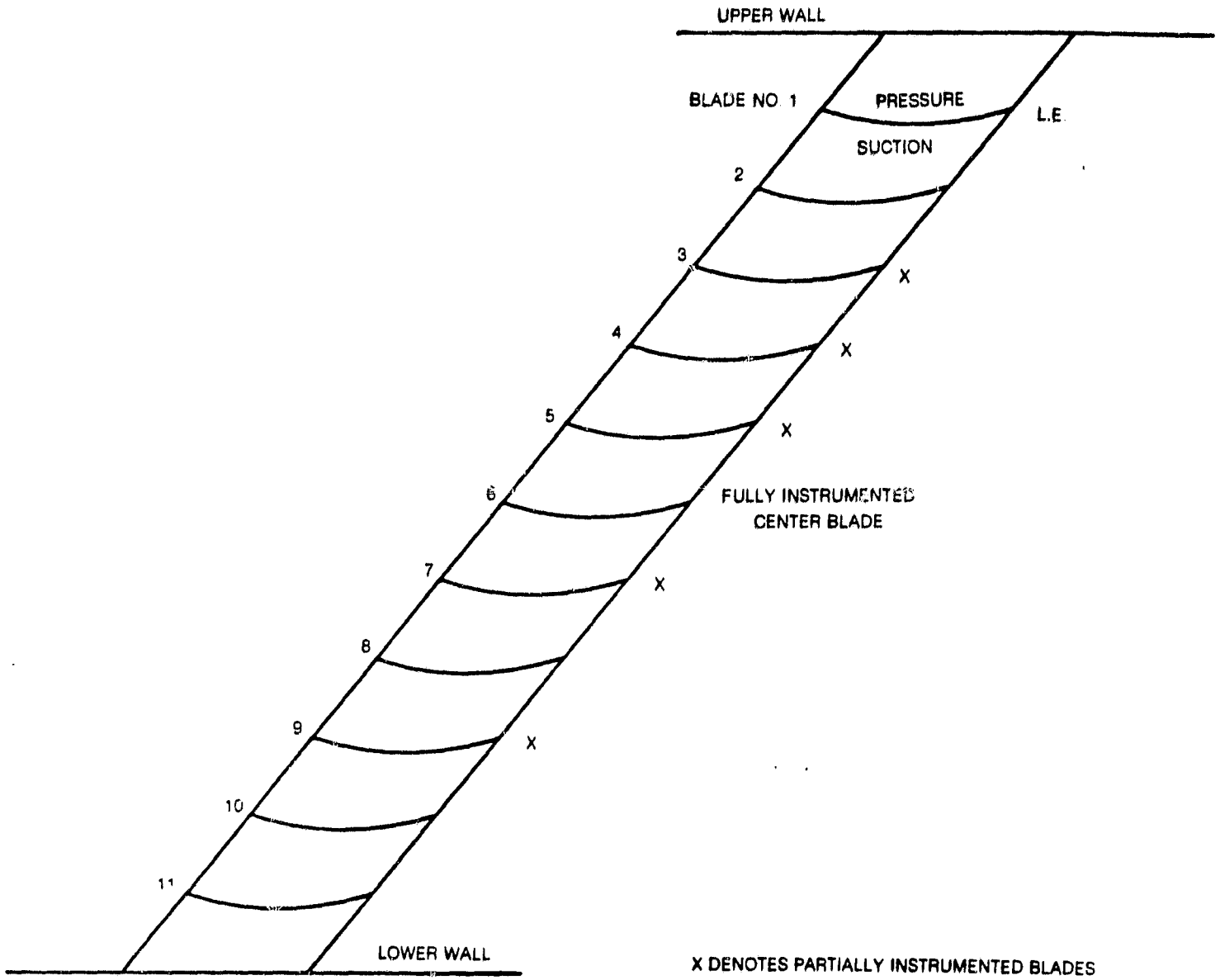


Figure 1 Schematic Plan View of Instrumented Airfoil



**Figure 2 Schematic of Cascade Showing Instrumented Blades**

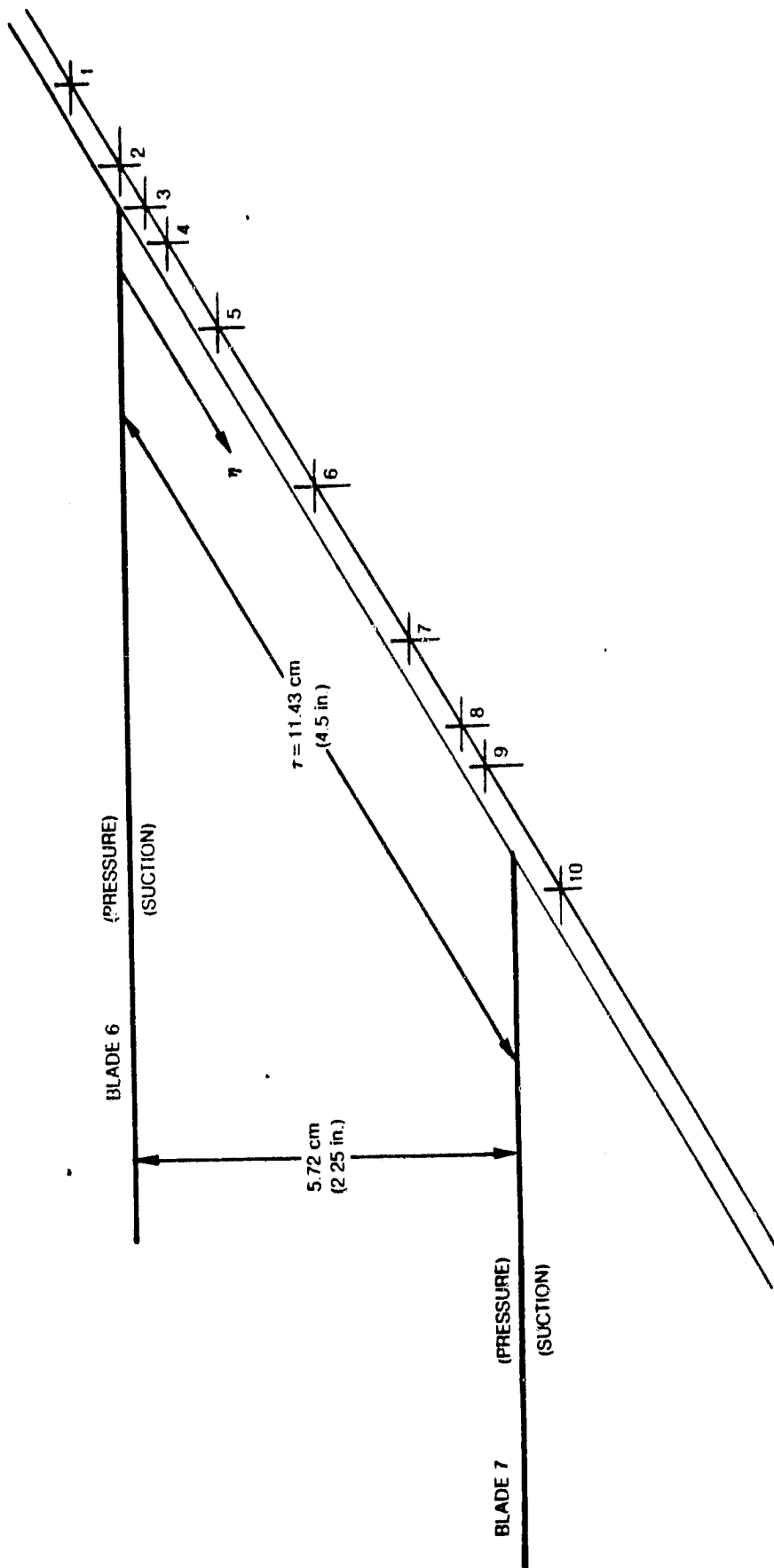


Figure 3 Sidewall Transducer Array

TABLE 1  
 DIMENSIONLESS AIRFOIL COORDINATES IN FRACTION OF CHORD

$c = 15.24 \text{ cm (6 in.)}$

SUCTION SURFACE		PRESSURE SURFACE	
X	+y/c	X	-y/c
.0008	.0020	.0012	.0019
.0046	.0053	.0054	.0042
.0070	.0064	.0080	.0050
.0120	.0083	.0130	.0061
.0244	.0116	.0256	.0077
.0494	.0164	.0507	.0098
.0743	.0204	.0757	.0115
.0993	.0237	.1007	.0129
.1494	.0290	.1506	.0150
.1994	.0331	.2006	.0165
.2495	.0364	.2505	.0177
.2996	.0387	.3004	.0185
.3998	.0411	.4002	.0188
.5000	.0406	.5000	.0176
.6002	.0370	.5998	.0146
.7003	.0306	.6997	.0104
.8003	.0223	.7997	.0069
.8503	.0176	.8497	.0053
.9003	.0127	.8997	.0040
.9502	.0078	.9497	.0032
.9975	.0030	.9973	.0025

RADIUS CENTER COORDINATES	
L. E. RADIUS/c = .0024	X = .0024, y/c = .0002
T. E. RADIUS/c = .0028	X = .9972, y/c = .0003

TABLE 2

TRANSDUCER ORIFICE LOCATIONS  
(FRACTION OF CHORD)

a) Blade Transducers, Fractions of Chord

Blade Number	Values of X	
	Suction Surface	Pressure Surface
6	.0120	.0120
	.0622	.0622
	.1478	.1478
	.2612	.2612
	.3924	.3924
	.5297	.5297
	.6608	.6608
	.7742	.7742
	.8598	.8598
	.9100	.9100
3,5,7,9	.0120	.0120
	.0622	
4	.0050	
	.0120	
	.0350	
	.0622	

b) Sidewall Transducers, Gap Fraction From Blade 6 Suction Surface

Wall Station Number	Gap Fraction $\eta$
1	-.125
2	.0
3	.062
4	.125
5	.25
6	.50
7	.75
8	.875
9	.938
10	1.125

TABLE 3

## BLADE DATA CHANNELS

ATLAS CHANNEL NUMBER	MODE 1		MODE 2	
	BLADE OR WALL LOCATION	$\chi$ or $\eta$	BLADE OR WALL LOCATION	$\chi$ or $\eta$
1*	a	-	a	-
2*	6S1	.0120	6S1	.0120
3*	6S2	.0622	6S2	.0622
4	6S3	.1478	3S1	.0120
5	6S4	.2612	3S2	.0622
6	6S5	.3924	3P1	.0120
7	6S6	.5297	4S1	.0050
8	6S7	.6608	4S2	.0120
9	6S8	.7742	4S3	.0350
10	6S9	.8598	4S4	.0622
11	6S10	.9100	5S1	.0120
12*	6P1	.0120	6P1	.0120
13*	6P2	.0622	5S2	.0622
14	6P3	.1478	5P1	.0120
15	6P4	.2612	7S1	.0120
16	6P5	.3924	7S2	.0622
17	6P6	.5297	7P1	.0120
18	6P7	.6608	9S1	.0120
19	6P8	.7742	9S2	.0622
20	6P9	.8598	9P1	.0120
21	6P10	.9100	W3	.062
22	W1	-.125	W5	.250
23	W2	.000	W7	.750
24*	W4	.125	W4	.125
25	W6	.500	W8	.875
26	W10	1.125	W9	.938

\* DENOTES REDUNDANT CHANNEL

NOTES: • Blade location notation ---

3S2 → blade 3, suction surface, second  
transducer aft of leading edge  
(P denotes pressure surface)

• Transducer location values ---

$\chi$  is blade chord fraction  
 $\eta$  is sidewall gap fraction

TABLE 4

MODE 1 DATA FOR  $\alpha_{MCL} = 2 \text{ deg}$ ,  $\bar{\alpha} = 0.5 \text{ deg}$ 

<u><math>\sigma</math> (deg)</u>	<u>k</u>	<u>page</u>
-135	.0714	18
"	.1230	22
"	.1523	26
-90	.0719	30
"	.1225	34
"	.1520	38
-45	.0715	42
"	.1225	46
"	.1514	50
0	.0715	54
"	.1210	58
"	.1503	62
45	.0722	66
"	.1219	70
"	.1526	74
90	.0716	78
"	.1219	82
"	.1507	86
135	.0717	90
"	.1227	94
"	.1526	98
180	.0714	102
"	.1213	106
"	.1504	110



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE TD ALPHA-RCA = 2.0 POP RUN PI 15.085  
POINT IS ALPHA-RCA = 135.0 Q-COMP = 200.12  
COMPUTED V-DEF = 200.12  
FREQUENCY = 9.10, K = .0714

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	X = .012-UPPER CPREAL CPIMAG	.662-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-1.049	4.189	1.126	0.098	-3.207	-1.485	-0.177
2	1.576	-1.888	-0.812	1.918	2.008	-1.757	2.159
3	1.431	-0.708	-0.636	0.679	2.074	-1.081	2.342
4	1.233	0.292	0.333	0.317	-0.335	0.380	-0.394
5	-0.066	-0.042	0.340	0.269	0.233	-0.266	-0.265
6	-0.044	0.034	0.349	0.232	-0.134	0.272	-0.203
7	-0.019	0.009	0.312	0.051	-0.047	0.048	-0.172
8			0.712	0.035	-0.047	0.010	-0.029
9							
10							

N	X = .774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.198-LOWER CPREAL CPIMAG	.368-LOWER CPREAL CPIMAG
1	-3.569	-1.887	-2.334	14.415	9.923	5.484	2.505
2	2.151	-0.989	2.037	1.975	1.809	-1.030	2.405
3	0.392	0.321	-0.302	0.349	1.415	1.679	0.005
4	-0.207	0.273	-0.259	-0.019	-0.063	0.308	-0.322
5	0.117	-0.347	0.327	0.283	0.273	-0.276	-0.246
6	-0.071	0.071	-0.075	0.178	-0.203	0.052	0.207
7	-0.018	0.018	-0.026	0.146	-0.121	0.029	-0.139
8							0.024
9							
10							

N	X = .868-UPPER CPREAL CPIMAG	.920-UPPER CPREAL CPIMAG	.961-UPPER CPREAL CPIMAG	.074-LOWER CPREAL CPIMAG	.124-LOWER CPREAL CPIMAG	.260-LOWER CPREAL CPIMAG	.429-LOWER CPREAL CPIMAG
1	1.170	-1.180	0.759	4.297	-0.433	-1.073	0.797
2	1.970	-0.920	2.037	1.975	2.059	-1.030	1.588
3	0.306	0.306	-0.306	0.349	1.415	1.679	0.005
4	-0.209	0.209	-0.209	-0.019	-0.063	0.308	-0.322
5	0.127	-0.127	0.127	0.178	-0.203	0.052	0.207
6	-0.074	0.074	-0.074	0.146	-0.121	0.029	-0.139
7	-0.024	0.024	-0.024				0.024
8							
9							
10							

MODE 1 --- OCWT PERIODICITY TEST  
 CENTER BLADE DATA, WALL STATIONS

FILE 19  
 RUM 15  
 POINT 1

ALPHA-MCL = 2.0 POP RUMPT 15.05  
 ALPHA-PAR = .5 Q-COMP = 32550  
 SIGMA = -135. V-REF = 200.12

COMPUTED FREQUENCY = 9.10, K = .0714  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	-012-UPPER		-062-UPPER		-148-UPPER		-261-UPPER		-392-UPPER		-510-UPPER		-661-UPPER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.529	162.92	0.579	172.56	5.349	179.91	4.057	189.73	3.534	208.83	4.558	201.70	4.522	208.73
2	1.939	338.66	2.090	335.46	2.170	335.37	2.074	337.39	2.333	332.47	2.405	335.53	2.410	334.02
3	1.729	513.62	1.314	485.78	1.324	485.44	1.741	64.06	1.821	61.15	2.008	61.18	2.010	61.18
4	1.177	67.18	1.324	189.35	1.251	189.26	1.345	189.06	1.381	195.20	1.363	193.50	1.349	194.48
5	1.44	207.00	1.223	198.66	1.324	194.06	1.319	195.89	1.353	193.62	1.347	195.98	1.348	188.48
6	1.111.98		1.117	205.40	1.144	203.87	1.473	234.44	1.52	208.19	1.65	209.71	1.48	213.88
7	0.56	196.00	0.417	52.17	0.53	42.05	0.473	44.55	0.484	34.32	0.408	44.73	0.493	38.51
8	0.21	155.26	0.038	162.27	0.026	193.69	0.036	194.13	0.043	191.51	0.048	190.03	0.031	200.24

N	-060-UPPER		-012-LOWER		-012-LOWER		-062-LOWER		-148-LOWER		-261-LOWER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.017	207.74	1.319	211.07	1.327	213.17	1.640	219.15	1.735	221.26	1.921	221.75
2	1.008	315.31	1.366	315.78	2.370	333.95	2.327	328.07	2.323	321.08	2.243	325.63
3	1.006	165.20	1.371	165.27	1.807	162.60	1.847	166.19	1.893	159.22	2.002	163.72
4	1.007	104.37	1.379	105.58	1.801	101.29	1.808	102.72	1.804	103.64	1.767	102.05
5	1.007	188.77	1.379	187.88	1.801	185.19	1.808	177.80	1.804	175.82	1.767	181.88
6	1.007	218.49	1.379	218.49	1.801	215.14	1.808	195.76	1.804	193.29	1.767	204.21
7	1.007	45.85	1.379	48.24	1.801	40.87	1.808	35.76	1.804	34.51	1.767	205.60
8	0.028	221.90	0.032	216.71	0.029	202.21	0.071	212.78	0.064	198.50	0.035	205.60

N	-092-LOWER		-050-LOWER		-074-LOWER		-090-LOWER		-090-LOWER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.091	163.15	1.051	163.88	1.039	163.77	1.039	163.77	1.039	163.77
2	1.091	313.07	1.051	312.05	1.039	312.05	1.039	312.05	1.039	312.05
3	1.091	166.52	1.051	166.52	1.039	166.52	1.039	166.52	1.039	166.52
4	1.091	181.22	1.051	181.22	1.039	181.22	1.039	181.22	1.039	181.22
5	1.091	213.25	1.051	213.25	1.039	213.25	1.039	213.25	1.039	213.25
6	1.091	206.18	1.051	206.18	1.039	206.18	1.039	206.18	1.039	206.18



MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 79 ALPHA-MCL = 2.0 POP RUN-PT 15.05  
 RUN 15 ALPHA-BAR = .5 R-COMP = 32550  
 POINT 1 SIGMA = -135. V-PEF = 200.12  
 COMPUTED FREQUENCY = 9.13, K = .0714

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE = 9.13, K = .0714  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	0.29	383.37	19.52	149.15	9.74	146.92	6.59	350.87	4.17	169.47	3.29	236.12
2	0.51	287.73	0.26	190.63	0.90	281.49	2.14	272.86	1.21	187.53	0.79	330.96
3	0.72	111.10	0.88	107.97	0.48	110.17	0.30	175.93	0.17	107.53	0.07	332.21
4	0.93	142.42	0.95	188.99	0.36	112.87	0.06	175.93	0.02	107.53	0.03	332.21
5	1.14	125.33	0.71	161.97	0.33	124.35	0.23	334.36	0.13	117.09	0.04	332.21
6	1.35	195.42	1.00	181.18	0.36	205.60	0.42	257.76	0.13	120.40	0.05	332.21
7	1.56	229.27	0.95	157.88	0.36	212.81	0.35	229.73	0.23	131.36	0.07	332.21
8	1.77	229.27	0.95	157.88	0.36	212.81	0.35	229.73	0.23	131.36	0.07	332.21
9	1.98	229.27	0.95	157.88	0.36	212.81	0.35	229.73	0.23	131.36	0.07	332.21
10	2.19	229.27	0.95	157.88	0.36	212.81	0.35	229.73	0.23	131.36	0.07	332.21

N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	3.24	202.79	2.06	140.57	1.04	159.13	0.63	327.84	0.36	161.67	0.21	332.21
2	0.73	282.52	0.16	120.15	0.92	129.17	0.23	249.84	0.08	107.53	0.03	332.21
3	0.29	359.05	0.24	322.59	0.06	351.50	0.02	325.38	0.00	325.38	0.00	332.21
4	0.09	29.03	0.39	335.25	0.16	33.59	0.03	325.38	0.00	325.38	0.00	332.21
5	0.02	27.74	0.36	309.20	0.03	33.59	0.03	325.38	0.00	325.38	0.00	332.21
6	0.16	265.16	0.13	65.69	0.03	146.95	0.01	174.00	0.02	17.30	0.00	332.21
7	0.10	353.17	0.11	40.92	0.17	174.00	0.02	174.00	0.02	17.30	0.00	332.21
8	0.10	353.17	0.11	40.92	0.17	174.00	0.02	174.00	0.02	17.30	0.00	332.21
9	0.10	353.17	0.11	40.92	0.17	174.00	0.02	174.00	0.02	17.30	0.00	332.21
10	0.10	353.17	0.11	40.92	0.17	174.00	0.02	174.00	0.02	17.30	0.00	332.21

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

MAG	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10
1	524	396.99	2.02	394.79	9.05	175.15	3.23	191.89	7.14	114
2	274	377.41	3.09	327.42	1.70	337.05	2.76	336.35	2.47	162
3	224	357.21	1.09	297.86	1.06	304.40	2.76	336.35	2.47	162
4	174	337.05	0.62	273.86	0.67	267.35	4.25	192.15	1.49	170
5	124	316.89	0.51	253.86	0.67	267.35	4.25	192.15	1.49	170
6	74	296.73	0.42	233.86	0.67	267.35	4.25	192.15	1.49	170
7	24	276.57	0.33	213.86	0.67	267.35	4.25	192.15	1.49	170
8	24	276.57	0.33	213.86	0.67	267.35	4.25	192.15	1.49	170
9	24	276.57	0.33	213.86	0.67	267.35	4.25	192.15	1.49	170
10	24	276.57	0.33	213.86	0.67	267.35	4.25	192.15	1.49	170

\*\*\* STABILITY PARAMETER \*\*\*

MAG	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10
1	524	396.99	2.02	394.79	9.05	175.15	3.23	191.89	7.14	114
2	274	377.41	3.09	327.42	1.70	337.05	2.76	336.35	2.47	162
3	224	357.21	1.09	297.86	1.06	304.40	2.76	336.35	2.47	162
4	174	337.05	0.62	273.86	0.67	267.35	4.25	192.15	1.49	170
5	124	316.89	0.51	253.86	0.67	267.35	4.25	192.15	1.49	170
6	74	296.73	0.42	233.86	0.67	267.35	4.25	192.15	1.49	170
7	24	276.57	0.33	213.86	0.67	267.35	4.25	192.15	1.49	170
8	24	276.57	0.33	213.86	0.67	267.35	4.25	192.15	1.49	170
9	24	276.57	0.33	213.86	0.67	267.35	4.25	192.15	1.49	170
10	24	276.57	0.33	213.86	0.67	267.35	4.25	192.15	1.49	170



OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 72 ALPHA-MCL = 2.0 POP RUN-PT 15.07  
 RUN 15 ALPHA-BAR = 0.5 O-COMP = 13.72  
 POINT 13 SIGMA = -135 V-REF = 198.94  
 COMPUTED FREQUENCY = 15.57, K = .1230

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI													
1	18	126	162	19	7	806	163	79	4	464	167	65	2	168	197	40	3	038	198	55	3	009	198	41			
2	312	274	40	322	274	40	322	274	40	308	297	16	235	343	41	422	274	40	322	274	40	308	297	16	235	343	41
3	148	216	16	148	216	16	148	216	16	149	209	19	230	190	84	105	282	08	122	282	08	122	282	08	122	282	08
4	148	216	16	148	216	16	148	216	16	149	209	19	230	190	84	105	282	08	122	282	08	122	282	08	122	282	08
5	148	216	16	148	216	16	148	216	16	149	209	19	230	190	84	105	282	08	122	282	08	122	282	08	122	282	08
6	148	216	16	148	216	16	148	216	16	149	209	19	230	190	84	105	282	08	122	282	08	122	282	08	122	282	08
7	148	216	16	148	216	16	148	216	16	149	209	19	230	190	84	105	282	08	122	282	08	122	282	08	122	282	08
8	148	216	16	148	216	16	148	216	16	149	209	19	230	190	84	105	282	08	122	282	08	122	282	08	122	282	08
9	148	216	16	148	216	16	148	216	16	149	209	19	230	190	84	105	282	08	122	282	08	122	282	08	122	282	08
10	148	216	16	148	216	16	148	216	16	149	209	19	230	190	84	105	282	08	122	282	08	122	282	08	122	282	08

X	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI																
1	2	438	202	49	1	758	205	93	1	145	206	55	16	707	342	65	11	487	335	01	5	528	347	56	3	819	351	85		
2	303	293	79	303	293	79	303	293	79	303	293	79	303	293	79	303	293	79	303	293	79	303	293	79	303	293	79	303	293	79
3	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16
4	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16
5	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16
6	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16
7	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16
8	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16
9	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16
10	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16

X	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI																
1	2	266	357	48	1	865	327	51	1	551	327	51	796	251	73	969	350	56	672	319	77	672	319	77	672	319	77			
2	119	222	05	119	222	05	119	222	05	119	222	05	119	222	05	119	222	05	119	222	05	119	222	05	119	222	05	119	222	05
3	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16
4	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16
5	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16
6	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16
7	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16
8	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16
9	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16
10	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16	138	216	16



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 72 ALPHA-MCL = 2.0 PDP RUN.PI 15.07  
 POINT 13 ALPHA-RAP = 0.5 Q-COMP = 32172  
 COMPUTED FREQUENCY = 15.57, K = 123 V-PEF = 198.94  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	34.833	342.30	1.19	239	338.59	9.991	347.60	6.548	353.63	4.364	7.22	4.947
2	1.330	231.86	1.273	174.83	0.061	208.87	3.08	216.01	100	160.34	11.01	11.01
3	1.172	154.52	0.370	179.79	0.080	159.45	1.75	264.49	118	198.29	27.00	27.00
4	0.61	37.22	0.079	256.74	0.35	35.55	1.23	351.30	1106	132.42	211.54	211.54
5	3.15	217.26	0.153	201.18	0.109	236.97	0.329	326.98	0.69	242.98	256.45	256.45
6	1.15	317.41	0.082	310.74	0.021	291.79	0.029	50.63	0.40	145.38	127.51	127.51
7	1.73	283.41	0.090	278.92	0.051	261.63	0.027	255.23	0.36	243.08	274.20	274.20
8	1.02	292.35	0.066	293.55	0.034	318.96	0.046	331.26	0.05	335.84	307.37	307.37
9	0.19	259.35	0.022	276.48	0.013	317.67	0.017	289.20	0.021	355.84	350.99	350.99
10	0.011	216.97	0.019	222.55	0.006	105.06	0.021	86.42	0.020	122.18	111.24	111.24

N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	3.233	263.30	2.316	19.19	1.540	155.75	3.95	195.13	0.316	155.13	1.480	139.39
2	0.043	157.07	0.045	203.05	0.023	189.41	0.75	180.73	0.075	180.73	1.090	189.39
3	0.029	144.07	0.028	176.76	0.033	193.32	0.046	50.25	0.046	50.25	0.011	190.55
4	0.035	308.17	0.031	12.05	0.035	15.25	0.015	241.46	0.015	241.46	0.016	217.97
5	0.028	315.54	0.021	198.08	0.006	17.34	0.015	241.46	0.015	241.46	0.005	324.52
6	0.07	47.12	0.019	250.54	0.012	217.53	0.014	241.46	0.014	241.46	0.007	284.87
7	0.016	71.51	0.008	91.42	0.009	17.96	0.019	322.26	0.019	322.26	0.006	296.98
8	0.016	144.15	0.008	119.82	0.003	66.37	0.019	322.26	0.019	322.26	0.007	279.77
9					0.011	66.37	0.019	322.26	0.019	322.26	0.007	279.77
10												

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	W1	W2	W4	W6	W10	W XI
1	2.872	341.33	7.881	151.79	8.597	31.15
2	0.350	304.26	2.889	273.59	0.956	316.45
3	0.439	220.92	3.65	237.95	0.453	225.07
4	1.68	215.66	2.83	219.66	0.203	237.52
5	2.03	256.76	1.25	279.92	0.136	319.44
6	0.19	275.21	1.01	290.47	0.152	301.11
7	0.12	298.25	0.44	244.77	0.150	245.67
8	0.12	358.28	0.41	257.46	0.102	367.03
9	0.03	106.57	0.42	139.56	0.102	110.11
10	0.03	324.05	0.077	337.50	0.076	348.20

\*\*\* STABILITY PARAMETER \*\*\*

N	CM-MAG	PHIM	CM-MAG	PHIM
1	1.480	139.39	1.480	139.39
2	0.011	190.55	0.011	190.55
3	0.005	17.97	0.005	17.97
4	0.016	217.97	0.016	217.97
5	0.005	324.52	0.005	324.52
6	0.007	284.87	0.007	284.87
7	0.006	296.98	0.006	296.98
8	0.007	279.77	0.007	279.77
9	0.007	279.77	0.007	279.77
10	0.007	279.77	0.007	279.77



ORIGINAL PAGE IS  
OF POOR QUALITY

WCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS  
MODE 1 --  
FILE 75 ALPHA-NCL = 2.0 PDP RUN-PT 15.09  
RUN 15 ALPHA-SAP = 3.5 Q-COMP = 12027  
POINT 6 SIGMA = -33.5 V-REF = 198.46  
COMPUTED FREQUENCY = 19.25, K = .1523

FOUPLER COEFFICIENTS, REAL & IMAGINARY  
\*\* BLADE PRESSURES, PER RADIAN \*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.198-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG
1	1	-17.486	6.000	-7.481	1.029	1.029	1.029	1.029	1.029	1.029	1.029	1.029
2	2	-.320	-.114	-.257	.067	.067	.067	.067	.067	.067	.067	.067
3	3	-.032	-.091	-.050	.300	.300	.300	.300	.300	.300	.300	.300
4	4	-.150	-.057	-.054	-.143	-.143	-.143	-.143	-.143	-.143	-.143	-.143
5	5	-.045	-.196	-.086	.123	.123	.123	.123	.123	.123	.123	.123
6	6	-.004	-.045	-.019	.023	.023	.023	.023	.023	.023	.023	.023
7	7	-.069	-.025	-.017	-.023	-.023	-.023	-.023	-.023	-.023	-.023	-.023
8	8	-.053	-.023	-.017	-.036	-.036	-.036	-.036	-.036	-.036	-.036	-.036
9	9				.012	.012	.012	.012	.012	.012	.012	.012
10	10				.012	.012	.012	.012	.012	.012	.012	.012

X	N	.778-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG
1	1	-2.562	-.905	-1.872	-.748	-.748	-.748	-.748	-.748	-.748	-.748	-.748
2	2	-.261	-.112	-.169	.304	.304	.304	.304	.304	.304	.304	.304
3	3	-.006	-.039	-.031	-.251	-.251	-.251	-.251	-.251	-.251	-.251	-.251
4	4	-.026	-.039	-.031	.061	.061	.061	.061	.061	.061	.061	.061
5	5	-.037	-.051	-.033	.058	.058	.058	.058	.058	.058	.058	.058
6	6	-.014	-.022	-.016	.028	.028	.028	.028	.028	.028	.028	.028
7	7	-.025	-.026	-.019	.025	.025	.025	.025	.025	.025	.025	.025
8	8	-.025	-.026	-.019	.025	.025	.025	.025	.025	.025	.025	.025
9	9				.025	.025	.025	.025	.025	.025	.025	.025
10	10				.025	.025	.025	.025	.025	.025	.025	.025

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.778-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	1.984	-.060	1.523	-.373	-.373	-.373	-.373	-.373	-.373	-.373	-.373
2	2	-.159	-.198	-.257	.218	.218	.218	.218	.218	.218	.218	.218
3	3	-.056	-.232	-.027	-.235	-.235	-.235	-.235	-.235	-.235	-.235	-.235
4	4	-.039	-.051	-.022	.063	.063	.063	.063	.063	.063	.063	.063
5	5	-.034	-.047	-.032	.054	.054	.054	.054	.054	.054	.054	.054
6	6	-.030	-.039	-.026	.044	.044	.044	.044	.044	.044	.044	.044
7	7	-.022	-.031	-.026	.020	.020	.020	.020	.020	.020	.020	.020
8	8	-.022	-.031	-.026	.020	.020	.020	.020	.020	.020	.020	.020
9	9				.020	.020	.020	.020	.020	.020	.020	.020
10	10				.020	.020	.020	.020	.020	.020	.020	.020

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 75 ALPHA-MCL = 2.0 PDP RUN.PT 15.09  
 RUN 15 ALPHA-BAR = .5 O-COMP = .32027  
 POINT 16 ALPHA SIGMA = -135. V-REF = 198.40  
 COMPUTED FREQUENCY = 19.25; K = .1523

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP-MAG	PHI	062-UPPER	CP-MAG	PHI	148-UPPER	CP-MAG	PHI	261-UPPER	CP-MAG	PHI	392-UPPER	CP-MAG	PHI	510-UPPER	CP-MAG	PHI	661-UPPER	CP-MAG	PHI	
1	18.449	161.02	0.027	163.10	4.732	167.43	3.072	176.22	2.481	196.20	3.421	193.01	3.278	196.61							
2	340	199.53	2.10	169.16	305	179.62	2.47	186.80	1.54	147.02	2.286	171.21	3.308	158.28							
3	302	181.84	1.44	161.09	310	179.59	2.68	81.97	1.31	147.02	2.286	171.21	3.308	158.28							
4	177	328.00	0.66	335.66	160	253.59	0.89	230.56	2.59	275.84	0.25	263.58	0.215	260.86							
5	073	45.79	0.05	376.66	085	334.48	0.49	148.15	0.91	52.73	0.257	148.73	0.47	64.38							
6	202	101.03	0.50	124.94	053	134.93	0.49	148.15	0.71	142.37	0.71	142.37	0.71	142.37							
7	087	281.26	0.54	350.20	053	12.51	0.52	327.90	0.66	35.69	0.45	321.99	0.31	338.59							
8	074	310.38	0.50	335.69	036	269.43	0.32	286.66	0.38	294.67	0.41	295.29	0.35	308.40							
9	011	231.18	0.27	27.27	010	48.67	0.18	65.81	0.16	56.69	0.08	73.60	0.01	124.30							
10	058	233.27																			

X	CP-MAG	PHI	060-UPPER	CP-MAG	PHI	012-LOWER	CP-MAG	PHI	002-LOWER	CP-MAG	PHI	108-LOWER	CP-MAG	PHI	261-LOWER
1	2.717	199.45	2.015	201.69	1.405	199.97	16.457	342.07	10.937	332.85	5.261	348.23	3.239	353.95	
2	324	58.63	3.48	60.98	333	57.43	3.31	3.56	1.384	159.23	2.290	41.87	2.20	51.95	
3	029	268.08	0.46	269.73	032	272.38	4.09	222.61	1.79	223.72	0.74	248.23	0.55	260.20	
4	029	268.08	0.46	269.73	032	272.38	4.09	222.61	1.79	223.72	0.74	248.23	0.55	260.20	
5	029	268.08	0.46	269.73	032	272.38	4.09	222.61	1.79	223.72	0.74	248.23	0.55	260.20	
6	029	268.08	0.46	269.73	032	272.38	4.09	222.61	1.79	223.72	0.74	248.23	0.55	260.20	
7	029	268.08	0.46	269.73	032	272.38	4.09	222.61	1.79	223.72	0.74	248.23	0.55	260.20	
8	029	268.08	0.46	269.73	032	272.38	4.09	222.61	1.79	223.72	0.74	248.23	0.55	260.20	
9	029	268.08	0.46	269.73	032	272.38	4.09	222.61	1.79	223.72	0.74	248.23	0.55	260.20	
10	029	268.08	0.46	269.73	032	272.38	4.09	222.61	1.79	223.72	0.74	248.23	0.55	260.20	

X	CP-MAG	PHI	510-LOWER	CP-MAG	PHI	661-LOWER	CP-MAG	PHI	774-LOWER	CP-MAG	PHI	860-LOWER	CP-MAG	PHI	910-LOWER
1	1.985	149.03	1.579	142.73	083	71.55	0.667	52.31	0.401	356.29	0.350	293.69	0.324	150.01	
2	260	256.51	2.73	153.04	324	55.52	2.66	175.70	3.34	159.95	2.49	158.01	2.49	158.01	
3	045	229.27	0.47	253.39	044	90.39	0.70	270.28	0.59	275.31	0.59	275.31	0.59	275.31	
4	045	229.27	0.47	253.39	044	90.39	0.70	270.28	0.59	275.31	0.59	275.31	0.59	275.31	
5	045	229.27	0.47	253.39	044	90.39	0.70	270.28	0.59	275.31	0.59	275.31	0.59	275.31	
6	045	229.27	0.47	253.39	044	90.39	0.70	270.28	0.59	275.31	0.59	275.31	0.59	275.31	
7	045	229.27	0.47	253.39	044	90.39	0.70	270.28	0.59	275.31	0.59	275.31	0.59	275.31	
8	045	229.27	0.47	253.39	044	90.39	0.70	270.28	0.59	275.31	0.59	275.31	0.59	275.31	
9	045	229.27	0.47	253.39	044	90.39	0.70	270.28	0.59	275.31	0.59	275.31	0.59	275.31	
10	045	229.27	0.47	253.39	044	90.39	0.70	270.28	0.59	275.31	0.59	275.31	0.59	275.31	

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- CCWI PERIODICITY TEST  
CENTIP BLADE DATA, WALL STATIONS

FILE 75 ALPHA-WCL = 2.0 PDP RUN-PT 15.09  
RUR 15 ALPHA-SPR = .5 O-COMP = .32027  
POINT 6 SIGMA = -135. V-REF = 198.48  
COMPUTED FREQUENCY = 19.25, K = .1523

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.148		.261		.392		.530		.661	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	33.104	-11.046	17.413	-7.325	9.769	-2.102	6.580	-1.594	4.366	.756	4.896	1.145	3.452	1.869
2	-.236	-.100	-.451	-.076	-.133	-.098	-.288	-.133	-.079	.056	.175	-.071	-.040	.058
3	-.451	-.189	-.173	-.106	-.236	-.106	-.112	-.236	-.079	.056	.175	-.071	-.040	.058
4	-.001	-.009	-.044	-.006	-.099	-.006	.025	-.104	-.043	.026	.034	-.078	-.049	-.128
5	-.123	-.243	-.059	-.118	-.009	-.002	.002	-.047	-.046	.026	.034	-.078	-.049	-.128
6	-.065	-.158	-.044	-.091	-.008	-.055	-.015	-.050	-.018	.026	.034	-.078	-.049	-.128
7	-.074	-.035	-.045	-.045	-.030	-.029	-.029	-.019	-.010	.026	.034	-.078	-.049	-.128
8	-.163	-.113	-.057	-.071	-.041	-.032	-.029	-.029	-.026	.026	.034	-.078	-.049	-.128
9	-.112	-.044	-.070	-.028	-.043	-.022	-.032	-.023	-.020	.026	.034	-.078	-.049	-.128
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N	.774		.850		.910		CMREAL		CMIMAG	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	CMREAL	CMIMAG	CMREAL	CMIMAG
1	2.969	1.433	2.272	.719	1.458	.167	6.258	-.042	1.361	-.569
2	-.325	-.052	-.074	-.016	-.010	-.040	-.028	-.056	-.040	-.008
3	-.013	-.023	-.003	-.016	-.011	-.019	-.062	-.056	-.017	-.022
4	-.040	-.014	-.022	-.042	-.002	-.005	-.030	-.066	-.005	-.002
5	-.016	-.024	-.004	-.017	-.008	-.012	-.008	-.046	-.005	-.012
6	-.009	-.000	-.002	-.004	-.009	-.006	-.006	-.026	-.004	-.008
7	-.001	-.017	-.003	-.004	-.003	-.014	-.014	-.016	-.004	-.003
8	-.002	-.019	-.003	-.013	-.000	-.005	-.021	-.024	-.007	-.005
9	-.001	-.015	-.001	-.013	-.009	-.004	-.020	-.016	-.007	-.002
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\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

CAP FRACTION	WALL NO.	.125		.010		.010		.500		1.175		.001	
		CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	2	327	-.670	2.300	-.716	-7.760	2.327	-2.542	.529	7.106	4.401	4.401	4.401
2	3	247	-.197	1.117	-.277	-.441	-.307	-.231	.029	-.001	-.014	-.014	-.014
3	4	238	-.256	1.222	-.352	-.183	-.342	-.098	.281	-.120	-.253	-.253	-.253
4	5	171	-.261	1.118	-.215	-.004	-.085	-.214	.071	-.059	-.226	-.226	-.226
5	6	073	-.359	1.174	-.040	-.145	-.085	-.071	.096	-.158	-.130	-.130	-.130
6	7	143	-.357	1.165	-.040	-.145	-.085	-.071	.096	-.158	-.130	-.130	-.130
7	8	062	-.357	1.165	-.040	-.145	-.085	-.071	.096	-.158	-.130	-.130	-.130
8	9	056	-.359	1.152	-.077	-.069	-.002	-.046	.044	-.049	-.037	-.037	-.037
9	10	027	-.324	1.015	-.047	-.008	-.044	-.038	.008	-.010	-.022	-.022	-.022
10		015	-.022	1.017	-.009	-.022	-.020	-.008	.008	-.014	-.024	-.024	-.024

\*\*\* STABILITY PARAMETER

\* XI = .5689 \*  
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ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 75 ALPHA-MCL = 2.0 POP RUM-PT 15.009  
 RUN 15 ALPHA-BAR = .5 G-COMP = 32027  
 POINT 16 SIGMA = -135 V-REF = 198.48  
 COMPUTED FREQUENCY = 19.25, K = .1523

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661		
	M	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	34	.905	341.52	18.891	337.18	9.993	347.86	6.607	354.84	4.431	9.82	4.939	13.24	3.926	28.44
2		.257	201.10	1.176	157.47	.040	162.88	.378	204.72	.113	150.19	.208	12.32	.444	17.49
3		.887	203.14	.249	202.85	.192	326.65	.762	296.41	.129	152.05	.061	317.01	.031	17.88
4		.009	203.14	.054	243.35	.125	232.21	.129	306.29	.087	162.66	.078	291.11	.037	167.87
5		.212	283.11	.132	243.35	.088	164.26	.026	11.05	.065	315.57	.042	324.87	.029	178.10
6		.170	67.59	.094	74.38	.056	98.26	.052	1.6.84	.020	151.20	.019	166.62	.016	178.53
7		.068	204.83	.068	222.04	.041	223.85	.022	2.45.27	.021	241.90	.019	239.92	.003	178.16
8		.198	34.83	.113	39.36	.055	42.86	.041	2.45.27	.024	241.90	.019	239.92	.003	178.16
9		.120	201.38	.075	201.47	.048	207.59	.039	215.27	.028	223.59	.017	225.38	.009	260.78

X	.778		.860		.910		.910		.910		.910		.910		
	M	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	3	.297	25.76	2.383	170.96	1.468	103.53	6.52	6.273	355.96	6.273	355.96	1.475	337.31	
2		.331	69.48	.019	240.46	.022	289.32	.044	317.75	.107	156.90	.084	317.75	.049	170.17
3		.023	281.12	.043	61.25	.019	264.83	.067	243.21	.067	243.21	.067	243.21	.025	201.17
4		.028	303.34	.017	284.47	.023	347.64	.047	280.29	.010	321.56	.047	280.29	.019	206.25
5		.008	179.52	.004	126.41	.013	93.82	.021	1229.33	.021	1229.33	.021	1229.33	.012	215.27
6		.017	272.39	.004	274.82	.003	164.22	.021	49.48	.021	49.48	.021	49.48	.008	82.46
7		.016	84.15	.013	274.82	.005	86.02	.032	218.47	.032	218.47	.032	218.47	.005	215.66
8		.013	273.67	.014	274.51	.010	336.92	.026	218.47	.026	218.47	.026	218.47	.007	198.26
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\*\*\* STABILITY PARAMETER

WALL NO.	GAP FRACTION	.125		.125		.125		.125		.125		.125		.125	
		M	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG
1	2	.444	339.50	2.408	342.71	8.101	163.31	2.597	168.29	8.359	31.77	8.359	31.77	8.359	31.77
2		.316	141.53	.301	112.91	.337	214.87	.232	173.97	.014	266.93	.014	266.93	.014	266.93
3		.308	236.16	.245	241.32	.288	268.96	.243	254.32	.234	235.42	.234	235.42	.234	235.42
4		.099	177.20	.134	43.85	.087	77.86	.072	86.16	.205	332.56	.205	332.56	.205	332.56
5		.155	157.50	.179	167.16	.205	134.84	.172	146.15	.246	160.49	.246	160.49	.246	160.49
6		.089	39.65	.098	48.44	.069	357.98	.076	35.35	.061	37.40	.061	37.40	.061	37.40
7		.088	318.51	.099	308.47	.065	316.11	.065	315.35	.100	293.60	.100	293.60	.100	293.60
8		.014	318.05	.049	288.07	.045	259.80	.039	281.44	.028	293.60	.028	293.60	.028	293.60
9		.013	371.06	.020	208.39	.030	43.34	.008	90.55	.028	58.56	.028	58.56	.028	58.56
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\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 64 ALPHA-MCL = 2.0 PDP RUN-PT 14.01  
 PUA 14 ALPHA-PAR = 9.5 O-COMP = 32580  
 POINT 1 SIGMA = .90 V-REF = 200.18  
 COMPUTED FREQUENCY = 9.16, K = .0719

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\* BLADE PRESSURES, PER RADIAN \*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-14	7.385	-5.892	3.007	-1.628	.511	-.552	-.713
2	1	1.775	2.003	3.566	2.083	.441	-.441	2.284
3	-	-.364	-.446	-.057	-.073	-.089	-.117	-.555
4	5	-.335	.381	.124	.348	.089	.089	.443
5	6	.103	.084	.067	.058	.048	.062	.083
6	7	.290	.256	.251	.256	.362	.296	.292
7	8	-.014	.018	-.018	-.010	-.010	.132	.101
8	9	-.082	.093	-.086	.070	-.073	.139	.151
9	10	-.040	.030	-.040	.051	-.059	.087	.055
10	11	-.065	.044	-.052	.030	.046	.020	.027

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	1	2.59	2.088	2.260	14.363	-6.388	-4.761	4.279
2	2	-.525	-.017	-.574	1.787	-.090	-.359	2.170
3	3	.423	.173	.424	-.074	.138	-.051	-.506
4	4	.082	.058	.098	.522	.120	.151	.440
5	5	.297	.295	.267	.058	.438	.111	.088
6	6	.158	.117	.095	.278	-.062	-.075	.294
7	7	.053	.037	.060	.020	-.169	.119	.056
8	8	-.033	.037	.043	.044	-.092	.088	.153
9	9	-.033	.037	.043	-.017	-.092	-.007	.038
10	10	-.033	.037	.043	-.017	-.092	-.007	.038

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	2.896	2.897	1.693	1.764	2.574	1.594
2	2	-.382	-.497	1.537	2.088	2.181	2.062
3	3	-.044	-.094	-.366	-.074	-.584	-.522
4	4	.033	.043	.074	.427	.454	.399
5	5	.367	.434	.269	.260	.105	.141
6	6	.391	.499	.099	.112	.274	.265
7	7	.391	.499	.152	.194	.174	.174
8	8	.369	.464	.120	.148	.076	.089
9	9	.369	.464	.120	.148	.076	.089
10	10	.369	.464	.120	.148	.076	.089

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 64 ALPHA-MCL = 2.0 POP RUN-PT 14.01  
 RUN 14 ALPHA-BAR = 0.5 Q-COMP = 32580  
 POINT 11 SIGMA = -90.0 V-REF = 200.18  
 COMPUTED FREQUENCY = 9.16, K = .0719

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X N	.012-UPPER		.062-UPPER		.148-UPPER		.261-UPPER		.392-UPPER		.530-UPPER		.661-UPPER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	14.169	152.82	6.573	153.69	3.318	155.02	1.707	161.57	2.746	227.74	1.249	228.34	1.424	239.96
2	1.821	112.83	2.034	110.03	2.055	111.42	2.227	117.35	2.541	192.45	2.553	181.72	2.318	239.77
3	1.800	204.40	1.849	187.28	1.855	183.11	1.882	169.35	1.900	140.81	1.909	136.09	1.918	178.11
4	1.448	18.54	1.404	18.97	1.395	18.58	1.396	18.58	1.399	11.87	1.404	16.07	1.418	22.14
5	1.111	318.67	1.024	307.19	1.012	307.52	1.002	305.21	1.000	310.64	1.000	307.57	1.000	307.09
6	0.883	107.01	0.834	107.41	0.832	107.41	0.832	107.41	0.832	107.41	0.832	107.41	0.832	107.41
7	0.811	106.54	0.764	106.94	0.762	106.94	0.762	106.94	0.762	106.94	0.762	106.94	0.762	106.94
8	0.744	106.54	0.697	106.94	0.695	106.94	0.695	106.94	0.695	106.94	0.695	106.94	0.695	106.94
9	0.681	106.54	0.634	106.94	0.632	106.94	0.632	106.94	0.632	106.94	0.632	106.94	0.632	106.94
10	0.624	106.54	0.577	106.94	0.575	106.94	0.575	106.94	0.575	106.94	0.575	106.94	0.575	106.94

X N	.012-LOWER		.062-LOWER		.148-LOWER		.261-LOWER		.392-LOWER		.530-LOWER		.661-LOWER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.119	256.93	0.846	244.12	0.789	239.88	0.749	236.02	0.706	233.62	0.673	231.78	0.645	230.98
2	1.542	178.26	1.339	179.33	1.282	179.83	1.231	178.78	1.184	183.47	1.137	178.15	1.091	180.98
3	1.457	22.26	1.368	23.24	1.324	23.38	1.281	23.49	1.237	16.49	1.190	15.83	1.143	17.51
4	1.100	35.55	1.004	36.64	0.961	36.83	0.918	36.99	0.875	30.35	0.832	29.76	0.789	24.69
5	0.864	308.23	0.785	307.51	0.746	305.30	0.707	302.33	0.668	301.95	0.629	300.15	0.590	308.57
6	0.718	332.66	0.661	331.90	0.622	329.15	0.583	327.59	0.544	326.42	0.505	325.26	0.466	324.09
7	0.671	332.66	0.614	331.90	0.575	329.15	0.536	327.59	0.497	326.42	0.458	325.26	0.419	324.09
8	0.624	332.66	0.567	331.90	0.528	329.15	0.489	327.59	0.450	326.42	0.411	325.26	0.372	324.09
9	0.577	332.66	0.520	331.90	0.481	329.15	0.442	327.59	0.403	326.42	0.364	325.26	0.325	324.09
10	0.530	332.66	0.473	331.90	0.434	329.15	0.395	327.59	0.356	326.42	0.317	325.26	0.278	324.09

X N	.392-LOWER		.530-LOWER		.661-LOWER		.774-LOWER		.860-LOWER		.910-LOWER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.916	352.41	2.897	359.43	2.878	366.45	2.859	373.47	2.840	380.49	2.821	387.51
2	2.471	145.17	2.494	150.07	2.517	154.97	2.540	159.87	2.563	164.77	2.586	169.67
3	2.026	19.63	2.009	20.52	1.992	21.41	1.975	22.30	1.958	23.19	1.941	24.08
4	1.581	19.63	1.564	20.52	1.547	21.41	1.530	22.30	1.513	23.19	1.496	24.08
5	1.136	305.01	1.119	306.20	1.102	307.39	1.085	308.58	1.068	309.77	1.051	310.96
6	0.691	327.21	0.674	333.58	0.657	339.85	0.640	346.12	0.623	352.39	0.606	358.66
7	0.644	327.21	0.627	333.58	0.610	339.85	0.593	346.12	0.576	352.39	0.559	358.66
8	0.597	327.21	0.580	333.58	0.563	339.85	0.546	346.12	0.529	352.39	0.512	358.66
9	0.550	327.21	0.533	333.58	0.516	339.85	0.499	346.12	0.482	352.39	0.465	358.66
10	0.503	327.21	0.486	333.58	0.469	339.85	0.452	346.12	0.435	352.39	0.418	358.66

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 64 ALPHA-MCL = 2.0 PDR RUN.PI 14.01  
RUN 14 ALPHA-PAR = .5 Q-COMP = 32580  
POINT 1 SIGMA = -90. V-REF = 200.18  
COMPUTED FREQUENCY = 9.16, K = .0719

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012	.062	.149	.261	.392	.530	.661
N	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	25.747	-13.773	15.481	-7.674	6.445	-3.191	5.837
2	.011	.005	.010	.005	.005	.005	.005
3	.110	.037	.041	.027	.027	.027	.027
4	.197	.076	.076	.053	.053	.053	.053
5	.266	.121	.121	.087	.087	.087	.087
6	.313	.145	.145	.107	.107	.107	.107
7	.334	.122	.122	.087	.087	.087	.087
8	.324	.119	.119	.084	.084	.084	.084
9	.284	.133	.133	.086	.086	.086	.086
10	.082	.176	.176	.084	.084	.084	.084

X =	.774	.860	.910
N	DELCPR	DELCPR	DELCPR
	DELCP	DELCP	DELCP
	DELCP	DELCP	DELCP
1	2.022	1.585	2.367
2	.233	.016	.024
3	.004	.012	.014
4	.027	.055	.021
5	.001	.023	.007
6	.036	.012	.014
7	.039	.042	.021
8	.026	.027	.026
9	.026	.027	.026
10	.026	.027	.026

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	W1	W2	W3	W4	W5	W6	W10
GAP FRACTION	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL
	N	N	N	N	N	N	N
	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL
1	2.932	-1.000	2.913	-0.983	-5.785	2.918	3.681
2	.890	.074	3.031	.659	2.582	.221	2.696
3	.649	.014	.064	.041	.588	.157	.475
4	.667	.191	.763	.314	.490	.089	.335
5	.117	.071	.113	.103	.357	.211	.020
6	.341	.502	.415	.341	.152	.473	.194
7	.044	.010	.072	.002	.024	.075	.285
8	.144	.195	.081	.148	.138	.083	.069
9	.112	.166	.039	.032	.049	.144	.166
10	.021	.140	.021	.034	.063	.144	.060

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 64 ALPHA-MCL = 2.0 POP RUN-PT 14.01  
MUM 14 ALPHA-PAR = .5 Q-COMP = 32580  
POINT 1 ALPHA-SIGMA = -90. V-REF = 200.18  
COMPUTED FREQUENCY = 9.16, K = .0719

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI				
1	31.876	334.90	17.279	333.63	9.028	339.30	6.049	345.54	3.396	2.82	3.802	14.11	2.981	14.11	2.981	36.19
2	.495	271.33	1.644	140.18	.149	312.35	.142	284.62	.093	194.89	.048	192.26	.048	242.26	.048	275.05
3	.199	109.89	.132	111.68	.048	142.72	.105	333.22	.071	158.07	.044	282.21	.044	325.86	.044	397.31
4	.106	244.90	.048	115.76	.023	313.91	.051	352.21	.033	258.58	.034	325.86	.034	325.86	.034	397.31
5	.165	244.90	.087	320.27	.076	285.71	.039	350.47	.053	187.25	.053	293.82	.053	333.23	.053	397.31
6	.126	285.79	.088	320.27	.048	313.14	.025	39.28	.019	158.07	.044	325.86	.044	325.86	.044	397.31
7	.179	268.79	.088	320.27	.059	348.97	.035	17.99	.019	158.07	.044	325.86	.044	325.86	.044	397.31
8	.227	324.12	.072	330.21	.059	348.97	.025	28.76	.036	351.82	.066	57.74	.066	57.74	.066	29.73
9	.194	245.05	.087	254.15	.063	274.00	.047	278.97	.050	303.24	.057	324.52	.057	324.52	.057	339.05
10																

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI				
1	2.569	38.08	2.722	29.58	1.101	25.88	1.101	25.88	5.263	351.09	1.132	187.88	1.132	187.88	1.132	210.97
2	.238	188.08	.024	178.17	.045	141.86	.045	141.86	.048	218.66	.048	218.66	.048	218.66	.048	218.66
3	.013	288.82	.062	292.53	.031	214.89	.031	214.89	.033	354.41	.033	354.41	.033	354.41	.033	354.41
4	.077	211.89	.021	200.07	.044	112.89	.044	112.89	.023	262.21	.023	262.21	.023	262.21	.023	262.21
5	.061	211.89	.021	200.07	.023	105.68	.023	105.68	.027	18.72	.027	18.72	.027	18.72	.027	18.72
6	.040	26.68	.016	83.08	.042	90.03	.042	90.03	.019	148.61	.019	148.61	.019	148.61	.019	148.61
7	.058	47.82	.022	341.16	.022	82.98	.022	82.98	.038	13.33	.038	13.33	.038	13.33	.038	13.33
8	.037	313.92	.036	324.69	.013	275.20	.013	275.20	.044	292.38	.044	292.38	.044	292.38	.044	292.38
9																
10																

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	3.098	341.17	3.074	343.34	6.479	153.23	1.203	144.84	1.222	63.05	1.222	63.05
2	2.929	19.32	3.103	12.27	2.591	14.90	2.710	10.30	2.864	19.75	2.864	19.75
3	.646	181.27	.663	176.45	.588	195.42	.604	184.47	.585	215.93	.585	215.93
4	.684	111.96	.623	123.39	.588	110.11	.563	104.89	.543	248.14	.543	248.14
5	.137	111.13	.152	42.24	.263	53.42	.067	348.88	.054	344.17	.054	344.17
6	.606	304.19	.524	322.26	.589	306.68	.572	314.10	.545	344.17	.545	344.17
7	.049	348.06	.072	178.88	.079	107.57	.050	67.91	.078	117.34	.078	117.34
8	.243	306.36	.164	299.60	.161	328.99	.184	323.55	.180	333.07	.180	333.07
9	.110	110.36	.041	343.70	.151	372.49	.083	46.37	.060	84.70	.060	84.70
10	.048	62.42	.096	77.33	.074	32.52	.054	57.25	.047	20.09	.047	20.09

\*\*\* STABILITY PARAMETER

WALL NO	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	1.418	329.55	1.418	329.55	1.418	329.55	1.418	329.55	1.418	329.55	1.418	329.55
2	.051	210.97	.051	210.97	.051	210.97	.051	210.97	.051	210.97	.051	210.97
3	.020	153.05	.020	153.05	.020	153.05	.020	153.05	.020	153.05	.020	153.05
4	.012	113.25	.012	113.25	.012	113.25	.012	113.25	.012	113.25	.012	113.25
5	.004	282.62	.004	282.62	.004	282.62	.004	282.62	.004	282.62	.004	282.62
6	.007	307.20	.007	307.20	.007	307.20	.007	307.20	.007	307.20	.007	307.20
7	.009	279.14	.009	279.14	.009	279.14	.009	279.14	.009	279.14	.009	279.14
8	.008	314.51	.008	314.51	.008	314.51	.008	314.51	.008	314.51	.008	314.51
9	.008	244.78	.008	244.78	.008	244.78	.008	244.78	.008	244.78	.008	244.78
10												





ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 66 ALPHA-MCL = 2.0 POP RUN-PT 14.03  
 RUN 14 ALPHA-BAR = .5 O-COMP = 3280  
 POINT 3 SIGMA = -90. V-REF = 135.24  
 COMPUTED FREQUENCY = 15.54, N = .1225

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	.012-UPPER		.062-UPPER		.148-UPPER		.261-UPPER		.392-UPPER		.530-UPPER		.661-UPPER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	.17	.314	154.96	162.02	8.320	162.02	5.347	170.68	4.057	181.46	3.525	203.03	4.173	205.73
2		.701	284.11	240.59	.428	238.97	.382	290.01	.471	304.67	.489	249.24	.389	249.24
3		.414	207.47	214.75	.251	203.44	.187	177.41	.356	215.04	.286	212.77	.240	212.77
4		.108	328.22	315.38	.094	191.00	.159	177.41	.473	218.85	.140	190.89	.131	188.82
5		.344	325.36	325.25	.379	329.07	.390	331.75	.473	343.49	.439	344.20	.431	347.35
6		.025	110.49	018.36	.015	110.10	.023	98.15	.043	80.76	.039	137.49	.034	131.93
7		.155	149.41	113.14	.094	158.92	.092	165.68	.105	175.10	.098	173.11	.072	175.00
8		.050	143.88	071.14	.042	149.88	.048	150.74	.092	166.83	.074	159.32	.078	169.39
9		.050	136.65	061.12	.042	151.12	.048	150.74	.092	166.83	.074	159.32	.078	169.39
10		.081	160.49	051.13	.050	130.14	.051	122.81	.055	114.64	.052	128.03	.059	124.66

N	.774-UPPER		.860-UPPER		.910-UPPER		.012-LOWER		.062-LOWER		.188-LOWER		.261-LOWER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	3.690	211.32	3.139	212.59	2.619	210.42	13.385	325.69	6.305	315.49	3.577	317.02	2.114	309.84
2	.471	267.86	.283	207.85	.231	201.57	.809	236.44	1.474	159.05	.340	216.50	.174	249.23
3	.249	197.33	.154	198.96	.142	195.90	.260	183.25	.314	195.86	.175	193.54	.180	217.19
4	.038	152.42	.026	148.02	.071	152.18	.430	332.83	.156	183.97	.434	338.19	.159	206.14
5	.074	175.38	.069	170.53	.071	170.05	.477	337.92	.056	177.19	.074	165.92	.034	174.90
6	.064	164.74	.062	164.38	.056	158.65	.102	237.62	.088	213.02	.074	167.52	.086	208.12
7	.060	142.61	.062	135.33	.070	139.67	.028	207.62	.035	180.72	.050	181.28	.057	197.20
8	.058	128.65	.060	124.05	.061	128.66	.059	1.23	.067	84.99	.065	109.07	.074	122.67
9														
10														

N	.392-LOWER		.530-LOWER		.661-LOWER		.774-LOWER		.860-LOWER		.910-LOWER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	.985	289.56	.757	253.58	.915	184.15	1.125	192.95	.989	231.92	1.646	216.04
2	.337	235.87	.404	260.45	.533	302.63	.481	228.09	.387	248.07	.295	216.04
3	.191	217.55	.277	217.21	.305	203.92	.177	211.10	.183	213.04	.214	210.35
4	.406	344.29	.145	200.96	.134	220.46	.140	208.71	.127	206.39	.122	227.52
5	.022	166.41	.488	349.74	.404	325.49	.439	325.68	.336	352.39	.437	357.88
6	.071	187.58	.028	140.47	.023	173.36	.051	160.28	.036	152.39	.076	178.89
7	.040	199.36	.046	175.67	.084	173.36	.081	188.84	.073	187.02	.085	178.89
8	.062	123.47	.070	19.79	.070	181.68	.047	174.15	.037	179.52	.033	165.05
9	.048	128.11	.058	130.79	.044	133.76	.071	39.64	.069	37.94	.066	139.21
10							.051	141.32	.043	147.37	.043	143.42

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 66 ALPHA-MCL = 2.0 PDP RUN.PI 14.03  
RUN 14 ALPHA-PAR = .5 Q-COMP = 3228C  
POINT 3 SIGMA = -9D V-PEF = 199.24  
COMPUTED FREQUENCY = 15.54, K = .1225

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI
1	25.7	.873	13.8	.836	7.8	.893	5.4	.410	3.5	.574	3.5	.546	2.7	.731
2	-.915	.363	-1.4	.466	-2.4	.249	-.262	-.012	-.350	.451	.136	1.0	.085	1.9
3	.313	.109	-.050	.089	-.093	-.023	-.035	-.053	-.140	.080	.020	.136	-.012	-.063
4	-.184	.053	-.045	.024	-.079	-.023	-.076	-.077	.003	.046	.054	.033	-.025	-.064
5	-.061	.019	-.084	.016	-.028	-.006	-.031	-.019	-.066	.025	-.030	.032	-.032	-.052
6	.074	.165	-.021	.105	-.017	-.056	-.015	-.062	-.035	-.018	-.031	.036	-.001	-.031
7	.073	.064	.021	.043	.009	-.036	-.005	-.050	.021	-.007	.008	.017	-.017	-.004
8	.018	.029	.034	.043	.038	-.023	.033	-.003	.004	-.022	.019	.034	.015	-.020
9	.012	.033	.042	.017	.015	.013	-.018	-.001	-.006	-.013	-.036	.003	.002	-.017

X	.774		.860		.910		.910		.910		.910		.910	
	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI
1	2.0	.013	1.6	.040	.9	.920	3.3	.353	4.9	.946	4.9	.946	1.1	.878
2	-.293	.023	-.116	.079	-.041	.039	-.020	-.020	-.211	.050	-.211	.050	-.012	-.037
3	.071	.023	.031	.007	.039	-.045	-.020	-.020	.061	.020	.061	.020	-.006	.004
4	.013	.023	.046	.003	.000	.039	-.030	-.030	-.061	.023	-.061	.023	-.009	.003
5	-.021	.010	-.015	.020	.005	-.001	-.005	-.005	-.020	.015	-.020	.015	-.005	.001
6	-.006	.017	-.023	.017	-.012	-.005	-.012	-.012	.018	.016	.018	.016	-.004	-.004
7	.010	.017	.023	.017	-.003	-.003	-.003	-.003	.017	.024	.017	.024	-.004	-.004
8	.010	.017	.023	.017	-.003	-.003	-.003	-.003	.017	.024	.017	.024	-.004	-.004
9	.004	.013	.007	.007	-.002	-.002	-.002	-.002	.004	.005	.004	.005	-.003	-.003
10	-.004	.013	-.007	.007	-.002	-.002	-.002	-.002	.004	.005	.004	.005	-.003	-.003

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.125		.125		.125		.125		.125		.125		.125	
	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG
1	-.527	-1.997	-.344	-2.025	-.5.629	2.211	3.852	1.60	1.047	6.040	6.040	6.040	6.040	6.040	6.040	6.040
2	-.063	-.502	.011	-.297	-.103	.059	-.001	-.508	.197	.054	.054	.054	.054	.054	.054	.054
3	-.224	-.158	-.153	-.304	-.058	.016	-.436	-.030	.068	.410	.410	.410	.410	.410	.410	.410
4	-.199	-.023	-.262	-.016	-.058	.016	-.136	-.023	.184	.116	.116	.116	.116	.116	.116	.116
5	-.430	-.306	.475	-.287	.497	-.237	-.195	-.184	.416	.053	.053	.053	.053	.053	.053	.053
6	-.155	.019	-.079	.054	.054	.108	-.195	.041	.063	.057	.057	.057	.057	.057	.057	.057
7	-.057	.012	-.063	.024	.097	.023	-.195	.027	.201	.001	.001	.001	.001	.001	.001	.001
8	.057	.043	.063	.024	.069	.059	-.054	.027	.072	.068	.068	.068	.068	.068	.068	.068
9	.057	.043	.063	.024	.069	.059	-.054	.027	.072	.068	.068	.068	.068	.068	.068	.068
10	-.066	.066	-.013	.021	-.058	.072	-.056	.065	.003	.054	.054	.054	.054	.054	.054	.054

\*\*\* STABILITY PARAMETER

\* XI = .7506  
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MODE 1 -- OCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 66 ALPHA-MCL = 2.0 PDP RUN-PT 14.03  
 RUN 14 ALPHA-RAR = .5 G-COMP = 32280  
 POINT 13 SIGMA = -90. V-REF = 199.24  
 COMPUTED FREQUENCY = 15.54, K = .1225  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012	.062	.118	.261	.392	.530	.661								
N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH								
1	30.600	330.92	16.181	328.77	8.557	337.29	5.620	348.31	3.602	170.16	7.19	3.778	17.02	3.355	35.50
2	.984	158.17	1.784	145.27	.264	177.34	.262	177.34	.355	170.16	.165	.122	328.77	.340	349.32
3	.331	19.15	.051	119.58	.093	158.81	.063	303.86	.166	32.14	.024	.024	276.34	.049	176.10
4	.199	160.77	.112	151.60	.086	196.44	.141	282.00	.071	86.92	.047	.066	29.57	.056	303.05
5	.088	122.87	.081	9.58	.028	122.70	.037	57.73	.047	158.91	.040	.022	251.53	.031	110.24
6	.048	197.01	.048	191.03	.038	211.92	.064	211.92	.040	332.36	.019	.016	271.12	.019	166.02
7	.011	295.46	.048	282.66	.038	285.45	.090	282.62	.023	341.71	.039	.039	298.98	.040	350.47
8	.034	302.24	.056	286.20	.044	328.26	.033	355.09	.023	281.79	.017	.017	299.96	.016	339.19
9	.129	14.98	.045	22.14	.920	41.28	.018	183.127	.018	242.77	.007	.007	153.15	.017	277.74

X	.774	.860	.910							
N	DELCPH	PHI	DELCPH							
1	2.597	39.18	2.229	24.15	.985	20.99	5.920	150.12	1.345	326.08
2	.293	177.47	.062	162.50	.104	56.82	.053	152.04	.086	334.79
3	.030	311.94	.032	347.83	.044	332.71	.020	16.63	.011	33.74
4	.037	60.68	.046	173.30	.066	316.46	.045	267.58	.005	162.76
5	.024	205.29	.011	162.75	.039	89.44	.025	59.57	.005	8.84
6	.019	325.23	.024	325.80	.005	353.48	.037	216.43	.010	193.41
7	.013	325.09	.024	324.16	.024	329.78	.030	207.43	.004	237.38
8	.014	254.06	.003	324.62	.004	229.78	.022	307.15	.004	231.12
9			.027	265.07	.022	279.58	.007	318.85	.004	317.10
10										47.68

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	W1	W2	W4	W6	W10	W125		
GAP FRACTION	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI		
1	2.065	255.23	2.054	260.37	8.907	165.63	6.130	40.16
2	.506	262.82	.297	272.12	.818	262.77	.204	15.21
3	.274	215.28	.340	247.32	.106	159.17	.415	279.46
4	.528	124.15	.555	128.88	.092	331.01	.210	373.25
5	.031	141.25	.107	303.31	.551	334.51	.344	344.44
6	.106	170.68	.122	177.51	.122	177.51	.082	220.40
7	.054	167.33	.091	148.29	.136	171.37	.209	195.83
8	.071	16.94	.068	159.09	.127	140.06	.072	120.49
9	.066	95.24	.092	139.78	.091	319.30	.054	48.42
10			.025	123.06	.093	128.63	.054	93.30

\*\*\* STABILITY PARAMETER \*\*\*

W1	W2	W4	W6	W10	W125	
CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	
1	1.345	326.08	1.345	326.08	1.345	326.08
2	.086	334.79	.086	334.79	.086	334.79
3	.011	162.76	.011	162.76	.011	162.76
4	.005	8.84	.005	8.84	.005	8.84
5	.010	193.41	.010	193.41	.010	193.41
6	.004	231.12	.004	231.12	.004	231.12
7	.004	317.10	.004	317.10	.004	317.10
8	.004	47.68	.004	47.68	.004	47.68
9						
10						

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 68 ALPHA-PCL = 2.0 PDP RUN-PT 14.05  
 RUN 14 ALPHA-PAR = 0.5 O-COMP = 32162  
 POINT 15 SIGMA = -90. V-REF = 198.87  
 FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CPREAL	CPIMAG	.062-UPPER	.148-UPPER	.261-UPPER	.392-UPPER	.530-UPPER	.661-UPPER
1	1	-14.554	7.511	-6.579	2.214	-2.588	-1.709	-2.108	-1.913
2	2	.428	-1.488	.324	-2.268	.351	.499	.023	.170
3	3	.120	-1.336	.187	-0.930	.248	.156	.233	.204
4	4	.546	-0.899	.376	-0.274	.352	.426	.465	.477
5	5	-0.000	-0.000	-0.036	-0.006	-0.019	-0.014	-0.003	.014
6	6	-0.061	.000	-0.071	-0.013	-0.093	-0.100	-0.093	-0.083
7	7	.047	-0.038	.051	-0.017	.047	.043	.047	.063
8	8	-0.016	-0.020	.023	-0.019	.027	.010	.014	.010
9	9	-0.000	-0.004	-0.015	-0.009	-0.025	-0.023	-0.025	-0.013
10	10	-0.014	-0.004	-0.036	-0.010	-0.045	-0.054	-0.060	-0.033

X	N	CPREAL	CPIMAG	.012-UPPER	.090-UPPER	.012-LOWER	.062-LOWER	.148-LOWER	.261-LOWER
1	1	-1.413	-2.690	12.524	-8.838	-1.195	-7.973	4.159	2.973
2	2	.176	-0.091	.697	-0.338	-1.104	.973	.153	.070
3	3	.222	-0.115	.484	-0.222	.339	.154	.334	.293
4	4	.511	-0.003	.327	-0.654	.231	.550	.348	.477
5	5	-0.079	-0.007	.008	-0.002	.115	-0.332	.033	.013
6	6	.052	-0.008	.051	-0.046	.111	-0.026	-0.085	-0.078
7	7	.005	-0.015	.000	-0.078	.088	-0.044	-0.073	.067
8	8	-0.041	-0.020	.011	-0.048	.010	.026	-0.017	-0.027
9	9			.032	-0.018	.054	-0.036	.017	.019
10	10							.036	.037

X	N	CPREAL	CPIMAG	.030-LOWER	.061-LOWER	.090-LOWER	.148-LOWER	.261-LOWER	
1	1	1.765	-1.570	1.526	-1.449	1.144	-1.198	1.194	1.923
2	2	.072	-0.090	.144	-0.198	.256	-0.311	.224	.293
3	3	.445	-0.036	.638	-0.407	.582	-0.379	.224	.477
4	4	.010	-0.019	.032	-0.230	.006	-0.071	.003	.013
5	5	-0.054	-0.028	.036	-0.042	.040	-0.026	-0.062	-0.078
6	6	.015	-0.028	.019	-0.032	.005	-0.016	.005	.067
7	7	-0.037	-0.012	.005	-0.016	.009	-0.012	.007	.019
8	8			.005	-0.009	.009	-0.015	.005	.019
9	9					.009	-0.015	.005	.019
10	10							.005	.019

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCHI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 68 ALPHA-MCL = 2.0 POP RUM-PT 14.05  
 RUN 14 ALPHA-BAR = .5 O-COMP = 321.62  
 POINT 15 SIGMA = -9.0 V-REF = 196.87  
 COMPUTED FREQUENCY = 19.25, K = .1520  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	CP-MAG	PHI	012-UPPER	CP-MAG	PHI	198-UPPER	CP-MAG	PHI	261-UPPER	CP-MAG	PHI	392-UPPER	CP-MAG	PHI	530-UPPER	CP-MAG	PHI	661-UPPER	CP-MAG	PHI	
1	16	.378	152.70	0	.941	161.40	3	.865	175.43	2	.697	196.36	2	.781	232.08	3	.416	335.94	3	.416	335.94
2		.655	311.84		.189	320.89		.206	326.64		.265	349.33		.159	349.33		.203	355.71		.203	355.71
3		.553	350.79		.563	324.21		.576	327.68		.028	327.68		.051	337.04		.087	301.98		.087	301.98
4		.102	180.03		.073	238.93		.094	227.69		.094	188.04		.102	189.16		.097	188.04		.097	188.04
5		.066	177.41		.071	175.52		.077	183.93		.060	188.04		.055	31.43		.016	26.12		.016	26.12
6		.041	45.42		.051	345.71		.054	350.04		.023	13.53		.023	166.91		.025	178.86		.025	178.86
7		.020	247.78		.018	323.68		.025	179.91		.026	179.56		.023	166.91		.068	207.87		.068	207.87
8		.014	196.17		.037	196.02		.046	202.67		.050	206.72		.062	209.97						
10																					

N	CP-MAG	PHI	012-LOWER	CP-MAG	PHI	020-UPPER	CP-MAG	PHI	062-LOWER	CP-MAG	PHI	100-LOWER	CP-MAG	PHI	261-LOWER	CP-MAG	PHI				
1	3	.078	342.72	2	.629	249.78	2	.160	324.81	15	.324	324.81	10	.097	315.45	5	.293	331.84	3	.257	321.09
2		.222	328.73		.235	329.55		.225	324.66		.533	24.66		.133	224.79		.345	308.01		.304	315.29
3		.600	328.73		.618	329.55		.608	290.93		.126	290.93		.597	292.79		.608	308.01		.612	321.25
4		.010	146.05		.077	204.27		.086	305.28		.107	205.28		.120	193.43		.091	201.38		.099	218.04
5		.084	199.89		.059	4.72		.051	186.73		.068	349.84		.084	355.56		.075	201.38		.081	218.04
6		.052	73.32		.034	91.51		.022	190.23		.078	88.03		.045	102.36		.030	181.13		.048	123.60
7		.025	249.78		.026	229.45		.017	231.86		.046	257.46		.026	213.48		.034	181.13		.039	219.57
8		.045	205.73		.040	220.33		.037	209.21		.073	221.22					.045	216.34		.048	219.57

N	CP-MAG	PHI	012-LOWER	CP-MAG	PHI	020-UPPER	CP-MAG	PHI	062-LOWER	CP-MAG	PHI	100-LOWER	CP-MAG	PHI	261-LOWER	CP-MAG	PHI			
1	2	.362	318.76	2	.104	316.49	2	.934	315.95	1	.062	300.02	1	.737	297.69	1	.583	277.05		
2		.244	308.72		.180	323.16		.115	190.91		.138	190.91		.110	284.79		.225	155.27		
3		.392	318.76		.256	323.16		.623	329.28		.736	329.28		.651	331.89		.625	333.74		
4		.041	146.05		.067	204.27		.061	178.92		.073	178.92		.093	188.03		.064	192.01		
5		.054	114.26		.012	209.26		.047	189.52		.069	189.52		.054	188.25		.043	178.92		
6		.032	118.35		.017	220.17		.026	29.72		.023	137.10		.014	118.11		.009	52.21		
7		.042	267.79		.051	208.80		.040	214.40		.046	204.81		.017	177.95		.047	207.35		
8																				
9																				
10																				

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 62 ALPHA-PCL = 2.0 FOP RUN.PT 14.05  
RUN 13 ALPHA-RAR = .5 O-COMP = .32162  
POINT 5 SIGMA = -90. V-REF = .198.R7  
COMPUTED FREQUENCY = 19.25, K = .1520

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	N	DELCPR	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	27.078	-16.341	13.774	-9.297	8.012	-3.582	5.511	-1.600	3.475	.625	3.634	1.196	2.585	2.181
2	-1.134	.450	-1.325	1.241	-3.119	.084	-.341	.007	-.426	.091	.121	-.057	.326	-.196
3	.364	-.359	.152	-.184	.128	-.098	.045	-.012	.085	.068	.054	-.026	-.089	-.028
4	-.210	.064	-.151	.055	-.050	-.082	.122	-.072	.019	.001	.131	-.040	.105	.028
5	-.036	-.048	-.040	-.032	-.008	-.028	.016	-.047	-.032	.037	.004	-.020	-.020	.015
6	.020	-.059	-.038	.097	-.020	-.028	.008	.056	.007	.014	.011	-.020	-.031	-.005
7	.018	-.116	-.032	.061	-.045	-.044	-.008	.032	-.038	.024	-.009	-.038	-.023	.030
8	-.011	-.065	-.015	-.035	-.042	-.033	-.045	.022	-.058	.017	-.033	-.018	-.005	.001
9	-.041	-.044	-.018	-.025	-.006	-.009	.008	-.008	.017	.012	-.027	-.007	-.007	.004
10											.016	-.000	-.000	-.003

X	.774		.800		.910	
	N	DELCPR	DELCP	DELCP	DELCP	DELCP
1	1.944	1.770	1.715	.929	.779	.508
2	-.311	.065	-.161	.005	.033	.061
3	.121	-.016	.014	-.021	-.029	-.016
4	-.036	.045	-.017	.001	.011	-.058
5	.007	.016	.008	.023	.003	-.009
6	-.024	.027	-.009	.012	.003	-.022
7	.008	-.008	.006	.022	.006	-.015
8	-.004	.020	-.001	.020	.004	-.026
9	-.001	.000	.000	.000	.000	.016
10						.002

N	CMREAL		CNIMAG	
	CMREAL	CMIMAG	CNREAL	CNIMAG
1	1.140	-.825	4.921	-.911
2	-.015	.049	-.239	.101
3	-.011	-.028	.061	.042
4	.002	.007	.044	-.076
5	-.004	.004	.016	.037
6	-.001	.001	.008	.014
7	.008	.008	.002	-.021
8	-.004	-.001	-.026	.020
9	.000	.006	.016	-.010
10	.000	-.002	.002	-.003

\*\*\* STABILITY PARAMETER

WALL NO.	.125		.44		.74		.500		.125		.125	
	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	1.454	-2.691	1.680	-3.024	-6.717	1.497	-1.980	-.922	2.756	5.503		
2	.147	-.156	.219	-.000	.301	-.476	.212	-.238	.374	-.551		
3	.361	-.084	.318	-.015	.395	-.056	.463	-.012	.707	-.126		
4	.019	-.591	.021	-.544	.521	-.442	.435	-.021	.574	-.161		
5	-.105	-.032	.079	-.033	.001	.006	-.084	.009	.049	-.063		
6	-.042	-.017	.105	-.007	-.122	.005	.054	-.040	.102	-.020		
7	.015	-.049	.014	-.028	.042	-.016	.047	-.034	.034	-.055		
8	-.017	-.021	.032	-.009	.005	-.016	.005	-.033	.071	-.016		
9	-.058	-.028	.054	-.019	-.053	-.004	.039	-.027	.070	-.052		
10												

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

\*\*\* XI = .8247 \*\*\*

MODE 1 -- OCW PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 68 ALPHA-MCL = 2.0 PDP RUNPT 14.05  
 RUN 14 ALPHA-BAR = 0.5 O-COMP = 12162  
 POINT 5 SIGMA = -90.0 V-REF = 198.87  
 COMPUTED FREQUENCY = 19.25, K = .1520  
 AND PHASE ANGLE

FOURIER COEFFICIENTS, AMPLITUDE, PER RADIAN \*\*\*  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.261		.392		.530		.661	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	31.627	328.89	16.818	325.98	8.776	373.81	3.530	187.19	3.026	18.21	3.382	40.15
2	1.220	158.37	1.816	136.87	1.330	178.90	.438	167.78	.134	334.85	.380	328.91
3	.511	44.50	.219	150.31	.161	145.45	.109	38.78	.060	225.98	.092	195.17
4	.270	213.92	.514	220.14	.192	268.84	.079	317.30	.171	333.58	.108	151.13
5	.060	213.07	.161	218.28	.029	253.67	.049	268.18	.024	195.27	.031	151.42
6	.063	289.08	.039	219.78	.035	154.79	.056	182.10	.039	299.45	.028	127.52
7	.118	81.08	.069	117.94	.067	151.84	.045	148.13	.041	102.62	.005	164.85
8	.066	260.89	.038	193.16	.046	133.69	.050	151.10	.032	142.77	.008	27.59
9	.060	227.03	.031	234.82	.011	308.86	.011	313.23	.017	25.11	.003	269.90

N	.774		.860		.910		CM-MAG.		PHI		CM-MAG		PHI	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	2.627	42.32	1.951	128.43	.930	33.12	5.029	349.51	1.407	328.13	1.407	328.13	1.407	328.13
2	.122	177.75	.025	149.38	.069	617.46	.074	157.04	.022	146.26	.022	146.26	.022	146.26
3	.138	197.51	.025	155.73	.016	267.23	.048	299.89	.032	243.10	.032	243.10	.032	243.10
4	.018	67.55	.024	188.41	.015	633.61	.040	666.72	.013	247.02	.013	247.02	.013	247.02
5	.026	199.03	.014	122.71	.025	218.82	.016	300.94	.005	247.02	.005	247.02	.005	247.02
6	.020	101.49	.022	89.38	.016	120.77	.023	142.87	.008	116.98	.008	116.98	.008	116.98
7	.001	156.49	.012	158.59	.011	200.67	.019	127.66	.006	272.94	.006	272.94	.006	272.94

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.125		.125		.500		.500		.500		.8207	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	3.237	296.70	3.459	299.02	6.882	162.44	2.184	204.96	6.190	83.57	6.190	83.57	6.190	83.57
2	.370	277.11	.318	357.31	.563	302.28	.319	311.75	.666	349.86	.666	349.86	.666	349.86
3	.669	297.96	.021	300.06	.683	319.53	.272	321.45	.718	344.32	.718	344.32	.718	344.32
4	.107	192.52	.081	192.91	.006	78.25	.041	148.54	.596	232.55	.596	232.55	.596	232.55
5	.084	348.27	.105	4.00	.122	177.67	.085	173.90	.104	191.18	.104	191.18	.104	191.18
6	.052	231.47	.032	117.94	.045	335.48	.052	244.41	.075	198.73	.075	198.73	.075	198.73
7	.027	205.73	.057	199.17	.053	183.88	.047	214.38	.087	216.63	.087	216.63	.087	216.63

\*\*\* STABILITY PARAMETER

N	.125		.125		.125		.500		.500		.500		.8207	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.407	328.13	1.407	328.13	1.407	328.13	1.407	328.13	1.407	328.13	1.407	328.13	1.407	328.13
2	.022	146.26	.022	146.26	.022	146.26	.022	146.26	.022	146.26	.022	146.26	.022	146.26
3	.032	243.10	.032	243.10	.032	243.10	.032	243.10	.032	243.10	.032	243.10	.032	243.10
4	.013	247.02	.013	247.02	.013	247.02	.013	247.02	.013	247.02	.013	247.02	.013	247.02
5	.005	247.02	.005	247.02	.005	247.02	.005	247.02	.005	247.02	.005	247.02	.005	247.02
6	.008	116.98	.008	116.98	.008	116.98	.008	116.98	.008	116.98	.008	116.98	.008	116.98
7	.006	272.94	.006	272.94	.006	272.94	.006	272.94	.006	272.94	.006	272.94	.006	272.94
8	.002	272.94	.002	272.94	.002	272.94	.002	272.94	.002	272.94	.002	272.94	.002	272.94
9	.002	272.94	.002	272.94	.002	272.94	.002	272.94	.002	272.94	.002	272.94	.002	272.94
10	.002	272.94	.002	272.94	.002	272.94	.002	272.94	.002	272.94	.002	272.94	.002	272.94



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCMI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 51 ALPHA-MCL = 2.0 PDP RUN.PT 11.07  
 RUN 11 ALPHA-PAR = .5 Q-COMP = 32769  
 POINT SIGMA = -.45 V-REF = 200.8C  
 COMPUTED FREQUENCY = 9.14, K = .0715

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.912-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.419-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG	
1	1	-9.950	7.041	-2.677	-1.592	-1.660	-1.788	-1.558	-1.400	5.540	2.740	2.740	5.540	2.740	2.740	2.740	2.740	2.740	
2	2	-1.760	-1.174	-1.076	.936	.944	.777	.629	.498	-.209	-.698	-.698	-.209	-.498	-.629	-.777	-.936	-.944	-.950
3	3	-1.977	-1.223	-1.378	-.878	-.864	-.949	-.828	-.697	-.215	-.974	-.974	-.215	-.697	-.828	-.949	-.878	-.864	-.854
4	4	-1.583	-1.011	-1.153	-.891	-.854	-.973	-.809	-.677	-.341	-.974	-.974	-.341	-.677	-.809	-.973	-.891	-.854	-.833
5	5	-1.350	-1.382	-1.382	-.009	-.341	-.694	-.469	-.377	-.456	-.389	-.389	-.456	-.377	-.469	-.694	-.009	-.341	-.341
6	6	-1.266	.330	-.502	-.427	.293	.656	.437	.686	.444	.204	.204	.444	.686	.437	.656	.427	.293	.330
7	7	-1.006	.049	-.045	-.100	.053	.437	.347	.633	.076	.055	.055	.076	.633	.347	.437	.100	.045	.049
8	8	-1.120	.041	-.089	-.156	.070	.437	.347	.633	-.139	.070	.070	-.139	.633	.347	.437	.156	.089	.041
9	9	-1.021	-.003	-.001	-.000	.009	.002	.002	.002	-.002	.002	.002	-.002	.002	.009	.002	.000	.001	-.003
10	10																		

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 51 ALPHA-MCL = 2.0 POP RUN.PI = 11.07  
 RUN 11 ALPHA-BAR = .5 Q-COMP = 1.2769  
 POINT 1 SIGMA = -.45 V-REF = 200.80  
 COMPUTED FREQUENCY = 9.14, K = .0715

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP-MAG	PHI	.062-UPPER	CP-MAG	PHI	.261-UPPER	CP-MAG	PHI	.392-UPPER	CP-MAG	PHI	.510-UPPER	CP-MAG	PHI	.661-UPPER	CP-MAG	PHI	
1	12.189	144.72	0.903	161.82	2.714	189.39	2.274	225.59	3.496	258.45	3.724	257.88	4.336	262.61	4.778	272.78	5.331	277.01
2	1.002	167.06	.799	154.51	.770	156.87	.936	156.66	.944	159.58	1.008	160.92	1.063	165.60	1.109	167.29	1.150	168.67
3	1.003	167.16	.803	159.50	.995	158.55	.964	158.80	1.023	160.00	1.058	161.25	1.093	162.51	1.127	163.77	1.161	165.03
4	1.003	167.16	.803	159.50	.995	158.55	.964	158.80	1.023	160.00	1.058	161.25	1.093	162.51	1.127	163.77	1.161	165.03
5	1.003	167.16	.803	159.50	.995	158.55	.964	158.80	1.023	160.00	1.058	161.25	1.093	162.51	1.127	163.77	1.161	165.03
6	1.003	167.16	.803	159.50	.995	158.55	.964	158.80	1.023	160.00	1.058	161.25	1.093	162.51	1.127	163.77	1.161	165.03
7	1.003	167.16	.803	159.50	.995	158.55	.964	158.80	1.023	160.00	1.058	161.25	1.093	162.51	1.127	163.77	1.161	165.03
8	1.003	167.16	.803	159.50	.995	158.55	.964	158.80	1.023	160.00	1.058	161.25	1.093	162.51	1.127	163.77	1.161	165.03
9	1.003	167.16	.803	159.50	.995	158.55	.964	158.80	1.023	160.00	1.058	161.25	1.093	162.51	1.127	163.77	1.161	165.03
10	1.003	167.16	.803	159.50	.995	158.55	.964	158.80	1.023	160.00	1.058	161.25	1.093	162.51	1.127	163.77	1.161	165.03

X	CP-MAG	PHI	.860-UPPER	CP-MAG	PHI	.012-LOWER	CP-MAG	PHI	.062-LOWER	CP-MAG	PHI	.148-LOWER	CP-MAG	PHI	.261-LOWER	CP-MAG	PHI	
1	4.026	267.95	3.858	272.42	3.559	275.22	13.449	310.19	9.297	302.65	5.478	308.04	4.524	297.39	1.009	155.46	1.005	157.75
2	1.009	161.16	1.019	161.22	1.082	159.77	1.144	147.96	1.352	154.02	1.009	155.46	1.005	157.75	1.009	155.46	1.005	157.75
3	1.009	161.16	1.019	161.22	1.082	159.77	1.144	147.96	1.352	154.02	1.009	155.46	1.005	157.75	1.009	155.46	1.005	157.75
4	1.009	161.16	1.019	161.22	1.082	159.77	1.144	147.96	1.352	154.02	1.009	155.46	1.005	157.75	1.009	155.46	1.005	157.75
5	1.009	161.16	1.019	161.22	1.082	159.77	1.144	147.96	1.352	154.02	1.009	155.46	1.005	157.75	1.009	155.46	1.005	157.75
6	1.009	161.16	1.019	161.22	1.082	159.77	1.144	147.96	1.352	154.02	1.009	155.46	1.005	157.75	1.009	155.46	1.005	157.75
7	1.009	161.16	1.019	161.22	1.082	159.77	1.144	147.96	1.352	154.02	1.009	155.46	1.005	157.75	1.009	155.46	1.005	157.75
8	1.009	161.16	1.019	161.22	1.082	159.77	1.144	147.96	1.352	154.02	1.009	155.46	1.005	157.75	1.009	155.46	1.005	157.75
9	1.009	161.16	1.019	161.22	1.082	159.77	1.144	147.96	1.352	154.02	1.009	155.46	1.005	157.75	1.009	155.46	1.005	157.75
10	1.009	161.16	1.019	161.22	1.082	159.77	1.144	147.96	1.352	154.02	1.009	155.46	1.005	157.75	1.009	155.46	1.005	157.75

X	CP-MAG	PHI	.530-LOWER	CP-MAG	PHI	.774-LOWER	CP-MAG	PHI	.860-LOWER	CP-MAG	PHI	.910-LOWER	CP-MAG	PHI
1	3.032	294.85	3.704	293.80	2.575	290.89	2.885	291.53	3.137	302.11	2.952	291.70	1.801	152.97
2	1.016	157.00	1.016	158.77	1.016	160.94	1.031	158.87	.875	156.91	1.001	157.15	1.001	157.15
3	1.016	157.00	1.016	158.77	1.016	160.94	1.031	158.87	.875	156.91	1.001	157.15	1.001	157.15
4	1.016	157.00	1.016	158.77	1.016	160.94	1.031	158.87	.875	156.91	1.001	157.15	1.001	157.15
5	1.016	157.00	1.016	158.77	1.016	160.94	1.031	158.87	.875	156.91	1.001	157.15	1.001	157.15
6	1.016	157.00	1.016	158.77	1.016	160.94	1.031	158.87	.875	156.91	1.001	157.15	1.001	157.15
7	1.016	157.00	1.016	158.77	1.016	160.94	1.031	158.87	.875	156.91	1.001	157.15	1.001	157.15
8	1.016	157.00	1.016	158.77	1.016	160.94	1.031	158.87	.875	156.91	1.001	157.15	1.001	157.15
9	1.016	157.00	1.016	158.77	1.016	160.94	1.031	158.87	.875	156.91	1.001	157.15	1.001	157.15
10	1.016	157.00	1.016	158.77	1.016	160.94	1.031	158.87	.875	156.91	1.001	157.15	1.001	157.15

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 51 ALPHA-MCL = 2.0 PDP RUN-PT 11.07  
RUN 11 ALPHA-PAR = 32769  
POINT 1 SIGMA = -45.0  
COMPUTED FREQUENCY = 9.14, K = .0715  
V-PEF = 200.80

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012	.062	.148	.261	.392	.530	.661
N	DELCPR	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD
1	18.625	-17.318	9.689	-1.024	-9.342	5.417	-4.296
2	-.451	.382	-.292	.261	-.187	.055	-.077
3	.008	-.384	-.261	.261	-.187	.055	-.077
4	-.345	.100	-.072	.072	-.055	.048	-.037
5	.022	-.179	-.016	.016	-.003	.014	-.011
6	.015	-.126	-.007	.007	-.001	.009	-.007
7	.013	-.100	-.004	.004	-.001	.006	-.005
8	-.053	.100	-.002	.002	-.001	.004	-.003
9	-.074	.057	-.001	.001	-.001	.003	-.002
10							

X =	.774	.86C	.910
N	DELCPR	DELCPD	DELCPD
1	1.223	1.339	1.505
2	-.014	.040	-.029
3	-.016	.010	-.023
4	.054	-.044	.031
5	.050	-.005	-.019
6	.036	-.024	-.017
7	-.004	.012	-.002
8	-.004	.011	-.001
9			
10			

WALL NO.	GAP FRACTION	N	W1	W2	W3	W4	W5	W6	W10	W125	W150	
			CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1		1	.725	-.4	.833	1.066	-.4	.340	-1.087	-2.259	-.440	3.581
2		2	.963	-.081	.558	1.290	.027	.627	-1.085	.040	-.719	.479
3		3	-1.343	-.258	-.496	-1.340	-.027	-.027	-1.214	.436	-.530	.450
4		4	-.029	-.496	.293	-.064	-.505	-.011	-1.157	-.292	-.045	-.278
5		5	-.605	.293	.442	-.479	1.189	.877	-.063	.472	-.045	-.437
6		6	.535	.293	.442	-.479	1.189	.877	-.536	.838	-.294	.637
7		7	.133	.470	.770	.527	.334	.433	.471	.395	.051	.453
8		8	-.216	.158	.158	-.143	.225	.025	.108	.088	-.159	.113
9		9	-.033	.046	.046	-.049	.002	.002	-.165	.029	-.044	.041
10		10							.012	.029	.044	.041

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

\*\*\* STABILITY PARAMETER

\* XI = .8922 \*

MODE 1 -- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 51 ALPHA-MCL = 2.0 POP RUN-PT 11.07  
 RUN 11 ALPHA-PAR = .5 Q-COMP = 22769  
 POINT 11 SIGMA = -.45 V-REF = 200.80  
 COMPUTED FREQUENCY = 9.14, K = .0715  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE =  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	25.432	317.08	13.467	316.07	6.914	321.59	4.390	326.87	2.105	313.13	2.100	7.93
2	.591	119.74	.187	132.69	.562	112.74	.202	126.81	.227	157.35	.119	37.01
3	.384	126.83	.120	138.95	.376	122.18	.072	127.61	.098	127.10	.076	141.01
5	.964	203.44	.100	113.89	.076	185.34	.006	311.93	.008	146.55	.076	207.33
7	.180	283.03	.057	106.20	.034	130.94	.006	237.97	.111	127.79	.053	107.96
8	.131	285.63	.082	281.57	.048	191.59	.043	148.85	.088	321.29	.051	184.01
9	.114	117.84	.072	128.33	.052	27.10	.021	178.63	.033	25.29	.055	45.38
10	.093	142.71	.041	130.48	.031	153.06	.009	187.07	.023	313.32	.015	335.69

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	1.800	46.08	1.923	38.50	1.110	46.23	1.210	37.75	3.500	337.75	1.183	311.02
2	.127	160.65	.153	171.02	.072	123.49	.080	127.28	.177	188.65	.015	142.38
3	.038	230.16	.033	157.90	.040	137.79	.042	128.12	.063	252.12	.030	208.85
5	.055	169.90	.045	149.12	.009	138.99	.009	178.41	.062	197.41	.007	198.20
6	.066	141.39	.039	321.75	.009	198.20	.012	246.61	.011	197.41	.006	292.63
7	.046	154.13	.052	248.74	.012	206.27	.004	330.27	.029	246.61	.006	15.01
8	.017	188.23	.017	188.23	.004	330.27	.021	257.03	.019	258.65	.007	119.92
9	.012	158.05	.007	209.84	.016	274.43	.016	274.43	.024	258.65	.007	119.92
10												

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12
1	.6196	279.495	.469	283.40	.934	175.74	2.507	244.31	3.608	97.00		
2	.370	152.42	1.279	154.92	1.070	150.09	.986	160.26	.897	33.69		
3	.375	192.42	1.425	184.07	1.315	195.39	1.293	194.15	1.033	154.17		
5	.496	266.58	.509	262.79	1.537	271.10	1.476	277.61	1.152	193.97		
6	.119	118.41	1.282	111.97	1.024	121.10	.995	122.58	.814	264.16		
7	.696	27.69	1.332	29.49	.735	50.03	.614	39.99	.540	157.04		
8	.268	143.85	.267	122.27	.021	173.34	.193	149.05	.124	65.55		
10	.057	126.18	.049	2.68	.043	124.21	.031	66.40	.160	165.74		

\*\*\* STABILITY PARAMETER \*\*\*

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	1.800	46.08	1.923	38.50	1.110	46.23	1.210	37.75	3.500	337.75	1.183	311.02
2	.127	160.65	.153	171.02	.072	123.49	.080	127.28	.177	188.65	.015	142.38
3	.038	230.16	.033	157.90	.040	137.79	.042	128.12	.063	252.12	.030	208.85
5	.055	169.90	.045	149.12	.009	138.99	.009	178.41	.062	197.41	.007	198.20
6	.066	141.39	.039	321.75	.009	198.20	.012	246.61	.011	197.41	.006	292.63
7	.046	154.13	.052	248.74	.012	206.27	.004	330.27	.029	246.61	.006	15.01
8	.017	188.23	.017	188.23	.004	330.27	.021	257.03	.019	258.65	.007	119.92
9	.012	158.05	.007	209.84	.016	274.43	.016	274.43	.024	258.65	.007	119.92
10												



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCW PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 53 ALPHA-MCL = 2.0 PDP RUN.PI 11.09  
 RUN 11 ALPHA-BAR = .5 Q-COMP = 32646  
 POINT 13 ALPHA-SIGMA = -.5 V-REF = 200.42  
 COMPUTED FREQUENCY = 15.62, K = .1225  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	.012-UPPER		.062-UPPER		.148-UPPER		.261-UPPER		.392-UPPER		.530-UPPER		.661-UPPER	
M	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.044	140.02	0.653	153.22	2.354	177.19	1.817	215.23	2.819	256.88	3.192	255.09	3.272	259.05
2	1.044	140.02	1.033	204.46	.993	124.08	.351	298.01	1.107	299.98	.892	287.08	.942	287.08
3	1.044	140.02	1.033	204.46	.396	124.08	.351	298.01	.385	132.83	.254	170.13	.285	170.13
4	1.044	140.02	1.033	204.46	.306	133.93	.352	339.32	.392	169.38	.254	170.13	.421	193.92
5	1.044	140.02	1.033	204.46	.071	115.20	.089	117.41	.050	136.55	.076	122.30	.031	190.71
6	1.044	140.02	1.033	204.46	.119	116.71	.118	117.41	.110	136.19	.128	133.93	.041	321.92
7	1.044	140.02	1.033	204.46	.021	102.84	.023	118.98	.030	143.54	.025	130.99	.061	352.42
8	1.044	140.02	1.033	204.46	.034	108.13	.038	118.98	.032	157.10	.033	130.99	.041	352.42
9	1.044	140.02	1.033	204.46	.051	89.86	.050	91.88	.047	199.73	.052	109.71	.075	115.50
10	1.044	140.02	1.033	204.46	.051	89.86	.050	91.88	.047	199.73	.052	109.71	.075	115.50

X	.774-UPPER		.860-UPPER		.910-UPPER		.012-LOWER		.062-LOWER		.148-LOWER		.261-LOWER	
M	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	3.359	267.35	3.180	272.88	2.936	276.22	12.358	309.01	8.503	300.41	7.740	302.89	7.740	302.89
2	3.359	267.35	3.170	212.95	.165	109.40	.416	263.28	.551	126.55	.673	282.76	.673	282.76
3	3.359	267.35	3.170	212.95	.208	177.40	.396	186.20	.312	182.03	.281	186.32	.281	186.32
4	3.359	267.35	3.170	212.95	.413	153.64	.470	173.13	.376	134.79	.384	142.48	.384	142.48
5	3.359	267.35	3.170	212.95	.063	107.38	.069	112.27	.084	122.86	.087	108.99	.085	101.80
6	3.359	267.35	3.170	212.95	.103	129.40	.101	128.75	.095	158.17	.097	122.69	.095	122.69
7	3.359	267.35	3.170	212.95	.025	156.36	.022	171.70	.028	207.54	.029	218.90	.028	207.54
8	3.359	267.35	3.170	212.95	.042	113.36	.030	121.70	.033	257.54	.034	218.90	.032	207.54
9	3.359	267.35	3.170	212.95	.042	118.41	.030	121.70	.033	257.54	.034	218.90	.032	207.54
10	3.359	267.35	3.170	212.95	.042	118.41	.030	121.70	.033	257.54	.034	218.90	.032	207.54

X	.392-LOWER		.530-LOWER		.661-LOWER		.774-LOWER		.860-LOWER		.910-LOWER		.012-UPPER	
M	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.727	300.26	2.868	299.89	1.932	300.60	2.132	298.13	2.775	301.18	2.936	295.01	2.936	295.01
2	2.727	300.26	2.868	299.89	1.489	297.87	.906	288.64	.155	293.14	.384	295.01	.384	295.01
3	2.727	300.26	2.868	299.89	.701	194.29	.220	185.36	.184	182.66	.202	180.67	.202	180.67
4	2.727	300.26	2.868	299.89	.358	159.01	.419	155.22	.388	155.58	.361	155.78	.361	155.78
5	2.727	300.26	2.868	299.89	.033	128.59	.075	124.83	.080	107.53	.082	105.78	.082	105.78
6	2.727	300.26	2.868	299.89	.087	113.39	.077	117.99	.072	117.97	.062	119.86	.062	119.86
7	2.727	300.26	2.868	299.89	.015	54.28	.006	261.99	.012	270.97	.027	319.86	.027	319.86
8	2.727	300.26	2.868	299.89	.013	182.49	.004	181.39	.025	185.82	.026	179.65	.026	179.65
9	2.727	300.26	2.868	299.89	.013	182.49	.004	181.39	.025	185.82	.026	179.65	.026	179.65
10	2.727	300.26	2.868	299.89	.013	182.49	.004	181.39	.025	185.82	.026	179.65	.026	179.65

MODE 1 -- CENTFR BLADE DATA, WALL STATIONS

FILE 53 ALPHA-MCL = 2.0 POP RUN.PT 11.09  
 RUN 11 ALPHA-PAR = .5 Q-COMP = 32546  
 POINT 13 SIGMA = -45. V-REF = 200.42  
 COMPUTED FREQUENCY = 15.62, K = .1225

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	N	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI
1	16.853	-17.215	8.459	-9.430	4.994	-4.050	3.472	-2.123	2.012	.386	2.248	.591	1.605	1.550
2	-.655	.354	-.520	1.067	-.208	.119	-.197	.056	-.276	.183	.021	-.089	.151	-.122
3	-.297	-.085	-.269	.205	.205	.047	.077	.046	.191	.072	.014	.077	-.151	-.147
4	.217	-.187	-.157	-.107	-.091	-.098	-.050	-.116	.040	-.022	.018	-.059	.025	.028
5	.037	-.141	-.019	-.046	.018	-.026	.019	-.080	-.031	-.022	.048	.017	-.020	-.089
6	-.008	.061	-.012	.022	-.033	.011	-.026	.016	.058	-.031	.031	.018	-.036	-.013
7	-.005	.034	-.005	.026	.019	.017	-.015	.008	-.034	.013	-.050	-.018	-.052	-.020
8	-.002	.040	-.013	-.048	-.005	-.051	.000	-.033	-.000	.013	-.031	.038	-.041	-.038
9	-.006	-.019	.017	-.024	-.001	-.016	-.013	-.034	.002	.013	-.005	-.038	.011	-.042
10														

X	.774		.860		.910		.910		.910		.910		.910	
	N	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI
1	1.160	1.475	1.277	.802	.538	.791	1.048	-1.264	3.048	-1.264	3.048	-1.264	3.048	-1.264
2	-.070	.067	-.028	.053	.048	.054	-.116	.110	-.116	.110	-.116	.110	-.116	.110
3	.008	-.068	.040	-.006	-.020	.012	.080	-.073	.080	-.073	.080	-.073	.080	-.073
4	.002	.013	-.042	.002	.006	-.028	-.010	.056	-.010	.056	-.010	.056	-.010	.056
5	.005	.016	-.006	.011	-.009	.009	.021	-.042	.021	-.042	.021	-.042	.021	-.042
6	-.034	.008	-.036	.010	.024	.017	-.030	.006	-.030	.006	-.030	.006	-.030	.006
7	-.008	.017	-.010	.010	-.007	.017	.042	-.011	.042	-.011	.042	-.011	.042	-.011
8	-.008	-.017	-.010	-.010	-.001	-.010	-.010	.009	-.010	.009	-.010	.009	-.010	.009
9	.016	-.017	.017	-.019	.004	-.010	.010	-.029	.010	-.029	.010	-.029	.010	-.029
10														

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	.125		.125		.125		.125		.125		.125		.125	
	GAP FRACTION	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	.783	-3.325	1.077	-3.739	-4.316	1.165	-.855	-1.562	.237	.4106	.237	.4106	.237	.4106
2	.384	-1.091	.607	-1.044	.536	-1.387	.439	-1.075	.090	.423	.090	.423	.090	.423
3	-.090	.515	-.077	.194	-.293	.101	-.201	.449	-.172	.423	-.172	.423	-.172	.423
4	-.349	-.218	.460	-.250	.364	-.155	.349	.073	.307	.073	.307	.073	.307	.073
5	.064	-.042	-.041	.063	-.034	-.052	-.045	.113	.442	.075	.442	.075	.442	.075
6	.023	-.097	.061	-.063	.041	-.017	.045	.102	.114	.140	.114	.140	.114	.140
7	-.028	.003	-.037	.040	.034	-.008	.030	.106	.011	.039	.011	.039	.011	.039
8	.018	-.028	.024	-.023	.029	.036	.030	-.026	.049	.017	.049	.017	.049	.017
9	.018	.051	.024	.007	-.011	.103	-.027	.070	.034	.036	.034	.036	.034	.036
10														

\*\*\* STABILITY PARAMETER

WALL NO.	.125		.125		.125		.125		.125		.125		.125	
	GAP FRACTION	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	.701	-.863	.701	-.863	.701	-.863	.701	-.863	.701	-.863	.701	-.863	.701	-.863
2	.045	-.046	.045	-.046	.045	-.046	.045	-.046	.045	-.046	.045	-.046	.045	-.046
3	.033	-.013	.033	-.013	.033	-.013	.033	-.013	.033	-.013	.033	-.013	.033	-.013
4	.014	-.005	.014	-.005	.014	-.005	.014	-.005	.014	-.005	.014	-.005	.014	-.005
5	.002	-.002	.002	-.002	.002	-.002	.002	-.002	.002	-.002	.002	-.002	.002	-.002
6	.001	-.002	.001	-.002	.001	-.002	.001	-.002	.001	-.002	.001	-.002	.001	-.002
7	.000	-.000	.000	-.000	.000	-.000	.000	-.000	.000	-.000	.000	-.000	.000	-.000
8	.000	-.000	.000	-.000	.000	-.000	.000	-.000	.000	-.000	.000	-.000	.000	-.000
9	.000	-.000	.000	-.000	.000	-.000	.000	-.000	.000	-.000	.000	-.000	.000	-.000
10	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 53 ALPHA-MCL = 2.0 POP RUN.PT 11.09  
 RUN 11 ALPHA-BAR = .5 Q-COMP = 32646  
 POINT 13 SIGMA = -.45 V-REF = 200.42  
 COMPUTED FREQUENCY = 15.62, K = .1225

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	24	.091	314.39	12.667	311.97	6.430	320.96	4.069	328.55	2.448	146.86	2.125	18.79
2	24	.091	151.54	11.167	311.97	6.430	150.14	4.069	164.06	2.448	146.86	2.125	18.79
3	24	.091	211.92	11.167	311.97	6.430	12.81	4.069	31.02	2.448	20.77	2.125	18.79
4	24	.091	211.92	11.167	311.97	6.430	236.26	4.069	248.69	2.448	20.77	2.125	18.79
5	24	.091	211.92	11.167	311.97	6.430	161.67	4.069	257.79	2.448	20.77	2.125	18.79
6	24	.091	211.92	11.167	311.97	6.430	161.67	4.069	359.65	2.448	20.77	2.125	18.79
7	24	.091	211.92	11.167	311.97	6.430	161.20	4.069	148.34	2.448	20.77	2.125	18.79
8	24	.091	211.92	11.167	311.97	6.430	161.20	4.069	151.29	2.448	20.77	2.125	18.79
9	24	.091	211.92	11.167	311.97	6.430	161.20	4.069	151.29	2.448	20.77	2.125	18.79
10	24	.091	211.92	11.167	311.97	6.430	265.53	4.069	270.22	2.448	20.77	2.125	18.79

X	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	1	.877	51.80	1.508	32.11	.957	55.75	3.300	337.88	1.112	309.09	1.112	309.09
2	1	.071	173.94	.060	118.19	.072	48.74	1.108	136.64	.064	134.90	.064	134.90
3	1	.060	173.94	.060	118.19	.023	147.94	.057	42.56	.019	222.66	.019	222.66
4	1	.033	275.88	.042	177.47	.016	189.91	.021	262.97	.006	276.35	.006	276.35
5	1	.017	18.65	.012	120.63	.009	171.87	.021	373.73	.002	70.98	.002	70.98
6	1	.035	186.65	.037	164.71	.024	175.82	.032	159.65	.003	265.59	.003	265.59
7	1	.030	192.35	.025	211.06	.017	271.54	.030	251.19	.001	227.12	.001	227.12
8	1	.019	345.37	.014	224.82	.016	263.56	.023	280.94				
9	1	.017	345.37	.014	224.82	.016	263.56	.023	280.94				
10	1	.017	345.37	.014	224.82	.016	263.56	.023	280.94				

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1	3	.416	263.24	3	.891	286.07	4	.471	164.89	1	.781	241.32	
2	1	1	.523	99.86	1	.207	300.18	1	.161	291.11	1	.126	277.11	
3	1	1	.523	99.86	1	.207	300.18	1	.161	291.11	1	.126	277.11	
4	1	1	.523	99.86	1	.207	300.18	1	.161	291.11	1	.126	277.11	
5	1	1	.523	99.86	1	.207	300.18	1	.161	291.11	1	.126	277.11	
6	1	1	.523	99.86	1	.207	300.18	1	.161	291.11	1	.126	277.11	
7	1	1	.523	99.86	1	.207	300.18	1	.161	291.11	1	.126	277.11	
8	1	1	.523	99.86	1	.207	300.18	1	.161	291.11	1	.126	277.11	
9	1	1	.523	99.86	1	.207	300.18	1	.161	291.11	1	.126	277.11	
10	1	1	.523	99.86	1	.207	300.18	1	.161	291.11	1	.126	277.11	

\*\*\* STABILITY PARAMETER

W	XI
1	.832
2	.832
3	.832
4	.832
5	.832
6	.832
7	.832
8	.832
9	.832
10	.832



ORIGINAL PAGE IS  
OF POOR QUALITY

QCHT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

MODE 1 --  
FILE 55 ALPHA-MCL = 2.0 POP RUN-PT 11.11  
RUN 11 ALPHA-PAR = .5 O-COMP = 32465  
POINT 5 SIGMA = .45 V-REF = 199.85  
COMPUTED FREQ = 19.26, K = .1514

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-9	.436	7.950	-3.408	-2.680	-2.042	-2.185	-2.077
2	-153	.494	.302	.278	.216	.126	.402	.341
3	.373	.059	.072	.176	.133	.181	.126	.054
4	.159	.130	.072	.107	.140	.196	.189	.163
5	.210	.192	.072	.068	.072	.055	.038	.045
6	.207	.196	.072	.244	.251	.039	.256	.193
7	.006	.011	.016	.028	.038	.062	.031	.048
8	.000	.021	.034	.001	.009	.018	.015	.000
9	.014	.021	.022	.004	.009	.011	.001	.014
10	.014	.021	.011	.003	.006	.011	.012	.053

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-1	.549	-2.247	-1.339	5.927	2.404	1.139	.461
2	.058	.128	.067	.357	.823	.583	.493	.444
3	.217	.000	.105	.069	.211	.299	.245	.047
4	.051	.009	.036	.222	.395	.047	.063	.215
5	.201	.080	.011	.065	.016	.047	.153	.073
6	.051	.046	.073	.179	.184	.196	.013	.047
7	.027	.047	.046	.059	.020	.046	.015	.054
8	.007	.031	.045	.027	.040	.029	.036	.028
9	.006	.033	.039	.004	.029	.004	.030	.041
10	.005	.005	.008	.004	.006	.004	.001	.008

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	-1	.616	-1.268	.502	.579	.296	.722
2	.400	.098	.161	.264	.429	.369	.318
3	.053	.036	.065	.109	.082	.068	.096
4	.201	.038	.071	.088	.211	.203	.206
5	.067	.036	.026	.074	.002	.173	.054
6	.149	.054	.064	.132	.043	.155	.160
7	.022	.042	.052	.047	.061	.040	.037
8	.011	.022	.032	.034	.024	.035	.030
9	.014	.032	.043	.041	.024	.003	.002
10	.031	.031	.008	.016	.036	.014	.011

ORIGINAL PAGE IS  
OF POOR QUALITY.

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 55 ALPHA-MCL = 2.0 PDR RUN.PI 11.11  
 RUN 11 ALPHA-BAP = 4.5 Q-COMP = 32465  
 POINT 15 SIGMA = 45. V-REF = 199.85  
 COMPUTED FREQUENCY = 19.26, K = .1514

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	.012-UPPER		.062-UPPER		.148-UPPER		.261-UPPER		.392-UPPER		.510-UPPER		.661-UPPER												
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI											
1	12	338	139	99	5	745	151	133	3	513	165	97	2	651	219	63	3	017	223	58	3	125	228	35	
2		317	252	71		394	229	30		352	217	80		299	244	98		410	191	90		443	229	82	
3		156	196	87		234	194	72		188	156	123		224	216	12		188	236	81		443	234	82	
4		205	219	28		078	150	03		123	216	123		204	164	23		203	157	91		169	214	93	
5		156	110	64		118	217	63		082	208	24		061	205	13		284	217	04		031	206	97	
6		290	138	66		244	170	71		254	188	85		267	173	43		284	191	04		202	196	77	
7		103	110	86		049	153	91		047	171	98		037	171	98		061	331	09		011	122	19	
8		013	270	20		022	279	71		032	190	36		037	185	60		048	108	17		054	122	19	
9		026	235	63		011	285	69		015	293	35		012	334	35		016	319	50		054	255	56	
10																									

N	.077-UPPER		.060-UPPER		.012-UPPER		.062-LOWER		.148-LOWER		.261-LOWER														
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI													
1	2	379	375	21	2	412	338	79	10	192	398	07	2	939	293	73	7	478	293	73	1	973	282	27	
2		156	235	90		125	237	28		220	343	97		046	330	00		300	239	90		061	282	27	
3		217	170	58		066	188	45		395	196	71		070	176	36		247	191	39		029	200	03	
4		051	201	71		202	201	12		203	229	51		054	217	28		057	215	22		082	152	10	
5		053	120	40		066	124	61		024	230	97		054	217	28		057	215	22		054	152	10	
6		033	320	53		055	285	64		057	134	34		053	122	74		043	332	93		057	150	73	
7		008	320	53		009	301	01		067	327	65		046	302	74		052	304	66		058	314	73	
10																									

N	.392-LOWER		.530-LOWER		.661-LOWER		.774-LOWER		.860-LOWER		.910-LOWER													
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI												
1	1	245	269	20	1	190	255	74	1	252	256	33	1	291	235	97	1	252	256	33	1	291	235	97
2		473	199	81		457	200	05		969	233	32		941	193	82		107	194	61		110	209	78
3		205	190	81		241	197	08		123	228	18		238	230	33		207	191	44		222	201	06
4		076	151	82		097	164	05		078	181	02		073	181	58		073	181	58		063	191	79
5		060	151	82		080	160	30		165	184	02		170	181	58		073	181	58		063	191	79
6		019	140	97		068	178	30		077	152	69		079	155	46		079	155	46		063	191	79
7		015	199	79		050	139	41		040	143	69		039	151	69		039	151	69		039	151	69
8		011	273	37		044	180	04		036	173	40		029	164	44		029	164	44		029	164	44
10						010	311	16		016	307	59												

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE I -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 55 ALPHA-MCL = 2.0 POP RUN.PI 11.11  
RUN 11 ALPHA-RAP = 5.0 Q-COMP = 32465  
POINT SIGMA = -45.0 V-DEF = 199.85

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.052		.148		.261		.392		.530		.561	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	15.813	1.470	7.434	4.574	3.141	-1.764	2.025	.426	1.892	.926	1.574	1.917		
2	-.810	.836	-.329	-.215	-.168	.090	-.273	.172	-.026	-.077	-.054	-.047		
3	.586	-.053	-.158	.156	.085	.043	.117	.096	.005	.070	-.055	.106		
4	-.143	-.054	-.277	-.053	-.075	-.141	-.005	-.062	.043	-.147	-.060	-.165		
5	.034	-.007	.045	-.005	-.001	-.079	-.012	.004	-.048	.064	-.060	.017		
6	.057	-.044	.020	-.004	.110	-.088	.111	.004	.038	-.004	.020	.021		
7	-.039	.051	-.031	-.016	-.030	.016	.004	.012	-.023	.035	-.034	.031		
8	.021	-.010	-.016	-.026	-.037	-.005	-.024	.003	-.027	.016	-.030	.029		
9			-.000	-.002	.002	.001	.010	-.005	.005	-.003	-.003	.020		
10														

X	.774		.860		.910		.910		.910		.910		.910	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	.971	1.470	.957	.408	.702	2.749	-1.040	1.040	1.892	.926	1.574	1.917		
2	-.046	.037	-.021	.027	-.025	-.123	.121	.121	-.026	-.077	-.054	-.047		
3	.014	-.059	.040	-.016	.038	.070	-.058	.058	.005	.070	-.055	.106		
4	-.004	-.004	-.012	.001	-.013	-.010	-.097	.097	.043	-.147	-.060	-.165		
5	.004	.038	.033	.020	.031	.069	-.035	.035	.038	.064	-.060	.017		
6	-.005	.015	-.007	.022	.008	-.023	.008	.008	-.023	.035	-.034	.031		
7	-.005	-.022	-.007	-.003	-.014	.015	-.015	.004	.005	-.003	-.003	.003		
8	-.004	-.002	-.010	-.008	-.002	-.003	-.002	.004	.005	-.003	-.003	.003		
9														
10														

WALL NO. GAP FRACTION	.125		.000		.125		.500		1.125		.8215	
	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG
1	1	-1.089	-1.962	1	-.986	-2.196	1	-2.269	-1.276	1	4.584	4.584
2	2	-.600	-1.125	2	-.421	-1.158	2	-.430	-.232	2	-.042	-.042
3	3	-.276	-.051	3	-.122	.021	3	-.192	-.090	3	-.039	-.039
4	4	-.077	.038	4	-.085	.105	4	-.224	.035	4	-.265	-.265
5	5	-.257	-.087	5	-.085	-.147	5	-.107	.053	5	-.087	-.087
6	6	-.050	.022	6	-.253	-.134	6	-.296	-.072	6	-.100	-.100
7	7	-.019	.046	7	.020	.056	7	.015	.031	7	-.081	-.081
8	8	-.022	-.046	8	-.007	-.037	8	.028	.035	8	-.022	-.022
9	9	.001	-.028	9	-.007	-.037	9	.028	.035	9	-.005	-.005
10	10	.001	-.028	10	-.005	-.014	10	.017	-.012	10	-.021	-.021

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

\*\*\* STABILITY PARAMETER

\*\*\* XI = .8215 \*\*\*

MODE 1 -- CENTER PERIODICITY TEST  
OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 55 ALPHA-MCL = 2.0 POP RUN-PT 11.11  
RUN 11 ALPHA-BAR = .5 Q-COMP = 32465  
POINT 15 SIGMA = -.45 V-REF = 199.85  
COMPUTED FREQUENCY = 19.26, K = .1514

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	22.290	313.79	11.948	308.48	5.775	321.90	3.602	330.69	2.070	11.87	2.137	26.08
2	1.072	128.70	112.00	112.00	283	139.47	190	151.70	323	147.77	0.010	251.17
3	5.589	105.61	275	112.80	160	13.16	096	126.68	092	139.35	0.070	286.00
4	55.00	105.61	191.12	112.80	177	218.71	160	242.18	093	268.90	0.153	254.52
5	309	276.81	132	87.02	106	87.02	079	90.72	063	100.85	0.077	123.96
6	101	304.14	194	314.46	129	314.46	141	321.19	111	22.07	0.088	159.93
7	062	303.25	026	348.43	017	160.28	033	152.41	013	289.73	0.052	137.13
8	042	314.40	026	309.03	033	320.71	045	184.29	024	217.89	0.026	209.53
9	027	39.52	009	93.21	004	129.14	002	27.90	012	208.30	0.006	153.40
10												

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	061	56.56	1.281	41.66	030	59.85	030	330.69	2.939	339.27	1.042	307.98
2	037	160.40	021	191.65	037	121.77	190	126.68	092	139.35	0.029	126.68
3	029	256.57	018	353.04	041	292.53	096	126.68	119	234.37	0.024	191.65
4	029	162.17	018	226.25	036	276.54	160	242.18	093	268.90	0.025	169.81
5	016	108.60	014	48.26	023	57.03	141	321.19	077	322.21	0.022	285.83
6	006	214.10	027	262.52	015	159.41	033	152.41	018	179.68	0.003	136.34
7	009	296.53	010	346.33	008	342.46	045	184.29	023	345.07	0.004	136.34
8									006	204.80	0.001	771.62
9												
10												

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.244	240.96	2.591	247.63	5.856	158.90	2.322	192.23	1.761	105.55	1.125	758	105.55
2	613	191.48	450	200.55	245	232.45	489	208.33	227	209.20	761	143.77	143.77
3	144	204.02	260	156.19	139	150.07	227	209.20	227	209.20	345	220.27	220.27
4	272	191.51	113	156.19	250	235.97	119	153.69	302	120.85	345	196.85	196.85
5	272	198.63	286	207.93	359	182.15	305	173.25	390	158.29	345	196.85	196.85
6	037	15.61	051	67.58	059	108.75	035	113.71	022	187.62	022	187.62	187.62
7	046	194.50	061	113.58	019	32.90	045	109.08	022	187.62	022	187.62	187.62
8	050	194.12	031	283.79	019	286.30	045	109.08	022	187.62	022	187.62	187.62
9	028	272.08	015	251.36	016	305.85	021	326.17	040	301.31	040	301.31	301.31
10													

\*\*\* STABILITY PARAMETER

W	XI
1	0.215
2	0.215
3	0.215
4	0.215
5	0.215
6	0.215
7	0.215
8	0.215
9	0.215
10	0.215

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 45 ALPHA-MCL = 2.6 POP RUN-PI 19.06  
 POINT 10 ALPHA-PAR = 0.5 G-COMP = 32275  
 1 SIGMA = 0.0 V-REF = 199.25  
 COMPUTED FREQUENCY = 9.07, K = .0715  
 REAL & IMAGINARY

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL	.062-UPPER CPIMAG	.148-UPPER CPREAL	.261-UPPER CPIMAG	.392-UPPER CPREAL	.530-UPPER CPIMAG	.661-UPPER CPREAL	.800-UPPER CPIMAG	.910-UPPER CPREAL	.012-LOWER CPREAL	.062-LOWER CPIMAG	.148-LOWER CPREAL	.261-LOWER CPIMAG	.392-LOWER CPREAL	.530-LOWER CPIMAG	.661-LOWER CPREAL	.800-LOWER CPIMAG	.910-LOWER CPREAL
1	1	-10.226	1.694	-.052	-.718	-1.193	-1.097	.506	-1.746	.782	-1.919	1.301	-2.011	1.493	1.185	2.404	-1.697	1.981	1.465
2	2	-.767	1.017	1.378	1.137	-.346	1.188	-.282	1.377	1.370	1.422	1.078	1.247	1.077	1.602	1.444	1.061	1.078	1.078
3	3	-.094	1.435	1.499	1.389	-.094	1.428	1.017	1.472	1.425	1.498	1.067	1.590	1.110	1.613	1.079	1.078	1.078	1.078
4	4	-.054	1.168	1.81	1.073	-.086	1.192	-.098	1.575	1.067	1.222	1.116	1.449	-.272	1.131	1.146	1.146	1.146	1.146
5	5	-.356	1.222	1.175	1.173	-.246	1.137	-.461	1.131	1.198	1.198	1.198	1.198	-.278	1.131	1.131	1.131	1.131	1.131
6	6	-.156	1.177	1.127	1.117	-.157	1.159	-.186	1.164	1.154	1.154	1.154	1.154	-.198	1.154	1.154	1.154	1.154	1.154
7	7	-.037	1.037	1.001	1.022	-.027	1.002	-.038	1.038	1.038	1.038	1.038	1.038	-.031	1.038	1.038	1.038	1.038	1.038
8	8	1.593	-1.937	-1.945	-1.860	1.567	-3.715	6.247	-3.800	2.972	-1.893	2.404	-1.697	1.493	1.185	2.404	-1.697	1.981	1.465
9	9	1.408	1.573	1.627	1.554	1.137	1.490	1.125	1.493	1.078	1.422	1.078	1.422	1.078	1.602	1.444	1.061	1.078	1.078
10	10	1.105	1.182	1.175	1.161	-.063	1.202	-.067	1.222	1.067	1.222	1.116	1.449	-.272	1.131	1.146	1.146	1.146	1.146
11	11	1.274	1.138	1.157	1.173	-.219	1.061	-.198	1.141	1.198	1.198	1.198	1.198	-.217	1.141	1.141	1.141	1.141	1.141
12	12	1.164	1.184	1.196	1.190	-.084	1.136	-.056	1.043	1.056	1.056	1.056	1.056	-.035	1.056	1.056	1.056	1.056	1.056
13	13	1.022	1.011	1.007	1.014	-.007	1.066	-.024	1.042	1.024	1.024	1.024	1.024	-.010	1.024	1.024	1.024	1.024	1.024

X	N	.192-LOWER CPREAL	.530-LOWER CPIMAG	.661-LOWER CPREAL	.774-LOWER CPIMAG	.860-LOWER CPREAL	.910-LOWER CPIMAG
1	1	1.829	-1.433	-1.395	-1.300	1.680	-1.518
2	2	-.329	1.355	1.277	1.485	1.481	1.274
3	3	-.014	1.175	1.088	1.619	1.066	1.587
4	4	-.219	1.155	1.071	1.636	1.066	1.587
5	5	-.239	1.016	1.008	1.188	1.066	1.587
6	6	-.154	1.009	1.008	1.010	1.066	1.587
7	7	-.021	1.009	1.007	1.026	1.066	1.587
8	8	1.008	1.009	1.005	1.026	1.066	1.587
9	9	1.008	1.009	1.005	1.026	1.066	1.587
10	10	1.008	1.009	1.005	1.026	1.066	1.587

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE NS ALPHA-MCL = 2.0 PDP RUN,PT 10.06  
 RUN IO ALPHA-BAR = .5 Q-COMP = .32275  
 POINT I SIGMA = 0. V-REF = 199.25  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*  
 9.07. K = .0715

M	.012-UPPER		.062-UPPER		.148-UPPER		.241-UPPER		.392-UPPER		.510-UPPER		.661-UPPER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	10.364	170.59	4.574	180.69	2.529	196.43	1.620	222.60	1.817	286.17	2.872	292.18	2.395	302.91
2	1.401	182.29	1.357	157.36	1.696	157.33	1.696	157.33	1.478	226.84	1.931	156.10	1.925	155.22
3	1.485	191.75	1.580	98.14	1.537	104.16	1.537	104.16	1.783	55.34	1.623	102.24	1.584	94.47
4	1.777	197.83	1.298	119.63	1.241	150.86	1.241	150.86	1.292	112.25	1.311	118.44	1.219	120.32
5	1.420	145.02	1.358	149.20	1.247	151.86	1.247	151.86	1.266	159.77	1.278	154.33	1.272	151.68
6	1.270	223.30	1.335	216.72	1.224	235.44	1.224	235.44	1.226	221.39	1.249	227.39	1.244	223.87
7	1.067	315.16	1.031	111.16	1.027	139.68	1.027	139.68	1.026	102.82	1.047	144.07	1.024	138.89
8	1.053	315.16							1.050	40.44	1.034	25.87	1.024	38.05

M	.774-UPPER		.860-UPPER		.910-UPPER		.012-LOWER		.062-LOWER		.148-LOWER		.261-LOWER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.508	309.44	2.540	312.54	2.562	313.45	9.338	336.55	7.309	328.68	3.524	327.51	2.938	324.90
2	1.489	156.10	1.546	147.66	1.495	147.89	1.867	142.16	1.874	149.56	1.456	144.07	1.455	147.10
3	1.593	150.24	1.578	99.53	1.579	95.11	1.621	91.42	1.591	93.15	1.743	94.57	1.571	100.84
4	1.207	118.79	1.207	122.21	1.178	115.72	1.212	107.45	1.232	106.78	1.568	97.09	1.278	114.37
5	1.272	119.42	1.201	147.97	1.201	145.83	1.245	146.94	1.260	152.13	1.266	146.02	1.278	144.91
6	1.277	118.72	1.249	158.36	1.249	155.63	1.170	133.99	1.241	135.22	1.218	154.82	1.238	142.98
7	1.037	227.30	1.034	221.65	1.029	157.97	1.086	211.45	1.058	215.80	1.036	221.26	1.023	232.23
8	1.024	126.34	1.020	120.46	1.029	129.77	1.086	84.15	1.048	60.34	1.027	168.95	1.023	164.72

M	.392-LOWER		.530-LOWER		.661-LOWER		.774-LOWER		.860-LOWER		.910-LOWER			
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI		
1	2.371	322.08	2.541	327.24	1.840	319.30	2.369	319.74	2.265	317.90	2.193	320.99	2.193	320.99
2	1.434	153.99	1.491	147.27	1.475	125.08	1.530	156.23	1.568	153.09	1.507	151.16	1.507	151.16
3	1.537	150.24	1.524	98.53	1.524	96.67	1.545	100.59	1.568	100.80	1.542	97.48	1.542	97.48
4	1.263	104.15	1.270	111.91	1.270	116.92	1.216	109.62	1.233	109.71	1.196	118.48	1.196	118.48
5	1.240	156.13	1.240	144.04	1.240	141.13	1.216	143.32	1.233	146.60	1.218	140.29	1.218	140.29
6	1.022	227.28	1.024	223.18	1.028	226.98	1.039	223.32	1.027	223.14	1.028	221.61	1.028	221.61
7	1.016	127.91	1.024	120.19	1.028	119.55	1.039	131.08	1.027	146.03	1.021	159.90	1.021	159.90



MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 45 ALPHA-MCL = 2.0 PDP RUN-PI 10.06  
 RUN 10 ALPHA-BAR = 0.5 O-COMP = 32275  
 POINT SIGMA = 0. V-REF = 199.25  
 COMPUTED FREQUENCY = 9.07, K = .0715  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	19.556	343.94	11.416	340.84	5.534	347.74	3.645	350.64	1.369	352.22	1.352	352.74
2	.296	88.12	.165	125.35	.137	107.27	.069	121.35	.151	252.12	.116	120.54
3	.420	68.00	.262	28.44	.093	20.82	.075	29.92	.156	228.55	.042	170.16
4	.035	105.51	.101	63.78	.028	93.30	.032	112.17	.047	267.07	.029	107.38
5	.175	127.72	.042	79.82	.016	73.64	.012	310.62	.054	305.80	.021	335.62
6	.139	217.48	.075	304.65	.037	356.74	.006	277.85	.048	229.36	.063	44.81
7	.068	171.73	.066	205.30	.039	204.35	.022	170.30	.031	209.66	.010	177.81
8	.152	196.91	.066	199.42	.042	242.99	.012	291.47	.023	229.45	.041	240.16
9	.107	106.57	.043	99.81	.029	137.41	.025	132.56	.036	210.99	.016	168.30
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X	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	.460	62.19	.440	103.75	.403	96.85	.277	353.08	2.717	353.08	.966	341.66
2	.095	215.80	.048	251.68	.031	218.14	.014	83.25	.030	83.25	.016	117.46
3	.054	104.42	.031	255.26	.015	106.23	.021	126.75	.021	126.75	.022	119.13
4	.033	110.92	.057	351.81	.017	292.28	.019	81.29	.021	81.29	.006	66.47
5	.034	185.73	.015	354.61	.027	279.92	.024	316.54	.019	316.54	.003	119.66
6	.033	265.06	.045	174.02	.020	77.65	.021	193.86	.023	193.86	.007	212.54
7	.011	62.89	.026	319.53	.013	276.99	.017	254.86	.015	254.86	.002	182.05
8	.010	194.25	.009	307.37	.007	152.77	.017	156.10	.017	156.10	.004	109.72
9												
10												

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.069	289.90	2.712	290.68	4.773	187.98	1.517	49.87	3.375	188.64		
2	.582	188.50	.615	155.89	2.474	165.83	2.148	146.67	1.517	146.67		
3	.795	56.33	.651	88.07	2.243	55.79	.721	56.50	1.862	170.81		
4	.248	114.42	.279	99.16	.325	97.43	.284	97.58	1.596	109.84		
5	.414	114.85	.392	145.11	.366	115.43	.354	112.00	.161	108.12		
6	.301	153.95	.347	358.96	.335	151.15	.327	151.09	.392	146.72		
7	.044	212.54	.113	148.46	.031	217.08	.267	228.22	.267	228.22		
8	.029	149.58	.077	353.92	.013	21.87	.032	139.01	.080	176.82		
9												
10												

\*\*\* STABILITY PARAMETER

W1 = .3039  
 W2 =  
 W3 =  
 W4 =  
 W5 =  
 W6 =



ORIGINAL FACE IS  
OF POOR QUALITY

MODE 1 --- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 47 ALPHA-MCL = 2.0 PDP RUN, PI 10.08  
RUN 10 ALPHA-BAP = .5 0-COMP = 32.683  
POINT 3 SIGMA = 0. V-REF = 200.47  
COMPUTED FREQUENCY = 15.44, K = .1210

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.198-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-9	.613	2.310	-.292	-.1264	.284	.439	1.016
2	-.002	-.002	-.002	-.049	.524	.679	.109	-.199
3	.060	-.021	-.021	-.007	.219	.299	.220	-.309
4	.040	-.075	-.083	-.076	-.239	.462	.156	-.215
5	-.070	-.021	-.042	-.028	-.641	-.042	-.031	-.028
6	-.021	-.021	-.021	-.033	-.028	.101	.051	-.028
7	-.021	-.021	-.021	-.033	-.028	.101	.051	-.028
8	-.021	-.021	-.021	-.033	-.028	.101	.051	-.028
9	-.021	-.021	-.021	-.033	-.028	.101	.051	-.028
10	-.021	-.021	-.021	-.033	-.028	.101	.051	-.028

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.198-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	1.220	-.094	1.384	1.303	7.644	5.290	2.564	1.976
2	.605	-.077	.642	.636	.570	.509	.128	.573
3	.209	-.059	.295	.279	.347	.356	.129	.261
4	-.114	-.105	.237	.208	.148	.205	.125	.223
5	-.032	-.149	-.141	.158	.001	.009	.174	-.024
6	-.037	-.037	-.084	.023	.050	-.020	.026	-.024
7	-.037	-.037	-.084	.023	.050	-.020	.026	-.024
8	-.037	-.037	-.084	.023	.050	-.020	.026	-.024
9	-.037	-.037	-.084	.023	.050	-.020	.026	-.024
10	-.037	-.037	-.084	.023	.050	-.020	.026	-.024

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1.413	.010	1.555	.872	1.276	1.165	1.174
2	.242	-.028	.288	.237	.238	.241	.032
3	-.074	-.126	.261	.134	.233	.200	.032
4	-.074	-.157	.106	.187	.177	.110	.032
5	-.069	-.089	.015	.004	.006	.111	.032
6	-.069	-.089	.015	.004	.006	.111	.032
7	-.069	-.089	.015	.004	.006	.111	.032
8	-.069	-.089	.015	.004	.006	.111	.032
9	-.069	-.089	.015	.004	.006	.111	.032
10	-.069	-.089	.015	.004	.006	.111	.032

MODE 1 -- CENTER PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE #7 ALPHA-MCL = 2.0 PDP RUN.PT 10.08  
 RUN 10 ALPHA-BAR = .5 Q-COMP = 32663  
 POINT 13 SIGMA = 0. V-REF = 200.47  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	9	.886	166.49	.410	106.29	1.282	170.40	.391	316.66	.531	348.91
2	402	359.45	354.48	.539	354.76	.527	354.05	.671	313.13	.348	350.39
3	.086	313.85	352.52	.192	357.83	.219	2.75	.302	351.74	.295	3.45
4	.348	347.58	342.84	.268	343.10	.253	341.23	.273	343.67	.757	331.46
5	.088	208.28	121.97	.057	107.86	.118	110.06	.166	119.53	.179	121.28
6	.029	314.36	318.93	.032	298.05	.043	309.94	.030	296.48	.052	312.58
7	.148	102.27	115.99	.114	126.55	.115	138.04	.114	152.94	.115	153.92
8	.047	80.45	116.84	.018	133.73	.011	130.55	.036	125.41	.010	154.16
9	.065	144.36	132.17	.047	132.43	.047	130.69	.036	125.41	.047	119.14
10	.045	145.60	150.12	.035	158.65	.036	157.01	.034	174.00	.032	182.63

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	.233	355.65	1.384	354.62	7.785	349.09	5.578	341.50	2.565	346.02
2	.291	311.67	301.11.55	.282	327.71	.330	309.94	.356	336.94	.283	331.95
3	.233	337.35	330.67	.214	321.46	.252	89.79	.240	328.82	.249	329.87
4	.187	327.01	321.46	.033	324.81	.052	343.39	.039	301.56	.121	346.14
5	.098	157.71	156.92	.088	145.25	.121	192.11	.098	170.17	.066	170.05
6	.014	206.05	227.92	.014	222.65	.010	284.53	.011	256.07	.007	182.72
7	.046	182.83	118.74	.048	179.45	.007	318.14	.020	203.07	.025	174.93
8	.029	182.83	118.74	.028	179.45	.015	239.41	.011	203.23	.012	174.93
9	.029	182.83	118.74	.028	179.45	.015	239.41	.011	203.23	.012	174.93
10	.029	182.83	118.74	.028	179.45	.015	239.41	.011	203.23	.012	174.93

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	.471	36.19	1.677	21.96	1.408	24.97	1.237	19.71	1.325	27.95
2	.540	36.69	357.27	.359	358.68	.628	352.09	.568	351.95	.636	357.06
3	.249	329.83	332.77	.319	326.60	.280	6.86	.241	326.19	.232	327.47
4	.174	332.39	119.69	.217	127.17	.217	125.30	.179	128.19	.209	130.57
5	.073	157.01	157.77	.068	152.27	.092	154.13	.080	148.03	.045	151.53
6	.008	214.20	158.17	.002	145.17	.012	147.00	.007	148.88	.010	151.53
7	.028	174.18	120.92	.029	178.06	.012	261.84	.007	279.76	.013	187.39
8	.018	174.18	120.92	.023	180.06	.012	120.87	.026	121.88	.033	159.82
9	.018	174.18	120.92	.023	180.06	.012	120.87	.026	121.88	.033	159.82
10	.018	174.18	120.92	.023	180.06	.012	120.87	.026	121.88	.033	159.82

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 47 ALPHA-MCL = 2.0 PDP RUN.PT 10.08  
 RUN 10 ALPHA-BAR = .5 O-COMP = 32663  
 POINT 3 ALPHA-SIGMA = 0. V-REF = 200.47  
 COMPUTED FREQUENCY = 15.44, K = .1210

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	N	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI
1	17	.257	-3.263	9.574	-.018	-.016	-.468	3.240	1.129	.678	1.116	.823	-.144	1.035
2		.167	-.106	.197	.034	.090	.079	.043	-.046	-.124	.134	.018	-.118	.084
3		.192	-.102	.157	.044	.041	.027	.017	.031	-.072	-.006	.033	-.072	.054
4		.078	-.284	.022	.142	-.026	.098	-.047	-.014	-.049	.026	-.033	-.052	.099
5		.030	-.056	.004	.100	.008	.043	-.004	.034	.018	-.019	.036	-.046	.026
6		.087	-.170	.009	.100	.017	.076	-.000	.034	.023	-.021	.008	.031	.015
7		.057	-.042	.023	.033	.006	.013	.006	.014	-.003	.014	-.007	.009	.004
8		.039	-.039	.022	-.023	.021	-.012	.017	-.012	-.002	.008	-.003	.007	.001
9														
10														

X	.77%		.850		.910		.910		.910		.910		.910	
	N	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI
1		.046	.684	-.219	-.033	.413	.558	2.352	1.229	.839	1	.839	-.219	.218
2		.016	-.025	.029	-.029	.029	.023	.012	-.026	.018	2	.018	-.006	.006
3		.025	-.059	.030	.004	.005	.013	.012	-.039	.008	3	.008	-.002	.002
4		.012	-.027	.018	.007	.005	.005	.007	-.046	.001	4	.001	-.002	.002
5		.037	.033	.015	.005	.035	.010	.007	.025	.002	5	.002	-.001	.001
6		.011	-.013	.015	.004	.010	.010	.006	-.036	.004	6	.004	-.001	.001
7		.044	.036	.009	.002	.002	.002	.009	-.009	.001	7	.001	-.001	.001
8		.002	-.006	.002	.002	.016	.006	.011	-.012	.002	8	.002	-.001	.001
9		.005	.015	.002	.013	.004	.006	.010	-.002	.002	9	.002	-.001	.001
10											10			

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.000		.125		.500		.125		.125		.2175	
	N	CPREAL CPIMAG	CPREAL CPIMAG	CPREAL CPIMAG	CPREAL CPIMAG	CPREAL CPIMAG	CPREAL CPIMAG	CPREAL CPIMAG	CPREAL CPIMAG	CPREAL CPIMAG	CPREAL CPIMAG	CPREAL CPIMAG	CPREAL CPIMAG	CPREAL CPIMAG
1		.329	.232	.284	.003	-.4649	.865	.191	-.3652	.797	1	.797	-.132	.132
2		.753	-.104	.836	-.163	.643	-.196	.686	.617	-.132	2	.617	-.090	.090
3		.281	-.155	.356	-.118	.301	-.075	.252	.159	-.136	3	.159	-.095	.095
4		.026	-.214	.057	-.146	.193	-.132	.329	.377	-.095	4	.377	-.136	.136
5		.009	-.078	.021	.025	.035	-.076	.051	.018	-.001	5	.018	-.001	.001
6		.006	-.026	.014	.020	.024	-.065	.054	-.059	.001	6	.059	-.001	.001
7		.020	-.022	.044	-.060	.101	.155	.064	-.162	.001	7	.162	-.001	.001
8		.040	-.027	.068	-.014	.003	.064	.023	-.031	.001	8	.031	-.001	.001
9		.015	.021	.028	.014	.037	.052	.040	-.096	.001	9	.096	-.001	.001
10		.025	.021	.028	.026	.028	.008	.034	.005	.001	10	.005	-.001	.001

\*\*\* STABILITY PARAMETER

\* XI = .2175 \*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 47 ALPHA-MCL = 2.0 POP RUN.PT 10.08  
 RUN 19 ALPHA-BAR = .5 Q-COMP = 32663  
 POINT 13 SIGMA = 0. V-REF = 200.47  
 COMPUTED FREQUENCY = 15.44, K = .1210

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.198		.261		.392		.530		.661	
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	17.667	347.64	9.979	343.61	4.879	354.49	3.242	317.12	1.317	30.99	1.387	36.42	1.045	97.95
2	306	203.03	170	275.99	0.81	281.23	0.67	316.12	0.91	222.14	0.137	13.03	0.145	35.23
3	306	203.03	170	275.99	0.094	16.51	0.22	336.23	0.067	127.54	0.19	109.37	0.086	143.03
4	306	203.03	170	275.99	0.14	218.78	0.63	226.74	0.15	255.54	0.36	121.43	0.057	146.54
5	306	203.03	170	275.99	0.13	253.19	0.75	196.93	0.19	207.70	0.45	126.90	0.027	177.95
6	306	203.03	170	275.99	0.108	248.16	0.77	289.65	0.42	325.82	0.27	119.97	0.034	334.29
7	306	203.03	170	275.99	0.108	248.16	0.77	289.65	0.42	325.82	0.27	119.97	0.034	334.29
8	306	203.03	170	275.99	0.108	248.16	0.77	289.65	0.42	325.82	0.27	119.97	0.034	334.29
9	306	203.03	170	275.99	0.108	248.16	0.77	289.65	0.42	325.82	0.27	119.97	0.034	334.29
10	306	203.03	170	275.99	0.108	248.16	0.77	289.65	0.42	325.82	0.27	119.97	0.034	334.29

N	.774		.860		.910		N		CM-MAG		PHIN		
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	1	2	3	4	5	6	
1	689	330.04	467	117.92	573	103.38	2	356	305.85	3	15	867	395.49
2	689	330.04	467	117.92	0.23	204.87	3	049	63.47	4	59	019	18.78
3	689	330.04	467	117.92	0.32	172.57	4	040	252.86	5	86	012	196.65
4	689	330.04	467	117.92	0.19	164.45	5	026	105.98	6	35	003	324.35
5	689	330.04	467	117.92	0.41	121.41	6	012	279.53	7	69	011	256.83
6	689	330.04	467	117.92	0.16	257.63	7	012	315.33	8	83	003	330.29
7	689	330.04	467	117.92	0.16	257.63	8	016	312.63	9	29	003	330.29
8	689	330.04	467	117.92	0.06	267.92	9	011	349.98	10	42	004	307.42
9	689	330.04	467	117.92	0.12	109.25	10						

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.000		.125		.500		1.125	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	403	35.18	284	64	729	169.46	787	165.99	738	167.69
2	761	351.63	851	349.05	672	346.09	688	354.78	631	347.90
3	281	358.77	250	3.01	310	341.44	252	359.65	168	345.85
4	346	333.38	375	341.62	415	314.43	350	339.75	401	340.12
5	220	34.40	157	111.42	084	118.43	127	113.74	097	100.95
6	027	315.75	059	168.94	068	218.96	065	162.85	059	159.08
7	024	140.65	147	168.26	185	123.24	150	152.85	211	139.36
8	020	186.61	112	212.58	064	187.57	035	130.95	037	133.92
9	032	120.08	070	168.14	029	126.00	050	144.68	102	159.38
10	033	140.79	036	136.44	029	164.79	036	161.35	017	173.81

\*\*\* STABILITY PARAMETER

W X Z = 2175  
 \*\*\*\*\*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE #9 ALPHA-MCL = 2.0 POP RUN-PT 10.10  
 RUN 10 ALPHA-PAR = 0.5 Q-COMP = 12.402  
 POINT 15 SIGMA = 0. V-REF = 199.65  
 FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	M	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-9	.834	2.070	-.556	-.012	-.534	-.047	-.081
2	-9	.371	.295	-.296	.259	.333	.450	.599
3	-9	.372	.297	-.176	-.141	.177	.098	.074
4	-9	.072	-.039	-.067	-.082	-.066	-.074	-.074
5	-9	.071	-.041	-.067	-.052	-.053	-.003	-.003
6	-9	.012	-.042	-.021	-.020	-.019	-.019	-.019
7	-9	.019	.042	-.021	.013	.004	.009	.009
8	-9	.033	.030	-.005	.009	.004	.022	.021
9	-9	.002	-.031	-.004	.005	.005	.021	.021
10	-9	.002	-.031	-.004	.012	.012	-.007	-.007

X	M	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	9	.001	-.227	.934	7.264	-.741	-1.949	1.911
2	9	.003	.468	.227	.149	.176	.494	.222
3	9	.050	.193	-.053	.031	.038	.098	.079
4	9	.052	.116	-.059	-.032	-.092	-.087	-.086
5	9	.020	-.020	-.032	-.049	.199	.013	-.025
6	9	.007	-.019	-.014	-.053	.037	-.044	-.006
7	9	.007	.033	-.003	.006	.011	.012	-.009
8	9	.007	.028	-.009	-.010	.000	.010	-.004
9	9	.007	.008	-.007	.027	.012	.041	.002
10	9	.001	-.008	-.013	-.018	.012	-.002	-.015

X	M	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	9	1.066	.930	.491	.800	.738	.728
2	9	.026	.410	.368	-.090	.226	.278
3	9	.072	.147	-.060	-.068	-.087	-.079
4	9	.030	-.081	-.018	-.027	-.047	-.042
5	9	.022	-.022	-.031	-.006	.026	.027
6	9	.002	-.016	-.006	-.027	.004	.010
7	9	.003	.016	-.003	.001	.005	-.008
8	9	.003	.026	-.002	.008	.001	.009
9	9	.003	.026	-.002	.002	.001	.009
10	9	.003	.026	-.002	-.020	.001	.016

MODE 1 -- OCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 49 ALPHA-MCL = 2.0 POP RUN-PT 10.10  
 RUN 10 ALPHA-MBAR = 0.5 O-COMP = 32402  
 POINT 5 SIGMA = 0. V-REF = 199.65  
 COMPUTED FREQUENCY = 19.10, K = .1503  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI						
1	10	.050	169.12	.633	169.54	2	.623	173.77	1	.535	181.77	5	.556	261.61	4	.451	281.86	1	.597	325.97	
2	3	.382	317.44	.470	153.57	.221	160.30	.498	133.30	.226	128.62	.685	60.10	.655	60.10	.183	112.70	.492	68.08	.490	108.08
3	4	.082	337.45	.076	341.31	.086	326.62	.056	328.79	.105	350.13	.098	228.52	.054	228.52	.138	226.39	.138	226.39	.138	226.39
4	5	.012	183.12	.025	213.57	.022	227.67	.036	233.07	.018	224.12	.033	215.33	.031	215.33	.021	222.30	.021	222.30	.025	222.30
5	6	.043	165.12	.038	148.83	.036	167.07	.019	187.07	.023	176.52	.021	114.42	.021	114.42	.041	82.90	.041	82.90	.026	89.23
6	7	.032	182.54	.019	185.54	.012	289.25	.012	289.25	.014	327.65	.016	334.37	.016	334.37	.022	332.58	.022	332.58	.007	268.89
7	8	.016	282.61	.016	282.61	.012	289.25	.012	289.25	.014	327.65	.016	334.37	.016	334.37	.022	332.58	.022	332.58	.007	268.89
8	9	.012	285.54	.016	282.61	.012	289.25	.012	289.25	.014	327.65	.016	334.37	.016	334.37	.022	332.58	.022	332.58	.007	268.89
9	10	.012	285.54	.016	282.61	.012	289.25	.012	289.25	.014	327.65	.016	334.37	.016	334.37	.022	332.58	.022	332.58	.007	268.89

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI						
1	10	.929	395.85	1	.044	353.88	9	.935	358.76	7	.448	347.23	5	.126	337.66	2	.223	323.08	1	.649	10.64
2	3	.510	66.50	.514	64.77	.212	108.57	.202	105.35	.056	56.32	.057	56.32	.105	111.29	.178	112.57	.154	154.34	.154	154.34
3	4	.133	242.37	.139	242.04	.033	249.28	.019	243.18	.085	197.95	.057	197.95	.057	197.95	.053	219.59	.053	219.59	.043	235.90
4	5	.028	352.70	.033	349.28	.032	344.02	.019	321.02	.024	275.94	.016	230.11	.016	230.11	.010	257.54	.010	257.54	.043	265.95
5	6	.020	289.90	.032	264.15	.032	277.88	.033	277.88	.021	198.45	.021	198.45	.021	198.45	.010	276.63	.010	276.63	.028	269.47
6	7	.024	287.77	.032	264.15	.032	277.88	.033	277.88	.021	198.45	.021	198.45	.021	198.45	.010	276.63	.010	276.63	.028	269.47
7	8	.029	275.92	.035	171.64	.035	173.38	.026	173.38	.051	108.02	.044	88.64	.044	88.64	.010	89.80	.010	89.80	.045	87.23
8	9	.014	215.71	.010	202.75	.014	201.92	.014	201.92	.020	153.27	.012	187.32	.012	187.32	.025	196.75	.025	196.75	.023	228.33
9	10	.014	215.71	.010	202.75	.014	201.92	.014	201.92	.020	153.27	.012	187.32	.012	187.32	.025	196.75	.025	196.75	.023	228.33

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI						
1	10	.150	21.98	1	.300	31.72	1	.011	60.93	1	.036	39.46	1	.831	37.39	1	.979	41.99	1	.649	10.64
2	3	.468	61.15	.366	62.59	.170	117.95	.170	117.95	.186	119.03	.186	119.03	.187	117.75	.208	112.48	.208	112.48	.154	154.34
3	4	.164	234.04	.157	243.04	.042	243.29	.022	264.04	.151	243.12	.028	243.12	.111	117.75	.124	125.02	.124	125.02	.154	154.34
4	5	.024	248.28	.037	243.04	.024	243.29	.042	243.29	.028	243.12	.028	243.12	.005	149.19	.027	209.16	.027	209.16	.043	265.95
5	6	.014	242.49	.020	248.28	.024	243.29	.018	219.13	.016	197.62	.016	197.62	.009	238.43	.027	209.16	.027	209.16	.043	265.95
6	7	.017	242.49	.020	248.28	.024	243.29	.018	219.13	.016	197.62	.016	197.62	.009	238.43	.027	209.16	.027	209.16	.043	265.95
7	8	.026	242.49	.024	248.28	.024	243.29	.018	219.13	.016	197.62	.016	197.62	.009	238.43	.027	209.16	.027	209.16	.043	265.95
8	9	.018	242.49	.024	248.28	.024	243.29	.018	219.13	.016	197.62	.016	197.62	.009	238.43	.027	209.16	.027	209.16	.043	265.95
9	10	.018	242.49	.024	248.28	.024	243.29	.018	219.13	.016	197.62	.016	197.62	.009	238.43	.027	209.16	.027	209.16	.043	265.95

ORIGINAL PAGE IS  
OF PAPER QUALITY

MODE 1 -- OCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILF 49 ALPHA-MCL = 2.0 PDP RUN-PT 10.10  
RUM 10 ALPHA-BAR = .5 O-COMP = 32402  
POINT 15 SIGMA = 3. V-REF = 199.65  
COMPUTED FREQUENCY = 19.10, N = .1503

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.148		.261		.392		.530		.661	
	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP
1	17.098	-3.715	9.298	-2.788	4.830	-.281	3.146	-.350	1.147	-.980	1.016	-.096	1.125	-.004
2	-.352	-.161	-.120	-.099	-.031	-.033	-.036	-.013	-.189	-.189	-.025	-.096	-.011	-.184
3	-.354	-.210	-.134	-.108	-.097	-.029	-.062	-.041	-.049	-.049	-.019	-.025	-.011	-.000
4	-.361	-.052	-.169	-.033	-.077	-.051	-.025	-.062	-.034	-.019	-.019	-.019	-.044	-.058
5	-.042	-.066	-.015	-.030	-.007	-.025	-.023	-.023	-.017	-.003	-.014	-.014	-.009	-.006
6	-.013	-.018	-.010	-.021	-.012	-.046	-.014	-.038	-.006	-.007	-.014	-.014	-.009	-.013
7	-.048	-.009	-.024	-.021	-.014	-.024	-.005	-.038	-.001	-.034	-.001	-.001	-.009	-.013
8	-.039	-.013	-.019	-.023	-.014	-.021	-.003	-.033	-.003	-.005	-.004	-.004	-.013	-.005
9	-.016	-.044	-.016	-.014	-.028	-.004	-.027	-.010	-.030	-.003	-.028	-.004	-.011	-.020
10														

X =	.774		.860		.910		UNREAL		CNIMAG		N		CMREAL		CMIMAG	
	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP
1	-.101	-.885	-.305	-.494	-.207	-.675	2.294	-.323	-.012	-.323	1	1.25	-.834	-.214	-.214	
2	-.040	-.031	-.007	-.074	-.009	-.012	-.033	-.010	-.010	-.010	2	1.125	-.017	-.008	-.008	
3	-.007	-.017	-.018	-.035	-.026	-.000	-.022	-.036	-.027	-.036	3	1.000	-.016	-.004	-.004	
4	-.002	-.013	-.002	-.019	-.004	-.009	-.015	-.027	-.011	-.027	4	0.875	-.001	-.004	-.004	
5	-.014	-.008	-.003	-.022	-.004	-.007	-.016	-.010	-.010	-.010	5	0.750	-.001	-.001	-.001	
6	-.036	-.011	-.003	-.013	-.011	-.013	-.010	-.029	-.018	-.029	6	0.625	-.001	-.001	-.001	
7	-.013	-.002	-.012	-.008	-.014	-.006	-.002	-.018	-.007	-.018	7	0.500	-.003	-.003	-.003	
8	-.075	-.002	-.012	-.016	-.009	-.009	-.000	-.007	-.007	-.007	8	0.375	-.002	-.002	-.002	
9	-.009	-.003	-.000	-.009	-.004	-.000	-.019	-.002	-.002	-.002	9	0.250	-.002	-.002	-.002	
10											10	0.125	-.002	-.002	-.002	

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.000		.125		.500		1.125	
	N	CPREAL	N	CPREAL	N	CPREAL	N	CPREAL	N	CPREAL
1	-.106	-.054	-.173	-.206	-5.107	-.571	-1.188	-.050	-.192	-.571
2	-.116	-.083	-.196	-.249	-.305	-.305	-.305	-.305	-.303	-.110
3	-.178	-.193	-.178	-.076	-.146	-.204	-.146	-.204	-.303	-.110
4	-.045	-.223	-.031	-.078	-.153	-.153	-.081	-.008	-.225	-.005
5	-.045	-.245	-.067	-.067	-.012	-.042	-.081	-.008	-.040	-.058
6	-.019	-.200	-.029	-.040	-.017	-.001	-.029	-.042	-.029	-.034
7	-.019	-.243	-.014	-.026	-.036	-.042	-.009	-.042	-.004	-.014
8	-.024	-.243	-.014	-.055	-.018	-.027	-.004	-.016	-.004	-.015
9	-.014	-.205	-.000	-.020	-.009	-.036	-.003	-.016	-.003	-.015
10										

\*\*\* STABILITY PARAMETER \*\*\*  
\* XI = .2136 \*

MODE 1 -- CENTER PERIODICITY TEST  
OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 49 ALPHA-ACL = 2.0 PDP RUN,PT 10.10  
 RUN 10 ALPHA-BAR = 0.5 Q-COMP = 32402  
 POINT 5 SIGMA = 0. V-REF = 199.65  
 COMPUTED FREQUENCY = 19.10, K = .1503

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.198		.261		.392		.510		.661	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	17.827	325.78	9.707	343.31	4.838	356.67	3.165	6.35	1.509	40.51	1.516	47.91	1.218	90.20
2	229.326	115.08	175.156	140.52	101.181	161.65	63.274	326.35	219.240	44.96	112.152	150.44	115.08	352.75
3	357.188	125.47	173.191	143.16	109.213	173.28	66.062	265.63	241.246	34.75	127.292	192.87	127.292	389.87
4	105.217	141.41	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37
5	105.217	141.41	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37
6	105.217	141.41	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37
7	105.217	141.41	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37
8	105.217	141.41	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37
9	105.217	141.41	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37
10	105.217	141.41	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37	105.217	143.37

N	.770		.860		.910		N		CM-MAG		PHIM	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	891.96	52.50	578.171	37.27	706.107	40.03	2.317	8.01	2.317	8.01	2.317	8.01
2	267.52	30	400.217	49.80	216.185	44	0.13	279.37	0.13	279.37	0.13	279.37
3	248.56	33	429.83	13	163.359	12	0.34	342.43	0.34	342.43	0.34	342.43
4	332.03	33	433.19	22	119.177	15	0.42	239.43	0.42	239.43	0.42	239.43
5	101.12	33	433.19	22	159.15	15	0.30	116.76	0.30	116.76	0.30	116.76
6	115.327	33	433.19	22	130.69	15	0.11	197.85	0.11	197.85	0.11	197.85
7	324.31	33	433.19	22	138.75	15	0.18	164.97	0.18	164.97	0.18	164.97
8	196.16	33	433.19	22	223.35	15	0.07	289.12	0.07	289.12	0.07	289.12
9	196.16	33	433.19	22	223.35	15	0.19	186.60	0.19	186.60	0.19	186.60
10	196.16	33	433.19	22	223.35	15	0.19	186.60	0.19	186.60	0.19	186.60

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.000		.125		.500		.125		.125	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	118	152.99	269	230.06	5.140	173.56	1.188	181.88	1.199	172.18	1.199	172.18
2	805	158.06	738	56.06	261	48.23	655	62.30	313	56.06	313	56.06
3	225	121.10	317	128.22	261	48.23	251	125.64	322	160.08	322	160.08
4	202	208.06	887	155.22	171	227.46	290	220.33	165	239.12	165	239.12
5	051	312.02	884	248.22	134	5.75	881	5.88	226	1.31	226	1.31
6	019	325.08	884	253.09	014	210.65	051	83	070	235.05	070	235.05
7	049	325.09	884	253.09	014	210.65	033	377.13	044	96.86	044	96.86
8	049	325.09	884	253.09	014	210.65	043	81.93	034	96.86	034	96.86
9	049	325.09	884	253.09	014	210.65	027	260.27	016	69.99	016	69.99
10	015	341.47	884	270.94	037	256.38	016	260.27	037	265.62	037	265.62

\*\*\* STABILITY PARAMETER

SI = 2136  
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ORIGINAL PAGE  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 192 ALPHA-MCL = 2.0 POP RUN PI 12.02  
 RUN 12 ALPHA-BAR = 5.5 C-LOMP = 12.77  
 POINT 1 SIGMA = 45. V-REF = 159.26  
 COMPUTED FREQUENCY = 9.16, K = .0722

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	012-UPPER CPREAL CPIMAG	062-UPPER CPREAL CPIMAG	148-UPPER CPREAL CPIMAG	261-UPPER CPREAL CPIMAG	392-UPPER CPREAL CPIMAG	530-UPPER CPREAL CPIMAG	661-UPPER CPREAL CPIMAG
1	12.893	-5.604	-3.379	-1.005	-.406	-.389	-.330
2	-.155	-.039	-.224	-.265	-.325	-.096	-.010
3	-.080	-.533	-.109	-1.125	-1.141	-1.096	-1.432
4	-.114	-.092	-.102	-.104	-.113	-.146	-.091
5	-.237	-.049	-.124	-.285	-.296	-.105	-.122
6	-.352	-.022	-.346	-.358	-.401	-.376	-.428
7	-.021	-.065	-.031	-.036	-.031	-.013	-.024
8	-.017	-.046	-.012	-.014	-.012	-.003	-.028
9	-.022	-.049	-.011	-.018	-.015	-.003	-.036
10							

X	774-UPPER CPREAL CPIMAG	860-UPPER CPREAL CPIMAG	910-UPPER CPREAL CPIMAG	012-LOWER CPREAL CPIMAG	062-LOWER CPREAL CPIMAG	148-LOWER CPREAL CPIMAG	261-LOWER CPREAL CPIMAG
1	2.24	1.074	-.570	10.583	7.491	3.323	2.472
2	-.178	-.102	-.210	-.018	-.136	-.233	-.224
3	-.150	-.597	-.109	-1.432	-.914	-1.237	-1.186
4	-.099	-.037	-.058	-.286	-.228	-.180	-.072
5	-.331	-.154	-.010	-.078	-.096	-.080	-.313
6	-.408	-.043	-.175	-.308	-.284	-.295	-.372
7	-.005	-.060	-.027	-.344	-.362	-.326	-.021
8	-.085	-.071	-.076	-.076	-.059	-.069	-.021
9	-.008	-.066	-.010	-.035	-.018	-.052	-.005
10							

X	892-LOWER CPREAL CPIMAG	530-LOWER CPREAL CPIMAG	661-LOWER CPREAL CPIMAG	774-LOWER CPREAL CPIMAG	860-LOWER CPREAL CPIMAG	910-LOWER CPREAL CPIMAG
1	1.668	1.723	-.937	9.525	7.423	3.733
2	-.073	-.275	-.107	-.218	-.152	-.233
3	-.140	-.618	-.193	-1.170	-1.152	-1.191
4	-.064	-.074	-.021	-.089	-.172	-.178
5	-.256	-.050	-.352	-.351	-.331	-.353
6	-.516	-.022	-.021	-.427	-.398	-.385
7	-.072	-.062	-.058	-.017	-.000	-.018
8	-.002	-.062	-.105	-.097	-.094	-.097
9	-.002	-.050	-.069	-.053	-.006	-.005
10						

MODE 1 -- CENTER PERIODICITY TEST, WALL STATIONS

FILE 192 ALPHA-MCL = 2.0 PDP NUMBPT 12.02  
 RUN 12 ALPHA-SEAR = 4.5 Q-COMP = 32277  
 POINT 1 SIGMA = 45.0 V-REF = 199.26  
 COMPUTED FREQUENCY = 9.16, K = .0722  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP-MAG	UPPER PHI	062-UPPER CP-MAG	UPPER PHI	14M-UPPER CP-MAG	UPPER PHI	192-UPPER CP-MAG	UPPER PHI	530-UPPER CP-MAG	UPPER PHI	661-UPPER CP-MAG	UPPER PHI
1	14.058	203.49	6.878	203.33	3.665	202.79	2.143	200.68	.492	145.67	1.438	103.16
2	1.160	174.28	1.216	162.51	1.235	162.45	2.028	152.40	.383	147.93	2.433	88.64
3	1.635	243.80	1.851	137.35	1.901	136.90	2.040	136.30	2.040	279.15	2.032	225.21
4	1.559	98.27	.540	82.66	.522	77.98	.112	71.75	.543	279.15	.175	83.16
5	1.477	321.02	1.105	321.02	1.022	358.31	.112	149.55	.339	151.04	.367	151.32
6	1.242	168.20	.259	153.49	.289	147.03	.339	149.88	.355	183.06	.431	173.74
7	.257	189.94	.337	183.71	.347	184.71	.091	184.62	.485	277.76	.128	169.85
8	.087	289.21	.097	286.59	.103	283.57	.082	294.63	.104	308.64	.088	329.36
9	.068	75.66	.026	290.40	.045	285.87	.043	293.80	.058	289.91	.088	294.16
10	.053	293.87	.049	291.59	.047	283.80						

X	CP-MAG	UPPER PHI	062-UPPER CP-MAG	UPPER PHI	14M-UPPER CP-MAG	UPPER PHI	192-UPPER CP-MAG	UPPER PHI	530-UPPER CP-MAG	UPPER PHI	661-UPPER CP-MAG	UPPER PHI
1	1.098	78.21	1.084	65.37	.957	53.45	1.1619	24.38	7.975	20.07	3.758	27.75
2	2.183	236.47	2.219	153.42	2.176	153.98	2.207	229.54	1.0897	263.33	2.225	174.55
3	.078	75.18	.073	75.66	.079	74.69	.0554	58.87	.612	241.19	2.109	235.78
4	.345	28.02	.345	32.62	.379	12.46	.042	17.70	.115	60.42	.082	27.68
5	.411	187.04	.413	154.24	.406	152.46	.369	134.56	.381	137.64	.357	127.62
6	.011	275.26	.017	187.39	.077	172.45	.096	158.11	.368	169.40	.379	176.98
7	.119	278.79	.109	269.69	.115	272.45	.144	259.21	.096	293.70	.083	288.35
8			.067	278.77	.072	278.18	.055	229.84	.032	236.67	.056	234.81
9												
10												

X	CP-MAG	UPPER PHI	062-UPPER CP-MAG	UPPER PHI	14M-UPPER CP-MAG	UPPER PHI	192-UPPER CP-MAG	UPPER PHI	530-UPPER CP-MAG	UPPER PHI	661-UPPER CP-MAG	UPPER PHI
1	1.891	28.13	1.937	27.19	1.054	27.23	1.060	26.01	.798	22.46	.798	22.46
2	1.209	167.41	1.244	170.33	1.341	150.33	1.215	183.14	.248	176.18	.248	181.84
3	1.531	74.65	1.543	74.04	1.547	73.72	1.623	74.21	2.022	273.33	2.022	273.33
4	.061	15.89	.083	15.54	.021	15.69	.108	30.26	.080	156.29	.080	156.29
5	.367	179.72	.451	154.15	.393	156.05	.429	185.77	.389	184.82	.389	184.82
6	.110	261.28	.151	220.30	.137	225.02	.125	281.57	.071	269.82	.071	269.82
7	.050	261.28	.069	273.51	.060	275.72	.053	285.49	.065	275.58	.065	275.58
8												
9												
10												

MODE 1 -- GCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 192 ALPHA-VCL = 2.0 POP RUN-PT 12.02  
 HUN 12 ALPHA-BR = 0.5 Q-COMP = 32277  
 POINT 1 SIGMA = .45 V-REF = 199.26  
 COMPUTED FREQUENCY = 9.16, K = .0722

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	N	DELCPR <sup>012</sup>	DELCPRI <sup>012</sup>	DELCPR <sup>062</sup>	DELCPRI <sup>062</sup>	DELCPR <sup>148</sup>	DELCPRI <sup>148</sup>	DELCPR <sup>261</sup>	DELCPRI <sup>261</sup>	DELCPR <sup>392</sup>	DELCPRI <sup>392</sup>	DELCPR <sup>530</sup>	DELCPRI <sup>530</sup>	DELCPR <sup>661</sup>	DELCPRI <sup>661</sup>
1	23	.476	10.400	13.439	5.302	6.701	3.167	4.477	2.087	2.074	.614	2.212	.281	1.267	-.928
2		.137	-.120	.070	-.122	.011	-.051	.042	-.115	.121	-.158	-.145	.056	-.324	-.265
3		.710	-.078	.184	-.104	-.177	-.113	.061	-.056	.068	-.089	-.069	.128	.031	-.284
4		.367	-.117	.053	-.133	-.072	-.004	.012	-.048	.038	-.021	.031	-.012	-.153	-.250
5		.071	-.218	.056	-.146	-.022	-.038	.032	-.001	-.003	-.010	-.025	-.002	.010	-.034
6		.008	-.197	.025	-.088	-.016	-.051	.015	-.000	.035	-.059	-.074	-.009	.036	-.178
7		.054	-.192	.047	-.093	-.001	-.071	.054	-.017	.012	-.002	-.073	-.018	.023	-.012
8		.057	-.007	.036	-.019	-.013	-.007	.013	-.016	.022	-.004	.056	-.021	-.023	-.012
10												.031	-.006	-.030	-.021

X	N	DELCPR <sup>774</sup>	DELCPRI <sup>774</sup>	DELCPR <sup>860</sup>	DELCPRI <sup>860</sup>	DELCPR <sup>910</sup>	DELCPRI <sup>910</sup>	CMREAL	CMIMAG
1	23	.728	-.610	-.012	-.332	-.164	-.465	3.709	1.150
2		-.032	-.114	.054	-.079	-.069	-.111	.038	-.180
3		.020	-.045	.049	-.095	.025	.043	.006	-.072
4		.020	-.014	.024	-.004	.028	.038	.056	-.021
5		.020	-.011	.016	-.021	-.017	.016	.037	.021
6		.018	-.006	.032	-.021	-.010	-.009	-.029	.018
7		.012	-.002	.007	-.014	-.013	.011	-.004	.020
8		.013	-.005	.011	-.001	-.011	-.006	-.027	-.013
9		.035	-.015	.004	-.001	-.005	-.001	.016	-.003
10									

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CPREAL	CPIMAG	W1	W2	W3	W4	W5	W6	W10	W125	W100	W125	W100
1		1	.796	.720	1.000	.000	.000	.000	.000	.500	1.000	1.000	1.000	1.000	1.000
2		2	-.345	.115	-.357	-.000	-.000	-.000	-.000	-.264	-.049	-.049	-.164	-.164	-.164
3		3	-.157	-2.272	-.060	-.080	-.106	-.139	-.174	.114	-2.174	-1.094	-2.540	-2.540	-2.540
4		4	.098	-.096	.080	-.159	.139	.083	.083	.063	.630	.084	.000	.000	.000
5		5	-.328	.667	-.293	-.048	-.268	-.245	-.245	-.272	.042	.236	.000	.000	.000
6		6	-.443	.645	-.471	-.048	-.048	-.087	-.087	-.454	-.007	.280	.132	.132	.132
7		7	.050	-.119	-.039	-.094	.076	.087	.087	.016	-.112	.267	-.182	-.182	-.182
8		8	.056	-.082	-.001	-.094	.051	-.099	-.099	.070	-.090	.090	.090	.090	.090
9		9	.033	-.032	-.063	-.130	-.059	-.059	-.059	.019	-.104	-.075	-.013	-.013	-.013
10		10													

\*\*\* STABILITY PARAMETER

\* XI = -.5578 \*  
 \* \*\*\*\*\*

ORIGINAL DRAWING  
OF POOR QUALITY

MODE 1 --- OCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 192 ALPHA-MCL = 2.0 POP RUN-PT 12.02  
 RUN 12 ALPHA-BAR = .5 Q-COMP = 32277  
 POINT 1 SIGMA = 45. V-REF = 189.26  
 COMPUTED FREQUENCY = 9.16, X = .0722

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE =  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.188		.261		.392		.530		.661	
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	25.676	23.89	14.447	21.53	7.412	25.30	4.940	24.99	2.163	16.49	2.230	7.23	1.570	323.78
2	.182	338.84	1.229	273.26	.052	262.10	.123	289.92	.112	307.47	.145	158.73	.406	220.80
3	.375	147.93	.162	308.68	.072	212.42	.049	225.97	.049	330.85	.033	20.62	.431	318.81
4	.277	107.04	.102	111.85	.044	119.71	.032	181.86	.049	178.74	.026	184.90	.277	291.56
5	.197	104.87	.092	111.05	.074	135.13	.028	172.83	.068	174.92	.075	181.24	.159	252.42
6	.090	235.61	.042	106.31	.053	107.97	.025	178.24	.012	59.16	.080	199.03	.077	229.82
7	.019	172.82	.040	152.61	.091	309.02	.023	131.64	.012	10.61	.018	339.26	.193	209.58
8					.014	207.08	.020	233.09	.023	168.71	.006	279.63	.037	145.13
9														
10														

N	.77		.860		.910		LN-MAG		PHIM		CM-MAG		PHIM	
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	.950	329.05	.332	297.88	.493	289.39	3.883	17.202	1.237	26.92	1.237	26.92	.025	192.54
2	.086	261.99	.107	349.52	.081	311.96	.149	274.98	.073	274.98	.025	192.54	.017	23.08
3	.023	58.96	.032	358.34	.045	50.97	.059	339.96	.048	146.38	.017	23.08	.012	108.19
4	.018	180.52	.036	306.28	.023	120.11	.048	146.38	.018	106.22	.009	102.63	.006	77.09
5	.017	314.35	.014	270.41	.013	220.45	.013	252.33	.013	252.33	.010	103.13	.010	103.13
6	.019	129.41	.012	334.93	.017	140.72	.016	169.05	.016	169.05	.002	209.60	.002	209.60
7	.019	129.41	.004	160.85	.005	163.73								
8														
9														
10														

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO	GAP FRACTION	.125		.008		.125		.500		1.125		*** STABILITY PARAMETER	
		CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1	.073	42.16	1.266	37.43	6.890	200.90	1.549	197.75	6.893	197.75	245.51	
2	2	.363	161.59	.365	168.46	.213	197.60	.281	159.88	2.173	286.56	286.56	
3	3	.776	275.29	.891	274.62	2.548	238.99	2.490	238.99	2.546	238.99	245.92	
4	4	.088	356.24	.177	296.90	.161	329.25	.076	33.71	.236	178.10	178.10	
5	5	.463	170.89	.397	137.59	.403	142.50	.393	133.93	.310	154.78	154.78	
6	6	.466	174.63	.473	185.77	.481	191.82	.454	178.39	.306	159.11	159.11	
7	7	.162	287.96	.248	268.63	.111	311.87	.114	308.01	.202	244.62	244.62	
8	8	.129	295.55	.094	244.07	.061	164.77	.106	280.17	.106	170.26	170.26	
9	9	.088	291.78	.144	244.07								
10	10												

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 194 ALPHA-MCL = 2.0 PDP RUN PT 12.04  
 RUN 12 ALPHA-RAR = .5 C-COMP = 32707  
 POINT 13 SIGMA = 45. V-PEF = 200.60  
 COMPUTED FREQUENCY = 15.56, K = .1219

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	M	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																										
1	1	-1.684	-2.823	-7.814	2.244	-5.275	1.277	-3.926	2.022	-2.555	3.076	-2.789	3.578	-2.269	4.144	-2.063	4.703	-1.063	5.259	1.063	5.817	1.063	6.376	1.063	6.933	1.063	7.490	1.063	8.047	1.063	8.604	1.063	9.161	1.063	9.718	1.063	10.275	1.063	10.832	1.063	11.389	1.063	11.946	1.063	12.503	1.063	13.060	1.063	13.617	1.063	14.174	1.063	14.731	1.063	15.288	1.063	15.845	1.063	16.402	1.063	16.959	1.063	17.516	1.063	18.073	1.063	18.630	1.063	19.187	1.063	19.744	1.063	20.301	1.063	20.858	1.063	21.415	1.063	21.972	1.063	22.529	1.063	23.086	1.063	23.643	1.063	24.200	1.063	24.757	1.063	25.314	1.063	25.871	1.063	26.428	1.063	26.985	1.063	27.542	1.063	28.099	1.063	28.656	1.063	29.213	1.063	29.770	1.063	30.327	1.063	30.884	1.063	31.441	1.063	31.998	1.063	32.555	1.063	33.112	1.063	33.669	1.063	34.226	1.063	34.783	1.063	35.340	1.063	35.897	1.063	36.454	1.063	37.011	1.063	37.568	1.063	38.125	1.063	38.682	1.063	39.239	1.063	39.796	1.063	40.353	1.063	40.910	1.063	41.467	1.063	42.024	1.063	42.581	1.063	43.138	1.063	43.695	1.063	44.252	1.063	44.809	1.063	45.366	1.063	45.923	1.063	46.480	1.063	47.037	1.063	47.594	1.063	48.151	1.063	48.708	1.063	49.265	1.063	49.822	1.063	50.379	1.063	50.936	1.063	51.493	1.063	52.050	1.063	52.607	1.063	53.164	1.063	53.721	1.063	54.278	1.063	54.835	1.063	55.392	1.063	55.949	1.063	56.506	1.063	57.063	1.063	57.620	1.063	58.177	1.063	58.734	1.063	59.291	1.063	59.848	1.063	60.405	1.063	60.962	1.063	61.519	1.063	62.076	1.063	62.633	1.063	63.190	1.063	63.747	1.063	64.304	1.063	64.861	1.063	65.418	1.063	65.975	1.063	66.532	1.063	67.089	1.063	67.646	1.063	68.203	1.063	68.760	1.063	69.317	1.063	69.874	1.063	70.431	1.063	70.988	1.063	71.545	1.063	72.102	1.063	72.659	1.063	73.216	1.063	73.773	1.063	74.330	1.063	74.887	1.063	75.444	1.063	76.001	1.063	76.558	1.063	77.115	1.063	77.672	1.063	78.229	1.063	78.786	1.063	79.343	1.063	79.900	1.063	80.457	1.063	81.014	1.063	81.571	1.063	82.128	1.063	82.685	1.063	83.242	1.063	83.799	1.063	84.356	1.063	84.913	1.063	85.470	1.063	86.027	1.063	86.584	1.063	87.141	1.063	87.698	1.063	88.255	1.063	88.812	1.063	89.369	1.063	89.926	1.063	90.483	1.063	91.040	1.063	91.597	1.063	92.154	1.063	92.711	1.063	93.268	1.063	93.825	1.063	94.382	1.063	94.939	1.063	95.496	1.063	96.053	1.063	96.610	1.063	97.167	1.063	97.724	1.063	98.281	1.063	98.838	1.063	99.395	1.063	99.952	1.063	100.509	1.063	101.066	1.063	101.623	1.063	102.180	1.063	102.737	1.063	103.294	1.063	103.851	1.063	104.408	1.063	104.965	1.063	105.522	1.063	106.079	1.063	106.636	1.063	107.193	1.063	107.750	1.063	108.307	1.063	108.864	1.063	109.421	1.063	109.978	1.063	110.535	1.063	111.092	1.063	111.649	1.063	112.206	1.063	112.763	1.063	113.320	1.063	113.877	1.063	114.434	1.063	114.991	1.063	115.548	1.063	116.105	1.063	116.662	1.063	117.219	1.063	117.776	1.063	118.333	1.063	118.890	1.063	119.447	1.063	120.004	1.063	120.561	1.063	121.118	1.063	121.675	1.063	122.232	1.063	122.789	1.063	123.346	1.063	123.903	1.063	124.460	1.063	125.017	1.063	125.574	1.063	126.131	1.063	126.688	1.063	127.245	1.063	127.802	1.063	128.359	1.063	128.916	1.063	129.473	1.063	130.030	1.063	130.587	1.063	131.144	1.063	131.701	1.063	132.258	1.063	132.815	1.063	133.372	1.063	133.929	1.063	134.486	1.063	135.043	1.063	135.600	1.063	136.157	1.063	136.714	1.063	137.271	1.063	137.828	1.063	138.385	1.063	138.942	1.063	139.499	1.063	140.056	1.063	140.613	1.063	141.170	1.063	141.727	1.063	142.284	1.063	142.841	1.063	143.398	1.063	143.955	1.063	144.512	1.063	145.069	1.063	145.626	1.063	146.183	1.063	146.740	1.063	147.297	1.063	147.854	1.063	148.411	1.063	148.968	1.063	149.525	1.063	150.082	1.063	150.639	1.063	151.196	1.063	151.753	1.063	152.310	1.063	152.867	1.063	153.424	1.063	153.981	1.063	154.538	1.063	155.095	1.063	155.652	1.063	156.209	1.063	156.766	1.063	157.323	1.063	157.880	1.063	158.437	1.063	158.994	1.063	159.551	1.063	160.108	1.063	160.665	1.063	161.222	1.063	161.779	1.063	162.336	1.063	162.893	1.063	163.450	1.063	164.007	1.063	164.564	1.063	165.121	1.063	165.678	1.063	166.235	1.063	166.792	1.063	167.349	1.063	167.906	1.063	168.463	1.063	169.020	1.063	169.577	1.063	170.134	1.063	170.691	1.063	171.248	1.063	171.805	1.063	172.362	1.063	172.919	1.063	173.476	1.063	174.033	1.063	174.590	1.063	175.147	1.063	175.704	1.063	176.261	1.063	176.818	1.063	177.375	1.063	177.932	1.063	178.489	1.063	179.046	1.063	179.603	1.063	180.160	1.063	180.717	1.063	181.274	1.063	181.831	1.063	182.388	1.063	182.945	1.063	183.502	1.063	184.059	1.063	184.616	1.063	185.173	1.063	185.730	1.063	186.287	1.063	186.844	1.063	187.401	1.063	187.958	1.063	188.515	1.063	189.072	1.063	189.629	1.063	190.186	1.063	190.743	1.063	191.300	1.063	191.857	1.063	192.414	1.063	192.971	1.063	193.528	1.063	194.085	1.063	194.642	1.063	195.199	1.063	195.756	1.063	196.313	1.063	196.870	1.063	197.427	1.063	197.984	1.063	198.541	1.063	199.098	1.063	199.655	1.063	200.212	1.063	200.769	1.063	201.326	1.063	201.883	1.063	202.440	1.063	202.997	1.063	203.554	1.063	204.111	1.063	204.668	1.063	205.225	1.063	205.782	1.063	206.339	1.063	206.896	1.063	207.453	1.063	208.010	1.063	208.567	1.063	209.124	1.063	209.681	1.063	210.238	1.063	210.795	1.063	211.352	1.063	211.909	1.063	212.466	1.063	213.023	1.063	213.580	1.063	214.137	1.063	214.694	1.063	215.251	1.063	215.808	1.063	216.365	1.063	216.922	1.063	217.479	1.063	218.036	1.063	218.593	1.063	219.150	1.063	219.707	1.063	220.264	1.063	220.821	1.063	221.378	1.063	221.935	1.063	222.492	1.063	223.049	1.063	223.606	1.063	224.163	1.063	224.720	1.063	225.277	1.063	225.834	1.063	226.391	1.063	226.948	1.063	227.505	1.063	228.062	1.063	228.619	1.063	229.176	1.063	229.733	1.063	230.290	1.063	230.847	1.063	231.404	1.063	231.961	1.063	232.518	1.063	233.075	1.063	233.632	1.063	234.189	1.063	234.746	1.063	235.303	1.063	235.860	1.063	236.417	1.063	236.974	1.063	237.531	1.063	238.088	1.063	238.645	1.063	239.202	1.063	239.759	1.063	240.316	1.063	240.873	1.063	241.430	1.063	241.987	1.063	242.544	1.063	243.101	1.063	243.658	1.063	244.215	1.063	244.772	1.063	245.329	1.063	245.886	1.063	246.443	1.063	246.999	1.063	247.556	1.063	248.113	1.063	248.670	1.063	249.227	1.063	249.784	1.063	250.341	1.063	250.898	1.063	251.455	1.063	252.012	1.063	252.569	1.063	253.126	1.063	253.683	1.063	254.240	1.063	254.797	1.063	255.354	1.063	255.911	1.063	256.468	1.063	257.025	1.063	257.582	1.063	258.139	1.063	258.696	1.063	259.253	1.063	259.810	1.063	260.367	1.063	260.924	1.063	261.481	1.063	262.038	1.063	262.595	1.063	263.152	1.063	263.709	1.063	264.266	1.063	264.823	1.063	265.380	1.063	265.937	1.063	266.494	1.063	267.051	1.063	267.608	1.063	268.165	1.063	268.722	1.063	269.279	1.063	269.836	1.063	270.393	1.063	270.950	1.063	271.507	1.063	272.064	1.063	272.621	1.063	273.178	1.063	273.735	1.063	274.292	1.063	274.849	1.063	275.406	1.063	275.963	1.063	276.520	1.063	277.077	1.063	277.634	1.063	278.191	1.063	278.748	1.063	279.305	1.063	2

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 194 ALPHA-MCL = 2.0 PDP RUN-PT 12.04  
 RUN 12 ALPHA-BAR = 0.5 O-COMP = 22707  
 POINT 13 SIGMA = 45.0 V-REF = 200.60  
 COMPUTED FREQUENCY = 15.56, N = .1214

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	X = .012-UPPER		.198-UPPER		.261-UPPER		.392-UPPER		.530-UPPER		.641-UPPER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	14.953	190.88	7.819	177.92	4.416	152.75	3.998	129.71	4.537	127.93	4.725	110.71
2	.291	24.92	.453	96.97	.587	191.99	.679	99.31	.933	78.29	.517	80.035
3	.044	26.92	.137	20.70	.127	331.45	.169	14.31	.168	14.31	.068	175.555
4	.196	184.84	.228	186.06	.053	193.95	.130	173.15	.107	195.55	.177	184.73
5	.097	178.04	.104	156.62	.313	156.59	.330	168.09	.358	166.38	.322	184.73
6	.212	329.78	.173	176.93	.104	80.43	.109	77.99	.095	187.77	.090	175.45
7	.112	251.22	.173	271.61	.153	271.61	.127	9.71	.162	14.14	.147	34.19
8	.041	221.44	.071	262.46	.035	271.61	.066	276.90	.034	278.22	.076	280.70
9	.062	251.44	.052	252.72	.049	242.10	.033	226.90	.034	260.22	.076	280.70
10							.050	240.70	.051	246.81	.086	220.31

N	X = .774-UPPER		.860-UPPER		.910-UPPER		.062-LOWER		.198-LOWER		.261-LOWER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	.559	116.07	4.523	116.35	11.161	42.82	7.055	48.19	4.211	77.27	4.956	89.06
2	.110	351.19	.156	349.31	.212	345.45	.495	291.65	.311	91.29	.509	95.39
3	.373	180.73	.402	175.83	.085	188.86	.451	334.40	.188	351.89	.169	351.39
4	.079	86.43	.095	80.32	.428	142.96	.349	150.10	.077	184.35	.088	183.37
5	.135	17.57	.122	15.31	.057	108.67	.062	88.32	.075	155.38	.370	170.37
6	.074	273.44	.084	258.58	.111	150.50	.119	33.53	.094	27.99	.088	33.82
7	.050	259.20	.047	259.44	.027	308.37	.020	286.79	.024	276.72	.052	295.57
8					.033	218.88	.026	229.02	.024	218.88	.032	249.31
9									.035	247.53		
10												

N	X = .392-LOWER		.530-LOWER		.661-LOWER		.774-LOWER		.860-LOWER		.910-LOWER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	3.738	97.83	4.462	102.82	3.809	118.01	4.118	115.94	4.207	115.63	3.786	118.02
2	.460	95.48	.194	196.92	.184	196.92	.191	196.92	.168	359.87	.174	358.72
3	.183	184.36	.100	174.40	.091	183.58	.418	177.99	.100	177.01	.104	161.61
4	.379	184.77	.087	173.98	.104	176.99	.077	182.79	.378	178.63	.417	179.09
5	.094	13.09	.101	15.75	.095	22.42	.102	6.37	.103	15.61	.100	182.47
6	.055	47.58	.067	272.48	.043	256.49	.066	267.60	.064	266.64	.059	265.32
7	.034	252.79	.046	254.87	.042	263.75	.020	291.93	.014	286.03	.022	293.31
8					.041	263.75	.040	263.78	.041	262.49	.040	264.08
9												
10												

OCMI PERIODICITY TEST  
MODE 1 --- CENTER BLADE DATA, WALL STATIONS

FILE 194 ALPHA-MCL = 2.0 PDP RUN.PT 12.04  
 HUM 12 ALPHA-BAR = .5 O-COMP = .32707  
 POINT 3 SIGMA = 45. V-REF = 200.60  
 COMPUTED FREQUENCY = 15.56, K = .1219

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	012		062		148		261		392		530		661	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	.22	.865	12	.518	6	.337	3	.426	3	.999	2	.433	2	.433
2	.062	.284	12	.260	6	.005	3	.058	3	.075	2	.067	2	.067
3	.166	.073	12	.277	6	.037	3	.060	3	.056	2	.037	2	.037
4	.120	.003	12	.057	6	.043	3	.017	3	.036	2	.008	2	.008
5	.147	.271	12	.073	6	.087	3	.042	3	.077	2	.062	2	.062
6	.038	.041	12	.023	6	.016	3	.027	3	.013	2	.024	2	.024
7	.111	.192	12	.071	6	.077	3	.036	3	.078	2	.033	2	.033
8	.051	.025	12	.031	6	.016	3	.016	3	.022	2	.014	2	.014
9	.019	.061	12	.001	6	.002	3	.032	3	.018	2	.029	2	.029
10	.009	.040	12	.004	6	.002	3	.018	3	.006	2	.002	2	.002

N	077M		060		0910		0500		0500		0500		0500	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	.331	.330	12	.159	6	.096	3	.202	3	.376	2	.344	2	.344
2	.034	.124	12	.012	6	.039	3	.106	3	.049	2	.078	2	.078
3	.062	.023	12	.007	6	.025	3	.002	3	.080	2	.037	2	.037
4	.047	.026	12	.032	6	.008	3	.037	3	.027	2	.015	2	.015
5	.005	.002	12	.019	6	.024	3	.007	3	.061	2	.013	2	.013
6	.028	.026	12	.026	6	.007	3	.007	3	.009	2	.009	2	.009
7	.008	.004	12	.004	6	.008	3	.005	3	.005	2	.006	2	.006
8	.010	.004	12	.003	6	.008	3	.021	3	.006	2	.022	2	.022
9	.005	.009	12	.005	6	.004	3	.021	3	.006	2	.022	2	.022
10			12		6		3		3		2		2	

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	W1		W2		W3		W4		W5		W6		W7		W8		W9		W10	
	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	-2.190	4.458	-2.230	4.499	-9.074	1.467	-4.072	2.995	-6.154	-2.690	1.125	1.125	1.125	1.125	1.125	1.125	1.125	1.125	1.125	1.125
2	.008	.791	.121	.777	.094	.353	.072	.597	.072	.597	.072	.597	.072	.597	.072	.597	.072	.597	.072	.597
3	.264	.020	.216	.086	.038	.128	.027	.140	.027	.140	.027	.140	.027	.140	.027	.140	.027	.140	.027	.140
4	.380	.022	.381	.027	.309	.132	.367	.107	.455	.192	.128	.192	.128	.192	.128	.192	.128	.192	.128	.192
5	.050	.120	.088	.157	.033	.135	.036	.107	.036	.107	.036	.107	.036	.107	.036	.107	.036	.107	.036	.107
6	.106	.178	.198	.144	.237	.085	.165	.048	.201	.036	.107	.036	.107	.036	.107	.036	.107	.036	.107	.036
7	.036	.041	.056	.124	.002	.054	.014	.100	.014	.100	.014	.100	.014	.100	.014	.100	.014	.100	.014	.100
8	.017	.036	.057	.059	.001	.054	.013	.036	.013	.036	.013	.036	.013	.036	.013	.036	.013	.036	.013	.036
9	.017	.036	.057	.059	.001	.054	.013	.036	.013	.036	.013	.036	.013	.036	.013	.036	.013	.036	.013	.036
10																				

\*\*\* STABILITY PARAMETER

WALL NO.	STABILITY PARAMETER
1	1.055
2	.003
3	.002
4	.006
5	.002
6	.006
7	.003
8	.001
9	.001
10	.002

ORIGINAL PAGE IS  
OF POOR QUALITY

OCVT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILF 194 ALPHA-MCL = 2.0 POP RUN.PT 12.04  
 RUN 12 ALPHA-BAR = .5 Q-COMP = 32707  
 POINT 13 SIGMA = 45. V-REF = 200.60  
 COMPUTED FREQUENCY = 15.56, K = .1219

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE = PER RADIAN \*\*\*  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
25	.125	24.49	.13	.070	21.67	7.204	28.39	.4	.681	31.32	2.140	17.05
1	.291	37.63	.058	85.21	.100	317.94	.222	266.68	.067	317.40	.059	266.68
2	.181	336.40	.070	301.94	.037	167.82	.059	377.26	.037	167.82	.037	377.26
3	.120	118.71	.057	154.57	.099	218.96	.036	132.55	.099	218.96	.036	132.55
4	.108	118.71	.110	234.38	.032	154.06	.034	180.99	.034	180.99	.034	180.99
5	.056	226.04	.040	126.81	.085	156.87	.013	121.51	.085	156.87	.013	121.51
6	.222	120.04	.038	34.30	.026	32.51	.013	172.71	.026	32.51	.013	172.71
7	.091	155.53	.032	267.01	.007	344.39	.017	60.40	.007	344.39	.017	60.40
8	.015	182.91	.034	96.87	.018	82.88	.017	60.40	.018	82.88	.017	60.40
9	.041	102.55										
10												

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	.467	315.07	.257	308.18	.519	280.66	3.634	21.70	.088	235.40	.088	235.40
2	.128	254.67	.107	263.91	.062	230.83	.031	170.72	.031	170.72	.031	170.72
3	.062	355.52	.023	59.73	.035	355.19	.022	170.63	.022	170.63	.022	170.63
4	.054	409.28	.007	7.03	.037	378.41	.016	169.06	.016	169.06	.016	169.06
5	.025	392.43	.033	328.99	.003	222.97	.050	49.97	.050	49.97	.050	49.97
6	.005	332.80	.023	236.99	.002	199.09	.022	255.09	.022	255.09	.022	255.09
7	.040	225.80	.029	171.16	.009	30.28	.016	44.43	.016	44.43	.016	44.43
8	.009	205.96	.009	30.28	.021	265.68						
9	.016	231.19	.028	263.25	.008	53.88						
10	.010	60.97	.011	63.41								

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO	GAP FRACTION	M	CP-MAG	PHI	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11
1		4	.967	116.18	5	.021	116.36	9	.192	170.82	5	.054	143.66	6	.717
2		4	.291	190.60	5	.787	98.83	9	.365	286.70	5	.597	190.87	6	.598
3		4	.264	4.42	5	.333	21.76	9	.174	200.21	5	.240	336.65	6	.405
4		4	.154	192.35	5	.226	189.03	9	.115	156.88	5	.132	194.70	6	.231
5		4	.440	142.89	5	.454	147.03	9	.316	168.35	5	.383	185.54	6	.456
6		4	.130	67.24	5	.180	60.83	9	.145	68.35	5	.107	71.89	6	.115
7		4	.179	278.91	5	.174	345.51	9	.237	268.49	5	.172	16.34	6	.206
8		4	.075	48.18	5	.129	253.85	9	.085	290.75	5	.101	261.85	6	.152
9		4	.055	48.18	5	.062	287.73	9	.054	242.71	5	.039	69.77	6	.017
10		4	.058	252.80	5	.062	287.73	9	.075	241.42	5	.071	241.42	6	.075

\*\*\* STABILITY PARAMETER

\* XI = .5500  
 \* \* \* \* \*



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCHI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 196 ALPHA-MCL = 2.0 POP RUN.PT 12.06  
KUN 12 ALPHA-RAR = .5 Q-COMP = .31769  
POINT 5 SIGMA = 45. V-REF = 197.66  
COMPUTED FREQUENCY = 19.21, K = .1526

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CPREAL	CPIMAG	012-UPPER	CPREAL	CPIMAG	062-UPPER	CPREAL	CPIMAG	148-UPPER	CPREAL	CPIMAG	261-UPPER	CPREAL	CPIMAG	392-UPPER	CPREAL	CPIMAG	530-UPPER	CPREAL	CPIMAG	661-UPPER	CPREAL	CPIMAG	
1	1	-.14	.442	-.4	.107	-7	.592	-1	.421	-5	.048	-3	.697	-2	.271	-2	.788	-2	.440	-2	.719	-1	.909	-1	.837
2	2	-.618	.534	-.406	.070	-.445	.092	-.128	.128	-.416	.520	-.460	.617	-.308	.108	-.308	.108	-.308	.108	-.308	.108	-.308	.108	-.308	.108
3	3	-.024	.062	-.142	.100	-.009	.009	-.074	.074	-.005	.122	-.103	.268	-.199	.168	-.199	.168	-.199	.168	-.199	.168	-.199	.168	-.199	.168
4	4	-.003	.186	-.031	.031	-.058	.058	-.011	.011	-.065	.003	-.070	.031	-.030	.030	-.030	.030	-.030	.030	-.030	.030	-.030	.030	-.030	.030
5	5	-.024	.001	-.057	.057	-.014	.014	-.034	.034	-.038	.024	-.041	.013	-.038	.038	-.038	.038	-.038	.038	-.038	.038	-.038	.038	-.038	.038
6	6	-.001	.001	-.009	.009	-.009	.009	-.059	.059	-.007	.047	-.004	.043	-.003	.003	-.003	.003	-.003	.003	-.003	.003	-.003	.003	-.003	.003
7	7	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001
8	8	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001
9	9	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001
10	10	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001

X	N	CPREAL	CPIMAG	074-UPPER	CPREAL	CPIMAG	080-UPPER	CPREAL	CPIMAG	090-UPPER	CPREAL	CPIMAG	012-LOWER	CPREAL	CPIMAG	022-LOWER	CPREAL	CPIMAG	148-LOWER	CPREAL	CPIMAG	261-LOWER	CPREAL	CPIMAG		
1	1	-.1	.753	1	.815	-1	.626	1	.734	-1	.569	1	.602	8	.463	5	.130	2	.634	1	.325	2	.582	366	2	.295
2	2	-.648	.539	-.539	.082	-.429	.429	-.107	.107	-.429	.124	-.268	.186	-.300	.108	-.300	.108	-.300	.108	-.300	.108	-.300	.108	-.300	.108	
3	3	-.082	.032	-.032	.032	-.047	.047	-.006	.006	-.047	.003	-.079	.031	-.052	.052	-.052	.052	-.052	.052	-.052	.052	-.052	.052	-.052	.052	
4	4	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	
5	5	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	
6	6	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	
7	7	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	
8	8	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	
9	9	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	
10	10	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	

X	N	CPREAL	CPIMAG	032-LOWER	CPREAL	CPIMAG	060-LOWER	CPREAL	CPIMAG	074-LOWER	CPREAL	CPIMAG	080-LOWER	CPREAL	CPIMAG	090-LOWER	CPREAL	CPIMAG	148-LOWER	CPREAL	CPIMAG	261-LOWER	CPREAL	CPIMAG		
1	1	-.272	1	.829	1	.533	1	.626	2	.054	1	.631	-1	.445	1	.631	-1	.445	1	.631	-1	.445	1	.631	-1	.445
2	2	-.360	.152	-.152	.152	-.449	.449	-.162	.162	-.366	.142	-.359	.161	-.338	.147	-.338	.147	-.338	.147	-.338	.147	-.338	.147	-.338	.147	
3	3	-.105	.012	-.012	.012	-.047	.047	-.006	.006	-.047	.003	-.079	.031	-.052	.052	-.052	.052	-.052	.052	-.052	.052	-.052	.052	-.052	.052	
4	4	-.050	.006	-.006	.006	-.057	.057	-.011	.011	-.062	.003	-.079	.031	-.052	.052	-.052	.052	-.052	.052	-.052	.052	-.052	.052	-.052	.052	
5	5	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	
6	6	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	
7	7	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	
8	8	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	
9	9	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	
10	10	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCHT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 196 ALPHA-MCL = 2.0 POP RUN.PT 12.06  
 RUN 12 ALPHA-BAR = .5 Q-COMP = .31769  
 POINT 15 ALPHA-SIGMA = .45 V-REF = .197.66  
 COMPUTED FREQUENCY = 19.21, K = .1526  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	15	.015	195.80	7.723	190.60	5.080	186.35	3.697	180.27	2.404	160.87	2.700	152.10
2	1	.740	172.49	.463	163.96	.757	161.31	.682	171.44	.662	161.15	1.002	158.96
3	1	.110	293.53	.191	277.15	.432	236.29	.297	246.52	.275	237.79	.482	228.06
4	5	.033	296.13	.075	279.03	.032	277.56	.032	269.12	.039	262.79	.077	254.36
5	7	.033	195.26	.060	169.03	.085	177.29	.071	182.45	.094	179.41	.067	179.41
6	9	.025	170.95	.103	210.90	.080	220.84	.043	215.75	.117	216.34	.055	231.03
7	9	.057	256.55	.069	258.69	.068	257.16	.071	263.27	.085	263.47	.059	255.71
8	10	.102	256.55	.060	261.47	.047	261.55	.043	264.50	.034	274.47	.040	261.49

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	2	.523	134.00	2.377	133.16	2.203	137.39	9.896	112.80	5.986	274.59	2.948	62.83
2	3	.466	169.85	.463	166.69	.447	163.84	.326	145.26	.301	176.84	.370	154.94
3	5	.312	175.18	.329	167.11	.303	176.00	.107	137.67	.426	233.53	.063	151.69
4	7	.058	190.88	.033	208.07	.048	203.65	.023	199.48	.027	199.29	.069	198.97
5	9	.051	257.35	.024	216.12	.046	223.63	.033	214.23	.065	208.24	.077	197.60
6	9	.041	257.35	.050	250.38	.048	243.98	.057	209.56	.063	221.66	.049	219.02
7	10	.041	246.27	.047	244.47	.044	244.54	.030	138.19	.023	204.12	.040	221.65

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	.849	98.46	2.159	107.95	1.993	125.08	2.121	131.95	2.222	129.39	2.019	138.31
2	3	.390	157.10	.478	158.14	.353	152.87	.462	161.43	.419	161.07	.414	159.94
3	5	.091	161.04	.045	171.82	.067	191.26	.049	174.58	.029	183.52	.039	185.29
4	7	.058	201.56	.013	198.62	.050	193.21	.051	212.41	.022	183.46	.043	185.29
5	9	.038	230.39	.046	201.79	.021	192.57	.074	181.54	.038	211.09	.069	209.76
6	9	.052	230.39	.060	231.69	.049	244.12	.049	232.27	.051	237.24	.053	241.71
7	10	.042	237.84	.048	244.92	.050	253.40	.046	249.37	.043	253.57	.039	255.48



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS  
 FILE 196 ALPHA-MCL = 2.0 PDP RUN-PI 12.06  
 RUN 12 ALPHA-BAR = .5 Q-COMP = .31764  
 POINT 5 SIGMA = 45. W-REF = .19766  
 COMPUTED FREQUENCY = 19.21, K = .1526  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	24.697	21.86	13.266	17.80	4.674	29.61	2.254	27.50	1.931	23.26	.791	344.90
2	.551	29.86	1.009	17.57	.164	280.90	.166	263.44	.110	149.48	.394	139.35
3	.473	23.47	.138	222.41	.097	35.81	.028	73.00	.074	171.07	.262	31.44
4	.259	219.41	.112	227.42	.077	277.69	.084	301.90	.140	296.03	.054	307.66
5	.162	216.43	.047	239.65	.016	324.28	.052	314.88	.055	150.27	.063	311.99
6	.113	245.43	.076	234.04	.022	148.40	.046	55.24	.033	141.53	.057	244.03
7	.058	149.79	.043	255.15	.035	268.34	.049	278.22	.030	135.51	.017	179.21
8	.110	89.54	.051	104.05	.010	106.35	.025	112.16	.014	192.77	.025	33.33

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	.017	324.69	.216	155.89	.266	287.18	.637	234.61	3.637	234.61	1.169	24.02
2	.069	272.08	.062	28.17	.045	23.06	.049	232.57	.089	268.72	.023	324.05
3	.038	324.86	.014	219.61	.034	304.80	.044	128.52	.004	305.22	.015	231.45
4	.017	193.48	.022	103.44	.017	85.50	.019	110.90	.014	110.90	.007	337.23
5	.022	173.75	.006	137.14	.025	182.47	.029	160.09	.019	160.09	.008	258.52
6	.019	125.78	.013	115.37	.005	19.38	.027	133.81	.012	118.05	.005	113.76
7	.021	167.25	.008	8.17	.009	13.68	.012	118.05	.012	118.05	.005	124.69
8	.005	275.35										
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\*\*\* STABILITY PARAMETER

WALL NO.	W1	W2	W3	W4	W5	W6	W125	W125	W125	W125	W125	W125
GRAV. ACTION	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.527	138.15	2.696	139.75	8.832	186.97	3.699	173.00	7.933	321.59	1.125	330.34
2	.550	155.90	.439	153.23	1.215	170.22	.571	160.82	1.335	148.91	1.125	148.91
3	.406	200.44	.491	234.59	.686	235.08	.343	243.90	.332	222.01	.332	222.01
4	.038	200.44	.065	303.19	.058	146.32	.097	192.61	.095	229.76	.095	229.76
5	.120	187.48	.120	194.16	.078	183.87	.099	192.61	.124	148.29	.124	148.29
6	.116	194.16	.087	121.60	.121	216.65	.072	228.11	.054	168.97	.054	168.97
7	.081	238.10	.091	132.60	.053	240.41	.064	151.83	.103	168.97	.103	168.97
8	.081	238.10	.071	245.43	.085	250.29	.089	258.83	.068	268.66	.068	268.66
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ORIGINAL PAGE IS  
OF POOR QUALITY

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 58 ALPHA-MCL = 2.0 POP RUN-PT 13.009  
RUN 13 ALPHA-PAR = .5 O-COMP = 32735  
POINT 11 SIGMA = 90. V-REF = 200.61  
COMPUTED FREQUENCY = 9.15, K = .0716

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	012-UPPER CPREAL CPIMAG	062-UPPER CPREAL CPIMAG	188-UPPER CPREAL CPIMAG	261-UPPER CPREAL CPIMAG	392-UPPER CPREAL CPIMAG	530-UPPER CPREAL CPIMAG	661-UPPER CPREAL CPIMAG
1	1	-16.208	-2.635	-7.544	-3.089	-1.920	-2.638	-2.205
1	2	-.276	-.257	-.442	-.123	-.545	-.364	-.433
1	3	-.191	-.318	-.088	-.123	-.012	-.336	-.044
1	4	-.371	-.299	-.246	-.367	-.760	-.629	-.825
1	5	-.293	-.433	-.111	-.251	-.098	-.298	-.001
1	6	-.185	-.443	-.187	-.202	-.632	-.268	-.236
1	7	-.199	-.419	-.304	-.344	-.148	-.077	-.075
1	8	-.168	-.409	-.211	-.249	-.059	-.276	-.286
1	9	-.094	-.032	-.039	-.028	-.010	-.044	-.052
1	10							

X	N	774-UPPER CPREAL CPIMAG	860-UPPER CPREAL CPIMAG	910-UPPER CPREAL CPIMAG	012-LOWER CPREAL CPIMAG	062-LOWER CPREAL CPIMAG	188-LOWER CPREAL CPIMAG	261-LOWER CPREAL CPIMAG
1	1	-1.797	3.367	3.487	12.648	8.441	3.697	2.392
1	2	-.440	-.308	-.311	-.222	-.929	-.470	-.493
1	3	-.335	-.787	-.601	-.651	-.244	-.683	-.052
1	4	-.283	-.014	-.801	-.777	-.233	-.790	-.297
1	5	-.676	-.076	-.079	-.176	-.405	-.236	-.245
1	6	-.058	-.058	-.566	-.052	-.762	-.173	-.375
1	7	-.175	-.115	-.307	-.282	-.465	-.288	-.316
1	8	-.052	-.014	-.062	-.030	-.023	-.027	-.001
1	9	-.011						
1	10							

X	N	392-LOWER CPREAL CPIMAG	530-LOWER CPREAL CPIMAG	661-LOWER CPREAL CPIMAG	774-LOWER CPREAL CPIMAG	860-LOWER CPREAL CPIMAG	910-LOWER CPREAL CPIMAG
1	1	1.246	2.777	3.106	-.263	-1.508	-.411
1	2	-.038	-.506	-.915	-.108	-.114	-.601
1	3	-.275	-.027	-.890	-.320	-.275	-.001
1	4	-.202	-.033	-.752	-.362	-.305	-.289
1	5	-.244	-.050	-.684	-.385	-.353	-.265
1	6	-.284	-.056	-.551	-.302	-.270	-.336
1	7	-.256	-.011	-.413	-.071	-.076	-.287
1	8	-.056	-.011				
1	9						
1	10						

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCMI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 58 ALPHA-MCL = 2.0 PDP NUM.PT 13.09  
 RUN 13 ALPHA-PAR = .5 0-COMP = 32715  
 POINT 1 SIGMA = 90. V-REF = 200.61  
 COMPUTED FREQUENCY = 9.15 K = .0716  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP-MAG	PHI	.062-UPPER	CP-MAG	PHI	.148-UPPER	CP-MAG	PHI	.261-UPPER	CP-MAG	PHI	.392-UPPER	CP-MAG	PHI	.530-UPPER	CP-MAG	PHI	.661-UPPER	CP-MAG	PHI
1	16.421	189.223	7.546	178.77	4.729	166.67	3.551	150.44	3.262	126.05	3.928	127.00	4.151	122.08						
2	.377	222.535	.463	209.15	.511	210.15	.549	190.77	.556	171.35	.589	211.61	.547	217.55						
3	.394	249.06	.449	261.16	.481	259.44	.625	258.67	.497	271.35	.630	266.77	.646	268.08						
4	.411	321.77	.359	288.43	.764	288.77	.844	221.18	.778	277.68	.892	291.97	.894	297.65						
5	.424	301.70	.611	289.92	.285	133.93	.270	221.18	.737	292.32	.900	290.93	.744	288.77						
6	.214	317.67	.290	308.02	.305	283.93	.344	281.73	.365	297.22	.752	1.16	.362	334.80						
7	.190	326.03	.256	318.34	.270	321.55	.289	329.29	.341	320.11	.331	326.52	.316	334.80						
8	.099	18.935	.040	26.00	.041	15.57	.074	311.34	.106	332.11	.076	305.39	.089	308.35						
9							.028	355.66	.011	25.21	.041	68.56	.023	25.73						
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X	CP-MAG	PHI	.060-UPPER	CP-MAG	PHI	.091-UPPER	CP-MAG	PHI	.012-LOWER	CP-MAG	PHI	.062-LOWER	CP-MAG	PHI	.148-LOWER	CP-MAG	PHI	.261-LOWER	CP-MAG	PHI	
1	3.817	118.08	3.478	115.30	3.104	112.04	14.572	284.16	9.940	28.88	9.213	28.88	5.473	46.87	4.248	55.73					
2	.637	214.40	.553	267.25	.603	265.06	.618	253.95	2.213	253.49	.910	250.50	.611	219.60	.624	217.76					
3	.655	293.07	.872	293.27	.828	291.00	.873	288.54	.910	284.50	.910	284.50	.566	269.69	.571	264.81					
4	.725	291.22	.304	1.40	.290	358.19	.166	241.49	.767	327.59	.767	327.59	.839	281.69	.814	281.02					
5	.352	291.22	.330	292.91	.162	290.11	.430	347.80	.409	352.60	.409	352.60	.736	283.69	.713	281.11					
6	.312	337.79	.332	337.61	.306	335.80	.323	317.51	.336	322.60	.336	322.60	.378	325.78	.344	325.64					
7	.091	399.73	.026	57.83	.028	54.37	.070	115.33	.057	2.66	.057	2.66	.016	379.48	.017	381.11					
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9																					
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X	CP-MAG	PHI	.530-LOWER	CP-MAG	PHI	.661-LOWER	CP-MAG	PHI	.774-LOWER	CP-MAG	PHI	.860-LOWER	CP-MAG	PHI	.910-LOWER	CP-MAG	PHI				
1	3.619	99.729	3.246	73.40	2.385	94.33	2.498	86.05	2.498	86.05	2.561	86.05	2.429	81.17	2.426	81.17					
2	.438	213.522	.615	213.13	.520	177.97	.620	233.17	.620	233.17	.566	258.30	.486	219.21	.486	219.21					
3	.775	290.78	.963	292.38	.841	291.12	.837	292.50	.837	292.50	.766	291.02	.833	292.82	.833	292.82					
4	.665	281.55	.299	6.29	.232	291.68	.142	293.13	.142	293.13	.307	291.13	.298	292.91	.298	292.91					
5	.349	311.22	.412	290.98	.346	293.02	.391	292.88	.391	292.88	.359	291.65	.345	292.44	.345	292.44					
6	.119	331.025	.376	335.49	.322	340.70	.337	333.80	.337	333.80	.291	338.37	.287	336.51	.287	336.51					
7	.012	61.070	.149	64.82	.015	140.84	.035	300.45	.035	300.45	.125	307.10	.131	311.76	.131	311.76					
8																					
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ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 58 ALPHA-MCL = 2.0 POP RUN-PT 13.09  
 RUN 13 ALPHA-RAR = 0.5 O-COMP = 32715  
 POINT 11 SIGMA = 90.0 V-REF = 200.61  
 COMPUTED FREQUENCY = 9.15, K = .0716

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.149		.261		.392		.530		.661	
	N	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR
1	29	.054	9.511	15.985	4.494	8.298	2.849	5.481	1.759	3.166	.135	3.307	-.032	2.025
2		.071	-.216	-.224	-1.896	-.628	-.134	.046	-.279	.096	-.190	-.170	-.082	-.177
3		.087	-.258	.313	-.209	.025	-.089	.071	.044	-.050	-.010	.027	.014	.339
4		.195	-.198	-.011	-.148	.037	-.067	-.069	.002	.035	.027	.043	.014	.130
5		-.241	-.389	-.099	-.138	-.055	-.041	-.006	-.059	-.078	-.052	-.000	-.050	.040
6		.239	-.258	.118	-.104	-.103	-.048	.043	.033	.017	.048	.016	-.080	.031
7		.139	-.139	.073	.071	-.028	.068	.016	.025	-.017	.018	.044	.027	-.004
8		.024	.024	-.067	.022	-.028	.027	.027	-.018	.018	.018	.066	.050	-.028
9		.031	.031	-.033	-.037	-.004	-.029	.029	-.019	-.034	-.025	.058	.025	-.046
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X	.774		.860		.910	
	N	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR
1	1	.534	-.863	.439	-.754	-.788
2		.021	-.251	-.246	-.148	-.090
3		.014	.032	-.077	.045	.115
4		.034	.032	.031	.026	.006
5		.007	.007	.009	.001	.026
6		.035	.009	-.021	.020	.007
7		.013	.032	-.011	-.023	.011
8		.009	-.046	.036	.016	-.015
9		.024	-.010	.016	-.012	-.002
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\*\*\* STABILITY PARAMETER

WALL NO.	.125		.500		.500		.500		.500		.500		.500	
	N	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL
1	1	.772	4.097	-.680	3.982	-8.230	1.035	-3.035	2.319	.731	-4.776	1.289	1.289	526
2		.629	-.658	-.759	-.313	-.472	-.535	-.584	-.300	-.208	-.073	.006	.006	-.075
3		.117	-.127	-.189	-.177	.022	-.549	-.050	-.622	.017	-.022	.012	.012	-.022
4		.326	.037	.228	-1.177	.351	-.890	.376	-.926	-.000	-.034	.009	.009	.011
5		.191	.034	.388	.699	.414	.138	.302	.123	.015	-.017	-.009	-.009	-.017
6		.495	-.101	.487	-1.077	.272	-.780	.425	-.824	.027	-.014	.010	.010	-.009
7		.344	-.192	.311	.019	.411	.058	.420	.059	.031	-.026	.009	.009	-.004
8		.060	-.078	.107	-.332	.117	-.268	.691	-.211	.026	-.008	.008	.008	-.004
9		.000	.029	.050	-.025	-.004	-.005	.128	-.026	-.061	-.005	-.005	-.005	.002
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\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	.125		.500		.500		.500		.500		.500		.500	
	N	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL
1	1	.772	4.097	-.680	3.982	-8.230	1.035	-3.035	2.319	.731	-4.776	1.289	1.289	526
2		.629	-.658	-.759	-.313	-.472	-.535	-.584	-.300	-.208	-.073	.006	.006	-.075
3		.117	-.127	-.189	-.177	.022	-.549	-.050	-.622	.017	-.022	.012	.012	-.022
4		.326	.037	.228	-1.177	.351	-.890	.376	-.926	-.000	-.034	.009	.009	.011
5		.191	.034	.388	.699	.414	.138	.302	.123	.015	-.017	-.009	-.009	-.017
6		.495	-.101	.487	-1.077	.272	-.780	.425	-.824	.027	-.014	.010	.010	-.009
7		.344	-.192	.311	.019	.411	.058	.420	.059	.031	-.026	.009	.009	-.004
8		.060	-.078	.107	-.332	.117	-.268	.691	-.211	.026	-.008	.008	.008	-.004
9		.000	.029	.050	-.025	-.004	-.005	.128	-.026	-.061	-.005	-.005	-.005	.002
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\*\*\* STABILITY PARAMETER

WALL NO.	.125		.500		.500		.500		.500		.500		.500	
	N	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL
1	1	.772	4.097	-.680	3.982	-8.230	1.035	-3.035	2.319	.731	-4.776	1.289	1.289	526
2		.629	-.658	-.759	-.313	-.472	-.535	-.584	-.300	-.208	-.073	.006	.006	-.075
3		.117	-.127	-.189	-.177	.022	-.549	-.050	-.622	.017	-.022	.012	.012	-.022
4		.326	.037	.228	-1.177	.351	-.890	.376	-.926	-.000	-.034	.009	.009	.011
5		.191	.034	.388	.699	.414	.138	.302	.123	.015	-.017	-.009	-.009	-.017
6		.495	-.101	.487	-1.077	.272	-.780	.425	-.824	.027	-.014	.010	.010	-.009
7		.344	-.192	.311	.019	.411	.058	.420	.059	.031	-.026	.009	.009	-.004
8		.060	-.078	.107	-.332	.117	-.268	.691	-.211	.026	-.008	.008	.008	-.004
9		.000	.029	.050	-.025	-.004	-.005	.128	-.026	-.061	-.005	-.005	-.005	.002
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\*\*\* STABILITY PARAMETER

WALL NO.	.125		.500		.500		.500		.500		.500		.500	
	N	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL
1	1	.772	4.097	-.680	3.982	-8.230	1.035	-3.035	2.319	.731	-4.776	1.289	1.289	526
2		.629	-.658	-.759	-.313	-.472	-.535	-.584	-.300	-.208	-.073	.006	.006	-.075
3		.117	-.127	-.189	-.177	.022	-.549	-.050	-.622	.017	-.022	.012	.012	-.022
4		.326	.037	.228	-1.177	.351	-.890	.376	-.926	-.000	-.034	.009	.009	.011
5		.191	.034	.388	.699	.414	.138	.302	.123	.015	-.017	-.009	-.009	-.017
6		.495	-.101	.487	-1.077	.272	-.780	.425	-.824	.027	-.014	.010	.010	-.009
7		.344	-.192	.311	.019	.411	.058	.420	.059	.031	-.026	.009	.009	-.004
8		.060	-.078	.107	-.332	.117	-.268	.691	-.211	.026	-.008	.008	.008	-.004
9		.000	.029	.050	-.025	-.004	-.005	.128	-.026	-.061	-.005	-.005	-.005	.002
10														

\*\*\* STABILITY PARAMETER

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 58 ALPHA-MCL = 2.0 POP RUN-PT 13.09  
 RUN 13 ALPHA-BAR = .85 Q-COMP = 32715  
 POINT 1 SIGMA = 90. V-REF = 200.61  
 COMPUTED FREQUENCY = 9.15, K = .0716  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	30.573	18.12	16.605	15.70	8.774	18.95	5.757	17.79	3.169	2.43	3.307	359.45	2.323	330.63												
2	52.274	27.94	26.325	25.28	13.77	258.26	283	279.34	.213	296.96	.189	154.20	.030	177.98												
3	30.633	298.32	326.69	311.60	.083	285.66	.089	311.72	.051	190.81	.030	376.06	.174	148.13												
4	15.631	216.82	265.69	233.49	.069	233.49	.060	263.78	.044	36.250	.087	299.68	.058	135.49												
5	32.212	218.25	208	241.64	.104	262.20	.057	263.11	.092	244.54	.052	287.42	.044	65.72												
6	33.212	312.80	150	321.87	.086	326.03	.039	319.15	.042	244.53	.061	44.30	.054	33.32												
7	21.73	306.41	.082	333.68	.036	331.12	.032	325.30	.031	233.58	.071	32.27	.016	193.06												
8	120	165.92	.030	187.07	.037	173.30	.035	147.12	.007	120.39	.026	250.63	.060	309.18												
9													.033	181.14												
10																										

X	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	1.770	330.05	.919	298.52	1.090	313.74	.954	9.04	.954	9.04	.954	9.04	.954	9.04												
2	.252	274.76	.137	250.51	.173	211.40	.215	254.78	.215	254.78	.215	254.78	.215	254.78												
3	.048	161.14	.121	128.99	.127	68.50	.017	9.73	.017	9.73	.017	9.73	.017	9.73												
4	.019	138.92	.031	89.50	.062	42.18	.035	268.26	.035	268.26	.035	268.26	.035	268.26												
5	.020	347.93	.023	157.72	.032	52.76	.031	254.51	.031	254.51	.031	254.51	.031	254.51												
6	.037	19.81	.041	189.13	.024	163.00	.031	331.97	.031	331.97	.031	331.97	.031	331.97												
7	.035	292.49	.021	152.18	.029	145.98	.026	359.45	.026	359.45	.026	359.45	.026	359.45												
8	.047	380.92	.017	337.87	.012	187.67	.017	182.00	.017	182.00	.017	182.00	.017	182.00												
9	.026																									
10																										

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL STATION	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14	W15	W16	W17	W18	W19	W20
1	5.130	79.22	4.039	80.30	8.344	172.88	3.823	142.62	3.823	142.62	3.823	142.62	3.823	142.62						
2	.669	205.94	.821	202.41	.716	228.78	.656	207.19	.656	207.19	.656	207.19	.656	207.19						
3	1.134	259.77	1.752	255.46	.957	273.31	.924	265.41	.924	265.41	.924	265.41	.924	265.41						
4	.328	201.44	1.248	203.98	.436	18.46	.426	22.22	.426	22.22	.426	22.22	.426	22.22						
5	.495	208.44	1.080	236.46	.413	288.25	.389	289.61	.389	289.61	.389	289.61	.389	289.61						
6	.451	219.65	.433	215.88	.366	312.83	.384	326.61	.384	326.61	.384	326.61	.384	326.61						
7	.098	207.62	.148	216.51	.152	320.14	.116	322.00	.116	322.00	.116	322.00	.116	322.00						
8	.066	25.89	.056	332.83	.007	230.10	.131	11.48	.131	11.48	.131	11.48	.131	11.48						
9																				
10																				

\*\*\* STABILITY PARAMETER \*\*\*

WALL STATION	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14	W15	W16	W17	W18	W19	W20
1	1.392	22.21	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62						
2	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62						
3	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62						
4	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62						
5	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62						
6	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62						
7	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62						
8	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62						
9	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62						
10	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62	.025	274.62						



ORIGINAL PAGE IS  
OF POOR QUALITY

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 60 ALPHA-MCL = 2.0 PDP RUN-PT 13.11  
RUN 13 ALPHA-RER = .5 Q-COMP = 32721  
POINT 13 SIGMA = 90. V-REF = 200.63

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.188-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	1	-15.723	-4.367	-4.430	-3.086	-1.690	-2.138	-1.982
2	2	.914	.195	.861	.800	.457	.987	.957
3	3	.406	.326	.331	.350	.391	.254	.306
4	4	.163	.194	.261	.288	.139	.326	.354
5	5	.000	.102	.050	.073	.079	.045	.049
6	6	.075	.076	.066	.060	.016	.045	.048
7	7	.100	.084	.042	.036	.064	.049	.031
8	8	.054	.084	.038	.018	.080	.039	.023
9	9	.021	.052	.015	.011	.020	.019	.019
10	10	.061	.052	.036	.035	.024	.042	.028

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.188-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	1	-1.567	-6305	-941	12.574	1.917	3.615	2.796
2	2	.288	.430	.289	.257	.417	.766	.768
3	3	.050	.161	.367	.466	.215	.212	.257
4	4	.052	.043	.041	.163	.038	.390	.372
5	5	.022	.052	.047	.021	.027	.067	.156
6	6	.022	.024	.028	.011	.044	.034	.033
7	7	.022	.022	.021	.012	.048	.023	.045
8	8	.022	.022	.023	.006	.027	.047	.011
9	9	.022	.022	.023	.037	.015	.013	.017
10	10	.022	.022	.023	.037	.015	.013	.002

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	1.329	.589	.006	.073	.366	.161
2	2	.239	.316	.150	.864	.825	.770
3	3	.030	.138	.018	.306	.299	.232
4	4	.037	.033	.074	.027	.360	.360
5	5	.040	.033	.020	.050	.448	.049
6	6	.019	.019	.022	.021	.057	.049
7	7	.011	.019	.022	.021	.044	.049
8	8	.011	.019	.022	.021	.044	.049
9	9	.011	.019	.022	.021	.044	.049
10	10	.011	.019	.022	.021	.044	.049

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 60 ALPHA-MCL = 2.0 PDP RUN-PT 13.11  
 RUN 13 ALPHA-BAR = 9.5 Q-COMP = 32721  
 POINT 3 SIGMA = 90.0 V-REF = 200.63  
 COMPUTED FREQUENCY = 15.57 K = .1219

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\* BLADE PRESSURES, PER RADIAN \*\*

X N	-012-UPPER		-042-UPPER		-148-UPPER		-261-UPPER		-392-UPPER		-510-UPPER		-661-UPPER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	16.303	195.32	7.796	199.27	4.879	204.76	3.518	208.70	2.191	214.17	2.343	204.14	2.074	197.12
2	.935	218.07	.921	19.36	.929	226.15	.922	229.74	1.053	38.87	1.019	14.88	1.033	222.03
3	.520	180.15	.509	222.67	.482	226.68	.524	228.19	.527	237.90	.567	234.86	.556	236.55
4	.217	171.15	.231	180.50	.318	192.07	.107	154.35	.470	150.34	.422	148.92	.388	152.72
5	.125	306.38	.072	313.77	.074	332.93	.062	344.92	.053	343.75	.055	325.53	.055	329.96
6	.100	57.55	.093	227.99	.078	236.99	.073	240.75	.079	247.31	.081	232.70	.062	239.92
7	.084	104.40	.048	111.54	.093	66.14	.084	71.99	.114	127.11	.083	279.11	.087	74.90
8	.081	119.68	.054	125.32	.044	115.55	.042	120.41	.040	128.95	.047	135.23	.029	130.06
9									.037	312.76				
10														

X N	-774-UPPER		-860-UPPER		-910-UPPER		-012-LOWER		-262-LOWER		-148-LOWER		-261-LOWER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.696	202.48	1.496	216.62	1.497	229.21	12.720	8.67	8.237	357.73	3.615	25.88	2.415	352.79
2	.510	237.05	.523	234.00	.504	233.69	.490	238.31	.540	277.50	.461	233.61	.463	235.44
3	.409	156.25	.412	157.89	.408	154.06	.513	155.30	.474	252.51	.420	150.18	.432	163.96
4	.069	328.34	.061	325.66	.054	318.99	.168	318.40	.120	329.82	.067	326.02	.059	358.57
5	.061	227.25	.056	228.77	.055	239.54	.027	292.69	.042	320.82	.040	327.97	.055	324.67
6	.087	75.17	.070	78.05	.074	73.69	.050	75.94	.056	64.09	.052	63.94	.054	80.19
7	.033	124.37	.030	135.72	.033	117.21	.040	202.26	.022	225.04	.028	143.35	.023	137.77
8														
9														
10														

X N	-392-LOWER		-530-LOWER		-661-LOWER		-774-LOWER		-860-LOWER		-910-LOWER			
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI		
1	1.454	336.09	1.420	318.28	1.411	270.35	1.264	273.33	1.203	254.73	1.646	263.69		
2	.829	234.06	.494	239.96	.418	248.90	.502	228.44	.473	230.73	.425	236.95		
3	.367	157.82	.338	163.49	.407	165.04	.441	157.33	.407	153.67	.392	156.70		
4	.049	318.15	.058	325.84	.084	332.62	.067	332.99	.056	320.45	.060	333.98		
5	.050	59.00	.049	64.71	.060	67.92	.073	58.18	.068	70.43	.070	65.53		
6	.023	122.30	.024	136.17	.019	123.95	.040	305.14	.032	321.31	.033	149.57		
7														
8														
9														
10														

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 60 ALPHA-MCL = 2.0 PDP RUN-PT 13.11  
RUN 13 ALPHA-PAR = .5 Q-COMP = 32721  
POINT 3 SIGMA = 90. V-REF = 200.63  
COMPUTED FREQUENCY = 15.57, K = .1219

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI
1	28	.297	6	.225	15	.590	2	.103	5	.481	1	.387	3	.141
2	-.076	-.065	-.095	-.095	-.058	-.021	-.033	-.051	-.035	-.034	-.259	-.100	-.107	-.259
3	-.101	-.078	-.128	-.068	-.128	-.027	-.088	-.030	-.035	-.075	-.107	-.035	-.107	-.035
4	-.160	-.232	-.080	-.017	-.017	-.102	-.019	-.077	-.042	-.067	-.062	-.044	-.077	-.062
5	-.054	-.084	-.017	-.032	-.032	-.021	-.016	-.015	-.014	-.005	-.044	-.002	-.017	-.044
6	-.110	-.036	-.031	-.021	-.021	-.038	-.015	-.011	-.004	-.033	-.015	-.002	-.017	-.015
7	-.041	-.108	-.009	-.008	-.008	-.017	-.001	-.015	-.013	-.012	-.006	-.006	-.007	-.006
8	-.098	-.037	-.061	-.015	-.015	-.001	-.033	-.015	-.014	-.000	-.029	-.010	-.007	-.010
9														
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X	.77M		.860		.910		.910		.910		.910		.910	
	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI
1	6.61	-.614	1.661	-.171	1.661	-.171	1.661	-.171	1.661	-.171	1.661	-.171	1.661	-.171
2	-.049	-.069	-.049	-.069	-.049	-.069	-.049	-.069	-.049	-.069	-.049	-.069	-.049	-.069
3	-.023	-.014	-.023	-.014	-.023	-.014	-.023	-.014	-.023	-.014	-.023	-.014	-.023	-.014
4	-.025	-.003	-.025	-.003	-.025	-.003	-.025	-.003	-.025	-.003	-.025	-.003	-.025	-.003
5	-.028	-.006	-.028	-.006	-.028	-.006	-.028	-.006	-.028	-.006	-.028	-.006	-.028	-.006
6	-.017	-.023	-.017	-.023	-.017	-.023	-.017	-.023	-.017	-.023	-.017	-.023	-.017	-.023
7	-.017	-.013	-.017	-.013	-.017	-.013	-.017	-.013	-.017	-.013	-.017	-.013	-.017	-.013
8	-.014	-.003	-.014	-.003	-.014	-.003	-.014	-.003	-.014	-.003	-.014	-.003	-.014	-.003
9														
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\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	.125		.000		.125		.125		.500		.125		.125	
		N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG
1	1	.809	-.945	1.756	-.192	-1.785	-2.771	-2.771	-1.844	-2.652	-1.844	-.215	-8.023		
2	-.452	-.440	-.519	-.419	-.147	-1.147	-1.197	-.421	-.514	-.470	-.421	-.260	1.000		
3	-.094	-.057	-.123	-.071	-.013	-.398	-.227	-.227	-.211	-.398	-.211	-.242	-.332		
4	-.040	-.073	-.025	-.036	-.031	-.166	-.166	-.079	-.118	-.056	-.079	-.186	-.085		
5	-.059	-.035	-.046	-.097	-.058	-.017	-.017	-.045	-.046	-.105	-.045	-.047	-.050		
6	-.021	-.031	-.027	-.114	-.005	-.117	-.117	-.097	-.056	-.004	-.097	-.021	-.144		
7	-.011	-.031	-.027	-.002	-.019	-.163	-.163	-.089	-.056	-.016	-.089	-.018	-.152		
8															
9															
10															

\*\*\* STABILITY PARAMETER

WALL NO.	GAP FRACTION	.125		.000		.125		.125		.500		.125	
		N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG
1	1	.809	-.945	1.756	-.192	-1.785	-2.771	-2.771	-1.844	-2.652	-1.844	-.215	-8.023
2	-.452	-.440	-.519	-.419	-.147	-1.147	-1.197	-.421	-.514	-.470	-.421	-.260	1.000
3	-.094	-.057	-.123	-.071	-.013	-.398	-.227	-.227	-.211	-.398	-.211	-.242	-.332
4	-.040	-.073	-.025	-.036	-.031	-.166	-.166	-.079	-.118	-.056	-.079	-.186	-.085
5	-.059	-.035	-.046	-.097	-.058	-.017	-.017	-.045	-.046	-.105	-.045	-.047	-.050
6	-.021	-.031	-.027	-.114	-.005	-.117	-.117	-.097	-.056	-.004	-.097	-.021	-.144
7	-.011	-.031	-.027	-.002	-.019	-.163	-.163	-.089	-.056	-.016	-.089	-.018	-.152
8													
9													
10													

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 60 ALPHA-MCL = 2.0 PDP RUN.PT 13.11  
 RUN 13 ALPHA-BAR = .5 Q-COMP = 32723  
 POINT 13 SIGMA = 90. V-REF = 200.63  
 COMPUTED FREQUENCY = 15.57, K = .1219  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI																				
1	28	974	12052	15	753	8	20	8	315	14	65	5	654	14	26	3	206	11	54	3	292	3	292	112	18	2	933	347	78			
2	174	22052	226	46	062	167	37	061	339	80	094	110	093	198	04	113	272	33	272	33	067	125	238	49	125	238	49	125	238	49		
3	174	16553	109	169	13	131	191	71	104	80	72	083	103	65	079	231	50	089	139	57	089	139	57	089	139	57	089	139	57	089	139	57
4	281	15543	105	40	38	103	123	78	032	178	84	022	224	93	022	224	93	022	224	93	022	224	93	022	224	93	022	224	93	022	224	93
5	105	12465	033	19	61	038	155	93	041	248	69	024	228	07	018	317	35	018	317	35	018	317	35	018	317	35	018	317	35	018	317	35
6	105	227793	052	240	25	019	295	69	049	178	97	015	272	93	015	272	93	015	272	93	015	272	93	015	272	93	015	272	93	015	272	93
7	105	15942	062	165	98	049	178	97	049	178	97	036	205	12	036	205	12	036	205	12	036	205	12	036	205	12	036	205	12	036	205	12

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI		
1	1	752	339	50	82	341	17	735	324	31	735	324	31	
2	182	12794	154	106	07	145	157	68	145	157	68	145	157	68
3	081	16794	080	156	91	083	36	82	071	213	69	071	213	69
4	027	14881	026	144	36	020	110	27	065	98	88	065	98	88
5	026	31175	005	218	55	004	220	90	006	192	62	006	192	62
6	027	16755	009	311	16	002	241	50	016	45	81	016	45	81
7	027	10656	005	301	16	011	218	64	027	269	09	027	269	09
8	014	19211	004	202	72	012	218	64	014	269	70	014	269	70
9	014	19211	004	202	72	012	218	64	014	269	70	014	269	70
10	014	19211	004	202	72	012	218	64	014	269	70	014	269	70

WALL MO	GAP FRACTION	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	
1	1	1.294	310.59	1.411	302.40	8.263	199.59	3.230	214.80	8.923	271.38	8.923	271.38
2	1	1.294	26.49	1.391	31.35	1.168	10.92	1.196	226.50	1.393	50.83	1.393	50.83
3	1	1.294	224.51	1.547	218.88	1.444	206.36	1.632	221.98	1.415	233.12	1.415	233.12
4	1	1.294	152.11	1.547	149.87	1.312	174.45	1.451	152.07	1.390	191.12	1.390	191.12
5	1	1.294	124.46	1.547	122.78	1.366	135.45	1.487	130.57	1.390	111.82	1.390	111.82
6	1	1.294	224.46	1.547	205.39	1.355	131.88	1.564	131.73	1.468	133.20	1.468	133.20
7	1	1.294	233.06	1.547	215.52	1.396	132.90	1.664	122.28	1.564	146.69	1.564	146.69
8	1	1.294	57.87	1.122	67.95	1.117	87.56	1.112	92.28	1.152	86.59	1.152	86.59
9	1	1.294	120.96	1.041	106.94	1.066	72.99	1.065	120.99	1.019	21.98	1.019	21.98
10	1	1.294	289.95	1.033	272.57	1.066	323.74	1.041	289.88	1.050	204.34	1.050	204.34

\*\*\* STABILITY PARAMETER

W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11			
1	1	1.292	15.19	1.040	241.67	0.014	174.66	0.011	155.73	0.004	157.07	0.004	157.07
2	1	1.292	15.19	1.040	241.67	0.014	174.66	0.011	155.73	0.004	157.07	0.004	157.07
3	1	1.292	15.19	1.040	241.67	0.014	174.66	0.011	155.73	0.004	157.07	0.004	157.07
4	1	1.292	15.19	1.040	241.67	0.014	174.66	0.011	155.73	0.004	157.07	0.004	157.07
5	1	1.292	15.19	1.040	241.67	0.014	174.66	0.011	155.73	0.004	157.07	0.004	157.07
6	1	1.292	15.19	1.040	241.67	0.014	174.66	0.011	155.73	0.004	157.07	0.004	157.07
7	1	1.292	15.19	1.040	241.67	0.014	174.66	0.011	155.73	0.004	157.07	0.004	157.07
8	1	1.292	15.19	1.040	241.67	0.014	174.66	0.011	155.73	0.004	157.07	0.004	157.07
9	1	1.292	15.19	1.040	241.67	0.014	174.66	0.011	155.73	0.004	157.07	0.004	157.07
10	1	1.292	15.19	1.040	241.67	0.014	174.66	0.011	155.73	0.004	157.07	0.004	157.07

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 62 ALPHA-MCL = 2.0 POP RUN-PT 13.13  
 RUN 13 ALPHA-RAR = 2.5 Q-COMP = 32737  
 POINT 15 ALPHA-SIGMA = 90.0 V-REF = 200.67  
 COMPUTED FREQUENCY = 19.25, K = .1507

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	X	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.140-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-16	.108	-7.506	-4.557	-3.139	-1.859	-2.221	-2.011
2	.199	.028	.015	.087	.163	.218	.138	.182
3	.182	.028	.091	.061	.093	.037	.046	.040
4	.225	.060	.083	.025	.032	.046	.029	.057
5	.015	.017	.083	.004	.019	.042	.135	.004
6	.034	.001	.045	.008	.127	.031	.037	.060
7	.010	.005	.008	.006	.014	.024	.017	.025
8	.002	.017	.005	.014	.006	.009	.018	.019
9	.009	.017	.007	.027	.039	.028	.035	.002
10	.006	.007	.004	.004	.004	.003	.007	.002
11	.004	.004	.004	.004	.004	.003	.007	.002
12	.004	.004	.004	.004	.004	.003	.007	.002
13	.004	.004	.004	.004	.004	.003	.007	.002
14	.004	.004	.004	.004	.004	.003	.007	.002
15	.004	.004	.004	.004	.004	.003	.007	.002

N	X	.774-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.140-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG
1	-1	.653	1.692	1.513	1.314	4.358	1.918	2.397	3.652	2.397
2	.013	.421	.012	.004	.004	.124	.529	.419	.419	.060
3	.017	.045	.017	.046	.091	.259	.529	.271	.271	.060
4	.021	.069	.017	.119	.081	.091	.043	.054	.054	.072
5	.021	.069	.017	.119	.081	.091	.043	.054	.054	.072
6	.021	.069	.017	.119	.081	.091	.043	.054	.054	.072
7	.021	.069	.017	.119	.081	.091	.043	.054	.054	.072
8	.021	.069	.017	.119	.081	.091	.043	.054	.054	.072
9	.021	.069	.017	.119	.081	.091	.043	.054	.054	.072
10	.021	.069	.017	.119	.081	.091	.043	.054	.054	.072

N	X	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	.370	1.620	1.743	1.430	1.320	.472
2	.334	.255	.390	.608	.319	.320	.306
3	.037	.279	.055	.100	.051	.161	.000
4	.062	.062	.044	.177	.033	.324	.000
5	.066	.066	.072	.083	.108	.027	.108
6	.026	.031	.036	.086	.006	.059	.063
7	.031	.031	.036	.086	.027	.001	.014
8	.031	.031	.036	.086	.027	.004	.014
9	.031	.031	.036	.086	.027	.004	.014
10	.031	.031	.036	.086	.027	.004	.014

MODE 1 --- OCMI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 62 ALPHA-MCL = 2.0 PDP RUN-PT 13.13  
 RUN 13 ALPHA-BAR = .5 O-COMP = 32737  
 POINT 15 ALPHA-SIGMA = 90. V-REF = 200.67  
 COMPUTED FREQUENCY = 19.25, N = .15U7  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	16	.303	188.86	7	.532	184.75	4	.557	180.51	3	.158	173.65
2	.300	154.73	.178	85.24	.356	116.22	.518	111.40	.518	111.40	.469	154.00
3	.370	240.91	.104	252.54	.356	116.22	.518	111.40	.518	111.40	.469	154.00
4	.233	347.66	.083	351.81	.356	116.22	.518	111.40	.518	111.40	.469	154.00
5	.087	291.92	.045	288.57	.356	116.22	.518	111.40	.518	111.40	.469	154.00
6	.010	100.08	.018	181.93	.356	116.22	.518	111.40	.518	111.40	.469	154.00
7	.007	235.39	.018	343.37	.356	116.22	.518	111.40	.518	111.40	.469	154.00
8	.011	54.18	.025	254.00	.356	116.22	.518	111.40	.518	111.40	.469	154.00
9	.025	252.14	.027	254.00	.356	116.22	.518	111.40	.518	111.40	.469	154.00
10												

N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	2	.359	124.35	2	.016	131.40	1	.688	129.04	13	.487	18.88
2	.421	268.92	.072	271.46	.472	271.46	.307	202.61	.324	195.48	1.324	195.48
3	.171	232.26	.142	252.09	.307	202.61	.307	202.61	.128	189.94	1.324	195.48
4	.008	111.48	.080	252.09	.307	202.61	.307	202.61	.138	189.94	1.324	195.48
5	.024	108.68	.011	125.04	.307	202.61	.307	202.61	.185	235.85	1.324	195.48
6	.019	127.35	.020	113.22	.307	202.61	.307	202.61	.106	254.58	1.324	195.48
7	.011	277.35	.003	206.42	.307	202.61	.307	202.61	.055	322.93	1.324	195.48
8					.307	202.61	.307	202.61	.030	119.53	1.324	195.48
9					.307	202.61	.307	202.61	.017	186.15	1.324	195.48
10					.307	202.61	.307	202.61			1.324	195.48

N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	2	.064	52.09	1	.977	61.88	1	.436	95.33	1	.283	95.83
2	.281	271.96	.100	276.70	.367	276.70	.407	190.93	.359	171.76	1.283	171.76
3	.079	332.71	.154	257.57	.100	276.70	.105	37.01	.034	194.26	1.283	171.76
4	.013	250.86	.049	257.57	.100	276.70	.105	37.01	.172	274.26	1.283	171.76
5	.018	148.86	.032	154.87	.100	276.70	.105	37.01	.031	302.26	1.283	171.76
6	.031	192.33	.028	167.05	.100	276.70	.105	37.01	.034	196.27	1.283	171.76
7	.022	200.33	.028	217.86	.100	276.70	.105	37.01	.030	219.30	1.283	171.76
8					.100	276.70	.105	37.01			1.283	171.76
9					.100	276.70	.105	37.01			1.283	171.76
10					.100	276.70	.105	37.01			1.283	171.76



MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 62 ALPHA-WCL = 2.0 POP RUN.PT 13.13  
 RUN 13 ALPHA-RA = 90.0 Q-COMP = 32737  
 POINT 15 SIGMA = 90.0 V-REF = 200.67  
 COMPUTED FREQUENCY = 19.25, K = .1507

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012	.062	.148	.261	.392	.530	.661	
N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	29.657	13.39	15.820	17.94	3.211	12.97	3.166	5.25
2	.881	170.10	.334	174.79	.322	248.99	.321	141.24
3	.354	10.15	.123	200.74	.136	89.74	.117	25.35
4	.132	44.10	.067	217.01	.168	269.10	.122	125.50
5	.080	237.90	.038	96.70	.057	143.05	.091	258.38
6	.052	112.58	.024	322.70	.032	294.05	.026	325.37
7	.020	165.99	.014	141.90	.009	141.90	.052	117.31
8	.024	112.05	.006	205.04	.005	229.98	.047	197.19
9			.022	49.38	.035	35.98	.046	36.62
10			.024	119.21	.041	115.44	.021	137.25

X	.774	.860	.910	CM-MAG	PHIN	
N	DELCPM	PHI	DELCPM	PHI	PHIN	
1	1.578	148.74	.750	121.92	1.325	187.33
2	.078	120.93	.007	159.02	.064	191.33
3	.026	108.86	.030	351.15	.027	201.55
4	.028	351.01	.011	101.41	.008	257.09
5	.021	146.84	.014	162.71	.006	247.67
6	.028	256.57	.012	75.34	.004	148.46
7	.015	103.93	.009	282.34	.005	148.82
8	.026	197.59	.013	151.85	.005	148.82
9			.017	240.26	.005	91.91
10			.022	226.72		

\*\*\* STABILITY PARAMETER

WALL NO.	W1	W2	W4	W6	W10	
GAP FRACTION	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.276	71.04	2.087	70.67	2.483	270.30
2	.502	131.14	.494	128.74	.743	119.37
3	.087	188.06	.118	227.93	.219	212.81
4	.165	114.44	.178	356.94	.082	66.92
5	.100	251.90	.092	247.85	.225	278.62
6	.048	326.97	.045	15.78	.102	211.58
7	.010	29.60	.029	85.85	.021	189.48
8	.037	203.06	.039	47.75	.041	299.48
9			.014	157.85	.026	192.12
10			.029	266.84		



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 77 ALPHA-MCL = 2.0 POP RUN-PT 16.04  
RUN 16 ALPHA-RAD = 0.5 O-COMP = .32905  
POINT 1 SIGMA = 135. V-REF = 201.23  
COMPUTED FREQUENCY = 9.18, K = .0717

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	1	-19.994	-2.287	-.631	-.172	.209	-3.608	1.112
2	1	.215	.438	.579	.826	.348	.213	.501
3	1	-1.579	-.490	-1.910	-.419	-.338	-2.176	-.371
4	1	-.320	-.209	-.396	-.409	-.455	-.478	-.429
5	1	-.370	.040	-.509	.040	-.584	-.543	.241
6	1	.023	.177	.045	.236	.584	.023	.302
7	1	-.003	-.129	-.044	-.283	.304	.015	.116
8	1	-.019	.086	.006	.101	.004	.015	.128
9	1	.046	.190	.017	.135	.017	.006	.041
10	1	-.012	.028	.011	.026	.003	-.008	.007

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	1	-2.995	1.285	1.081	15.760	11.441	4.603	2.900
2	1	.169	.659	.202	.299	.374	.648	.130
3	1	-2.171	-.391	-2.391	-2.298	-1.960	-2.116	-2.099
4	1	-.505	.045	-.604	.478	.277	.416	-.387
5	1	.057	.244	.074	.093	-.474	-.513	-.493
6	1	.009	.128	.005	.121	.061	.248	.012
7	1	-.010	.041	-.012	.038	.008	.026	.013
8	1				.026	.031	.086	.008
9	1				.029	.025	.014	.009
10	1							

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	1.457	.951	.559	-.152	-.683	-.233
2	1	.107	.650	.793	.412	.647	.520
3	1	-1.375	-.330	-2.156	-.478	-.447	-.419
4	1	-.445	.024	-.439	.429	-.350	-.419
5	1	.016	.245	.013	.101	-.503	-.468
6	1	.015	.065	.034	.280	.027	.055
7	1	.006	.102	.001	.290	.044	.054
8	1	.002	.028	.001	.149	.007	.011
9	1	.002	.002	.006	.127	.001	.018
10	1				.040		.020

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 77 ALPHA-MCL = 2.0 PDP RUNAPT 16.04  
RUN 16 ALPHA-BAR = 135. Q-COMP = 32905  
POINT 1 SIGMA = .5 V-REF = 201.23  
COMPUTED FREQUENCY = 9.18, K.E. = .0717  
FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	CP-MAG	PHI	.012-UPPER CP-MAG	PHI	.154-UPPER CP-MAG	PHI	.261-UPPER CP-MAG	PHI	.392-UPPER CP-MAG	PHI	.530-UPPER CP-MAG	PHI	.661-UPPER CP-MAG	PHI
1	19.081	186.88	0.715	184.15	5.343	181.84	3.778	176.84	2.064	165.34	3.775	162.87	3.014	158.41
2	1.488	63.85	.603	173.84	.591	175.27	.835	81.82	.853	163.77	.544	67.01	.645	173.75
3	1.653	197.24	1.083	191.98	1.942	190.38	2.149	191.25	1.974	189.85	2.207	189.68	2.580	189.36
4	1.382	213.13	.450	214.23	.498	217.33	.551	227.93	.520	208.87	.545	221.54	.531	222.48
5	.571	175.95	.548	175.70	.510	176.54	.487	175.25	.585	177.86	.544	177.21	.531	178.01
6	.179	82.60	.204	173.17	.209	176.50	.238	182.41	.254	82.21	.242	81.76	.244	176.19
7	.129	268.57	.220	261.68	.257	260.20	.283	267.46	.310	270.59	.303	274.34	.313	274.29
8	.088	102.38	.102	85.96	.090	86.07	.101	86.11	.111	83.80	.117	82.54	.118	82.97
9	.196	76.35	.152	77.80	.131	82.64	.135	86.51	.141	83.80	.128	82.87	.145	92.60
10	.030	112.55	.032	93.89	.030	69.32	.026	90.26	.043	86.29	.042	101.49	.048	98.41

N	CP-MAG	PHI	.774-UPPER CP-MAG	PHI	.910-UPPER CP-MAG	PHI	.012-LOWER CP-MAG	PHI	.062-LOWER CP-MAG	PHI	.149-LOWER CP-MAG	PHI	.221-LOWER CP-MAG	PHI
1	3.258	156.78	2.986	156.04	1.559	153.44	16.095	14.68	11.748	6.032	4.881	19.51	3.199	77.48
2	2.206	190.20	2.235	191.30	2.546	189.96	2.302	183.50	2.011	192.87	2.158	188.27	2.321	189.91
3	.510	174.92	.521	174.54	.519	175.70	.504	175.40	.476	177.88	.537	178.73	.528	178.59
4	.248	179.54	.261	180.84	.284	174.79	.304	168.40	.261	176.88	.251	172.44	.246	175.45
5	.308	280.68	.307	282.73	.294	281.48	.415	253.17	.348	260.06	.326	265.42	.311	273.40
6	.128	86.07	.133	89.82	.128	2.38	.045	34.84	.070	285.95	.067	85.95	.084	97.84
7	.139	93.89	.133	93.56	.127	113.34	.045	34.84	.069	63.62	.090	78.74	.093	85.09
8	.042	103.46	.043	103.08	.044	113.34	.032	27.83	.033	41.95	.025	55.61	.028	71.85

N	CP-MAG	PHI	.392-LOWER CP-MAG	PHI	.530-LOWER CP-MAG	PHI	.661-LOWER CP-MAG	PHI	.774-LOWER CP-MAG	PHI	.910-LOWER CP-MAG	PHI
1	1.740	33.03	1.313	46.91	.869	128.40	.667	101.19	.433	133.93	.285	167.50
2	1.619	180.56	1.003	60.21	2.203	191.76	.433	192.09	2.173	191.87	.666	181.94
3	.933	180.42	.581	191.84	.458	190.26	.579	227.77	.503	225.98	.514	191.10
4	.450	171.83	.416	172.74	.437	172.74	.571	169.82	.514	168.48	.472	172.44
5	.281	80.60	.266	85.36	.237	83.12	.281	85.40	.267	84.43	.259	177.79
6	.283	272.99	.311	277.39	.306	289.84	.295	280.57	.266	279.57	.271	281.38
7	.103	86.37	.121	96.63	.070	90.41	.149	92.19	.126	93.01	.115	88.58
8	.029	86.37	.031	89.34	.035	78.42	.127	85.97	.038	90.31	.039	80.59
9	.029	86.37	.031	89.34	.035	78.42	.127	85.97	.038	90.31	.039	80.59
10	.029	86.37	.031	89.34	.035	78.42	.127	85.97	.038	90.31	.039	80.59

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 77 ALPHA=MCL = 2.0 PDP RUN=PT 16.0M  
 RUN 16 ALPHA=BAR = 32905  
 POINT SIGMA = 135.0  
 COMPUTED FREQUENCY = 9.18, K = .0717

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X N	.012		.062		.148		.261		.392		.530		.661	
	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN
1	34.704	5.553	1.898	9.943	1.802	6.673	1.135	4.228	.226	.076	.292	3.007	.723	
2	.083	.342	1.227	.001	.032	.012	.240	.015	.017	.076	.292	.007	.377	
3	.719	.126	.057	.206	.042	.008	.053	.043	.017	.134	.114	.005	.098	
4	.076	.061	.003	.004	.037	.018	.051	.080	.069	.018	.030	.009	.151	
5	.059	.094	.004	.004	.044	.019	.010	.139	.040	.015	.034	.001	.001	
6	.117	.280	.028	.018	.042	.031	.028	.012	.038	.020	.026	.080	.005	
7	.009	.065	.001	.007	.043	.060	.042	.007	.038	.020	.004	.028	.062	
8	.040	.013	.002	.004	.007	.009	.001	.001	.001	.013	.001	.013	.049	
10														

X N	.774		.860		.910		CNREAL		CNIMAG		N		CMREAL		CMIMAG	
	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN	DELCPN
1	2.843	.036	1.699	1.648	1.809	6.374	.710	1.890	.316	1.234	1.234	1.890	.316			
2	.034	.067	.112	.183	.118	.076	.024	.003	.024	.024	.024	.003	.024			
3	.006	.057	.065	.070	.032	.059	.010	.022	.022	.022	.022	.002	.022			
4	.036	.036	.042	.028	.041	.041	.041	.021	.021	.021	.021	.002	.021			
5	.023	.036	.024	.040	.019	.037	.011	.019	.019	.019	.019	.001	.019			
6	.014	.021	.027	.029	.012	.020	.011	.011	.011	.011	.011	.001	.011			
7	.014	.021	.027	.029	.012	.020	.011	.011	.011	.011	.011	.001	.011			
8	.014	.021	.027	.029	.012	.020	.011	.011	.011	.011	.011	.001	.011			
9	.014	.021	.027	.029	.012	.020	.011	.011	.011	.011	.011	.001	.011			
10																

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.250		.500		.750		.875		.910		.910	
	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	1.603	1.714	1.594	1.480	-9.247	-4.94	4.838	4.19	4.838	4.19	4.838	4.19	4.838	4.19
2	.221	.402	.151	.075	-2.375	-4.93	-2.375	-4.93	-2.375	-4.93	-2.375	-4.93	-2.375	-4.93
3	.561	.386	.607	.371	-2.375	-5.44	-2.375	-5.44	-2.375	-5.44	-2.375	-5.44	-2.375	-5.44
4	.765	.118	.693	.256	.803	.215	.803	.215	.803	.215	.803	.215	.803	.215
5	.056	.349	.162	.463	.016	.292	.016	.292	.016	.292	.016	.292	.016	.292
6	.044	.291	.177	.425	.020	.351	.020	.351	.020	.351	.020	.351	.020	.351
7	.018	.165	.017	.145	.019	.145	.019	.145	.019	.145	.019	.145	.019	.145
8	.025	.165	.006	.163	.019	.163	.019	.163	.019	.163	.019	.163	.019	.163
9	.025	.165	.006	.163	.019	.163	.019	.163	.019	.163	.019	.163	.019	.163
10														

\*\*\* STABILITY PARAMETER

WALL NO. GAP FRACTION	.125		.250		.500		.750		.875		.910	
	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	1.603	1.714	1.594	1.480	-9.247	-4.94	4.838	4.19	4.838	4.19	4.838	4.19
2	.221	.402	.151	.075	-2.375	-4.93	-2.375	-4.93	-2.375	-4.93	-2.375	-4.93
3	.561	.386	.607	.371	-2.375	-5.44	-2.375	-5.44	-2.375	-5.44	-2.375	-5.44
4	.765	.118	.693	.256	.803	.215	.803	.215	.803	.215	.803	.215
5	.056	.349	.162	.463	.016	.292	.016	.292	.016	.292	.016	.292
6	.044	.291	.177	.425	.020	.351	.020	.351	.020	.351	.020	.351
7	.018	.165	.017	.145	.019	.145	.019	.145	.019	.145	.019	.145
8	.025	.165	.006	.163	.019	.163	.019	.163	.019	.163	.019	.163
9	.025	.165	.006	.163	.019	.163	.019	.163	.019	.163	.019	.163
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\*\*\* STABILITY PARAMETER  
 XI = -.3158  
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MODE 1 -- OCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 77 ALPHA-MCL = 2.0 POP RUN-PT 16.04  
 RUN 16 ALPHA-BAR = 135.0 Q-COMP = 32905  
 POINT 1 SIGMA = 135.0 V-REF = 201.23  
 COMPUTED FREQUENCY = 9.16, N = .0717

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	35.146	9.09	20.223	5.19	6.768	9.566	4.238	3.052	4.506	358.06	3.093	186.48
2	15.599	281.00	13.101	208.77	0.072	272.976	0.238	273.052	3.302	108.27	3.384	105.73
3	0.078	298.87	0.131	205.77	0.053	80.99	0.047	318.41	0.176	220.37	0.098	267.25
4	0.078	298.87	0.131	205.77	0.053	80.99	0.047	318.41	0.176	220.37	0.098	267.25
5	0.078	298.87	0.131	205.77	0.053	80.99	0.047	318.41	0.176	220.37	0.098	267.25
6	0.078	298.87	0.131	205.77	0.053	80.99	0.047	318.41	0.176	220.37	0.098	267.25
7	0.078	298.87	0.131	205.77	0.053	80.99	0.047	318.41	0.176	220.37	0.098	267.25
8	0.078	298.87	0.131	205.77	0.053	80.99	0.047	318.41	0.176	220.37	0.098	267.25
9	0.078	298.87	0.131	205.77	0.053	80.99	0.047	318.41	0.176	220.37	0.098	267.25
10	0.078	298.87	0.131	205.77	0.053	80.99	0.047	318.41	0.176	220.37	0.098	267.25

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	2.914	347.39	1.740	347.63	1.873	331.676	6.136	315.42	1.521	11.96	1.521	11.96
2	0.249	262.04	0.114	188.18	0.217	212.76	0.134	202.41	0.051	253.59	0.051	253.59
3	0.077	274.94	0.066	152.25	0.070	135.55	0.040	10.31	0.026	294.98	0.026	294.98
4	0.077	274.94	0.066	152.25	0.070	135.55	0.040	10.31	0.026	294.98	0.026	294.98
5	0.077	274.94	0.066	152.25	0.070	135.55	0.040	10.31	0.026	294.98	0.026	294.98
6	0.077	274.94	0.066	152.25	0.070	135.55	0.040	10.31	0.026	294.98	0.026	294.98
7	0.077	274.94	0.066	152.25	0.070	135.55	0.040	10.31	0.026	294.98	0.026	294.98
8	0.077	274.94	0.066	152.25	0.070	135.55	0.040	10.31	0.026	294.98	0.026	294.98
9	0.077	274.94	0.066	152.25	0.070	135.55	0.040	10.31	0.026	294.98	0.026	294.98
10	0.077	274.94	0.066	152.25	0.070	135.55	0.040	10.31	0.026	294.98	0.026	294.98

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL FRACTION	W1	W2	W3	W4	W5	W6	W10	W11
1	2.199	40.04	2.138	43.79	9.250	183.06	3.500	172.21
2	0.882	168.05	0.086	81.99	0.800	158.84	2.800	171.08
3	0.779	171.24	0.981	188.70	2.523	192.91	2.523	191.01
4	0.402	256.49	0.739	159.77	0.649	161.99	0.649	176.48
5	0.099	100.36	0.491	70.68	0.311	85.86	0.248	105.26
6	0.167	81.46	0.344	239.04	0.352	266.69	0.279	243.51
7	0.016	94.36	0.104	80.68	0.127	87.17	0.084	95.91
8	0.016	94.36	0.104	80.68	0.127	87.17	0.084	95.91
9	0.016	94.36	0.104	80.68	0.127	87.17	0.084	95.91
10	0.016	94.36	0.104	80.68	0.127	87.17	0.084	95.91

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 79 ALPHA-PCL = 2.0 PDP RUN.PT 16.07  
RUN 16 ALPHA-PAR = .5 Q-COMP = .32333  
POINT 3 SIGMA = 135. V-REF = 199.44  
COMPUTED FREQUENCY = 15.58, K = .1227

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	17	.439	-1.005	-3.620	-1.945	-.787	-1.551	-1.809
2	16	.754	-.249	-.546	-.501	-.526	-.521	-.524
3	15	.106	-.263	-.323	-.044	-.375	-.392	-.374
4	14	.059	-.032	-.045	-.038	-.052	-.052	-.054
5	13	.045	-.005	-.039	-.077	-.052	-.039	-.050
6	12	.041	-.005	-.049	-.008	-.023	-.027	-.025
7	11	.022	-.002	-.112	-.095	-.089	-.105	-.078
8	10	.038	-.041	-.007	-.049	-.043	-.046	-.047
9	9	.016	-.063	-.000	-.010	-.008	-.040	-.061
10	8	.053	-.042	-.038	-.045	-.050	-.059	-.060

X	N	.174-UPPER CPREAL CPIMAG	.360-UPPER CPREAL CPIMAG	.610-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	1.262-LOWER CPREAL CPIMAG	1.748-LOWER CPREAL CPIMAG	2.261-LOWER CPREAL CPIMAG
1	19	.098	-.490	-.185	1.390	12.722	6.486	4.444
2	18	.315	-.379	-.504	-.057	-.569	-.396	-.315
3	17	.014	-.174	-.205	-.202	-.252	-.227	-.244
4	16	.128	-.062	-.012	-.036	-.115	-.077	-.049
5	15	.072	-.141	-.113	-.004	-.020	-.154	-.049
6	14	.057	-.062	-.056	-.005	-.016	-.005	-.026
7	13	.019	-.018	-.047	-.056	-.048	-.038	-.057
8	12	.035	-.051	-.016	-.063	-.020	-.028	-.031
9	11	.055	-.033	-.050	-.021	-.022	-.028	-.029
10	10	.034	-.033	-.051	-.007	-.007	-.027	-.041

X	N	.392-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	3	.221	-.054	1.879	1.349	1.515
2	2	.195	-.505	-.188	-.450	-.301
3	1	.233	-.287	-.041	-.187	-.195
4	0	.069	-.031	-.073	-.015	-.050
5	0	.080	-.169	-.040	-.092	-.076
6	0	.040	-.052	-.030	-.047	-.047
7	0	.049	-.052	-.044	-.057	-.043
8	0	.014	-.022	-.033	-.031	-.023
9	0	.034	-.042	-.000	-.025	-.024
10	0	.017	-.019	-.048	-.048	-.048

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 79 ALPHA-MCL = 2.0 POP RUN-PT 16.07  
 POINT 13 ALPHA-RAR = 135.5 Q-COMP 32333  
 SIGMA = 135.5 T-REF = 199.44  
 COMPUTED FREQUENCY = 15.58, N = 1227  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	17.536	186.02	7.140	188.09	3.716	193.11	2.046	198.06	.891	208.03	1.435	188.99
2	.754	285.42	.522	304.42	.374	330.65	.255	349.49	.179	366.21	.106	168.99
3	.070	326.91	.059	326.57	.055	305.80	.047	284.81	.031	246.02	.021	229.43
4	.046	261.57	.116	244.44	.140	206.02	.179	10.12	.157	32.48	.084	325.53
5	.208	194.48	.100	268.31	.077	265.93	.072	276.33	.050	286.64	.029	289.68
6	.062	38.13	.040	199.86	.123	203.67	.116	215.50	.085	244.48	.049	214.79
7	.129	277.11	.064	276.78	.055	370.24	.048	358.52	.032	378.97	.025	255.70
8	.094	124.06	.070	147.09	.064	126.73	.060	138.16	.064	141.25	.071	144.09

N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	918	197.97	293	180.05	241	319.90	17.702	4.47	12.752	356.07	6.506	41.88
2	.691	321.68	.289	323.03	.268	319.08	.388	308.64	.284	271.44	.227	315.58
3	.074	287.41	.069	299.13	.074	289.18	.041	282.44	.052	325.48	.055	299.43
4	.074	287.41	.069	299.13	.074	289.18	.041	282.44	.052	325.48	.055	299.43
5	.040	215.98	.091	214.71	.061	292.84	.027	11.53	.016	261.92	.026	231.17
6	.057	255.53	.037	330.15	.034	332.11	.064	263.52	.033	277.42	.037	229.71
7	.065	148.03	.052	151.13	.059	150.04	.033	151.53	.008	209.81	.030	163.91

ORIGINAL PAGE IS  
OF POOR QUALITY

N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	3.227	45.46	3.097	45.16	1.452	21.81	1.885	355.36	1.358	353.05	1.713	332.19
2	.120	214.00	.015	216.29	.287	316.25	.293	309.91	.280	311.86	.264	317.77
3	.071	278.13	.098	271.40	.151	288.33	.107	277.60	.070	282.30	.178	297.84
4	.054	277.46	.085	259.40	.040	269.33	.134	300.18	.165	55.89	.180	52.78
5	.031	262.86	.030	310.37	.069	216.69	.071	218.03	.074	219.81	.075	215.14
6	.035	151.86	.049	156.80	.039	266.07	.045	268.67	.037	264.21	.024	317.91
7	.035	151.86	.049	156.80	.039	266.07	.045	268.67	.037	264.21	.024	317.91
8	.035	151.86	.049	156.80	.039	266.07	.045	268.67	.037	264.21	.024	317.91
9	.035	151.86	.049	156.80	.039	266.07	.045	268.67	.037	264.21	.024	317.91
10	.035	151.86	.049	156.80	.039	266.07	.045	268.67	.037	264.21	.024	317.91

MODE 1 -- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 79 ALPHA-MCL = 2.0 PDP RUN-PT 16.07  
RUN 16 ALPHA-PAR = .5 Q-LUMP = .32333  
POINT 3 SIGMA = 135. V-REF = 199.44  
COMPUTED FREQUENCY = 15.58, N = .1227

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NOMINAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.149		.261		.392		.530		.661	
	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI
1	35	.127	3	.228	19	.792	10	.105	1	.441	6	.789	1	.446
2	.154	.061	4	.071	1	.173	10	.150	1	.247	4	.149	4	.407
3	.225	.179	5	.002	1	.073	10	.039	1	.025	4	.142	4	.162
4	.150	.042	6	.012	1	.066	10	.018	1	.069	4	.130	4	.033
5	.042	.147	7	.004	1	.035	10	.014	1	.039	4	.027	4	.008
6	.226	.104	8	.004	1	.001	10	.011	1	.021	4	.027	4	.033
7	.033	.155	9	.032	1	.103	10	.021	1	.015	4	.017	4	.013
8	.046	.099	10	.035	1	.035	10	.011	1	.008	4	.014	4	.014
9														
10														

X	.774		.860		.910	
	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI
1	2	.777	3	.344	1	.231
2	.118	.052	4	.058	1	.209
3	.047	.038	5	.044	1	.038
4	.070	.028	6	.035	1	.009
5	.001	.020	7	.023	1	.007
6	.006	.040	8	.016	1	.004
7	.024	.014	9	.005	1	.005
8	.032	.005	10	.001	1	.007
9	.014	.009				
10	.007	.009				

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.000		.125		.500		.500		.125		.125	
	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG
1	4	.150	4	.100	4	.651	6	.327	6	.327	6	.735	6	.827
2	.668	.415	5	.658	5	.496	6	.324	6	.482	6	.045	6	.565
3	.305	.407	6	.272	6	.272	6	.334	6	.314	6	.295	6	.368
4	.210	.314	7	.222	7	.050	6	.182	6	.043	6	.157	6	.006
5	.007	.014	8	.019	8	.099	6	.081	6	.094	6	.031	6	.137
6	.086	.375	9	.104	9	.047	6	.130	6	.081	6	.069	6	.074
7	.046	.342	10	.046	10	.013	6	.057	6	.027	6	.022	6	.182
8	.032	.336					6	.005	6	.059	6	.022	6	.016
9	.032	.336					6	.005	6	.059	6	.022	6	.016
10	.033	.333					6	.005	6	.059	6	.022	6	.016

\*\*\* STABILITY PARAMETER

\* XI = -.189 \*  
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Handwritten mark resembling a stylized '2' or 'C-2'.

MODE 1 -- CENTER PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 79 ALPHA-MCL = 2.0 PDP RUN-PT 16.07  
 RUN 16 ALPHA-BAR = 5.5 Q-COMP = 32333  
 POINT 13 SIGMA = 135. V-REF = 199.44  
 COMPUTED FREQUENCY = 15.58, K = .1227

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.188		.261		.392		.530		.661	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	35.275	5.25	19.792	3.38	10.207	6.11	6.869	8.76	4.054	8.71	4.649	8.07	2.866	355.94
2	.258	187.41	.310	208.21	.150	193.34	.271	245.62	.220	227.48	.317	91.51	.408	84.30
3	.078	178.36	.083	222.87	.044	226.36	.189	17.46	.145	162.01	.035	263.21	.070	178.55
4	.161	155.75	.043	323.83	.025	222.92	.071	94.88	.137	252.67	.035	243.94	.032	281.64
5	.151	174.02	.084	289.56	.037	67.43	.040	126.16	.012	122.75	.051	132.77	.039	281.34
6	.226	358.94	.104	358.16	.052	354.06	.047	357.76	.042	130.37	.038	351.94	.025	330.83
7	.119	241.97	.074	241.45	.033	228.29	.026	217.12	.019	200.80	.030	215.03	.025	219.66
8	.102	234.64	.069	111.27	.033	103.64	.014	35.78	.021	126.43	.020	111.32	.018	167.43
9					.058	285.84	.029	278.52	.020	308.44	.027	308.55	.029	288.40
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N	.774		.860		.910		M		M		M		
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	CM-MAG	PHI	CM-MAG	PHI	CM-MAG	PHI	
1	2.798	352.93	1.649	354.62	1.478	374.18	1.2	3.17	6.377	3.17	1.521	6.98	
2	.070	228.27	.056	218.93	.010	231.27	3	191.89	.020	276.89	.014	216.80	
3	.034	269.86	.029	216.78	.046	326.06	4	288.36	.021	288.36	.004	355.03	
4	.041	98.28	.028	189.57	.012	127.83	5	533.57	.011	533.57	.004	169.10	
5	.021	10.47	.019	124.44	.016	127.83	6	103.43	.040	103.43	.010	20.01	
6	.005	251.47	.003	140.03	.010	37.49	7	218.79	.024	218.79	.005	354.35	
7	.017	313.69	.007	240.29	.003	37.49	8	218.64	.024	218.64	.005	243.78	
8	.011	309.96	.022	301.28	.015	283.76	9	95.77	.030	95.77	.004	110.77	
9							10	295.83	.030	295.83	.004	292.11	
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\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	.125		.125		.125		.500		.500		.500	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	4.122	1.96	4.101	.73	7.048	188.44	1.251	404.83	9.590	314.61	1.725	1.189
2	.787	31.81	.926	44.70	.808	10.20	.796	37.25	.567	85.48	1.125	1.189
3	.509	306.26	.566	298.79	.462	305.57	.449	315.56	.474	308.74	1.125	1.189
4	.080	334.28	.123	336.06	.158	317.74	.186	312.25	.157	308.74	1.125	1.189
5	.210	275.82	.243	336.06	.122	264.94	.189	272.97	.180	310.30	1.125	1.189
6	.012	221.16	.114	204.28	.125	213.31	.095	212.91	.280	292.50	1.125	1.189
7	.143	317.90	.114	204.28	.125	213.31	.153	334.75	.195	249.22	1.125	1.189
8	.063	317.90	.067	285.36	.072	278.89	.063	334.75	.047	304.28	1.125	1.189
9	.026	273.31	.067	221.39	.072	278.89	.059	274.40	.039	304.28	1.125	1.189
10	.089	124.04	.074	154.01	.066	127.98	.069	136.30	.041	161.42	1.125	1.189

\*\*\* STABILITY PARAMETER



MODE 1 -- CENTER BLADE DATA, WALL STATIONS  
 OCWT PERIODICITY TEST  
 FILE 81 ALPHA-MCL = 2.0 PDP RUN.PT 16.09  
 RUN 16 ALPHA-PAR = 5.5 Q-COMP = .31887  
 POINT 15 SIGMA = 135. V-REF = 198.04  
 COMPUTED FREQUENCY = 19.24, K = .1526  
 FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	X	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.146-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-18.755	1.093	-179	-4.847	-3.020	-2.157	-2.959	-2.763
2	.138	.418	.024	.363	.405	.171	.511	.493
3	.030	.273	.049	.069	.267	.427	.077	.080
4	.002	.045	.173	.013	.010	.066	.038	.077
5	-.098	.005	.017	.017	.013	.044	.000	.004
6	-.061	.134	.117	.041	.041	.058	.043	.056
7	.016	.028	.010	.005	.018	.030	.004	.001
8	.003	.094	.005	.012	.013	.020	.024	.006
9	.003	.009	.023	.021	.019	.039	.037	.028
10			.023	.021	.019	.039	.037	.028

N	X	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.146-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-2.270	1.094	-1.669	-1.197	16.346	2.480	5.238	3.535
2	.442	.042	.087	.195	.848	.004	.636	.618
3	.022	.037	.055	.104	.069	.071	.073	.073
4	.028	.017	.026	.044	.034	.026	.011	.041
5	.057	.046	.002	.078	.061	.066	.069	.066
6	.011	.043	.005	.036	.058	.045	.014	.047
7	.029	.028	.022	.014	.037	.033	.020	.028
8	.013	.005	.005	.005	.016	.010	.013	.010
9			.005	.005	.016	.010	.013	.010
10			.005	.005	.016	.010	.013	.010

N	X	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	2.025	1.139	1.413	1.237	3.08	3.35	5.592
2	.554	.075	.120	.274	.604	.567	.592
3	.013	.019	.012	.104	.133	.167	.102
4	.061	.019	.017	.033	.021	.020	.036
5	.009	.065	.069	.055	.046	.043	.035
6	.009	.035	.043	.005	.041	.016	.016
7	.017	.048	.018	.005	.068	.016	.017
8	.021	.027	.032	.024	.029	.023	.021
9	.001	.001	.001	.009	.001	.001	.001
10			.001	.009	.001	.001	.001

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MODE 1 -- OCUT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 81 ALPHA-MCL = 2.0 PDP RUNPT 16.09  
HUN 19 ALPHA BAR = 135.0 O-COMP = 31887  
POINT 15 SIGMA = 135.0 W-REF = 198.04  
COMPUTED FREQUENCY = 19.24, K = .1526

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	X =	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	18.787	181.18	0.268	181.24	4.847	180.03	3.025	176.76	2.194	169.46	3.008	156.75	
2	223	277.54	0.147	258.33	0.370	169.22	0.288	153.50	0.498	157.07	0.494	174.97	
3	0.845	87.18	0.039	256.77	0.107	242.44	0.275	193.51	0.187	158.72	0.072	218.32	
4	0.088	171.44	0.119	280.32	0.029	263.96	0.017	237.24	0.032	140.21	0.123	268.16	
5	0.066	201.77	0.114	135.05	0.113	291.97	0.128	248.54	0.044	198.63	0.041	181.50	
6	0.034	255.62	0.014	119.52	0.025	100.90	0.035	58.76	0.041	290.55	0.056	91.07	
7	0.024	268.28	0.052	251.75	0.016	116.90	0.014	332.43	0.037	101.07	0.028	355.28	
8	0.084	118.05	0.032	141.93	0.024	155.35	0.019	167.54	0.028	228.64	0.058	231.01	

N	X =	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	2.520	170.40	1.895	151.69	2.447	145.82	16.533	8.633	10.797	1.714	5.879	3.836	27.83
2	0.099	202.96	0.120	282.51	0.503	169.32	0.848	180.29	0.221	243.16	0.084	165.25	
3	0.046	185.69	0.046	177.84	0.115	250.13	0.226	268.24	0.277	275.07	0.168	209.62	
4	0.045	104.35	0.100	304.58	0.090	199.32	0.034	181.55	0.075	208.48	0.039	192.63	
5	0.014	104.35	0.029	96.94	0.037	179.89	0.095	52.02	0.068	59.57	0.049	172.98	
6	0.014	223.91	0.029	348.28	0.026	326.26	0.068	268.71	0.047	272.97	0.035	105.61	
7	0.013	187.55	0.009	234.69	0.008	226.03	0.072	282.98	0.039	172.56	0.041	233.35	

N	X =	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	2.223	29.37	2.026	37.20	1.176	78.62	0.966	71.42	0.222	87.59	0.235	102.84	
2	0.037	161.93	0.141	249.23	0.368	126.40	0.714	193.56	0.543	180.33	0.639	168.39	
3	0.034	274.77	0.174	271.28	0.305	288.60	0.122	207.07	0.195	228.02	0.131	219.28	
4	0.014	199.30	0.084	308.52	0.067	315.31	0.054	306.40	0.054	303.18	0.034	199.26	
5	0.015	319.38	0.032	324.46	0.021	306.46	0.013	307.04	0.020	323.45	0.024	311.25	
6	0.019	277.12	0.012	236.11	0.012	221.91	0.049	230.89	0.036	230.27	0.033	233.27	
7	0.012	277.12	0.012	221.91	0.012	221.91	0.003	248.13	0.012	192.04	0.014	189.34	

MODE 1 -- GCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE R1 ALPHA-WCL = 2.0 PDP RUN-PT 16.09  
 RUN 16 ALPHA-PAR = 135.5 O-COMP = 1.087  
 POINT SIGMA = 135.5 V-REF = 198.04  
 COMPUTED FREQUENCY = 19.24, K = .1526

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	35.101	3.573	19.057	3.94	10.064	1.658	6.555	1.319	4.181	.738	4.572	.326	2.987	-.074
2	-.956	.314	-1.097	-.217	-.293	.304	-.213	-.293	-.096	-.013	-.102	-.055	-.155	-.414
3	-.089	-.314	-.037	-.106	-.024	-.053	-.180	-.002	-.191	-.048	-.102	-.055	-.047	-.078
4	-.054	-.070	-.026	-.153	-.044	-.045	-.045	.061	-.017	-.146	-.049	-.014	-.037	-.038
5	.052	.070	.024	.034	.018	.030	.044	.070	.009	.004	.044	.046	.006	.038
6	.120	.099	.044	.048	.019	.022	.020	.002	.009	.004	.005	.003	.006	.015
7	-.037	-.121	-.032	-.026	-.009	-.014	-.007	-.007	-.000	-.015	-.005	-.011	-.005	-.014
8	.046	-.126	.038	-.067	.035	-.035	.029	-.020	.001	.003	.023	.011	.001	-.008
9									.029	-.011				
10														

X	.774		.860		.910	
N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	2.576	-.179	1.703	1.141	1.584	6.240
2	-.042	-.049	-.057	-.002	-.076	-.230
3	-.006	-.003	-.003	.002	-.018	-.027
4	-.001	-.003	-.000	.016	-.022	.014
5	-.024	-.020	.000	.013	-.000	-.020
6	-.021	-.021	.014	.010	.014	.009
7	-.032	-.032	.012	.001	-.003	-.002
8	-.001	-.002	-.012	-.006	-.003	.003
9	.012	-.001	-.012	.014	.003	.014
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\*\*\* STABILITY PARAMETER

WALL NO.	.125		.125		.125		.125		.125		.125		.125	
GAP FRACTION	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	
1	2.391	1.450	2.351	1.322	-.738	.112	-2.635	.540	5.062	-6.272				
2	-.720	-.197	-.651	-.436	-.400	-.281	-.553	-.094	-1.096	-.293				
3	-.042	-.147	-.013	-.119	.077	-.171	-.016	.051	-.078	-.332				
4	-.053	-.207	-.039	-.190	-.066	-.048	.013	-.149	.037	-.118				
5	-.044	-.154	-.027	-.163	.059	-.008	.040	-.013	.026	-.070				
6	.027	-.154	-.027	-.193	-.024	-.138	.077	-.140	.056	-.145				
7	.015	-.025	-.001	-.022	.024	-.003	.006	.044	.047	-.067				
8	-.055	-.049	-.019	-.069	.030	-.055	.049	-.011	-.042	-.030				
9	-.014	-.022	-.019	-.031	-.022	-.018	-.017	-.040	-.030	-.056				
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\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

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MODE 1 -- CWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 81 ALPHA-MCL = 2.0 PDP RUN-PT 16.09  
 RUN 16 ALPHA-BAR = .5 Q-COMP = 31887  
 POINT 5 SIGMA = 135. V-REF = 198.04  
 COMPUTED FREQUENCY = 18.24, X = .1526

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.188		.261		.392		.510		.661	
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	35.283	5.88	19.061	1.18	10.220	9.34	6.586	11.37	4.246	10.01	4.589	10.00	2.988	358.59
2	1.042	156.68	1.523	188.19	.311	160.53	.363	234.80	.097	187.68	.337	109.34	.442	189.43
3	.370	269.07	.157	227.66	.058	113.63	.180	165.73	.197	165.73	.057	257.56	.091	238.82
4	.654	323.73	.038	283.69	.046	293.91	.075	54.13	.147	224.70	.043	274.39	.040	235.11
5	.047	323.73	.038	220.26	.046	166.86	.075	194.38	.024	224.70	.043	200.23	.040	235.11
6	.156	39.65	.041	54.96	.043	35.35	.082	58.05	.047	117.58	.046	84.87	.042	117.22
7	.094	257.92	.065	47.66	.029	49.42	.020	173.44	.010	390.63	.012	151.36	.015	249.11
8	.126	107.21	.062	259.37	.019	296.33	.020	310.99	.004	69.63	.015	48.08	.014	34.80
9	.114	290.04	.077	299.77	.049	315.09	.015	324.50	.031	338.92	.025	334.45	.008	278.51
10														

X	.774		.860		.910		CM-MAG		PHIM	
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	CM-MAG	PHIM	CM-MAG	PHIM
1	2.589	358.03	1.705	357.41	1.780	332.91	6.293	4.85	1.596	7.78
2	.052	216.75	.010	268.22	.018	276.81	.028	178.29	.008	186.59
3	.007	209.89	.027	82.84	.023	305.75	.043	288.80	.011	278.59
4	.029	271.99	.030	270.12	.023	357.96	.025	218.40	.003	163.52
5	.024	180.31	.023	328.90	.020	178.78	.039	35.89	.006	54.53
6	.021	182.39	.026	304.19	.011	276.39	.010	15.91	.006	54.53
7	.010	354.76	.014	49.73	.006	203.39	.012	257.16	.003	290.75
8	.012	354.76	.004	161.75	.013	111.40	.026	315.32	.004	127.09
9					.009	161.08			.007	306.70
10										

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL MAG	.125		.000		.125		.500		1.125		2.038	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.796	31.24	2.697	29.35	8.738	179.26	2.729	163.60	8.060	308.90	1.134	183.00
2	.747	184.71	.183	126.18	.489	215.09	.381	170.36	1.134	183.00	.134	183.00
3	.153	254.18	.193	276.51	.188	298.25	.033	252.27	.124	287.36	.124	287.36
4	.058	198.88	.063	258.51	.060	187.19	.042	198.50	.075	290.65	.075	290.65
5	.161	287.46	.195	278.19	.125	147.104	.150	97.91	.156	290.93	.156	290.93
6	.029	300.26	.022	268.47	.043	147.26	.144	326.44	.050	339.47	.050	339.47
7	.074	321.55	.105	221.32	.063	241.31	.120	219.06	.032	200.37	.032	200.37
8	.026	237.63	.036	238.95	.028	141.17	.017	167.24	.064	241.93	.064	241.93
9												
10												

\*\*\* STABILITY PARAMETER

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 83 ALPHA-MCL = 2.0 POP RUN.PT 17.96  
 RUN 17 ALPHA-PAR = 0.5 O-COMP = .32872  
 POINT SIGMA = 180. V-PEF = 201.12  
 COMPUTED FREQUENCY = 9.14, K = .0714

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-19.471	2.195	1.427	-5.065	1.137	-3.368	.996
2	-1.179	.037	.037	.035	.031	.110	.929
3	-1.778	.499	.597	-.917	.636	.699	.606
4	-2.278	-.084	.228	.632	-.182	.759	.394
5	-3.51	.387	-.067	-.142	.100	.115	.101
6	-3.744	.387	.436	.260	.465	.472	.488
7	-4.533	.169	-.013	.260	-.010	.532	.015
8	-4.533	.169	.135	.031	.219	.580	.118
9	-4.533	.169	.077	.030	.022	.638	.023
10	-4.533	.169	.144	.033	-.085	.716	.152

X	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-3.010	1.088	1.050	-1.753	1.060	17.330	-1.366
2	-1.545	.016	.018	-.307	.760	-1.380	.887
3	-1.732	.735	.739	-1.026	.326	-1.845	.744
4	-2.105	.341	.360	-.746	-.058	1.064	.166
5	-2.194	-.022	-.082	-.129	.416	-.189	-.492
6	-2.200	.440	.447	.171	.036	.234	.469
7	-2.226	.055	.049	-.238	.057	.508	.060
8	-2.227	.055	.075	-.033	.003	.586	.091
9	-2.227	.055	.176	-.115	.139	.669	.040
10	-2.227	.055	.176	-.115	.139	.669	.040

X	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	2.080	1.025	1.025	.233	1.230	1.096
2	-1.880	.648	.655	-1.060	.762	.112
3	-1.880	.648	.391	-1.711	.333	.743
4	-1.994	-.070	-.098	-.124	.022	.320
5	-1.994	.392	.177	.192	.041	.427
6	-1.994	.392	.032	.291	.058	.023
7	-1.994	.392	.317	.057	.272	.043
8	-1.994	.392	.204	.057	.272	.043
9	-1.994	.392	.077	.057	.272	.043
10	-1.994	.392	.077	.057	.272	.043

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 83 ALPHA-MCL = 2.0 PDP RUN.PI 17.06  
 RUN 17 ALPHA-OBAR = 180.5 Q-COMP = 32872  
 POINT 1 SIGMA = 180.0 V-REF = 201.12  
 COMPUTED FREQUENCY = 9.14, K = .0714

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	012-UPPER		062-UPPER		108-UPPER		261-UPPER		392-UPPER		530-UPPER		661-UPPER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	19.594	173.57	0.689	170.55	5.191	167.35	3.512	163.53	2.747	160.25	3.812	162.56	3.621	162.31
2	.237	227.94	1.228	170.72	.237	175.82	1.352	119.87	.265	155.49	1.328	204.10	.328	184.91
3	.468	124.79	1.075	146.25	1.116	145.26	1.346	148.69	1.031	144.04	1.242	146.24	1.204	144.49
4	.290	196.88	.205	208.14	.683	215.49	.666	15.98	.835	271.06	.852	124.55	.620	122.84
5	.522	177.82	.528	208.14	.174	215.02	.514	234.44	.534	215.09	.554	225.32	.154	227.80
6	.244	356.17	.528	55.62	.533	65.01	.514	65.54	.534	65.01	.554	64.33	.492	65.13
7	.215	128.15	.233	357.04	.246	357.04	.233	357.64	.233	357.64	.227	9.83	.219	11.69
8	.120	184.96	.233	179.70	.231	145.69	.249	151.65	.279	158.73	.296	157.05	.294	158.65
9	.203	123.58	.080	174.17	.061	61.02	.082	45.90	.048	36.47	.039	38.47	.034	128.95
10			.172	123.21	.158	123.90	.157	122.87	.194	126.66	.203	130.51	.181	134.69

N	774-UPPER		062-UPPER		012-LOWER		194-LOWER		261-LOWER					
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI				
1	3.200	160.13	2.541	155.59	17.320	359.79	13.040	353.97	5.631	9.04	3.874	186.40	15.51	
2	.277	171.01	1.277	143.47	1.862	227.70	1.126	212.74	1.239	141.69	1.224	143.36	1.353	143.36
3	.808	220.95	.824	225.89	1.000	123.61	1.077	8.85	.840	207.89	.833	207.89	.797	211.97
4	.137	220.11	.465	204.78	.097	189.97	.195	194.13	.511	206.70	.488	210.65	.488	210.65
5	.207	115.22	.175	63.29	.238	339.16	.216	343.53	.206	354.49	.201	354.49	.257	171.83
6	.287	162.29	.299	168.66	.238	168.34	.281	163.78	.281	163.78	.281	162.07	.257	171.83
7	.027	111.03	.040	6.84	.061	321.06	.079	329.99	.047	343.99	.047	343.99	.047	343.99
8	.180	135.08	.190	134.30	.121	71.04	.129	96.19	.137	108.48	.137	108.48	.148	124.44

N	392-LOWER		530-LOWER		774-LOWER		860-LOWER		913-LOWER					
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI				
1	2.309	173.27	2.010	40.13	1.323	89.43	1.197	103.27	.659	72.20	1.305	142.39	.659	72.20
2	.104	173.27	1.342	166.27	1.323	104.82	1.246	143.37	1.305	142.39	.716	126.15	.659	72.20
3	.700	223.05	1.900	225.73	1.306	144.76	.754	143.37	1.305	142.39	.716	126.15	.659	72.20
4	.129	215.30	.423	223.40	.126	229.66	.473	189.42	.468	189.42	.468	189.42	.468	189.42
5	.429	103.16	.527	68.51	.507	64.30	.473	63.97	.468	63.97	.468	63.97	.468	63.97
6	.216	197.78	.216	169.59	.197	12.02	.180	170.26	.180	170.26	.180	169.10	.180	169.10
7	.047	197.78	.039	162.91	.039	334.31	.044	354.51	.044	354.51	.044	354.51	.044	354.51
8	.139	115.42	.171	122.72	.171	122.38	.154	124.51	.154	124.51	.154	124.51	.154	124.51

MODE 1 --- OCHI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 93 ALPHA-MCL = 2.0 POP RUN-PT 17.06  
 RUN 17 ALPHA-PAR = .5 O-COMP = 32872  
 POINT 1 SIGMA = 180. Y-REF = 201.12  
 COMPUTED FREQUENCY = 9.14, N = .0714

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	36.801	-2.258	21.511	-2.791	10.629	-1.114	7.102	0.40	4.095	-0.95	5.174	0.174	3.654	.172
2	4.01	.485	1.154	.924	.055	.132	.164	.370	.054	.013	.014	.230	.240	.110
3	.750	.028	.471	.147	.250	.078	.091	.136	.056	.033	.036	.047	.055	.087
4	.170	.068	.004	.049	.058	.038	.045	.050	.043	.031	.044	.037	.090	.085
5	.033	.082	.064	.056	.058	.004	.055	.018	.043	.031	.027	.031	.004	.024
6	.013	.102	.032	.048	.041	.007	.046	.026	.035	.018	.020	.003	.002	.040
7	.053	.170	.047	.064	.058	.067	.033	.029	.039	.032	.038	.020	.001	.058
8	.159	.342	.080	.016	.050	.000	.002	.010	.057	.030	.040	.011	.005	.000
9													.032	.013
10														

X	.774		.850		.910		.910		.910		.910		.910	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	3.243	-.142	2.096	-.096	1.955	-.432	6.973	-.249	6.973	-.249	1.561	1.561	1.561	1.561
2	.154	-.277	.100	-.130	.162	-.046	.014	.035	.014	.035	.001	.001	.001	.001
3	.022	-.068	.067	-.033	.041	.020	.072	.019	.072	.019	.001	.001	.001	.001
4	.020	-.069	.013	-.020	.003	.010	.008	.007	.008	.007	.001	.001	.001	.001
5	.020	-.069	.012	-.020	.014	.010	.008	.007	.008	.007	.001	.001	.001	.001
6	.019	-.035	.027	-.015	.010	.017	.015	.007	.015	.007	.001	.001	.001	.001
7	.031	-.033	.002	-.019	.031	-.010	.017	.009	.017	.009	.001	.001	.001	.001
8	.033	-.021	.046	-.010	.018	-.041	.023	.035	.023	.035	.001	.001	.001	.001
9											.004	.004	.004	.004
10														

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

\*\*\* STABILITY PARAMETER

WALL NO.	GAP FRACTION	.125		.125		.125		.125		.125		.125		.125	
		CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	2.763	1.078	1.222	-0.935	1.870	1.408	7.434	1.125	7.434	1.125	1.125	1.125	1.125	1.125	1.125
2	5.23	-.065	1.072	-1.079	.843	-.022	-.716	1.125	-.716	1.125	1.125	1.125	1.125	1.125	1.125
3	3.24	-.033	1.072	-1.079	.843	-.022	-.687	1.125	-.687	1.125	1.125	1.125	1.125	1.125	1.125
4	1.071	.355	-.062	-.209	-.183	-.198	-.296	1.125	-.296	1.125	1.125	1.125	1.125	1.125	1.125
5	.516	-.035	-.082	-.209	-.183	-.198	-.296	1.125	-.296	1.125	1.125	1.125	1.125	1.125	1.125
6	.271	-.048	-.119	-.375	-.030	-.608	-.178	1.125	-.178	1.125	1.125	1.125	1.125	1.125	1.125
7	.276	-.166	-.064	-.209	-.171	-.115	-.199	1.125	-.199	1.125	1.125	1.125	1.125	1.125	1.125
8	.360	.032	-.070	-.165	.057	-.046	-.144	1.125	-.144	1.125	1.125	1.125	1.125	1.125	1.125
9	.044	.125	.252	-.165	.209	.175	.175	1.125	.175	1.125	1.125	1.125	1.125	1.125	1.125
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ORIGINAL FACE IS  
OF POOR QUALITY

MODE 1 -- OCHI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 83 ALPHA-MCL = 2.0 PDP RUN-PT 17.06  
 RUN 17 ALPHA-BAR = .5 Q-COMP = 32872  
 POINT 1 SIGMA = 100. V-REF = 201.12  
 COMPUTED FREQUENCY = 9.14, K = .0714  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.148		.261		.392		.530		.661	
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	36.871	356.89	21.692	352.60	10.629	358.64	7.102	361.48	4.647	364.43	3.176	367.38	1.770	370.33
2	530	210.22	1.478	216.67	.175	220.52	.404	246.48	.092	234.43	.230	237.38	.118	240.33
3	551	20.74	.175	352.47	.157	117.41	.163	56.28	.171	232.51	.045	71.59	.072	319.31
4	195	20.33	.050	398.59	.055	56.02	.053	112.97	.054	342.63	.012	67.82	.027	259.81
5	119	157.25	.085	138.68	.058	176.98	.058	198.40	.105	242.87	.041	130.68	.025	266.01
6	.073	237.71	.059	233.79	.042	189.66	.053	150.33	.058	162.25	.070	189.74	.091	271.14
7	.178	287.22	.126	291.84	.076	229.81	.088	248.23	.049	311.67	.020	234.88	.058	356.43
8	.174	346.00	.082	348.99	.051	289.23	.038	309.23	.033	332.42	.048	344.60	.034	356.43
9														
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N	.774		.860		.910		N		CM-MAG		PHI-M		PHI-M	
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	3.349	240.51	2.096	232.36	1.326	237.52	2.082	345.71	6.978	357.95	1.565	355.79	1.565	355.79
2	.023	119.48	.071	207.42	.067	101.79	.037	151.79	.056	216.42	.017	94.21	.017	94.21
3	.060	105.70	.064	299.98	.020	128.55	.026	128.55	.074	14.65	.005	10.68	.005	10.68
4	.050	241.03	.025	300.63	.017	146.26	.017	146.26	.029	194.74	.010	10.70	.010	10.70
5	.018	242.09	.043	319.20	.020	159.96	.033	342.98	.038	190.28	.003	191.93	.003	191.93
6	.040	312.58	.043	319.20	.033	342.98	.033	342.98	.051	250.61	.020	221.01	.020	221.01
7	.039	312.58	.047	348.22	.021	32.66	.047	299.73	.041	351.97	.005	223.48	.005	223.48
8														
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\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO	.125		.000		.125		.500		1.125		1.161	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.966	21.34	2.688	27.04	1.256	168.18	3.405	155.57	7.400	377.72	1.400	377.72
2	.527	187.18	.584	158.03	.356	254.19	.275	185.63	1.900	277.23	1.955	277.23
3	1.610	118.97	1.190	145.56	1.785	121.23	1.423	146.23	1.708	146.82	1.708	146.82
4	1.328	194.14	.268	193.32	.963	226.76	.925	224.05	.656	185.31	.656	185.31
5	.766	163.86	.911	169.14	.640	60.71	.659	67.16	.217	325.13	.217	325.13
6	.385	342.10	.278	328.60	.380	350.90	.242	354.04	.201	325.13	.201	325.13
7	.071	142.07	.153	170.01	.270	148.66	.282	156.04	.075	228.80	.075	228.80
8	.201	114.39	.179	115.03	.067	128.27	.052	160.53	.027	229.41	.027	229.41
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\*\*\* STABILITY PARAMETER \*\*\*

WALL NO	.125		.000		.125		.500		1.125		1.161	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.966	21.34	2.688	27.04	1.256	168.18	3.405	155.57	7.400	377.72	1.400	377.72
2	.527	187.18	.584	158.03	.356	254.19	.275	185.63	1.900	277.23	1.955	277.23
3	1.610	118.97	1.190	145.56	1.785	121.23	1.423	146.23	1.708	146.82	1.708	146.82
4	1.328	194.14	.268	193.32	.963	226.76	.925	224.05	.656	185.31	.656	185.31
5	.766	163.86	.911	169.14	.640	60.71	.659	67.16	.217	325.13	.217	325.13
6	.385	342.10	.278	328.60	.380	350.90	.242	354.04	.201	325.13	.201	325.13
7	.071	142.07	.153	170.01	.270	148.66	.282	156.04	.075	228.80	.075	228.80
8	.201	114.39	.179	115.03	.067	128.27	.052	160.53	.027	229.41	.027	229.41
9												
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MODE 1 --- OCMI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 86 ALPHA-XCL = 2.0 PDP RUN.PT 17.08  
 RUN 17 ALPHA-RAR = .5 Q-COMP = .33017  
 POINT 14 SIGMA = 180. V-REF = 201.56  
 COMPUTED FREQUENCY = 15.57 \* K = .1213

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.188-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-19	.099	2.539	-5.632	-3.221	-2.548	-3.570	-3.630
2	.174	.214	.614	.205	.080	.197	.356	.541
3	.158	.153	.141	.203	.022	.170	.219	.737
4	.151	.233	.095	.080	.072	.219	.075	.188
5	.167	.066	.068	.256	.179	.206	.237	.082
6	.032	.042	.019	.027	.122	.086	.066	.226
7	.059	.184	.059	.093	.025	.086	.088	.050
8	.071	.010	.029	.043	.094	.086	.030	.070
9	.002	.014	.027	.081	.025	.018	.013	.019
10			.022	.040	.050	.062	.015	.005

X	N	.774-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.188-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG	.392-LOWER CPREAL CPIMAG
1	-2	.254	.463	-1.772	16.659	11.587	-2.551	5.397
2	.259	.729	.747	.261	.444	-1.279	.423	.312
3	.190	.143	.156	.219	.205	.124	.200	.170
4	.237	.028	.015	.112	.093	.112	.164	.106
5	.098	.092	.085	.085	.061	.109	.029	.161
6	.074	.018	.072	.060	.005	.021	.079	.084
7	.065	.012	.025	.072	.100	.086	.008	.023
8	.022	.019	.007	.027	.091	.019	.005	.004
9	.005	.075	.077	.098	.058	.047	.002	.032
10						.049	.083	.044

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	.270	.688	.059	.185	.054
2	.202	.006	.183	.018	.499	.456
3	.284	.013	.175	1.009	.191	.445
4	.194	.095	.222	.111	.399	.208
5	.029	.111	.204	.006	.001	.198
6	.057	.095	.020	.140	.064	.236
7	.004	.074	.039	.017	.014	.017
8	.017	.004	.025	.086	.089	.075
9	.027	.016	.012	.012	.305	.022
10			.017	.073	.005	.014

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 06 ALPHA-MCL = 2.0 PDP RUN-PT 17.08  
 RUN 17 ALPHA-RAR = 180.5 Q-COMP = 33017  
 POINT 14 ALPHA-SIGMA = 180.5 V-REF = 201.56  
 COMPUTED FREQUENCY = 15.57, K = .1215

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	CP-MAG	PHI	062-UPPER	CP-MAG	PHI	261-UPPER	CP-MAG	PHI	530-UPPER	CP-MAG	PHI	661-UPPER	CP-MAG	PHI
1	267	172.43	0.477	171.46	5.080	171.52	2.561	174.34	3.549	172.63	3.670	171.53	3.670	171.53
2	374	335.81	0.440	106.47	1.036	104.43	0.773	104.72	0.645	123.34	0.777	104.98	0.777	104.98
3	281	329.97	0.282	331.29	0.222	10.15	0.473	321.36	0.269	329.43	0.233	323.98	0.233	323.98
4	203	333.44	0.131	43.60	0.179	43.06	0.166	324.65	0.083	335.09	0.083	331.51	0.083	331.51
5	165	335.44	0.163	335.44	0.077	322.39	0.225	337.70	0.271	331.10	0.258	331.10	0.258	331.10
6	167	165.11	0.085	166.81	0.051	182.58	0.076	185.64	0.066	182.60	0.059	201.95	0.059	201.95
7	187	279.92	0.136	295.66	0.121	306.81	0.129	317.62	0.120	312.10	0.092	319.65	0.092	319.65
8	086	317.12	0.045	35.41	0.034	40.69	0.027	34.83	0.019	312.72	0.023	319.43	0.023	319.43
9	014	274.13	0.027	52.37	0.017	94.83	0.005	196.18	0.014	178.08	0.009	118.43	0.009	118.43
10	014	274.13	0.027	52.37	0.017	94.83	0.005	196.18	0.014	178.08	0.009	118.43	0.009	118.43

N	CP-MAG	PHI	060-UPPER	CP-MAG	PHI	012-LOWER	CP-MAG	PHI	190-LOWER	CP-MAG	PHI	261-LOWER	CP-MAG	PHI
1	290	171.09	2.277	169.25	1.798	165.62	16.688	356.62	11.864	347.59	5.415	4.63	3.653	10.33
2	219	321.22	0.294	109.30	0.269	109.28	0.524	147.91	1.235	161.80	0.753	114.93	0.753	114.93
3	095	17.47	0.100	345.91	0.113	327.77	0.205	357.95	0.229	309.15	0.209	341.09	0.209	341.09
4	051	338.83	0.044	341.47	0.046	340.49	0.118	322.17	0.036	345.56	0.036	345.56	0.036	345.56
5	099	318.93	0.096	310.55	0.056	303.47	0.226	285.78	0.197	303.21	0.217	317.30	0.217	317.30
6	028	39.00	0.033	310.13	0.029	303.44	0.051	275.42	0.036	317.30	0.024	313.58	0.024	313.58
7	021	133.85	0.021	126.37	0.026	104.53	0.029	329.87	0.048	173.95	0.032	144.21	0.032	144.21
8	075	86.27	0.078	182.99	0.078	80.92	0.114	159.19	0.097	159.28	0.087	159.64	0.087	159.64

N	CP-MAG	PHI	530-LOWER	CP-MAG	PHI	661-LOWER	CP-MAG	PHI	860-LOWER	CP-MAG	PHI	910-LOWER	CP-MAG	PHI
1	207	19.24	1.733	31.17	1.084	87.48	0.882	77.89	0.86	99.76	0.86	108.96	0.86	108.96
2	250	19.67	0.931	107.69	1.009	88.98	0.736	132.59	0.762	115.61	0.762	120.39	0.762	120.39
3	083	337.21	0.111	325.69	0.214	328.77	0.216	328.68	0.264	328.54	0.264	326.15	0.264	326.15
4	223	330.19	0.203	333.08	0.222	328.43	0.077	358.91	0.094	348.59	0.094	341.04	0.094	341.04
5	101	310.75	0.051	156.98	0.036	151.60	0.017	123.78	0.027	145.03	0.027	155.14	0.027	155.14
6	021	167.52	0.012	114.47	0.095	159.65	0.123	308.01	0.093	141.34	0.097	109.36	0.097	109.36
7	018	167.52	0.017	16.14	0.027	44.25	0.026	349.21	0.019	15.23	0.023	14.65	0.023	14.65
8	074	68.39	0.088	163.62	0.075	77.07	0.089	163.33	0.081	159.12	0.074	148.42	0.074	148.42

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

MODE 1 -- ALPHA-MCL = 2.0 POP RUN PT 17.08  
 FILE 85 ALPHA-RAR = 190.5 Q-COMP = 33017  
 RUN 17 SIGMA = 190.5 V-REF = 201.56  
 POINT 14 COMPUTED FREQUENCY = 15.57, K = .1213

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012	.062	.148	.261	.392	.570	.661
N	DELCP DELCPI	DELCP DELCPI	DELCP DELCPI	DELCP DELCPI	DELCP DELCPI	DELCP DELCPI	DELCP DELCPI
1	35.758	-3.524	19.969	-3.809	10.419	-3.32	6.814
2	-.210	.064	-1.092	.191	-.112	.009	-.246
3	-.065	.146	-.120	-.059	-.006	-.044	-.176
4	-.090	-.303	-.040	-.096	.045	-.076	.106
5	-.162	-.282	-.040	-.048	.036	-.025	.018
6	-.058	.140	-.027	.143	.032	.008	-.001
7	-.059	-.179	-.014	-.034	-.028	-.025	-.016
8	-.022	.013	-.078	.002	-.002	-.002	-.001
9	.057	.112	.028	.055	.019	.036	.001
10							

X =	.774	.850	.910
N	DELCP DELCPI	DELCP DELCPI	DELCP DELCPI
1	3.139	.399	1.689
2	-.239	-.186	-.263
3	-.000	.044	-.023
4	-.013	-.030	-.010
5	-.038	.028	.026
6	-.005	.024	.010
7	.003	-.021	.003
8	.001	.011	-.014
9	.006	.013	-.003
10			

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	W1	W2	W3	W4	W5	W6	W10
GAP FRACTION	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL
1	2.670	.434	2.590	.419	-3.015	.873	7.302
2	-.287	-.133	-.285	-.216	-.285	.873	-.896
3	.175	.027	.095	-.024	.305	-.179	.250
4	-.074	-.175	.120	.175	.108	-.013	.118
5	-.135	.016	-.126	-.037	.145	-.113	-.003
6	-.136	-.135	-.161	-.129	-.124	-.069	.060
7	-.032	-.116	-.075	-.084	.047	-.119	.044
8	.022	.022	-.035	.023	.041	.026	-.175
9	.049	.072	.058	.046	.040	.069	-.023
10							.134

\*\*\* STABILITY PARAMETER

\* XI = .1846 \*  
 \* \* \* \* \*

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 86 ALPHA-MCL = 2.0 PDP RUN.PT 17.08  
 RUN 17 ALPHA-BAR = .5 Q-COMP = .33017  
 POINT 4 SIGMA = 180. V-REF = 201.56  
 COMPUTED FREQUENCY = 15.57, K = .1213  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	35.922	354.37	20.329	349.20	10.424	358.17	6.817	235.46	4.539	5.50	5.077	4.93
2	.277	166.69	.113	184.46	.089	197.22	.191	337.28	.257	219.10	.343	181.17
3	.200	133.13	.089	101.27	.054	28.74	.054	58.87	.088	129.42	.043	332.55
4	.217	257.99	.074	321.87	.034	35.87	.049	90.88	.028	14.75	.030	389.09
5	.184	110.12	.051	58.16	.030	258.57	.038	222.50	.022	163.21	.013	50.48
6	.138	60.67	.034	242.83	.021	191.37	.034	212.06	.013	156.21	.014	210.48
7	.098	233.21	.062	63.26	.043	161.84	.037	91.43	.012	337.65	.015	50.48
8	.162	175.42										
9	.125	63.12										
10												

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	3.164	7.24	2.136	6.76	1.713	350.23	6.717	358.56	1.333	180.83	1.505	352.96
2	.044	90.03	.021	247.78	.011	126.34	.042	108.44	.033	293.10	.042	203.42
3	.033	246.08	.024	58.59	.014	355.43	.016	270.51	.016	272.11	.016	272.11
4	.030	246.08	.003	93.94	.010	387.33	.007	102.20	.007	319.79	.007	319.79
5	.025	278.21	.014	243.81	.010	251.81	.007	102.20	.004	233.93	.004	233.93
6	.014	67.00	.005	137.79	.011	193.72	.023	198.14	.023	173.70	.006	173.70
7												
8												
9												
10												

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10
1	1	2.705	9.24	2.403	9.19	9.037	169.28	3.183	163.83	7.378	351.38
2	3	.116	335.15	.358	325.86	.591	336.43	.353	329.52	.308	222.51
3	4	.254	176.40	.258	297.93	.228	40.03	.109	6.77	.214	359.08
4	5	.095	308.15	.145	189.09	.129	179.22	.217	328.52	.063	17.65
5	6	.172	308.15	.217	299.57	.182	39.41	.171	316.51	.119	158.11
6	7	.036	25.42	.062	114.81	.031	324.36	.026	97.40	.237	219.33
7	8	.087	55.54	.082	45.12	.060	39.73	.080	59.78	.034	101.40
8	9										
9	10										
10											

\*\*\* STABILITY PARAMETER

W1	W2	W3	W4	W5	W6	W7	W8	W9	W10
1	1	1	1	1	1	1	1	1	1
2	1	1	1	1	1	1	1	1	1
3	1	1	1	1	1	1	1	1	1
4	1	1	1	1	1	1	1	1	1
5	1	1	1	1	1	1	1	1	1
6	1	1	1	1	1	1	1	1	1
7	1	1	1	1	1	1	1	1	1
8	1	1	1	1	1	1	1	1	1
9	1	1	1	1	1	1	1	1	1
10	1	1	1	1	1	1	1	1	1

ORIGINAL PAGE IS OF POOR QUALITY

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 88 ALPHA-MCL = 2.0 POP RWL-PI 17.10  
 ROW 17 ALPHA-RAP = 18.5 G-COMP = 127.88  
 POINT 6 ALPHA-SIGMA = 186.7 V-REF = 200.85  
 COMPUTED FREQUENCY = 19.23, K = .1504

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\* BLADE PRESSURES, PER RADIAN \*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-19	.006	2.484	.855	-.376	-.425	-.425	-.425
2	-.347	-.681	.714	-.446	.839	.564	.377	.496
3	-.264	-.549	-.199	-.442	-.293	-.010	-.177	-.152
4	-.117	-.031	-.094	-.103	-.047	.140	-.039	-.044
5	-.097	-.184	-.020	-.105	-.027	.037	-.060	-.063
6	-.024	-.044	-.068	-.060	-.040	.054	-.044	-.044
7	-.029	-.011	-.025	-.023	-.016	.030	-.011	-.015
8	-.026	-.002	-.016	-.013	-.014	.031	-.016	-.024
9	-.020	-.002	-.014	-.013	-.014	.031	-.016	-.024
10	-.020	-.002	-.013	-.013	-.014	.032	-.016	-.024

X	N	.774-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG
1	-2	.947	-.330	.373	-.320	11.250	5.494	3.667
2	-.325	-.386	-.453	-.404	-.429	-.564	-.415	-.474
3	-.134	-.449	-.126	-.427	-.129	-.129	-.035	-.030
4	-.055	-.173	-.091	-.180	-.149	-.034	-.025	-.024
5	-.079	-.033	-.037	-.015	.024	.023	.023	.024
6	-.041	-.079	-.017	-.067	.024	.027	.026	.026
7	-.010	-.009	-.008	-.009	.017	.022	.020	.020
8	-.025	-.043	-.024	-.014	.032	.022	.019	.019
9	-.033	-.016	-.037	-.019	.032	.022	.019	.019
10	-.033	-.016	-.037	-.019	.032	.022	.019	.019

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	2	.040	1.546	.151	.263	.008
2	-.082	-.107	-.125	-.144	-.137	-.422
3	-.093	-.248	-.175	-.182	-.137	-.290
4	-.023	-.042	-.020	-.009	-.107	-.398
5	-.054	-.057	-.015	-.002	.006	-.119
6	-.017	-.035	-.024	-.011	.044	-.190
7	-.011	-.017	-.025	-.036	.025	-.070
8	-.017	-.015	-.025	-.036	.025	-.022
9	-.017	-.015	-.025	-.036	.025	-.022
10	-.017	-.015	-.025	-.036	.025	-.022

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCHI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 88 ALPHA-MCL = 2.0 POP RUN.PY 17.10  
WUN 17 ALPHA-RAR = .5 Q-COMP = 32788  
POINT 16 SIGMA = 180. V-REF = 200.85  
COMPUTED FREQUENCY = 19.23, K = .1504  
FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	.012-UPPER CP-MAG	.012-UPPER PHI	.148-UPPER CP-MAG	.148-UPPER PHI	.261-UPPER CP-MAG	.261-UPPER PHI	.392-UPPER CP-MAG	.392-UPPER PHI	.530-UPPER CP-MAG	.530-UPPER PHI	.661-UPPER CP-MAG	.661-UPPER PHI
1	19.167	172.55	0.420	174.17	3.218	183.32	2.034	192.12	3.626	185.08	3.625	184.07
2	.764	287.01	.408	312.88	.640	356.81	.678	326.34	.728	302.19	.658	311.90
3	.601	245.96	.485	245.72	.374	220.95	.651	269.11	.524	250.31	.490	251.90
4	.216	227.14	.147	309.91	.174	254.56	.192	316.61	.145	288.43	.184	287.86
5	.107	224.37	.107	259.08	.095	286.22	.130	264.44	.090	307.66	.077	328.76
6	.047	193.91	.091	41.28	.035	257.62	.130	63.44	.100	37.01	.088	328.44
7	.036	344.23	.036	224.87	.032	240.17	.030	191.09	.018	233.58	.050	190.77
8	.026	5.21	.035	42.25	.044	64.23	.073	64.73	.026	76.62	.024	359.06
9	.025	5.21	.015	340.06	.020	317.27	.017	338.88	.041	261.18	.038	206.53
10	.025	205.50	.053	255.24	.034	252.44	.038	272.93	.041	261.18	.038	206.53

X	.778-UPPER CP-MAG	.778-UPPER PHI	.910-UPPER CP-MAG	.910-UPPER PHI	.012-LOWER CP-MAG	.012-LOWER PHI	.062-LOWER CP-MAG	.062-LOWER PHI	.148-LOWER CP-MAG	.148-LOWER PHI	.261-LOWER CP-MAG	.261-LOWER PHI
1	2.966	186.39	2.231	189.63	16.407	353.28	11.802	342.44	5.497	358.19	3.667	.96
2	.652	323.67	.471	326.01	.271	286.50	.414	251.90	.329	256.85	.335	259.92
3	.190	294.48	.209	295.97	.117	236.31	.334	243.09	.255	268.35	.239	282.42
4	.064	328.77	.079	339.70	.055	84.78	.061	86.73	.078	42.78	.094	60.68
5	.089	622.50	.079	62.10	.027	73.86	.024	126.82	.032	127.18	.037	147.20
6	.017	137.18	.042	110.28	.062	122.86	.041	101.04	.029	130.01	.027	148.33
7	.025	5.80	.033	4.44	.030	129.10	.034	16.71	.029	41.16	.031	159.50
8	.025	205.50	.040	202.40	.052	141.65	.044	178.27	.056	176.12	.081	201.88

X	.392-LOWER CP-MAG	.392-LOWER PHI	.530-LOWER CP-MAG	.530-LOWER PHI	.661-LOWER CP-MAG	.661-LOWER PHI	.774-LOWER CP-MAG	.774-LOWER PHI	.800-LOWER CP-MAG	.800-LOWER PHI	.910-LOWER CP-MAG	.910-LOWER PHI
1	2.050	5.09	1.570	10.05	.593	75.20	.392	47.84	.121	105.56	.498	270.96
2	.498	321.11	.658	327.12	.768	349.26	.611	295.34	.601	313.92	.512	325.50
3	.330	298.07	.499	255.50	.358	249.65	.444	243.56	.419	251.64	.454	249.80
4	.077	39.39	.261	290.62	.297	306.21	.235	294.69	.210	300.05	.227	302.21
5	.077	39.39	.023	205.12	.028	285.27	.066	285.22	.020	251.58	.083	300.87
6	.029	195.40	.043	48.46	.044	454.58	.040	154.58	.025	185.69	.024	175.82
7	.020	24.99	.025	101.02	.022	152.74	.022	82.07	.030	175.82	.033	175.82
8	.018	24.99	.019	18.97	.019	18.97	.012	24.22	.011	9.72	.029	348.36
9	.048	204.96	.063	213.49	.054	211.77	.049	228.69	.044	239.32	.042	239.36







TABLE 5

MODE 1 DATA FOR  $\alpha_{MCL} = 2 \text{ deg}$ ,  $\bar{\alpha} = 2 \text{ deg}$ 

<u><math>\sigma</math> (deg)</u>	<u>k</u>	<u>page</u>
-135	.0717	116
"	.1225	120
"	.1519	124
-90	.0722	128
"	.1218	132
"	.1504	136
-45	.0707	140
"	.1214	144
"	.1508	148
0	.0724	152
"	.1228	156
"	.1491	160
45	.0724	164
"	.1223	168
"	.1506	172
90	.0721	176
"	.1222	180
"	.1499	184
135	.0716	188
"	.1224	192
"	.1516	196
180	.0724	200
"	.1217	204
"	.1498	208

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ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 32 ALPHA-MCL = 2.0 PDP RUNPRT 8.03  
 RUN 8 ALPHA-BAR = 2.0 Q-COMP = .32236  
 POINT 1 SIGMA = -135. V-REF = 199.10  
 1 COMPUTED FREQUENCY = 9.09, K = .0717

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	
1	24	.343	1.017	-4.253	-3.033	-2.813	-2.948	-2.971	-1.794	-1.369	15.835	8.656	5.022	3.401	5.022	3.401	5.022	3.401	5.022	
2	2	.865	-.008	.243	.408	.437	.517	.511	.517	.532	-.101	-.106	-.170	-.403	-.469	-.403	-.469	-.403	-.469	
3	4	.333	-.051	.158	.257	.284	.280	.330	.296	.292	.328	.416	.451	.306	.315	.306	.315	.306	.315	
4	5	.665	-.033	.043	.143	.143	.113	.105	.143	.143	.131	.195	.195	.089	.040	.089	.040	.040	.040	
5	6	.629	-.055	.037	.134	.134	.092	.087	.134	.134	.123	.185	.185	.071	.041	.071	.041	.041	.041	
6	7	.043	-.085	.118	.034	.034	.079	.067	.034	.034	-.083	-.083	-.037	.045	.025	.045	.025	.025	.025	
7	8	.301	-.037	.010	.034	.034	.029	.018	.034	.034	.098	.098	.041	.051	.026	.051	.026	.026	.026	
8	9	.183	-.019	.010	.014	.014	.018	.018	.014	.014	.039	.039	.012	.044	.026	.044	.026	.026	.026	
9	10	.040	-.003	-.003	-.009	-.009	-.017	-.006	-.003	-.003	-.003	-.003	-.013	-.006	-.011	-.006	-.011	-.011	-.011	
X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.392-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG
1	2	.383	-1.764	-1.587	-1.726	-1.328	-5.271	-3.328	-3.798	-3.798	8.656	5.022	3.401	5.022	3.401	5.022	3.401	5.022	3.401	
2	3	.475	-.199	.202	.202	.202	.202	.202	.202	.202	.202	.202	.202	.202	.202	.202	.202	.202	.202	.202
3	4	.286	-.113	.106	.106	.106	.106	.106	.106	.106	.106	.106	.106	.106	.106	.106	.106	.106	.106	.106
4	5	.112	-.043	.043	.043	.043	.043	.043	.043	.043	.043	.043	.043	.043	.043	.043	.043	.043	.043	.043
5	6	.084	-.031	.031	.031	.031	.031	.031	.031	.031	.031	.031	.031	.031	.031	.031	.031	.031	.031	.031
6	7	.022	-.008	.008	.008	.008	.008	.008	.008	.008	.008	.008	.008	.008	.008	.008	.008	.008	.008	.008
7	8	.022	-.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007
8	9	.012	-.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007	.007
9	10	.005	-.006	.006	.006	.006	.006	.006	.006	.006	.006	.006	.006	.006	.006	.006	.006	.006	.006	.006
X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.392-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG
1	2	.007	-.925	1.697	-.686	-.686	-.686	-.686	-.686	-.686	-.686	-.686	-.686	-.686	-.686	-.686	-.686	-.686	-.686	-.686
2	3	.272	-.075	.477	-.198	-.198	-.198	-.198	-.198	-.198	-.198	-.198	-.198	-.198	-.198	-.198	-.198	-.198	-.198	-.198
3	4	.103	-.025	.138	-.084	-.084	-.084	-.084	-.084	-.084	-.084	-.084	-.084	-.084	-.084	-.084	-.084	-.084	-.084	-.084
4	5	.058	-.007	.078	-.020	-.020	-.020	-.020	-.020	-.020	-.020	-.020	-.020	-.020	-.020	-.020	-.020	-.020	-.020	-.020
5	6	.023	-.002	.018	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003
6	7	.023	-.002	.018	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003
7	8	.013	-.001	.013	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001
8	9	.001	-.000	.001	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000
9	10	.001	-.000	.001	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000	-.000

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 32 ALPHA-MCL = 2.0 PDP RUMPT 8.03  
 RUN 6 ALPHA-PAR = 2.0 Q-COMP = 32236  
 POINT 1 SIGMA = -135. V-REF = 199.10  
 COMPUTED FREQUENCY = 9.09. M = .0717  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP-MAG	PHI	062-UPPER	CP-MAG	PHI	148-UPPER	CP-MAG	PHI	261-UPPER	CP-MAG	PHI	392-UPPER	CP-MAG	PHI	510-UPPER	CP-MAG	PHI	661-UPPER	CP-MAG	PHI		
1	25.100	165.89	7.396	172.10	4.253	179.88	3.081	190.11	3.005	200.59	3.419	209.06	3.539	212.92	3.419	209.06	3.539	212.92	3.419	209.06	3.539	212.92
2	5.137	236.16	.379	182.69	.398	176.88	.431	172.70	.438	172.70	.438	172.70	.438	172.70	.438	172.70	.438	172.70	.438	172.70	.438	172.70
3	.843	322.09	.165	357.08	.261	338.64	.279	340.15	.323	327.62	.084	349.42	.123	328.09	.084	349.42	.123	328.09	.084	349.42	.123	328.09
4	.712	207.88	.072	271.81	.043	358.73	.041	321.99	.046	279.50	.011	355.47	.025	331.28	.011	355.47	.025	331.28	.011	355.47	.025	331.28
5	.695	286.59	.093	21.59	.657	79.99	.037	85.59	.082	131.08	.049	131.08	.025	96.91	.049	131.08	.025	96.91	.049	131.08	.025	96.91
6	.474	230.05	.043	97.53	.035	13.48	.039	354.80	.029	174.43	.021	212.15	.037	258.05	.021	212.15	.037	258.05	.021	212.15	.037	258.05
7	.230	122.11	.021	221.40	.010	385.54	.012	266.70	.004	137.57	.004	137.57	.007	147.56	.004	137.57	.007	147.56	.004	137.57	.007	147.56
8	.192	197.79	.004	132.87	.004	137.57	.016	234.38	.016	147.56	.016	147.56	.016	147.56	.016	147.56	.016	147.56	.016	147.56	.016	147.56
9	.253	279.08	.004	132.87	.004	137.57	.016	234.38	.016	147.56	.016	147.56	.016	147.56	.016	147.56	.016	147.56	.016	147.56	.016	147.56
10	.253	279.08	.004	132.87	.004	137.57	.016	234.38	.016	147.56	.016	147.56	.016	147.56	.016	147.56	.016	147.56	.016	147.56	.016	147.56

X	CP-MAG	PHI	060-UPPER	CP-MAG	PHI	910-UPPER	CP-MAG	PHI	012-LOWER	CP-MAG	PHI	062-LOWER	CP-MAG	PHI	180-LOWER	CP-MAG	PHI	261-LOWER	CP-MAG	PHI		
1	2.265	216.57	2.395	221.49	1.942	225.16	16.689	241.51	9.636	336.79	1.530	182.76	9.636	336.79	5.398	339.30	3.677	337.96	5.398	339.30	3.677	337.96
2	.315	157.27	.315	340.21	.309	340.93	.111	6.38	.201	104.55	.201	104.55	.201	104.55	.345	315.91	.125	318.71	.345	315.91	.125	318.71
3	.120	338.45	.112	315.08	.036	318.61	.082	211.87	.236	206.85	.236	206.85	.236	206.85	.099	219.67	.087	318.71	.099	219.67	.087	318.71
4	.098	314.12	.092	318.66	.085	315.88	.130	41.17	.096	112.10	.096	112.10	.096	112.10	.096	41.17	.096	318.71	.096	41.17	.096	318.71
5	.058	97.34	.058	28.96	.053	84.47	.021	32.87	.097	124.29	.097	124.29	.097	124.29	.057	51.73	.077	50.32	.057	51.73	.077	50.32
6	.031	45.46	.033	58.40	.034	55.79	.041	160.45	.050	154.94	.050	154.94	.050	154.94	.040	206.13	.031	50.32	.040	206.13	.031	50.32
7	.014	208.82	.014	236.57	.021	258.09	.057	187.04	.035	134.24	.035	134.24	.035	134.24	.028	87.29	.014	208.82	.028	87.29	.014	208.82
8	.007	50.89	.012	75.01	.005	89.60	.057	187.04	.035	134.24	.035	134.24	.035	134.24	.028	87.29	.014	208.82	.028	87.29	.014	208.82
9	.007	50.89	.012	75.01	.005	89.60	.057	187.04	.035	134.24	.035	134.24	.035	134.24	.028	87.29	.014	208.82	.028	87.29	.014	208.82
10	.007	50.89	.012	75.01	.005	89.60	.057	187.04	.035	134.24	.035	134.24	.035	134.24	.028	87.29	.014	208.82	.028	87.29	.014	208.82

X	CP-MAG	PHI	392-LOWER	CP-MAG	PHI	774-LOWER	CP-MAG	PHI	060-LOWER	CP-MAG	PHI	910-LOWER	CP-MAG	PHI
1	2.210	335.26	1.914	332.43	1.045	325.56	.881	312.23	.721	305.99	.575	296.41	.881	312.23
2	.523	351.43	.516	357.45	.268	156.87	.552	170.82	.264	146.20	.819	172.82	.552	170.82
3	.259	343.21	.162	345.41	.197	329.15	.285	355.32	.102	331.72	.250	335.82	.102	331.72
4	.123	326.09	.043	333.51	.071	323.49	.063	316.95	.048	310.33	.121	331.72	.048	310.33
5	.083	324.09	.042	333.51	.071	323.49	.063	316.95	.048	310.33	.075	35.38	.048	310.33
6	.043	57.16	.054	71.08	.048	64.48	.061	57.52	.054	48.34	.048	46.12	.054	48.34
7	.032	44.36	.054	71.08	.048	64.48	.061	57.52	.054	48.34	.048	46.12	.054	48.34
8	.015	207.13	.019	216.95	.011	26.74	.068	45.39	.052	45.64	.036	46.12	.052	45.64
9	.006	298.26	.007	309.39	.029	211.17	.016	237.11	.017	243.05	.011	239.02	.017	243.05
10	.006	298.26	.007	309.39	.029	211.17	.016	237.11	.017	243.05	.011	239.02	.017	243.05

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 32 ALPHA-MCL = 2.0 POP RUN.PI 8.03  
 RUN 8 ALPHA-RAD = 3.0 O-COMP = .32236  
 POINT 1 SIGMA = 135. V-REF = 199.1C  
 COMPUTED FREQUENCY = 9.09, K = .0717

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.148		.261		.392		.530		.661	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	40.178	-11.391	16.181	-4.815	9.275	-1.910	6.834	-.857	4.820	.132	.685	.775	3.833	1.333
2	1.334	-2.941	-.949	-.046	-.071	-.148	.005	-.193	.066	.169	.040	.147	.110	-.010
3	-.336	.554	.051	-.635	-.072	-.046	.049	-.012	-.036	.075	.037	.049	-.062	-.097
4	.760	-.210	-.187	.246	-.118	-.041	-.054	-.035	.004	.004	.056	.069	.064	-.036
5	-.248	.604	-.124	-.016	-.002	-.016	-.001	-.027	.027	.027	.013	.004	.053	-.021
6	-.032	.056	.042	-.158	.046	.035	-.064	.023	.020	.020	-.025	.015	-.017	-.022
7	.394	-.452	.030	.046	-.016	-.002	.045	.022	.004	.004	.025	.002	-.027	-.028
8	-.184	.133	-.069	.012	-.032	-.008	-.003	.000	.005	.004	.032	.015	-.008	-.028
9	.184	-.133	.031	-.032	-.004	-.005	-.013	.000	.015	-.010	.032	.008	-.014	-.028
10	-.037	.307	.032	.016	.004	.025	.006	.026	.005	-.002	-.020	-.008	-.017	.009

N	.774		.910		.910		.910		.910		.910		.910	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	2.975	1.112	1.625	1.625	1.625	1.625	1.625	1.625	1.625	1.625	1.625	1.625	1.625	1.625
2	-.070	-.040	-.040	-.040	-.040	-.040	-.040	-.040	-.040	-.040	-.040	-.040	-.040	-.040
3	-.049	.018	.018	.018	.018	.018	.018	.018	.018	.018	.018	.018	.018	.018
4	.040	-.037	-.037	-.037	-.037	-.037	-.037	-.037	-.037	-.037	-.037	-.037	-.037	-.037
5	-.027	.026	.026	.026	.026	.026	.026	.026	.026	.026	.026	.026	.026	.026
6	.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026
7	-.026	.026	.026	.026	.026	.026	.026	.026	.026	.026	.026	.026	.026	.026
8	.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026
9	-.026	.026	.026	.026	.026	.026	.026	.026	.026	.026	.026	.026	.026	.026
10	.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026	-.026

\*\*\* STABILITY PARAMETER

WALL NO. GAP FRACTION	.125		.000		.125		.500		.500		.500		.500	
	CREAL	CPIMAG	CREAL	CPIMAG	CREAL	CPIMAG	CREAL	CPIMAG	CREAL	CPIMAG	CREAL	CPIMAG	CREAL	CPIMAG
1	2.565	-1.365	2.142	-1.656	-9.790	1.009	-2.360	-.757	6.217	4.374	6.217	4.374	6.217	4.374
2	-.664	.372	.426	-.824	-1.519	-2.140	-.386	.040	1.202	-.805	1.202	-.805	1.202	-.805
3	.372	-.664	.133	-.259	-.684	-.140	.048	-.123	.211	.035	.211	.035	.211	.035
4	-.664	.372	.084	-.019	.157	-.173	.080	-.024	.089	.031	.089	.031	.089	.031
5	.372	-.664	.098	.089	.192	.083	.068	.050	-.027	.027	-.027	.027	-.027	.027
6	-.664	.372	.027	.025	-.043	.055	.011	.065	.074	.007	.074	.007	.074	.007
7	.372	-.664	.041	-.007	-.050	.018	.016	.020	.021	.040	.021	.040	.021	.040
8	-.664	.372	.004	-.054	-.020	-.040	.006	-.011	.028	.040	.028	.040	.028	.040
9	.372	-.664	.004	.004	.004	.004	.004	.004	.004	.004	.004	.004	.004	.004
10	-.664	.372	.004	-.004	-.004	-.004	-.004	-.004	-.004	-.004	-.004	-.004	-.004	-.004

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

\*\*\* XI = .5194 \*\*\*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- DCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 32 ALPHA-MCL = 2.0 POP RUN-PT 8.03  
 RUN 8 ALPHA-BAR = 2.0 Q-COMP = 32236  
 POINT 1 STILMA = -135 V-REF = 199.10  
 1 COMPUTED FREQUENCY = 9.09, K = .0717

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE =  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012 PHI		.062 PHI		.148 PHI		.261 PHI		.392 PHI		.530 PHI		.661 PHI	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	41.761	344.17	16.883	343.43	9.469	348.36	6.491	352.42	4.422	1.57	4.748	9.39	0.058	19.17
2	1.153	64.91	9.507	142.79	1.64	115.75	.193	386.61	.181	68.84	.153	74.14	.113	154.95
3	.649	121.34	.637	274.59	.085	321.50	.050	345.92	.010	135.71	.082	339.28	.173	132.01
4	.788	112.42	.308	127.23	.125	197.30	.064	213.13	.034	156.70	.089	304.28	.054	251.01
5	.652	112.29	.284	206.79	.050	197.57	.005	284.61	.034	118.05	.015	341.74	.057	251.93
6	.603	119.91	.165	273.20	.087	142.99	.007	137.05	.054	118.05	.015	341.74	.028	334.75
7	.224	136.97	.070	123.37	.016	342.45	.051	126.61	.006	39.99	.017	298.17	.015	189.67
8	.161	126.78	.045	133.72	.033	190.45	.033	105.11	.018	327.64	.037	248.39	.015	189.67
9	.109	98.88	.036	127.41	.028	90.35	.027	177.88	.008	22.98	.021	202.15	.019	151.59

N	.774 PHI		.860 PHI		.910 PHI		M CM-MAG		PHIN		M CM-MAG		PHIN	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	3.176	24.50	2.434	24.34	1.839	27.95	6.435	355.89	1.122	141.90	1.095	339.67	1.064	324.83
2	.029	238.00	.059	132.49	.291	125.87	.012	109.07	.012	141.90	.010	298.32	.009	197.69
3	.052	193.88	.013	193.57	.019	181.37	.024	107.65	.024	107.65	.010	197.69	.009	197.69
4	.051	39.21	.040	145.16	.033	81.86	.029	129.78	.029	129.78	.011	51.59	.007	114.59
5	.046	125.94	.016	344.34	.009	218.61	.049	65.88	.049	65.88	.007	114.59	.007	85.50
6	.027	359.66	.021	325.50	.006	340.59	.017	130.47	.017	130.47	.007	85.50	.007	85.50
7	.009	275.10	.003	271.84	.006	14.79	.017	89.68	.017	89.68	.007	85.50	.007	85.50
8	.009	228.49	.008	334.84	.009	14.79	.017	89.68	.017	89.68	.007	85.50	.007	85.50
9	.009	228.49	.008	334.84	.009	14.79	.017	89.68	.017	89.68	.007	85.50	.007	85.50
10	.009	228.49	.008	334.84	.009	14.79	.017	89.68	.017	89.68	.007	85.50	.007	85.50

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	M1		M2		M4		M6		M10		M125		M500		M1000	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	3.172	323.96	2.707	322.29	9.850	123.65	2.478	197.79	7.604	35.13	1.444	7.604	1.444	7.604	1.444	7.604
2	.403	346.64	.546	331.65	2.752	335.48	.587	176.14	1.214	328.67	.254	1.214	.254	1.214	.254	1.214
3	.055	351.72	.086	347.36	.234	312.35	.067	342.06	.067	342.06	.029	.067	.029	.067	.029	.067
4	.109	467.24	.132	421.13	.208	312.29	.084	16.46	.084	16.46	.022	.084	.022	.084	.022	.084
5	.058	46.55	.045	52.33	.067	123.17	.069	71.84	.069	71.84	.122	.069	.122	.069	.122	.069
6	.012	158.94	.015	34.33	.061	223.16	.021	58.09	.021	58.09	.096	.021	.096	.021	.096	.021
7	.016	107.06	.054	190.44	.044	296.09	.026	231.01	.026	231.01	.042	.026	.042	.026	.042	.026
8	.016	107.06	.054	190.44	.044	296.09	.026	231.01	.026	231.01	.042	.026	.042	.026	.042	.026
9	.016	107.06	.054	190.44	.044	296.09	.026	231.01	.026	231.01	.042	.026	.042	.026	.042	.026
10	.016	107.06	.054	190.44	.044	296.09	.026	231.01	.026	231.01	.042	.026	.042	.026	.042	.026

\*\*\* STABILITY PARAMETER

\*\*\* XI = .5199 \*\*\*



ORIGINAL COPY  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 3N ALPHA-MCL = 2.0 POP RUN-PT 8.06  
RUN 8 ALPHA-BAR = 2.0 Q-COMP = 32266  
POINT 3 SIGMA = 135 V-REF = 199.19  
COMPUTED FREQUENCY = 15.53, K = .1225

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP	UPPER	PHI	CP	UPPER	PHI	CP	UPPER	PHI	CP	UPPER	PHI	CP	UPPER	PHI
1	25	.193	163.31	7.568	167.47	4.416	172.55	3.178	180.62	3.031	190.26	3.370	199.28	3.360	202.83	.661-UPPER CP-MAG PHI
2	4	.757	232.64	.043	167.00	.106	177.52	.117	185.90	.151	199.27	.178	219.35	.120	240.22	.661-UPPER CP-MAG PHI
3	4	.659	308.11	.062	195.78	.100	273.10	.053	269.06	.025	349.49	.052	462.88	.035	551.52	.661-UPPER CP-MAG PHI
4	7	.709	195.34	.033	151.03	.027	199.47	.063	220.43	.030	263.62	.024	348.38	.024	466.52	.661-UPPER CP-MAG PHI
5	7	.106	261.94	.050	268.52	.071	297.21	.065	295.76	.019	273.18	.038	348.23	.053	466.52	.661-UPPER CP-MAG PHI
6	7	.527	246.11	.064	343.87	.059	359.23	.036	329.14	.019	267.71	.026	348.37	.015	349.86	.661-UPPER CP-MAG PHI
7	9	.281	331.68	.044	357.98	.046	323.90	.043	310.85	.053	367.07	.044	455.45	.035	566.39	.661-UPPER CP-MAG PHI
8	9	.058	219.37	.060	177.37	.040	13.87	.020	34.16	.038	40.17	.045	34.53	.053	566.39	.661-UPPER CP-MAG PHI
9	10	.305	279.91	.049	7.69	.040	13.87	.020	34.16	.038	40.17	.045	34.53	.053	566.39	.661-UPPER CP-MAG PHI

X	N	CP	UPPER	PHI	CP	UPPER	PHI	CP	UPPER	PHI	CP	UPPER	PHI	CP	UPPER	PHI
1	2	.785	205.03	2.168	206.91	1.690	206.01	16.343	342.66	8.963	338.31	5.031	345.93	3.021	348.69	.261-LOWER CP-MAG PHI
2	4	.115	239.74	.113	238.77	.109	235.18	.137	232.38	.498	181.33	.196	276.06	.146	267.93	.261-LOWER CP-MAG PHI
3	4	.052	140.22	.033	135.41	.029	135.68	.084	182.50	.258	272.07	.039	309.60	.011	339.73	.261-LOWER CP-MAG PHI
4	7	.031	267.38	.024	286.32	.027	177.22	.068	222.93	.118	148.87	.060	35.73	.011	88.01	.261-LOWER CP-MAG PHI
5	7	.020	33.36	.041	353.09	.045	357.46	.072	65.68	.127	117.27	.032	300.93	.025	322.60	.261-LOWER CP-MAG PHI
6	9	.027	33.52	.017	39.40	.019	10.40	.036	136.69	.020	113.25	.026	74.96	.051	270.76	.261-LOWER CP-MAG PHI
7	9	.051	55.51	.058	62.40	.051	57.25	.089	102.87	.036	100.57	.058	123.97	.021	207.28	.261-LOWER CP-MAG PHI

X	N	CP	UPPER	PHI	CP	UPPER	PHI	CP	UPPER	PHI	CP	UPPER	PHI	CP	UPPER	PHI
1	1	.459	352.78	1.479	359.24	.711	15.09	.411	227.31	.377	225.75	.123	358.85	.240	355.53	.910-LOWER CP-MAG PHI
2	3	.102	259.56	.105	252.77	.024	305.94	.150	197.66	.111	257.17	.025	328.40	.024	356.87	.910-LOWER CP-MAG PHI
3	4	.008	106.34	.023	375.97	.056	318.21	.033	194.73	.074	170.87	.024	356.87	.024	356.87	.910-LOWER CP-MAG PHI
4	7	.016	306.16	.023	333.78	.049	252.57	.034	32.03	.013	152.66	.019	296.16	.034	321.80	.910-LOWER CP-MAG PHI
5	6	.043	21.19	.072	68.95	.050	296.91	.046	314.70	.020	341.78	.037	58.11	.037	58.11	.910-LOWER CP-MAG PHI
6	9	.020	112.89	.029	106.62	.035	26.46	.021	61.30	.024	13.13	.022	66.37	.022	66.37	.910-LOWER CP-MAG PHI





ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 34 ALPHA-MCL = 2.0 POP RUN-PT 8.06  
 RUN 8 ALPHA-BAR = 155 O-COMP = 32268  
 POINT 3 SIGMA = 155 V-REF = 196.19  
 COMPUTED FREQUENCY = 15.53, K = .1225  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	41.535	343.03	16.479	342.50	9.432	349.02	6.450	354.54	4.237	3.63	4.747	13.20	4.086	21.49
2	2.773	152.74	4.897	143.49	0.822	293.97	1.106	16.63	1.118	23.64	1.120	14.74	1.109	316.30
3	4.53	179.03	8.255	143.08	0.662	280.60	0.372	271.42	0.522	23.04	0.628	14.74	0.866	316.30
4	7.44	176.57	12.55	148.06	1.15	187.80	0.47	173.77	0.623	24.04	0.939	23.79	0.860	316.30
5	18.7	166.47	18.33	135.44	0.81	91.63	0.53	109.95	0.623	24.04	0.939	23.79	0.860	316.30
6	31.6	149.98	26.61	146.37	0.50	212.35	0.81	109.95	0.623	24.04	0.939	23.79	0.860	316.30
7	39.6	103.25	0.26	146.00	0.85	105.67	0.75	98.66	0.623	24.04	0.939	23.79	0.860	316.30
8	39.6	103.25	0.26	152.44	0.62	174.86	0.73	216.35	0.623	24.04	0.939	23.79	0.860	316.30
9	39.6	103.25	0.26	152.44	0.62	174.86	0.73	216.35	0.623	24.04	0.939	23.79	0.860	316.30
10	39.6	103.25	0.26	152.44	0.62	174.86	0.73	216.35	0.623	24.04	0.939	23.79	0.860	316.30

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	3.196	29.68	1.815	23.07	1.729	24.44	1.125	24.44	6.339	352.78	1.489	339.45	1.020	67.08
2	0.73	38.14	0.166	233.44	0.148	152.72	0.08	221.78	0.048	23.04	0.020	23.04	0.015	23.04
3	0.63	157.00	0.069	140.63	0.029	221.78	0.029	221.78	0.053	23.04	0.020	23.04	0.015	23.04
4	0.48	9.47	0.009	243.78	0.028	221.78	0.028	221.78	0.044	23.04	0.020	23.04	0.015	23.04
5	0.58	60.26	0.028	60.47	0.028	221.78	0.028	221.78	0.044	23.04	0.020	23.04	0.015	23.04
6	0.29	225.08	0.028	174.45	0.028	221.78	0.028	221.78	0.044	23.04	0.020	23.04	0.015	23.04
7	0.47	225.18	0.028	174.45	0.028	221.78	0.028	221.78	0.044	23.04	0.020	23.04	0.015	23.04
8	0.27	321.46	0.028	350.27	0.028	221.78	0.028	221.78	0.044	23.04	0.020	23.04	0.015	23.04
9	0.31	321.55	0.028	350.27	0.028	221.78	0.028	221.78	0.044	23.04	0.020	23.04	0.015	23.04
10	0.31	321.55	0.028	350.27	0.028	221.78	0.028	221.78	0.044	23.04	0.020	23.04	0.015	23.04

WALL NO	GAP FRACTION	M1	M2	M4	M6	M10	STABILITY PARAMETER	
1	2.523	335.77	2.127	316.44	10.024	168.31	1.951	39.37
2	1.16	287.22	2.69	293.63	4.54	307.89	1.027	325.90
3	0.46	333.21	0.19	50.87	0.43	261.20	1.096	250.21
4	0.04	348.31	0.38	15.34	0.19	108.92	0.311	51.23
5	0.28	46.88	0.44	73.79	0.10	267.72	0.070	21.01
6	0.14	11.07	0.61	15.04	0.10	355.32	0.071	32.51
7	0.18	52.19	0.44	120.49	0.23	331.55	0.071	32.51
8	0.42	52.19	0.44	120.49	0.23	331.55	0.071	32.51
9	0.38	56.55	0.44	120.49	0.23	331.55	0.071	32.51
10	0.38	56.55	0.44	120.49	0.23	331.55	0.071	32.51

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 37 ALPHA-WCL = 2.0 PDP RUN#PT 8.59  
 RUN 9 ALPHA-BAR = 2.0 Q-COMP = 31950  
 POINT 6 SIGMA = -135.0 V-PEF = 198.19  
 COMPUTED FREQUENCY = 19.17, K = .1519

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.281-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-2.4110	7.709	1.612	1.421	430	196	233
2	-2.5229	-3.695	0.41	0.05	0.82	0.10	0.18
3	-.365	-.461	0.46	0.08	0.06	0.30	0.12
4	-.169	-.778	0.12	0.03	0.04	0.84	0.17
5	-.025	-.014	0.27	0.04	0.08	0.41	0.42
6	-.314	-.205	0.49	0.08	0.06	0.02	0.37
7	-.055	-.078	0.29	0.13	0.15	0.25	0.02
8	-.055	-.082	0.35	0.09	0.08	0.31	0.35
9	-.022	-.152	0.40	0.07	0.05	0.24	0.18
10	-.061	-.046	0.26	0.04	0.02	0.43	0.32

X	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.022-LOWER CPREAL CPIMAG	.120-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-2.524	-1.430	1.229	1.499	969	794	464
2	-.055	-.020	0.14	0.11	0.27	1.363	1.853
3	-.021	-.018	0.17	0.05	0.16	0.29	0.27
4	-.020	-.016	0.03	0.17	0.24	0.93	1.53
5	-.007	-.018	0.13	0.17	0.07	0.80	1.07
6	-.017	-.021	0.20	0.05	0.35	0.84	1.03
7	-.022	-.021	0.07	0.05	0.20	0.34	0.97
8	-.017	-.027	0.20	0.14	0.52	0.34	0.94
9	-.009	-.019	0.04	0.01	0.04	0.62	0.19
10	-.009	-.019	0.04	0.01	0.04	0.61	0.19

X	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1.879	339	146	721	882	503
2	0.322	0.024	0.10	0.28	0.10	0.17
3	0.021	0.007	0.32	0.08	0.02	0.13
4	0.013	0.023	0.46	0.04	0.01	0.17
5	0.015	0.023	0.49	0.02	0.06	0.13
6	0.022	0.017	0.41	0.01	0.12	0.09
7	0.022	0.017	0.41	0.01	0.12	0.09
8	0.022	0.017	0.41	0.01	0.12	0.09
9	0.022	0.017	0.41	0.01	0.12	0.09
10	0.022	0.017	0.41	0.01	0.12	0.09

MODE 1 -- CENTER PERIODICITY TEST  
OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 37 ALPHA-MCL = 2.0 POP RUN.PI 8.09  
RUN 8 ALPHA-PAR = 2.0 Q-COMP = 31950  
POINT 2 SIGMA = -135. V-REF = 198.19  
COMPUTED FREQUENCY = 19.17, K = .1519  
FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	PHI	.062-UPPER	CP-MAG	PHI	.148-UPPER	CP-MAG	PHI	.261-UPPER	CP-MAG	PHI	.392-UPPER	CP-MAG	PHI	.510-UPPER	CP-MAG	PHI	.661-UPPER	CP-MAG	PHI
1	25	.312	162.27	7.609	167.77	4.442	174.45	3.204	184.16	3.118	194.54	3.501	202.94	3.474	207.08	3.501	202.94	3.474	207.08	3.474	207.08
2	4	.715	231.59	.048	300.76	.069	314.47	.083	274.93	.141	265.02	.104	255.53	.016	332.36	.104	255.53	.016	332.36	.016	332.36
3	4	.604	307.21	.112	4.65	.113	3.92	.084	4.28	.045	20.99	.033	235.06	.036	211.93	.033	235.06	.036	211.93	.036	211.93
4	5	.747	256.91	.032	212.31	.044	238.98	.060	272.11	.117	288.41	.030	296.07	.026	168.86	.030	296.07	.026	168.86	.026	168.86
5	7	.029	210.23	.049	354.10	.050	328.24	.029	328.24	.046	102.66	.029	322.07	.061	334.88	.029	322.07	.061	334.88	.061	334.88
6	8	.375	213.19	.043	316.97	.022	195.75	.032	195.26	.036	105.66	.010	110.56	.014	141.27	.010	110.56	.014	141.27	.014	141.27
7	9	.098	123.91	.037	19.50	.042	347.11	.009	323.55	.030	36.22	.013	24.96	.026	312.33	.013	24.96	.026	312.33	.026	312.33
8	9	.305	211.15	.046	185.96	.034	218.74	.047	204.56	.039	235.04	.040	250.02	.006	324.04	.040	250.02	.006	324.04	.006	324.04

X	N	CP-MAG	PHI	.774-UPPER	CP-MAG	PHI	.910-UPPER	CP-MAG	PHI	.012-LOWER	CP-MAG	PHI	.062-LOWER	CP-MAG	PHI	.148-LOWER	CP-MAG	PHI	.261-LOWER	CP-MAG	PHI
1	2	.901	209.53	2.258	212.98	1.776	213.05	16.713	340.92	9.062	335.86	5.161	344.07	3.408	346.53	5.161	344.07	3.408	346.53	3.408	346.53
2	3	.055	2.16	.025	324.96	.017	252.31	.128	136.53	.179	230.04	.120	271.49	.116	296.21	.120	271.49	.116	296.21	.116	296.21
3	4	.048	21.65	.037	227.06	.039	38.12	.074	101.51	.058	58.61	.076	164.04	.029	108.43	.076	164.04	.029	108.43	.029	108.43
4	5	.028	195.75	.018	170.33	.018	189.31	.056	35.93	.058	287.93	.033	167.54	.019	171.70	.033	167.54	.019	171.70	.019	171.70
5	6	.020	270.17	.019	224.30	.024	172.35	.038	287.93	.054	309.10	.050	290.91	.092	281.73	.050	290.91	.092	281.73	.092	281.73
6	7	.050	338.55	.057	339.47	.052	330.57	.036	33.32	.060	309.92	.033	346.21	.054	304.93	.033	346.21	.054	304.93	.054	304.93
7	8	.010	100.46	.007	98.79	.012	61.69	.080	319.22	.011	98.40	.029	291.77	.021	54.56	.029	291.77	.021	54.56	.021	54.56
8	9	.026	310.04	.038	327.15	.025	303.34	.062	176.05	.064	342.97	.040	24.59	.042	317.17	.040	24.59	.042	317.17	.042	317.17
9	10	.021	296.11	.008	328.42	.010	278.04	.064	342.97	.064	342.97	.040	24.59	.042	317.17	.040	24.59	.042	317.17	.042	317.17

X	N	CP-MAG	PHI	.392-LOWER	CP-MAG	PHI	.530-LOWER	CP-MAG	PHI	.661-LOWER	CP-MAG	PHI	.774-LOWER	CP-MAG	PHI	.860-LOWER	CP-MAG	PHI	.910-LOWER	CP-MAG	PHI
1	1	.909	349.78	1.520	354.50	7.27	6.97	.402	2.57	.438	226.26	.282	299.09	.282	299.09	.282	299.09	.282	299.09	.282	299.09
2	3	.101	321.39	.128	302.72	.130	309.34	.126	257.07	.143	249.01	.076	167.75	.076	167.75	.076	167.75	.076	167.75	.076	167.75
3	4	.033	16.07	.027	337.21	.093	28.68	.068	22.94	.068	321.63	.021	25.91	.021	25.91	.021	25.91	.021	25.91	.021	25.91
4	5	.022	167.36	.022	27.19	.044	294.80	.033	97.90	.024	90.22	.010	68.32	.010	68.32	.010	68.32	.010	68.32	.010	68.32
5	6	.073	280.25	.033	78.58	.024	230.00	.068	306.12	.055	291.18	.060	275.28	.060	275.28	.060	275.28	.060	275.28	.060	275.28
6	7	.028	58.16	.032	286.96	.021	41.16	.035	28.40	.039	47.01	.014	32.44	.014	32.44	.014	32.44	.014	32.44	.014	32.44
7	8	.028	28.38	.023	28.02	.033	85.32	.031	355.19	.018	55.05	.016	33.15	.016	33.15	.016	33.15	.016	33.15	.016	33.15
8	9	.034	329.50	.047	332.18	.045	339.51	.040	323.86	.029	341.18	.023	2.70	.023	2.70	.023	2.70	.023	2.70	.023	2.70
9	10	.010	204.16	.017	175.18	.007	11.19	.036	228.54	.036	228.54	.036	228.54	.036	228.54	.036	228.54	.036	228.54	.036	228.54

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 37 ALPHA-MCL = 2.0 PDP RUN/PT 8.00  
 RUN 6 ALPHA-PA = 2.0 C-COMP = .31950  
 POINT 6 SIGMA = 135. V-PEF = 198.19  
 COMPUTED FREQUENCY = 19.17, K = .1519

FOUJIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.142		.261		.392		.530		.661	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	39.934	-13.172	15.705	-5.318	9.534	-1.846	6.519	-.561	4.697	-.444	1.219	3.815	1.670	
2	1.566	1.241	-.591	-.046	-.501	-.091	-.082	-.011	-.067	-.072	-.007	-.057	-.087	
3	-.458	1.149	-.231	-.325	-.014	-.053	-.006	-.008	-.035	-.049	-.010	-.066	-.046	
4	-.646	1.160	-.019	-.123	-.186	-.110	-.093	-.021	-.021	-.059	-.063	-.019	-.049	
5	-.215	-.760	-.052	-.123	-.056	-.072	-.016	-.066	-.065	-.015	-.059	-.050	-.004	
6	-.043	-.291	-.111	-.086	-.076	-.052	-.016	-.031	-.024	-.039	-.126	-.037	-.093	
7	-.009	-.056	-.034	-.062	-.019	-.050	-.018	-.049	-.017	-.021	-.067	-.039	-.040	
8	-.009	-.056	-.034	-.062	-.019	-.050	-.018	-.049	-.017	-.021	-.067	-.039	-.040	
9	-.037	-.077	-.001	-.037	-.030	-.002	-.052	-.010	-.032	-.022	-.002	-.014	-.025	
10	-.322	-.139	-.055	-.015	-.062	-.038	-.048	-.023	-.013	-.035	-.027	-.002	-.003	

N	.774		.910		.500		.125		.500		.125		.554	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	2.925	1.849	1.591	-.913	1.620	-.722	6.376	-.334	1.403	1.219	1.403	1.403	1.403	1.403
2	-.083	-.125	-.037	-.119	-.063	-.043	-.028	-.036	-.033	-.010	-.033	-.033	-.033	-.033
3	-.053	-.045	-.033	-.060	-.024	-.025	-.007	-.011	-.018	-.003	-.003	-.006	-.006	-.006
4	-.047	-.045	-.007	-.018	-.020	-.007	-.032	-.011	-.003	-.003	-.003	-.006	-.006	-.006
5	-.051	-.041	-.002	-.018	-.010	-.010	-.039	-.062	-.003	-.003	-.003	-.006	-.006	-.006
6	-.025	-.040	-.025	-.078	-.041	-.050	-.036	-.052	-.002	-.002	-.002	-.006	-.006	-.006
7	-.032	-.032	-.012	-.049	-.037	-.036	-.034	-.042	-.004	-.004	-.004	-.006	-.006	-.006
8	-.016	-.004	-.004	-.008	-.007	-.002	-.030	-.004	-.004	-.004	-.004	-.006	-.006	-.006
9	-.033	-.004	-.024	-.021	-.010	-.022	-.049	-.013	-.003	-.003	-.003	-.006	-.006	-.006
10	-.033	-.004	-.024	-.021	-.010	-.022	-.049	-.013	-.003	-.003	-.003	-.006	-.006	-.006

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	.125		.012		.062		.142		.261		.392		.530		.661	
		CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	2.361	-1.283	1.988	-1.174	-9.812	-2.007	-2.590	-.311	6.211	4.050	1.219	3.815	1.670				
2	-.027	-.028	1.966	-1.174	-1.174	-2.007	-.043	-.043	1.586	-1.102	-.007	-.057	-.087				
3	-.037	-.037	1.966	-1.174	-1.174	-2.007	-.043	-.043	1.586	-1.102	-.007	-.057	-.087				
4	-.027	-.037	1.966	-1.174	-1.174	-2.007	-.043	-.043	1.586	-1.102	-.007	-.057	-.087				
5	-.027	-.037	1.966	-1.174	-1.174	-2.007	-.043	-.043	1.586	-1.102	-.007	-.057	-.087				
6	-.049	-.049	1.966	-1.174	-1.174	-2.007	-.043	-.043	1.586	-1.102	-.007	-.057	-.087				
7	-.017	-.017	1.966	-1.174	-1.174	-2.007	-.043	-.043	1.586	-1.102	-.007	-.057	-.087				
8	-.017	-.017	1.966	-1.174	-1.174	-2.007	-.043	-.043	1.586	-1.102	-.007	-.057	-.087				
9	-.017	-.017	1.966	-1.174	-1.174	-2.007	-.043	-.043	1.586	-1.102	-.007	-.057	-.087				
10	-.017	-.017	1.966	-1.174	-1.174	-2.007	-.043	-.043	1.586	-1.102	-.007	-.057	-.087				

\*\*\* STABILITY PARAMETER \*\*\*

W1 = 1.125  
 W2 = .554  
 W3 = .554  
 W4 = .554  
 W5 = .554  
 W6 = .554  
 W7 = .554  
 W8 = .554  
 W9 = .554  
 W10 = .554

ORIGINAL PAGE IS  
OF POOR QUALITY.

MODE 1 --- OCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 37 ALPHA-MCL = 2.0 POP RUN.PT 8.09  
RUN 8 ALPHA-PAR = 2.0 Q-COMP = .31950  
POINT 6 SIGMA = -135. V-REF = 198.19  
COMPUTED FREQUENCY = 19.17, X = .1519

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	2.022	341.73	16.581	341.29	9.564	348.87	6.534	355.07	4.917	5.18	4.692	18.43	4.164	23.64
2	2.417	49.62	600	175.55	0.91	269.36	0.83	7.42	0.102	49.50	0.096	352.79	0.105	303.24
3	6.63	128.84	399	234.50	0.55	285.01	0.10	306.32	0.160	54.19	0.071	335.13	0.080	335.05
4	7.90	74.94	145	97.51	1.23	175.92	0.95	167.08	0.223	203.66	0.076	235.80	0.050	248.70
5	0.59	316.38	133	112.82	0.81	62.93	0.81	54.49	0.067	13.39	0.064	266.80	0.050	265.92
6	0.26	37.85	140	322.15	0.81	296.46	0.52	297.61	0.046	121.53	0.130	284.54	0.056	134.62
7	0.11	77.85	0.69	115.44	0.53	107.99	0.52	69.89	0.027	308.03	0.067	294.52	0.028	161.19
8	0.078	264.60	0.96	354.14	0.53	357.87	0.53	11.36	0.039	325.10	0.040	317.86	0.025	71.46
9	0.351	23.33	0.67	347.44	0.73	31.07	0.52	21.73	0.031	64.50	0.039	95.05	0.005	71.32

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	3.264	26.33	1.834	29.84	1.779	23.95	6.365	357.00	6.365	357.00	6.365	357.00	6.365	357.00
2	0.96	139.91	0.37	258.50	0.35	46.44	0.10	42.97	0.010	42.97	0.010	42.97	0.019	197.64
3	0.48	8.28	0.68	119.35	0.20	168.47	0.33	161.51	0.074	57.69	0.074	57.69	0.021	92.05
4	0.65	320.83	0.11	100.79	0.23	337.94	0.59	295.69	0.042	91.72	0.042	91.72	0.009	27.13
5	0.33	129.59	0.55	118.41	0.51	135.34	0.35	308.03	0.030	351.72	0.030	351.72	0.005	328.78
6	0.16	346.36	0.14	35.79	0.08	65.42	0.15	301.66	0.015	301.66	0.015	301.66	0.005	233.91
7	0.034	193.36	0.21	217.65	0.31	214.57	0.26	336.54	0.026	336.54	0.026	336.54	0.014	220.87

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.687	331.46	2.305	329.44	10.016	168.44	2.609	186.86	7.880	37.99	7.880	37.99	7.880	37.99
2	0.95	339.93	2.708	348.78	12.401	240.73	0.95	339.74	1.931	325.22	1.931	325.22	1.931	325.22
3	0.41	205.23	0.37	50.17	0.67	313.73	0.54	307.93	0.041	30.120	0.041	30.120	0.041	30.120
4	0.54	237.79	0.17	257.44	0.50	288.83	0.17	230.04	0.094	27.98	0.094	27.98	0.094	27.98
5	0.54	237.79	0.65	257.80	0.51	310.41	0.57	230.04	0.106	202.83	0.106	202.83	0.106	202.83
6	0.46	156.10	0.43	8.80	0.27	325.00	0.21	163.03	0.075	27.300	0.075	27.300	0.075	27.300
7	0.07	337.49	0.24	257.83	0.31	351.16	0.24	163.03	0.019	325.22	0.019	325.22	0.019	325.22
8	0.21	211.69	0.10	177.70	0.18	198.24	0.35	191.70	0.019	72.88	0.019	72.88	0.019	72.88

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 13 ALPHA-WCL = 2.0 PDP RUN-PT 5.04  
 RUN 5 ALPHA-RAR = 2.0 O-COMP = 31749  
 POINT 1 SIGMA = -90. V-REF = 197.56  
 FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	1	-21.185	15.136	-4.110	.625	-2.907	.222	-.984
2	2	-3.495	-2.595	-.240	.087	-.066	.103	.114
3	3	.413	-.996	.116	-.249	.234	-.264	-.100
4	4	-.473	.504	.027	.018	-.036	-.023	-.017
5	5	-.566	-.319	.017	.005	-.000	.034	.000
6	6	-.295	.319	-.010	-.037	.028	-.035	-.019
7	7	.604	-.131	-.008	-.026	.040	.027	-.038
8	8	-.114	.153	.020	.005	.016	.017	-.005
9	9							
10	10							
X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	1	-1.616	-2.016	-1.641	-1.479	12.403	-7.491	6.089
2	2	.153	-.298	.236	-.241	-1.264	-.436	-.002
3	3	.647	-.021	.055	-.069	.064	-.041	.190
4	4	.010	.029	.003	.017	-.014	.034	-.117
5	5	.048	-.313	.054	.022	.116	.028	.055
6	6	-.029	.325	-.025	-.010	-.043	.048	-.057
7	7	.028	-.016	.011	-.010	.045	-.011	.005
8	8	.024	.329	.009	-.029	-.007	.007	.037
9	9							
10	10							
X	N	.392-LOWER CPREAL CPIMAG	.536-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG
1	1	1.275	-1.133	.497	-.566	-.185	-.961	3.702
2	2	.206	.168	-.008	.168	-.272	.167	-.120
3	3	.051	-.001	.064	-.076	.048	-.280	.233
4	4	.054	.008	.018	-.007	-.058	.032	.025
5	5	-.019	.016	-.026	.019	.015	.009	.043
6	6	-.020	.007	-.023	-.014	.010	.015	.001
7	7	.025	-.004	.016	-.001	.004	.005	.012
8	8							.019
9	9							.002
10	10							.003

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 13 ALPHA-MCL = 2.0 POP RUN-PT 5.04  
 RUN ALPHA-BAR = 3.0 O-COMP = 31749  
 POINT 1 SIGMA = -90.0 W-REF = 197.56  
 COMPUTED FREQUENCY = 9.09, K = .0722

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	X = .012-UPPER PHI		.062-UPPER PHI		.148-UPPER PHI		.261-UPPER PHI		.392-UPPER PHI		.530-UPPER PHI		.661-UPPER PHI	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	23.081	154.43	7.169	162.29	4.157	171.35	2.916	184.37	2.708	201.30	3.045	217.20	3.133	226.41
2	4.639	214.02	.071	152.93	.112	129.03	.122	122.85	.139	124.35	.220	128.58	.326	120.01
3	1.080	292.80	.287	326.54	.346	313.98	.353	311.60	.372	306.09	.391	309.58	.398	321.92
4	1.691	133.14	.081	7.79	.118	351.01	.094	346.73	.060	343.16	.032	29.23	.005	351.92
5	6.99	209.27	.060	17.84	.027	10.36	.044	264.73	.038	152.72	.078	63.61	.050	85.26
6	0.26	312.15	.019	33.94	.042	308.56	.043	308.56	.070	127.90	.049	157.80	.025	23.05
7	0.49	131.15	.028	110.11	.029	117.46	.032	141.44	.070	267.35	.028	330.91	.021	143.53
8	0.22	224.65	.025	162.21	.010	263.05	.012	239.57	.036	43.49	.047	551.89	.019	315.49
9	0.31	88.15	.031	363.14	.010	329.09	.003	90.90	.016	43.21	.027	310.27	.021	532.40
10	0.91	126.72	.031	326.82	.027	319.43	.003	90.90	.016	43.21	.027	310.27	.021	532.40

N	X = .774-UPPER PHI		.860-UPPER PHI		.910-UPPER PHI		.012-LOWER PHI		.062-LOWER PHI		.148-LOWER PHI		.261-LOWER PHI	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.585	211.25	2.327	233.97	1.808	223.86	1.541	128.99	8.310	322.26	4.525	324.89	3.066	322.82
2	0.336	117.17	.350	120.76	.287	123.81	.307	126.85	1.573	162.25	.351	130.64	.199	166.16
3	0.251	335.89	.063	341.72	.057	314.35	.080	329.44	.442	270.23	.035	111.52	.372	309.40
4	0.51	71.79	.023	76.44	.017	81.01	.037	329.44	.222	64.52	.044	336.06	.050	32.11
5	0.50	345.37	.051	134.40	.054	139.04	.119	202.59	.256	163.52	.060	350.61	.038	348.73
6	0.18	138.46	.031	134.23	.033	139.04	.057	248.62	.064	157.14	.035	154.19	.021	129.86
7	0.18	297.75	.019	311.88	.015	317.16	.046	145.90	.040	176.58	.018	196.35	.015	159.86
8	0.19	41.63	.021	315.34	.012	312.46	.030	193.78	.039	221.98	.028	162.28	.029	127.33
9	0.19	280.63	.015	331.51	.012	317.86	.030	193.78	.039	221.98	.028	162.28	.029	127.33
10	0.019	280.63	.015	331.51	.012	317.86	.030	193.78	.039	221.98	.028	162.28	.029	127.33

N	X = .392-LOWER PHI		.530-LOWER PHI		.661-LOWER PHI		.774-LOWER PHI		.860-LOWER PHI		.910-LOWER PHI	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.782	320.59	1.492	318.87	.754	312.31	.645	299.08	.978	280.88	.464	288.78
2	0.188	89.19	.193	101.78	.188	113.38	.246	112.99	.311	142.99	.435	129.78
3	0.200	314.07	.358	318.54	.326	332.84	.367	328.38	.390	314.16	.261	311.71
4	0.51	1.53	.067	352.27	.100	310.16	.066	9.40	.058	350.18	.038	350.18
5	0.19	322.96	.026	11.40	.047	351.60	.037	9.40	.029	114.26	.039	32.47
6	0.55	133.05	.069	140.55	.022	327.96	.024	120.07	.059	115.94	.028	109.68
7	0.23	148.71	.027	126.88	.033	143.70	.020	328.07	.035	129.11	.027	133.05
8	0.27	15.05	.033	332.03	.027	107.00	.024	40.77	.017	55.09	.027	313.68
9	0.07	218.54	.004	313.21	.016	356.96	.024	257.66	.021	281.83	.017	278.25
10	0.007	218.54	.004	313.21	.016	356.96	.024	257.66	.021	281.83	.017	278.25

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 13 ALPHA-MC = 2.0 PGP RUN/PT 5.04  
 RUN ALPHA-RC = 2.0 C-COMP = 31749  
 POINT 1 SIGMA = -90.0 V-DEF = 197.56  
 COMPUTED FREQUENCY = 9.09, K = .0722

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.062		.148		.261		.392		.530		.661	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	33.643	-17.627	13.489	-7.152	7.812	-3.228	5.350	-1.631	3.898	-.150	-.150	1.689
2	2.342	2.140	-.226	.304	-.050	.053	.079	-.090	.081	.054	-.155	-.114
3	-.154	-.845	.103	-.415	-.008	-.014	-.056	-.054	-.097	.025	.018	-.069
4	.532	.307	-.173	.016	.017	-.037	.031	-.048	.027	-.029	-.014	-.065
5	.098	.047	-.040	-.019	-.022	-.004	.015	-.018	.027	-.019	-.028	-.012
6	.275	-.321	-.036	.072	.002	-.047	.012	-.017	-.013	.021	-.006	.004
7	.041	-.143	-.031	-.012	.018	-.003	.020	-.014	-.014	-.031	-.025	.005
8	.085	-.160	-.053	-.012	-.050	-.021	-.007	-.011	-.021	-.001	-.011	-.005
9												
10												

N	.774		.910		.500		.500		.500		.500	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	1.932	1.452	1.492	1.190	1.540	1.096	5.140	-.972	5.140	-.972	1.212	-.778
2	.055	.050	-.021	-.077	-.063	.045	-.011	.022	-.011	.022	-.010	-.004
3	.027	.064	-.012	-.034	.001	.003	.003	-.007	.003	-.007	.003	-.005
4	.346	.023	-.016	.035	.029	.007	.029	-.002	.029	-.002	.011	-.002
5	.017	-.028	.007	-.001	-.003	.003	.014	-.011	.014	-.011	.002	-.002
6	.038	.006	-.006	.020	.076	-.005	.022	-.021	.022	-.021	.003	-.005
7	.009	-.004	-.004	-.006	-.002	.001	-.007	-.014	-.007	-.014	.002	-.003
8												
9												
10												

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	.125		.125		.125		.125		.125		.125	
	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	1.005	-2.043	1.178	-1.889	-9.233	2.505	-2.426	-.508	1.263	0.569	1.125	-.778
2	-.063	-.309	.324	-.565	-1.682	-1.474	-.350	-.316	.937	1.197		
3	.068	.027	.076	-.039	.217	-.041	.045	-.043	.021	-.162		
4	.027	.036	.102	-.067	-.006	-.151	.065	-.067	-.059	-.044		
5	.286	.011	.009	.027	-.098	-.048	.660	.067	.069	.047		
6	-.232	.073	.067	-.031	-.050	-.067	-.041	.027	-.053	-.105		
7	.042	.014	.009	-.031	-.016	-.018	-.012	-.035	.029	.011		
8	.017	-.011	.007	-.002	-.043	-.019	.007	-.031	.021	-.019		
9												
10												

\*\*\* STABILITY PARAMETER

WALL NO.	.125		.125		.125		.125		.125	
	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	1.005	-2.043	1.178	-1.889	-9.233	2.505	-2.426	-.508	1.263	0.569
2	-.063	-.309	.324	-.565	-1.682	-1.474	-.350	-.316	.937	1.197
3	.068	.027	.076	-.039	.217	-.041	.045	-.043	.021	-.162
4	.027	.036	.102	-.067	-.006	-.151	.065	-.067	-.059	-.044
5	.286	.011	.009	.027	-.098	-.048	.660	.067	.069	.047
6	-.232	.073	.067	-.031	-.050	-.067	-.041	.027	-.053	-.105
7	.042	.014	.009	-.031	-.016	-.018	-.012	-.035	.029	.011
8	.017	-.011	.007	-.002	-.043	-.019	.007	-.031	.021	-.019
9										
10										

\*\*\* XI = .778 \*\*\*



MODE 1 -- CENTRIFUGAL BLADE DATA, WALL STATIONS

FILE 13 ALPHA-MCL = 2.0 PDP RUN.PI 5.04  
 KUM ALPHA-PAP = 2.0 Q-COMP = .31749  
 POINT 1 SIGMA = -90. W-PEF = 197.56  
 COMPUTED FREQUENCY = 9.09, K = .0722

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	37.981	332.335	15.26P	332.07	8.452	337.555	5.593	343.05	3.901	357.80	3.651	13.61
2	3.173	423.42	1.07C	163.51	0.73	133.12	0.120	48.95	0.097	33.77	0.099	19.73
3	768	314.62	4.5C	240.23	0.16	241.40	0.024	42	0.086	96.97	0.066	7.94
4	612	29.67	1.7C	174.66	0.06	156.11	0.078	135.98	0.020	111.06	0.055	257.01
5	109	25.44	2.4C	354.40	0.21	323.03	0.032	354.76	0.057	329.57	0.026	296.61
6	478	355.0P	0.478	235.08	0.48	41.03	0.057	57.32	0.028	14.98	0.014	130.95
7	311	56.5C	0.17	235.55	0.22	189.34	0.023	309.33	0.047	305.06	0.039	357.16
8	148	253.75	0.33	339.76	0.18	288.07	0.039	346.62	0.034	134.99	0.017	122.61
9	121	253.02	0.54	172.26	0.37	145.95	0.013	236.92	0.021	176.64	0.023	129.78
10												

X	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	2.417	36.94	1.712	29.31	1.580	41.15	5.231	349.29	5.231	349.29	1.440	327.29
2	0.123	261.62	0.112	219.68	0.152	141.00	0.178	144.39	0.224	116.50	0.051	279.50
3	0.064	47.42	0.041	102.89	0.04	65.20	0.029	179.07	0.018	179.07	0.009	318.95
4	0.035	319.20	0.017	164.68	0.029	65.20	0.033	356.75	0.025	319.72	0.006	611.82
5	0.017	343.56	0.011	55.62	0.009	129.73	0.025	303.41	0.031	433.26	0.011	111.89
6	0.010	34.54	0.008	236.23	0.008	143.96	0.015	296.66	0.015	296.66	0.004	58.69
7	0.009	210.42	0.016	235.75	0.011	234.36	0.013	145.66	0.013	145.66	0.002	238.34
8												
9												
10												

WALL NO.	GAP FRACTION	W1	W2	W3	W4	W5	W6	W10	W125	W500	W1000
1	2.313	295.75	2.226	301.95	9.567	164.82	2.479	191.83	6.689	79.12	
2	385	90.36	248	66.34	2.252	221.67	2.11	150.77	1.461	55.04	
3	469	311.22	706	209.91	0.970	324.71	4.72	317.97	4.40	329.07	
4	077	15.65	0.86	27.23	0.64	267.03	0.64	45.57	0.163	279.33	
5	022	15.65	1.12	320.85	0.65	267.03	0.65	357.01	0.074	143.26	
6	036	144.07	0.28	370.85	0.61	146.70	0.61	6.70	0.084	34.15	
7	095	144.07	0.91	137.57	0.84	126.95	0.84	146.26	0.117	243.15	
8	014	32.74	0.32	194.75	0.49	227.44	0.19	232.28	0.174	298.22	
9	034	32.74	0.05	194.75	0.45	166.93	0.41	58.60	0.011	271.41	
10	016	225.41	0.24	232.56	0.58	298.36	0.32	283.28	0.029	318.24	

\*\*\* STABILITY PARAMETER

\* XI = .7784 \*  
 \* \*\*\*\*\*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTFR BLADE DATA, WALL STATIONS

FILE 15 ALPHA-MCL = 2.0 PDP RUN-PT 5.07  
RUM 15 ALPHA-RAR = 2.0 0-COMP = 32192  
POINT 3 SIGMA = -90. V-REF = 198.96  
COMPUTED FREQUENCY = 15.43, K = .1218  
FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	012-UPPER CPREAL CPIMAG	062-UPPER CPREAL CPIMAG	148-UPPER CPREAL CPIMAG	261-UPPER CPREAL CPIMAG	392-UPPER CPREAL CPIMAG	530-UPPER CPREAL CPIMAG	661-UPPER CPREAL CPIMAG
1	23	152	11.271	2.802	-3.591	1.104	-2.841	-2.517
2	3	154	-2.964	.024	.104	.174	.054	.050
3	4	156	.154	.061	.013	.011	.028	.043
4	5	158	.370	.084	.009	.022	.019	.034
5	6	161	.238	.038	.111	.100	.040	.029
6	7	169	.108	.024	.043	.046	.025	.041
7	8	182	.102	.043	.006	.018	.052	.022
8	9	193	.094	.016	.056	.042	.052	.053
9	10	207	.000	.011	.005	.016	.029	.010
10	10	210	.260	.002	.018	.020	.020	.033
								.035

X	N	774-UPPER CPREAL CPIMAG	860-UPPER CPREAL CPIMAG	910-UPPER CPREAL CPIMAG	012-LOWER CPREAL CPIMAG	062-LOWER CPREAL CPIMAG	148-LOWER CPREAL CPIMAG	261-LOWER CPREAL CPIMAG
1	1	1.616	-1.617	-.884	-1.010	12.303	-7.572	6.264
2	2	.046	.165	.027	.066	-1.429	.773	-4.768
3	3	.082	.077	.059	.032	.016	.228	.367
4	4	.048	.021	.028	.088	.059	.033	.059
5	5	.003	.020	.004	.010	.027	.024	.065
6	6	.015	.021	.049	.014	.070	.024	.030
7	7	.036	.060	.025	.018	.034	.027	.032
8	8		.016	.032	.002	.018	.029	.008
9	9			.022	.015	.066	.028	.038
10	10							.060
								.041

X	N	392-LOWER CPREAL CPIMAG	530-LOWER CPREAL CPIMAG	661-LOWER CPREAL CPIMAG	774-LOWER CPREAL CPIMAG	860-LOWER CPREAL CPIMAG	910-LOWER CPREAL CPIMAG
1	1	1.382	-.636	-.342	.334	.273	.212
2	2	.145	.037	.027	.014	.043	.152
3	3	.066	.035	.061	.135	.094	.084
4	4	.004	.060	.028	.000	.015	.069
5	5	.005	.017	.027	.042	.035	.029
6	6	.036	.011	.024	.025	.018	.020
7	7	.001	.001	.024	.031	.026	.020
8	8	.013	.022	.024	.002	.003	.020
9	9	.013	.022	.024	.002	.003	.020
10	10	.024	.022	.024	.007	.007	.020
					.018	.016	.014
					.007	.000	.008
					.016	.016	.014

ORIGINAL  
OF POOR QUALITY

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 15 ALPHA-MCL = 2.0 PDP RUN.PY 5.07  
 RUN 3 ALPHA-BAR = 2.0 O-COMP = 32192  
 POINT 5 ALPHA-SIGMA = -9.0 V-PEF = 198.96  
 COMPUTED FREQUENCY = 15.43, K = .1218  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	2	.990	150.78	7.180	157.03	4.142	153.49	2.846	176.49	2.588	193.46	2.832	210.23	2.846	220.88
2	3	.337	208.42	.102	346.39	.101	353.06	.079	344.46	.048	336.15	.052	56.58	.095	20.10
3	4	.514	136.03	.087	25.99	.095	350.76	.102	281.05	.079	259.92	.039	299.17	.082	275.65
4	5	.724	199.25	.044	352.17	.113	287.08	.042	287.07	.079	200.92	.049	301.10	.044	327.67
5	6	.129	302.59	.027	324.55	.053	263.54	.045	249.33	.007	211.46	.060	301.88	.058	24.71
6	7	.377	126.73	.046	19.89	.056	356.03	.028	121.81	.025	54.53	.011	37.68	.036	66.61
7	8	.307	197.85	.014	142.30	.005	112.83	.042	173.31	.033	210.84	.030	167.56	.036	157.32
8	9	.037	197.85	.014	142.30	.005	112.83	.042	173.31	.033	210.84	.030	167.56	.036	157.32
9	10	.281	112.36	.006	119.01	.019	347.27	.032	150.09	.035	212.00	.020	167.56	.036	157.32

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	2	.292	225.13	1.866	227.11	1.408	225.85	1.447	328.39	7.872	322.72	4.286	329.48	2.783	331.30
2	3	.171	4.57	.127	22.57	.067	28.69	1.624	206.41	.691	147.91	.091	16.64	.154	335.54
3	4	.080	254.74	.064	258.74	.090	268.61	.068	330.52	.266	193.27	.034	16.64	.034	349.74
4	5	.053	376.94	.054	329.19	.054	329.84	.095	267.87	.266	14.27	.058	206.80	.066	228.09
5	6	.021	278.94	.021	296.77	.047	325.80	.036	137.84	.115	138.02	.042	224.96	.037	291.06
6	7	.050	24.96	.045	14.07	.047	17.09	.071	98.87	.088	25.32	.034	14.27	.040	340.73
7	8	.026	175.40	.025	72.69	.027	66.45	.051	98.87	.040	147.62	.034	14.27	.040	340.73
8	9	.036	175.40	.025	72.69	.027	66.45	.051	98.87	.040	147.62	.034	14.27	.040	340.73
9	10	.040	24.11	.032	133.99	.033	176.45	.072	122.62	.033	40.41	.061	181.21	.016	156.97

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	2	.522	335.50	1.180	343.13	1.546	1.73	336	51.39	278	349.08	2.252	327.12	2.252	327.12
2	3	.076	29.40	.146	36.08	.153	28.25	.023	51.84	.195	67.26	.168	67.26	.168	67.26
3	4	.060	266.12	.091	255.97	.136	286.28	.147	271.67	.118	337.04	.099	57.09	.099	57.09
4	5	.018	250.14	.047	293.33	.071	299.64	.028	314.29	.051	314.50	.076	317.29	.076	317.29
5	6	.028	355.75	.027	102.33	.037	162.91	.049	300.56	.032	235.47	.045	317.29	.045	317.29
6	7	.014	107.64	.025	102.33	.027	48.97	.032	249.36	.004	180.60	.029	43.69	.029	43.69
7	8	.032	156.67	.044	47.31	.021	183.94	.019	169.32	.018	64.74	.016	175.61	.016	175.61
8	9	.032	156.67	.044	47.31	.021	183.94	.019	169.32	.018	64.74	.016	175.61	.016	175.61
9	10	.032	156.67	.044	47.31	.021	183.94	.019	169.32	.018	64.74	.016	175.61	.016	175.61

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 15 ALPHA-MCL = 2.0 PDP RUN-PT 5.07  
 RUN 15 ALPHA-RAR = 2.0 O-COMP = .32192  
 POINT 3 SIGMA = -90.0 V-PEF = 198.96  
 3 COMPUTED FREQUENCY = 15.43, K = .1218

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	N	DELCPR	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD
1	32.456	-13.043	12.875	-7.570	7.683	-3.284	5.281	-1.511	3.900	-.033	3.576	1.084	2.698	1.879
2	2.385	1.291	-.685	-.391	-.654	-.064	-.077	-.034	.053	-.057	.090	-.077	.101	-.190
3	-.140	1.148	-.333	-.122	-.034	-.028	-.042	-.015	.022	.057	.056	-.018	.056	-.043
4	.677	-.143	-.067	-.176	-.071	-.094	-.043	-.074	.010	.018	-.040	-.054	-.063	-.021
5	-.096	-.133	-.008	-.098	-.024	-.023	-.033	-.021	-.000	-.014	-.016	-.005	-.055	-.023
6	-.295	-.314	-.036	-.022	-.023	-.012	-.003	-.028	-.030	-.016	-.038	-.014	-.028	-.010
7	-.056	-.029	-.047	-.033	-.004	-.033	-.001	-.012	-.022	-.040	-.026	-.015	-.014	-.004
8	-.173	-.232	-.024	-.023	-.009	-.045	-.027	-.001	-.007	-.015	-.010	-.015	-.026	-.014
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X	.774		.560		.910		.929		.929		.929		.929	
	N	DELCPR	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD	DELCPD
1	1.944	1.649	1.543	1.315	1.193	.874	.874	.874	5.055	-.929	1.166	1.166	1.166	1.166
2	-.032	-.052	-.035	-.047	-.045	-.086	-.086	-.086	-.063	.014	-.013	-.013	-.013	-.013
3	.021	.048	.001	.034	-.013	.019	.019	.019	-.015	.015	-.011	-.011	-.011	-.011
4	-.006	-.022	-.014	-.008	-.016	-.002	-.002	-.002	.013	-.005	.011	.011	.011	.011
5	-.022	-.022	-.014	-.018	-.003	-.000	-.000	-.000	-.012	-.004	-.002	-.002	-.002	-.002
6	-.014	-.018	-.017	-.030	-.024	.006	.006	.006	-.001	-.022	-.006	-.006	-.006	-.006
7	-.018	-.022	-.017	-.030	-.001	-.016	-.016	-.016	.001	-.009	-.003	-.003	-.003	-.003
8	-.015	-.022	-.017	-.030	-.012	-.000	-.000	-.000	.003	.006	-.003	-.003	-.003	-.003
9	-.030	-.030	-.024	-.026	-.022	-.001	-.001	-.001	.003	.006	-.007	-.007	-.007	-.007
10														

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO	GAP FRACTION	.125		.000		.125		.500		.125		.125		* XI =
		N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG		
1	1.095	-1.535	1.188	-1.353	-8.849	3.349	-2.404	1.446	7.112	1.446	7.112	1.446	7.112	
2	.161	.105	.574	-.643	-1.488	-1.395	.041	1.164	1.116	1.164	1.116	1.164	1.116	
3	.026	-.054	.191	-.212	.280	-.462	-.021	-.195	.068	-.121	.191	-.191	.068	
4	.015	-.062	.012	-.091	.032	-.152	-.060	-.046	-.011	-.046	-.011	-.046	-.011	
5	.006	-.021	.011	-.034	.000	-.024	-.002	.004	.040	-.056	.040	-.056	.040	
7	.007	-.018	.004	-.017	.000	-.043	.009	.059	.040	-.030	.040	-.030	.040	
8	-.021	.013	-.018	.017	-.044	-.043	-.004	-.009	-.041	-.000	-.041	-.000	-.041	
9	-.015	.003	-.009	.005	-.002	.016	.022	.006	.016	-.012	.016	-.012	.016	
10	.032	.035	.009	.045	.002	.010	.022	.022	.016	.016	.016	.016	.016	

ORIGINAL PAGE IS  
OF POOR QUALITY

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- DCMI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 15 ALPHA-MCL = 2.0 PDP RUN-PT 5.07  
RUN 3 ALPHA-RAR = 32192  
POINT 3 SIGMA = -90.0  
COMPUTED FREQUENCY = 15.43, K = .1218  
V-REF = 195.96

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012	.062	.148	.261	.392	.530	.661					
N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM					
1	37.529	329.86	14.935	329.55	8.356	336.86	5.493	344.08	3.900	359.51	3.737	16.86
2	7.717	28.43	.482	157.29	.084	229.98	.025	376.08	.053	5.29	.119	319.28
3	1.150	96.96	.260	32.26	.044	140.77	.044	159.66	.021	69.055	.063	18.15
4	.692	317.66	.101	131.14	.023	127.38	.039	120.33	.043	233.55	.017	197.25
5	.164	111.92	.099	265.61	.033	136.23	.038	327.69	.014	301.26	.041	159.71
6	.431	125.87	.057	31.14	.026	183.44	.029	85.95	.050	268.30	.036	223.71
7	.320	313.33	.057	144.46	.034	152.49	.012	255.14	.022	176.68	.028	128.47
8	.083	152.38	.011	22.13	.018	80.21	.027	95.61	.016	165.54	.018	304.23
9	.290	306.69	.033	44.27	.053	58.67	.016	19.12	.024	114.86	.031	71.64
10												

X =	.774	.860	.910	PHI	N	CM-MAG	PHIN	N	CM-MAG	PHIM
N	DELCPM	PHI	DELCPM	PHI	N	DELCPM	PHI	N	DELCPM	PHI
1	2.589	49.30	2.027	40.47	1.478	16.27	5.139	349.58	1.825	328.96
2	.075	44.75	.034	20.49	.027	36.17	.062	112.13	.025	150.89
3	.053	66.72	.014	87.71	.052	96.82	.016	104.24	.022	13.28
4	.023	253.41	.014	216.74	.022	124.55	.023	348.82	.012	21.48
5	.030	314.99	.013	307.44	.018	185.63	.023	164.76	.008	148.17
6	.023	232.53	.017	178.53	.025	165.36	.012	151.54	.006	324.74
7	.033	237.53	.016	173.65	.012	157.65	.012	85.18	.002	65.33
8	.015	234.05	.012	157.65	.022	182.44	.007	66.47	.001	116.53
9	.030	177.44								
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\*\*\* STABILITY PARAMETER

WALL NO.	W1	W2	W4	W6	W10	W125	W178	
GAP FRACTION	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	
1	1.886	395.51	1.801	311.29	9.461	159.27	7.258	78.54
2	.192	33.290	.931	43.64	2.040	301.15	1.615	43.87
3	.064	294.00	.285	311.97	.540	279.41	.179	22.43
4	.057	283.53	.072	345.50	.143	279.41	.226	237.58
5	.024	245.04	.033	279.88	.155	258.23	.047	193.51
6	.024	144.44	.033	249.35	.024	273.95	.069	35.75
7	.015	165.69	.025	333.27	.024	224.62	.038	217.41
8	.047	47.83	.010	149.46	.043	205.81	.041	270.00
9			.046	78.38	.010	75.81	.023	56.76
10							.033	63.20

OCWT PERIODICITY TEST  
 MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 17 ALPHA-MCL = 2.0 POP RUN.PT 5.09  
 RUN 5 ALPHA-PAR = 2.0 Q-COMP = .31935  
 POINT 5 SIGMA = -90. V-REF = 198.15  
 COMPUTED FREQUENCY = 18.97, K = .1524  
 FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	X	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.198-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-19.718	11.417	-6.594	2.534	-2.922	-2.250	-2.612	-2.290
2	-3.812	-1.834	.161	.534	.146	.091	.106	.100
3	-.163	-.855	-.050	-.102	-.094	-.129	-.132	-.063
4	-.334	-.486	.019	-.032	.008	.029	.033	.008
5	-.739	-.081	.022	-.010	-.016	.001	.033	.006
6	-.112	-.253	.036	-.013	-.007	.005	.033	.027
7	-.200	-.373	.041	-.080	-.007	.034	.037	.022
8	-.278	-.068	.038	-.034	-.033	.039	.017	.026
9	-.039	-.008	.001	-.007	-.026	.003	.015	-.010
10	-.158	-.256	-.046	.005	-.007	.009	-.028	-.011

N	X	.770-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.198-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-1.763	-2.137	-1.374	-1.861	11.951	-8.319	5.929	3.566
2	-.103	-.693	-.092	-.015	-1.486	.770	-3.86	-2.627
3	-.024	-.020	-.026	-.056	-.054	.135	-3.81	-2.200
4	-.074	-.001	-.031	-.008	-.008	.019	-1.94	-.057
5	-.014	-.038	-.014	-.010	-.016	.004	.004	-.034
6	-.013	-.060	-.006	-.032	-.003	.076	.012	.022
7	-.022	-.022	-.014	-.050	-.051	.044	.039	.035
8	-.015	-.018	-.014	-.025	-.004	.013	.006	.010
9	-.013	-.018	-.001	-.031	-.056	.027	.027	.025
10	-.013	-.018	-.001	-.031	-.056	.027	.027	.013

N	X	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.770-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1.262	-.980	.981	.763	.227	.381	.120
2	-.157	-.126	.160	-.160	.086	-.001	.132
3	-.075	-.015	-.014	-.034	-.057	.082	.069
4	-.017	-.019	-.012	-.000	.026	.011	.016
5	-.025	-.019	-.035	-.036	-.007	.000	.038
6	-.010	-.010	-.009	-.062	-.053	.060	.012
7	-.016	-.010	-.025	-.017	-.015	.017	.017
8	-.012	-.025	-.025	-.024	-.005	.009	.014
9	-.023	-.045	-.025	-.034	-.011	.012	.007
10	-.023	-.045	-.025	-.034	-.011	.012	.007

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 17 ALPHA-MCL = 2.0 PDF RUN-PT 5.09  
 RUN 5 ALPHA-PAR = 2.0 Q-CORP = .31935  
 POINT 5 ALPHA-SIGMA = -90.0 V-REF = 198.15  
 COMPUTED FREQUENCY = 18.97, K = .1504

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	PHI	012-UPPER	062-UPPER	148-UPPER	261-UPPER	392-UPPER	510-UPPER	661-UPPER
1	22	.785	189.93	7.064	158.98	4.110	169.64	2.932	184.89	2.068
2	4	.230	205.69	.191	327.82	.172	328.16	.176	320.04	.112
3	4	.969	260.34	.059	212.86	.144	229.29	.165	218.67	.142
4	5	.773	125.62	.022	328.09	.030	285.74	.012	176.37	.056
5	4	.744	186.26	.024	334.57	.016	289.17	.059	102.62	.033
6	4	.277	293.94	.017	12.93	.009	143.95	.059	162.07	.035
7	4	.423	118.20	.064	232.79	.058	235.66	.012	235.23	.025
8	4	.285	187.61	.059	11.29	.027	172.11	.050	40.91	.027
9	4	.040	348.03	.008	82.65	.029	189.13	.028	175.19	.011
10	4	.301	121.67	.046	174.32	.011	129.82	.032	238.11	.024

X	N	CP-MAG	PHI	774-UPPER	910-UPPER	012-LOWER	062-LOWER	148-LOWER	261-LOWER
1	2	.771	230.47	2.313	233.57	14.561	317.76	4.429	323.62
2	4	.139	42.08	.043	213.03	1.674	207.38	.206	219.25
3	4	.121	139.48	.102	233.13	.145	187.44	.106	120.70
4	5	.034	91.91	.027	163.33	.021	112.18	.066	153.74
5	4	.042	61.81	.036	17.98	.017	87.95	.035	284.81
6	4	.051	258.12	.035	66.14	.047	254.64	.040	72.79
7	4	.031	44.79	.050	262.22	.044	331.52	.018	16.88
8	4	.021	250.90	.023	44.22	.013	106.12	.054	297.85
9	4	.022	126.87	.033	92.09	.044	269.87	.057	79.92
10	4			.062	26.12	.057	85.48	.071	

X	N	CP-MAG	PHI	392-LOWER	661-LOWER	774-LOWER	860-LOWER	910-LOWER
1	1	.598	325.19	1.243	322.14	.444	254.27	.620
2	1	.210	328.69	.226	315.10	.092	99.75	.133
3	4	.015	94.48	.065	203.57	.060	218.04	.072
4	5	.025	131.84	.036	180.98	.059	75.60	.035
5	4	.014	195.77	.019	197.37	.007	70.39	.008
6	7	.014	195.77	.019	197.37	.007	70.39	.008
7	4	.020	229.12	.011	164.17	.023	332.79	.020
8	4	.026	298.36	.041	164.17	.023	42.04	.013
9	4	.046	104.42	.043	158.66	.017	193.15	.011
10	4			.042	118.23	.047	158.66	.040





ORIGINAL COPY  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 17 ALPHA-WCL = 2.0 PDP RUN-PT 5.09  
 RUN 5 ALPHA-PRP = 31935  
 POINT 2 SIGMA = -90.0 C-COMP = 199.13  
 V-CDEF = 199.13  
 COMPUTED FREQUENCY = 18.97, K = .1504

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	37	315	328.07	14.819	327.70	8.320	336.13	5.508	344.12	3.935	337.33	1.94	337.33
2	37	352	29.58	6.93	142.18	1.52	224.63	1.03	290.12	0.55	44.85	0.134	18.15
3	1	595	24.20	332	193.05	1.14	122.10	0.32	122.32	0.575	51.53	0.084	19.53
4	5	727	16.32	179	19.59	0.69	108.36	0.69	108.36	0.37	51.53	0.079	226.06
5	6	349	169.32	123	93.23	0.38	296.20	0.27	98.71	0.31	181.62	0.072	174.11
6	7	487	341.56	172	27.77	1.05	67.92	0.45	64.65	0.39	144.69	0.072	274.58
7	8	279	341.56	244	22.65	0.18	340.32	0.12	296.51	0.37	274.58	0.072	347.77
8	9	533	223.45	058	229.75	0.69	321.60	0.77	323.60	0.72	12.93	0.048	384.37
9	10	533	513.09	073	45.96	0.87	60.87	0.80	34.22	0.72	83.52	0.048	384.37
10	10	533	513.09	073	45.96	0.87	60.87	0.80	34.22	0.72	83.52	0.048	384.37

X	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	2	654	41.42	1.425	44.07	1.478	35.23	5.033	349.32	0.83	349.32	1.423	323.61
2	3	121	37.39	0.24	166.69	0.29	22.54	0.24	22.54	0.60	81.20	0.034	82.82
3	4	059	33.34	0.47	43.47	0.21	80.87	0.39	68.41	0.60	81.20	0.027	126.48
4	5	181	181.31	1.12	161.12	0.32	190.77	0.17	272.41	0.30	68.41	0.016	266.25
5	6	104	289.33	0.87	268.87	0.50	97.37	0.30	296.22	0.40	56.22	0.010	327.58
6	7	030	93.77	0.26	117.26	0.33	93.06	0.28	296.22	0.28	56.22	0.004	365.85
7	8	034	215.42	0.37	228.37	0.15	164.07	0.28	296.22	0.28	56.22	0.006	365.85
8	9	025	140.52	0.68	179.68	0.10	223.06	0.28	296.22	0.28	56.22	0.010	365.85
9	10	025	140.52	0.68	179.68	0.10	223.06	0.28	296.22	0.28	56.22	0.010	365.85

\*\*\* STABILITY PARAMETER

WALL NO.	GAP FRACTION	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10
1	2	347	294.16	2.245	259.27	0.274	161.18	2.568	190.76	0.860	77.06
2	3	117	211.31	0.356	268.95	1.681	223.07	1.183	242.06	1.595	37.12
3	4	050	91.06	0.990	105.65	0.82	282.30	0.83	121.16	0.070	275.11
4	5	027	346.02	0.896	297.21	0.94	241.71	0.20	311.51	0.130	147.16
5	6	025	251.62	0.891	182.42	0.97	318.93	0.59	14.44	0.064	219.17
6	7	045	34.62	0.391	236.43	0.57	226.55	0.44	265.99	0.114	219.17
7	8	033	231.74	0.228	67.35	0.61	178.12	0.22	179.37	0.048	167.15
8	9	032	231.74	0.228	67.35	0.61	178.12	0.22	179.37	0.048	167.15
9	10	032	231.74	0.228	67.35	0.61	178.12	0.22	179.37	0.048	167.15

\*\*\* ALL PRESSURES, PER RADIAN \*\*\*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTIP BLADE DATA, WALL STATIONS

FILE 7 ALPHA-MCL = 2.0 PDP RUN-PT 4.01  
 KUM 4 ALPHA-PAR = 2.0 Q-COMP = .3111  
 POINT 1 SIGMA = -45. V-REF = 201.99  
 COMPUTED FREQUENCY = 9.09, K = .0707  
 FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	012-UPPER CPREAL	012-UPPER CPIMAG	062-UPPER CPREAL	062-UPPER CPIMAG	148-UPPER CPREAL	148-UPPER CPIMAG	261-UPPER CPREAL	261-UPPER CPIMAG	392-UPPER CPREAL	392-UPPER CPIMAG	530-UPPER CPREAL	530-UPPER CPIMAG	661-UPPER CPREAL	661-UPPER CPIMAG
1	1	-13.975	10.827	-4.945	2.590	-3.112	.705	-2.240	.345	-1.651	-1.259	-1.630	-2.157	-1.358	-2.699
2	2	1.003	-1.114	.075	-.066	.079	-.051	.068	.029	.004	-.049	-.041	-.127	-.055	-.200
3	3	-.089	.311	-.033	-.038	-.076	-.033	-.074	-.028	-.076	-.305	-.046	-.269	-.108	-.293
4	4	-.422	.116	-.028	-.009	-.052	-.054	-.028	-.028	-.028	.031	-.011	-.070	-.050	-.036
5	5	-.274	-.135	-.019	-.019	-.022	-.045	-.058	-.036	.002	-.039	-.034	-.019	-.045	-.014
6	6	.045	.121	-.017	-.021	.007	-.018	.000	.032	.011	-.021	-.021	-.002	-.030	-.000
7	7	-.135	.054	-.019	-.022	-.028	-.018	.000	.032	.008	-.009	-.021	-.002	-.003	-.000
8	8							.016	-.030	-.034	-.041	-.014	-.039	-.001	-.029
9	9														
10	10														

X	N	774-UPPER CPREAL	774-UPPER CPIMAG	910-UPPER CPREAL	910-UPPER CPIMAG	062-LOWER CPREAL	062-LOWER CPIMAG	148-LOWER CPREAL	148-LOWER CPIMAG	261-LOWER CPREAL	261-LOWER CPIMAG	392-LOWER CPREAL	392-LOWER CPIMAG	530-LOWER CPREAL	530-LOWER CPIMAG
1	1	1.013	-2.594	-6.310	-2.053	7.134	-8.982	3.450	-5.843	1.713	-3.256	1.713	-3.256	.969	-2.483
2	2	-.095	.297	.061	-.067	-.126	.299	-.271	.943	-.125	.122	-.125	.122	-.043	-.091
3	3	-.063	-.039	-.048	-.036	.192	-.080	.254	-.117	-.050	-.288	-.050	-.288	-.043	-.293
4	4	.034	-.026	.030	-.032	-.049	.032	.068	-.009	-.035	.057	-.035	.057	-.043	-.062
5	5	-.028	.039	-.019	-.040	.024	-.041	.064	-.024	.035	-.052	.035	-.052	-.026	-.059
6	6	-.005	-.031	-.006	-.007	-.044	.025	-.033	-.024	-.025	.034	-.020	.034	-.018	-.032
7	7	.013	-.026	.009	-.021	.039	-.031	-.002	-.032	.025	-.022	.000	-.004	-.017	-.004
8	8	-.006	.026	-.009	-.021	-.007	.031	.051	-.022	-.051	.022	-.006	.013	-.001	-.009
9	9														
10	10														

X	N	392-LOWER CPREAL	392-LOWER CPIMAG	530-LOWER CPREAL	530-LOWER CPIMAG	661-LOWER CPREAL	661-LOWER CPIMAG	774-LOWER CPREAL	774-LOWER CPIMAG	910-LOWER CPREAL	910-LOWER CPIMAG				
1	1	.441	-1.719	.273	-1.723	.012	-1.179	-.021	-1.257	.168	-1.398	.054	-1.315	.054	-1.315
2	2	-.012	.063	-.002	-.072	.034	-.033	-.101	.294	-.124	.128	-.014	.125	-.014	.125
3	3	-.019	-.042	-.005	-.040	-.013	-.045	.021	-.066	-.065	.044	-.044	.039	-.044	.039
4	4	.031	-.009	.000	-.021	.049	-.040	-.049	.040	.033	-.000	.030	-.000	.033	-.000
5	5	.022	-.029	-.010	-.034	-.011	-.040	.017	-.038	.037	-.038	.032	-.028	.032	-.028
6	6	-.010	.004	-.005	-.009	-.013	.014	-.012	-.009	-.012	.006	-.012	.003	-.012	.006
7	7	-.002	-.014	-.001	-.022	-.007	-.019	.001	-.029	.016	-.021	.015	-.020	.015	-.020
8	8														
9	9														
10	10														

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWJ PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 7 ALPHA-MCL = 2.0 POP RUN-PT 4.01  
 RUN 4 ALPHA-BAR = 2.0 Q-COMP = .33111  
 POINT 1 ALPHA-SIGMA = -45.0 V-REF = 201.89  
 COMPUTED FREQUENCY = 9.09, K = .0707  
 COMPUTED AND PHASE ANGLE

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	.012-UPPER		.148-UPPER		.261-UPPER		.392-UPPER		.530-UPPER		.661-UPPER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	16.899	140.16	5.582	152.36	3.191	167.33	2.266	188.77	2.237	214.08	2.704	232.93
2	1.254	181.71	.070	290.76	.079	356.39	.072	23.69	.555	62.08	.134	107.93
3	1.502	228.10	.233	293.39	.271	280.93	.285	275.66	.305	270.74	.273	279.63
4	1.231	117.39	.075	149.76	.083	203.45	.078	198.36	.086	152.11	.071	99.11
5	.431	117.39	.045	316.30	.023	313.64	.039	315.09	.042	47.33	.044	315.16
6	.269	210.20	.040	207.96	.074	217.83	.068	217.09	.037	32.86	.043	330.91
7	.078	341.60	.019	3.79	.019	291.04	.022	67.84	.039	272.86	.037	205.76
8	.130	69.67	.027	4.60	.014	43.06	.032	89.55	.024	61.91	.006	96.54
9	.150	154.59	.034	234.88	.034	213.17	.034	242.07	.012	310.26	.004	355.54
10									.041	264.13	.041	250.63

N	.774-UPPER		.910-UPPER		.012-LOWER		.062-LOWER		.148-LOWER		.261-LOWER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.785	248.68	2.524	251.51	1.242	309.39	6.793	300.57	3.674	297.61	2.665	291.32
2	.201	104.27	.124	104.18	1.002	157.57	1.255	131.25	.174	135.63	.100	115.31
3	.312	287.61	.273	282.86	.355	302.76	.374	223.57	.309	292.39	.307	287.53
4	.074	148.15	.060	143.51	.094	221.65	.280	224.62	.076	131.37	.075	124.55
5	.034	326.90	.031	307.68	.083	286.46	.088	352.92	.036	307.32	.033	305.85
6	.034	326.90	.031	307.68	.055	216.44	.081	322.02	.036	307.32	.027	241.77
7	.040	234.84	.044	244.46	.041	268.70	.043	216.76	.038	243.64	.027	241.77
8	.040	234.84	.044	244.46	.050	150.55	.043	234.67	.028	159.61	.016	165.59
9	.013	349.51	.007	10.05	.039	184.22	.032	86.54	.004	95.55	.008	97.79
10	.027	257.35	.023	245.98	.032	282.89	.036	205.22	.016	246.18	.016	235.79

N	.392-LOWER		.530-LOWER		.774-LOWER		.862-LOWER		.910-LOWER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.775	284.39	1.744	279.00	1.288	269.06	1.398	276.88	1.316	272.33
2	.064	101.09	.072	91.58	.185	131.67	.215	124.11	.136	95.89
3	.271	289.62	.325	289.79	.311	188.87	.298	282.58	.268	290.11
4	.057	133.08	.065	142.33	.070	107.48	.069	140.88	.061	141.95
5	.033	308.13	.032	310.05	.061	178.78	.050	318.27	.049	305.28
6	.032	101.26	.032	119.78	.049	356.50	.035	359.17	.033	305.28
7	.030	255.59	.042	256.14	.042	254.11	.022	258.14	.029	258.14
8	.010	181.76	.006	147.04	.021	210.28	.015	216.13	.004	217.11
9	.004	242.03	.011	303.01	.001	48.38	.014	244.83	.005	356.61
10	.019	227.47	.024	246.75	.034	239.60	.026	233.48	.026	245.43

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 7 ALPHA-MCL = 2.0 PDP RUN/PT 4.01  
 POINT 1 ALPHA-RAD = 2.0 O-COMP = .33111  
 1 SIGMA = -.45. V-REF = 201.89  
 COMPUTED FREQUENCY = 9.09, K = .0707

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.148		.261		.392		.530		.661	
	N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	20.109	-19.516	8.395	-8.430	4.814	-3.961	3.209	-2.137	2.302	-.460	1.903	.435	1.361	1.521
3	2.128	.457	-.852	1.009	-.504	-.127	-.109	-.010	-.038	.014	.039	-.055	.089	-.167
5	1.195	.294	-.319	.079	-.066	-.019	.031	-.086	.037	.019	.064	-.037	.074	-.021
7	.475	-.094	.035	-.029	-.012	.003	.015	-.019	.005	.073	.013	-.021	.003	-.025
9	.232	-.094	.036	-.056	-.042	-.016	.040	-.004	-.002	.016	.005	-.020	.023	-.026
10	.114	-.049	.044	-.037	-.042	-.016	.025	-.016	-.004	.010	.027	-.025	.019	-.014
	.142	-.096	.025	-.030	-.022	-.004	.001	-.024	-.009	.006	.004	-.007	.003	-.005
			-.032	.004	.022	.004	.007	.017	.009	.027	.004	-.017	.009	.012

X =	.774		.860		.910		.500		.500		.500		.500	
	N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	1.307	1.005	.961	1.005	.715	.715	3.038	-1.440	3.038	-1.440	3.038	-1.440	3.038	-1.440
3	.003	-.027	-.024	.004	.031	.014	.028	.024	.028	.024	.028	.024	.028	.024
5	.015	-.005	.003	-.015	.005	.001	.030	.031	.030	.031	.030	.031	.030	.031
7	.014	-.001	.002	-.002	.002	.003	.020	-.004	.020	-.004	.020	-.004	.020	-.004
9	.013	-.012	.004	-.005	.003	.011	.014	.007	.014	.007	.014	.007	.014	.007
10	.011	-.003	.005	-.009	.003	.004	.016	.004	.016	.004	.016	.004	.016	.004
			-.013	.009	-.001	.003	.002	.002	.002	.002	.002	.002	.002	.002

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.000		.125		.500		.500		.500		.500	
	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL
1	-.059	-2.143	.202	-2.226	-6.553	2.539	-2.030	-1.777	-2.030	-1.777	-2.030	-1.777	-2.030	-1.777
3	-.042	-.143	.754	-.675	-1.143	-.573	-.078	-.347	-.078	-.347	-.078	-.347	-.078	-.347
5	-.098	-.355	-.114	-.074	-.100	-.073	-.084	-.047	-.084	-.047	-.084	-.047	-.084	-.047
7	-.160	-.038	.067	-.080	-.047	-.023	.039	-.025	.039	-.025	.039	-.025	.039	-.025
9	-.024	-.017	.010	-.002	-.070	.051	.012	-.038	.012	-.038	.012	-.038	.012	-.038
10	-.014	-.016	.020	-.031	-.008	-.007	.007	-.010	.007	-.010	.007	-.010	.007	-.010
			-.020	.033	-.013	-.041	.013	-.026	.013	-.026	.013	-.026	.013	-.026

\*\*\* STABILITY PARAMETER

N	.8728	
	CMREAL	CMIMAG
1	.749	-.873
2	-.001	.048
3	.010	.012
4	.012	-.005
5	.010	-.001
6	.005	.000
7	-.002	.002
8	.003	-.001
9	-.002	.002
10	.003	-.001

ORIGINAL DATA  
OF POOR QUALITY

MODE 1 --- CENTER PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 7 ALPHA-MCL = 2.0 PDP RUN.PT 4.01  
RUN 4 ALPHA-PAR = 2.0 Q-COMP = .33111  
POINT 1 SIGMA = -45. V-REF = 201.89  
COMPUTED FREQUENCY = 9.09, K = .0707

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	20.022	315.866	11.897	314.88	6.234	320.55	3.855	326.33	2.348	348.69	1.952	125.87	2.041	48.18
2	2.372	11.110	1.321	130.19	.069	148.08	.125	150.28	.141	159.86	.068	305.18	.190	298.04
3	1.449	34.42	3.366	136.95	.094	173.95	.065	175.39	.100	179.54	.074	330.12	.176	112.78
4	.296	82.750	.329	113.89	.013	168.33	.032	175.08	.077	232.17	.051	347.46	.039	213.59
5	.484	346.777	.067	302.69	.014	352.47	.044	334.46	.019	273.79	.024	300.90	.035	130.92
6	.250	157.08	.068	296.58	.043	13.76	.041	6.19	.034	238.79	.031	313.82	.019	313.68
7	.127	227.27	.058	219.58	.037	137.15	.030	212.07	.033	134.32	.034	209.61	.019	313.12
8	.150	235.99	.030	130.18	.012	205.49	.024	266.69	.011	150.75	.035	205.59	.006	164.22
9	.172	326.11	.032	173.45	.022	10.18	.019	67.34	.028	108.08	.017	276.09	.014	126.08
10														

X	.774		.860		.910		CN-MAG		PHIN		N		CM-MAG		PHIM	
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.681	52.81	1.396	46.10	1.027	45.91	3.349	335.11	.077	105.42	1	1.149	310.59	.048	91.17	
2	.006	218.06	.025	190.51	.035	42.72	.043	122.42	.043	46.04	2	.017	45.37	.017	45.37	
3	.050	32.83	.019	46.75	.002	63.69	.043	46.04	.043	46.04	3	.006	302.63	.006	302.63	
4	.016	201.99	.015	279.17	.003	308.84	.041	347.78	.041	347.78	4	.011	17.32	.011	17.32	
5	.016	341.82	.010	156.80	.017	52.04	.024	9.71	.024	9.71	5	.005	174.52	.005	174.52	
6	.016	350.96	.010	328.22	.017	41.12	.024	203.48	.024	203.48	6	.003	224.61	.003	224.61	
7	.018	350.96	.007	234.70	.003	351.52	.011	201.48	.011	201.48	7	.003	348.74	.003	348.74	
8	.013	167.18	.016	146.44	.005	128.98	.011	201.48	.011	201.48	8					
9	.011	193.35			.003	241.13					9					
10											10					

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	.125		.125		.125		.500		1.125		STABILITY PARAMETER	
		CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	XI	
1	2	.387	258.92	2.305	175.04	7.027	158.82	2.174	200.93	5.579	105.59	*	
2	1	.155	108.54	.787	275.61	1.279	206.61	.107	136.66	1.741	187.53	*	
3	3	.362	285.77	.682	147.10	1.007	184.06	.111	138.92	.219	68.21	*	
4	4	.114	157.31	.101	307.99	.087	237.24	.061	109.29	.175	283.83	*	
5	5	.053	327.21	.029	376.37	.025	247.01	.039	41.54	.054	359.80	*	
6	6	.029	216.20	.011	349.59	.087	216.28	.012	252.77	.045	316.22	*	
7	7	.019	96.32	.043	117.49	.004	91.48	.015	48.98	.038	156.98	*	
8	8	.021	49.37	.051	36.67	.011	225.27	.029	243.75	.045	136.48	*	
9	9	.035	255.57	.052	227.86	.043	252.27	.029	243.75	.056	306.01	*	
10	10											*	

OCWT PERIODICITY TEST  
 MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 9 ALPHA-MCL = 2.0 PDP RUN.PT 4.54  
 RUN 4 ALPHA-PAR = 2.0 Q-COMP = 32612  
 POINT 3 SIGMA = -45. V-REF = 200.34  
 COMPUTED FREQUENCY = 15.49, K = .1214

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	.012-UPPER		.062-UPPER		.148-UPPER		.261-UPPER		.392-UPPER		.530-UPPER		.661-UPPER	
N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	-12.084	11.126	-4.672	3.015	-2.953	1.127	-2.143	.078	-1.431	-.780	-1.606	-1.596	-1.295	-2.068
2	-1.072	-.734	-.067	-.035	.030	-.016	-.029	-.018	-.045	-.011	-.043	.038	-.120	-.151
3	-1.055	-.296	-.027	.012	-.049	-.045	-.066	-.038	-.026	-.027	-.039	.031	-.044	-.000
4	-.080	-.147	-.071	-.006	-.053	-.045	-.066	-.038	-.046	-.028	-.067	-.029	-.065	-.029
5	-.182	-.149	-.052	-.006	-.019	-.010	-.010	-.046	-.011	-.002	-.005	-.010	-.017	-.017
6	-.254	-.019	-.031	-.024	-.065	-.009	-.050	-.010	-.066	-.020	-.025	-.010	-.044	-.007
7	-.098	-.056	-.036	-.024	-.051	-.029	-.022	-.026	-.068	-.010	-.037	-.011	-.033	-.003
8	-.006	-.113	-.011	-.008	-.005	-.012	-.022	-.026	-.006	-.010	-.007	-.011	-.007	-.006
9	-.051	.037	.001	-.021	-.009	.004	.004	-.002	.009	-.018	.000	.008	.006	.012
10														
X	.774-UPPER		.860-UPPER		.910-UPPER		.012-LOWER		.062-LOWER		.148-LOWER		.261-LOWER	
N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	-1.005	-1.962	-1.743	-1.707	-6.45	-1.441	6.649	-7.932	2.986	-5.182	2.616	-2.482	9.07	-1.679
2	-.105	.115	-.106	.016	-.056	.050	-.033	.219	-.390	.927	-.177	.046	-.118	.025
3	-.020	.026	-.014	.028	-.009	.029	.018	-.078	-.221	.121	-.029	.023	-.020	-.019
4	-.055	-.021	-.054	-.025	-.061	-.026	-.066	-.078	-.175	-.066	-.041	.043	-.039	-.016
5	-.001	-.010	-.006	-.008	-.012	.015	-.065	-.066	-.016	-.021	-.041	.021	-.039	-.017
6	-.024	-.010	-.029	-.008	-.029	-.008	-.005	-.044	-.050	-.021	-.024	.015	-.018	-.010
7	-.006	-.017	-.045	-.004	-.036	-.003	-.060	-.050	-.002	-.027	-.028	.033	-.008	-.028
8	-.018	-.021	-.012	-.018	-.013	-.008	-.007	-.051	-.039	-.042	-.038	.028	-.081	-.021
9									.008	.051	.020	.031	-.010	-.018
10													.014	-.005
X	.392-LOWER		.520-LOWER		.661-LOWER		.774-LOWER		.860-LOWER		.910-LOWER			
N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG		
1	.379	-.976	.195	-.788	.005	-.358	-.060	-.449	-.036	-.565	-.013	-.682		
2	-.058	-.013	-.061	-.004	-.028	-.012	.153	.101	-.097	.071	-.041	.015		
3	.003	-.021	-.016	-.020	-.059	-.033	.030	.009	.008	.012	.012	.035		
4	-.050	-.011	-.053	-.026	-.059	-.027	.054	-.015	-.057	.021	-.001	.027		
5	-.011	-.021	-.006	-.020	-.015	-.008	-.006	.008	.000	-.029	.006	.010		
6	-.000	-.027	-.007	-.037	-.018	-.029	-.015	-.017	-.012	-.010	-.010	.003		
7	-.066	-.019	-.085	-.010	-.061	-.004	-.074	.007	-.066	.002	-.058	.003		
8	.001	-.019	-.014	-.005	-.014	-.009	.018	-.009	.017	.004	.016	.002		
9	.013	-.031	.007	-.022	.007	.012	.009	.008	.007	.010	.005	.013		
10														

ORIGINAL PAGE IS  
 OF POOR QUALITY

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 9 ALPHA-MCL = 2.0 POP RUN.PT 4.04  
 RUN 4 ALPHA-RAR = 2.0 Q-COMP = 32612  
 POINT 3 SIGMA = -45. V-REF = 200.34  
 COMPUTED FREQUENCY = 15.49, K = .1214  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	15	.426	137.36	5.560	147.16	3.160	159.11	2.144	177.90	1.990	203.06	2.224	224.81
2	3	.079	176.06	.046	247.36	.024	332.57	.007	322.73	.041	158.05	.144	139.81
3	1	.286	214.88	.076	27.88	.013	359.63	.038	211.44	.046	193.54	.039	195.00
4	5	.307	254.88	.030	155.93	.068	223.53	.058	212.57	.038	133.52	.049	138.84
5	6	.392	149.65	.071	174.89	.064	220.17	.066	182.73	.054	148.65	.073	202.06
6	7	.290	141.90	.053	353.21	.024	339.64	.032	102.28	.022	68.89	.005	222.51
7	6	.265	175.46	.043	141.90	.066	171.85	.051	169.13	.021	286.10	.027	158.51
8	9	.133	92.93	.014	213.71	.059	209.15	.022	177.23	.068	186.25	.051	192.61
9	15	.063	144.37	.021	272.48	.010	158.63	.004	336.20	.012	295.68	.013	304.68
10	15									.020	295.68	.013	93.16

X	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2	.204	242.85	1.852	245.97	1.579	245.90	10.350	309.97	5.981	299.95	2.962	303.06
2	3	.025	11.90	.022	48.59	.029	80.30	.066	323.30	1.005	112.84	.163	165.42
3	5	.058	200.80	.031	116.84	.028	109.19	.070	248.69	.252	151.29	.038	321.61
4	7	.026	202.30	.014	64.87	.069	50.69	.079	245.54	.187	339.24	.046	206.63
5	9	.050	179.81	.030	144.37	.010	194.46	.050	175.71	.020	202.30	.028	2148.77
6	9	.028	49.08	.045	175.09	.039	176.06	.085	134.72	.005	164.22	.034	256.77
7	10			.023	323.23	.017	42.78	.051	71.72	.099	164.22	.084	159.52
8	10									.057	80.64	.029	286.70
9	10											.037	56.70

X	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1	.047	291.78	.612	293.93	.358	269.24	.453	262.43	.567	266.33	.682	268.92
2	3	.040	331.24	.061	179.68	.064	243.76	.184	146.68	.121	143.82	.059	134.83
3	5	.033	82.62	.022	117.98	.078	350.97	.010	65.69	.036	56.48	.019	151.91
4	6	.054	192.18	.054	186.53	.068	150.66	.047	50.71	.061	68.19	.035	92.19
5	7	.027	119.41	.021	105.59	.031	60.89	.056	195.60	.029	200.19	.067	204.07
6	8	.057	267.87	.038	125.99	.034	237.90	.021	289.04	.021	289.04	.022	258.47
7	9	.049	177.04	.086	173.57	.061	183.80	.074	174.75	.066	178.50	.020	282.86
8	9	.033	67.51	.029	49.66	.015	20.09	.020	333.34	.017	348.16	.058	183.31
9	10							.012	40.356	.013	55.16	.017	5.79
10	10											.014	67.87

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 9 ALPHA-MCL = 2.0 PDP RUN,PT 4.74  
 RUN 4 ALPHA-RAD = 2.0 O-COMP = 32612  
 POINT 3 SIGMA = -45 V-REF = 200.34  
 COMPUTED FREQUENCY = 15.49, K = .1214

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, MOMENT, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.148		.261		.392		.530		.661	
	N	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR
1	18.733	-19.059	7.655	-8.188	4.568	-3.609	3.050	-1.757	2.210	-1.196	1.802	-.808	1.290	1.710
2	2.137	.067	-.373	.969	-.206	.062	-.123	.029	-.021	-.003	.049	-.034	.092	-.208
3	1.108	.695	-.096	.096	-.016	-.023	-.049	-.001	.056	.004	.019	-.034	.034	-.013
4	.099	.374	-.099	.078	.047	.089	.051	.067	.029	-.009	-.049	-.023	-.006	.007
5	.196	-.412	-.054	.011	-.041	.074	-.008	-.036	-.023	-.008	-.014	-.018	-.002	.007
6	.269	-.069	-.102	.014	-.042	.000	-.041	-.002	.002	-.007	-.018	-.007	-.002	.010
7	.029	.116	-.030	.029	-.057	.042	-.050	.002	.002	-.022	.018	-.007	-.026	-.022
8	.029	.164	-.027	.050	-.021	.052	-.041	.020	.002	-.022	.036	-.007	-.002	.007
9	.013	-.015	.027	.050	-.029	.044	-.013	.044	.004	-.009	-.036	-.009	-.006	.011
10	.055	-.015	.027	.072	.029	-.027	-.010	.026	.004	.001	.020	.014	.001	.000

X =	.774		.910		.910		.910		.910		.910		.910	
	N	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR
1	9.85	1.513	.707	1.146	.622	-.760	2.840	-1.156	2.840	-1.156	2.840	-1.156	2.840	-1.156
2	2.09	-.014	.004	-.004	.007	-.007	.019	.035	.019	.035	.019	.035	.019	.035
3	.050	.010	-.028	.006	.008	-.013	.035	.010	.035	.010	.035	.010	.035	.010
4	.031	-.006	-.024	.003	.000	-.005	.027	-.013	.027	-.013	.027	-.013	.027	-.013
5	.037	-.002	-.007	.003	.000	-.004	.013	-.007	.013	-.007	.013	-.007	.013	-.007
6	.013	-.007	-.017	.010	-.006	-.010	.010	-.007	.010	-.007	.010	-.007	.010	-.007
7	.011	.004	-.021	.002	-.021	.010	.047	-.025	.047	-.025	.047	-.025	.047	-.025
8	.009	.004	-.004	.006	-.004	.010	.063	-.018	.063	-.018	.063	-.018	.063	-.018
9	.009	.004	-.004	.006	-.004	.010	.063	-.018	.063	-.018	.063	-.018	.063	-.018
10	.009	.004	-.004	.006	-.004	.010	.063	-.018	.063	-.018	.063	-.018	.063	-.018

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	.125		.007		.125		.500		.125		.125		* XI =
		N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG		
1	1	-.480	-1.522	.228	-1.519	-6.142	3.167	-1.943	-.149	-1.426	5.535	-.885	.8455	*
2	2	-.150	.107	.712	.151	-1.056	-.513	-.140	.041	-.173	.885	.183	.8455	*
3	3	-.020	-.049	.030	-.334	-.009	-.348	.668	-.039	.045	.183	.183	.8455	*
4	4	-.073	.024	-.083	-.045	-.029	-.040	.019	.026	.177	.177	.177	.8455	*
5	5	-.030	.009	-.042	-.016	.057	-.029	.067	.064	.064	.064	.064	.8455	*
6	6	-.030	.023	.012	.053	-.063	-.014	.015	.002	.053	.053	.053	.8455	*
7	7	-.014	-.014	.046	-.048	-.048	-.013	.062	.003	.054	.054	.054	.8455	*
8	8	.012	-.012	.020	-.051	-.009	-.009	.011	-.003	.036	.036	.036	.8455	*
9	9	.012	-.012	.016	-.049	-.007	-.007	.014	-.016	.033	.033	.033	.8455	*
10	10	.012	-.012	.016	-.049	-.007	-.007	.014	-.016	.033	.033	.033	.8455	*



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 9 ALPHA-XCL = 2.0 PDP RUN.PT 4.04  
RUN 4 ALPHA-PAR = 2.0 Q-COMP = 32612  
POINT 3 SIGMA = -45.0 V-DEF = 200.34  
COMPUTED FREQUENCY = 15.49, K = .1214

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	26.724	314.51	11.038	313.05	5.822	321.69	3.520	330.05	2.219	354.93	1.975	24.16
2	1.308	32.08	2.17	163.41	.028	304.61	.127	166.68	.021	187.20	.039	297.90
3	387	75.26	3.01	138.78	.101	62.44	.049	158.35	.056	4.45	.030	299.57
4	441	290.75	.057	342.21	.026	64.35	.029	340.91	.039	351.56	.050	192.93
5	212	331.11	.103	188.04	.042	180.23	.029	237.66	.024	200.42	.026	38.50
6	276	345.24	.044	119.15	.071	323.60	.056	318.84	.009	226.67	.050	120.01
7	120	70.42	.078	139.67	.064	115.00	.062	161.13	.022	84.98	.041	291.20
8	164	274.22	.057	248.64	.040	174.01	.046	253.99	.012	306.84	.012	132.53
9	066	4.54	.072	24.11	.040	42.62	.028	69.22	.046	85.09	.024	136.12
10												

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	1.784	58.01	1.343	58.23	0.988	50.25	0.666	337.84	0.337	337.84	0.066	337.84
2	0.051	169.63	0.012	314.30	0.055	350.77	0.040	61.32	0.030	271.51	0.018	309.66
3	0.051	111.85	0.020	115.77	0.015	297.69	0.036	41.94	0.020	319.94	0.013	57.20
4	0.006	80.83	0.005	136.21	0.007	86.77	0.020	207.20	0.015	207.20	0.004	304.03
5	0.012	192.96	0.007	330.15	0.022	217.13	0.039	319.83	0.034	142.75	0.007	103.20
6	0.025	164.50	0.021	185.84	0.022	333.43	0.054	195.43	0.015	282.69	0.006	271.59
7	0.014	35.68	0.011	69.57	0.011	69.57	0.011	69.57	0.020	66.34	0.006	271.59
8	0.016	235.42	0.013	213.77	0.008	171.45	0.011	69.57	0.020	66.34	0.006	271.59
9												
10												

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	W1	W2	W3	W4	W5	W6	W10	W125	W125	W125	W125	W125
1	1.596	252.50	1.728	278.55	6.910	152.72	1.948	184.21	1.948	184.21	5.717	104.44
2	0.184	144.49	0.335	235.08	1.474	205.91	1.474	163.61	0.778	350.39	0.022	191.04
3	0.062	358.87	0.045	100.63	0.053	236.51	0.035	123.85	0.072	201.22	0.189	191.04
4	0.078	112.04	0.101	214.52	0.135	197.06	0.072	123.85	0.055	173.34	0.210	22.53
5	0.039	200.00	0.045	159.02	0.064	321.65	0.029	55.17	0.057	338.78	0.057	338.78
6	0.045	210.28	0.047	156.39	0.050	195.51	0.062	176.96	0.055	175.03	0.063	175.03
7	0.063	183.17	0.047	167.46	0.010	159.52	0.062	143.27	0.036	172.03	0.036	172.03
8	0.024	317.37	0.352	72.07	0.021	199.52	0.021	49.80	0.021	49.80	0.021	49.80
9	0.036	170.00	0.052	72.07	0.021	199.52	0.021	49.80	0.021	49.80	0.021	49.80
10												

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTFP BLADE DATA, WALL STATIONS

FILE 11 ALPHA-MCL = 2.0 POP RUN.PI 4.07  
 RUN POINT 4 ALPHA-FAR = 2.0 Q-COMP = .32329  
 5 SIGMA = -.45 V-REF = 199.45  
 COMPUTED FREQUENCY = 19.14, K = .1508

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.510-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-11.287	10.807	-4.342	2.716	-1.907	-1.623	-1.320	-1.055
2	-2.950	.336	.127	.067	.144	.097	.035	.028
3	-.037	-.578	.148	.255	.028	.006	.051	.107
4	.004	.318	.024	.023	.019	.222	.073	.008
5	.394	.091	-.044	.090	.043	.047	.010	.012
6	.177	.093	.034	.026	.032	.017	.019	.020
7	-.012	.065	.027	.001	.000	.001	.028	.004
8	-.050	.129	.019	.013	.031	.061	.046	.001
9	-.102	.214	.051	.020	.038	.078	.035	.003
10								

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-.761	-2.298	-.435	-2.019	6.572	-8.234	2.901	1.768
2	.038	.097	.035	.044	.747	.175	.003	.024
3	.071	.022	.017	.024	.071	.053	.117	.026
4	.012	.023	.010	.004	.027	.060	.026	.011
5	-.027	-.022	.021	.017	.016	.041	.029	.019
6	-.013	.008	.006	.013	.035	.041	.015	.016
7	.003	.001	.006	.007	.021	.068	.033	.005
8	.002	.013	.022	.031	.041	.021	.051	.037
9	.002	.001	.016	.037	.090	.014	.043	.073
10					.148	.065	.043	.017

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	.530	-1.149	.186	.219	.169	.680	.158
2	.079	.044	.034	.097	.011	.049	.097
3	.019	-.004	.076	.019	.047	.024	.058
4	.010	-.007	.011	.016	.047	.045	.072
5	-.026	-.004	.028	.019	.018	.021	.014
6	.011	.015	-.024	.012	.031	.012	.012
7	.012	.012	.031	.016	.030	.022	.026
8	.013	.017	.014	.005	.016	.008	.007
9	.029	.010	.026	.005	.024	.008	.005
10					.001	.001	.002

ORIGINAL PAGE IS  
OF POOR QUALITY

OCNT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 11 ALPHA-MCL = 2.0 PDP RUN.PT 4.07  
 RUN 4 ALPHA-BAR = -2.0 Q-COMP = 32329  
 POINT 5 ALPHA-SIGMA = -45. V-REF = 199.45  
 COMPUTED FREQUENCY = 19.14, K = .1508  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI								
1	15	.627	136.25	5	.121	147.97	2	.798	163.77	1	.927	186.39	2	.608	215.79	2	.422	234.98	2	.638	246.42
2	15	.780	173.06	5	.144	132.05	2	.186	349.88	1	.166	349.88	2	.098	351.67	2	.137	378.30	2	.137	378.30
3	1	.112	243.29	5	.158	20.51	2	.095	144.42	1	.030	18.04	2	.037	80.98	2	.108	8.235	2	.108	8.235
4	3	.318	89.26	5	.030	311.02	2	.063	269.79	1	.023	15.94	2	.049	15.94	2	.023	306.85	2	.023	306.85
5	3	.407	167.07	5	.091	240.41	2	.063	234.56	1	.045	194.05	2	.019	250.13	2	.066	240.75	2	.019	240.75
6	7	.200	152.32	5	.027	178.32	2	.037	175.19	1	.036	154.05	2	.019	250.13	2	.020	158.19	2	.019	228.09
7	8	.066	100.20	5	.023	178.32	2	.035	205.10	1	.035	179.36	2	.011	277.09	2	.048	166.13	2	.048	166.13
8	9	.139	68.80	5	.054	158.66	2	.054	158.66	1	.039	192.20	2	.086	204.12	2	.062	207.28	2	.062	207.28
9	10	.237	115.48	5	.055	158.66	2	.054	158.66	1	.039	192.20	2	.086	204.12	2	.062	207.28	2	.062	207.28

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI								
1	2	.421	251.69	2	.076	256.50	1	.809	256.85	10	.539	308.60	6	.178	298.01	3	.228	303.21	2	.170	299.71
2	3	.104	68.87	2	.058	26.95	1	.045	19.44	10	.089	166.58	6	.200	129.19	3	.067	309.88	2	.052	315.71
3	4	.012	17.28	2	.010	338.06	1	.020	329.92	10	.065	65.73	6	.188	314.00	3	.025	536.94	2	.030	347.79
4	5	.028	303.80	2	.026	321.97	1	.019	296.80	10	.049	250.74	6	.037	334.12	3	.018	509.57	2	.018	334.12
5	6	.024	211.32	2	.019	287.85	1	.013	207.42	10	.054	249.89	6	.019	321.52	3	.021	340.27	2	.040	334.12
6	7	.015	348.18	2	.011	142.35	1	.011	165.25	10	.046	256.77	6	.004	324.84	3	.035	347.79	2	.020	334.12
7	8	.045	197.97	2	.038	233.27	1	.028	219.32	10	.091	189.14	6	.064	317.20	3	.074	352.10	2	.051	319.40
8	9	.051	272.39	2	.040	293.70	1	.036	282.89	10	.081	306.52	6	.046	338.66	3	.074	352.10	2	.051	319.40

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI								
1	1	.260	294.88	1	.067	291.75	2	.584	292.08	7	.700	287.93	6	.980	275.57	6	.987	279.19	6	.987	279.19
2	3	.097	328.03	1	.178	14.02	2	.137	347.92	7	.074	18.87	6	.081	33.66	6	.100	346.62	6	.100	346.62
3	4	.020	338.28	1	.019	306.08	2	.042	157.66	7	.048	347.04	6	.020	44.26	6	.073	349.61	6	.073	349.61
4	5	.030	309.78	1	.049	336.08	2	.005	346.09	7	.026	317.29	6	.019	318.76	6	.021	349.61	6	.021	349.61
5	6	.018	304.20	1	.049	336.08	2	.013	291.42	7	.059	237.71	6	.043	235.73	6	.043	235.73	6	.043	235.73
6	7	.018	304.20	1	.023	87.24	2	.017	71.76	7	.030	85.18	6	.023	107.74	6	.025	109.21	6	.025	109.21
7	8	.036	41.60	1	.023	37.54	2	.002	215.40	7	.017	68.69	6	.008	126.87	6	.008	126.87	6	.008	126.87
8	9	.036	41.60	1	.031	244.60	2	.019	270.60	7	.023	301.23	6	.006	145.02	6	.006	145.02	6	.006	145.02
9	10	.033	236.21	1	.025	30.63	2	.021	330.73	7	.013	95.23	6	.026	183.15	6	.026	183.15	6	.026	183.15
10	10	.033	236.21	1	.025	30.63	2	.021	330.73	7	.013	95.23	6	.026	183.15	6	.026	183.15	6	.026	183.15

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 11 ALPHA-NCL = 2.0 POP RUM-PT M.07  
RUN 4 ALPHA-RAR = 2.0 O-COMP = 32329  
POINT 5 SIGMA = .85 V-SPEF = 199.85  
COMPUTED FREQUENCY = 19.14, K = .1506

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	N	DELCP <sup>012</sup>	DELCP <sup>062</sup>	DELCP <sup>148</sup>	DELCP <sup>261</sup>	DELCP <sup>392</sup>	DELCP <sup>530</sup>	DELCP <sup>661</sup>
1	17	.859	-19	.041	7.243	-8.170	4.453	-3.482
2	12	.012	-.161	.845	-.130	.845	-.130	.845
3	1	.064	-.371	.098	-.097	.098	-.097	.098
4	1	.020	-.360	.007	-.016	.007	-.016	.007
5	1	.431	-.161	.011	-.011	.011	-.011	.011
6	1	.152	-.086	.033	-.033	.033	-.033	.033
7	1	.144	-.144	.033	-.033	.033	-.033	.033
8	1	.150	-.279	.037	-.037	.037	-.037	.037
9	1							
10	1							

X	N	DELCP <sup>774</sup>	DELCP <sup>860</sup>	DELCP <sup>910</sup>	DELCP <sup>910</sup>	DELCP <sup>910</sup>	DELCP <sup>910</sup>	DELCP <sup>910</sup>
1	1	.929	1.618	.048	.568	.782	2.737	-1.039
2	1	.026	-.042	.004	.004	.004	.004	.004
3	1	.035	-.032	.004	.004	.004	.004	.004
4	1	.024	-.005	.004	.004	.004	.004	.004
5	1	.024	-.027	.004	.004	.004	.004	.004
6	1	.015	-.038	.004	.004	.004	.004	.004
7	1	.055	-.011	.004	.004	.004	.004	.004
8	1							
9	1							
10	1							

\*\*\* WALL PRESSURES, PFR RADIAN \*\*\*

WALL NO.	GAP FRACTION	W1	W2	W3	W4	W5	W6	W10	W125	W10	W125
1	1	.214	-1.931	.462	-1.966	-5.664	-1.652	-1.199	5.023	1.199	5.023
2	1	.083	.362	.367	.058	.800	.058	-.081	.719	-.081	.719
3	1	.131	.312	.022	.367	.005	.107	.092	.165	.092	.165
4	1	.020	.029	.009	.064	.012	.013	.190	.049	.190	.049
5	1	.020	.043	.021	.064	.012	.013	.046	.201	.046	.201
6	1	.019	.043	.021	.064	.012	.013	.027	.009	.027	.009
7	1	.015	.011	.004	.064	.012	.013	.025	.011	.025	.011
8	1	.051	.013	.004	.064	.012	.013	.035	.036	.035	.036
9	1	.057	.012	.004	.064	.012	.013	.017	.036	.017	.036
10	1							.016	.028	.016	.028

\*\*\* STABILITY PARAMETER

\* XI = .8382 \*  
\*\*\*\*\*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 11 ALPHA-MCL = 2.0 PDP RUN.PT 4.07  
 RUN 4 ALPHA-BAR = 2.0 Q-COMP = 32329  
 POINT 5 SIGMA = -45. V-REF = 199.45  
 COMPUTED FREQUENCY = 19.14. K = .1508  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	26	106	313.17	10.918	311.56	5.652	321.97	3.386	331.75	2.153	339.22	2.033	293.10
2	109	355.42	855	198.72	198.72	208	169.58	107	185.59	0.355	337.56	0.173	298.36
3	1	377	27.19	292	159.96	0.58	239.10	0.40	324.60	0.65	321.60	0.053	173
4	365	80.28	138	314.50	0.94	73.44	0.80	0.80	53.27	0.14	256.48	0.029	176.70
5	411	263.44	059	65.98	0.07	112.32	0.09	0.09	112.35	0.71	208.54	0.019	63.88
6	228	315.09	040	74.60	0.53	51.87	0.29	0.29	98.34	0.28	354.22	0.049	71.88
7	101	301.36	061	266.38	0.69	351.21	0.49	0.49	354.76	0.28	354.22	0.049	42.86
8	101	225.79	034	1.36	0.79	17.17	0.30	0.30	31.54	0.55	61.56	0.052	42.86
9	117	298.29	101	338.31	0.69	267.21	0.75	0.75	263.39	0.55	318.07	0.052	308.93
10	117	298.29	101	338.31	0.127	346.44	0.091	0.091	267.73	0.118	25.50	0.087	28.25

X	N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	1	866	60.14	1.194	60.95	0.567	54.01	0.67	339.22	2.927	339.22	1.076	308.80
2	3	055	241.32	0.21	136.30	0.67	325.28	0.28	345.74	0.028	345.74	0.034	68.02
3	003	108.74	012	89.03	0.07	284.46	0.07	60.09	0.024	0.024	373.21	0.012	55.02
4	007	340.31	007	27.60	0.06	60.55	0.06	55.55	0.017	0.017	182.12	0.005	48.74
5	016	54.78	029	147.58	0.32	245.19	0.42	104.49	0.028	0.028	15.80	0.011	25.00
6	041	67.83	042	107.79	0.07	54.12	0.07	54.12	0.025	0.025	21.50	0.010	308.71
7	017	84.48	001	303.44	0.23	32.06	0.23	32.06	0.038	0.038	295.18	0.005	356.43
8	056	92.98	055	140.22	0.049	137.92	0.049	137.92	0.060	0.060	18.40	0.018	325.89

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1	1.943	263.69	2.020	283.22	6.292	154.19	1.739	198.19	5.164	103.43	5.164	103.43	
2	3	108	39.42	0.991	33.33	0.941	211.75	0.070	13.56	0.724	96.44	0.724	96.44	
3	024	316.67	024	17.42	0.21	280.40	0.21	280.40	0.108	352.08	60.81	0.189	60.81	
4	036	104.44	065	262.72	0.08	266.80	0.08	266.80	0.320	0.320	359.67	0.192	359.67	
5	075	216.16	091	206.75	0.14	260.36	0.14	260.36	0.377	335.15	245.83	0.069	245.83	
6	019	287.98	038	305.15	0.11	59.47	0.081	230.66	0.081	230.66	265.45	0.202	265.45	
7	016	156.85	069	246.18	0.14	219.53	0.14	219.53	0.912	220.06	341.90	0.012	341.90	
8	013	239.89	014	251.32	0.042	202.56	0.042	202.56	0.054	168.62	246.08	0.019	246.08	
9	013	239.89	013	199.81	0.050	190.15	0.050	190.15	0.043	220.86	331.67	0.019	331.67	

\*\*\* STABILITY PARAMETE

W	WID	W6	W500	W125	W125	W125	W125	W125	W125	W125	W125	W125	W125
1	1	076	034	012	005	011	010	005	011	005	011	005	011
2	3	034	012	005	011	010	005	011	005	011	005	011	005
3	4	012	005	011	010	005	011	005	011	005	011	005	011
4	5	005	011	010	005	011	005	011	005	011	005	011	005
5	6	011	010	005	011	010	005	011	005	011	010	005	011
6	7	010	005	011	010	005	011	005	011	010	005	011	005
7	8	005	011	010	005	011	010	005	011	010	005	011	005
8	9	011	010	005	011	010	005	011	005	011	010	005	011
9	10	010	005	011	010	005	011	010	005	011	010	005	011
10	10	005	011	010	005	011	010	005	011	010	005	011	005

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTRF BLADE DATA, WALL STATIONS

FILE 136 ALPHA-VCL = 2.0 POP RUN-PT 2.95  
RUN 2 ALPHA-PAR = 2.0 O-COMP E 31962  
POINT 1 SIGMA = 0. V-REF = 198.28  
COMPUTED FREQUENCY = 9.14, K = .6724

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PEP RADIAN \*\*\*

X	N	D12-UPPER CPREAL CPIMAG	D62-UPPER CPREAL CPIMAG	D148-UPPER CPREAL CPIMAG	D261-UPPER CPREAL CPIMAG	D392-UPPER CPREAL CPIMAG	D530-UPPER CPREAL CPIMAG	D661-UPPER CPREAL CPIMAG								
1	-12	.231	2.133	-.574	.622	-2.328	.115	-1.100	.151	-.082	.161	-.354	.713	-.539	1.422	-.611
2	-.404	-1.654	.164	-.044	.029	.199	.10E	-.175	-.079	-.154	-.154	-.000	.077	-.084	-.104	-.171
3	.417	-.458	-.044	-.050	-.059	-.059	-.091	-.109	-.128	-.098	-.098	-.137	-.062	-.137	-.104	-.107
4	-.037	-.195	-.021	-.027	-.041	-.041	-.042	-.037	-.038	-.038	-.038	-.037	-.028	-.037	-.037	-.037
5	-.021	-.100	-.017	-.022	-.011	-.011	-.011	-.015	-.012	-.012	-.012	-.011	-.024	-.025	-.025	-.025
6	-.122	-.135	-.017	-.027	-.028	-.028	-.028	-.021	-.021	-.021	-.021	-.021	.045	-.019	.050	-.030
7	-.009	-.015	-.026	-.046	-.004	-.004	-.004	-.017	-.036	-.036	-.036	-.036	.031	-.001	-.009	-.007
8													.031	-.046	-.002	-.051
9																
10																

X	N	D774-UPPER CPREAL CPIMAG	D660-UPPER CPREAL CPIMAG	D910-UPPER CPREAL CPIMAG	D910-LOWER CPREAL CPIMAG	D062-LOWER CPREAL CPIMAG	D149-LOWER CPREAL CPIMAG	D261-LOWER CPREAL CPIMAG								
1	1	.606	-.539	1.755	-.517	1.644	-.449	8.819	-1.968	5.568	-1.889	2.922	-.922	-.588	2.324	-.407
2	-.073	-.162	-.094	-.098	-.170	.128	-.145	-.148	-.669	-.632	-.495	-.079	-.110	-.186	-.104	-.171
3	.108	-.055	-.079	-.098	-.098	-.109	-.082	-.074	-.179	-.179	-.523	.047	-.147	-.098	-.101	-.100
4	-.002	-.102	-.017	-.013	-.014	-.009	-.014	-.050	-.063	-.063	-.256	.012	-.042	-.126	-.055	-.116
5	-.122	-.013	-.041	-.027	-.020	-.020	-.020	-.156	-.023	-.023	-.019	-.126	-.126	-.010	-.008	-.017
6	.051	-.006	-.047	-.017	-.043	-.043	-.043	-.049	-.010	-.010	-.004	-.126	-.010	-.001	-.026	-.001
7	-.007	-.001	-.011	-.008	-.011	-.011	-.011	-.019	-.022	-.022	-.066	.035	-.035	-.001	-.028	-.004
8	-.002	-.006	-.004	-.008	-.002	-.002	-.002	-.028	-.047	-.047	-.046	-.002	-.002	-.039	-.004	-.007
9																
10																

X	N	D392-LOWER CPREAL CPIMAG	D530-LOWER CPREAL CPIMAG	D661-LOWER CPREAL CPIMAG	D774-LOWER CPREAL CPIMAG	D860-LOWER CPREAL CPIMAG	D910-LOWER CPREAL CPIMAG									
1	1	.673	-.238	1.871	-.187	1.302	-.055	1.547	-.163	1.463	-.195	1.360	-.360	-.227	1.324	-.407
2	-.092	-.026	-.129	-.103	-.182	.179	-.092	-.113	-.186	-.112	-.155	.138	-.138	-.127	-.104	-.171
3	.092	-.108	-.073	-.098	-.098	-.102	-.100	-.084	-.164	-.164	-.103	-.064	-.064	-.089	-.101	-.100
4	-.002	-.003	-.008	-.003	-.003	-.001	-.004	-.008	-.016	-.016	-.013	-.004	-.004	-.012	-.008	-.017
5	-.122	-.003	-.028	-.015	-.020	-.021	-.020	-.133	-.011	-.011	-.005	-.111	-.111	-.002	-.026	-.001
6	.051	-.006	-.047	-.017	-.043	-.043	-.043	-.049	-.022	-.022	-.006	.035	-.035	-.001	-.028	-.004
7	-.007	-.001	-.011	-.008	-.011	-.011	-.011	-.019	-.022	-.022	-.066	.035	-.035	-.001	-.028	-.004
8	-.002	-.006	-.004	-.008	-.002	-.002	-.002	-.028	-.047	-.047	-.046	-.002	-.002	-.039	-.004	-.007
9																
10																

ORIGINAL FILE IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
OCWT PERIODICITY TEST  
WALL STATIONS

FILE 186 ALPHA-MCL = 2.0 PDP RUN.PI 2.05  
 RUN 2 ALPHA-BAR = 2.0 Q-COMP = .31962  
 POINT 1 SIGMA = 0. W-REF = 198.28  
 COMPUTED FREQUENCY = 9.14, K = .0724

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	PHI	.062-UPPER CP-MAG	PHI	.148-UPPER CP-MAG	PHI	.261-UPPER CP-MAG	PHI	.392-UPPER CP-MAG	PHI	.510-UPPER CP-MAG	PHI	.661-UPPER CP-MAG	PHI
1	12	.415	170.11	.616	172.26	2.331	177.16	1.110	187.80	389	245.49	.894	322.91	1.548	336.75
2	1	.702	256.17	.164	3.03	.227	28.52	.097	238.26	.154	359.58	.128	319.12	.165	298.24
3	1	.033	328.83	.078	214.38	.103	202.40	.097	238.26	.139	261.49	.151	245.68	.126	214.15
4	5	.294	47.67	.066	48.56	.109	56.90	.168	49.41	.148	48.45	.095	72.86	.017	62.46
5	4	.619	138.14	.071	179.14	.053	134.58	.053	134.25	.068	176.51	.132	216.50	.111	191.47
6	4	.043	209.85	.079	174.57	.123	184.61	.084	170.50	.068	176.51	.024	169.18	.022	149.44
7	1	.102	178.02	.017	353.82	.021	323.31	.045	170.97	.012	321.19	.049	337.15	.058	329.21
8	1	.131	159.77	.030	320.82	.033	302.31	.022	287.95	.010	39.31	.002	49.37	.011	141.36
9	1	.136	275.11	.018	338.54	.021	274.97	.059	300.73	.030	24.41	.046	89.20	.051	192.70
10	1	.018	119.09	.052	119.27	.037	83.99	.059	107.06	.030	24.41	.046	89.20	.051	192.70

X	N	CP-MAG	PHI	.860-UPPER CP-MAG	PHI	.910-UPPER CP-MAG	PHI	.012-LOWER CP-MAG	PHI	.062-LOWER CP-MAG	PHI	.148-LOWER CP-MAG	PHI	.261-LOWER CP-MAG	PHI
1	1	.694	341.45	1.830	343.59	1.705	344.72	9.036	347.42	5.880	341.26	2.980	348.62	2.360	350.07
2	1	.180	296.03	.194	299.00	.137	211.47	.685	257.52	.268	261.93	.148	221.74	.142	224.79
3	1	.121	206.81	.126	214.22	.131	216.79	.209	208.05	.286	116.80	.137	69.90	.128	64.74
4	1	.130	253.06	.022	220.41	.044	184.55	.044	106.58	.097	184.55	.130	217.65	.019	279.27
5	1	.123	173.87	.118	173.56	.120	173.38	.158	171.74	.189	174.26	.130	175.56	.176	179.37
6	1	.022	16.96	.041	4.08	.038	1.28	.013	50.08	.045	355.33	.015	358.00	.015	305.39
7	1	.051	152.17	.050	339.79	.048	334.20	.090	302.89	.066	263.67	.053	304.40	.045	309.37
8	1	.006	10.36	.015	148.44	.014	152.80	.029	131.88	.017	97.78	.007	110.35	.008	118.48
9	1	.037	92.98	.048	194.19	.049	192.87	.055	159.65	.047	97.78	.039	180.21	.036	188.48

X	N	CP-MAG	PHI	.530-LOWER CP-MAG	PHI	.661-LOWER CP-MAG	PHI	.774-LOWER CP-MAG	PHI	.860-LOWER CP-MAG	PHI	.910-LOWER CP-MAG	PHI
1	1	.90	351.89	1.880	354.28	1.303	357.59	1.556	354.00	1.476	352.43	1.398	350.67
2	1	.173	313.25	.231	315.60	.220	335.27	.219	326.00	.191	306.04	.164	311.20
3	1	.122	62.12	.145	218.44	.143	199.96	.163	226.36	.153	222.48	.144	217.90
4	1	.020	284.73	.013	69.04	.004	44.99	.118	64.94	.122	62.38	.129	60.10
5	1	.124	278.56	.127	269.08	.104	285.60	.114	276.38	.014	244.99	.011	248.33
6	1	.022	328.73	.027	127.72	.022	148.99	.024	176.18	.032	350.80	.039	349.21
7	1	.036	320.25	.047	326.43	.045	352.32	.033	352.32	.036	350.80	.039	349.21
8	1	.004	168.91	.023	182.65	.015	172.34	.010	187.80	.011	170.91	.012	156.14
9	1	.031	188.76	.041	199.03	.050	117.21	.048	199.37	.044	102.46	.040	106.21

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 186 ALPHA-MCL = 2.0 PDP RUN.PT 2.005  
 RUN 2 ALPHA-PAR = 2.0 0-COMP = 31962  
 POINT 1 SIGMA = 0. V-REF = 198.28  
 COMPUTED FREQUENCY = 9.14, K = .0724

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.536		.661	
N	DELCPR	DELCPY	DELCPR	DELCPY	DELCPR	DELCPY	DELCPR	DELCPY	DELCPR	DELCPY	DELCPR	DELCPY	DELCPR	DELCPY
1	21.050	-.4	101	10.142	-2.514	5.250	-.704	3.424	1.434	1.126	1.158	-.079	-.120	-.554
2	1.253	-.086	-.910	-.096	-.279	-.120	-.294	-.070	-.072	-.051	-.067	-.035	-.017	-.054
3	-1.059	-.336	-.177	-.279	-.206	-.015	-.059	-.050	-.072	-.061	-.045	-.017	-.017	-.028
4	-.273	-.262	-.046	-.177	-.094	-.012	-.035	-.055	-.041	-.020	-.018	-.013	-.018	-.007
5	-.119	-.044	-.011	-.046	-.011	-.006	-.013	-.042	-.045	-.023	-.008	-.001	-.009	-.000
6	-.013	-.040	-.028	-.040	-.012	-.003	-.016	-.020	-.046	-.022	-.002	-.027	-.001	-.001
7	-.178	-.094	-.031	-.031	-.020	-.007	-.022	-.018	-.032	-.011	-.006	-.024	-.001	-.003
8	-.031	-.137	-.019	-.019	-.001	-.003	-.002	-.018	-.012	-.001	-.002	-.007	-.006	-.005
9	-.036	-.032	-.001	-.001	-.001	-.003	-.002	-.018	-.012	-.001	-.002	-.007	-.006	-.005
10	-.036	-.032	-.001	-.001	-.001	-.003	-.002	-.018	-.012	-.001	-.002	-.007	-.006	-.005

X	.774		.860		.910		.950		.950		.950		.950	
N	DELCPR	DELCPY	DELCPR	DELCPY	DELCPR	DELCPY	DELCPR	DELCPY	DELCPR	DELCPY	DELCPR	DELCPY	DELCPR	DELCPY
1	-.059	-.376	-.292	-.322	-.265	-.223	-.649	-.194	2.649	-.194	1.158	-.079	-.120	-.554
2	-.034	-.023	-.015	-.017	-.004	-.007	-.043	-.022	-.043	-.022	-.067	-.035	-.017	-.054
3	-.034	-.023	-.015	-.017	-.004	-.007	-.043	-.022	-.043	-.022	-.067	-.035	-.017	-.054
4	-.001	-.012	-.001	-.001	-.005	-.005	-.039	-.022	-.039	-.022	-.067	-.035	-.017	-.054
5	-.001	-.012	-.001	-.001	-.005	-.005	-.039	-.022	-.039	-.022	-.067	-.035	-.017	-.054
6	-.005	-.008	-.005	-.008	-.005	-.010	-.023	-.013	-.023	-.013	-.008	-.001	-.001	-.001
7	-.019	-.002	-.012	-.002	-.005	-.014	-.003	-.006	-.003	-.006	-.001	-.004	-.001	-.004
8	-.016	-.002	-.002	-.002	-.002	-.002	-.003	-.006	-.003	-.006	-.001	-.004	-.001	-.004
9	-.016	-.002	-.002	-.002	-.002	-.002	-.003	-.006	-.003	-.006	-.001	-.004	-.001	-.004
10	-.016	-.002	-.002	-.002	-.002	-.002	-.003	-.006	-.003	-.006	-.001	-.004	-.001	-.004

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	.125		.125		.125		.125		.125		.125		.125	
GAP FRACTION	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL
1	528	-.478	-.478	660	-.660	-.660	660	-.660	-.660	660	-.660	-.660	660	-.660
2	128	-.018	-.018	104	-.104	-.104	104	-.104	-.104	104	-.104	-.104	104	-.104
3	106	-.119	-.119	83	-.083	-.083	83	-.083	-.083	83	-.083	-.083	83	-.083
4	109	-.173	-.173	85	-.085	-.085	85	-.085	-.085	85	-.085	-.085	85	-.085
5	059	-.002	-.002	020	-.020	-.020	020	-.020	-.020	020	-.020	-.020	020	-.020
6	132	-.019	-.019	124	-.124	-.124	124	-.124	-.124	124	-.124	-.124	124	-.124
7	132	-.019	-.019	124	-.124	-.124	124	-.124	-.124	124	-.124	-.124	124	-.124
8	025	-.025	-.025	025	-.025	-.025	025	-.025	-.025	025	-.025	-.025	025	-.025
9	025	-.025	-.025	025	-.025	-.025	025	-.025	-.025	025	-.025	-.025	025	-.025
10	025	-.025	-.025	025	-.025	-.025	025	-.025	-.025	025	-.025	-.025	025	-.025

\*\*\* STABILITY PARAMETER

\* XI = .2055 \*  
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ORIGINAL FILED IN  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 182 ALPHA-MCL = 2.0 PDP RUN.PT 2.05  
 ROW ALPHA-BAR = 2.0 Q-COMP = 21962  
 POINT I SIGMA = 0. V-REF = 198.28  
 COMPUTED FREQUENCY = 9.14, K = .0724

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.148		.261		.392		.510		.661	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	21.445	348.98	10.449	345.09	5.297	352.37	3.434	355.72	1.838	3.60	1.210	16.91	.569	102.17
2	1.218	75.69	1.116	246.33	.216	247.85	.260	254.26	.331	254.71	.076	111.25	.133	23.77
3	1.353	157.77	.477	268.79	.061	255.96	.053	199.85	.188	183.77	.059	152.45	.047	117.68
4	.443	219.13	.269	130.01	.037	109.43	.056	192.25	.041	152.99	.022	40.79	.018	351.68
5	.377	319.90	.104	195.94	.085	309.34	.071	109.02	.024	52.77	.027	37.33	.042	181.11
6	.127	159.76	.110	174.04	.015	113.40	.046	19.05	.046	181.62	.020	272.94	.006	282.44
7	.080	261.88	.026	256.20	.011	107.23	.046	270.54	.011	351.55	.039	268.72	.006	282.44
8	.050	330.88	.056	236.20	.020	306.14	.026	119.80	.019	146.21	.039	226.99	.019	150.39
9	.048	101.34	.021	106.28	.028	98.74	.014	119.80	.013	208.35	.029	185.27	.003	221.30
10	.048	41.32	.019	1.58	.004	39.37	.027	311.83	.002	156.88	.029	120.91	.027	244.98

X =	.774		.860		.910		CM-MAG		PHIM	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHIM
1	.281	93.84	.435	132.13	.349	133.92	.656	355.81	.974	247.81
2	.043	327.86	.039	247.76	.029	133.01	.104	235.52	.020	203.22
3	.034	266.08	.025	156.14	.008	163.72	.067	198.84	.013	168.57
4	.012	184.19	.011	7.84	.007	44.42	.037	156.99	.014	106.10
5	.009	301.12	.008	236.09	.015	386.81	.024	199.64	.008	159.13
6	.019	188.70	.017	220.35	.010	275.15	.014	280.87	.002	292.21
7	.019	188.70	.017	135.69	.015	110.11	.007	241.15	.006	310.54
8	.012	118.73	.006	289.93	.012	110.11	.013	238.69	.003	98.16
9			.008	222.99	.014	230.59	.005	277.41	.003	15.12
10										

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	W1		W2		W3		W4		W5		W6		W7		W8		W9		W10		W11									
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI								
1	.743	317.85	.925	314.50	5.798	175.39	.932	173.60	.118	203.46	.456	175.76	.511	280.71	.336	255.96	.170	55.63	.029	148.89	.151	181.05	.047	344.14	.044	303.89	.014	68.32	.071	138.27
2	.129	228.23	.250	226.47	.223	219.61	.154	49.33	.108	211.26	.156	154.32	.124	177.34	.031	344.97	.047	303.89	.014	68.32	.071	138.27	.044	303.89	.014	68.32	.071	138.27	.044	303.89
3	.151	67.18	.171	305.34	.030	170.20	.108	171.18	.031	344.97	.047	303.89	.014	68.32	.071	138.27	.044	303.89	.014	68.32	.071	138.27	.044	303.89	.014	68.32	.071	138.27	.044	303.89
4	.107	305.34	.168	183.98	.034	183.15	.034	183.15	.034	183.15	.034	183.15	.034	183.15	.034	183.15	.034	183.15	.034	183.15	.034	183.15	.034	183.15	.034	183.15	.034	183.15	.034	183.15
5	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79
6	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79
7	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79
8	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79
9	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79
10	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79	.018	46.79

\*\*\* STABILITY PARAMETE

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 188 ALPHA-MCL = 2.0 PDP RUN.PT 2.088  
 RUN 2 ALPHA-PAR = 2.0 O-COMP = 31980  
 POINT 3 SIGMA = 0. V-DEF = 198.33  
 COMPUTED FREQUENCY = 15.50, K = .1228

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-10	.687	1.436	-.082	-.056	-.988	-1.242	-1.440
2	-.463	-.739	.185	.013	.013	-.204	-.119	-.157
3	.572	-.270	-.055	.030	.055	.082	.057	.029
4	.356	-.226	.041	.090	.029	.095	.001	-.005
5	-.029	.278	-.043	.063	.104	.052	.001	.001
6	-.052	-.142	.077	.066	.043	.133	.054	.069
7	.030	-.020	-.025	.024	.019	.039	.049	-.002
8	-.044	.064	.029	.008	.043	.013	.051	-.046
9	.036	-.001	.016	.014	.032	.005	.015	.046
10	-.006	-.040	.002	-.010	.006	.006	.014	.027

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.912-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.188-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	1	.578	1.347	1.502	8.324	5.639	2.724	2.132
2	-.741	-.048	-.107	-.081	-.279	-.831	-.102	-.047
3	.030	.036	.032	.013	.011	.110	.038	.043
4	.041	-.006	.029	-.012	.048	.021	.048	.058
5	.059	.044	.046	.067	.043	.029	.031	.031
6	-.049	-.043	.059	.004	.059	.039	.046	.046
7	.056	.011	.047	.002	.082	.073	.048	.038
8	-.032	-.027	.029	.027	.073	.054	.046	.021
9	.022	.014	.027	.020	.093	.052	.034	.030
10					.016	.028	.023	.030

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	.498	1.644	1.137	1.365	1.457	1.158
2	-.047	-.005	-.064	.074	.092	.047	.068
3	.044	.017	.017	.036	.023	.041	.027
4	.055	.065	.083	.053	.051	.039	.047
5	.040	.043	.062	.058	.044	.048	.049
6	-.034	-.062	.042	.051	.077	.037	.034
7	.019	.001	.030	.028	.003	.030	.027
8	-.047	.047	.043	.023	.069	.044	.044
9	.016	.012	.019	.018	.021	.018	.018
10	-.016	.012	.016	.024	.026	.015	.022

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 168 ALPHA-MCL = 2.0 PDR RUN-PT = 2.08  
 RUN 3 ALPHA-BAR = 2.0 Q-COMP = 35980  
 POINT 3 SIGMA = 0. V-REF = 156.33  
 COMPUTED FREQUENCY = 15.50, K = .1228  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	PHI	.012-UPPER	.062-UPPER	.148-UPPER	.261-UPPER	.392-UPPER	.530-UPPER	.661-UPPER	
		CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	
1	10	.783	172.35	.350	196.51	1.446	223.10	1.259	260.47	1.963	312.68
2	3	.872	237.96	.193	86.26	.283	27.41	.214	101.71	.170	151.00
3	4	.632	314.69	.078	85.38	.062	87.75	.101	323.73	.077	40.40
4	5	.279	32.47	.048	306.67	.090	27.93	.059	352.20	.025	2.367
5	6	.422	95.86	.090	318.29	.321	58.71	.059	26.50	.088	48.67
6	7	.157	249.92	.101	319.26	.052	326.46	.122	327.30	.048	326.48
7	8	.037	325.89	.034	136.18	.036	148.50	.039	177.00	.059	184.14
8	9	.077	324.51	.034	29.54	.045	204.57	.020	177.28	.050	176.72
9	10	.036	357.66	.017	14.65	.058	8.91	.026	208.09	.027	350.73
10		.041	261.66	.005	63.11	.011	132.28	.007	29.87	.027	350.73

X	N	CP-MAG	PHI	.012-LOWER	.062-LOWER	.148-LOWER	.261-LOWER	.392-LOWER	.530-LOWER	.661-LOWER	
		CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	
1	2	.074	319.52	.041	323.03	.117	155.43	.049	330.12	.038	335.80
2	3	.149	161.22	.040	38.09	.029	38.39	.038	157.42	.048	147.27
3	4	.048	351.47	.029	350.39	.038	341.11	.045	348.63	.044	348.75
4	5	.073	56.02	.073	55.51	.074	50.63	.035	28.15	.069	314.93
5	6	.074	323.51	.073	324.72	.058	314.38	.045	330.68	.056	324.85
6	7	.049	183.25	.043	184.82	.040	177.51	.048	187.68	.038	181.80
7	8	.064	288.73	.058	335.89	.057	270.00	.059	258.33	.067	222.01
8	9	.042	219.36	.041	224.89	.027	220.00	.024	218.75	.030	222.01
9	10	.026	32.51	.027	14.23	.028	12.31	.024	345.30	.030	222.01

X	N	CP-MAG	PHI	.060-UPPER	.060-LOWER	.090-UPPER	.090-LOWER
		CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1	.647	335.48	1.596	335.53	1.303	328.20
2	2	.083	125.24	.091	148.52	.099	133.06
3	3	.045	5.81	.041	356.23	.028	16.01
4	4	.059	342.94	.070	320.54	.039	337.64
5	5	.059	316.90	.072	555.46	.076	52.47
6	6	.034	182.07	.037	311.21	.034	184.49
7	7	.050	67.76	.057	165.89	.051	58.19
8	8	.028	243.74	.030	231.54	.027	209.45
9	9	.028	36.35	.027	24.61	.027	54.28

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 188 ALPHA-MCL = 2.0 PDP RUN.PI 2.08  
 RUN 2 ALPHA-BAR = 2.0 O-COMP = .31980  
 POINT 3 SIGMA = 0. V-DEF = 198.33  
 COMPUTED FREQUENCY = 15.50, K = .1228

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661			
N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP		
1	19	.011	-4	.263	9	.388	-2	.613	4	.949	-5	.300	1	.013		
2	185	.285	-7	.776	-1	.178	-3	.369	-1	.122	-2	.227	-1	.071		
3	583	.244	-3	.277	-1	.033	-1	.159	-1	.030	-1	.024	-1	.015		
4	.072	-2	.277	-1	.033	-1	.159	-1	.030	-1	.024	-1	.015			
5	.111	.139	-1	.037	-1	.087	-1	.061	-1	.021	-1	.002	-1	.024		
6	.113	.139	-1	.037	-1	.087	-1	.061	-1	.021	-1	.002	-1	.024		
7	.116	.139	-1	.037	-1	.087	-1	.061	-1	.021	-1	.002	-1	.024		
8	.199	-1	.019	-1	.068	-1	.032	-1	.018	-1	.006	-1	.039	-1	.010	
9	.021	.013	-1	.019	-1	.068	-1	.032	-1	.018	-1	.006	-1	.039	-1	.010
10																

X	.774		.860		.910		
N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	
1	213	.694	-1	.177	-1	.343	
2	.048	-1	.029	-1	.013	-1	.008
3	.009	-1	.003	-1	.005	-1	.006
4	.017	-1	.003	-1	.000	-1	.004
5	.016	-1	.007	-1	.004	-1	.004
6	.021	-1	.006	-1	.009	-1	.016
7	.033	-1	.006	-1	.006	-1	.004
8	.014	-1	.017	-1	.023	-1	.017
9	.003	-1	.017	-1	.016	-1	.016
10							

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	.125		.000		.125		.500		1.125			
GAP FRACTION	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG
1	407	-1	.519	383	-1	.738	-5	.393	-4	.212		
2	.134	.066	.000	.046	.345	.572	-1	.269	-1	.206		
3	.057	.032	.000	.065	.109	.049	-1	.206	-1	.043		
4	.093	.046	.084	.084	.109	.049	-1	.206	-1	.043		
5	.076	.071	.084	.084	.141	.062	-1	.206	-1	.043		
6	.064	.021	.084	.084	.089	.053	-1	.206	-1	.043		
7	.554	.046	.084	.084	.045	.028	-1	.206	-1	.043		
8	.217	.011	.084	.084	.000	.006	-1	.206	-1	.043		
9	.011	.011	.084	.084	.017	.021	-1	.206	-1	.043		
10												

\*\*\* STABILITY PARAMETER \*\*\*

N	CMREAL	CMIMAG	CMREAL	CMIMAG
1	.886	.227	.886	.227
2	.034	.013	.034	.013
3	.014	.009	.014	.009
4	.008	.004	.008	.004
5	.002	.008	.002	.008
6	.001	.008	.001	.008
7	.005	.002	.005	.002
8	.005	.002	.005	.002
9	.006	.004	.006	.004
10	.003	.001	.003	.001

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 188 ALPHA-MCL = 2.0 POP RUN-PT 3180  
RUN 2 ALPHA-PAR = 2.0 O-COMP = 2180  
POINT 3 ALPHA-SIGMA = 0.0 V-REF = 198.33  
COMPUTED FREQUENCY = 15.50, K = .1228

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM
1	19	483	347.32	9.800	343.32	4.977	353.89	3.188	1.796	18.14	1.258	36.42	1.015	191.00
2		64	180.26	7.776	180.26	2.290	245.10	.028	.073	258.24	.054	318.74	.015	131.75
3		63	157.26	4.10	244.31	.079	294.31	.026	.051	118.27	.072	347.89	.045	57.24
4		375	214.84	.162	101.84	.033	63.50	.048	.015	80.65	.057	347.89	.029	334.16
5		286	51.45	.085	227.45	.021	257.55	.067	.004	159.66	.027	270.44	.041	222.61
6		118	353.55	.073	228.86	.017	113.30	.021	.007	306.10	.010	4.47	.037	351.29
7		101	190.67	.075	68.01	.046	242.11	.031	.023	77.59	.059	131.52	.044	114.77
8		1025	30.93	.021	203.43	.019	11.02	.024	.013	40.02	.028	41.44	.030	117.92
9														
10														

X	.774		.860		.910		.910		.910		.910		.910	
	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM
1	2	726	107.41	.593	107.41	.533	130.10	.019	.016	1.50	.017	245.69	.015	245.69
2		354	57.76	.029	288.75	.007	230.25	.033	.033	202.12	.009	211.25	.008	200.25
3		208	13	.022	278.00	.003	279.45	.013	.022	189.93	.000	158.37	.000	158.37
4		343	95	.017	227.08	.004	298.86	.011	.011	153.03	.006	197.86	.006	197.86
5		203	95	.014	66.16	.008	325.06	.033	.033	111.85	.005	119.81	.005	119.81
6		131	32.59	.022	139.42	.019	143.69	.016	.016	251.57	.007	311.16	.007	311.16
7		21	59	.006	95.95	.020	128.16	.011	.011	251.57	.003	311.16	.003	311.16
8														
9														
10														

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.000		.125		.500		.125		.125		.226		
	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1	572	285.01	1.780	282.44	5.414	185.06	1.432	242.43	4.258	188.48	4.258	188.48	4.258	188.48
2		321	114.69	.348	82.32	.613	248.80	.257	126.81	.299	267.58	.299	267.58	.299	267.58
3		306	84	.073	333.24	.296	352.25	.093	27.60	.125	328.57	.125	328.57	.125	328.57
4		103	26.45	.084	6.34	.154	23.52	.063	337.60	.046	50.31	.046	50.31	.046	50.31
5		104	316.76	.071	343.30	.027	303.19	.103	319.15	.127	241.37	.127	241.37	.127	241.37
6		167	41.28	.049	165.57	.010	149.70	.057	129.22	.044	170.04	.044	170.04	.044	170.04
7		172	41.28	.071	338.79	.070	271.48	.025	186.91	.005	147.25	.005	147.25	.005	147.25
8		103	83	.030	253.91	.029	51.46	.024	2.30	.041	330.81	.041	330.81	.041	330.81
9															
10															

\*\*\* STABILITY PARAMETE

\*\*\* XI = .226

ORIGINAL PAGE IS  
OF POOR QUALITY

CCNT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 190 ALPHA-MCL = 2.0 PDP RUN PT 3.11  
 RUN 2 ALPHA-RAR = 2.0 C-COMP = 33314  
 POINT 5 SIGMA = 3.0 V-DEF = 202.49  
 5 COMPUTED FREQUENCY = 19.22. K = .1491

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CPREAL	CPIMAG	062-UPPER	CPREAL	CPIMAG	148-UPPER	CPREAL	CPIMAG	261-UPPER	CPREAL	CPIMAG	392-UPPER	CPREAL	CPIMAG	530-UPPER	CPREAL	CPIMAG	661-UPPER	CPREAL	CPIMAG
1	1.714	1.903	-4.559	1.714	1.903	-2.430	1.714	1.903	-1.133	1.714	1.903	-5.113	1.714	1.903	3.116	1.714	1.903	1.032	1.714	1.903
2	1.269	1.257	-3.047	1.269	1.257	-1.924	1.269	1.257	-0.835	1.269	1.257	-1.033	1.269	1.257	2.058	1.269	1.257	0.700	1.269	1.257
3	1.145	1.175	-2.041	1.145	1.175	-1.229	1.145	1.175	-0.522	1.145	1.175	-0.722	1.145	1.175	1.361	1.145	1.175	0.335	1.145	1.175
4	1.044	1.077	-1.229	1.044	1.077	-0.635	1.044	1.077	-0.229	1.044	1.077	-0.229	1.044	1.077	0.829	1.044	1.077	0.229	1.044	1.077
5	0.950	0.985	-0.635	0.950	0.985	-0.308	0.950	0.985	-0.115	0.950	0.985	-0.115	0.950	0.985	0.429	0.950	0.985	0.115	0.950	0.985
6	0.874	0.912	-0.308	0.874	0.912	-0.112	0.874	0.912	-0.032	0.874	0.912	-0.032	0.874	0.912	0.219	0.874	0.912	0.032	0.874	0.912
7	0.811	0.843	-0.112	0.811	0.843	-0.032	0.811	0.843	-0.016	0.811	0.843	-0.016	0.811	0.843	0.091	0.811	0.843	0.016	0.811	0.843
8	0.757	0.793	-0.032	0.757	0.793	-0.016	0.757	0.793	-0.008	0.757	0.793	-0.008	0.757	0.793	0.014	0.757	0.793	0.008	0.757	0.793
9	0.710	0.747	-0.016	0.710	0.747	-0.008	0.710	0.747	-0.004	0.710	0.747	-0.004	0.710	0.747	0.002	0.710	0.747	0.004	0.710	0.747
10	0.667	0.704	-0.008	0.667	0.704	-0.004	0.667	0.704	-0.002	0.667	0.704	-0.002	0.667	0.704	0.001	0.667	0.704	0.002	0.667	0.704

X	CPREAL	CPIMAG	062-UPPER	CPREAL	CPIMAG	148-UPPER	CPREAL	CPIMAG	261-UPPER	CPREAL	CPIMAG	392-UPPER	CPREAL	CPIMAG	530-UPPER	CPREAL	CPIMAG	661-UPPER	CPREAL	CPIMAG
1	1.321	1.312	1.328	1.321	1.312	1.328	1.321	1.312	1.328	1.321	1.312	1.328	1.321	1.312	2.429	1.321	1.312	1.790	1.321	1.312
2	0.866	0.848	-0.867	0.866	0.848	-0.867	0.866	0.848	-0.867	0.866	0.848	-0.867	0.866	0.848	1.429	0.866	0.848	0.847	0.866	0.848
3	0.619	0.610	-0.619	0.619	0.610	-0.619	0.619	0.610	-0.619	0.619	0.610	-0.619	0.619	0.610	0.951	0.619	0.610	0.220	0.619	0.610
4	0.429	0.410	-0.429	0.429	0.410	-0.429	0.429	0.410	-0.429	0.429	0.410	-0.429	0.429	0.410	0.619	0.429	0.410	0.004	0.429	0.410
5	0.279	0.260	-0.279	0.279	0.260	-0.279	0.279	0.260	-0.279	0.279	0.260	-0.279	0.279	0.260	0.429	0.279	0.260	0.004	0.279	0.260
6	0.171	0.152	-0.171	0.171	0.152	-0.171	0.171	0.152	-0.171	0.171	0.152	-0.171	0.171	0.152	0.279	0.171	0.152	0.011	0.171	0.152
7	0.111	0.092	-0.111	0.111	0.092	-0.111	0.111	0.092	-0.111	0.111	0.092	-0.111	0.111	0.092	0.171	0.111	0.092	0.011	0.111	0.092
8	0.067	0.048	-0.067	0.067	0.048	-0.067	0.067	0.048	-0.067	0.067	0.048	-0.067	0.067	0.048	0.111	0.067	0.048	0.011	0.067	0.048
9	0.033	0.024	-0.033	0.033	0.024	-0.033	0.033	0.024	-0.033	0.033	0.024	-0.033	0.033	0.024	0.067	0.033	0.024	0.011	0.033	0.024
10	0.016	0.012	-0.016	0.016	0.012	-0.016	0.016	0.012	-0.016	0.016	0.012	-0.016	0.016	0.012	0.033	0.016	0.012	0.011	0.016	0.012

X	CPREAL	CPIMAG	062-UPPER	CPREAL	CPIMAG	148-UPPER	CPREAL	CPIMAG	261-UPPER	CPREAL	CPIMAG	392-UPPER	CPREAL	CPIMAG	530-UPPER	CPREAL	CPIMAG	661-UPPER	CPREAL	CPIMAG
1	1.121	1.299	1.229	1.121	1.299	1.229	1.121	1.299	1.229	1.121	1.299	1.229	1.121	1.299	2.774	1.121	1.299	1.790	1.121	1.299
2	0.811	0.816	-0.811	0.811	0.816	-0.811	0.811	0.816	-0.811	0.811	0.816	-0.811	0.811	0.816	1.429	0.811	0.816	0.847	0.811	0.816
3	0.622	0.610	-0.622	0.622	0.610	-0.622	0.622	0.610	-0.622	0.622	0.610	-0.622	0.622	0.610	0.951	0.622	0.610	0.220	0.622	0.610
4	0.429	0.410	-0.429	0.429	0.410	-0.429	0.429	0.410	-0.429	0.429	0.410	-0.429	0.429	0.410	0.619	0.429	0.410	0.004	0.429	0.410
5	0.279	0.260	-0.279	0.279	0.260	-0.279	0.279	0.260	-0.279	0.279	0.260	-0.279	0.279	0.260	0.429	0.279	0.260	0.004	0.279	0.260
6	0.171	0.152	-0.171	0.171	0.152	-0.171	0.171	0.152	-0.171	0.171	0.152	-0.171	0.171	0.152	0.279	0.171	0.152	0.011	0.171	0.152
7	0.111	0.092	-0.111	0.111	0.092	-0.111	0.111	0.092	-0.111	0.111	0.092	-0.111	0.111	0.092	0.171	0.111	0.092	0.011	0.111	0.092
8	0.067	0.048	-0.067	0.067	0.048	-0.067	0.067	0.048	-0.067	0.067	0.048	-0.067	0.067	0.048	0.111	0.067	0.048	0.011	0.067	0.048
9	0.033	0.024	-0.033	0.033	0.024	-0.033	0.033	0.024	-0.033	0.033	0.024	-0.033	0.033	0.024	0.067	0.033	0.024	0.011	0.033	0.024
10	0.016	0.012	-0.016	0.016	0.012	-0.016	0.016	0.012	-0.016	0.016	0.012	-0.016	0.016	0.012	0.033	0.016	0.012	0.011	0.016	0.012

ORIGINAL PAGE  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STAYIONS  
 OCVI PERIODICITY TEST  
 FILE 190 ALPHA-MCR = 2.0 POP RUN/PI = 3314  
 RUN 2 ALPHA-RAR = 0.0 G-COMP = 3314  
 POINT 5 ALPHA-SIGMA = 0.0 V-REF = 202.49  
 COMPUTED FREQUENCY = 19.22, K = 1.491  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.0891	169.94	1.594	172.74	1.154	192.30	.681	226.33	.950	299.04	1.154	338.74
2	.4310	151.28	.110	148.77	.053	161.83	.074	249.67	.083	225.04	.070	276.16
3	.1147	118.39	.033	115.15	.022	125.44	.024	160.84	.026	200.75	.036	225.76
4	.0504	103.49	.016	100.82	.008	108.97	.004	122.97	.004	129.27	.004	148.91
5	.0234	89.30	.010	86.65	.006	93.72	.003	105.91	.004	127.07	.004	148.91
6	.0117	75.41	.005	72.82	.003	78.88	.002	91.21	.004	104.64	.004	125.06
7	.0058	61.52	.003	59.03	.002	64.96	.001	77.42	.004	86.97	.004	108.31
8	.0029	47.63	.001	45.14	.001	50.92	.001	63.86	.004	77.42	.004	108.31
9	.0015	33.74	.001	31.25	.001	36.81	.001	49.73	.004	63.86	.004	108.31
10	.0007	19.85	.001	17.36	.001	22.90	.001	35.66	.004	49.73	.004	108.31

N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.274	393.42	1.337	350.36	1.163	354.95	.633	412.48	2.535	355.97	1.721	3.98
2	.767	279.36	.267	182.36	.064	200.78	.035	220.22	.056	222.56	.051	207.63
3	.031	279.67	.016	255.02	.008	259.51	.004	308.02	.009	268.94	.004	235.07
4	.016	223.52	.009	136.52	.005	142.12	.003	170.37	.004	268.94	.004	235.07
5	.007	123.59	.004	125.65	.002	134.01	.001	152.46	.004	193.32	.004	182.67
6	.003	54.84	.002	174.54	.001	156.73	.001	197.22	.004	175.09	.004	182.67
7	.001	310.45	.001	344.31	.001	68.55	.001	352.48	.002	206.01	.002	226.92

N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.213	14.19	1.341	23.56	1.059	26.57	.407	288.17	.633	261.19	1.721	3.98
2	.052	191.59	.025	182.08	.017	203.42	.008	249.81	.056	222.56	.051	207.63
3	.021	211.49	.011	208.08	.006	229.67	.003	249.01	.009	268.94	.004	235.07
4	.011	165.49	.005	111.41	.003	134.01	.002	152.46	.004	193.32	.004	182.67
5	.005	119.98	.003	182.36	.002	200.78	.001	220.22	.004	222.56	.004	207.63
6	.002	29.39	.001	182.36	.001	156.73	.001	197.22	.004	175.09	.004	182.67
7	.001	178.98	.001	182.36	.001	156.73	.001	197.22	.004	175.09	.004	182.67
8	.001	29.39	.001	182.36	.001	156.73	.001	197.22	.004	175.09	.004	182.67
9	.001	178.98	.001	182.36	.001	156.73	.001	197.22	.004	175.09	.004	182.67
10	.001	29.39	.001	182.36	.001	156.73	.001	197.22	.004	175.09	.004	182.67

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 103 ALPHA-PCL = 2.0 FOP RUM.PI = 3314  
 RUN 2 ALPHA-FAR = 2.0 C-COMP = 3314  
 POINT 5 SIGMA = 1.0 V-DEF = 2J2.89  
 5 COMPUTED FREQUENCY = 19.22, K = 1491

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCP <sup>012</sup>	DELCP <sup>12</sup>	DELCP <sup>149</sup>	DELCP <sup>261</sup>	DELCP <sup>392</sup>	DELCP <sup>530</sup>	DELCP <sup>661</sup>
1	19.714	-3.640	9.137	0.017	1.196	0.113	1.693
2	1.122	0.183	0.173	0.013	0.013	0.116	1.105
3	0.013	0.118	0.177	0.037	0.047	0.024	0.055
4	0.025	0.016	0.012	0.036	0.022	0.031	0.002
5	0.021	0.009	0.011	0.016	0.022	0.002	0.014
6	0.026	0.049	0.021	0.017	0.022	0.004	0.015
7	0.023	0.034	0.015	0.013	0.011	0.004	0.009
8	0.023	0.034	0.015	0.013	0.011	0.004	0.009
9	0.023	0.034	0.015	0.013	0.011	0.004	0.009
10	0.023	0.034	0.015	0.013	0.011	0.004	0.009

X	DELCP <sup>174</sup>	DELCP <sup>175</sup>	DELCP <sup>176</sup>	DELCP <sup>177</sup>	DELCP <sup>178</sup>	DELCP <sup>179</sup>	DELCP <sup>180</sup>
1	0.274	0.213	0.497	0.327	0.326	0.326	0.326
2	0.249	0.237	0.34	0.27	0.219	0.219	0.219
3	0.217	0.207	0.306	0.25	0.22	0.22	0.22
4	0.115	0.107	0.11	0.12	0.15	0.15	0.15
5	0.015	0.01	0.016	0.012	0.01	0.01	0.01
6	0.019	0.01	0.016	0.012	0.01	0.01	0.01
7	0.019	0.01	0.016	0.012	0.01	0.01	0.01
8	0.019	0.01	0.016	0.012	0.01	0.01	0.01
9	0.019	0.01	0.016	0.012	0.01	0.01	0.01
10	0.019	0.01	0.016	0.012	0.01	0.01	0.01

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL STATION	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10
1	0.229	0.175	0.605	0.212	0.212	0.212	0.212	0.212	0.212	0.212
2	0.253	0.18	0.133	0.131	0.131	0.131	0.131	0.131	0.131	0.131
3	0.136	0.225	0.112	0.11	0.11	0.11	0.11	0.11	0.11	0.11
4	0.129	0.21	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
5	0.07	0.14	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
6	0.04	0.13	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
7	0.04	0.13	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
8	0.04	0.13	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
9	0.04	0.13	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11
10	0.04	0.13	0.11	0.11	0.11	0.11	0.11	0.11	0.11	0.11

\*\*\* STABILITY PARAMETER

• XI = 0.003  
 • \*\*\*\*\*



ORIGINAL PAGE IS  
OF POOR QUALITY

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA; WALL STATIONS

FILE 192 ALPHA-MCL = 2.0 PDP RUN.PI 2.11  
 RUN 2 ALPHA-RAR = 2.0 Q-COMP = 33314  
 POINT 5 ALPHA SIGMA = 9. V-PEF = 202.49  
 COMPUTED FREQUENCY = 19.22, K = .1491

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	19.055	349.00	9.450	345.20	3.141	7.56	1.853	24.33	1.438	50.20	1.186	102.39
2	15.26	187.97	3.271	259.49	.271	274.49	.113	265.15	.057	106.71	.069	37.20
3	4.76	211.00	.090	298.29	.040	211.92	.059	181.37	.049	333.91	.034	324.81
4	1.19	263.81	.012	333.19	.037	261.23	.024	321.37	.022	350.11	.027	278.00
5	0.67	346.89	.014	329.74	.037	339.14	.019	160.25	.062	300.31	.020	292.97
6	0.92	336.22	.026	209.23	.052	239.71	.013	100.00	.025	258.58	.016	196.95
7	1.35	189.63	.043	275.44	.038	330.33	.025	246.69	.022	218.97	.012	316.85
8	0.76	357.44	.041	219.09	.033	249.90	.026	245.92	.020	222.13	.014	100.87
9	0.55	345.20	.024	357.71	.033	256.60	.026	245.92	.020	222.13	.014	100.87
10	0.57	187.97	.090	298.29	.040	211.92	.059	181.37	.049	333.91	.034	324.81

X	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	891	108.10	755	126.30	560	133.32	2.346	7.87	.009	397.93	.006	349.32
2	067	266.86	004	280.78	004	8.20	.020	269.03	.025	214.96	.014	214.96
3	019	329.17	005	183.67	005	183.67	.013	209.00	.013	209.00	.002	209.00
4	019	285.62	006	301.94	006	308.69	.028	301.33	.016	234.98	.008	203.35
5	006	352.37	005	28.20	006	28.58	.004	68.98	.004	68.98	.007	205.20
6	012	346.69	008	132.88	008	17.15	.019	233.87	.019	233.87	.006	349.32
7	007	86.12	009	145.96	009	145.96	.019	233.87	.019	233.87	.006	349.32
8	007	86.12	009	145.96	009	145.96	.019	233.87	.019	233.87	.006	349.32
9	007	86.12	009	145.96	009	145.96	.019	233.87	.019	233.87	.006	349.32
10	007	86.12	009	145.96	009	145.96	.019	233.87	.019	233.87	.006	349.32

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	377	264.76	643	249.46	5.717	175.92	1.298	197.61	1.820	179.30	1.125	179.30
2	356	198.66	322	328.59	1.623	344.74	.045	156.87	.699	224.71	.021	224.71
3	036	35.78	016	143.03	.023	2.07	.022	295.00	.021	224.71	.021	224.71
4	024	145.78	021	121.80	.086	118.28	.025	35.85	.055	123.68	.062	123.68
5	005	120.36	022	135.25	.031	143.75	.027	107.40	.013	192.14	.013	192.14
6	005	120.36	022	135.25	.031	143.75	.027	107.40	.013	192.14	.013	192.14
7	005	120.36	022	135.25	.031	143.75	.027	107.40	.013	192.14	.013	192.14
8	002	116.84	003	189.11	.007	136.17	.014	206.81	.029	180.68	.029	180.68
9	002	116.84	003	189.11	.007	136.17	.014	206.81	.029	180.68	.029	180.68
10	002	116.84	003	189.11	.007	136.17	.014	206.81	.029	180.68	.029	180.68

\*\*\* STABILITY PARAMETER

XI = .1003  
 \*\*\*\*\*



OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
 CENTER BLADE DATA, WALL STATIONS

FILE 1 ALPHA-MCL = 2.0 PDP RUN PT 3.003  
 RUN 3 ALPHA-BAR = 2.0 Q-COMP = 32.953  
 POINT 1 SIGMA = 45. V-REF = 199.97  
 COMPUTED FREQUENCY = 9.22. K = .0724  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PLR RADIAN \*\*\*

X	N	CP-MAG	PHI	012-UPPER	CP-MAG	PHI	062-UPPER	CP-MAG	PHI	148-UPPER	CP-MAG	PHI	261-UPPER	CP-MAG	PHI	392-UPPER	CP-MAG	PHI	510-UPPER	CP-MAG	PHI	661-UPPER	CP-MAG	PHI
1	1	19.560	206.80	6.552	198.29	3.838	189.27	2.558	174.68	2.166	150.24	2.393	124.95	2.732	109.72									
1	2	3.720	329.05	.392	239.68	.360	183.28	.071	163.99	.354	165.84	.026	171.95	.089	150.72									
1	3	1.160	175.80	.061	201.48	.340	189.71	.063	184.70	.050	184.91	.378	186.53	.078	194.16									
1	4	.446	151.75	.049	129.46	.027	136.13	.076	150.40	.114	136.98	.082	150.31	.055	172.16									
1	5	.346	285.31	.030	410.58	.021	340.34	.039	274.42	.079	317.71	.044	141.97	.004	134.56									
1	6	.102	101.75	.068	110.65	.082	142.28	.027	68.94	.019	68.94	.073	101.95	.066	108.13									
1	7	.341	339.12	.019	30.75	.014	142.94	.027	310.32	.018	255.42	.029	172.76	.011	201.51									
1	8	.201	78.21	.025	8.19	.038	50.75	.061	60.11	.024	20.32	.047	167.09	.035	156.91									
1	9	.092	209.64	.019	165.74	.036	190.00	.013	151.94	.008	124.52	.023	146.09	.015	128.62									

X	N	CP-MAG	PHI	012-LOWER	CP-MAG	PHI	062-LOWER	CP-MAG	PHI	148-LOWER	CP-MAG	PHI	261-LOWER	CP-MAG	PHI
1	1	2.676	103.56	2.479	101.71	2.337	102.00	12.094	37.56	6.840	39.34	4.019	53.66	3.090	61.54
1	2	.125	226.06	.109	29.67	.078	37.54	1.107	341.60	1.061	291.65	.138	341.27	.023	303.97
1	3	.038	191.48	.052	190.33	.058	189.76	.270	200.43	.212	24.42	.338	194.10	.350	189.35
1	4	.075	141.21	.078	139.06	.059	143.94	.076	341.12	.375	316.69	.029	142.30	.037	145.52
1	5	.015	141.29	.017	100.06	.013	57.18	.037	160.35	.120	111.68	.066	165.41	.043	141.71
1	6	.000	112.18	.063	95.53	.064	100.00	.026	93.13	.061	114.95	.099	100.24	.060	108.02
1	7	.027	185.35	.011	265.20	.013	206.33	.091	208.54	.060	153.52	.037	205.69	.026	211.89
1	8	.047	82.88	.034	70.50	.036	81.17	.077	116.08	.045	91.81	.047	95.57	.049	92.15
1	9	.023	98.77	.016	125.38	.020	114.79	.057	171.28	.041	136.71	.032	77.55	.032	81.82

X	N	CP-MAG	PHI	030-LOWER	CP-MAG	PHI	060-LOWER	CP-MAG	PHI	090-LOWER	CP-MAG	PHI	
1	1	2.170	70.15	2.305	76.91	1.728	88.35	1.765	90.64	1.736	105.68	1.479	99.93
1	2	.008	158.71	.025	115.09	.060	124.96	.112	331.05	.021	175.68	.091	298.15
1	3	.321	192.30	.397	193.32	.409	202.99	.368	192.34	.370	181.58	.320	195.15
1	4	.064	160.97	.036	84.92	.060	139.27	.058	152.91	.035	97.50	.030	192.66
1	5	.005	154.76	.075	151.30	.051	177.14	.086	147.63	.020	141.13	.028	144.13
1	6	.005	100.65	.068	103.90	.068	107.84	.061	96.22	.061	104.87	.028	101.77
1	7	.016	249.04	.021	262.54	.026	237.11	.001	310.90	.042	209.87	.029	242.07
1	8	.028	84.80	.033	91.55	.044	100.10	.031	68.37	.022	71.27	.029	78.51
1	9	.025	91.67	.029	80.50	.023	61.07	.021	103.84	.028	106.64	.015	123.83



MODE 1 --- OCNI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 1 ALPHA-MCL = 2.0 PDP RUN.PT 3.05  
 RUN 3 ALPHA-BAR = 2.0 Q-COMP = 32493  
 POINT 1 ALPHA SIGMA = 45. V-PEF = 199.97  
 COMPUTED FREQUENCY = 9.22, K = .0724

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.145		.261		.392		.530		.661	
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	31.522	30.91	13.167	29.04	7.276	32.00	.680	31.316	2.789	20.24	1.914	8.52	1.284	318.98
2	1.705	143.94	1.019	294.75	.182	350.39	.090	334.41	.060	346.74	.019	187.42	.107	181.52
3	1.249	278.07	.527	42.60	.034	320.99	.028	273.75	.055	315.70	.050	256.47	.066	265.64
4	.583	280.42	.427	312.12	.081	356.53	.081	274.79	.034	299.18	.016	217.91	.034	202.35
5	.473	327.99	.407	100.77	.044	178.42	.027	274.79	.057	296.39	.018	260.21	.028	202.52
6	.477	102.15	.095	2.31	.023	117.94	.051	91.24	.045	85.00	.042	270.88	.021	202.94
7	.368	239.54	.009	259.80	.643	226.18	.021	213.24	.045	356.22	.035	254.59	.021	13.68
8	.148	168.69	.049	166.13	.033	228.13	.040	169.92	.028	134.48	.035	316.73	.030	251.91
9	.139	45.29	.032	111.07	.056	41.31	.030	191.99	.016	77.26	.022	33.58	.022	222.13
10														

X =	.774		.860		.910		CM-MAG		PHIN		M		CM-MAG		PHIM	
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	1.034	306.60	.757	272.58	.661	285.57	3.864	22.78	.056	244.06	1	1.308	34.67	.006	155.59	
2	.110	262.48	.091	215.61	.129	261.60	.054	244.06	.020	231.93	2	.019	325.56	.017	325.56	
3	.042	117.61	.048	102.11	.028	262.87	.022	235.71	.022	235.71	3	.007	390.23	.007	390.23	
4	.037	173.06	.012	212.65	.014	320.00	.016	276.37	.009	300.69	4	.010	288.42	.011	174.18	
5	.022	173.52	.021	344.48	.005	257.32	.019	188.68	.019	188.68	5	.004	170.54	.004	170.54	
6	.027	15.91	.010	95.86	.008	12.01	.019	175.84	.023	49.94	6	.005	159.80	.005	159.80	
7	.023	287.57	.008	74.60	.006	273.10					7					
8	.018	238.91	.014	85.38							8					
9											9					
10											10					

\*\*\* STABILITY PARAMETE

WALL NO.	.125		.000		.125		.500		.125		.125		.125	
	GAP FRACTION	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG
1	2.270	100.30	2.059	100.78	8.618	194.08	2.350	161.95	7.131	237.42	1	1.125	1.125	1.125
2	.123	136.97	.734	140.30	1.723	174.60	.094	144.93	1.630	176.18	2	.630	.630	.630
3	.460	191.59	.478	164.30	.463	139.91	.489	193.36	.633	190.60	3	.083	.083	.083
4	.074	101.87	.108	80.15	.052	163.07	.066	149.14	.142	230.45	4	.079	.079	.079
5	.065	139.24	.085	128.41	.175	129.07	.062	140.51	.145	110.37	5	.145	.145	.145
6	.050	38.37	.061	10.36	.030	293.62	.012	100.55	.145	110.37	6	.081	.081	.081
7	.067	93.71	.065	103.36	.104	111.93	.089	237.08	.081	358.91	7	.032	.032	.032
8	.033	190.66	.039	173.97	.048	300.04	.044	69.40	.030	180.01	8	.030	.030	.030
9	.044	56.44	.078	77.97	.049	372.07	.024	172.95			9			
10	.031	56.44	.041	70.58	.044	229.64					10			

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS  
FILE 3 ALPHA-WCL = 2.0 PDP RUN.PT 3.47  
RUN 3 ALPHA-BAP = 2.0 G-COMP = 32370  
POINT 3 SIGMA = .5 V-DEF = 196.58  
COMPUTED FREQUENCY = 15.54, K = .1223  
FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.198-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.651-UPPER CPREAL CPIMAG							
1	1	-19.359	-7.373	-6.767	-1.869	-4.239	-.701	-2.933	-.001	-2.258	-.723	-1.713	1.539	-1.168	2.123
2	2	-2.688	-2.355	-.105	-.060	-.121	-.001	-.110	-.014	-.082	-.003	-.019	-.005	-.051	-.068
3	3	.211	-.138	-.041	-.138	-.013	-.066	-.001	-.054	-.019	-.062	-.015	-.062	-.003	-.094
4	4	.387	-.029	.041	-.009	-.038	-.011	-.036	-.007	.010	-.006	.077	-.035	.002	-.029
5	5	-.370	.500	.052	.014	.038	-.019	.025	-.020	.028	-.004	.035	-.007	.054	-.020
6	6	-.086	-.384	.052	.021	.018	-.003	-.015	-.020	.006	-.004	.018	-.020	.002	-.009
7	7	-.133	-.124	.011	-.033	.054	-.036	-.040	-.031	-.008	-.013	.014	-.010	.004	-.010
8	8	-.063	-.115	-.022	.010	-.030	-.036	-.026	-.004	-.020	-.002	.017	-.012	.020	-.003
9	9	-.133	-.182	.011	.005	-.030	.009	-.026	-.004	-.020	-.002	-.009	-.019	.021	-.003
10	10	-.077	.022	.008	.012	-.016	.038	-.004	.033	.009	.018	.004	.045	-.005	.025

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.198-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.651-LOWER CPREAL CPIMAG	
1	1	-.874	2.107	-.793	1.835	9.563	6.210	5.045	3.333	2.179	1.123	2.123
2	2	.096	-.076	.077	-.022	-.053	-.006	-.200	-.332	.073	-.007	2.123
3	3	.034	-.123	.015	-.034	.041	-.230	.364	-.134	.010	.023	2.123
4	4	.038	-.008	.029	-.002	-.057	-.109	-.101	-.295	-.020	.004	2.123
5	5	.005	-.008	.029	-.002	-.001	-.051	-.103	.007	-.023	.004	2.123
6	6	.007	-.004	.027	-.000	-.098	-.077	-.033	-.079	-.035	.004	2.123
7	7	.004	-.009	.027	-.000	-.005	-.117	.004	-.077	-.012	.004	2.123
8	8	.004	-.009	.027	-.000	-.046	-.042	.062	-.017	.012	.005	2.123
9	9	.014	-.009	-.017	-.026	-.042	-.037	-.033	-.020	.008	.005	2.123
10	10	.016	.029	-.010	.013	-.003	.019	.019	.033	.012	.007	2.123

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	.001	1.838	-.349	1.621	-.428	1.618
2	2	-.022	-.014	-.023	-.039	.055	-.099
3	3	-.029	-.082	-.060	-.130	.025	-.092
4	4	-.010	-.036	-.011	-.048	.027	-.039
5	5	-.018	-.005	-.019	-.010	.018	.015
6	6	-.018	-.015	-.026	-.012	.013	.008
7	7	-.007	-.012	-.014	-.007	.004	.001
8	8	-.007	-.012	-.004	-.007	.005	.001
9	9	-.011	-.003	-.004	-.007	.004	.001
10	10	-.011	-.003	-.003	-.007	.004	.001

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 3 ALPHA-MCL = 2.0 PDF RUN-PT 3.07  
 RUN 3 ALPHA-RAP = 2.0 Q-COMP = 32370  
 POINT 3 SIGMA = 45.0 V-REF = 199.58  
 COMPUTED FREQUENCY = 15.54, K = .1223

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	PHI	.012-UPPER	.062-UPPER	.148-UPPER	.261-UPPER	.392-UPPER	.530-UPPER	.661-UPPER
1	19	.559	202.10	7.020	195.44	4.294	189.40	2.371	2.295	2.423
2	3	.159	19.56	.121	209.56	.067	180.85	.082	.019	.052
3	4	.159	19.56	.144	209.56	.036	180.85	.065	.064	.054
4	5	.623	18.51	.047	12.66	.043	196.98	.012	.049	.051
5	9	.393	157.39	.056	33.64	.025	332.25	.061	.041	.051
6	7	.182	317.02	.034	289.26	.050	349.25	.015	.020	.009
7	9	.258	256.02	.012	137.30	.027	145.24	.051	.018	.010
8	10	.080	164.30	.015	56.62	.033	113.31	.020	.045	.025

X	N	CP-MAG	PHI	.012-LOWER	.062-LOWER	.148-LOWER	.261-LOWER
1	1	.490	33.72	11.490	33.72	6.947	33.45
2	3	.138	280.08	.138	327.81	.876	256.79
3	4	.123	242.27	.123	242.27	.397	339.84
4	5	.098	180.16	.051	271.00	.312	351.73
5	6	.117	317.32	.098	180.16	.086	247.66
6	7	.093	321.52	.117	317.32	.077	246.98
7	8	.056	97.86	.093	321.52	.064	344.59
8	9	.019	97.86	.019	97.86	.038	211.02

X	N	CP-MAG	PHI	.012-UPPER	.062-UPPER	.148-UPPER	.261-UPPER
1	1	.997	123.19	11.490	33.72	6.947	33.45
2	3	.051	283.39	.138	280.08	.876	256.79
3	4	.086	307.31	.123	242.27	.397	339.84
4	5	.032	352.22	.051	271.00	.312	351.73
5	6	.048	282.93	.098	180.16	.086	247.66
6	7	.010	501.89	.117	317.32	.077	246.98
7	8	.029	351.17	.093	321.52	.064	344.59
8	9	.016	59.46	.019	97.86	.038	211.02

X	N	CP-MAG	PHI	.012-LOWER	.062-LOWER	.148-LOWER	.261-LOWER
1	1	.674	104.82	11.490	33.72	6.947	33.45
2	3	.113	294.15	.138	280.08	.876	256.79
3	4	.055	298.91	.123	242.27	.397	339.84
4	5	.046	24.96	.051	271.00	.312	351.73
5	6	.021	175.75	.098	180.16	.086	247.66
6	7	.007	174.03	.117	317.32	.077	246.98
7	8	.020	264.47	.093	321.52	.064	344.59
8	9	.031	18.66	.019	97.86	.038	211.02

X	N	CP-MAG	PHI	.012-UPPER	.062-UPPER	.148-UPPER	.261-UPPER
1	1	.489	118.10	1.571	111.07	1.489	118.10
2	3	.047	242.09	.072	278.71	.100	278.71
3	4	.035	297.92	.045	298.53	.045	298.53
4	5	.010	319.65	.015	328.71	.015	328.71
5	6	.003	218.86	.004	188.71	.004	188.71
6	7	.017	228.74	.015	10.45	.015	10.45
7	8	.036	244.60	.033	252.65	.033	252.65

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OCWI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 3 ALPHA-MCL = 2.0 PDP RUN.PT 3.07  
 RUN 3 ALPHA-BAR = 2.0 O-COMP = 32370  
 POINT 3 SIGMA = 45. V-REF = 199.58  
 COMPUTED FREQUENCY = 15.54, K = .1223

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	30.964	26.02	12.907	23.77	7.265	28.83	4.694	30.21	2.884	22.75	1.849	16.03	.968	328.77
2	34.2	134.26	7.799	263.15	2.15	334.49	1.17	331.65	.043	344.76	.033	20.24	.033	158.05
3	1.5200	262.93	4.05	62	.059	290.11	.038	305.08	.022	241.30	.022	262.19	.077	210.00
4	.884	223.96	3.36	245.02	.042	270.82	.053	319.61	.036	274.70	.036	179.24	.044	170.58
5	.884	303.96	.089	358.21	.015	175.20	.015	283.14	.059	265.61	.021	199.54	.044	170.58
6	.884	91.88	.131	229.90	.053	190.66	.011	162.36	.025	235.51	.060	211.79	.030	205.58
7	.273	117.96	.110	93.82	.087	129.10	.064	132.68	.025	88.59	.030	158.57	.032	158.58
8	.104	44.05	.192	336.12	.059	192.31	.015	307.01	.009	355.78	.040	246.63	.025	168.03
9	.313	224.32	.050	209.40	.019	214.15	.034	199.07	.009	350.78	.016	265.93	.028	138.03
10	.074	357.76	.024	62.43	.053	302.52	.034	299.07	.013	312.64	.044	288.18	.014	303.74

X	.774		.860		.910		CM-MAG		PHIN		CM-MAG		PHIM	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	.662	312.40	.613	291.84	.530	279.27	3.877	22.08	.055	225.98	.012	29.20	.012	162.66
2	.112	248.69	.109	106.25	.028	237.57	.047	285.98	.049	220.32	.026	298.50	.015	258.94
3	.022	327.81	.009	320.91	.009	241.71	.023	288.42	.023	184.41	.014	308.14	.006	156.14
4	.023	379.65	.019	296.64	.022	136.85	.040	131.28	.040	131.28	.012	336.56	.007	336.56
5	.014	354.68	.017	204.22	.007	138.59	.018	321.17	.018	321.17	.009	216.17	.002	216.17
6	.017	163.25	.015	122.26	.014	228.19	.010	147.84	.010	147.84	.002	307.17	.002	307.17
7	.015	335.18	.020	47.84	.012	157.84	.023	516.33	.023	516.33				
8	.015	306.66	.029	14.65	.021	33.84								
9														
10														

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.125		.125		.500		1.125		1.125			
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI		
1	1.973	117.09	1.820	120.78	1.169	191.56	2.708	171.64	7.309	234.51	1.309	234.51		
2	.153	150.76	.624	151.71	1.681	302.29	.178	229.83	1.309	234.51	1.309	234.51		
3	.026	277.54	.026	170.02	.324	228.02	.052	356.07	.047	236.91	.047	236.91		
4	.026	277.54	.026	303.96	.324	228.02	.026	334.07	.173	291.11	.075	338.88		
5	.019	333.01	.063	384.17	.146	73.44	.013	20.67	.104	121.06	.104	121.06		
6	.019	225.17	.014	337.19	.008	56.87	.016	355.80	.027	25.23	.027	25.23		
7	.018	43.56	.010	126.12	.049	307.96	.020	164.87	.025	28.76	.025	28.76		
8	.012	74.56	.021	224.23	.038	158.39	.022	162.81	.038	295.68	.038	295.68		
9	.012	224.09	.015	242.23	.048	266.62	.018	92.83	.038	140.88	.038	140.88		
10	.021	359.02	.010	18.65	.048	266.62								

\*\*\* STABILITY PARAMETERI

ORIGINAL PAGE IS  
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MODE 1 -- OCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 5 ALPHA-MCL = 2.0 PDP RUN.PT 3.09  
 RUN 3 ALPHA-PAR = 2.0 0-COMP = 32614  
 POINT 5 SIGMA = 4.5 V-REF = 200.34  
 COMPUTED FREQUENCY = 19.21, K = .1506

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	1	-17.959	-6.608	-3.830	-2.514	-1.631	-1.225	-1.909
2	2	2.367	-2.398	-1.41	-1.124	-.105	-.042	-.673
3	3	1.409	1.225	-.044	-.062	-.105	-.079	-.126
4	4	1.463	1.457	-.037	-.032	-.085	-.066	-.079
5	5	1.283	1.457	-.004	-.005	-.019	-.000	-.015
6	6	1.071	1.335	-.059	-.083	-.076	-.032	-.006
7	7	1.071	1.335	-.042	-.022	-.027	-.013	-.018
8	8	1.071	1.335	-.011	-.004	-.018	-.017	-.008
9	9	1.071	1.335	-.011	-.004	-.018	-.017	-.008
10	10	1.071	1.335	-.011	-.004	-.018	-.017	-.008

X	N	.778-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	1.02-LOWER CPREAL CPIMAG	1.02-UPPER CPREAL CPIMAG	1.188-LOWER CPREAL CPIMAG	1.188-UPPER CPREAL CPIMAG
1	1	-.457	1.963	-.324	1.730	-.324	1.730	-.324	1.730
2	2	-.053	1.339	-.026	1.131	-.026	1.131	-.026	1.131
3	3	-.058	1.051	-.073	-.032	-.073	-.032	-.073	-.032
4	4	-.001	-.005	-.011	-.018	-.011	-.018	-.011	-.018
5	5	-.029	-.023	-.004	-.042	-.004	-.042	-.004	-.042
6	6	-.003	-.010	-.068	-.026	-.068	-.026	-.068	-.026
7	7	-.003	-.004	-.004	-.003	-.004	-.003	-.004	-.003
8	8	-.002	-.004	-.040	-.006	-.040	-.006	-.040	-.006
9	9	-.004	-.012	-.007	-.022	-.007	-.022	-.007	-.022
10	10	-.007	-.012	-.002	-.012	-.002	-.012	-.002	-.012

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.778-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	-.750	1.772	-.039	1.629	-.039	1.629
2	2	-.029	1.034	-.020	1.144	-.020	1.144
3	3	-.008	-.033	-.005	-.032	-.005	-.032
4	4	-.015	-.021	-.031	-.017	-.031	-.017
5	5	-.015	-.021	-.031	-.017	-.031	-.017
6	6	-.004	-.014	-.020	-.011	-.020	-.011
7	7	-.004	-.014	-.020	-.011	-.020	-.011
8	8	-.004	-.014	-.020	-.011	-.020	-.011
9	9	-.004	-.014	-.020	-.011	-.020	-.011
10	10	-.004	-.014	-.020	-.011	-.020	-.011

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCMI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 5 ALPHA-MCL = 2.0 PUP RUN.PT 3.09  
 RUN 3 ALPHA-PAR = 2.0 Q-COMP = 32614  
 POINT 5 ALPHA-SIGMA = 45. V-REF = 200.34  
 COMPUTED FREQUENCY = 19.21, K = .1506  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	.012-UPPER CP-MAG	.062-UPPER CP-MAG	.148-UPPER CP-MAG	.261-UPPER CP-MAG	.392-UPPER CP-MAG	.530-UPPER CP-MAG	.661-UPPER CP-MAG
1	19.134	6.598	3.895	2.516	1.914	1.813	2.023
2	336.9	143.83	136.69	130.59	129.68	132.52	129.42
3	1.291	.013	.056	.072	.066	.079	.055
4	71.80	243.65	138.06	130.21	129.51	137.9	129.28
5	638	250.86	.048	.009	.050	.073	.071
6	349	184.04	.059	.083	.058	.016	.071
7	.073	.027	.053	.043	.029	.031	.046
8	.274	189.93	.053	.036	.018	.020	.023
9	.153	37.83	.041	.018	.031	.041	.021
10	.068	315.38	.054	.035	.049	.041	.021

X	.774-UPPER CP-MAG	.860-UPPER CP-MAG	.910-UPPER CP-MAG	.012-LOWER CP-MAG	.062-LOWER CP-MAG	.148-LOWER CP-MAG	.261-LOWER CP-MAG
1	2.015	1.889	1.760	11.370	6.016	3.620	2.692
2	103.10	142.70	.134	.215	.358	.060	.054
3	169.15	323.47	.079	.133	.271	.077	.068
4	318.63	289.26	.021	.089	.065	.046	.043
5	278.66	192.48	.009	.142	.101	.042	.036
6	96.66	154.44	.072	.082	.057	.012	.011
7	161.02	91.94	.005	.081	.040	.058	.050
8	165.99	357.97	.041	.048	.057	.017	.017
9	5.59	99.66	.023	.057	.051	.066	.065
10	107.27	114.23	.012	.071	.025	.059	.035

X	.392-LOWER CP-MAG	.530-LOWER CP-MAG	.661-LOWER CP-MAG	.774-LOWER CP-MAG	.860-LOWER CP-MAG	.910-LOWER CP-MAG
1	1.924	2.091	1.630	1.614	1.551	1.357
2	67.07	115.98	.160	.021	.076	.108
3	108.23	272.43	.053	.083	.035	.108
4	326.35	268.44	.006	.059	.017	.026
5	256.86	143.26	.034	.047	.019	.019
6	128.37	350.77	.032	.027	.017	.015
7	122.46	138.36	.014	.031	.017	.021
8	14.14	96.48	.014	.038	.026	.031
9	120.67	110.29	.018	.021	.036	.031
10	140.73	256.99	.018	.021	.036	.031



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 5 ALPHA-MCL = 2.0 PDP RUN-PT 3.09  
RUN 3 ALPHA-BAR = 2.0 Q-COMP = 32614  
POINT 5 STIGMA = 45 V-REF = 200.34  
COMPUTED FREQUENCY = 19.21, M = .1506

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE = 19.21, M = .1506  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.148		.261		.392		.510		.661	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	30.422	23.45	12.531	21.40	7.162	27.43	4.653	29.85	2.851	25.18	1.893	21.20	.765	138.85
2	355	129.41	333.11	326.04	178	326.16	178	326.16	.086	333.15	.029	348.38	.062	149.05
3	486	255.36	419	261.13	.082	271.26	.084	271.26	.069	234.15	.063	248.38	.079	143.74
4	273	309.87	261	271.26	.089	196.07	.084	196.07	.047	236.57	.099	189.34	.037	150.46
5	410	93.48	.088	195.39	.088	151.09	.091	186.05	.020	186.05	.046	214.93	.045	149.31
6	314	37.79	.084	178.41	.093	118.90	.020	162.04	.014	148.61	.058	129.42	.050	150.02
7	137	145.98	.062	89.36	.081	137.40	.033	101.56	.013	148.61	.050	174.47	.015	116.09
8			.079	157.06	.091	187.28	.068	189.48	.059	196.14	.053	209.91	.034	232.01

N	.774		.800		.910		M		M		M		M	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	.550	353.67	348	245.99	418	268.98	3	817	226.63	1	250	160.43		
2	.026	44.65	.017	310.71	.021	170.93	2	.044	264.93	2	.034	278.41		
3	.006	276.58	.013	12.30	.017	130.32	3	.007	105.37	3	.015	228.28		
4	.054	325.67	.052	315.79	.073	335.66	4	.020	347.01	4	.010	351.08		
5	.028	178.03	.015	206.64	.025	174.07	5	.049	118.72	5	.010	124.13		
6	.018	221.46	.017	204.01	.013	201.45	6	.032	1143.26	6	.007	95.67		
7	.031	270.19	.029	226.80	.038	333.84	7	.033	101.99	7	.012	159.34		
8							8			8				
9							9			9				
10							10			10				

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	M1		M2		M4		M6		M10		M125		M250	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.643	104.93	1.469	106.76	8.718	191.01	2.171	171.82	6.801	216.84	1.250	160.43		
2	.269	136.82	.697	143.93	1.498	300.10	.452	167.47	1.031	358.86	.034	278.41		
3	.103	331.37	.136	99.30	.035	177.61	.048	352.07	.140	197.24	.015	228.28		
4	.017	246.00	.022	72.06	.058	100.67	.035	264.52	.020	270.63	.010	124.13		
5	.078	179.28	.091	178.87	.076	198.20	.066	174.06	.180	154.22	.010	124.13		
6	.043	8.25	.030	10.03	.013	221.67	.040	27.80	.086	26.00	.007	95.67		
7	.026	338.59	.051	262.85	.056	127.62	.040	104.72	.082	26.00	.012	159.34		
8	.024	338.59	.051	123.00	.076	309.60	.025	63.90	.030	84.01				
9	.009	268.47	.016	52.31										
10														

\*\*\* STABILITY PARAMETER \*\*\*

WALL NO. GAP FRACTION	M1		M2		M4		M6		M10		M125		M250	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.250	160.43												
2	.034	278.41												
3	.015	228.28												
4	.010	124.13												
5	.007	95.67												
6	.012	159.34												
7														
8														
9														
10														

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 19 ALPHA-MCL = 2.0 PDP RUN-PT 6.05  
RUN 6 ALPHA-RAR = 2.0 O-COMP = 32335  
POINT 1 SIGMA = 90.0 V-REF = 199.40  
COMPUTED FREQUENCY = 9.15, K = .0721

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-20.926	-9.147	-3.841	-2.590	-2.120	-1.917	-1.632
2	2.454	-3.461	.023	.013	.013	.031	.103
3	.633	.859	.282	.304	.270	.339	.321
4	.398	-.224	.133	.107	.043	.006	.042
5	.028	.692	.041	.031	.069	.027	.041
6	-.098	-.155	.029	.110	.091	.042	.076
7	-.216	.309	.001	.012	.027	.004	.012
8	-.133	.104	.008	.029	.090	.019	.007
9	-.012	-.295	.012	.021	.053	.026	.050
10				.012	.026	.015	.017

X	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-1.255	1.785	.718	12.844	7.351	3.878	2.600
2	.114	-.173	.594	-.963	-.026	.039	-.032
3	.051	.029	.326	.269	.688	.305	.364
4	-.021	-.059	.024	.022	.081	.012	.017
5	-.067	.154	.081	.009	.122	.021	.018
6	.010	.028	.001	.153	.096	.118	.108
7	.035	.074	.002	.019	.061	.016	.024
8	.020	-.009	.023	.025	.049	.030	.016
9			.023	.056	.061	.020	.046
10					.011	.002	.006

X	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1.532	1.342	.609	1.003	-.048	-.224
2	.291	-.245	.012	-.066	.200	.104
3	.057	.023	.110	.033	.273	.356
4	-.081	-.050	.008	.006	.050	.066
5	-.013	.146	.123	.058	.068	.059
6	.034	.020	.022	.012	.063	.159
7	.015	-.015	.040	.012	.004	.024
8	.015	-.005	.041	.025	.008	.062
9	.011	-.006	.001	.025	.032	.029
10				.016	.016	.006

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 19 ALPHA-MCL = 2.0 POP RUN-PT 6.05  
 RUN 6 ALPHA-BAR = 2.0 Q-COMP = 32335  
 POINT 1 ALPHA-SIGMA = 90.0 V-REF = 199.40  
 COMPUTED FREQUENCY = 9.15. K = .0721  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	21.810	196.37	6.740	190.38	3.852	134.35	2.603	174.20	2.286	158.02	2.559	141.33
2	1.243	303.33	.205	261.18	.201	263.47	.210	266.40	.231	268.65	.251	276.70
3	1.067	330.62	.118	195.28	.382	42.33	.406	41.61	.453	38.96	.461	42.72
4	.693	237.96	.050	36.13	.134	186.93	.107	185.27	.085	194.71	.084	202.34
5	.184	237.96	.152	249.81	.052	165.88	.073	67.06	.186	240.79	.157	254.41
6	.377	204.22	.024	108.08	.102	104.12	.024	121.01	.064	115.20	.038	127.84
7	.159	196.56	.094	92.29	.081	95.48	.060	117.58	.070	102.96	.039	79.02
8	.230	267.60	.067	209.95	.046	236.51	.043	140.96	.056	199.95	.040	229.26
9	.159	196.56	.028	270.44	.015	322.48	.028	294.30	.033	281.93	.015	343.26
10												

N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.187	125.12	1.819	121.45	1.487	118.85	1.393	22.79	1.947	22.78	4.598	11.91
2	.406	209.19	.436	40.14	.055	203.44	.377	314.83	.758	24.83	.218	278.16
3	.063	270.18	.065	68.35	.177	68.79	.029	107.05	.446	259.50	.411	42.46
4	.168	246.98	.177	246.11	.068	242.75	.021	124.56	.349	37.71	.030	249.32
5	.075	82.38	.030	93.95	.032	92.25	.021	68.88	.059	100.42	.020	234.06
6	.045	218.02	.048	81.27	.061	83.14	.021	301.94	.070	100.42	.040	176.73
7	.022	335.91	.026	343.47	.027	330.18	.031	134.01	.050	172.97	.023	202.96
8												
9												
10												

N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.036	41.20	1.897	45.87	1.174	58.72	1.019	65.08	.592	94.89	.257	107.26
2	.375	201.65	.440	41.11	.320	284.58	.282	283.46	.292	313.19	.453	256.03
3	.055	65.86	.071	167.83	.138	162.81	.055	41.78	.448	52.50	.420	32.03
4	.167	240.94	.203	241.25	.103	229.45	.036	68.43	.083	197.99	.073	204.96
5	.039	87.54	.039	120.63	.039	124.55	.190	252.15	.140	248.88	.061	204.91
6	.037	204.31	.045	209.95	.060	103.99	.036	116.65	.048	94.31	.077	243.80
7	.011	331.47	.015	344.69	.006	264.10	.029	329.96	.017	339.17	.063	181.33
8												
9												
10												

ORIGINAL PAGE IS  
OF POOR QUALITY

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 19 ALPHA-MCL = 2.0 POP RUN.PT 6.05  
 RUN 6 ALPHA-PAR = 2.0 Q-COMP = 32335  
 POINT 1 V-REF = 199.40  
 COMPUTED FREQUENCY = 9.15, K = .9721

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.198		.261		.392		.530		.661	
	N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	33.770	11.543	13.981	4.234	7.719	2.706	5.190	1.607	3.652	.486	3.239	-.179	2.241	-.929
2	-1.491	2.099	.469	-.596	.623	-.075	-.019	.018	-.018	.089	-.040	-.016	-.115	-.091
3	-.364	-.591	.033	.407	.121	-.016	.060	.018	-.069	-.039	-.017	-.023	-.095	-.025
4	-.377	-.204	.065	-.065	-.008	-.022	-.013	.038	.025	-.001	-.070	-.030	-.062	-.058
5	-.058	-.002	.062	-.193	-.019	-.004	.002	.002	-.010	.016	-.001	-.002	-.047	-.033
6	.223	-.290	-.002	-.035	-.015	-.022	.006	.000	.015	-.038	-.055	-.026	-.047	-.033
7	.209	-.379	.005	-.129	-.017	-.041	.044	.002	.019	-.029	-.016	-.006	-.010	-.017
8	.108	-.358	.000	-.037	-.005	-.026	.025	.005	.019	-.004	-.013	-.008	-.028	-.008
9	.058	-.333	.061	.039	-.008	.011	-.006	.026	.003	.027	-.013	-.008	-.009	-.001
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X	.774		.860		.910		.950		.984		.999		.999	
	N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	1.685	-.860	.911	-1.002	.493	-.580	.490	.857	.904	.857	1.271	1.271	1.271	1.271
2	-.048	-.101	.080	-.034	-.198	-.234	-.084	-.084	-.084	-.084	-.011	-.011	-.011	-.011
3	-.021	-.017	-.003	.075	.016	-.062	.000	-.017	.000	-.017	-.004	-.004	-.004	-.004
4	.002	-.006	.006	-.010	.011	-.013	-.017	-.032	.000	-.032	.001	.001	.001	.001
5	.009	-.027	.004	-.010	.003	-.002	-.007	-.015	.004	-.015	-.002	-.002	-.002	-.002
6	-.017	-.003	-.011	-.007	.002	-.003	.001	-.009	.001	-.009	.004	.004	.004	.004
7	.002	-.024	-.011	-.018	.002	-.002	.001	-.025	.003	-.025	.008	.008	.008	.008
8	.001	-.002	.002	-.001	.001	-.001	.001	-.010	.003	-.010	.003	.003	.003	.003
9	.005	-.006	-.002	-.001	-.001	-.005	.005	-.021	.005	-.021	.003	.003	.003	.003
10														

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	.125		.125		.500		.125		.125		.125	
		N	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL
1	1.254	2.021	.869	1.737	-0.983	-2.157	-2.077	1.188	1.188	-6.379	1.188	-6.379	1.188
2	.019	-.128	-.369	.298	.787	-2.145	.379	-.682	-.682	.379	-.682	.379	-.682
3	.373	.371	.479	.569	.686	.561	.360	-.235	-.235	.360	-.235	.360	-.235
4	-.014	-.070	-.066	.054	-.131	-.150	-.036	-.043	-.043	-.036	-.043	-.036	-.043
5	.134	-.203	.165	-.214	.140	-.165	.036	-.111	-.111	.036	-.111	.036	-.111
6	-.134	.203	-.165	.214	-.140	.165	-.036	.111	.111	-.036	.111	-.036	.111
7	.010	-.047	.002	.003	-.011	-.003	.026	.000	.000	.026	.000	.026	.000
8	.042	.020	.002	.002	.011	.008	.066	.007	.007	.066	.007	.066	.007
9	.039	-.002	.037	-.032	-.021	-.008	-.036	-.063	-.063	-.036	-.063	-.036	-.063
10													

\*\*\* STABILITY PARAMETER

\* XI = -.5359 \*  
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ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 19 ALPHA-MCL = 2.0 POP RUN-PT 6.035  
 RUN 6 ALPHA-PAR = 2.0 Q-COMP = 32335  
 POINT 1 SIGMA = 90. V-REF = 199.40  
 COMPUTED FREQUENCY = 9.153 K = .0721

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.149		.261		.392		.530		.661	
	N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH
1	35.698	18.87	14.608	16.95	8.180	19.32	5.439	17.43	3.684	7.58	3.244	356.84	2.426	337.48
2	2.574	125.38	.996	270.33	.097	399.51	.051	112.46	.090	101.27	.046	117.80	.147	141.63
3	.696	238.07	.492	17.66	.030	40.07	.063	117.00	.080	209.67	.024	253.88	.098	198.45
4	.927	151.80	.409	274.65	.122	352.45	.095	342.24	.025	357.78	.026	156.48	.089	139.07
5	.665	269.84	.104	38.48	.023	250.72	.041	250.72	.054	248.28	.002	256.32	.057	144.16
6	.058	177.93	.198	257.39	.019	191.28	.003	513.59	.019	59.48	.001	205.56	.010	189.14
7	.366	337.67	.035	95.14	.027	124.55	.006	345.08	.034	290.99	.017	160.05	.012	210.91
8	.224	20.74	.144	296.69	.026	120.63	.025	168.17	.019	11.49	.045	247.14	.017	143.59
9	.123	28.29	.038	76.93	.014	53.48	.027	102.18	.027	83.58	.000	100.24	.017	163.75
10	.340	78.40	.072	32.41	.014	53.48	.027	102.18	.027	83.58	.000	100.24	.017	163.75

X	.774		.960		.910		N		CN-MAG		PHIN		
	N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	N	CM-MAG	PHIN	N	CM-MAG	PHIN
1	1.092	332.94	1.355	312.27	.761	310.37	.307	329.92	.979	9.91	1.379	232.87	
2	.047	183.09	.096	128.89	.069	295.92	.018	289.60	.082	183.73	.016	232.03	
3	.027	321.64	.019	101.09	.018	299.63	.032	270.79	.018	289.60	.014	251.74	
4	.006	288.63	.021	107.29	.017	308.68	.022	262.93	.032	262.93	.006	2276.88	
5	.017	288.19	.010	291.30	.003	330.01	.014	214.93	.009	276.79	.006	2250.44	
6	.024	275.06	.021	145.73	.003	214.93	.010	279.64	.010	279.64	.009	3326.06	
7	.003	281.46	.005	343.46	.001	307.32	.010	279.64	.010	279.64	.003	3326.06	
8	.008	313.14	.009	171.74	.005	154.03	.021	77.28	.021	77.28	.008	65.94	
9													
10													

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.00C		.500		1.125		PHI		STABILITY PARAMETER		
	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	N	CM-MAG	PHIN	N	CM-MAG	PHIN
1	2.330	58.17	1.942	63.40	9.058	187.34	2.143	165.79	6.489	200.55			
2	.130	278.63	.474	141.07	2.285	290.15	.380	265.40	1.437	128.54			
3	.525	44.85	.743	149.93	.866	39.27	.495	46.70	1.049	57.40			
4	.134	227.08	.094	165.14	.116	193.17	.088	225.89	.049	192.06			
5	.071	80.32	.086	139.29	.199	48.90	.036	233.26	.209	122.11			
6	.256	237.03	.270	232.39	.217	228.81	.022	237.88	.158	271.87			
7	.005	179.46	.012	163.39	.100	113.96	.026	97.48	.092	58.97			
8	.048	205.97	.060	187.63	.094	176.09	.061	99.03	.008	245.72			
9	.046	205.97	.041	203.37	.122	176.09	.071	209.55	.007	36.95			
10	.040	21.34	.041	22.69	.038	235.48	.038	142.13					

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 21 ALPHA-MCL = 2.0 POP RUN,PT 6.07  
RUN 6 ALPHA-RAR = 2.0 O-COMP = .32585  
POINT 3 SIGMA = 90. V-REF = 200.18  
COMPUTED FREQUENCY = 15.57. K = .1222  
FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-21	.021	-5.596	-1.314	-3.939	-2.677	-2.236	.451
2	-2.452	.627	-.691	-.020	.194	.173	.176	1.713
3	.647	-.076	.062	.033	.036	.045	.034	-.020
4	.064	-.076	.033	.033	.084	.067	.018	-.039
5	.139	-.047	.017	-.022	.034	.044	-.003	.107
6	-.136	-.099	-.019	-.042	-.006	-.004	-.021	-.020
7	-.299	-.024	-.018	-.021	-.042	-.015	-.040	-.010
8	.047	-.024	-.009	-.005	-.006	-.008	-.011	-.018
9	-.001	-.198	-.008	.014	-.002	-.009	-.004	-.010
10								-.004

X	N	.77M-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-1.352	1.371	-1.076	1.186	12.083	4.691	2.303	2.452
2	.310	-.215	.315	-.217	1.095	-1.082	-.536	-.210
3	.003	-.034	.014	-.037	-.075	.036	-.078	.049
4	.113	-.034	.124	-.029	.083	.005	-.169	.142
5	.102	-.009	.117	-.014	-.027	-.055	-.022	-.029
6	.026	-.024	.022	-.017	-.014	-.045	-.010	-.005
7	-.004	-.016	-.004	-.019	-.004	-.044	-.006	-.007
8	-.004	-.009	-.010	-.017	-.004	-.020	-.003	-.004
9	-.006	-.006	-.009	-.007	-.017	.008	-.014	-.007
10								-.030

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.77M-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1.419	1.196	1.176	1.199	.279	.783	.323
2	.186	.207	.252	.237	.234	.128	.072
3	.085	.003	-.004	-.004	-.034	-.017	-.019
4	.085	.029	.114	.024	.137	.020	.014
5	.024	-.024	.095	.042	.018	.054	.055
6	-.010	-.017	.007	-.029	-.014	-.005	.006
7	-.009	-.017	-.012	-.038	-.003	-.025	-.022
8	.009	.005	-.005	.046	.001	.066	-.004
9	.009	.005	-.005	.004	-.003	.006	-.004
10					-.020	.003	-.009

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 21 ALPHA-MCL = 2.0 PDP RUN-PT 6.07  
 RUN 6 ALPHA-BAR = 2.0 Q-COMP = 32585  
 POINT 3 ALPHA-SIGMA = 90.0 V-REF = 200.18  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	X =	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	21	.753	194.91	6.872	191.03	3.974	187.59	2.678	181.42	2.281	168.60	2.303	151.56
2	4	.873	106.76	.263	40.71	.264	42.43	.261	41.75	.269	40.79	.290	31.24
3	4	.631	47.81	.036	213.58	.047	57.51	.058	41.89	.064	39.38	.044	50.07
4	5	.619	353.29	.061	229.56	.108	48.47	.120	45.25	.136	39.00	.170	6.07
5	6	.709	184.90	.062	328.08	.065	338.27	.078	313.82	.126	133.82	.110	358.68
6	7	.146	193.74	.020	320.47	.029	202.72	.034	173.58	.026	125.71	.047	302.39
7	8	.242	128.74	.043	260.50	.062	268.63	.043	262.58	.056	149.34	.023	241.65
8	9	.312	198.56	.020	163.27	.028	268.66	.040	199.58	.037	173.35	.023	92.45
9	9	.033	332.87	.010	106.69	.010	28.92	.014	232.58	.014	234.87	.014	6.20
10	9	.338	289.69	.009	124.93	.021	44.00	.009	256.67	.014	234.87	.014	6.20

N	X =	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	.926	134.60	1.682	132.37	1.291	130.84	13.710	20.01	7.436	18.04	4.290	29.30
2	1	.015	282.44	.014	350.75	.004	23.13	1.312	314.93	.554	255.38	.272	20.00
3	4	.103	11.65	.130	16.62	.123	15.42	.075	200.93	.217	343.18	.035	91.66
4	5	.015	311.00	.014	279.64	.114	15.42	.084	357.22	.168	235.79	.049	350.97
5	6	.015	311.00	.014	272.02	.017	209.16	.015	219.16	.029	222.06	.025	268.24
6	7	.017	248.89	.019	256.52	.023	260.91	.044	269.08	.061	269.08	.012	63.12
7	8	.010	311.56	.020	119.50	.013	143.60	.031	219.26	.014	300.46	.005	318.57
8	9	.038	111.56	.011	322.00	.006	297.42	.019	26.26	.030	300.46	.005	318.57

N	X =	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	.856	40.11	1.679	45.55	1.013	61.39	.932	70.39	.905	115.61	.706	117.27
2	1	.209	47.62	.005	228.24	.330	46.64	.038	256.03	.332	133.07	.161	63.57
3	4	.085	2.91	.116	12.01	.082	181.90	.138	351.63	.055	23.29	.043	247.14
4	5	.075	279.01	.109	235.81	.119	36.12	.100	32.52	.124	4.83	.120	33.81
5	6	.056	248.13	.024	252.52	.011	120.89	.049	283.42	.029	257.28	.022	281.24
6	7	.018	109.16	.047	110.64	.024	129.80	.006	277.99	.006	136.30	.006	136.30
7	8	.018	109.16	.019	311.75	.006	139.19	.003	193.60	.008	136.30	.004	136.30
8	9	.015	297.84	.019	311.75	.011	139.19	.025	323.73	.008	301.69	.007	323.73

ORIGINAL PAGE IS  
OF POOR QUALITY

OCMT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 21 ALPHA-MCL = 2.0 PDP RUN PT 6.07  
 RUN 5 ALPHA-BAR = 2.0 O-COMP = 32585  
 POINT 3 SIGMA = 200.18  
 COMPUTED FREQUENCY = 15.57, K = .1222

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.263		.392		.530		.661	
	N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	33.904	10.287	13.816	3.617	7.723	2.650	5.129	1.749	3.655	.745	3.201	.102	2.198	-.616
2	-1.721	-2.720	-.340	-.708	-.026	-.085	.014	-.035	-.017	.027	-.010	-.078	-.070	.017
3	.572	.081	-.246	.215	.045	-.100	-.058	-.110	-.048	-.061	-.056	.006	-.028	.031
4	.019	-.710	.114	.015	.017	.016	-.039	-.032	-.051	-.001	-.014	.005	-.051	.022
5	.150	-.008	-.034	.096	.011	-.028	.039	-.016	-.009	.029	-.027	-.008	-.009	.029
6	.295	.055	-.003	.063	.021	.032	.003	.002	-.017	.012	-.037	.002	-.024	.004
7	-.071	.005	.007	-.016	.024	.008	.010	.031	.042	-.012	.002	.009	.007	.004
8	.018	-.206	.007	-.029	.008	-.034	.032	-.014	-.015	-.030	.016	-.009	.005	.008
9														
10														

\*\*\* STABILITY PARAMETER

WALL NO. GAP FRACTION	.125		.125		.125		.500		.500		.500	
	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	
1	1.064	1.599	0.710	1.356	-0.927	-1.249	-2.169	1.40	1.270	-0.806	1.270	
2	.313	.391	.003	.766	.927	-1.613	.218	.132	1.270	1.270	1.270	
3	.134	.014	.050	.188	.337	.255	.045	.008	.034	.034	.034	
4	.111	-.002	.139	.066	.214	.081	.045	.004	.034	.034	.034	
5	.001	-.002	.029	.043	.151	.101	.054	.015	.038	.038	.038	
6	.001	-.002	.016	.023	.056	.004	.003	-.058	.041	.041	.041	
7	.001	-.002	.004	.007	.034	-.012	.006	.038	.007	.007	.007	
8	.012	.043	.011	.025	.016	-.042	.006	.038	.009	.009	.009	
9	.012	.035	.020	.045	.020	.008	.010	.038	.009	.009	.009	
10												

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.125		.125		.500		.500		.500	
	N	CMREAL	CMIMAG	CMREAL	CMIMAG	CMREAL	CMIMAG	CMREAL	CMIMAG	CMREAL	CMIMAG	
1	1.269	.473	4.872	.965	4.872	.965	4.872	.965	4.872	.965	4.872	
2	-.017	.013	-.093	.017	-.093	.017	-.093	.017	-.093	.017	-.093	
3	-.000	-.012	-.036	-.049	-.036	-.049	-.036	-.049	-.036	-.049	-.036	
4	.013	.004	.005	.001	.005	.001	.005	.001	.005	.001	.005	
5	.005	.004	.008	.020	.008	.020	.008	.020	.008	.020	.008	
6	.005	.003	.009	.002	.009	.002	.009	.002	.009	.002	.009	
7	.007	.003	.043	.023	.043	.023	.043	.023	.043	.023	.043	
8	.002	.003	.052	.009	.052	.009	.052	.009	.052	.009	.052	
9	.002	.001	.011	.004	.011	.004	.011	.004	.011	.004	.011	
10												

\* XI = -.735 \*  
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ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 21 ALPHA-MCL = 2.0 PPR RUN-PT 6.07  
 RUN 6 ALPHA-PAP = 2.0 Q-COMP = .32585  
 POINT 3 SIGMA = 90. V-DEF = 200.18  
 COMPUTED FREQUENCY = 15.57, K = .1222

HIGHER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE, PER RADIAN \*\*\*  
 \*\*\* SLADE PRESSURES, NUPPAL FORCE, AVG MOMENT, PER RADIAN \*\*\*

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	35.430	16.88	14.282	14.67	8.165	18.94	5.419	18.83	3.730	11.51	3.202	1.83	2.283	3.44	3.33	3.33
2	2.07	122.39	.785	348.37	.104	305.51	.038	66.13	.022	122.97	.079	81.03	.099	135.94	.072	135.94
3	1.057	225.24	.338	223.16	.110	294.12	.124	297.74	.056	210.88	.049	230.62	.042	166.22	.042	132.21
4	.577	171.55	.115	7.37	.015	86.62	.040	146.89	.031	181.53	.025	173.79	.030	140.87	.030	140.87
5	.112	355.70	.147	220.74	.023	316.42	.004	35.33	.044	178.25	.037	176.95	.024	171.26	.024	171.26
6	.249	307.12	.063	57.33	.048	88.75	.047	41.11	.012	325.43	.066	188.19	.009	180.06	.009	180.06
7	.301	176.13	.817	286.32	.019	234.53	.017	56.11	.012	354.74	.019	336.52	.007	303.06	.007	303.06
8	.071	85.05	.030	283.50	.035	282.48	.035	337.00	.015	354.74	.017	301.95	.007	6.23	.007	6.23

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	1.734	340.12	1.037	371.81	.627	326.13	.242	329.16	.094	11.26	.964	1.83	1.354	20.96	.023	138.96
2	.038	246.24	.025	271.53	.046	243.30	.008	260.96	.049	192.54	.061	233.42	.018	198.37	.018	198.37
3	.039	294.00	.026	277.09	.037	260.75	.015	284.01	.061	175.02	.015	175.02	.013	221.00	.013	221.00
4	.038	176.43	.024	103.16	.019	284.01	.008	225.48	.020	166.06	.008	166.06	.006	275.06	.006	275.06
5	.024	192.28	.031	199.33	.012	225.48	.033	90.01	.019	45.03	.019	45.03	.007	338.72	.007	338.72
6	.024	171.74	.017	195.46	.005	312.37	.005	322.37	.012	340.74	.012	340.74	.002	137.56	.002	137.56
7	.009	274.68	.005	180.27	.005	322.37										
8	.017	329.68														
9																
10																

WALL MO.	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	1.920	56.36	1.531	62.77	9.153	187.89	2.174	176.30	6.963	200.51	1.369	200.51	1.369	200.51	1.369	200.51
2	.007	51.28	.766	89.74	1.860	194.89	.255	126.75	1.369	133.55	.049	133.55	.049	133.55	.049	133.55
3	.018	82.81	.191	75.07	.230	21.97	.145	1.76	.250	11.03	.250	11.03	.250	11.03	.250	11.03
4	.113	358.94	.100	13.03	.182	33.96	.050	15.28	.141	139.27	.141	139.27	.141	139.27	.141	139.27
5	.034	275.01	.052	304.01	.037	175.97	.029	268.19	.061	270.07	.061	270.07	.061	270.07	.061	270.07
6	.025	264.62	.353	281.89	.037	217.69	.058	178.29	.082	270.72	.082	270.72	.082	270.72	.082	270.72
7	.027	134.23	.013	146.52	.045	110.34	.038	180.29	.042	102.68	.042	102.68	.042	102.68	.042	102.68
8	.037	284.43	.049	293.92	.021	158.55										

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL MO. W1 W2 W3 W4 W5 W6 W7 W8 W9 W10  
 GAP FRACTION N CP-MAG PHI CP-MAG PHI CP-MAG PHI CP-MAG PHI CP-MAG PHI CP-MAG PHI CP-MAG PHI CP-MAG PHI

\*\*\* STABILITY PARAMETER

\* XI = -.8735 \*  
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ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 23 ALPHA-MCL = 2.0 PDP RUN.PT 6.09  
 RUN 6 ALPHA-PAR = 2.0 O-COMP = 32940  
 POINT 5 SIGMA = 90. V-PEF = 201.26  
 COMPUTED FREQUENCY = 19.21. K = .1499

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-21	.187	-4.982	-6.966	-2.843	-2.395	-2.198	-1.848
2	1	.156	-3.294	-1.047	-0.555	-0.070	-0.059	.006
3	2	.615	-1.103	-0.098	-0.068	-0.060	-0.075	.006
4	3	.160	-0.003	-0.050	-0.027	-0.044	.000	.005
5	4	.165	-0.003	-0.008	-0.027	-0.018	.033	.003
6	5	.005	-0.002	-0.002	-0.052	-0.046	-0.001	.005
7	6	.312	-0.119	-0.005	-0.009	-0.019	-0.013	.005
8	7	.319	-0.118	-0.003	-0.023	-0.012	-0.018	.005
9	8	.179	-0.077	-0.013	-0.021	-0.044	-0.050	.009
10	9	.312	-0.134	-0.077	-0.046	-0.053	-0.052	.007

X	N	.778-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-1	.479	1.720	-1.014	1.423	5.049	6.963	2.373
2	1	.024	-0.204	-0.020	-0.197	-1.075	-0.424	-0.042
3	2	.103	-0.069	-0.071	-0.164	-0.034	-0.140	-0.049
4	3	.086	-0.012	-0.001	-0.019	-0.087	-0.195	-0.093
5	4	.020	-0.005	-0.006	-0.013	-0.047	-0.164	-0.033
6	5	.002	-0.003	-0.002	-0.010	-0.051	-0.114	-0.030
7	6	.007	-0.007	-0.002	-0.009	-0.024	-0.091	-0.030
8	7	.043	-0.036	-0.011	-0.026	-0.017	-0.044	-0.022
9	8	.007	-0.007	-0.004	-0.026	-0.002	-0.018	-0.036
10	9	.011	-0.007	-0.005	-0.011	-0.074	-0.057	-0.052

X	N	.392-LOWER CPREAL CPIMAG	.510-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	.599	1.688	.325	1.447	1.333	1.251
2	2	.032	-0.211	-0.012	-0.239	-0.116	-0.156
3	3	.057	-0.039	-0.020	-0.064	-0.065	-0.070
4	4	.009	-0.016	-0.005	-0.026	-0.010	-0.017
5	5	.015	-0.009	-0.003	-0.006	-0.006	-0.012
6	6	.010	-0.015	-0.010	-0.016	-0.014	-0.004
7	7	.003	-0.003	-0.017	-0.005	-0.004	-0.007
8	8	.003	-0.003	-0.017	-0.015	-0.016	-0.016
9	9	.003	-0.003	-0.017	-0.015	-0.016	-0.016
10	10	.011	-0.011	-0.002	-0.017	-0.028	-0.032

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 23 ALPHA-MCL = 2.0 POP RUN.PT 6.09  
RUN 6 ALPHA-BAR = 2.0 Q-COMP = 32950  
POINT 5 SIGMA = 90. V-REF = 201.28  
COMPUTED FREQUENCY = 19.21, K = .1499

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	CP-MAG	PHI	.062-UPPER CP-MAG	PHI	.148-UPPER CP-MAG	PHI	.261-UPPER CP-MAG	PHI	.392-UPPER CP-MAG	PHI	.530-UPPER CP-MAG	PHI	.661-UPPER CP-MAG	PHI
1	21.726	193.26	7.024	187.35	4.141	182.29	2.858	174.29	2.527	161.43	2.649	146.09	2.647	134.27
2	3.937	53.23	.185	104.62	.205	106.00	.199	106.00	.204	110.08	.178	109.22	.191	108.19
3	.768	211.79	.096	211.79	.074	202.66	.074	202.66	.074	216.42	.082	204.29	.148	214.48
4	.651	345.74	.098	358.27	.053	20.36	.063	24.89	.091	10.93	.139	342.60	.105	328.17
5	.807	85.74	.006	120.17	.009	202.44	.020	85.07	.051	64.16	.010	332.26	.016	328.17
6	.107	181.28	.022	194.15	.050	154.99	.062	148.11	.041	26.654	.005	254.37	.047	192.59
7	.347	136.98	.022	233.54	.034	159.82	.014	228.06	.020	69.78	.014	346.35	.010	121.20
8	.447	225.48	.022	305.95	.016	323.17	.023	186.64	.023	149.58	.019	346.35	.010	213.74
9	.182	280.10	.077	276.06	.086	288.08	.076	286.06	.058	310.91	.072	313.87	.046	326.31
10	.319	281.47	.084	336.38	.081	357.77	.047	352.59	.058	233.00	.065	359.39	.011	311.49

N	CP-MAG	PHI	.860-UPPER CP-MAG	PHI	.910-UPPER CP-MAG	PHI	.012-LOWER CP-MAG	PHI	.062-LOWER CP-MAG	PHI	.148-LOWER CP-MAG	PHI	.261-LOWER CP-MAG	PHI
1	2.268	130.69	2.029	127.60	1.747	125.48	13.002	21.30	7.361	21.18	4.522	35.35	3.238	42.86
2	.132	217.57	.124	217.57	.116	213.43	.134	193.72	.229	216.71	.112	80.36	.049	100.50
3	.087	354.36	.101	353.55	.107	349.77	.082	249.61	.227	313.85	.041	177.18	.119	178.27
4	.021	192.81	.040	197.13	.050	196.45	.069	227.93	.124	210.35	.119	190.96	.031	130.69
5	.008	106.73	.022	105.92	.011	198.15	.034	275.07	.069	207.47	.036	299.09	.029	130.69
6	.010	228.72	.026	204.31	.021	203.72	.036	118.06	.044	187.65	.031	208.40	.029	137.91
7	.056	320.87	.041	324.23	.043	322.14	.077	88.73	.047	195.14	.027	208.40	.020	210.52
8	.013	231.54	.013	231.54	.012	236.17	.039	145.76	.057	182.38	.067	193.60	.059	208.21

N	CP-MAG	PHI	.530-LOWER CP-MAG	PHI	.661-LOWER CP-MAG	PHI	.774-LOWER CP-MAG	PHI	.860-LOWER CP-MAG	PHI	.910-LOWER CP-MAG	PHI
1	.124	58.57	2.070	60.59	1.483	77.35	1.335	86.65	1.270	99.83	1.277	113.63
2	.094	201.46	.132	204.31	.187	92.98	.117	94.80	.180	119.88	.260	130.78
3	.069	325.80	.091	345.80	.124	185.03	.124	203.88	.155	206.88	.153	209.96
4	.019	120.10	.061	118.69	.042	146.60	.010	328.37	.103	338.90	.088	353.87
5	.016	288.70	.061	288.70	.006	156.86	.005	106.49	.039	116.12	.017	123.34
6	.034	133.83	.019	133.83	.024	128.21	.003	209.57	.004	255.85	.025	277.50
7	.008	230.86	.048	213.86	.023	220.38	.043	241.75	.036	240.14	.030	238.00
8	.027	223.80	.017	242.15	.017	275.61	.031	309.42	.036	325.59	.042	305.82
9	.027	223.80	.017	242.15	.017	275.61	.031	309.42	.036	325.59	.042	305.82
10	.027	223.80	.017	242.15	.017	275.61	.031	309.42	.036	325.59	.042	305.82

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWT PFRIDIORITY TEST  
CENTEP BLADE DATA, WALL STATIONS

MODE 1 -- ALPHA-MCL = 2.0 POP RUN.PT 6.09  
 FILE 23 ALPHA-PAR = 2.0 O-COMP = 32946  
 RUN 6 ALPHA-PAR = 2.0 V-REF = 201.28  
 POINT 5 SIGMA = 90.  
 COMPUTED FREQUENCY = 19.21, K = 1499

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.148		.261		.392		.530		.661	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	34	.100	13	.937	7	.626	2	.782	5	.217	1	.918
2	1	.337	2	.219	4	.495	3	.585	3	.585	8	.83
3	1	.599	3	.377	5	.617	6	.087	1	.918	1	.037
4	1	.663	4	.306	6	.444	7	.040	2	.217	2	.028
5	1	.698	5	.262	7	.330	8	.110	3	.585	3	.037
6	1	.552	6	.267	8	.113	9	.034	4	.217	4	.037
7	1	.256	7	.113	9	.069	10	.083	5	.217	5	.037
8	1	.296	8	.067	10	.070	11	.017	6	.217	6	.037
9	1	.030	9	.010	11	.034	12	.010	7	.217	7	.037
10	1	.137	10	.134	12	.116	13	.094	8	.217	8	.037
						.031		.072	9	.217	9	.037
									10	.217	10	.037

X	.774		.910		.910		.910		.910		.910	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	1	.557	1	.021	5	.502	1	.945	1	.945	1	.945
2	1	.034	2	.144	6	.190	2	.076	2	.076	2	.076
3	1	.019	3	.087	7	.035	3	.020	3	.020	3	.020
4	1	.001	4	.007	8	.017	4	.047	4	.047	4	.047
5	1	.001	5	.002	9	.015	5	.025	5	.025	5	.025
6	1	.001	6	.002	10	.014	6	.029	6	.029	6	.029
7	1	.001	7	.002	11	.011	7	.039	7	.039	7	.039
8	1	.001	8	.002	12	.009	8	.053	8	.053	8	.053
9	1	.001	9	.002	13	.008	9	.062	9	.062	9	.062
10	1	.001	10	.002	14	.008	10	.073	10	.073	10	.073

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	.125		.125		.125		.125		.125		.125		.125		.125		.125	
		CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	1	.835	2	.566	.439	2	.069	-9	.260	-1	.679	-2	.403	.598	.957	-0.260	1.125	.733	1.029
2	1	.002	.358	.747	.141	.574	.141	.229	.084	.084	.084	.084	.084	.084	.084	.084	.084	.084	.084
3	1	.057	.025	.065	.065	.161	.037	.161	.037	.161	.037	.161	.037	.161	.037	.161	.037	.161	.037
4	1	.013	.002	.002	.002	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029
5	1	.013	.002	.002	.002	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029
6	1	.013	.002	.002	.002	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029
7	1	.013	.002	.002	.002	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029
8	1	.013	.002	.002	.002	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029
9	1	.013	.002	.002	.002	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029
10	1	.013	.002	.002	.002	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029	.029



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 23 ALPHA-MCL = 2.0 PDP RUN-PT 6.09  
RUN 6 ALPHA-BAR = 2.0 C-COMP = 3294C  
POINT 5 SIGMA = 92. V-REF = 201.2E  
COMPUTED FREQUENCY = 19.21, K = .1499

FOURIFR COEFFICIENTS, AMPLITUDE AND PHASE ANGLE = 19.21, K = .1499  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	35.545	11.59	14.280	14.43	8.305	19.57	5.558	20.19	3.749	13.47	3.231	5.78
2	2.591	121.07	62.0	232.71	115	310.90	107	71.68	1.229	17.13	0.040	61.86
3	867	173.70	31.4	231.15	111	67.22	107	57.33	0.229	150.52	0.050	232.34
4	852	263.41	0.33	316.28	107	289.46	107	289.46	0.066	258.94	0.049	156.62
5	869	313.11	132	211.49	107	187.55	112	183.31	0.044	223.14	0.033	136.10
6	285	333.94	132	11.49	107	91.98	112	111.97	0.048	246.31	0.060	140.84
7	454	349.76	122	49.05	107	175.47	112	175.47	0.048	194.95	0.033	140.84
8	258	96.72	117	185.03	113	175.47	1096	102.19	0.050	126.60	0.062	122.01
9	398	110.73	117	155.80	117	124.94	101	192.50	0.053	209.53	0.074	191.41

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	1.604	346.04	1.062	340.77	562	333.28	5.027	12.65	5.027	12.65	1.359	19.83
2	0.94	153.71	1.22	207.05	190	178.94	0.085	154.53	0.085	154.53	0.025	132.57
3	0.60	288.90	0.22	172.85	0.36	109.15	0.32	207.14	0.32	207.14	0.019	200.01
4	0.60	231.37	0.22	124.25	0.20	150.69	0.32	231.91	0.32	231.91	0.017	268.87
5	0.60	316.75	0.22	124.25	0.20	150.69	0.32	316.41	0.32	316.41	0.007	235.89
6	0.33	285.55	0.22	281.23	0.17	278.02	0.13	276.70	0.13	276.70	0.007	46.32
7	0.22	243.54	0.22	230.29	0.17	227.89	0.13	227.89	0.13	227.89	0.015	90.99
8	0.19	157.54	0.22	230.29	0.17	227.89	0.13	227.89	0.13	227.89	0.018	161.13
9	0.19	157.54	0.22	230.29	0.17	227.89	0.13	227.89	0.13	227.89	0.018	161.13

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*  
WALL NO. M125 W5 W6 W10  
GAP FRACTION N CP-MAG FHT CP-MAG PHI CP-MAG PHI CP-MAG PHI CP-MAG PHI  
2.415 65.76 2.114 78.03 2.285 184.20 2.476 466.03 6.649 278.27  
0.358 189.60 1.191 113.93 1.222 289.46 1.185 129.95 1.463 120.07  
0.117 107.65 0.085 104.56 1.243 201.32 0.185 186.71 1.007 192.57  
0.041 13.85 0.030 104.56 1.129 73.24 0.119 375.11 0.187 326.13  
0.020 15.10 0.022 202.13 1.000 154.03 0.062 183.90 0.142 332.73  
0.006 15.10 0.027 274.64 0.888 135.10 0.024 110.77 0.061 90.75  
0.027 15.10 0.039 299.03 0.892 234.62 0.030 319.48 0.036 241.79  
0.023 27.65 0.034 299.03 0.890 324.03 0.027 11.25 0.031 323.66

\*\*\* STABILITY PARAMETER  
\* XI = -.610 \*  
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ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 25 ALPHA-MCL = 2.0 PDR RUN-PT 7.04  
RUN 7 ALPHA-ERR = 5.0 C-COMP = 3282C  
POINT 1 SIGMA = 135. V-REF = 200.93  
COMPUTED FREQUENCY = 9.16, K = .0716

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.145-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-2.4861	-3.659	-4.391	-3.123	-2.808	-2.939	-2.883
2	1.4666	-4.560	-.135	-.023	-.155	-.150	-.110
3	.519	.290	.002	.033	.033	.031	-.045
4	.594	-.698	.045	.048	.074	.113	-.063
5	.457	-.497	.003	.034	.049	.014	.012
6	.057	-.135	.007	.020	.038	.068	.024
7	.177	.367	.011	.029	.049	.039	.026
8	-.135	.093	.000	-.008	.016	.039	.030
9	.022	.228	-.011	-.009	.006	-.011	.000
10	-.024	-.038	.000	-.022	-.009	.013	.009

X	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.145-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-2.388	1.403	-1.421	15.899	8.981	4.565	3.251
2	-.059	.036	-.089	.514	-.347	-.067	-.119
3	.013	-.023	.020	-.085	.491	.064	.039
4	.044	-.084	.090	.048	-.179	-.099	.076
5	.028	-.028	.025	.090	-.185	.018	.012
6	.013	-.022	.038	.040	.089	.013	.009
7	.034	-.002	.024	.057	.116	.043	.009
8	.031	-.034	.037	.072	.081	.049	.040
9	.005	-.017	.024	-.050	.001	.042	.018
10	-.005	.017	.021	-.046	.044	.015	.027

X	.92-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1.894	1.560	.695	.428	-.078	-.278
2	-.003	-.132	-.099	-.105	.113	-.434
3	.016	.067	-.024	.068	-.001	-.047
4	.037	-.044	.024	.098	.087	.034
5	.026	-.036	.000	.074	.036	.033
6	.029	-.034	.013	.025	.019	.024
7	.029	-.044	.007	.041	.032	.013
8	.016	-.011	-.014	.038	.005	.024
9	.016	-.017	-.004	-.005	-.009	.029
10	.016	.017	-.004	-.005	-.009	.023

MODE 1 -- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 25 ALPHA-MCL = 2.0 PDP RUN/PT 7.04  
 RUN POINT 1 ALPHA-RAR = 135.0 Q-COMP = 32820  
 COMPUTED FREQUENCY = 9.16 K = .0716  
 V-PREF = 200.93  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\* BLADE PRESSURES, PER RADIAN \*\*

X	N	CP-MAG	PHI	.062-UPPER	CP-MAG	PHI	.148-UPPER	CP-MAG	PHI	.261-UPPER	CP-MAG	PHI	.392-UPPER	CP-MAG	PHI	.530-UPPER	CP-MAG	PHI	.661-UPPER	CP-MAG	PHI
1	25	128	188.37	7.545	184.30	4.391	180.19	3.141	173.07	2.907	164.97	3.192	157.04	3.258	152.24						
2	4	809	287.22	.135	194.90	.137	190.52	.037	191.07	.164	199.06	.186	216.12	.113	226.41						
3	4	595	29.22	.078	200.35	.023	85.90	.078	64.30	.114	42.81	.162	122.12	.045	181.03						
4	5	917	310.42	.021	322.13	.057	321.53	.040	322.04	.068	310.23	.106	313.85	.029	306.58						
5	6	675	47.41	.057	207.82	.022	99.75	.014	59.81	.048	45.72	.076	54.20	.059	65.37						
6	7	146	293.01	.027	239.88	.014	238.97	.030	375.00	.061	322.02	.030	331.09	.026	335.81						
7	6	404	64.05	.027	315.84	.003	321.79	.008	17.63	.025	36.22	.053	351.93	.047	309.76						
8	9	229	159.99	.004	10.01	.042	276.59	.027	138.63	.007	32.42	.053	316.93	.022	270.18						
9	6	243	188.95	.023	242.29	.020	254.44	.024	250.75	.018	204.13	.032	240.57	.026	270.65						
10	10	243	188.95	.023	289.47	.020	270.42	.024	204.13	.018	239.85	.032	293.26	.026	290.65						

X	N	CP-MAG	PHI	.142-UPPER	CP-MAG	PHI	.281-UPPER	CP-MAG	PHI	.412-UPPER	CP-MAG	PHI	.542-UPPER	CP-MAG	PHI	.671-UPPER	CP-MAG	PHI	.800-UPPER	CP-MAG	PHI
1	2	735	149.15	2.199	145.92	1.796	147.38	16.330	13.20	9.276	12.55	5.215	21.11	3.607	25.65						
2	3	105	141.51	.101	158.40	.034	140.09	1.087	167.13	.517	341.69	.088	43.21	.166	135.76						
3	5	114	312.70	.114	312.90	.121	311.69	.056	304.98	.372	245.27	.120	308.47	.055	45.91						
4	7	049	333.46	.052	330.55	.048	321.15	.073	308.43	.191	272.41	.045	289.49	.052	309.48						
5	9	028	313.71	.030	313.72	.028	309.82	.067	358.43	.119	12.91	.045	252.36	.071	303.33						
6	9	032	254.94	.047	258.10	.048	252.32	.108	311.94	.087	275.43	.067	323.63	.018	326.48						
7	10	017	285.24	.019	287.71	.021	276.89	.051	205.34	.044	269.45	.021	222.69	.051	239.92						

X	N	CP-MAG	PHI	.392-LOWER	CP-MAG	PHI	.530-LOWER	CP-MAG	PHI	.661-LOWER	CP-MAG	PHI	.774-LOWER	CP-MAG	PHI	.860-LOWER	CP-MAG	PHI	.910-LOWER	CP-MAG	PHI
1	2	216	31.48	1.881	38.09	1.180	53.93	1.016	65.07	.391	101.55	.719	112.76	.466	201.37						
2	3	138	124.23	.143	142.37	.133	138.43	.109	195.29	.151	318.26	.047	268.27	.096	280.60						
3	4	091	315.63	.104	320.04	.102	314.39	.068	302.50	.147	306.59	.015	307.61	.015	307.61						
4	5	050	62.13	.050	62.13	.040	121.86	.033	89.01	.053	294.65	.019	307.82	.019	307.82						
5	6	042	339.47	.042	339.47	.017	49.31	.027	290.49	.046	219.42	.019	311.80	.019	311.80						
6	8	032	323.59	.035	322.43	.028	345.77	.024	309.53	.036	312.53	.042	314.16	.042	314.16						
7	9	040	257.06	.043	250.33	.047	246.57	.064	252.69	.035	262.58	.033	245.42	.033	245.42						
8	10	025	225.61	.020	236.02	.014	194.70	.034	260.64	.030	251.23	.023	272.27	.023	272.27						

ORIGINAL PARTS  
OF POOR QUALITY.



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTF ELADE DATA, WALL STATIONS

FILE 25 ALPHA-MCL = 2.0 PDP RUN-PT 7.04  
 RUN 7 ALPHA-BAR = 2.0 C-COMP = 32R2C  
 POINT 1 SIGMA = 135. V-REF = 20G.93  
 COMPUTED FREQUENCY = 9.16, K = .0716  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NGRMAL FORCE, AND MOMENTY PER RADIAN \*\*\*

N	DELCPM	.012	PHI	DELCPM	.062	PHI	DELCPM	.149	PHI	DELCPM	.261	PHI	DELCPM	.392	PHI	DELCPM	.530	PHI	DELCPM	.661	PHI	
1	1.424	10.27	16.703	11.56	9.447	11.95	6.492	10.89	4.715	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91	4.91
2	1.882	107.15	16.703	31.95	0.80	30.78	1.40	88.14	.154	70.41	.154	70.41	.154	70.41	.154	70.41	.154	70.41	.154	70.41	.154	70.41
3	1.662	130.86	16.703	30.78	0.72	30.10	0.24	15.45	.034	117.16	.034	117.16	.034	117.16	.034	117.16	.034	117.16	.034	117.16	.034	117.16
4	1.859	130.86	16.703	30.10	1.05	30.10	0.45	288.88	.048	288.88	.048	288.88	.048	288.88	.048	288.88	.048	288.88	.048	288.88	.048	288.88
5	1.591	102.89	16.703	214.25	0.19	214.25	0.18	115.60	.059	100.95	.059	100.95	.059	100.95	.059	100.95	.059	100.95	.059	100.95	.059	100.95
6	1.377	102.89	16.703	214.25	0.19	214.25	0.18	100.95	.059	100.95	.059	100.95	.059	100.95	.059	100.95	.059	100.95	.059	100.95	.059	100.95
7	1.354	331.69	16.703	271.37	0.48	271.37	0.48	325.41	.024	325.41	.024	325.41	.024	325.41	.024	325.41	.024	325.41	.024	325.41	.024	325.41
8	1.316	250.76	16.703	271.37	0.48	271.37	0.48	247.48	.024	247.48	.024	247.48	.024	247.48	.024	247.48	.024	247.48	.024	247.48	.024	247.48
9	1.194	4.72	16.703	203.99	0.56	203.99	0.56	234.16	.008	234.16	.008	234.16	.008	234.16	.008	234.16	.008	234.16	.008	234.16	.008	234.16
10																						

N	DELCPM	.774	PHI	DELCPM	.860	PHI	DELCPM	.910	PHI	DELCPM	PHIN	CM-MAG	N	CM-MAG	N	CM-MAG	PHIM	PHIM				
1	2.818	350.16	1.938	334.03	1.223	330.11	1.223	330.11	6.316	5.42	5.42	1.497	1	1.497	13.69	13.69	13.69	13.69	13.69	13.69	13.69	
2	0.64	265.03	0.24	67.17	0.58	288.74	0.73	289.80	.032	116.20	116.20	.032	2	.032	100.14	100.14	100.14	100.14	100.14	100.14	100.14	
3	0.57	281.24	0.19	288.28	0.32	179.25	0.47	179.25	.035	183.69	183.69	.035	3	.035	342.16	342.16	342.16	342.16	342.16	342.16	342.16	
4	0.55	252.81	0.11	212.75	0.13	183.56	0.13	183.56	.027	216.27	216.27	.027	4	.027	189.04	189.04	189.04	189.04	189.04	189.04	189.04	
5	0.09	259.25	0.17	212.75	0.16	183.56	0.16	183.56	.027	216.27	216.27	.027	5	.027	273.04	273.04	273.04	273.04	273.04	273.04	273.04	
6	0.17	249.06	0.31	230.72	0.07	101.38	0.07	101.38	.006	143.78	143.78	.006	6	.006	260.33	260.33	260.33	260.33	260.33	260.33	260.33	
7	0.08	249.06	0.04	230.72	0.04	230.72	0.04	230.72	.029	324.22	324.22	.029	7	.029	296.70	296.70	296.70	296.70	296.70	296.70	296.70	
8	0.20	239.74	0.19	217.16	0.03	233.77	0.03	233.77	.039	180.09	180.09	.039	8	.039	314.08	314.08	314.08	314.08	314.08	314.08	314.08	
9													9		.006	353.25	353.25	353.25	353.25	353.25	353.25	353.25
10													10		.002							

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	DELCPM	PHI	CP-MAG	PHI	DELCPM	PHI	CP-MAG	PHI	DELCPM	PHI	CP-MAG	PHI	DELCPM	PHI	CP-MAG	PHI	DELCPM	PHI
1	2	911	37.56	2.308	45.33	10.132	182.79	2.553	160.16	16.16	7.493	320.59	7.493	320.59	7.493	320.59	7.493	320.59	7.493	320.59	7.493	320.59
2	155	131.10	114.96	1.774	114.96	2.279	273.70	2.205	174.55	174.55	1.904	191.750	1.904	191.750	1.904	191.750	1.904	191.750	1.904	191.750	1.904	191.750
3	154	321.83	320.72	1.144	320.72	3.244	295.70	0.76	295.70	295.70	1.042	235.81	1.042	235.81	1.042	235.81	1.042	235.81	1.042	235.81	1.042	235.81
4	153	91.59	90.56	0.59	90.56	2.17	187.36	0.51	152.91	152.91	0.33	88.91	0.33	88.91	0.33	88.91	0.33	88.91	0.33	88.91	0.33	88.91
5	152	144.59	144.59	0.52	144.59	0.17	187.69	0.84	313.28	313.28	0.63	299.33	0.63	299.33	0.63	299.33	0.63	299.33	0.63	299.33	0.63	299.33
6	151	37.25	37.25	0.21	37.25	0.58	60.15	0.12	86.33	86.33	0.08	240.15	0.08	240.15	0.08	240.15	0.08	240.15	0.08	240.15	0.08	240.15
7	150	317.25	317.25	0.41	337.19	0.13	269.36	0.36	44.17	44.17	0.73	211.26	0.73	211.26	0.73	211.26	0.73	211.26	0.73	211.26	0.73	211.26
8	149	250.15	243.15	0.30	266.82	0.35	44.17	0.20	273.62	273.62	0.54	140.64	0.54	140.64	0.54	140.64	0.54	140.64	0.54	140.64	0.54	140.64
9	148	224.17	224.17	0.31	184.89	0.18	174.93	0.28	215.27	215.27	0.32	158.97	0.32	158.97	0.32	158.97	0.32	158.97	0.32	158.97	0.32	158.97
10																						

\*\*\* STABILITY PARAMETER \*\*\*

W10	CP-MAG	PHI	W10	CP-MAG	PHI
1	1.125	1.125	1.125	1.125	1.125
2					
3					
4					
5					
6					
7					
8					
9					
10					

\* XI = -.3544 \*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCMI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 27 ALPHA-MCL = 2.0 PDP RUN.PT 7.07  
 RUN 7 ALPHA-RAR = 2.0 Q-COMP = 32555  
 POINT 3 SIGMA = 135. V-REF = 200.11  
 COMPUTED FREQUENCY = 15.59, K = .1224

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-24	.899	-2.871	-7.667	-3.264	.110	-2.989	.422
2	1	.908	-4.460	.143	.139	.031	.120	-.001
3	.861	.129	-.008	-.099	.012	.009	.028	-.018
4	.592	-.031	-.082	.069	.037	.069	.048	-.041
5	.531	-.134	-.050	.033	.087	-.010	.061	-.014
6	-.265	.368	-.016	-.026	-.017	.021	.009	-.008
7	-.095	.078	-.023	-.005	-.009	-.046	.035	-.035
8	-.061	.201	-.000	-.010	-.047	.031	.045	-.005
9	-.156	-.002	-.043	-.025	-.002	.001	.032	-.006
10				.025	.017	.021	.036	-.005

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-2	.455	1.323	-1.949	15.659	2.975	8.543	1.335
2	.370	-.019	.076	.191	.760	-1.637	-.274	-3.668
3	.035	-.017	-.015	-.034	-.092	-.134	.252	-.356
4	.039	-.017	-.019	.038	-.161	.134	-.263	.036
5	.005	-.017	-.013	.002	-.035	.114	.045	-.086
6	.006	-.012	-.003	.003	.111	-.082	-.029	.012
7	.012	-.000	.006	-.012	-.029	.018	-.008	-.022
8	-.001	-.016	-.044	-.009	-.029	.063	-.037	-.030
9	-.001	-.013	-.017	-.015	-.008	.027	.007	-.018
10				.015	-.034	-.029	-.007	-.018

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	.697	1.061	.507	.214	.782	.441
2	.808	-.020	.088	.193	.181	-.009	-.241
3	.000	-.023	-.033	-.080	-.074	-.017	-.069
4	.019	-.009	-.012	.026	.005	-.031	-.047
5	.019	-.012	-.029	-.004	-.035	.029	.016
6	-.011	-.002	-.015	-.004	-.022	.005	-.002
7	-.023	.022	-.027	-.026	-.050	.033	-.037
8	.009	-.002	-.014	-.003	-.000	-.023	-.007
9	.003	-.002	-.012	-.009	.012	.023	.019
10				.035	-.012	-.023	-.004

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 27 ALPHA-MCL = 2.0 PDP RUN.PT 7.07  
 RUN-POINT 3 ALPHA-BAR = 12.0 Q-COMP = 32555  
 SIGMA = 135. V-REF = 200.11  
 COMPUTED FREQUENCY = 15.59. K = .1224  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	PHI	062-UPPER	CP-MAG	PHI	198-UPPER	CP-MAG	PHI	261-UPPER	CP-MAG	PHI	392-UPPER	CP-MAG	PHI	530-UPPER	CP-MAG	PHI	661-UPPER	CP-MAG	PHI		
1	25	.064	186.58	7.684	183.80	4.552	181.64	3.266	178.07	3.019	171.96	3.200	164.13	3.217	159.25	3.150	155.72	3.060	150.41	3.022	146.09	3.010	141.77
2	4	.677	287.52	.151	18.14	.144	15.89	.143	12.61	.120	159.25	.037	190.06	.037	200.72	.037	211.38	.037	222.04	.037	232.70	.037	243.36
3	4	.567	35.55	.099	184.57	.093	74.21	.079	61.83	.063	40.27	.048	346.04	.048	309.13	.048	272.22	.048	235.31	.048	198.40	.048	161.49
4	4	.642	514.71	.108	49.85	.091	629.39	.049	347.66	.032	318.68	.025	277.23	.025	240.33	.025	202.93	.025	165.53	.025	128.13	.025	90.73
5	4	.648	259.96	.037	225.91	.041	163.43	.027	128.50	.014	311.06	.050	146.94	.049	105.05	.045	87.94	.045	70.74	.045	53.53	.045	36.32
6	4	.136	254.20	.017	249.70	.025	258.01	.014	311.06	.002	158.27	.038	27.74	.039	4.70	.036	352.52	.036	315.01	.036	277.54	.036	242.56
7	4	.454	159.30	.024	158.86	.020	238.84	.002	158.27	.027	50.70	.039	4.70	.039	4.70	.036	352.52	.036	315.01	.036	277.54	.036	242.56
8	4	.210	159.30	.001	240.43	.020	238.84	.002	158.27	.027	50.70	.039	4.70	.039	4.70	.036	352.52	.036	315.01	.036	277.54	.036	242.56
9	4	.217	67.99	.044	350.13	.025	6.90	.027	50.70	.039	4.70	.039	4.70	.039	4.70	.036	352.52	.036	315.01	.036	277.54	.036	242.56
10	4	.166	181.76	.044	350.13	.025	6.90	.027	50.70	.039	4.70	.039	4.70	.039	4.70	.036	352.52	.036	315.01	.036	277.54	.036	242.56

X	N	CP-MAG	PHI	060-UPPER	CP-MAG	PHI	012-LOWER	CP-MAG	PHI	198-LOWER	CP-MAG	PHI	261-LOWER	CP-MAG	PHI
1	2	.690	157.38	2.137	155.81	1.740	153.95	15.939	10.76	8.646	8.88	4.939	19.66	3.350	25.00
2	4	.175	208.03	.197	14.04	.200	159.65	1.988	292.47	.542	239.68	.200	1.59	.047	29.34
3	4	.043	23.37	.037	203.31	.038	208.22	.165	168.22	.136	305.37	.048	272.98	.046	335.30
4	4	.014	299.02	.020	26.07	.018	276.25	.138	175.34	.099	176.58	.037	159.33	.045	352.17
5	4	.013	299.02	.014	282.33	.011	281.01	.111	7.14	.066	114.57	.039	121.33	.045	352.17
6	4	.018	313.21	.006	288.73	.013	289.31	.084	260.63	.088	181.95	.045	242.90	.049	352.17
7	4	.048	160.41	.046	172.50	.043	189.86	.050	128.18	.037	136.30	.045	137.71	.048	352.17
8	4	.016	326.47	.020	106.19	.007	127.54	.020	292.69	.040	133.28	.020	290.86	.048	352.17
9	4	.024	326.47	.020	327.94	.017	331.00	.051	131.50	.040	133.28	.020	290.86	.048	352.17

X	N	CP-MAG	PHI	061-LOWER	CP-MAG	PHI	074-LOWER	CP-MAG	PHI	060-LOWER	CP-MAG	PHI	090-LOWER	CP-MAG	PHI
1	2	.001	32.01	1.725	39.84	1.016	60.03	.811	74.67	.912	133.88	.704	128.82	.014	276.61
2	4	.185	247.51	.036	222.92	.217	27.37	.181	357.26	.278	330.11	.094	128.82	.014	276.61
3	4	.023	69.68	.040	55.92	.090	150.30	.075	187.39	.035	244.65	.020	130.39	.014	276.61
4	4	.015	35.71	.009	295.16	.032	181.53	.033	181.53	.025	290.78	.010	279.61	.014	276.61
5	4	.019	35.71	.029	19.95	.049	32.13	.020	255.13	.007	284.52	.014	276.61	.014	276.61
6	4	.017	132.41	.033	243.15	.037	196.42	.054	247.91	.034	257.19	.043	187.52	.043	187.52
7	4	.004	357.14	.015	135.50	.027	104.05	.013	189.01	.007	102.81	.043	187.52	.043	187.52
8	4	.009	357.14	.027	325.03	.036	345.16	.015	321.01	.023	349.57	.019	349.57	.019	349.57

MODE 1 -- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 27 ALPHA-MCL = 2.0 POP RUN-PT 7.07  
 RUN 3 ALPHA-RAP = 2.0 Q-COMP = 32555  
 POINT 3 SIGMA = 135. V-PEF = 200.11  
 COMPUTED FREQUENCY = 15.59, K = .1224

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.148		.261		.392		.530		.661	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	0.558	5.845	16.210	1.843	9.201	1.791	6.301	1.306	4.645	6.318	4.093	2.310	3.516	-.260
2	-.649	-.623	-.417	-.515	-.061	-.034	-.045	-.072	-.040	-.094	-.039	-.171	-.024	-.111
3	-.553	-.432	-.351	-.348	-.065	-.015	-.031	-.029	-.037	-.002	-.099	-.018	-.032	-.041
4	-.496	-.238	-.046	-.038	-.031	-.134	-.049	-.074	-.048	-.019	-.024	-.045	-.009	-.039
5	-.136	-.147	-.085	-.085	-.068	-.001	-.056	-.032	-.049	-.023	-.023	-.017	-.044	-.052
6	-.279	-.151	-.024	-.071	-.003	-.007	-.041	-.012	-.046	-.025	-.010	-.009	-.042	-.007
7	-.166	-.037	-.019	-.052	-.019	-.027	-.005	-.031	-.031	-.016	-.011	-.001	-.007	-.013
8	-.074	-.044	-.071	-.037	-.018	-.021	-.012	-.030	-.030	-.014	-.014	-.011	-.007	-.001
9	-.132													-.002
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N	.774		.800		.910		.500		.500		.500		.500	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	2.670	-.241	1.524	-.435	1.130	-.220	6.201	.669	6.201	.669	6.201	.669	6.201	.669
2	-.011	-.048	-.050	-.186	-.266	-.038	-.034	-.089	-.034	-.089	-.034	-.089	-.034	-.089
3	-.034	-.049	-.026	-.003	-.013	-.009	-.016	-.006	-.016	-.006	-.016	-.006	-.016	-.006
4	-.018	-.013	-.022	-.049	-.022	-.007	-.038	-.009	-.038	-.009	-.038	-.009	-.038	-.009
5	-.011	-.006	-.031	-.004	-.010	-.007	-.026	-.006	-.026	-.006	-.026	-.006	-.026	-.006
6	-.034	-.006	-.011	-.006	-.001	-.006	-.026	-.009	-.026	-.009	-.026	-.009	-.026	-.009
7	-.003	-.001	-.013	-.005	-.005	-.016	-.016	-.016	-.016	-.016	-.016	-.016	-.016	-.016
8	-.001	-.003	-.002	-.005	-.011	-.005	-.031	-.008	-.031	-.008	-.031	-.008	-.031	-.008
9	-.008	-.006	-.006	-.007	-.004	-.005	-.001	-.002	-.001	-.002	-.001	-.002	-.001	-.002
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\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	.125		.000		.125		.500		.500		.500		.500	
		CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	2.045	1.485	1.449	1.338	-10.231	-2.413	-2.670	.265	5.886	-1.561	-5.122	1.447	1.447	1.447	1.447
2	.259	-.010	.112	.032	-.288	-.102	.107	.033	-1.052	-.052	-.307	-.010	-.010	-.010	-.010
3	.065	-.014	.036	.031	.078	-.015	.042	.023	-.065	-.065	-.187	-.027	-.027	-.027	-.027
4	.017	-.005	.022	-.044	.201	-.015	.013	.001	-.018	-.018	-.051	-.006	-.006	-.006	-.006
5	.013	-.005	-.001	-.040	-.056	-.041	.022	-.018	-.095	-.095	-.059	-.006	-.006	-.006	-.006
6	-.027	-.032	-.001	-.027	-.067	-.065	.022	-.018	-.052	-.052	-.077	-.006	-.006	-.006	-.006
7	.014	-.017	-.000	-.027	.049	-.005	.011	-.017	-.009	-.009	-.068	-.001	-.001	-.001	-.001
8	.014	-.017	-.000	-.027	.049	-.005	.011	-.017	-.009	-.009	-.068	-.001	-.001	-.001	-.001
9	.014	-.017	-.000	-.027	.049	-.005	.011	-.017	-.009	-.009	-.068	-.001	-.001	-.001	-.001
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\*\*\* STABILITY PARAMETER \*\*\*

WALL NO.	GAP FRACTION	W1	W2	W4	W6	W10	W125
1	2.045	1.485	1.449	1.338	-10.231	-2.413	-2.670
2	.259	-.010	.112	.032	-.288	-.102	.107
3	.065	-.014	.036	.031	.078	-.015	.042
4	.017	-.005	.022	-.044	.201	-.015	.013
5	.013	-.005	-.001	-.040	-.056	-.041	.022
6	-.027	-.032	-.001	-.027	-.067	-.065	.022
7	.014	-.017	-.000	-.027	.049	-.005	.011
8	.014	-.017	-.000	-.027	.049	-.005	.011
9	.014	-.017	-.000	-.027	.049	-.005	.011
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MODE I -- CENTER PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 27 ALPHA-MCL = 2.0 POP ROK-PI 7.07  
ALPHA-MAP = 135.0 G-CORP = 32559  
POINT 3 SIGMA = 135.0 Y-SEP = 200.11  
COMPUTED FREQUENCY = 15.59, K = .1224  
FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	.977	8.20	16.314	6.49	9.374	11.02	6.838	11.71	4.729	7.776	2.99	3.525
2	.701	103.89	210.99	330.80	.070	330.80	.085	58.79	.102	67.13	.119	68.54
3	.722	219.93	.894	315.29	.067	347.07	.042	316.79	.037	122.63	.020	127.81
4	.550	140.01	.335	187.94	.132	257.15	.084	241.36	.052	120.75	.051	174.80
5	.200	207.60	.025	319.74	.062	152.45	.046	136.30	.054	154.71	.033	137.96
6	.530	41.34	.085	92.56	.066	152.45	.070	122.63	.012	32.81	.068	147.75
7	.170	235.25	.075	288.71	.034	136.80	.042	195.29	.054	152.93	.014	152.04
8	.232	251.49	.066	123.11	.020	340.04	.042	308.57	.035	207.20	.040	177.34
9	.139	18.22	.037	182.62	.022	222.87	.036	31.10	.030	186.61	.017	127.80
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X	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	.681	354.84	1.526	344.09	1.151	342.99	6.237	6.16	.237	6.16	1.474	11.03
2	.049	182.83	.193	224.90	.016	171.92	.095	110.65	.041	110.65	.024	111.10
3	.059	232.02	.025	353.72	.012	172.56	.070	184.83	.039	184.83	.021	219.15
4	.040	161.93	.006	246.09	.012	144.15	.039	169.21	.032	169.21	.008	206.28
5	.014	216.56	.006	298.89	.007	103.17	.032	215.25	.019	215.25	.009	245.45
6	.021	180.47	.022	245.87	.007	211.28	.019	215.25	.008	215.25	.002	209.32
7	.003	156.97	.006	252.97	.013	211.28	.008	274.26	.009	274.26	.003	269.32
8	.009	155.77	.009	290.26	.006	280.27	.009	194.86	.009	194.86	.002	167.76
9												
10												

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11
1	.527	35.98	1.973	42.72	10.240	122.31	2.683	174.33	7.802	318.97	
2	.053	255.14	.117	16.12	.332	284.80	.152	26.27	1.591	191.24	
3	.074	277.67	.133	157.44	.107	317.10	.048	331.75	.052	183.24	
4	.013	214.25	.053	39.505	.264	355.87	.013	175.67	.054	109.20	
5	.022	275.07	.035	294.65	.037	141.74	.018	105.07	.095	285.78	
6	.022	275.07	.035	294.65	.037	141.74	.018	105.07	.095	285.78	
7	.017	130.70	.035	126.84	.040	176.02	.027	255.74	.017	130.70	
8	.017	130.70	.035	126.84	.040	176.02	.027	255.74	.017	130.70	
9	.017	130.70	.035	126.84	.040	176.02	.027	255.74	.017	130.70	
10									.039	162.82	

\*\*\* STABILITY PARAMETE

M	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.474	11.03	1.125	1.125	1.125	1.125	1.125	1.125	1.125	1.125	1.125	1.125
2	.024	111.10	.024	111.10	.024	111.10	.024	111.10	.024	111.10	.024	111.10
3	.021	219.15	.021	219.15	.021	219.15	.021	219.15	.021	219.15	.021	219.15
4	.008	206.28	.008	206.28	.008	206.28	.008	206.28	.008	206.28	.008	206.28
5	.006	245.45	.006	245.45	.006	245.45	.006	245.45	.006	245.45	.006	245.45
6	.009	269.32	.009	269.32	.009	269.32	.009	269.32	.009	269.32	.009	269.32
7	.003	269.32	.003	269.32	.003	269.32	.003	269.32	.003	269.32	.003	269.32
8	.002	167.76	.002	167.76	.002	167.76	.002	167.76	.002	167.76	.002	167.76
9												
10												

ORIGINAL PAGE IS  
OF POOR QUALITY.

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 29 ALPHA-MCL = 2.0 PDP RUN PT 7.110  
 RUN 7 ALPHA-RAR = 2.0 Q-COMP = 32547  
 POINT 5 SIGMA = 135. V-REF = 200.08  
 COMPUTED FREQUENCY = 19.30, K = .1516

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	2	1.935	-2.555	-7.739	-4.435	-4.558	-1.117	-3.255	.091	-2.990	.383	-3.079	.834
2	3	1.196	-4.556	-0.015	.035	.025	.038	.029	.023	.065	.012	.098	.004
3	4	.643	-.337	-.075	.033	.017	.023	.052	.030	.052	.004	.016	.005
4	5	.554	-.698	-.077	.008	-.008	.034	.051	.002	.033	.014	.037	.021
5	6	.011	.925	-.073	.031	-.021	.039	-.032	.075	.017	.026	.045	.018
6	7	.056	-.302	-.079	.024	-.047	.030	-.034	.011	-.023	.010	.042	.026
7	8	.322	.026	-.004	.066	-.009	.047	.001	.012	.005	.032	.046	.071
8	9	.007	.089	-.052	.016	-.065	.038	.050	.012	.005	.030	.030	.030
9	10	-.312	-.087	.012	.067	.021	.050	.017	.015	.044	.036	.024	.031

X	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	2	2.054	1.021	-1.920	.890	-1.547	.772	16.168	2.909	8.605	1.274	4.800	1.767
2	3	.039	.008	.014	.013	.012	.014	.553	-1.947	.417	.323	.045	.020
3	4	.037	.024	.029	.024	.028	.025	-.113	.076	.152	.101	.066	.030
4	5	.018	-.024	.015	.023	.018	.033	-.151	.019	.190	.151	.022	.037
5	6	.053	.024	-.052	.026	-.016	.002	.047	.019	.014	.177	.003	.004
6	7	.023	-.004	-.002	.005	.017	.002	.001	.060	.041	.000	.018	.079
7	8	.007	.052	-.014	.022	.010	.005	.050	.012	.012	.020	.009	.013
8	9	.000	.005	.014	.024	.008	.014	.046	.054	.028	.029	.056	.057
9	10								.093	.032	.067	.046	.044

X	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	2	1.767	1.186	1.400	1.254	.580	1.015	.255	.906	-.440	.601	-.392	.652
2	3	.025	.009	.035	.056	.031	.068	-.014	.043	.015	.163	-.186	.088
3	4	.008	.006	.006	.016	-.047	.016	-.036	.028	.000	.001	-.018	.052
4	5	.003	.000	-.006	.012	.059	.034	-.007	.014	.000	.027	.014	.013
5	6	.000	.000	-.003	.013	-.010	.033	-.030	.011	.003	.004	.012	.000
6	7	-.016	.056	-.025	.078	-.010	.059	-.041	.044	.049	.008	.039	.020
7	8	-.005	.011	-.015	.043	-.025	.025	-.021	.020	.010	.038	.005	.025
8	9	.012	.016	.025	.043	.004	.043	.001	.041	.002	.050	.005	.022
9	10								.015	.011	.026	.011	.021

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 29 ALPHA-MCL = 2.0 PDP RUN.PI 7.17  
 RUN ALPHA-RM = 2.0 Q-COMP = 32547  
 POINT 5 SIGMA = 135.0 W-REF = 200.06  
 5 COMPUTED FREQUENCY = 19.30, K = .1516

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	CP-MAG	UPPER PHI	062-UPPER CP-MAG	UPPER PHI	148-UPPER CP-MAG	UPPER PHI	261-UPPER CP-MAG	UPPER PHI	392-UPPER CP-MAG	UPPER PHI	530-UPPER CP-MAG	UPPER PHI	661-UPPER CP-MAG	UPPER PHI
1	25.065	185.85	7.751	183.22	4.560	181.48	3.259	178.40	3.014	172.70	3.190	168.84	3.153	159.35
2	9.711	227.65	0.076	112.59	0.046	123.51	0.037	141.62	0.066	190.59	0.135	222.62	0.073	211.52
3	7.26	308.75	0.075	175.43	0.026	142.11	0.037	204.85	0.052	352.17	0.113	47.20	0.034	190.52
4	8.95	45.75	0.077	5.71	0.057	42.11	0.017	30.76	0.033	353.70	0.026	234.06	0.011	180.96
5	7.94	66.32	0.032	180.57	0.086	126.53	0.082	112.80	0.031	56.46	0.026	160.66	0.081	135.53
6	0.27	81.87	0.083	196.94	0.073	204.33	0.036	198.56	0.025	203.61	0.050	212.16	0.023	135.92
7	3.96	81.87	0.083	196.94	0.073	204.33	0.036	198.56	0.025	203.61	0.050	212.16	0.023	135.92
8	3.23	175.33	0.055	266.24	0.048	210.88	0.017	273.35	0.026	358.28	0.043	325.39	0.021	236.6
9	0.80	184.42	0.055	197.24	0.075	210.88	0.052	193.60	0.026	358.28	0.043	325.39	0.021	236.6
10	0.324	195.52	0.068	280.14	0.059	292.32	0.022	318.80	0.056	320.74	0.039	308.89	0.018	88.72

N	CP-MAG	UPPER PHI	060-UPPER CP-MAG	UPPER PHI	910-UPPER CP-MAG	UPPER PHI	012-LOWER CP-MAG	LOWER PHI	062-LOWER CP-MAG	LOWER PHI	148-LOWER CP-MAG	LOWER PHI	261-LOWER CP-MAG	LOWER PHI
1	2.664	157.89	2.104	155.87	1.729	153.47	16.424	10.29	8.692	8.42	5.115	20.20	3.509	26.18
2	0.08	199.71	0.014	176.33	0.014	174.40	0.024	202.36	0.057	225.18	0.091	339.54	0.033	13.85
3	0.04	326.89	0.035	324.36	0.037	317.70	0.169	333.10	0.215	152.72	0.061	289.85	0.021	210.13
4	0.19	193.07	0.016	193.87	0.023	216.03	0.051	337.83	0.151	267.22	0.032	174.61	0.029	256.48
5	0.60	151.50	0.015	153.69	0.065	150.46	0.009	85.25	0.041	127.76	0.016	149.76	0.081	158.48
6	0.23	188.97	0.017	159.69	0.017	179.26	0.110	133.53	0.021	359.86	0.016	124.76	0.011	158.48
7	0.55	269.97	0.051	267.42	0.050	269.84	0.051	49.64	0.040	59.76	0.083	136.31	0.059	158.48
8	0.14	300.29	0.027	121.07	0.013	127.87	0.093	103.27	0.074	113.30	0.083	136.31	0.059	158.48
9	0.05	300.29	0.027	121.07	0.013	127.87	0.093	103.27	0.074	113.30	0.083	136.31	0.059	158.48
10	0.05	300.29	0.027	121.07	0.013	127.87	0.093	103.27	0.074	113.30	0.083	136.31	0.059	158.48

N	CP-MAG	UPPER PHI	530-LOWER CP-MAG	LOWER PHI	661-LOWER CP-MAG	LOWER PHI	774-LOWER CP-MAG	LOWER PHI	860-LOWER CP-MAG	LOWER PHI	91J-LOWER CP-MAG	LOWER PHI
1	2.128	33.88	1.879	41.84	1.169	60.53	941	74.29	745	126.20	761	121.01
2	0.73	84.39	0.066	57.55	0.074	65.53	045	231.65	0.05	125.11	0.205	154.62
3	0.07	84.39	0.019	108.90	0.020	126.17	046	141.87	0.08	354.24	0.021	154.62
4	0.06	84.39	0.025	116.48	0.061	132.25	062	154.48	0.09	270.55	0.019	154.62
5	0.05	49.63	0.014	116.48	0.016	132.25	036	154.48	0.08	270.55	0.012	154.62
6	0.18	179.98	0.013	336.53	0.016	151.48	046	194.26	0.02	172.86	0.030	154.62
7	0.57	101.22	0.028	108.10	0.064	113.37	069	223.26	0.03	159.61	0.043	154.62
8	0.13	273.42	0.030	108.10	0.030	133.33	029	223.26	0.03	159.61	0.022	154.62
9	0.41	153.53	0.034	196.97	0.044	179.08	041	202.60	0.028	247.14	0.024	154.62
10	0.036	153.53	0.034	196.97	0.044	179.08	041	202.60	0.028	247.14	0.024	154.62

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 29 ALPHA-PCL = 2.0 PDP RUN.PI 7.16  
 RUN 7 ALPHA-PAP = 2.0 Q-COMP = 32547  
 POINT 5 SIGMA = 135. V-PEF = 200.98  
 COMPUTED FREQUENCY = 10.30, K = .1516

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.188		.261		.392		.530		.661	
	N	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR
1	1	.103	5.465	16.344	1.709	9.359	1.884	6.396	1.452	4.757	4.479	3.539	4.19	3.102
2	2	.643	2.609	-.402	-.350	-.070	-.059	-.060	-.060	-.081	-.134	-.093	-.149	-.105
3	3	-.756	-.408	-.227	-.376	-.069	-.068	-.023	-.001	-.019	-.019	-.022	-.014	-.069
4	4	-.711	-.775	-.267	-.093	-.063	-.096	-.073	-.043	-.051	-.039	-.027	-.071	-.027
5	5	-.506	-.588	-.018	-.150	-.037	-.001	-.005	-.014	-.030	-.028	-.020	-.034	-.034
6	6	-.010	-.016	-.026	-.046	-.084	-.061	-.026	-.014	-.036	-.038	-.083	-.021	-.021
7	7	-.036	-.332	-.015	-.024	-.084	-.060	-.014	-.090	-.012	-.017	-.013	-.104	-.077
8	8	-.372	-.014	-.015	-.046	-.080	-.092	-.011	-.021	-.010	-.001	-.019	-.064	-.046
9	9	-.039	-.025	-.041	-.045	-.131	-.094	-.083	-.061	-.017	-.035	-.020	-.073	-.061
10	10	-.290	-.179	-.043	-.134	-.066	-.094	-.068	-.059	-.076	-.056	-.032	-.021	-.023

X	.774		.860		.910		.910		.910		.910		.910	
	N	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR
1	1	.719	-.106	1.480	-.259	1.154	-.174	-.170	1.452	6.283	6.283	7.75	1.467	2.68
2	2	-.025	-.023	-.033	-.193	-.014	-.022	-.003	-.060	-.002	-.002	-.020	-.013	-.029
3	3	-.044	-.037	-.028	-.029	-.014	-.012	-.014	-.014	-.014	-.014	-.022	-.017	-.017
4	4	-.009	-.019	-.022	-.024	-.006	-.014	-.014	-.014	-.014	-.014	-.008	-.014	-.014
5	5	-.009	-.047	-.022	-.022	-.021	-.019	-.019	-.019	-.019	-.019	-.003	-.002	-.002
6	6	-.018	-.036	-.012	-.013	-.021	-.019	-.019	-.019	-.019	-.019	-.010	-.001	-.001
7	7	-.021	-.036	-.012	-.023	-.003	-.025	-.025	-.025	-.025	-.025	-.006	-.002	-.002
8	8	-.006	-.017	-.003	-.028	-.015	-.017	-.017	-.017	-.017	-.017	-.011	-.011	-.011
9	9	-.036	-.029	-.003	-.050	-.003	-.031	-.031	-.031	-.031	-.031	-.000	-.000	-.000
10	10	-.036	-.029	-.003	-.050	-.003	-.031	-.031	-.031	-.031	-.031	-.000	-.000	-.000

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.125		.125		.125		.125		.125		.125	
	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL
1	1	2.087	1.565	1.506	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421	1.421
2	2	-.005	-.111	-.120	-.072	-.072	-.072	-.072	-.072	-.072	-.072	-.072	-.072	-.072
3	3	-.019	-.072	-.072	-.072	-.072	-.072	-.072	-.072	-.072	-.072	-.072	-.072	-.072
4	4	-.005	-.021	-.014	-.017	-.017	-.017	-.017	-.017	-.017	-.017	-.017	-.017	-.017
5	5	-.043	-.046	-.022	-.046	-.046	-.046	-.046	-.046	-.046	-.046	-.046	-.046	-.046
6	6	-.010	-.013	-.013	-.013	-.013	-.013	-.013	-.013	-.013	-.013	-.013	-.013	-.013
7	7	-.010	-.038	-.022	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041
8	8	-.010	-.038	-.022	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041
9	9	-.010	-.038	-.022	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041
10	10	-.002	-.005	-.033	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003	-.003

\*\*\* STABILITY PARAMETER

N	.125		.125		.125		.125		.125		.125	
	CMREAL	CMIMAG	CPREAL	CPIMAG	CMREAL	CMIMAG	CPREAL	CPIMAG	CMREAL	CMIMAG	CPREAL	CPIMAG
1	5.997	-5.159	2.65	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041
2	-1.752	-.359	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041
3	-.114	-.227	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041
4	-.114	-.227	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041
5	-.041	-.055	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041
6	-.041	-.055	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041
7	-.041	-.055	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041
8	-.041	-.055	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041
9	-.041	-.055	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041
10	-.041	-.055	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041	-.041

\* XI = -.2678 \*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 29 ALPHA-MCL = 2.0 POP RUN-PT 7.10  
 RUN 7 ALPHA-BAR = 2.0 Q-COMP = 35.47  
 POINT 5 SIGMA = 135.0 V-REF = 200.08  
 COMPUTED FREQUENCY = 19.30, K = .1516

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE = 19.30, K = .1516  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	1	1.455	7.57	16.433	5.97	9.546	11.38	6.559	12.79	4.624	9.58	4.478	5.35
2	2	1.682	103.93	17.533	221.00	0.091	320.15	0.085	15.36	0.121	42.11	0.250	43.71
3	3	1.859	209.39	18.398	304.84	0.069	6.38	0.084	358.84	0.048	158.25	0.023	143.00
4	4	1.052	329.55	15.131	160.74	0.115	236.52	0.084	210.10	0.031	166.92	0.072	100.17
5	5	1.776	237.79	10.531	119.25	0.071	181.66	0.107	184.29	0.044	215.97	0.062	174.47
6	6	1.019	276.15	12.231	11.24	0.138	52.20	0.091	81.14	0.063	79.76	0.105	80.96
7	7	1.372	357.80	0.088	80.04	0.160	20.30	0.103	116.09	0.052	117.71	0.044	84.34
8	8	1.341	351.73	0.093	29.20	0.162	15.16	0.089	138.58	0.092	145.75	0.060	153.08
9	9	1.141	108.03	0.141	108.03	0.115	125.26	0.089	138.58	0.092	145.75	0.060	153.08
10	10	1.141	108.03	0.141	108.03	0.115	125.26	0.089	138.58	0.092	145.75	0.060	153.08

X	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	1	1.503	350.08	1.161	350.07	6.330	7.00	6.330	7.00	1.491	10.35	1.491	10.35
2	2	0.186	292.78	0.222	187.73	0.074	156.73	0.074	156.73	0.037	117.28	0.037	117.28
3	3	0.040	225.70	0.015	138.26	0.027	138.26	0.027	138.26	0.014	133.55	0.014	133.55
4	4	0.027	296.34	0.035	323.92	0.040	305.26	0.040	305.26	0.017	209.10	0.017	209.10
5	5	0.031	314.36	0.028	138.10	0.056	74.67	0.056	74.67	0.003	254.33	0.003	254.33
6	6	0.037	159.58	0.025	135.93	0.040	74.67	0.040	74.67	0.010	314.43	0.010	314.43
7	7	0.026	161.70	0.023	130.36	0.047	138.16	0.047	138.16	0.011	15.43	0.011	15.43
8	8	0.050	273.73	0.031	235.87	0.047	138.16	0.047	138.16	0.016	91.69	0.016	91.69
9	9	0.032	120.81	0.031	235.87	0.047	138.16	0.047	138.16	0.016	91.69	0.016	91.69
10	10	0.050	273.73	0.031	235.87	0.047	138.16	0.047	138.16	0.016	91.69	0.016	91.69

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO	GAP FRACTION	W1	W2	W3	W4	W5	W6	W10	W125	W2670	
1	2	0.609	36.85	2.070	43.34	10.116	181.50	2.628	174.24	7.911	319.29
2	3	0.111	87.64	0.696	107.82	12.142	278.06	0.122	158.67	1.788	191.59
3	4	0.020	343.72	0.140	30.83	0.384	318.20	0.097	33.90	0.164	157.35
4	5	0.022	284.11	0.074	309.73	0.167	120.02	0.055	282.33	0.254	116.79
5	6	0.059	137.01	0.051	115.61	0.175	127.06	0.043	144.02	0.069	107.02
6	7	0.017	50.89	0.015	241.46	0.075	167.06	0.052	157.29	0.125	145.25
7	8	0.040	284.93	0.046	241.46	0.089	248.89	0.041	198.72	0.039	178.98
8	9	0.005	112.14	0.033	354.91	0.101	244.45	0.009	248.72	0.052	136.34
9	10	0.005	112.14	0.033	354.91	0.101	244.45	0.009	248.72	0.052	136.34

\*\*\* STABILITY PARAMETE

\*\*\* XI = -2670

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 39 ALPHA-MCL = 2.0 POP RUM-PT 9.10  
RUM 9 ALPHA-RAR = 2.0 O-COMP = 32110  
POINT 1 SIGMA = 180. V-REF = 198.68  
COMPUTED FREQUENCY = 9.16, N = 8724

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	012-UPPER CPREAL	062-UPPER CPREAL	148-UPPER CPREAL	261-UPPER CPREAL	392-UPPER CPREAL	530-UPPER CPREAL	661-UPPER CPREAL
1	-25.520	1.572	-7.616	0.013	0.013	-3.090	-3.110
2	-338	-4.425	0.013	0.013	0.013	-0.086	-0.068
3	790	0.168	0.083	0.171	0.171	-0.123	-0.079
4	-267	-0.777	-0.083	-0.222	-0.222	-0.052	-0.016
5	538	0.335	-0.083	0.015	0.015	-0.038	-0.010
6	-449	-0.018	0.012	-0.013	-0.013	-0.030	-0.003
7	449	0.018	-0.012	0.013	0.013	-0.022	-0.003
8	-066	-0.251	-0.058	-0.019	-0.019	-0.024	-0.004
9	160	0.133	0.009	0.024	0.024	-0.004	-0.006
10	167	0.173	0.014	0.036	0.036	0.021	0.021

X	774-UPPER CPREAL	860-UPPER CPREAL	910-UPPER CPREAL	012-LOWER CPREAL	062-LOWER CPREAL	148-LOWER CPREAL	261-LOWER CPREAL
1	-2.514	0.454	-1.363	0.548	0.548	-2.890	-2.890
2	-046	0.005	0.001	0.090	0.090	-0.043	-0.043
3	007	0.140	0.114	0.112	0.112	0.181	0.181
4	-019	0.006	-0.006	0.137	0.137	-0.113	-0.113
5	001	0.037	0.008	0.087	0.087	0.001	0.001
6	003	0.035	0.005	0.087	0.087	0.044	0.044
7	-003	-0.004	-0.004	0.026	0.026	0.066	0.066
8	003	0.011	0.014	0.083	0.083	0.001	0.001
9	031	0.011	0.027	0.064	0.064	0.009	0.009
10	031	0.014	0.027	0.064	0.064	0.033	0.033

X	392-LOWER CPREAL	530-LOWER CPREAL	661-LOWER CPREAL	774-LOWER CPREAL	860-LOWER CPREAL	910-LOWER CPREAL
1	2.238	0.693	1.927	0.667	0.208	0.071
2	055	0.009	0.027	0.425	0.188	0.155
3	-009	0.093	0.124	0.077	0.146	0.136
4	022	0.024	0.019	0.039	0.040	0.050
5	004	0.024	-0.031	0.049	0.009	0.021
6	010	0.024	0.038	0.045	0.031	0.021
7	006	0.007	-0.022	0.015	0.007	0.038
8	005	0.024	0.022	0.015	0.007	0.038
9	031	0.024	0.022	0.024	0.007	0.038
10	031	0.024	0.022	0.024	0.007	0.038

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 39 ALPHA-MCL = 2.0 PDP RUN.PT 9.10  
 RUN 9 ALPHA-BAR = 2.0 Q-COMP = 32110  
 POINT 1 ALPHA-SIGMA = 180. V-REF = 198.68  
 COMPUTED FREQUENCY = 9.16, K = .0724

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP	.012-UPPER PHI	.062-UPPER CP-MAG	.148-UPPER CP-MAG	.261-UPPER CP-MAG	.392-UPPER CP-MAG	.530-UPPER CP-MAG	.661-UPPER CP-MAG	.861-UPPER CP-MAG	.910-UPPER CP-MAG					
1	25	568	174.48	7.652	174.41	4.390	172.83	3.103	171.51	2.929	170.61	3.120	172.11	3.143	171.70
2	4	408	265.64	.156	85.20	.092	102.49	.066	118.11	.044	188.05	.146	234.12	.194	223.03
3	4	816	12.00	.175	61.94	.217	37.92	.204	135.08	.215	170.93	.184	46.16	.179	263.70
4	5	567	250.87	.041	134.35	.049	116.22	.030	102.47	.013	286.34	.039	215.98	.021	197.09
5	4	567	391.78	.082	179.94	.086	81.01	.074	172.45	.044	89.49	.043	153.33	.042	103.73
6	7	104	104.41	.055	295.88	.034	242.81	.033	276.95	.070	267.51	.033	273.67	.032	264.70
7	8	260	104.66	.058	174.72	.027	133.05	.025	275.35	.002	180.49	.024	183.95	.004	184.65
8	9	224	323.52	.009	174.86	.037	130.82	.037	113.83	.021	289.19	.008	159.42	.006	351.07
9	10	241	46.05	.017	324.22	.009	329.01	.037	114.16	.033	1.73	.021	347.03	.021	351.07

X	CP	.774-UPPER PHI	.860-UPPER CP-MAG	.910-UPPER CP-MAG	.012-LOWER CP-MAG	.062-LOWER CP-MAG	.184-LOWER CP-MAG	.261-LOWER CP-MAG	.392-LOWER CP-MAG	.530-LOWER CP-MAG	.661-LOWER CP-MAG	.861-LOWER CP-MAG	.910-LOWER CP-MAG	.910-LOWER CP-MAG	
1	2	555	169.77	1.955	158.07	1.461	158.92	17.798	359.76	9.955	358.57	5.676	244.07	6.63	213.04
2	3	173	54.22	.174	53.25	.182	53.96	.312	145.12	1.061	231.19	.152	240.56	.152	213.04
3	4	170	170.10	.016	175.76	.008	142.06	.108	187.57	.548	174.41	.207	219.61	.180	201.02
4	5	170	170.10	.034	185.76	.036	157.76	.101	217.12	.161	169.45	.055	177.96	.023	187.26
5	6	170	170.10	.040	266.10	.037	197.96	.145	217.12	.181	147.84	.049	174.86	.053	189.90
6	7	170	170.10	.009	11.59	.004	261.91	.104	327.50	.029	235.15	.034	143.76	.027	181.01
7	8	170	170.10	.010	101.28	.017	124.22	.088	159.18	.047	190.22	.023	143.76	.019	144.51
8	9	170	170.10	.031	348.06	.027	1.17	.068	119.18	.056	159.89	.027	143.76	.037	144.51

X	CP	.392-LOWER PHI	.530-LOWER CP-MAG	.661-LOWER CP-MAG	.774-LOWER CP-MAG	.860-LOWER CP-MAG	.910-LOWER CP-MAG	.910-LOWER CP-MAG					
1	2	381	16.91	1.275	39.95	1.053	50.68	.730	89.39	.442	198.79	.442	89.39
2	3	143	40.38	.084	70.62	.084	240.32	.199	43.07	.150	46.66	.147	46.66
3	4	143	40.38	.058	55.31	.141	200.37	.010	216.85	.042	133.58	.023	133.58
4	5	143	40.38	.071	119.87	.075	130.86	.010	152.46	.042	167.94	.023	167.94
5	6	143	40.38	.058	235.07	.052	149.76	.042	259.80	.017	157.13	.012	157.13
6	7	143	40.38	.049	1.24	.015	116.89	.015	66.20	.012	21.86	.012	21.86
7	8	143	40.38	.025	143.48	.031	140.93	.031	166.89	.034	121.19	.034	121.19
8	9	143	40.38	.048	352.20	.026	125.75	.026	166.89	.034	121.19	.034	121.19

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 39 ALPHA-MCL = 2.0 PDP RUN.PT 9.10  
RUN 9 ALPHA-RZR = 2.0 Q-COMP = .32110  
POINT 1 SIGMA = 180. V-REF = 198.68  
COMPUTED FREQUENCY = 9.16. K = .0724

FOURIER COEFFICIENTS, REAL & IMAGINARY FORCE, AND MOMENT, PER RADIAN \*\*\*  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	3.317	-1.641	17.568	-9.993	9.993	.112	6.912	.292	5.168	.215	5.043	.461	.087	.365
2	-.080	1.713	-.680	-.980	-.047	-.227	-.009	-.085	.908	-.013	.001	.014	-.020	.073
3	-1.043	-.015	3.06	-.541	-.018	-.023	-.008	-.032	-.072	-.024	.001	-.014	-.020	.009
4	-.278	.008	-.379	-.005	-.038	-.034	-.032	-.020	-.008	.048	.047	.056	-.027	.068
5	-.438	-.091	-.079	-.184	-.009	-.034	-.016	-.021	-.011	.048	.010	.020	-.018	.006
6	-.111	-.325	-.165	-.035	-.058	-.080	-.079	-.073	-.030	-.024	.010	.007	-.044	.006
7	-.495	-.023	-.820	-.019	-.015	-.054	-.029	-.041	-.027	-.060	-.012	.011	-.042	.013
8	-.263	-.307	-.070	-.021	-.052	-.018	-.024	-.029	-.008	-.031	-.036	.007	-.046	.001
9	-.103	-.151	-.055	-.059	-.020	-.015	-.025	-.007	-.031	-.039	-.016	.013	-.027	.016
10			-.014	-.059	.020	.005	-.001	.003	-.002	.005	.016	.010	-.027	-.007

X	.860		.910		.960		.910		.860		.810		.760	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	3.181	-.361	2.105	1.371	1.371	.205	6.863	.100	6.863	.100	1.535	1.535	1.535	1.535
2	-.004	-.035	-.230	-.368	-.368	-.144	-.054	-.053	-.054	-.053	-.015	-.015	-.015	-.015
3	-.031	-.021	-.042	-.041	-.041	-.035	-.024	-.023	-.024	-.023	-.006	-.006	-.006	-.006
4	-.030	-.053	-.006	-.041	-.041	-.032	-.012	-.022	-.012	-.022	-.001	-.001	-.001	-.001
5	-.046	-.015	-.033	-.006	-.006	-.009	-.032	-.022	-.032	-.022	-.010	-.010	-.010	-.010
6	-.018	-.008	-.005	-.009	-.009	-.003	-.030	-.027	-.030	-.027	-.009	-.009	-.009	-.009
7	-.027	-.008	-.022	-.014	-.014	-.004	-.027	-.010	-.027	-.010	-.005	-.005	-.005	-.005
8	-.007	-.008	-.004	-.004	-.004	-.002	-.030	-.013	-.030	-.013	-.005	-.005	-.005	-.005
9	-.007	-.015	-.001	-.018	-.018	-.002	-.004	-.005	-.004	-.005	-.001	-.001	-.001	-.001
10														

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.000		.125		.500		.125		.500		.125		.500	
	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	3.075	.786	2.456	.830	9.813	1.066	2.310	.649	7.627	.594	1.125	1.125	1.125	1.125	1.125	1.125
2	-.107	-.013	-.067	-.644	-.177	-.2106	-.089	.054	-.110	-.180	1.125	1.125	1.125	1.125	1.125	1.125
3	-.145	-.012	-.306	-.150	.540	.180	.241	.165	-.005	-.005	1.125	1.125	1.125	1.125	1.125	1.125
4	-.056	-.030	-.096	-.026	.109	.056	.039	-.032	-.005	-.005	1.125	1.125	1.125	1.125	1.125	1.125
5	-.024	-.014	-.150	-.021	.044	.054	.017	.018	-.005	-.005	1.125	1.125	1.125	1.125	1.125	1.125
6	-.024	-.017	-.006	-.006	.050	.054	.016	.001	-.005	-.005	1.125	1.125	1.125	1.125	1.125	1.125
7	-.024	-.004	-.006	-.006	.050	.054	.016	.001	-.005	-.005	1.125	1.125	1.125	1.125	1.125	1.125
8	-.029	-.018	-.030	-.034	.030	.038	.024	-.001	-.005	-.005	1.125	1.125	1.125	1.125	1.125	1.125
9	-.037	-.015	-.023	-.041	.005	.026	.021	.017	-.046	-.042	1.125	1.125	1.125	1.125	1.125	1.125
10											1.125	1.125	1.125	1.125	1.125	1.125

\*\*\* STABILITY PARAMETER

\* XI = .0590 \*



OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 39 ALPHA-MCL = 2.0 PDP RUN-PT 9.10  
 RUN 9 ALPHA-RAR = 2.0 G-COMP = 32110  
 POINT 1 SIGMA = 180. V-REF = 198.68  
 COMPUTED FREQUENCY = 9.16, K = .0724  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	43.348	357.83	17.596	356.76	9.994	258.35	.64	6.918	261.84	5.172	337.38	5.044	57.89	4.103	5.10	
2	1.715	92.15	1.193	235.23	.231	286.25	.085	.033	253.29	.075	198.41	.014	272.79	.022	45.67	
3	1.043	178.15	.622	179.06	.101	247.29	.026	.044	223.01	.049	114.53	.030	53.74	.038	154.02	
4	.478	156.46	.200	167.96	.099	233.95	.050	.101	52.32	.339	102.70	.016	50.27	.070	105.32	
5	.153	223.49	.028	137.62	.056	105.72	.050	.030	125.34	.065	114.00	.012	32.56	.043	98.66	
6	.343	1296.57	.055	168.64	.016	291.01	.030	.026	164.31	.050	132.84	.037	110.21	.046	145.58	
7	.183	235.74	.061	176.35	.020	14.87	.003	.003	110.19	.006	111.16	.019	31.04	.028	145.80	

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	3.202	6.47	2.143	349.14	1.386	8.48	1.884	224.25	6.884	224.82	1.125	1.125	1.125	1.125	1.125	
2	.076	273.79	.287	321.59	.537	201.20	.038	249.07	.038	249.07	1.125	1.125	1.125	1.125	1.125	
3	.028	148.79	.057	255.98	.061	172.45	.037	129.07	.037	129.07	1.125	1.125	1.125	1.125	1.125	
4	.062	213.50	.007	25.98	.033	132.45	.026	218.09	.026	218.09	1.125	1.125	1.125	1.125	1.125	
5	.047	193.65	.034	189.49	.011	173.91	.048	118.09	.048	118.09	1.125	1.125	1.125	1.125	1.125	
6	.013	139.16	.014	236.57	.008	135.13	.048	128.45	.048	128.45	1.125	1.125	1.125	1.125	1.125	
7	.023	191.26	.014	297.28	.008	136.24	.048	139.90	.048	139.90	1.125	1.125	1.125	1.125	1.125	
8	.028	162.46	.024	188.28	.002	271.33	.033	155.79	.033	155.79	1.125	1.125	1.125	1.125	1.125	
9	.017	114.09	.018	85.72	.006	113.57	.033	148.13	.033	148.13	1.125	1.125	1.125	1.125	1.125	
10											1.125	1.125	1.125	1.125	1.125	

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	3.174	14.34	2.593	18.67	9.870	173.80	2.457	164.68	7.650	164.68	1.125	1.125	1.125	1.125	1.125	
2	.108	167.08	.648	95.96	2.114	265.18	.104	148.91	1.594	148.91	1.125	1.125	1.125	1.125	1.125	
3	.205	44.89	.340	26.08	.569	18.22	.292	34.536	1.212	34.536	1.125	1.125	1.125	1.125	1.125	
4	.092	187.46	.099	195.28	.122	27.27	.079	201.88	.218	201.88	1.125	1.125	1.125	1.125	1.125	
5	.043	151.23	.032	137.12	.120	74.17	.025	133.92	.074	133.92	1.125	1.125	1.125	1.125	1.125	
6	.088	145.23	.034	137.12	.092	307.53	.016	178.17	.081	178.17	1.125	1.125	1.125	1.125	1.125	
7	.029	214.86	.008	221.42	.069	146.60	.005	175.00	.081	175.00	1.125	1.125	1.125	1.125	1.125	
8	.006	218.81	.062	142.40	.030	354.46	.005	154.46	.091	154.46	1.125	1.125	1.125	1.125	1.125	
9	.034	148.81	.047	61.18	.026	78.70	.027	38.42	.067	38.42	1.125	1.125	1.125	1.125	1.125	
10	.040	21.78									1.125	1.125	1.125	1.125	1.125	

\*\*\* STABILITY PARAMETE

ORIGINAL DATA  
OF POOR QUALITY

MODE 1 -- OCMI PERIODICITY TEST  
 CENTER BLADE DATA, WALL STATIONS  
 FILE 41 ALPHA-WCL = 2.0 POP UH-PT 9.20  
 RUN 9 ALPHA-BAR = 2.0 C-IMP = 32430  
 POINT 3 SIGMA = 180. C-IMP = 199.68  
 COMPUTED FREQUENCY = 15.47, K = .1217  
 FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	M	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG					
1	-25	.695	2.08M	-7.755	.393	.008	-3.253	-.176	-.303	-.351	-.408	-.324	-.374
2	-631	-.111	.054	-.077	.001	-.037	.071	.037	.110	.019	-.213	.023	-.374
3	-695	-.114	.054	-.077	.001	-.037	.081	.037	.110	.019	-.213	.023	-.374
4	-720	-.072	.028	-.045	.003	-.037	.035	.035	.066	.022	-.006	.004	-.016
5	-720	-.072	.028	-.045	.003	-.037	.035	.035	.066	.022	-.006	.004	-.016
6	-720	-.072	.028	-.045	.003	-.037	.035	.035	.066	.022	-.006	.004	-.016
7	-720	-.072	.028	-.045	.003	-.037	.035	.035	.066	.022	-.006	.004	-.016
8	-720	-.072	.028	-.045	.003	-.037	.035	.035	.066	.022	-.006	.004	-.016
9	-720	-.072	.028	-.045	.003	-.037	.035	.035	.066	.022	-.006	.004	-.016
10	-720	-.072	.028	-.045	.003	-.037	.035	.035	.066	.022	-.006	.004	-.016

X	M	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG					
1	-2	.731	-.395	-.006	-.006	-.006	-.006	-.006	-.006	-.006	-.006	-.006	-.006
2	-631	-.004	.003	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001
3	-631	-.004	.003	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001
4	-631	-.004	.003	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001
5	-631	-.004	.003	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001
6	-631	-.004	.003	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001
7	-631	-.004	.003	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001
8	-631	-.004	.003	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001
9	-631	-.004	.003	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001
10	-631	-.004	.003	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001

X	M	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG						
1	2	.122	-.059	-.032	-.015	-.008	-.004	-.002	-.001	-.001	-.001	-.001	-.001
2	631	.005	-.003	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001
3	631	.005	-.003	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001
4	631	.005	-.003	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001
5	631	.005	-.003	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001
6	631	.005	-.003	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001
7	631	.005	-.003	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001
8	631	.005	-.003	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001
9	631	.005	-.003	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001
10	631	.005	-.003	.001	-.001	.001	-.001	.001	-.001	.001	-.001	.001	-.001

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCMI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE #1 ALPHA-MCL = 2.0 PDP RUN#PT 9.20  
 RUN #9 ALPHA-RAP = 2.0 0-COMP = 32430  
 POINT 3 ALPHA-SIGMA = 180.0 V-REF = 199.68  
 COMPUTED FREQUENCY = 15.47, N = .1217

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	X	CP-MAG	PHI	.062-UPPER CP-MAG	PHI	.148-UPPER CP-MAG	PHI	.261-UPPER CP-MAG	PHI	.392-UPPER CP-MAG	PHI	.530-UPPER CP-MAG	PHI	.661-UPPER CP-MAG	PHI
1	25	.779	175.36	7.765	177.10	4.541	179.90	3.258	183.10	3.132	185.59	3.375	186.87	3.355	186.97
2	4	.589	262.10	.123	275.79	.577	358.21	.078	339.80	.190	308.23	.214	275.17	.159	289.97
3	4	.704	350.88	.019	271.58	.083	338.23	.089	335.80	.090	317.79	.072	307.49	.014	303.91
4	5	.654	335.45	.021	279.19	.045	386.46	.035	385.90	.011	350.77	.034	304.95	.014	332.91
5	6	.158	216.06	.016	190.89	.023	294.46	.043	305.74	.041	286.58	.030	243.70	.031	274.91
6	7	.494	304.45	.015	269.30	.024	349.66	.011	345.13	.058	303.98	.014	243.70	.019	303.91
7	8	.137	53.74	.031	149.03	.022	107.72	.066	136.11	.022	250.12	.025	139.29	.014	335.97
8	9	.182	294.78	.011	149.03	.038	171.52	.016	101.54	.010	183.12	.011	139.29	.014	335.97
9	10	.322	293.29	.011	83.73	.008	172.52	.024	359.81	.026	320.70	.012	24.50	.012	40.81

N	X	CP-MAG	PHI	.860-UPPER CP-MAG	PHI	.910-UPPER CP-MAG	PHI	.012-LOWER CP-MAG	PHI	.062-LOWER CP-MAG	PHI	.148-LOWER CP-MAG	PHI	.261-LOWER CP-MAG	PHI
1	2	.755	187.36	2.117	189.68	1.555	189.84	17.377	355.77	9.402	352.30	5.437	275.17	3.640	26.52
2	3	.027	165.24	.064	253.12	.007	309.95	.374	168.23	.210	218.32	.215	305.95	.157	286.94
3	4	.022	171.24	.023	179.85	.032	187.60	.134	104.46	.266	138.11	.109	211.59	.065	186.94
4	5	.030	267.25	.038	274.82	.026	265.21	.083	261.72	.174	273.72	.020	254.01	.033	221.87
5	6	.034	36.75	.015	76.51	.012	273.72	.035	60.75	.033	208.91	.018	134.22	.016	11.19
6	7	.012	139.57	.037	142.05	.045	332.12	.052	374.96	.078	218.50	.040	24.20	.051	173.74
7	8	.010	139.57	.009	116.52	.008	116.52	.023	210.20	.003	253.86	.015	221.91	.020	273.74

N	X	CP-MAG	PHI	.530-LOWER CP-MAG	PHI	.661-LOWER CP-MAG	PHI	.774-LOWER CP-MAG	PHI	.860-LOWER CP-MAG	PHI	.910-LOWER CP-MAG	PHI
1	2	.113	5.43	1.752	8.47	.864	18.76	.519	20.67	.460	39.15	.5	156.62
2	3	.032	306.21	.151	305.95	.141	323.44	.176	288.73	.204	273.15	.162	137.23
3	4	.034	176.58	.031	185.33	.027	115.70	.034	137.00	.077	191.05	.038	153.15
4	5	.017	331.53	.004	323.09	.035	361.91	.029	81.78	.023	268.84	.019	270.63
5	6	.008	251.40	.014	242.94	.006	275.72	.002	180.58	.023	221.47	.014	247.63
6	7	.041	107.40	.047	39.12	.037	335.11	.047	117.47	.042	148.21	.007	182.96
7	8	.019	265.40	.027	284.02	.029	158.40	.009	323.90	.015	260.59	.014	316.61

OCMI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 41 ALPHA-MCL = 2.0 PDP RUN.PT 9.20  
 RUN 9 ALPHA-PAR = 2.0 O-COMP = 32430  
 POINT 3 SIGMA = 180. V-REF = 199.68  
 COMPUTED FREQUENCY = 15.47, K = .1217

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	N	DELCPA	DELCPB	DELCPA	DELCPB	DELCPA	DELCPB	DELCPA	DELCPB	DELCPA	DELCPB
		.012	.052	.148	.261	.392	.530	.661			
1	1	.83	.025	17.073	-1.653	9.984	.011	6.889	.336	.503	.084
2	2	.160	-.737	-.009	-.055	-.013	-.068	-.028	-.068	.031	.059
3	3	-.061	-.415	-.028	-.028	-.065	-.041	-.074	-.043	.020	.038
4	4	-.521	-.278	-.091	-.018	-.007	-.024	-.009	-.026	-.004	.022
5	5	-.220	-.042	-.022	-.029	-.063	-.015	-.033	-.026	-.003	.018
6	6	-.254	-.040	-.018	-.022	-.018	-.017	-.033	-.050	-.045	.023
7	7	-.083	-.130	-.043	-.050	-.041	-.017	-.007	-.015	-.039	.013
8	8	-.083	-.174	-.043	-.050	-.041	-.017	-.007	-.015	-.039	.013
9	9	-.289	-.188	-.003	-.016	-.031	-.023	-.022	-.020	-.002	.005
10	10										

X	N	DELCPA	DELCPB	DELCPA	DELCPB	DELCPA	DELCPB	DELCPA	DELCPB	DELCPA	DELCPB
		.77	.860	.910							
1	1	3.217	.548	1.846	-.041	1.417	.315	6.831	.147	1.516	.125
2	2	-.027	-.017	-.002	-.025	-.043	-.013	-.062	-.004	-.014	-.003
3	3	-.056	-.021	-.007	-.002	-.006	-.023	-.024	-.018	-.008	-.012
4	4	-.027	-.045	-.007	-.006	-.005	-.011	-.008	-.026	-.009	-.012
5	5	-.032	-.030	-.020	-.026	-.004	-.016	-.008	-.014	-.020	-.002
6	6	-.007	-.047	-.004	-.019	-.001	-.026	-.006	-.006	-.004	-.009
7	7	-.002	-.007	-.001	-.001	-.001	-.001	-.003	-.022	-.000	-.001
8	8										
9	9										
10	10										

\*\*\* STABILITY PARAMETER

WALL NO.	N	CPREAL	CPIMAG	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10
GAP FRACTION		.125	.000	.125	.500	.500	.125	.500	.500	.125	.500	.500	.125
1	1	2.842	-.031	-.012	2.265	-.059	-10.179	-2.596	-.160	8.149	-.241	-.149	1.125
2	2	-.019	-.074	-.026	.141	-.062	.473	-.039	-.027	-.116	-1.741	-.116	
3	3	-.091	-.012	-.025	-.049	-.044	.019	-.170	-.054	-.040	-.089	-.040	
4	4	-.001	-.034	-.025	-.010	-.100	.206	-.032	-.005	-.019	-.247	-.019	
5	5	-.003	-.003	-.034	-.012	-.007	.075	-.032	-.005	-.061	-.010	-.061	
6	6	-.005	-.003	-.003	-.014	-.007	.012	-.013	-.048	.165	-.003	.165	
7	7	-.049	-.011	-.016	.074	-.014	-.044	-.001	-.038	.000	-.039	.000	
8	8	-.009	-.016	-.016	-.005	-.006	.006	-.051	-.024	.155	-.017	.155	
9	9	-.020	-.018	-.018	-.004	-.006	.006	-.001	-.022	-.014	-.013	-.014	
10	10									-.000	-.014	-.000	

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 41 ALPHA-MCL = 2.0 PDP RUN-PT 9.20  
 RUN 3 ALPHA-RAR = 2.0 0-COMP = 32430  
 POINT 3 SIGMA = 180. V-REF = 195.68  
 COMPUTED FREQUENCY = 15.47, A = .1217

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.198		.261		.392		.530		.661		
	N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	43	156	355.53	17.153	354.47	9.984	6.897	259.31	2.79	5.244	5.51	5.126	7.41	4.202	8.93
2	1	931	85.24	.219	217.63	.219	.069	195.58	.069	.077	158.39	.114	52.87	.090	47.44
3	1	970	169.83	.415	268.77	.415	.087	212.54	.087	.024	188.58	.031	179.65	.031	121.65
4	5	591	151.93	.112	143.67	.145	.027	104.46	.027	.042	101.67	.004	13.79	.041	359.10
5	1	121	119.47	.102	236.42	.032	.065	193.01	.065	.042	141.57	.029	238.05	.031	327.51
6	7	513	121.03	.028	230.34	.012	.025	135.48	.025	.050	86.01	.052	241.72	.025	271.42
7	8	134	258.02	.066	48.71	.041	.012	127.90	.012	.013	79.96	.041	58.12	.010	340.51
8	185	189.09	.023	306.16	.053	.041	.010	127.04	.010	.013	79.96	.041	58.12	.010	340.51
9	185	213.11	.017	260.55	.092	.092	.030	221.63	.030	.022	145.33	.032	261.75	.008	225.41
10	345	213.11	.017	260.55	.092	.092	.030	221.63	.030	.022	145.33	.032	261.75	.008	225.41

X	.774		.860		.910		CN-MAG		PHIN		M		CN-MAG		PHIN	
	N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	N	CP-MAG	PHI	N	CP-MAG	PHI	N	CP-MAG	PHIN
1	3	263	9.68	1.846	358.72	1.452	12.54	1	6.832	1.23	1	1.53	1	1.53	358.72	
2	3	277	249.14	.186	284.71	.219	135.03	2	.066	176.08	2	1.795	2	.022	166.47	
3	3	332	188.22	.025	265.23	.019	135.03	3	.066	196.99	3	1.090	3	.014	211.50	
4	5	60	200.67	.054	196.05	.022	135.03	4	.033	142.93	4	.248	4	.002	115.26	
5	5	82	36	.009	321.87	.022	115.39	5	.016	127.81	5	.165	5	.002	177.73	
6	7	115	238.22	.010	132.10	.012	115.39	6	.019	113.20	6	.165	6	.001	118.86	
7	8	115	238.22	.010	132.10	.012	115.39	7	.023	177.03	7	.165	7	.001	269.05	
8	8	115	238.22	.010	132.10	.012	115.39	8	.006	227.35	8	.165	8	.001	269.05	
9	8	115	238.22	.010	132.10	.012	115.39	9	.032	227.35	9	.165	9	.007	210.17	
10	8	115	238.22	.010	132.10	.012	115.39	10	.032	227.35	10	.165	10	.007	210.17	

\*\*\* STABILITY PARAMETE

WALL NO.	W1		W2		W3		W4		W5		W6		W10		W125	
	N	CP-MAG	PHI	N	CP-MAG	PHI	N	CP-MAG	PHI	N	CP-MAG	PHI	N	CP-MAG	PHI	PHI
1	2	.849	359.38	2	.265	358.50	10	.193	177.06	2	.602	183.71	8	.153	358.31	
2	2	.075	260.68	.579	84.25	84.25	2	.294	265.58	2	.602	183.71	1	.795	296.51	
3	3	.039	222.15	.154	336.93	336.93	2	.477	352.58	1	.178	342.43	1	.090	296.51	
4	3	.092	172.58	.066	137.93	137.93	2	.138	277.89	.062	180.21	1	.248	265.62		
5	5	.025	268.78	.101	175.95	175.95	2	.202	354.34	.033	151.44	1	.165	189.45		
6	5	.034	268.77	.021	235.26	235.26	2	.072	160.66	.030	255.01	1	.165	189.45		
7	7	.006	149.89	.075	334.08	334.08	2	.014	332.61	.038	391.01	1	.039	89.32		
8	8	.051	347.66	.075	11.00	11.00	2	.046	342.16	.057	335.46	1	.156	6.25		
9	8	.018	47.41	.008	133.29	133.29	2	.007	338.84	.022	4.46	1	.014	268.61		
10	8	.027	223.18	.031	262.36	262.36	2	.035	19.75	.022	4.46	1	.014	268.61		

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTR PERIODICITY TEST,  
CENTR BLADE DATA, WALL STATIONS

FILE #3 ALPHA-MCL = 2.0 PCP RUN#PT 9.22  
 RUN 9 ALPHA-PAB = 2.0 Q-COMP E 32527  
 POINT 5 SIGMA = 1RD. V-REF E 199.96  
 COMPUTED FREQUENCY = 19.08, X E .1498

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURE, PER RADIAN \*\*\*

X = .012-UPPER CPREAL CPIMAG .062-UPPER CPREAL CPIMAG .199-UPPER CPREAL CPIMAG .261-UPPER CPREAL CPIMAG .392-UPPER CPREAL CPIMAG .530-UPPER CPREAL CPIMAG .661-UPPER CPREAL CPIMAG

1	-25.440	2.4500	-7.689	.542	.095	-3.249	.146	-3.111	-.296	-3.346	-.427	-3.292	-.390
2	-.001	-.363	-.015	.018	.155	-.033	.119	-.032	.057	-.103	-.020	-.059	-.026
3	-.522	-.120	-.025	.018	.037	.032	.025	.015	-.047	-.049	-.005	-.015	-.034
4	-.612	-.215	-.011	.022	.003	.024	.014	.005	-.007	-.048	-.020	-.003	-.011
5	-.009	-.205	-.014	.022	.009	.024	.017	.095	-.016	-.004	-.020	-.003	-.004
6	.141	-.205	-.012	.022	.011	.032	.016	.073	-.014	-.022	-.013	-.006	-.007
7	.112	-.199	-.012	.022	.006	.017	.016	.074	-.017	-.022	-.013	-.009	-.005
8	.163	-.193	-.078	.011	.008	.017	.015	.072	-.035	-.026	-.015	-.009	-.027
9	-.203	.036	.022	.025	.032	-.050	-.029	.041	-.051	.041	-.011	-.033	-.021

X = .778-UPPER CPREAL CPIMAG .860-UPPER CPREAL CPIMAG .910-UPPER CPREAL CPIMAG .012-LOWER CPREAL CPIMAG .062-LOWER CPREAL CPIMAG .199-LOWER CPREAL CPIMAG .261-LOWER CPREAL CPIMAG

1	-2.640	-.375	-2.057	-.361	-.256	16.998	-1.392	9.042	-1.280	5.370	.133	3.592	.298
2	-.035	.018	-.009	.022	.018	-.670	.138	-.677	-.149	-.072	-.019	-.044	-.035
3	-.008	-.018	-.016	.016	-.026	-.297	.138	-.070	-.178	-.094	-.032	-.035	-.006
4	-.001	-.022	-.002	.016	.003	.004	.140	.110	-.068	-.074	-.047	-.044	-.003
5	-.005	-.016	-.003	.022	.007	.026	.062	.046	-.090	-.043	.035	.009	-.064
6	-.008	-.008	-.003	.022	.002	.118	-.032	.013	.016	.022	.051	.016	-.055
7	-.013	-.018	-.016	.019	.015	.081	-.050	.017	-.016	-.015	.044	.022	-.006
8	-.033	-.032	-.024	.035	.029	-.063	-.005	.018	-.006	-.047	-.002	-.029	-.005
9	-.034	.019	.020	.028	.020	-.012	.006	.008	.009	-.022	.032	.002	-.016

X = .392-LOWER CPREAL CPIMAG .530-LOWER CPREAL CPIMAG .661-LOWER CPREAL CPIMAG .778-LOWER CPREAL CPIMAG .860-LOWER CPREAL CPIMAG .910-LOWER CPREAL CPIMAG

1	2.098	.323	1.682	.413	.427	.440	.315	.347	.174	.120	.106	.106	.106
2	-.033	-.074	-.034	.022	.066	.069	.007	-.042	-.083	-.200	.140	.140	.140
3	-.006	-.000	-.012	.018	.046	-.003	.052	.007	.014	.044	.027	.027	.027
4	-.000	-.006	-.009	.014	.022	.006	-.030	.007	.030	.004	.010	.010	.010
5	-.020	-.040	-.015	.015	.076	.026	.036	.007	.000	.028	.004	.004	.004
6	-.022	-.025	-.015	.015	.017	.050	.035	.028	.025	.019	.010	.010	.010
7	-.039	-.051	-.022	.032	.030	.016	.009	.010	.013	.021	.010	.010	.010
8	-.055	-.051	-.025	.012	.004	.016	.018	.035	.009	.013	.016	.016	.016
9	-.051	.021	.013	.014	.014	.008	.018	.035	.020	.016	.016	.016	.016

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- CENTER BLADE DATA, WALL STATIONS

FILE 43 ALPHA-MCL = 2.0 PDB RUM.PI = 9.22  
 RUN 9 ALPHA-BAR = 2.0 C-COMP = 32527  
 POINT 5 SIGMA = 1.0 V-DEF = 199.92  
 COMPUTED FREQUENCY = 19.08, K = .1498

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	.062-UPPER CP-MAG	UPPER PHI	.148-UPPER CP-MAG	UPPER PHI	.261-UPPER CP-MAG	UPPER PHI	.392-UPPER CP-MAG	UPPER PHI	.510-UPPER CP-MAG	UPPER PHI	.661-UPPER CP-MAG	UPPER PHI
1	25	.563	174.39	7.708	175.97	4.522	178.79	3.243	182.58	3.125	185.83	3.373	187.27	3.315	186.75
2	3	.436	259.60	.202	85.492	.156	96.92	.123	105.31	.068	122.80	.115	190.83	.038	156.43
3	4	.594	348.39	.031	144.79	.059	345.83	.055	333.23	.017	304.60	.049	210.83	.011	113.66
4	5	.816	246.50	.339	127.00	.054	42.66	.035	33.15	.016	338.20	.022	187.27	.005	206.36
5	6	.689	340.63	.047	116.05	.044	338.47	.028	325.57	.012	308.56	.022	177.27	.003	133.18
6	7	.294	271.80	.042	267.68	.051	111.43	.036	207.22	.013	308.56	.026	250.55	.008	162.18
7	8	.228	320.50	.072	162.24	.033	168.13	.023	207.22	.022	183.38	.024	210.83	.008	219.99
8	9	.201	251.52	.073	137.12	.063	172.95	.048	318.62	.022	205.58	.024	211.75	.025	277.76
9	10	.206	10.16	.033	212.28	.037	329.77	.058	329.51	.065	308.65	.043	344.47	.039	32.97

X	N	CP-MAG	UPPER PHI	.062-LOWER CP-MAG	UPPER PHI	.148-LOWER CP-MAG	UPPER PHI	.261-LOWER CP-MAG	UPPER PHI	.392-LOWER CP-MAG	UPPER PHI	.510-LOWER CP-MAG	UPPER PHI	.661-LOWER CP-MAG	UPPER PHI
1	2	.667	188.08	2.088	169.97	1.545	189.52	1.055	255.32	0.133	351.98	5.372	191.83	3.604	4.75
2	3	.021	122.43	.088	114.25	.019	95.51	.328	155.11	.228	256.49	.072	333.65	.050	118.53
3	4	.022	87.70	.028	233.79	.031	236.02	.149	91.10	.189	111.09	.087	212.33	.049	187.80
4	5	.022	299.81	.012	42.25	.027	152.02	.072	317.50	.101	211.07	.037	110.33	.009	142.37
5	6	.010	296.81	.023	156.99	.023	209.25	.122	144.49	.101	308.56	.053	355.27	.050	288.05
6	7	.022	233.16	.025	230.19	.020	226.72	.095	211.56	.023	323.05	.015	186.22	.050	195.40
7	8	.039	229.70	.041	43.22	.029	45.03	.063	155.32	.019	341.97	.039	125.08	.029	349.87

X	N	CP-MAG	UPPER PHI	.530-LOWER CP-MAG	UPPER PHI	.661-LOWER CP-MAG	UPPER PHI	.774-LOWER CP-MAG	UPPER PHI	.860-LOWER CP-MAG	UPPER PHI	.910-LOWER CP-MAG	UPPER PHI
1	2	.073	0.96	1.732	13.79	.086	28.45	.541	35.59	.389	206.65	.160	138.53
2	3	.081	357.02	.070	118.20	.067	84.30	.070	173.91	.093	243.04	.244	144.95
3	4	.006	218.24	.022	303.20	.066	316.58	.050	223.04	.056	212.35	.030	162.82
4	5	.006	274.13	.016	122.59	.027	52.76	.040	81.43	.007	182.99	.019	292.91
5	6	.045	296.58	.144	105.08	.087	286.36	.036	292.35	.025	175.46	.034	303.13
6	7	.023	196.52	.056	142.98	.017	218.71	.018	150.36	.031	171.99	.023	155.27
7	8	.007	189.65	.014	209.52	.014	209.52	.024	332.53	.040	209.20	.017	210.07
8	9	.004	189.65	.023	142.07	.023	142.07	.008	332.53	.018	244.16	.042	309.09





ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 43 ALPHA-MCL = 2.0 PDP RUN-PT 9.22  
 RUN 5 ALPHA-PR = 2.0 O-COMP = 32527  
 POINT 9 SIGMA = 180. V-REF = 199.98  
 COMPUTED FREQUENCY = 19.08, K = .14988  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012 PHI	.062 PHI	.146 PHI	.261 PHI	.392 PHI	.530 PHI	.661 PHI
1	16.830	353.79	9.891	3.72	5.196	5.098	9.48
2	.776	206.81	.189	.042	.017	.114	45.57
3	.916	163.58	.019	.218	.053	.015	61.30
4	.954	170.24	.141	.194	.021	.061	322.50
5	.595	162.87	.044	.138	.011	.027	42.50
6	.358	97.24	.139	.221	.099	.143	305.11
7	.175	97.69	.067	.268	.107	.093	372.42
8	.314	232.24	.097	.222	.087	.029	194.74
9	.225	55.72	.118	.196	.013	.065	143.65
10	.217	188.15	.074	.137	.067	.054	172.08

N	.774 PHI	.860 PHI	.910 PHI	CM-MAG	N	CM-MAG	PHIM
1	3.157	12.62	1.727	6.25	1	1.506	358.44
2	.074	242.17	.165	266.82	2	.022	139.83
3	.036	76.35	.037	270.85	3	.019	207.33
4	.035	216.97	.032	193.77	4	.014	109.54
5	.018	73.78	.014	36.95	5	.013	174.95
6	.021	286.57	.027	239.92	6	.010	113.98
7	.023	96.78	.033	302.55	7	.007	227.69
8	.027	98.76	.012	156.41	8	.001	4.85
9	.022	38.41	.005	179.22	9	.009	124.00
10	.035	221.22	.040	136.23	10	.009	124.00

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	W1	W2	W3	W4	W5	W6	W10
1	2.189	1.74	2.199	9.840	175.66	2.578	7.949
2	.222	137.74	.820	2.000	259.20	.233	260.16
3	.047	131.23	.178	.429	343.76	.131	376.75
4	.009	104.83	.021	.205	286.46	.042	276.37
5	.012	215.76	.022	.161	347.28	.047	358.69
6	.027	145.40	.019	.072	168.93	.027	158.72
7	.026	184.60	.050	.035	143.93	.004	159.94
8	.021	197.62	.002	.084	225.48	.043	158.59
9	.009	201.01	.002	.051	353.95	.030	348.74

\*\*\* STABILITY PARAMETER

\* XI = .1460 \*  
 \* \*\*\*\*\*

TABLE 6

MODE 1 DATA FOR  $\alpha_{MCL} = 6$  deg,  $\bar{\alpha} = 0.5$  deg

<u><math>\sigma</math> (deg)</u>	<u>k</u>	<u>page</u>
-135	.0716	214
"	.1215	218
"	.1497	222
-90	.0714	226
"	.1226	230
"	.1516	234
-45	.0705	238
"	.1196	242
"	.1482	246
0	.0716	250
"	.1230	254
"	.1500	258
45	.0718	262
"	.1224	266
"	.1507	270
90	.0714	274
"	.1222	278
"	.1510	282
135	.0726	286
"	.1224	290
"	.1510	294
180	.0709	298
"	.1208	302
"	.1493	306

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ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 126 ALPHA-MCL = 6.0 PRC RUN/PI 35507  
RUN 1 ALPHA-BAR = 3.5 C-COMP = 200.22  
POINT 1 SIGMA = -135. V-REF = 200.22  
COMPUTED FREQUENCY = 9.12, K = .0716

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	X	012-UPPER CPREAL CPIMAG	026-UPPER CPREAL CPIMAG	148-UPPER CPREAL CPIMAG	261-UPPER CPREAL CPIMAG	392-UPPER CPREAL CPIMAG	530-UPPER CPREAL CPIMAG	661-UPPER CPREAL CPIMAG
1	-19	1.155	4.297	-1.710	-1.295	-3.761	-3.826	-3.952
2	4	1.172	1.404	-1.379	-1.434	-3.391	-3.321	-3.383
3	4	1.186	1.382	-1.375	-1.434	-3.383	-3.356	-3.383
4	5	1.199	1.384	-1.419	-1.161	-3.081	-3.124	-3.115
5	6	1.201	1.384	-1.407	-1.198	-3.018	-3.124	-3.115
6	7	1.201	1.377	-1.400	-1.176	-3.018	-3.124	-3.115
7	8	1.201	1.377	-1.400	-1.176	-3.018	-3.124	-3.115
8	9	1.201	1.377	-1.400	-1.176	-3.018	-3.124	-3.115
9	10	1.201	1.377	-1.400	-1.176	-3.018	-3.124	-3.115
10	10	1.201	1.377	-1.400	-1.176	-3.018	-3.124	-3.115

N	X	774-UPPER CPREAL CPIMAG	880-UPPER CPREAL CPIMAG	910-UPPER CPREAL CPIMAG	012-LOWER CPREAL CPIMAG	062-LOWER CPREAL CPIMAG	188-LOWER CPREAL CPIMAG	281-LOWER CPREAL CPIMAG
1	-3	1.151	4.297	-1.710	-1.295	-3.761	-3.826	-3.952
2	4	1.172	1.404	-1.379	-1.434	-3.391	-3.321	-3.383
3	4	1.186	1.382	-1.375	-1.434	-3.383	-3.356	-3.383
4	5	1.199	1.384	-1.419	-1.161	-3.081	-3.124	-3.115
5	6	1.201	1.384	-1.407	-1.198	-3.018	-3.124	-3.115
6	7	1.201	1.377	-1.400	-1.176	-3.018	-3.124	-3.115
7	8	1.201	1.377	-1.400	-1.176	-3.018	-3.124	-3.115
8	9	1.201	1.377	-1.400	-1.176	-3.018	-3.124	-3.115
9	10	1.201	1.377	-1.400	-1.176	-3.018	-3.124	-3.115
10	10	1.201	1.377	-1.400	-1.176	-3.018	-3.124	-3.115

N	X	322-LOWER CPREAL CPIMAG	520-LOWER CPREAL CPIMAG	661-LOWER CPREAL CPIMAG	012-LOWER CPREAL CPIMAG	062-LOWER CPREAL CPIMAG	188-LOWER CPREAL CPIMAG	281-LOWER CPREAL CPIMAG
1	-3	1.151	4.297	-1.710	-1.295	-3.761	-3.826	-3.952
2	4	1.172	1.404	-1.379	-1.434	-3.391	-3.321	-3.383
3	4	1.186	1.382	-1.375	-1.434	-3.383	-3.356	-3.383
4	5	1.199	1.384	-1.419	-1.161	-3.081	-3.124	-3.115
5	6	1.201	1.384	-1.407	-1.198	-3.018	-3.124	-3.115
6	7	1.201	1.377	-1.400	-1.176	-3.018	-3.124	-3.115
7	8	1.201	1.377	-1.400	-1.176	-3.018	-3.124	-3.115
8	9	1.201	1.377	-1.400	-1.176	-3.018	-3.124	-3.115
9	10	1.201	1.377	-1.400	-1.176	-3.018	-3.124	-3.115
10	10	1.201	1.377	-1.400	-1.176	-3.018	-3.124	-3.115

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 126 ALPHA-MCL = 6.0 POP RUN-PI 26.02  
 RUN 26 ALPHA-BAR = 0.5 C-COMP = 32.97  
 POINT 1 SIGMA = 135.0 V-REF = 230.22  
 COMPUTED FREQUENCY = 9.12, K = .0716  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	19.6718	167.38	1.5719	166.96	5.3158	167.91	4.217	157.74	1.7771	174.52	3.814	172.72
2	1.6113	312.65	1.469	306.93	1.454	306.28	1.584	305.52	1.583	305.42	1.607	306.42
3	1.98	346.96	1.46	284.42	1.76	296.74	1.176	295.12	1.193	295.52	1.212	303.99
4	1.52	310.93	1.46	234.94	1.59	229.34	1.199	228.14	1.234	227.56	1.244	227.71
5	1.93	250.13	2.035	271.04	1.89	279.22	1.335	276.05	1.334	274.37	1.443	272.61
6	1.51	337.13	1.117	179.92	1.29	186.92	1.118	182.10	1.133	191.35	1.149	192.41
7	0.56	215.56	1.072	210.74	0.88	214.92	0.71	161.01	0.861	131.92	0.931	118.77
8	0.95	77.39	0.075	118.30	0.368	119.72	0.071	132.96	0.061	127.32	0.048	129.27

N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	7.130	183.87	7.734	178.04	7.547	174.82	8.983	149.33	4.043	159.61	3.038	156.04
2	1.621	308.73	1.573	309.97	1.596	308.04	1.511	301.84	1.533	304.38	1.536	303.83
3	2.00	302.82	1.75	299.16	1.71	298.12	1.261	292.72	1.183	292.25	1.208	289.85
4	1.83	229.63	2.20	271.86	1.79	275.96	1.196	271.08	1.193	272.51	1.177	272.60
5	2.35	276.28	2.95	226.61	2.66	220.71	1.521	174.44	1.223	175.90	1.222	176.60
6	1.60	168.55	1.83	126.93	1.68	120.31	1.138	119.69	1.041	119.03	1.158	116.63
7	0.44	144.49	0.28	163.81	0.40	155.27	0.084	139.87	0.067	125.84	0.043	116.42
8	0.44	124.86	0.028	137.58	0.037	125.64	0.055	123.02	0.047	125.54	0.043	116.42

N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	7.34	29.23	1.617	82.24	1.556	137.31	1.538	143.86	1.801	165.17	1.423	154.76
2	1.5	257.96	1.627	258.23	1.551	307.90	1.483	311.49	1.443	312.75	1.422	306.90
3	1.84	298.05	2.11	298.87	1.71	301.64	1.183	300.63	1.169	316.83	1.205	304.79
4	1.62	277.68	1.24	279.56	1.171	279.77	1.189	278.76	1.213	279.37	1.195	275.77
5	2.027	277.12	2.92	275.64	2.22	272.77	1.247	276.04	1.213	279.37	1.255	275.76
6	1.57	195.68	1.75	202.93	1.52	119.81	1.174	123.73	1.165	116.97	1.164	120.78
7	0.44	154.32	0.069	161.02	0.069	160.75	0.069	169.12	0.047	157.21	0.053	149.44
8	0.44	116.63	0.046	117.47	0.042	129.36	0.043	137.60	0.037	192.11	0.046	120.20

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 126 ALPHA-MCR = 6.0 POP RUN PI 39.592  
 POINT 1 ALPHA-RM = 0.0 Q-COMP = 200.22  
 COMPUTED SIGMA = 135.0 V-REF = 200.22  
 FREQUENCY = 9.12, K = .0716

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCP R <sup>012</sup>	DELCP I <sup>012</sup>	DELCP R <sup>062</sup>	DELCP I <sup>062</sup>	DELCP R <sup>108</sup>	DELCP I <sup>108</sup>	DELCP R <sup>261</sup>	DELCP I <sup>261</sup>	DELCP R <sup>392</sup>	DELCP I <sup>392</sup>	DELCP R <sup>530</sup>	DELCP I <sup>530</sup>	DELCP R <sup>662</sup>	DELCP I <sup>662</sup>
1	27.983	-5.260	11.432	-1.738	8.212	-1.361	5.642	-5.14	4.397	-0.95	3.899	-0.566	3.093	0.611
2	1.274	-0.010	0.020	-0.071	0.028	-0.080	0.007	-0.005	-0.041	0.076	0.027	-0.004	-0.049	0.047
3	0.265	-0.010	0.055	-0.307	0.025	-0.031	0.013	-0.016	-0.002	0.011	-0.016	0.009	-0.023	0.037
4	0.037	-0.039	0.013	-0.011	0.031	-0.034	0.003	-0.007	0.012	0.020	0.014	-0.016	0.002	0.012
5	0.045	0.029	0.022	-0.029	0.008	-0.010	0.011	-0.012	0.011	0.011	0.017	-0.010	0.005	0.020
6	0.051	-0.047	0.006	-0.024	0.015	-0.021	0.025	-0.018	0.017	0.008	-0.050	-0.004	0.027	0.004

N	DELCP R <sup>774</sup>	DELCP I <sup>774</sup>	DELCP R <sup>860</sup>	DELCP I <sup>860</sup>	DELCP R <sup>910</sup>	DELCP I <sup>910</sup>	N	CMREAL	CMIMAG	N	CMREAL	CMIMAG
1	1.899	0.989	1.028	0.360	1.476	0.604	1	5.109	-1.179	1	1.077	-2.277
2	0.716	0.047	0.029	0.047	0.007	-0.029	2	0.025	0.007	2	0.000	-0.006
3	0.028	0.011	0.025	0.046	0.016	0.030	3	0.002	-0.016	3	0.005	-0.010
4	0.000	0.012	0.027	0.035	0.017	0.003	4	0.001	0.001	4	0.006	-0.002
5	0.008	0.020	0.051	0.008	0.000	0.020	5	0.003	0.008	5	0.002	-0.001
6	0.001	0.029	0.019	0.008	0.005	0.017	6	0.005	0.018	6	0.002	0.002
7	0.011	0.012	0.019	0.006	0.010	0.010	7	0.009	0.004	7	0.003	0.001
8	0.003	0.004	0.019	0.019	0.002	0.010	8	0.029	0.018	8	0.002	0.001
9							9	0.008	0.007	9	0.001	0.003
10							10	0.008	0.007	10	0.001	0.003

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CPREAL	CPIMAG	W1	W2	W3	W4	W5	W6	W10	W11	W12
1	0.879	1	0.279	-1.280	1.025	0.000	0.125	0.500	0.500	1.125	0.925	2.011	2.772
2	0.268	2	0.281	-0.608	0.016	0.000	0.125	0.500	0.500	1.125	0.925	2.011	2.772
3	0.013	3	0.005	-0.274	0.016	0.000	0.125	0.500	0.500	1.125	0.925	2.011	2.772
4	0.210	4	0.157	-0.195	0.031	0.000	0.125	0.500	0.500	1.125	0.925	2.011	2.772
5	0.028	5	0.086	-0.289	0.021	0.000	0.125	0.500	0.500	1.125	0.925	2.011	2.772
6	0.234	6	0.266	-0.299	0.010	0.000	0.125	0.500	0.500	1.125	0.925	2.011	2.772
7	0.174	7	0.011	-0.009	0.033	0.000	0.125	0.500	0.500	1.125	0.925	2.011	2.772
8	0.160	8	0.012	-0.023	0.031	0.000	0.125	0.500	0.500	1.125	0.925	2.011	2.772
9	0.028	9	0.003	-0.003	0.031	0.000	0.125	0.500	0.500	1.125	0.925	2.011	2.772
10		10											

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

\*\*\* STABILITY PARAMETER

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWT PERIODICITY TFST  
CENTER BLADE DATA, WALL STATIONS

FILE 126 ALPHA-MCL = 6.0 POP RUN.PI 36597  
POINT 1 SIGMA = 1.35 Q-COMP = 32597  
COMPUTED FREQUENCY = 9.12, K = .0718  
V-PHF = 200.22  
FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	28.611	347.98	11.563	351.36	8.324	350.59	5.665	354.80	4.397	359.93	3.940	365.11
2	17.139	175.99	16.474	279.84	18.222	246.82	13.222	254.70	14.333	273.40	15.759	275.54
3	4.338	307.21	0.855	285.68	0.083	289.28	0.008	324.49	0.013	170.64	0.028	209.31
4	2.666	171.93	0.566	306.75	0.236	257.18	0.021	288.41	0.022	115.64	0.019	209.31
5	0.554	314.44	0.177	181.22	0.056	182.99	0.007	230.24	0.033	211.56	0.022	261.12
6	0.174	168.81	0.039	213.79	0.026	227.32	0.012	263.68	0.043	227.32	0.010	297.50
7	0.071	155.99	0.031	225.15	0.013	259.92	0.012	283.12	0.043	242.04	0.036	317.04
8	0.037	148.14	0.034	186.92	0.039	230.67	0.029	245.12	0.031	177.41	0.050	185.22
9	0.025	222.49	0.025	284.31	0.025	305.39	0.031	324.31	0.019	333.70	0.010	266.79
10												

N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	1.171	27.40	1.089	19.30	1.547	22.86	1.690	25.86	1.812	27.99	1.880	30.57
2	0.139	16.86	0.103	323.37	0.023	205.21	0.008	283.21	0.009	127.21	0.006	271.27
3	0.019	144.78	0.054	58.02	0.034	298.05	0.017	171.70	0.018	297.01	0.011	299.33
4	0.032	145.44	0.054	61.18	0.030	171.34	0.017	269.02	0.008	259.34	0.002	214.49
5	0.021	112.67	0.052	345.79	0.014	269.02	0.014	251.81	0.013	251.81	0.003	168.59
6	0.029	200.93	0.026	99.69	0.010	301.56	0.010	191.51	0.030	253.18	0.004	158.59
7	0.005	236.30	0.027	43.99	0.010	199.98	0.010	199.98	0.011	320.21	0.003	279.38
8												
9												
10												

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12
1	1.895	2.744	3.740	4.880	6.080	7.466	8.951	10.551	12.264	14.099	15.989	17.938
2	1.638	2.670	3.812	5.058	6.312	7.674	9.148	10.732	12.426	14.229	16.141	18.164
3	2.298	3.218	4.211	5.271	6.393	7.570	8.803	10.093	11.441	12.847	14.310	15.831
4	2.998	3.928	4.929	5.993	7.121	8.313	9.569	10.891	12.279	13.724	15.226	16.784
5	3.723	4.653	5.653	6.721	7.859	9.067	10.345	11.693	13.111	14.600	16.159	17.788
6	4.474	5.404	6.404	7.472	8.610	9.818	11.096	12.444	13.862	15.351	16.900	18.519
7	5.249	6.179	7.179	8.247	9.385	10.593	11.871	13.219	14.637	16.126	17.695	19.334
8	6.049	6.979	7.979	8.947	9.985	11.093	12.271	13.519	14.837	16.276	17.784	19.334
9	6.874	7.804	8.804	9.772	10.810	11.918	13.096	14.344	15.662	17.051	18.460	19.933
10	7.724	8.654	9.654	10.622	11.660	12.768	13.946	15.194	16.512	17.921	19.330	20.783

\*\*\* STABILITY PARAMETER

N	CM-MAG	PHI	CM-MAG	PHI
1	1.112	305.57	1.112	305.57
2	0.006	271.27	0.006	271.27
3	0.011	299.33	0.011	299.33
4	0.002	214.49	0.002	214.49
5	0.003	168.59	0.003	168.59
6	0.004	158.59	0.004	158.59
7	0.003	279.38	0.003	279.38
8	0.003	279.38	0.003	279.38
9	0.003	279.38	0.003	279.38
10	0.003	279.38	0.003	279.38

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWT PERIODICITY, TFST  
CENTER BLADE DATA, WALL STATIONS

FILE 128 ALPHA-CK = 6.0 POP RUN.PI 35.84  
 FWT 26 ALPHA-AP = 5.5 D-COMP = 39.245  
 POINT 3 SIGMA = 13.5 V-PEF = 200.0  
 CGMPTED FREQUENCY = 15.47, K = .1215

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\* BLADE PRESSURES, PER RADIAN \*\*

X	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER
1	-19.973	5.170	-7.829	1.302	-5.574	1.094	-4.240	1.593	-4.121	1.013	-4.073	1.274	-4.147	1.317	-4.093	1.317	-4.093	1.317
2	1.431	1.563	1.374	1.164	1.110	1.024	1.063	1.178	1.125	1.061	1.258	1.258	1.072	1.173	1.058	1.177	1.058	1.177
3	0.195	0.278	0.147	0.244	0.110	0.222	0.160	0.222	0.158	0.161	0.222	0.158	0.152	0.153	0.162	0.152	0.162	0.153
4	0.090	0.142	0.065	0.109	0.049	0.077	0.039	0.062	0.048	0.022	0.048	0.039	0.022	0.025	0.026	0.025	0.026	0.025
5	0.045	0.072	0.032	0.042	0.024	0.031	0.018	0.022	0.015	0.012	0.015	0.012	0.012	0.011	0.011	0.011	0.011	0.011
6	0.022	0.034	0.017	0.022	0.011	0.019	0.007	0.011	0.003	0.005	0.003	0.005	0.003	0.002	0.002	0.002	0.002	0.002
7	0.011	0.019	0.007	0.011	0.005	0.007	0.003	0.005	0.003	0.002	0.003	0.002	0.002	0.001	0.001	0.001	0.001	0.001
8	0.005	0.011	0.003	0.007	0.003	0.004	0.002	0.003	0.002	0.001	0.002	0.001	0.001	0.000	0.000	0.000	0.000	0.000
9	0.002	0.007	0.001	0.005	0.002	0.003	0.001	0.002	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.001	0.004	0.000	0.003	0.001	0.002	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER
1	-1.377	1.327	-1.219	1.297	-1.088	1.084	-0.975	1.073	-0.885	1.037	-0.817	1.013	-0.756	1.002	-0.704	1.002	-0.664	1.002
2	0.323	0.186	0.170	0.195	0.085	0.192	0.037	0.184	0.014	0.178	0.003	0.173	0.002	0.168	0.002	0.164	0.002	0.160
3	0.071	0.042	0.039	0.027	0.017	0.038	0.010	0.034	0.005	0.031	0.003	0.028	0.002	0.026	0.002	0.024	0.002	0.022
4	0.033	0.056	0.017	0.052	0.009	0.049	0.005	0.046	0.003	0.043	0.002	0.040	0.001	0.038	0.001	0.036	0.001	0.034
5	0.017	0.027	0.009	0.023	0.005	0.020	0.003	0.018	0.002	0.016	0.001	0.014	0.001	0.013	0.001	0.012	0.001	0.011
6	0.008	0.013	0.004	0.010	0.002	0.009	0.001	0.008	0.000	0.007	0.000	0.006	0.000	0.005	0.000	0.004	0.000	0.003
7	0.004	0.007	0.002	0.005	0.001	0.004	0.000	0.003	0.000	0.002	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000
8	0.002	0.004	0.001	0.003	0.000	0.003	0.000	0.002	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.001	0.002	0.000	0.002	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER
1	1.472	1.477	1.195	1.591	1.022	1.537	0.874	1.473	0.756	1.422	1.373	1.274	1.329	1.168	1.289	1.091	1.247	1.011
2	0.545	1.150	0.112	1.043	0.015	1.044	0.001	1.044	0.000	1.043	0.000	1.042	0.000	1.041	0.000	1.040	0.000	1.039
3	0.148	0.624	0.037	0.543	0.010	0.422	0.005	0.342	0.003	0.261	0.002	0.180	0.001	0.100	0.000	0.020	0.000	0.000
4	0.076	0.332	0.019	0.243	0.005	0.142	0.003	0.041	0.002	0.040	0.001	0.039	0.001	0.038	0.001	0.037	0.001	0.036
5	0.038	0.166	0.009	0.121	0.003	0.061	0.001	0.030	0.000	0.029	0.000	0.028	0.000	0.027	0.000	0.026	0.000	0.025
6	0.019	0.083	0.004	0.060	0.002	0.030	0.001	0.015	0.000	0.014	0.000	0.013	0.000	0.012	0.000	0.011	0.000	0.010
7	0.009	0.041	0.002	0.030	0.001	0.015	0.000	0.007	0.000	0.006	0.000	0.005	0.000	0.004	0.000	0.003	0.000	0.002
8	0.004	0.020	0.001	0.015	0.000	0.007	0.000	0.003	0.000	0.002	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000
9	0.002	0.010	0.000	0.007	0.000	0.003	0.000	0.001	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.001	0.005	0.000	0.003	0.000	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

MODE 1 --- OCWI PERIODICITY TEST  
 CENTER BLADE DATA, WALL STATIONS

FILE 128 ALPHA-PER E 6.8 POP RUN.PI 36559  
 ROW 26 ALPHA-RAR E 135.0 C-COMP E 32559  
 POINT 3 SIGMA E -135.0 V-REF E 200.00  
 COMPUTED FREQUENCY E 15.47, K E .1215  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	27.544	165.44	7.870	174.15	5.574	179.47	4.369	186.62	4.217	193.36	4.351	197.61
2	1.245	150.42	1.457	144.65	1.152	144.09	1.659	145.87	1.747	145.87	1.891	144.88
3	1.571	279.59	1.352	245.64	1.137	221.49	1.810	250.01	1.749	248.97	1.881	247.40
4	1.082	270.76	1.147	173.96	1.077	167.26	1.600	176.94	1.643	168.72	1.651	160.86
5	1.222	252.57	1.047	249.45	1.081	260.78	1.039	261.41	1.047	255.05	1.058	233.43
6	1.193	137.39	1.071	245.55	1.074	258.78	1.053	261.14	1.081	254.55	1.090	256.38
7	1.115	340.40	1.126	138.33	1.131	133.35	1.094	191.94	1.136	183.40	1.151	220.20
8	1.064	143.21	1.057	157.99	1.052	158.15	1.040	158.15	1.032	142.68	1.052	150.24
9	1.066	205.94	1.162	173.79	1.058	178.96	1.061	177.62	1.067	169.77	1.071	180.24
10												

X N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	3.659	227.62	3.219	231.57	2.898	207.88	2.678	347.94	2.563	345.98	2.223	347.52
2	1.179	248.58	1.196	250.71	1.272	246.44	1.165	231.87	1.185	230.78	1.191	232.76
3	1.176	166.17	1.176	187.32	1.119	151.85	1.149	151.85	1.143	153.32	1.131	158.65
4	1.056	271.93	1.044	261.91	1.057	269.31	1.029	284.91	1.043	286.68	1.046	258.04
5	1.128	281.36	1.052	261.92	1.116	266.95	1.071	270.91	1.095	227.71	1.091	224.83
6	1.047	342.77	1.081	330.58	1.078	331.13	1.091	327.56	1.097	331.98	1.091	331.15
7	1.041	162.73	1.055	176.70	1.034	182.66	1.031	127.89	1.033	146.29	1.040	149.91
8												
9												
10												

X N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1.838	307.54	1.677	258.03	1.485	231.63	1.408	182.93	1.432	171.83	1.237	198.99
2	1.173	240.55	1.227	240.19	1.168	241.51	1.199	232.48	1.195	238.14	1.220	245.62
3	1.154	164.55	1.187	167.58	1.141	163.99	1.197	173.67	1.192	168.87	1.045	211.79
4	1.042	236.16	1.041	225.44	1.046	223.03	1.045	224.35	1.051	220.78	1.047	219.68
5	1.082	251.76	1.071	225.33	1.086	229.88	1.072	264.91	1.071	261.90	1.075	239.54
6	1.088	329.40	1.095	323.35	1.081	335.33	1.086	327.29	1.071	350.29	1.075	339.54
7	1.048	147.39	1.023	133.44	1.045	176.61	1.029	151.66	1.041	174.70	1.037	178.84
8	1.039	161.39	1.053	168.75	1.045	171.33	1.055	173.42	1.064	177.55	1.057	178.84
9												
10												

ORIGINAL PAGE IS  
 OF POOR QUALITY





ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TFST  
CENTER BLADE DATA, WALL STATIONS

FILE 128 ALPHA-HCL = 6.0 POP RUMPTI 36524  
 POINT 23 ALPHA-HA = 135.0 C-COMP = 32525  
 3 SIGMA = -135.0 V-REF = 200.00  
 COMPUTED FREQUENCY = 15.47, K = .3215

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	33.152	243.88	12.209	351.19	8.161	359.37	5.988	355.94	4.160	371.22	4.766	10.31	3.158	15.92	203.17	15.92
2	4.671	195.84	0.477	153.14	0.841	272.76	0.315	159.11	0.215	231.62	0.147	14.92	0.002	203.17	333.79	333.79
3	3.055	131.45	0.229	26.27	0.031	83.79	0.277	144.14	0.213	57.20	0.148	28.88	0.028	16.79	102.37	102.37
4	1.114	304.03	0.029	98.21	0.035	106.48	0.017	107.74	0.337	192.44	0.045	40.41	0.057	102.37	220.99	220.99
5	1.73	336.34	0.040	157.67	0.042	167.19	0.038	153.98	0.035	194.79	0.045	192.40	0.015	236.69	336.69	336.69
6	0.369	315.88	0.041	314.89	0.039	348.24	0.023	344.44	0.015	317.00	0.032	346.69	0.015	220.99	336.69	336.69
7	0.067	533.19	0.036	18.39	0.030	39.47	0.016	31.10	0.027	11.00	0.021	30.29	0.021	336.69	336.69	336.69

N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	2.278	34.12	1.292	42.45	1.668	24.28	1.736	359.00	1.926	359.00	1.926	359.00	1.926	359.00	1.926	359.00
2	0.332	26.98	0.171	250.28	0.098	154.88	0.074	150.90	0.074	150.90	0.074	150.90	0.074	150.90	0.074	150.90
3	0.030	215.07	0.018	184.17	0.011	327.18	0.016	59.75	0.011	51.63	0.011	84.14	0.011	84.14	0.011	84.14
4	0.043	69.77	0.012	24.75	0.025	30.75	0.025	182.49	0.025	182.49	0.025	234.07	0.025	234.07	0.025	234.07
5	0.022	105.74	0.031	222.07	0.014	189.17	0.014	189.17	0.014	189.17	0.014	189.17	0.014	189.17	0.014	189.17
6	0.013	244.10	0.012	182.75	0.005	128.34	0.005	128.34	0.005	128.34	0.005	128.34	0.005	128.34	0.005	128.34
7	0.016	350.59	0.019	182.75	0.019	128.34	0.019	128.34	0.019	128.34	0.019	128.34	0.019	128.34	0.019	128.34
8	0.012	350.59	0.019	182.75	0.019	128.34	0.019	128.34	0.019	128.34	0.019	128.34	0.019	128.34	0.019	128.34
9	0.012	350.59	0.019	182.75	0.019	128.34	0.019	128.34	0.019	128.34	0.019	128.34	0.019	128.34	0.019	128.34
10	0.012	350.59	0.019	182.75	0.019	128.34	0.019	128.34	0.019	128.34	0.019	128.34	0.019	128.34	0.019	128.34

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	220	284.71	1.369	242.40	0.166	152.70	0.090	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78
2	369	43.45	0.289	242.40	0.166	152.70	0.090	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78
3	166	152.70	0.090	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78
4	218	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78
5	152	152.70	0.090	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78
6	218	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78
7	152	152.70	0.090	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78
8	218	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78
9	152	152.70	0.090	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78
10	218	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78	0.052	218.78

\*\*\* STABILITY PARAMETER

W	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	1.183	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17
2	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17
3	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17
4	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17
5	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17
6	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17
7	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17
8	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17
9	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17
10	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17	0.007	342.17

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 132 ALPHA-MOB = 6.0 FOP RUN-PI 25.36  
PCW 26 ALPHA-PAB = 3.586  
POINT 5 SIGMA = 1.35 C-COMP = 35.586  
COMPUTED VREF = 27.002  
FREQUENCY = 19.08, N = 1.497

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X =	012-UPPER CPREAL CPIMAG	062-UPPER CPREAL CPIMAG	148-UPPER CPREAL CPIMAG	261-UPPER CPREAL CPIMAG	392-UPPER CPREAL CPIMAG	530-UPPER CPREAL CPIMAG	661-UPPER CPREAL CPIMAG
1	-1.0472	7.936	-6.768	3.80	-2.475	-1.114	-2.155
2	-1.266	1.351	-5.52	1.58	-5.27	1.46	-1.581
3	-1.169	1.171	-1.86	1.18	-2.43	2.37	-2.280
4	-1.077	1.039	-2.27	0.79	-2.33	1.24	-2.215
5	-1.033	0.916	-0.57	0.31	-0.33	0.16	-0.336
6	-1.033	0.726	-0.34	0.06	-0.14	0.07	-0.341
7	-1.033	0.555	-0.08	0.00	-0.03	0.00	-0.006
8	-1.033	0.411	0.11	0.00	0.03	0.00	-0.008
9	-1.033	0.336	0.11	0.00	0.03	0.00	-0.008

X =	774-UPPER CPREAL CPIMAG	860-UPPER CPREAL CPIMAG	910-UPPER CPREAL CPIMAG	112-LOWER CPREAL CPIMAG	162-LOWER CPREAL CPIMAG	148-LOWER CPREAL CPIMAG	261-LOWER CPREAL CPIMAG
1	-1.675	-1.534	-1.175	10.490	6.143	4.519	3.173
2	-1.227	0.672	-2.47	2.30	2.43	2.31	-2.173
3	-1.017	0.814	-2.01	2.16	2.56	2.42	-2.223
4	-0.873	0.915	-1.61	1.83	2.21	2.16	-2.024
5	-0.776	1.011	-1.27	1.50	1.82	1.80	-1.834
6	-0.716	1.116	-0.97	1.22	1.41	1.42	-1.698
7	-0.613	1.223	-0.71	1.01	1.23	1.23	-1.532

X =	392-LOWER CPREAL CPIMAG	530-LOWER CPREAL CPIMAG	661-LOWER CPREAL CPIMAG	774-LOWER CPREAL CPIMAG	860-LOWER CPREAL CPIMAG	910-LOWER CPREAL CPIMAG
1	1.0472	1.664	1.175	3.28	3.91	2.82
2	1.266	2.493	2.33	2.44	2.21	1.97
3	1.169	2.433	2.03	2.19	1.97	1.90
4	1.077	2.27	1.61	1.83	1.61	1.52
5	1.033	2.08	1.27	1.50	1.41	1.30
6	1.033	1.89	0.97	1.22	1.23	1.12
7	1.033	1.72	0.71	1.01	1.01	0.90
8	1.033	1.55	0.46	0.77	0.77	0.66
9	1.033	1.41	0.34	0.58	0.58	0.47

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE I -- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 130 ALPHA-MCL = 6.0 PDP RUNPT 26.06  
 RW 26 ALPHA-PAK = .5 C-COMP = 32596  
 POINT 5 SIGMA = -135. V-REF = 297.22  
 COMPUTED FREQUENCY = 17.78. K = .1497  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP	UPPER	PHI	148-UPPER	CP	UPPER	PHI	261-UPPER	CP	UPPER	PHI	392-UPPER	CP	UPPER	PHI	SIG	UPPER	PHI	661-UPPER			
1	2	1	171	163	173	49	077	179	71	2	871	191	78	2	714	204	822	183	90	2	717	217	57
1	3	1	154	145	157	89	187	153	94	4	530	159	86	4	543	8	286	115	83	4	546	12	08
1	4	1	324	261	315	17	194	171	72	4	319	163	66	4	236	170	236	132	59	4	239	177	36
1	5	1	282	254	257	33	141	133	79	4	043	323	11	4	043	337	039	132	70	4	046	337	70
1	6	1	099	90	84	84	039	343	79	4	034	355	52	4	034	346	034	355	92	4	037	355	26
1	7	1	256	242	227	72	047	244	41	4	045	209	90	4	052	210	045	209	95	4	048	207	84
1	8	1	059	133	189	17	023	257	67	4	009	280	90	4	003	293	032	280	78	4	040	277	91
1	9	1	038	282	258	93	019	306	93	4	009	315	46	4	003	293	012	306	34	4	025	289	18

X	N	CP	UPPER	PHI	860-UPPER	CP	UPPER	PHI	910-UPPER	CP	UPPER	PHI	012-LOWER	CP	LOWER	PHI	062-LOWER	CP	LOWER	PHI	148-LOWER	CP	LOWER	PHI
1	2	2	273	228	229	57	1	516	238	11	082	241	19	6	277	148	277	165	35	4	773	141	57	
1	3	2	267	144	166	66	2	256	151	11	281	156	14	6	245	4	262	167	62	4	238	155	71	
1	4	2	201	139	137	67	3	074	199	44	025	49	44	6	262	167	022	165	75	4	229	155	71	
1	5	2	040	338	327	67	4	074	332	47	019	261	26	6	046	326	046	326	82	4	027	326	16	
1	6	2	044	222	214	72	5	032	340	52	049	282	61	6	046	326	049	282	62	4	027	326	16	
1	7	2	041	279	292	41	6	040	279	55	030	23	69	6	024	241	024	241	79	4	026	326	16	
1	8	2	038	300	306	91	7	028	309	58	014	195	65	6	021	204	021	204	91	4	018	326	16	

X	N	CP	UPPER	PHI	530-LOWER	CP	LOWER	PHI	661-LOWER	CP	LOWER	PHI	860-LOWER	CP	LOWER	PHI	910-LOWER	CP	LOWER	PHI	148-LOWER	CP	LOWER	PHI
1	2	1	054	340	340	65	1	293	358	39	372	350	39	4	487	215	487	215	83	4	734	187	97	
1	3	1	051	159	155	83	2	210	158	39	260	23	32	4	241	23	245	23	62	4	625	187	97	
1	4	1	010	149	147	92	3	207	120	49	230	197	49	4	191	194	191	194	62	4	225	187	97	
1	5	1	016	314	314	94	4	024	321	79	045	317	64	4	042	331	042	331	68	4	190	187	97	
1	6	1	016	303	303	92	5	022	320	74	038	26	64	4	027	333	027	333	68	4	026	326	16	
1	7	1	018	310	308	71	6	022	300	81	036	20	74	4	033	320	033	320	71	4	026	326	16	
1	8	1	015	305	305	53	7	029	314	00	025	297	18	4	032	324	032	324	56	4	025	328	39	

ORIGINAL PAGE IS  
OF POOR  
QUALITY.

WAVE 1 -- COMPLEX PERIODICITY TEST  
WALL STATIONS

FILE 120 ALPHA=0.5 E 6.0 P\*P RUM\*PI 25.76  
PUN ALPHA=0.5 C-C\*P\*P E 32.506  
POINT 3 SIGMA E-135. V-REF E 200.02  
COMPUTED FREQENCY E 10.05, K E 1.197

FOURIER COEFFICIENTS, REAL & IMAGINARY PER RADIAN \*\*\*  
\*\*\* SLICE PRESSURES, ANGULAR FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPR	DELCPI	DELCPR	DELCPI	DELCPR	DELCPI	DELCPR	DELCPI	DELCPR	DELCPI	DELCPR	DELCPI	DELCPR	DELCPI	DELCPR	DELCPI	DELCPR	DELCPI
1	22.943	-1.178	12.515	-2.178	1.178	3.590	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224
2	22.075	-1.178	12.515	-2.178	1.178	3.590	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224
3	22.075	-1.178	12.515	-2.178	1.178	3.590	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224
4	22.075	-1.178	12.515	-2.178	1.178	3.590	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224
5	22.075	-1.178	12.515	-2.178	1.178	3.590	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224
6	22.075	-1.178	12.515	-2.178	1.178	3.590	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224
7	22.075	-1.178	12.515	-2.178	1.178	3.590	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224
8	22.075	-1.178	12.515	-2.178	1.178	3.590	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224
9	22.075	-1.178	12.515	-2.178	1.178	3.590	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224
10	22.075	-1.178	12.515	-2.178	1.178	3.590	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224	-1.555	5.224

N	DELCPR	DELCPI	DELCPR	DELCPI	DELCPR	DELCPI	DELCPR	DELCPI	DELCPR	DELCPI	DELCPR	DELCPI	DELCPR	DELCPI	DELCPR	DELCPI	DELCPR	DELCPI
1	2.724	1.472	784	1.724	1.724	1.516	732	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242
2	1.14	1.357	784	1.724	1.724	1.516	732	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242
3	1.14	1.357	784	1.724	1.724	1.516	732	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242
4	1.14	1.357	784	1.724	1.724	1.516	732	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242
5	1.14	1.357	784	1.724	1.724	1.516	732	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242
6	1.14	1.357	784	1.724	1.724	1.516	732	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242
7	1.14	1.357	784	1.724	1.724	1.516	732	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242
8	1.14	1.357	784	1.724	1.724	1.516	732	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242
9	1.14	1.357	784	1.724	1.724	1.516	732	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242
10	1.14	1.357	784	1.724	1.724	1.516	732	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242	5.242

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14	W15	W16	W17	W18	W19	W20
1	2.522	-1.764	4.078	-1.265	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178
2	2.522	-1.764	4.078	-1.265	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178
3	2.522	-1.764	4.078	-1.265	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178
4	2.522	-1.764	4.078	-1.265	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178
5	2.522	-1.764	4.078	-1.265	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178
6	2.522	-1.764	4.078	-1.265	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178
7	2.522	-1.764	4.078	-1.265	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178
8	2.522	-1.764	4.078	-1.265	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178
9	2.522	-1.764	4.078	-1.265	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178
10	2.522	-1.764	4.078	-1.265	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178	1.178

\*\*\* STABILITY PARAMETER

\*\*\* XI = .3841 \*\*\*



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 103 ALPHA-MCL = 6.0 PDP RUNPT 31.25  
 PUM 23 ALPHA-PAP = 0.5 C-COMP E 32424  
 POINT 1 SIGMA = 0.1 V-DEF E 190.71  
 COMPUTED FREQUENCY = 9.07, K E .3714

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIUS \*\*\*

N	X	F	CPREAL	CPUPPER	CPREAL	CPUPPER	CPREAL	CPUPPER	CPREAL	CPUPPER	CPREAL	CPUPPER	CPREAL	CPUPPER
1	-17	852	9.926	5.717	2.418	-3.550	1.322	-2.292	5.25	-1.752	-1.137	-1.299	-1.003	
2	1.429	4.52	4.46	4.48	4.48	1.446	4.48	1.397	4.97	4.65	5.43	4.96	4.96	
3	1.425	4.52	4.47	4.47	4.47	1.427	4.51	1.279	4.74	4.35	4.75	4.90	4.90	
4	1.381	4.31	4.31	4.31	4.31	1.159	4.26	1.204	4.08	4.02	4.24	4.17	4.17	
5	1.357	4.15	4.15	4.15	4.15	1.092	4.09	1.129	3.92	3.92	4.07	4.03	4.03	
6	1.322	3.98	3.98	3.98	3.98	1.035	3.95	1.069	3.79	3.79	3.96	3.93	3.93	
7	1.277	3.86	3.86	3.86	3.86	1.038	3.76	1.099	3.62	3.62	3.86	3.83	3.83	
8	1.223	3.77	3.77	3.77	3.77	1.039	3.66	1.129	3.47	3.47	3.77	3.74	3.74	
9	1.161	3.71	3.71	3.71	3.71	1.039	3.66	1.129	3.47	3.47	3.77	3.74	3.74	
10	1.083	3.66	3.66	3.66	3.66	1.039	3.66	1.129	3.47	3.47	3.77	3.74	3.74	

N	X	F	CPREAL	CPUPPER	CPREAL	CPUPPER	CPREAL	CPUPPER	CPREAL	CPUPPER	CPREAL	CPUPPER	CPREAL	CPUPPER
1	-17	852	9.926	5.717	2.418	-3.550	1.322	-2.292	5.25	-1.752	-1.137	-1.299	-1.003	
2	1.429	4.52	4.46	4.48	4.48	1.446	4.48	1.397	4.97	4.65	5.43	4.96	4.96	
3	1.425	4.52	4.47	4.47	4.47	1.427	4.51	1.279	4.74	4.35	4.75	4.90	4.90	
4	1.381	4.31	4.31	4.31	4.31	1.159	4.26	1.129	3.92	3.92	4.07	4.03	4.03	
5	1.357	4.15	4.15	4.15	4.15	1.092	4.09	1.069	3.79	3.79	3.96	3.93	3.93	
6	1.322	3.98	3.98	3.98	3.98	1.035	3.95	1.099	3.62	3.62	3.86	3.83	3.83	
7	1.277	3.86	3.86	3.86	3.86	1.038	3.76	1.099	3.62	3.62	3.86	3.83	3.83	
8	1.223	3.77	3.77	3.77	3.77	1.039	3.66	1.129	3.47	3.47	3.77	3.74	3.74	
9	1.161	3.71	3.71	3.71	3.71	1.039	3.66	1.129	3.47	3.47	3.77	3.74	3.74	
10	1.083	3.66	3.66	3.66	3.66	1.039	3.66	1.129	3.47	3.47	3.77	3.74	3.74	

N	X	F	CPREAL	CPUPPER	CPREAL	CPUPPER	CPREAL	CPUPPER	CPREAL	CPUPPER	CPREAL	CPUPPER	CPREAL	CPUPPER
1	-17	852	9.926	5.717	2.418	-3.550	1.322	-2.292	5.25	-1.752	-1.137	-1.299	-1.003	
2	1.429	4.52	4.46	4.48	4.48	1.446	4.48	1.397	4.97	4.65	5.43	4.96	4.96	
3	1.425	4.52	4.47	4.47	4.47	1.427	4.51	1.279	4.74	4.35	4.75	4.90	4.90	
4	1.381	4.31	4.31	4.31	4.31	1.159	4.26	1.129	3.92	3.92	4.07	4.03	4.03	
5	1.357	4.15	4.15	4.15	4.15	1.092	4.09	1.069	3.79	3.79	3.96	3.93	3.93	
6	1.322	3.98	3.98	3.98	3.98	1.035	3.95	1.099	3.62	3.62	3.86	3.83	3.83	
7	1.277	3.86	3.86	3.86	3.86	1.038	3.76	1.099	3.62	3.62	3.86	3.83	3.83	
8	1.223	3.77	3.77	3.77	3.77	1.039	3.66	1.129	3.47	3.47	3.77	3.74	3.74	
9	1.161	3.71	3.71	3.71	3.71	1.039	3.66	1.129	3.47	3.47	3.77	3.74	3.74	
10	1.083	3.66	3.66	3.66	3.66	1.039	3.66	1.129	3.47	3.47	3.77	3.74	3.74	

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 128 ALPHA-MCL = 6.0 POP RUN.PI 23.05  
 RUN 23 ALPHA-BAR = .90 V-COMP = 2242  
 POINT 1 ALPHA-SIGMA = -.90 V-REF = 199.71  
 COMPUTED FREQUENCY = 9.07, K = .0714

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	19.9236	153.47	6.204	157.78	3.789	159.58	2.357	167.46	1.757	189.47	1.757	189.47	1.757	189.47
2	3	4.538	353.35	1.312	18.77	1.357	19.41	1.544	18.84	1.433	19.32	1.433	19.32	1.433	19.32
3	4	1.98	350.89	.095	162.20	.086	172.82	.088	187.13	.103	191.79	.103	191.79	.100	187.01
4	5	1.384	36.62	.211	1.95	.208	357.64	.213	7.72	.218	10.96	.215	11.69	.210	10.71
5	6	1.159	258.58	.191	272.12	.185	271.33	.169	270.89	.173	265.37	.161	271.03	.145	262.28
6	7	1.23	276.33	.119	191.87	.133	197.87	.099	181.94	.107	176.80	.109	162.26	.095	152.99
7	8	1.795	295.33	.119	191.87	.133	197.87	.099	181.94	.107	176.80	.109	162.26	.095	152.99
8	9	1.037	52.78	.334	116.56	.350	100.44	.030	125.11	.038	143.97	.041	148.68	.067	152.45

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	1.722	232.98	.569	227.83	.557	229.39	1.049	216.83	.873	230.01	.873	230.01	.873	230.01
2	3	1.456	187.82	1.487	220.26	1.481	19.02	1.275	12.86	1.364	16.72	1.364	16.72	1.369	185.99
3	4	1.113	147.70	.205	193.07	.202	185.86	.116	173.51	.201	184.09	.201	184.09	.209	187.13
4	5	1.159	258.58	.191	272.12	.185	271.33	.169	270.89	.173	265.37	.161	271.03	.145	262.28
5	6	1.23	276.33	.119	191.87	.133	197.87	.099	181.94	.107	176.80	.109	162.26	.095	152.99
6	7	1.037	52.78	.334	116.56	.350	100.44	.030	125.11	.038	143.97	.041	148.68	.067	152.45

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	1.859	348.09	1.704	357.74	1.788	359.94	.873	230.01	.873	230.01	.873	230.01	.873	230.01
2	3	1.279	17.17	1.577	18.21	1.388	17.61	1.522	19.08	1.429	19.50	1.429	19.50	1.415	19.99
3	4	1.182	181.05	.126	186.62	.094	181.02	.122	191.28	.187	190.16	.183	185.48	.085	177.71
4	5	1.190	11.15	.192	17.34	.192	17.34	.201	11.15	.185	18.91	.185	18.91	.197	17.71
5	6	1.33	281.18	.127	251.00	.116	250.49	.122	249.54	.114	247.13	.114	247.13	.128	248.92
6	7	1.068	275.14	.072	151.65	.054	154.39	.039	152.17	.054	147.16	.054	147.16	.055	153.30
7	8	1.022	159.97	.027	166.24	.011	173.11	.014	139.09	.024	160.24	.024	160.24	.024	151.75





OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
 CENTER BLADE DATA, WALL STATIONS

FILE 158 ALPHA-MCL = 6.0 PDP RUN.PI 23.05  
 RUN 1 ALPHA-BAR = .5 0-COMP = 32424  
 POINT 1 SIGMA = -90. V-REF = 199.71  
 I COMPUTED FREQUENCY = 9.07, K = .0714

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	30.078	334.53	11.049	340.43	7.958	339.20	5.350	344.58	3.579	356.05	3.320	348.89	2.767	210.89	2.055	21.20
2	8.30	23.88	.021	174.27	.082	196.43	.041	192.35	.087	216.07	.096	214.40	.107	214.40	.107	225.32
3	3.26	172.18	.050	276.99	.025	175.50	.027	284.11	.033	321.79	.025	314.14	.018	314.14	.018	306.11
4	4.14	323.05	.033	344.63	.025	20.98	.043	119.61	.028	189.71	.022	201.72	.032	201.72	.032	159.78
5	1.14	323.05	.044	71.49	.090	90.38	.023	113.04	.032	129.62	.022	201.72	.032	201.72	.032	188.06
6	3.95	194.12	.031	98.10	.030	120.34	.032	173.68	.044	173.24	.030	210.89	.022	210.89	.022	135.70
7	0.51	144.14	.066	134.25	.073	173.00	.023	169.76	.044	173.24	.030	210.89	.022	210.89	.022	135.70
8	0.71	192.18	.028	247.21	.036	171.75	.016	250.81	.019	304.68	.017	300.97	.025	300.97	.025	137.75

N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	2.152	43.54	1.103	45.40	1.637	38.69	1.043	38.94	4.548	351.74	4.548	351.74	1.169	130.80	1.169	130.80
2	1.02	339.35	.043	256.39	.019	123.59	.083	235.69	.049	303.89	.049	303.89	.016	191.07	.016	191.07
3	0.10	140.53	.060	57.24	.028	284.34	.028	284.34	.028	198.16	.028	198.16	.007	237.29	.007	237.29
4	0.16	281.55	.051	84.41	.016	314.00	.016	314.00	.016	173.70	.016	173.70	.003	67.94	.003	67.94
5	0.50	221.60	.030	156.17	.019	129.28	.019	129.28	.029	184.65	.029	184.65	.007	67.94	.007	67.94
6	0.10	133.71	.005	332.25	.006	209.05	.006	209.05	.015	176.91	.015	176.91	.003	125.31	.003	125.31
7	0.44	197.71	.015	348.56	.021	276.81	.021	276.81	.015	296.91	.015	296.91	.005	212.63	.005	212.63
8	0.31	2.45														

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

BALL NO.	GAP FRACTION	N	W1	CP-MAG	PHI	W2	CP-MAG	PHI	W3	CP-MAG	PHI	W4	CP-MAG	PHI	W5	CP-MAG	PHI	W6	CP-MAG	PHI	W7	CP-MAG	PHI	W8	CP-MAG	PHI	W9	CP-MAG	PHI	W10	CP-MAG	PHI
2	0.14	333.66	4	277	359.86	14	641	160.06	14	414	171.72	14	414	171.72	9	933	77.10	9	933	77.10	9	933	77.10	9	933	77.10	9	933	77.10	9	933	77.10
1	0.06	225.98	1	904	16.95	2	039	219.08	2	770	223.22	2	770	223.22	1	545	261.54	1	545	261.54	1	545	261.54	1	545	261.54	1	545	261.54	1	545	261.54
3	0.16	174.65	1	374	161.34	2	066	89.82	2	291	184.51	2	291	184.51	1	336	154.85	1	336	154.85	1	336	154.85	1	336	154.85	1	336	154.85	1	336	154.85
4	0.06	196.81			237.01	5	51	37.93		130	141.1		130	141.1		374	16.98		374	16.98		374	16.98		374	16.98		374	16.98		374	16.98
5	0.14	284.70	4	404	343.16	5	284	356.65	5	264	285.72	5	264	285.72		303	246.36		303	246.36		303	246.36		303	246.36		303	246.36		303	246.36
6	0.14	284.70	4	404	343.16	5	284	356.65	5	264	285.72	5	264	285.72		303	246.36		303	246.36		303	246.36		303	246.36		303	246.36		303	246.36
7	0.14	284.70	4	404	343.16	5	284	356.65	5	264	285.72	5	264	285.72		303	246.36		303	246.36		303	246.36		303	246.36		303	246.36		303	246.36
8	0.14	284.70	4	404	343.16	5	284	356.65	5	264	285.72	5	264	285.72		303	246.36		303	246.36		303	246.36		303	246.36		303	246.36		303	246.36
9	0.14	284.70	4	404	343.16	5	284	356.65	5	264	285.72	5	264	285.72		303	246.36		303	246.36		303	246.36		303	246.36		303	246.36		303	246.36
10	0.14	284.70	4	404	343.16	5	284	356.65	5	264	285.72	5	264	285.72		303	246.36		303	246.36		303	246.36		303	246.36		303	246.36		303	246.36

\*\*\* STABILITY PARAMETER \*\*\*

N	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	PHI
1	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.5600
2	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.5600
3	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.5600
4	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.5600
5	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.5600
6	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.5600
7	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.5600
8	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.5600
9	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.5600
10	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.125	0.5600

MODE 1 --- CENTER BLADE DATA, WALL STATIONS

FILE 117 ALPHA-MCL = 6.0 PDP RUN.PI 33.07  
 POINT 23 ALPHA-CAR = 0.5 C-COMP = 32343  
 3 SIGMA = -9J. V-REF = 199.45  
 COMPUTED FREQUENCY = 15.57, K = 1226

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CPREAL-UPPER	CPREAL-LOWER	CPREAL-UPPER	CPREAL-LOWER	CPREAL-UPPER	CPREAL-LOWER	CPREAL-UPPER	CPREAL-LOWER	CPREAL-UPPER	CPREAL-LOWER
1	1	9.993	1.779	601	-2.831	-3.553	-1.117	-2.377	-1.769	-2.078	-2.034
2	2	1.5234	1.423	0.230	-0.831	-0.379	-1.117	-2.271	-1.115	-0.228	-0.036
3	3	1.177	1.177	0.295	-0.297	-0.095	-0.866	-0.279	-0.050	-0.175	-0.022
4	4	1.177	1.177	0.147	-0.158	-0.076	-0.866	-0.205	-0.081	-0.077	-0.050
5	5	1.175	1.175	0.110	-0.111	-0.053	-0.834	-0.223	-0.033	-0.048	-0.028
6	6	1.171	1.171	0.066	-0.065	-0.046	-0.846	-0.242	-0.043	-0.063	-0.050
7	7	1.170	1.170	0.056	-0.055	-0.041	-0.846	-0.242	-0.043	-0.063	-0.050
8	8	1.170	1.170	0.034	-0.032	-0.017	-0.846	-0.242	-0.043	-0.063	-0.050
9	9	1.170	1.170	0.016	-0.016	-0.017	-0.846	-0.242	-0.043	-0.063	-0.050
10	10	1.170	1.170	0.021	-0.021	-0.017	-0.846	-0.242	-0.043	-0.063	-0.050

X	N	CPREAL-UPPER	CPREAL-LOWER	CPREAL-UPPER	CPREAL-LOWER	CPREAL-UPPER	CPREAL-LOWER	CPREAL-UPPER	CPREAL-LOWER	CPREAL-UPPER	CPREAL-LOWER
1	1	1.875	-1.872	-1.117	7.047	-5.119	-2.327	3.094	-2.392	1.959	-1.721
2	2	0.526	-0.744	0.316	-1.221	-1.122	-1.221	3.094	-2.392	1.959	-1.721
3	3	0.186	-0.770	0.193	-1.176	-1.018	-1.176	3.094	-2.392	1.959	-1.721
4	4	0.122	-0.235	0.001	-0.021	-0.018	-0.021	3.094	-2.392	1.959	-1.721
5	5	0.045	-0.049	0.039	-0.055	-0.015	-0.049	3.094	-2.392	1.959	-1.721
6	6	0.001	-0.001	0.025	-0.013	-0.012	-0.013	3.094	-2.392	1.959	-1.721
7	7	0.001	-0.001	0.014	-0.009	-0.009	-0.009	3.094	-2.392	1.959	-1.721
8	8	0.001	-0.001	0.009	-0.009	-0.009	-0.009	3.094	-2.392	1.959	-1.721
9	9	0.001	-0.001	0.009	-0.009	-0.009	-0.009	3.094	-2.392	1.959	-1.721
10	10	0.001	-0.001	0.009	-0.009	-0.009	-0.009	3.094	-2.392	1.959	-1.721

X	N	CPREAL-UPPER	CPREAL-LOWER	CPREAL-UPPER	CPREAL-LOWER	CPREAL-UPPER	CPREAL-LOWER	CPREAL-UPPER	CPREAL-LOWER	CPREAL-UPPER	CPREAL-LOWER
1	1	1.111	-1.111	0.419	-0.419	-0.012	-0.419	0.419	-0.419	0.419	-0.419
2	2	0.067	-0.067	0.046	-0.046	-0.012	-0.046	0.046	-0.046	0.046	-0.046
3	3	0.020	-0.020	0.023	-0.023	-0.012	-0.023	0.023	-0.023	0.023	-0.023
4	4	0.015	-0.015	0.014	-0.014	-0.012	-0.014	0.014	-0.014	0.014	-0.014
5	5	0.015	-0.015	0.014	-0.014	-0.012	-0.014	0.014	-0.014	0.014	-0.014
6	6	0.015	-0.015	0.014	-0.014	-0.012	-0.014	0.014	-0.014	0.014	-0.014
7	7	0.015	-0.015	0.014	-0.014	-0.012	-0.014	0.014	-0.014	0.014	-0.014
8	8	0.015	-0.015	0.014	-0.014	-0.012	-0.014	0.014	-0.014	0.014	-0.014
9	9	0.015	-0.015	0.014	-0.014	-0.012	-0.014	0.014	-0.014	0.014	-0.014
10	10	0.015	-0.015	0.014	-0.014	-0.012	-0.014	0.014	-0.014	0.014	-0.014

CPREAL-UPPER  
 CPREAL-LOWER

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 110 ALPHA-MCR = 6.0 POP RUN-PT 33.07  
 RUM POINT SIGMA = -0.5 O-COMP = 33.14  
 COMPUTED FREQUENCY = 15.57, K = .1226  
 V-CREF = 199.45

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	19.546	150.99	6.219	163.78	4.098	171.51	2.853	187.11	2.683	197.57	2.908	212.48	2.908	224.79
1	2	1.612	255.19	1.132	209.59	1.129	222.75	1.129	218.50	1.201	206.66	1.201	201.95	1.201	191.59
1	3	1.174	179.05	0.466	253.19	0.330	215.04	0.233	204.42	0.337	197.57	0.337	195.05	0.337	181.56
1	4	1.64	261.09	0.061	229.08	0.061	206.18	0.061	197.57	0.061	181.56	0.061	166.15	0.061	148.08
1	5	0.380	329.93	0.070	35.59	0.070	53.53	0.070	48.84	0.070	46.07	0.070	45.15	0.070	45.08
1	6	0.52	172.49	0.016	163.02	0.016	175.96	0.016	177.96	0.016	168.07	0.016	167.51	0.016	172.01
1	7	0.34	150.54	0.034	136.02	0.040	148.17	0.027	141.98	0.024	142.58	0.024	137.71	0.024	125.66
1	8	0.34	150.54	0.034	136.02	0.040	148.17	0.027	141.98	0.024	142.58	0.024	137.71	0.024	125.66
1	9	0.34	150.54	0.034	136.02	0.040	148.17	0.027	141.98	0.024	142.58	0.024	137.71	0.024	125.66
1	10	0.34	150.54	0.034	136.02	0.040	148.17	0.027	141.98	0.024	142.58	0.024	137.71	0.024	125.66

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	2.519	228.38	2.133	211.47	1.871	211.99	1.573	226.71	1.322	226.71	1.022	226.71	0.922	226.71
1	2	0.19	220.47	0.078	215.29	0.078	210.77	0.078	205.22	0.078	197.57	0.078	191.56	0.078	181.56
1	3	0.31	308.01	0.036	286.70	0.036	260.54	0.036	235.64	0.036	209.59	0.036	181.56	0.036	150.54
1	4	0.61	305.38	0.037	301.01	0.037	267.19	0.037	235.64	0.037	209.59	0.037	181.56	0.037	150.54
1	5	0.28	47.27	0.062	46.01	0.062	42.69	0.062	38.89	0.062	35.59	0.062	32.29	0.062	29.08
1	6	0.53	181.14	0.330	171.65	0.225	176.47	0.122	152.39	0.076	142.58	0.053	125.66	0.053	102.06
1	7	0.25	135.16	0.017	118.51	0.022	130.15	0.022	126.71	0.022	125.71	0.022	125.71	0.022	125.71
1	8	0.25	135.16	0.017	118.51	0.022	130.15	0.022	126.71	0.022	125.71	0.022	125.71	0.022	125.71
1	9	0.25	135.16	0.017	118.51	0.022	130.15	0.022	126.71	0.022	125.71	0.022	125.71	0.022	125.71
1	10	0.25	135.16	0.017	118.51	0.022	130.15	0.022	126.71	0.022	125.71	0.022	125.71	0.022	125.71

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	1.536	190.61	1.294	309.19	0.988	301.38	0.771	326.71	0.487	326.71	0.271	326.71	0.271	326.71
1	2	0.256	190.61	0.090	303.90	0.080	293.90	0.080	288.69	0.080	282.34	0.080	276.09	0.080	270.84
1	3	0.20	190.61	0.025	296.25	0.025	288.69	0.025	282.34	0.025	276.09	0.025	270.84	0.025	265.59
1	4	0.44	281.09	0.047	291.36	0.047	282.34	0.047	276.09	0.047	270.84	0.047	265.59	0.047	260.34
1	5	0.079	193.47	0.026	219.82	0.024	164.53	0.024	154.16	0.024	143.00	0.024	137.71	0.024	132.46
1	6	0.021	133.33	0.026	135.55	0.024	131.85	0.024	127.71	0.024	123.58	0.024	119.45	0.024	115.32
1	7	0.021	133.33	0.026	135.55	0.024	131.85	0.024	127.71	0.024	123.58	0.024	119.45	0.024	115.32
1	8	0.021	133.33	0.026	135.55	0.024	131.85	0.024	127.71	0.024	123.58	0.024	119.45	0.024	115.32
1	9	0.021	133.33	0.026	135.55	0.024	131.85	0.024	127.71	0.024	123.58	0.024	119.45	0.024	115.32
1	10	0.021	133.33	0.026	135.55	0.024	131.85	0.024	127.71	0.024	123.58	0.024	119.45	0.024	115.32

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- 9CWI PERIODICITY TEST  
CENTR BLADE DATA, WALL STATIONS

FILE 110 ALPHA-WCL = 6.0 P/P RUN/PT 23.677  
P/W ALPHA-PAB = .5 C-COMP = .32343  
PRINT 23 SIGMA = -95.0 V-REF = 190.45  
COMPUTED FREQUENCY = 15.57, K = .1226

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.148		.261		.392		.550		.661		
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	
1	24.167	-14.743	10.180	-4.113	7.028	-2.292	4.790	-1.368	3.505	-0.96	0.96	2.593	1.190
2	1.116	-.633	-.042	-.043	-.020	-.031	-.027	-.019	-.037	-.019	-.019	-.043	-.047
3	-.321	-.087	-.026	-.043	-.013	-.052	-.011	-.040	-.013	-.016	-.019	-.010	-.022
4	-.193	-.063	-.011	-.076	-.013	-.098	-.011	-.070	-.033	-.014	-.008	-.008	-.005
5	-.145	-.045	-.020	-.039	-.007	-.110	-.005	-.072	-.015	-.014	-.010	-.005	-.005
6	-.116	-.031	-.013	-.025	-.007	-.087	-.012	-.056	-.024	-.010	-.010	-.018	-.016
7	-.091	-.024	-.010	-.016	-.009	-.074	-.014	-.047	-.033	-.015	-.015	-.017	-.010
8	-.073	-.016	-.006	-.012	-.009	-.061	-.014	-.042	-.044	-.021	-.021	-.017	-.010
9	-.058	-.011	-.004	-.008	-.007	-.051	-.014	-.038	-.054	-.033	-.033	-.014	-.010
10	-.043	-.008	-.003	-.006	-.005	-.041	-.014	-.032	-.064	-.044	-.044	-.014	-.010

X	.774		.910		.910		.910		.910		.910	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	1.576	1.573	1.350	1.350	1.133	1.133	0.913	0.913	0.785	0.785	0.649	0.649
2	-.015	-.008	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010
3	-.011	-.008	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010
4	-.011	-.008	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010
5	-.011	-.008	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010
6	-.011	-.008	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010
7	-.011	-.008	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010
8	-.011	-.008	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010
9	-.011	-.008	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010
10	-.011	-.008	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010

WALL NO.	.125		.125		.125		.125		.125		.125		.125	
	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	3.19	-2.272	3.121	-1.340	-13.203	4.237	-2.208	-9.12	3.180	9.585	9.585	9.585	9.585	9.585
2	1.68	-.248	1.226	-.248	1.146	-.248	1.146	-.248	1.146	-.248	1.146	-.248	1.146	-.248
3	1.40	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243
4	1.40	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243
5	1.40	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243
6	1.40	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243
7	1.40	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243
8	1.40	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243
9	1.40	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243
10	1.40	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243	1.45	-.243

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

\*\*\* STABILITY PARAMETER

W1 XI = .6057

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 113 ALPHA-MAG = 6.2 POP RUN.PI = 31.77  
 POINT 3 ALPHA-RAD = 93.0 C-COMP = 32343  
 COMPUTED FREQUENCY = 15.57 V-REF = 199.45  
 K = .1226

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE = 15.57, PER RADIAN \*\*\*  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	28	0.36	329.87	10.98	338.70	7.64	336.94	4.93	344.76	3.59	353.76	2.85	364.64
2	27	0.37	198.89	0.46	354.07	0.20	179.11	0.14	147.75	0.01	147.61	0.01	147.58
3	26	0.37	162.89	0.44	100.53	0.22	183.43	0.15	147.10	0.01	152.37	0.01	152.37
4	25	0.37	270.58	0.39	47.50	0.22	104.43	0.08	77.70	0.01	279.58	0.01	279.58
5	24	0.37	341.59	0.28	292.14	0.16	255.23	0.08	271.95	0.01	169.58	0.01	169.58
6	23	0.37	207.89	0.44	117.81	0.16	122.34	0.20	103.95	0.01	155.19	0.01	155.19
7	22	0.37	105.71	0.30	170.76	0.10	236.18	0.20	186.70	0.01	226.62	0.01	226.62
8	21	0.37	119.58	0.10	287.37	0.10	314.01	0.22	309.41	0.01	294.12	0.01	294.12
9	20	0.37	232.44	0.17	18.75	0.20	358.46	0.04	21.11	0.01	10.29	0.01	10.29
10	19	0.38	235.44	0.17	18.75	0.20	358.46	0.04	21.11	0.01	10.29	0.01	10.29

X =	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	2	0.12	47.57	1.81	41.77	1.56	39.18	1.37	37.14	1.24	35.14	1.10	33.14
2	3	0.12	203.22	0.15	161.59	0.14	161.90	0.14	166.33	0.14	170.70	0.14	174.50
3	4	0.13	178.22	0.16	334.75	0.16	302.95	0.16	302.95	0.16	310.40	0.16	310.40
4	5	0.13	36.67	0.21	107.71	0.24	6.54	0.24	6.54	0.24	139.62	0.24	139.62
5	6	0.13	127.83	0.15	228.33	0.23	174.36	0.23	174.36	0.23	202.24	0.23	202.24
6	7	0.13	245.46	0.11	343.18	0.19	180.92	0.19	180.92	0.19	340.68	0.19	340.68
7	8	0.12	1.26	0.14	28.70	0.17	336.55	0.17	336.55	0.17	300.57	0.17	300.57
8	9	0.12	56.89	0.08	214.43	0.17	269.79	0.17	269.79	0.17	300.57	0.17	300.57
9	10	0.07	300.89	0.07	214.43	0.17	269.79	0.17	269.79	0.17	300.57	0.17	300.57

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2	239	283.52	3.46	137.24	14.53	173.75	2.38	203.47	10.09	71.64	1.00	71.64	
2	3	266	195.11	4.45	300.46	15.66	354.81	2.08	203.47	3.46	225.56	1.12	225.56	
3	4	221	152.16	1.51	197.13	11.57	278.85	1.93	204.43	1.34	132.62	1.34	132.62	
4	5	045	302.38	0.90	36.67	11.9	137.86	0.73	88.75	1.86	10.66	1.86	10.66	
5	6	090	47.59	0.77	43.26	10.4	28.79	0.50	317.42	1.25	105.76	1.25	105.76	
6	7	075	163.12	1.01	150.32	10.7	146.42	0.70	147.46	0.21	160.66	0.21	160.66	
7	8	045	135.77	0.83	86.35	0.77	143.64	0.77	142.91	0.45	297.72	0.45	297.72	

\*\*\* STABILITY PARAMETER

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	
1	2	239	283.52	3.46	137.24	14.53	173.75	2.38	203.47	10.09	71.64	1.00	71.64
2	3	266	195.11	4.45	300.46	15.66	354.81	2.08	203.47	3.46	225.56	1.12	225.56
3	4	221	152.16	1.51	197.13	11.57	278.85	1.93	204.43	1.34	132.62	1.34	132.62
4	5	045	302.38	0.90	36.67	11.9	137.86	0.73	88.75	1.86	10.66	1.86	10.66
5	6	090	47.59	0.77	43.26	10.4	28.79	0.50	317.42	1.25	105.76	1.25	105.76
6	7	075	163.12	1.01	150.32	10.7	146.42	0.70	147.46	0.21	160.66	0.21	160.66
7	8	045	135.77	0.83	86.35	0.77	143.64	0.77	142.91	0.45	297.72	0.45	297.72

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS  
 DCWT PERIODICITY TEST  
 FILE 112 ALPHA-MCL = 6.2 PDB RUN PT 37.079  
 RUN 23 ALPHA-PAR = 0.2 P-COMP = 32.075  
 POINT 25 SIGMA = 0.1 V-REF = 12.661  
 FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*  
 COMPUTED FREQUENCY = 19.16, K = .1316

X	N	CPREAL	CPIMAG	UPPER	LOWER	CPREAL	CPIMAG	UPPER	LOWER	CPREAL	CPIMAG	UPPER	LOWER	CPREAL	CPIMAG	UPPER	LOWER	CPREAL	CPIMAG	UPPER	LOWER		
1	1	1.5163	9.5774	5.9277	2.1170	3.8921	0.8254	2.7336	1.4963	2.3559	0.8890	2.2654	1.5310	1.9523	1.7528	2.0033	1.7660	2.0033	1.7660	2.0033	1.7660	2.0033	
2	2	1.2211	5.5029	4.9274	1.7192	1.7192	0.0222	3.3741	0.2222	4.5511	0.2222	3.3741	0.2222	2.4003	0.0572	3.3741	0.2222	2.4003	0.0572	3.3741	0.2222	2.4003	0.0572
3	3	0.2911	0.2329	1.1664	0.1113	1.1577	0.0474	1.9744	0.0474	1.1422	0.0668	1.9744	0.0474	0.0817	0.0115	1.9744	0.0474	0.0817	0.0115	1.9744	0.0474	0.0817	0.0115
4	4	0.2911	0.2329	0.9977	0.0828	0.9888	0.0227	1.1916	0.0227	0.914	0.0266	1.1916	0.0227	0.1677	0.021	1.1916	0.0227	0.1677	0.021	1.1916	0.0227	0.1677	0.021
5	5	0.1116	0.0268	0.9394	0.0228	0.9377	0.0335	0.9929	0.0335	0.945	0.011	0.9929	0.0335	0.0877	0.008	0.9929	0.0335	0.0877	0.008	0.9929	0.0335	0.0877	0.008
6	6	0.1116	0.0268	0.8727	0.0113	0.8704	0.0119	0.9677	0.0113	0.825	0.0225	0.9677	0.0113	0.0523	0.002	0.9677	0.0113	0.0523	0.002	0.9677	0.0113	0.0523	0.002
7	7	0.0567	0.0111	0.7940	0.0110	0.7937	0.0119	0.9377	0.0110	0.775	0.0113	0.9377	0.0110	0.0225	0.002	0.9377	0.0110	0.0225	0.002	0.9377	0.0110	0.0225	0.002
8	8	0.0567	0.0111	0.7490	0.0110	0.7490	0.0119	0.9377	0.0110	0.775	0.0113	0.9377	0.0110	0.0225	0.002	0.9377	0.0110	0.0225	0.002	0.9377	0.0110	0.0225	0.002
9	9	0.0567	0.0111	0.7490	0.0110	0.7490	0.0119	0.9377	0.0110	0.775	0.0113	0.9377	0.0110	0.0225	0.002	0.9377	0.0110	0.0225	0.002	0.9377	0.0110	0.0225	0.002
10	10	0.0567	0.0111	0.7490	0.0110	0.7490	0.0119	0.9377	0.0110	0.775	0.0113	0.9377	0.0110	0.0225	0.002	0.9377	0.0110	0.0225	0.002	0.9377	0.0110	0.0225	0.002

X	N	CPREAL	CPIMAG	UPPER	LOWER	CPREAL	CPIMAG	UPPER	LOWER	CPREAL	CPIMAG	UPPER	LOWER	CPREAL	CPIMAG	UPPER	LOWER	CPREAL	CPIMAG	UPPER	LOWER		
1	1	1.1516	8.8185	8.944	6.78	5.86	5.19	8.944	6.78	5.86	5.19	8.944	6.78	3.68	3.81	8.944	6.78	3.68	3.81	8.944	6.78	3.68	3.81
2	2	0.2911	0.2329	0.7777	0.347	0.7777	0.347	0.60	0.347	0.527	0.347	0.60	0.347	0.0817	0.0115	0.60	0.347	0.0817	0.0115	0.60	0.347	0.0817	0.0115
3	3	0.2911	0.2329	0.7115	0.111	0.7115	0.111	0.534	0.111	0.422	0.111	0.534	0.111	0.0817	0.0115	0.534	0.111	0.0817	0.0115	0.534	0.111	0.0817	0.0115
4	4	0.2911	0.2329	0.6453	0.112	0.6453	0.112	0.451	0.112	0.347	0.112	0.451	0.112	0.0817	0.0115	0.451	0.112	0.0817	0.0115	0.451	0.112	0.0817	0.0115
5	5	0.2911	0.2329	0.5791	0.112	0.5791	0.112	0.374	0.112	0.266	0.112	0.374	0.112	0.0817	0.0115	0.374	0.112	0.0817	0.0115	0.374	0.112	0.0817	0.0115
6	6	0.2911	0.2329	0.5129	0.112	0.5129	0.112	0.297	0.112	0.186	0.112	0.297	0.112	0.0817	0.0115	0.297	0.112	0.0817	0.0115	0.297	0.112	0.0817	0.0115
7	7	0.2911	0.2329	0.4467	0.112	0.4467	0.112	0.220	0.112	0.109	0.112	0.220	0.112	0.0817	0.0115	0.220	0.112	0.0817	0.0115	0.220	0.112	0.0817	0.0115
8	8	0.2911	0.2329	0.3805	0.112	0.3805	0.112	0.143	0.112	0.0225	0.112	0.143	0.112	0.0817	0.0115	0.143	0.112	0.0817	0.0115	0.143	0.112	0.0817	0.0115
9	9	0.2911	0.2329	0.3143	0.112	0.3143	0.112	0.066	0.112	0.002	0.112	0.066	0.112	0.0817	0.0115	0.066	0.112	0.0817	0.0115	0.066	0.112	0.0817	0.0115
10	10	0.2911	0.2329	0.2481	0.112	0.2481	0.112	0.009	0.112	0.002	0.112	0.009	0.112	0.0817	0.0115	0.009	0.112	0.0817	0.0115	0.009	0.112	0.0817	0.0115

ORIGINAL DATA  
OF POOR QUALITY

MODE 1 --- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 113 ALPHA-MCK = 6.0 PDP RUNPT 3309  
 POINT 5 ALPHA-PAR = .5 C-COMP = 32J76  
 5 SIGMA = -9.5 V-REF = 198.61  
 COMPUTED FREQUENCY = 19.16, K = .1516  
 COMPUTED AND PHASE ANGLE

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	19.787	149.75	6.475	160.12	3.978	168.34	2.740	183.76	2.513	200.47	2.723	213.75
2	1.651	15.039	.442	189.21	.362	185.12	.077	16.40	.073	121.58	.093	138.44
3	1.545	248.30	.102	145.45	.189	165.46	.189	165.46	.087	174.08	.176	180.93
4	.041	174.70	.045	219.77	.022	165.97	.022	314.77	.027	332.04	.100	320.93
5	1.348	96.20	.093	175.26	.088	175.53	.090	175.50	.052	170.95	.104	174.21
7	1.374	226.28	.072	214.61	.051	222.57	.050	223.33	.052	216.95	.054	228.18
8	.066	307.48	.030	353.75	.071	44.36	.070	19.33	.077	312.46	.068	29.57
9	.067	351.72	.041	345.85	.038	346.88	.018	65.11	.027	331.98	.005	62.94
10							.033	337.11	.023	331.98	.029	343.62

N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	2.237	226.47	1.456	229.34	1.496	281.34	9.593	326.98	5.104	330.04	3.757	325.69
2	.074	332.28	.073	271.97	.176	125.49	.176	125.49	.131	331.29	.107	162.88
3	1.45	192.50	.138	195.66	.035	162.84	.035	162.84	.183	162.95	.175	293.57
4	.021	170.77	.083	352.92	.039	109.21	.039	109.21	.047	167.16	.047	154.56
5	.089	233.95	.047	233.68	.012	175.87	.012	175.87	.027	160.33	.032	194.24
6	.069	40.62	.065	40.33	.072	61.47	.072	61.47	.062	56.02	.055	61.47
7	.028	226.17	.019	311.75	.038	157.19	.038	157.19	.027	148.63	.018	183.12
8	.029	323.99	.029	311.75	.018	271.93	.018	271.93	.022	283.37	.028	286.52
9												
10												

N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1.425	324.94	1.083	325.85	1.776	319.04	1.069	89.74	5.54	197.99	5.20	183.83
2	.054	36.56	.052	199.31	.069	35.17	.196	52.58	.482	182.46	.770	47.91
3	.142	166.36	.176	321.43	.130	180.98	.184	37.37	.124	183.00	.127	190.40
4	.055	155.73	.072	320.49	.071	164.68	.176	19.45	.071	159.17	.027	116.94
5	.021	201.34	.041	197.72	.036	215.31	.222	54.54	.033	152.62	.053	217.23
6	.059	48.65	.059	52.26	.050	46.34	.249	56.16	.063	235.27	.063	41.99
7	.011	154.74	.039	210.16	.014	309.56	.219	15.06	.003	311.51	.037	242.76
8												
9												
10												





ORIGINAL FACE IS  
OF POOR QUALITY

CCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 112 ALPHA-MCL = 6.0 POP RUN-PI 23.09  
 PCH 23 ALPHA-PAR = 0.5 C-COMP = 32.07  
 POINT 25 SIGMA = -93.0  
 COMPUTED FREQUENCY = 19.16, K = .1516  
 V-DEF = 193.61

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE, PER RADIAN \*\*\*  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	22.350	328.57	11.252	336.23	7.597	327.18	4.824	245.72	3.527	1.04	3.297	15.98
2	22.329	329.77	11.262	335.44	7.597	327.18	4.824	245.72	3.527	1.04	3.297	15.98
3	22.329	329.77	11.262	335.44	7.597	327.18	4.824	245.72	3.527	1.04	3.297	15.98
4	22.329	329.77	11.262	335.44	7.597	327.18	4.824	245.72	3.527	1.04	3.297	15.98
5	22.329	329.77	11.262	335.44	7.597	327.18	4.824	245.72	3.527	1.04	3.297	15.98
6	22.329	329.77	11.262	335.44	7.597	327.18	4.824	245.72	3.527	1.04	3.297	15.98
7	22.329	329.77	11.262	335.44	7.597	327.18	4.824	245.72	3.527	1.04	3.297	15.98
8	22.329	329.77	11.262	335.44	7.597	327.18	4.824	245.72	3.527	1.04	3.297	15.98
9	22.329	329.77	11.262	335.44	7.597	327.18	4.824	245.72	3.527	1.04	3.297	15.98
10	22.329	329.77	11.262	335.44	7.597	327.18	4.824	245.72	3.527	1.04	3.297	15.98

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	2.278	47.45	1.297	62.89	1.538	29.32	1.538	29.32	336	351.74	1.123	326.70
2	2.278	47.45	1.297	62.89	1.538	29.32	1.538	29.32	336	351.74	1.123	326.70
3	2.278	47.45	1.297	62.89	1.538	29.32	1.538	29.32	336	351.74	1.123	326.70
4	2.278	47.45	1.297	62.89	1.538	29.32	1.538	29.32	336	351.74	1.123	326.70
5	2.278	47.45	1.297	62.89	1.538	29.32	1.538	29.32	336	351.74	1.123	326.70
6	2.278	47.45	1.297	62.89	1.538	29.32	1.538	29.32	336	351.74	1.123	326.70
7	2.278	47.45	1.297	62.89	1.538	29.32	1.538	29.32	336	351.74	1.123	326.70
8	2.278	47.45	1.297	62.89	1.538	29.32	1.538	29.32	336	351.74	1.123	326.70
9	2.278	47.45	1.297	62.89	1.538	29.32	1.538	29.32	336	351.74	1.123	326.70
10	2.278	47.45	1.297	62.89	1.538	29.32	1.538	29.32	336	351.74	1.123	326.70

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	2.322	292.18	1.322	307.16	1.577	347.74	1.577	347.74	2.205	195.87	1.125	175.74
2	2.322	292.18	1.322	307.16	1.577	347.74	1.577	347.74	2.205	195.87	1.125	175.74
3	2.322	292.18	1.322	307.16	1.577	347.74	1.577	347.74	2.205	195.87	1.125	175.74
4	2.322	292.18	1.322	307.16	1.577	347.74	1.577	347.74	2.205	195.87	1.125	175.74
5	2.322	292.18	1.322	307.16	1.577	347.74	1.577	347.74	2.205	195.87	1.125	175.74
6	2.322	292.18	1.322	307.16	1.577	347.74	1.577	347.74	2.205	195.87	1.125	175.74
7	2.322	292.18	1.322	307.16	1.577	347.74	1.577	347.74	2.205	195.87	1.125	175.74
8	2.322	292.18	1.322	307.16	1.577	347.74	1.577	347.74	2.205	195.87	1.125	175.74
9	2.322	292.18	1.322	307.16	1.577	347.74	1.577	347.74	2.205	195.87	1.125	175.74
10	2.322	292.18	1.322	307.16	1.577	347.74	1.577	347.74	2.205	195.87	1.125	175.74

\*\*\* STABILITY PARAMETER \*\*\*  
 \* XI = .6223 \*  
 \* \*\*\*\*\*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 103 ALPHA-MCL = 6.0 PDP RUN.PT 22.01  
RUN 22 ALPHA-RAP = .5 Q-COMP = .33188  
POINT 1 SIGMA = .45 V-REF = 202.05  
COMPUTED FREQUENCY = 9.07, K = .0705

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-10	.625	7.604	-4.692	-2.249	-1.893	-1.656	-1.317
2	-730	.730	1.239	-3.266	-2.249	-1.893	-1.656	-1.317
3	.059	.441	3.92	.521	-2.249	-1.893	-1.656	-1.317
4	.048	.066	4.42	.776	-2.249	-1.893	-1.656	-1.317
5	.007	.162	1.18	.047	-2.249	-1.893	-1.656	-1.317
6	.043	.198	2.68	.344	-2.249	-1.893	-1.656	-1.317
7	.009	.135	1.18	.134	-2.249	-1.893	-1.656	-1.317
8	.043	.053	3.37	.205	-2.249	-1.893	-1.656	-1.317
9	.103	.035	0.43	.048	-2.249	-1.893	-1.656	-1.317
10	.043	-.015	0.35	.026	-2.249	-1.893	-1.656	-1.317

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-1	.028	-2.443	-.851	4.761	1.845	1.326	.717
2	-.034	.387	2.37	-.664	-5.502	-618	-615	-628
3	.031	-.456	4.46	.821	-3.347	-.752	-.757	-.777
4	.038	-.170	1.68	-.072	-1.48	-.038	-.041	-.029
5	.025	.070	0.81	-.008	-.063	-.025	-.015	-.017
6	.022	-.343	3.46	-.297	-.284	-.025	-.274	-.331
7	.075	-.075	0.69	-.224	-.297	-.215	-.274	-.331
8	.075	.017	1.22	-.254	-.073	-.230	-.229	-.209
9	.003	.067	0.54	-.063	-.028	-.057	-.052	-.041
10	-.003	.041	0.33	-.015	-.012	-.007	-.010	-.005

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	250	-1.808	116	-.026	-1.329	-.504	-.041
2	-.354	.349	-.689	-.622	-.409	-.662	-.615
3	.714	-.374	1.91	-.791	-.463	-.805	-.820
4	-.019	.155	-.019	-.049	-.151	-.029	-.043
5	.031	-.080	1.00	-.061	-.079	-.057	-.065
6	.030	-.313	3.87	-.340	-.332	-.331	-.339
7	.001	-.005	1.04	-.229	-.002	-.239	-.239
8	.001	.005	0.54	-.183	-.002	-.159	-.162
9	.005	.049	0.33	-.048	-.002	-.050	-.036
10	.015	.015	0.21	-.002	-.002	-.027	-.014

MODE 1 -- CENTER BLADE DATA, WALL STATIONS  
QCM PERIODICITY TEST

FILE 103 ALPHA-MCL = 6.0 POP RUN.PY 22.031  
 RUN 22 ALPHA-BAR = .5 G-COMP = 33182  
 POINT 1 SIGMA = -45. V-REF = 202.05  
 COMPUTED FREQUENCY = 9.07, K = .0705  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI				
1	13	056	144.41	4	853	165.21	3	269	177.46	2	371	198.49	2	461	219.71	2	791	233.60	2	880	242.78
2	3	738	8.53	7	12	146.03	3	269	177.46	2	371	198.49	2	461	219.71	2	791	233.60	2	880	242.78
3	4	445	277.68	8	998	330.51	4	853	165.21	3	269	177.46	2	371	198.49	2	791	233.60	2	880	242.78
4	5	099	50.70	9	133	242.73	4	853	165.21	3	269	177.46	2	371	198.49	2	791	233.60	2	880	242.78
5	6	162	92.45	10	129	68.11	5	147	331.39	4	853	165.21	3	269	177.46	2	791	233.60	2	880	242.78
6	7	116	248.40	11	449	216.71	6	173	219.38	5	147	331.39	4	853	165.21	3	269	177.46	2	791	233.60
7	8	135	267.32	12	178	221.39	7	207	217.98	6	173	219.38	5	147	331.39	4	853	165.21	3	269	177.46
8	9	069	51.10	13	267	10.79	8	207	217.98	7	207	219.38	6	173	219.38	5	147	331.39	4	853	165.21
9	10	009	18.25	14	073	12.79	9	084	55.00	8	207	219.38	7	207	219.38	6	173	219.38	5	147	331.39
10		045	340.70	15	046	58.26	10	051	59.55	9	084	58.41	8	207	219.38	7	207	219.38	6	173	219.38

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI				
1	2	651	247.18	2	469	149.73	2	217	250.42	7	277	310.87	3	337	303.57	3	201	294.48	2	496	286.69
2	3	743	148.35	3	949	331.97	3	217	250.42	7	277	310.87	3	337	303.57	3	201	294.48	2	496	286.69
3	4	170	264.73	4	169	264.11	4	163	266.32	8	835	336.10	4	886	158.49	4	854	332.46	3	741	147.38
4	5	079	61.57	5	096	57.24	5	099	64.45	9	164	244.05	5	179	257.83	5	174	256.46	3	741	147.38
5	6	215	206.39	6	231	197.24	6	457	221.40	10	575	209.58	6	542	216.37	6	494	220.43	3	741	147.38
6	7	076	60.09	7	163	54.23	7	226	358.62	11	227	189.38	7	525	197.12	7	478	206.03	3	741	147.38
7	8	077	69.90	8	066	54.81	8	172	62.35	12	264	343.79	8	231	354.18	8	229	200.43	3	741	147.38
8	9	041	93.77	9	033	90.79	9	041	81.20	13	069	38.36	9	071	363.46	9	073	45.17	3	741	147.38
9	10			10			10			14	019	38.36	10	016	63.46	10	018	56.37	3	741	147.38

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI				
1	1	830	278.80	1	915	273.47	1	654	270.90	1	355	258.68	1	684	252.59	1	183	272.00	1	183	272.00
2	2	663	148.21	2	815	147.77	2	731	148.25	2	748	146.25	2	784	147.61	2	741	146.03	2	741	146.03
3	3	156	262.91	3	154	264.06	3	285	267.47	3	993	332.23	3	907	332.61	3	913	333.99	3	913	333.99
4	4	086	68.57	4	108	225.74	4	108	225.74	4	100	266.31	4	119	257.94	4	116	256.61	4	116	256.61
5	5	223	223.47	5	274	225.26	5	481	224.98	5	496	222.02	5	453	223.02	5	444	225.08	5	444	225.08
6	6	192	199.11	6	223	200.68	6	247	201.74	6	279	197.36	6	253	198.71	6	252	198.59	6	252	198.59
7	7	071	44.44	7	083	48.70	7	068	45.55	7	079	47.42	7	062	35.79	7	162	3.06	7	162	3.06
8	8	020	50.21	8	024	60.35	8	021	65.78	8	015	59.71	8	029	21.64	8	025	52.12	8	025	52.12
9	9			9			9			9			9			9			9		
10	10			10			10			10			10			10			10		

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

MODE 1 --  
FILE 103 ALPHA-MCL = 6.0 POP RUN-PT 22.01  
RUN 122 ALPHA-BAR = 0.5 O-COMP = 33188  
POINT 1 SIGMA = -45.0 V-DEF = 202.05  
COMPUTED FREQUENCY = 9.07, K = .0705

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.148		.261		.392		.530		.661	
	N	DELCPR	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	15.387	-13.107	6.537	-4.019	4.592	-3.058	2.966	-1.639	2.173	-.236	1.772	-.038	1.343	-.907
2	-1.485	.258	-.028	.100	-.020	.067	-.082	.026	-.041	.069	-.038	-.019	-.029	-.003
3	-1.723	.094	-.023	-.056	-.024	-.028	-.009	.023	-.117	.003	-.045	-.010	-.010	-.011
4	-.451	-.099	-.065	-.062	-.032	-.031	-.024	.024	-.001	-.004	-.007	-.008	-.010	-.008
5	-.008	-.176	-.022	-.068	-.033	-.032	-.028	.028	-.027	.024	-.009	-.003	-.010	-.003
6	-.217	.098	-.022	-.051	-.033	-.032	-.028	.028	-.027	.024	-.009	-.003	-.010	-.003
7	-.049	-.149	-.022	-.061	-.033	-.032	-.028	.028	-.027	.024	-.009	-.003	-.010	-.003
8	-.040	-.007	-.022	-.061	-.033	-.032	-.028	.028	-.027	.024	-.009	-.003	-.010	-.003
9	-.027	-.027	-.022	-.021	-.016	-.029	-.011	-.019	-.005	-.033	-.015	-.009	-.022	-.006
10														

X =	.774		.860		.910	
	N	DELCPR	DELCP	DELCP	DELCP	DELCP
1	.762	1.115	.347	.712	.784	.906
2	.308	-.022	.002	.032	.030	-.010
3	.006	-.007	-.012	.027	-.027	.046
4	.023	-.009	.005	.005	.024	-.024
5	-.043	.011	.018	.037	.029	.012
6	-.065	-.008	.018	.012	.021	-.021
7	.032	-.021	.023	.019	.015	.012
8	.016	-.029	.023	.022	.008	-.021
9	.000	-.026				
10						

\*\*\* STABILITY PARAMETER

\* \* XI = .5770 \*  
\* \* \* \* \*

WALL NO. GAP FRACTION	.125		.022		.125		.125		.500		1.125		
	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	1	-.441	-2.542	3.022	-2.214	-11.241	3.251	-1.965	-1.490	1.813	7.291	-1.813	7.291
2	2	-.792	-.547	-.740	.215	1.113	-.788	-.689	.456	-.758	.384	-.758	.384
3	3	1.045	-.224	.905	-.215	1.156	-.158	.938	-.505	-.993	.316	-.993	.316
4	4	-.113	-.103	-.205	.220	.118	.098	-.033	.225	-.151	.257	-.151	.257
5	5	.007	-.103	-.035	.118	.432	-.376	.057	.101	.234	.284	-.234	-.284
6	6	-.511	-.137	-.593	-.187	-.221	-.421	-.419	-.421	-.111	.108	-.111	.108
7	7	-.213	.322	-.412	.057	.324	-.126	-.201	.037	-.135	.141	-.135	.141
8	8	.312	.359	.480	-.049	.114	.168	.266	.073	-.081	.132	-.081	.132
9	9	.037	.305	.009	-.078	.046	.060	.020	.046	-.049	.127	-.049	.127
10	10												



ORIGINAL PAGE IS  
OF POOR QUALITY

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 105 ALPHA-MCL = 6.0 PDP RUN-PT 22.07  
 RUN 22 ALPHA-BAR = 45.5 Q-COMP = 33289  
 POINT 3 STEMA = -45.5 V-REF = 202.36  
 COMPUTED FREQUENCY = 15.40, K = .1196

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG						
1	-9.002	7.926	-3.780	1.876	-2.499	.698	-1.587	-1.195	-1.100	.914	-1.682	-.617	-1.984
2	.411	-.202	.343	.040	.250	.045	-.247	-.293	.089	.315	.101	-.375	-.103
3	-.040	.062	.406	-.018	.400	.005	.389	.423	-.014	.431	-.018	.573	-.038
4	.034	.099	-.042	.121	.446	.110	-.058	-.057	.167	.067	.159	-.063	.167
5	.031	.107	-.007	.048	-.004	.033	-.013	.011	.006	.073	-.028	-.050	-.021
6	-.061	.031	.034	-.002	.014	.009	-.029	.037	-.018	.021	-.014	-.025	-.020
7	.042	-.010	.017	.073	.043	.020	-.018	.007	.078	.004	.076	-.003	-.074
8	-.019	-.022	-.005	.025	.006	-.019	-.012	-.035	-.015	.033	-.015	-.038	-.008
9	.019	.022	-.005	.025	.006	-.019	-.012	-.035	-.015	.033	-.015	-.038	-.008
10	.019	.022	-.005	.025	.006	-.019	-.012	-.035	-.015	.033	-.015	-.038	-.008

X N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-.357	-1.860	-.335	-1.702	-.072	-1.484	4.696	-2.561	-2.333	1.699	-2.358	1.167	-1.771
2	.331	.106	.414	.090	.326	.082	-.478	-.342	.056	.310	.107	-.320	-.086
3	.022	-.024	-.019	-.009	.408	-.036	.338	.400	-.033	.396	-.038	.383	-.011
4	.065	.159	.069	.168	-.063	.163	-.075	.032	.154	-.042	.158	-.054	.148
5	.045	.033	-.030	.020	.031	.033	-.003	.065	.006	.065	.003	-.004	-.013
6	-.000	-.013	-.001	-.022	.004	.009	-.001	.002	-.005	.018	-.009	-.004	-.020
7	.016	.028	.008	.072	.006	.065	-.011	.001	.059	.018	.016	-.010	-.056
8	.001	.009	-.030	.008	-.029	.002	-.024	-.033	-.015	.028	.051	-.010	-.029
9	.030	.015	.019	.014	.016	.016	.017	.016	.010	.013	-.014	-.019	-.017
10	.016	.015	.019	.014	.016	.016	.017	.016	.010	.013	-.014	-.019	-.017

X N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	-.705	-1.196	-.506	-.980	-.050	-.813
2	.294	.090	.358	.311	-.052	.114
3	-.070	-.027	.450	.428	.362	-.034
4	.051	.007	.064	.075	.077	.034
5	.007	-.004	-.041	.026	-.027	.023
6	.007	-.004	-.041	.026	-.027	.023
7	.006	.049	-.018	.012	.008	.008
8	.026	.016	.006	.008	.012	.061
9	.013	.016	.006	.008	.012	.061
10	.013	.016	.006	.008	.012	.061

ORIGINAL DATA  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 105 ALPHA-MCL = 6.0 PDP RUN.PT 22.07  
RUN 23 ALPHA-BAR = 0.5 Q-COMP = 33289  
POINT 3 SIGMA = -4.5 V-REF = 202.36  
COMPUTED FREQUENCY = 15.40, K = .1196

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\* BLADE PRESSURES, PER RADIAN \*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	
1	11	.994	138.64	4	.220	153.61	2	.595	164.40	1	.620	191.60
2	12	.458	333.82	3	.345	173.41	2	.254	167.25	1	.312	163.45
3	4	.074	237.20	4	.406	357.50	3	.388	357.37	2	.423	358.04
4	5	.091	81.11	5	.119	108.92	4	.149	109.17	3	.177	108.67
5	6	.104	70.80	6	.088	138.15	5	.060	164.77	4	.072	184.73
6	7	.116	283.07	7	.048	261.46	6	.037	294.06	5	.019	305.40
7	8	.061	153.23	8	.034	183.54	7	.035	194.86	6	.042	205.74
8	9	.043	48.18	9	.042	176.60	8	.079	81.78	7	.076	87.60
9	10	.029	229.32	10	.025	194.89	9	.047	199.54	8	.039	203.62
					.025	257.42		.020	286.04		.034	311.64

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	
1	1	.896	258.82	1	.709	264.69	6	.985	312.25	3	.451	317.91
2	2	.349	161.88	2	.347	164.93	5	.509	159.28	4	.347	170.23
3	3	.403	113.55	3	.414	158.80	4	.351	144.67	3	.401	155.23
4	4	.173	212.86	4	.182	112.37	5	.175	111.22	4	.157	101.68
5	5	.053	269.17	5	.048	231.00	6	.076	104.45	5	.066	185.68
6	6	.032	239.82	6	.020	265.69	7	.009	190.16	6	.006	185.33
7	7	.075	88.91	7	.023	249.97	8	.034	109.19	7	.032	257.39
8	8	.031	196.35	8	.022	189.92	9	.059	100.88	8	.059	251.17
9	9	.022	317.88	9	.023	194.44	10	.020	100.64	9	.019	205.22
10	10			10	.023	315.53		.020	325.68		.019	329.02

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	
1	1	.388	300.54	1	.316	320.11	1	.103	297.30	1	.730	301.40
2	2	.307	162.99	2	.168	166.74	2	.331	170.49	2	.316	170.49
3	3	.152	108.10	3	.176	104.31	3	.155	116.08	3	.171	116.08
4	4	.015	198.92	4	.016	224.32	4	.023	211.41	4	.037	226.14
5	5	.049	218.28	5	.025	223.05	5	.015	132.44	5	.019	272.19
6	6	.017	83.38	6	.027	85.46	6	.049	208.27	6	.011	379.37
7	7	.029	319.71	7	.022	313.22	7	.027	185.57	7	.062	378.51
8	8			8	.022	316.04	8	.027	333.13	8	.018	182.54
9	9			9			9			9		
10	10			10			10			10		



ORIGINAL PAGE IS  
OF POOR QUALITY

3CWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILF 195 ALPHA-MCL = 6.0 POP PUM.PI 22.07  
RUM 22 ALPHA-RAP = 5.5 G-COMP = 33289  
POINT 3 SIGMA = -45.0 W-REF = 202.56  
COMPUTED FREQUENCY = 15.40, W = .1196

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.148		.261		.392		.530		.661	
	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI
1	13.688	-13.097	6.341	-4.149	4.199	-3.955	2.754	-1.445	1.901	-.095	1.574	-.023	1.122	1.004
2	-.689	.376	.807	.516	-.660	.362	-.072	.030	.005	-.001	-.018	.017	-.017	-.017
3	-.050	-.031	-.010	-.033	-.004	-.042	-.005	.006	-.053	-.012	.019	-.008	.017	-.018
4	-.010	-.112	.001	-.065	.012	-.036	-.005	-.021	.020	-.023	.034	-.006	.028	-.023
5	-.060	-.065	.007	-.042	.003	-.027	-.013	.021	-.019	-.002	-.015	-.017	.041	-.008
6	-.045	-.020	-.014	-.029	.015	-.007	-.016	.034	.025	.009	.003	-.004	-.003	-.007
7	-.017	-.013	-.007	-.014	-.014	-.026	-.021	-.016	.001	-.029	.003	-.004	-.003	-.014
8	-.036	.010	.021	.015	.007	.005	.014	-.015	.011	-.000	.003	-.014	.002	-.026
9	-.007	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001
10	-.007	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001

X =	.774		.860		.910		.925		.938		.948		.958	
	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI
1	.748	1.236	.102	.026	.026	.026	.026	.026	.026	.026	.026	.026	.026	.026
2	.020	-.036	-.026	-.036	-.036	-.036	-.036	-.036	-.036	-.036	-.036	-.036	-.036	-.036
3	-.006	-.005	-.004	-.005	-.005	-.005	-.005	-.005	-.005	-.005	-.005	-.005	-.005	-.005
4	-.019	.005	.002	.005	.005	.005	.005	.005	.005	.005	.005	.005	.005	.005
5	-.007	.016	.012	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016	.016
6	-.007	-.010	-.012	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010	-.010
7	-.000	.009	.007	.009	.009	.009	.009	.009	.009	.009	.009	.009	.009	.009
8	.000	.009	.007	.009	.009	.009	.009	.009	.009	.009	.009	.009	.009	.009
9	.000	.009	.007	.009	.009	.009	.009	.009	.009	.009	.009	.009	.009	.009
10	.000	.009	.007	.009	.009	.009	.009	.009	.009	.009	.009	.009	.009	.009

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	.125		.125		.125		.125		.125		.125		.125		.125			
		N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG		
1	.288	-1.036	3.550	-1.713	-10.142	4.306	-1.181	-.822	-1.017	7.582	1.125	-.607	-.017	7.582	1.125	-.607	-.017		
2	-.357	.125	-.128	-.049	-.517	.473	-.384	.082	-.607	-.017	7.582	1.125	-.607	-.017	7.582	1.125	-.607	-.017	
3	-.568	-.155	.706	.104	.610	-.015	.514	-.006	-.461	-.156	1.125	-.065	-.037	1.125	-.065	-.037	1.125	-.065	-.037
4	-.077	.233	-.399	.233	-.169	.169	-.058	.165	-.008	.131	1.125	-.037	-.037	1.125	-.037	-.037	1.125	-.037	-.037
5	-.102	.022	-.153	.035	-.081	-.030	.018	-.032	-.032	.074	1.125	-.037	-.037	1.125	-.037	-.037	1.125	-.037	-.037
6	-.037	.024	-.110	-.019	-.026	.125	-.038	.038	-.037	.089	1.125	-.037	-.037	1.125	-.037	-.037	1.125	-.037	-.037
7	-.010	.075	-.117	-.077	-.059	-.011	.001	-.037	-.037	.011	1.125	-.037	-.037	1.125	-.037	-.037	1.125	-.037	-.037
8	-.012	-.007	-.044	-.052	-.059	-.011	.001	-.037	-.037	.011	1.125	-.037	-.037	1.125	-.037	-.037	1.125	-.037	-.037
9	.014	-.014	.055	-.037	.039	-.011	.001	-.037	-.037	.011	1.125	-.037	-.037	1.125	-.037	-.037	1.125	-.037	-.037
10	.014	-.014	.055	-.037	.039	-.011	.001	-.037	-.037	.011	1.125	-.037	-.037	1.125	-.037	-.037	1.125	-.037	-.037

\*\*\* STABILITY PARAMETER

\* XI = .5799 \*

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 105 ALPHA-MCL = 6.0 POP RUN-PT 22.07  
 RUN 22 ALPHA-BAR = .5 Q-COMP = .33289  
 POINT 3 ALPHA-SIGMA = -4.5 V-REF = 202.36  
 COMPUTED FREQUENCY = 15.40, K = .1196

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE =  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.148		.261		.392		.530		.661	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	18.952	316.287	7.600	326.555	5.193	323.966	3.110	332.303	1.903	357.113	1.695	19.088	1.506	41.813
2	.966	157.407	.016	89.681	.086	134.502	.078	157.407	.005	10.007	.020	218.778	.018	285.778
3	.379	155.334	.017	249.611	.042	264.422	.008	50.788	.035	193.007	.020	335.877	.025	246.955
4	.069	135.888	.034	273.333	.048	86.119	.030	129.983	.020	292.637	.004	69.811	.024	287.477
5	.157	225.888	.065	270.520	.038	289.141	.030	279.333	.020	355.333	.035	349.811	.029	15.055
6	.120	106.330	.043	83.920	.028	84.414	.028	129.666	.019	172.877	.022	131.922	.041	189.822
7	.088	312.779	.040	312.920	.016	335.277	.016	12.588	.027	18.644	.005	3306.693	.015	101.099
8	.042	152.276	.023	216.117	.014	241.776	.021	332.533	.029	267.599	.014	307.033	.026	375.777
9	.022	322.278	.009	327.177	.004	352.004	.009	332.003	.011	357.811	.005	302.933	.002	371.655
10	.037	16.338	.026	34.779	.009	353.004	.009	336.003	.017	123.448	.011	86.674	.002	112.177

X =	.774		.860		.910		N		CN-MAG		PHIN	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	1.445	58.822	.896	33.047	1.107	47.801	2.499	342.599	1.903	357.113	.817	318.755
2	.060	289.861	.035	137.877	.013	324.966	.008	163.333	.005	10.007	.021	148.233
3	.008	219.133	.035	263.882	.037	212.881	.002	181.744	.002	193.007	.005	327.173
4	.020	169.334	.014	77.046	.022	12.889	.019	114.147	.002	292.637	.004	245.622
5	.022	102.233	.003	28.776	.007	181.133	.021	130.477	.019	172.877	.004	86.522
6	.017	112.233	.020	41.677	.013	279.776	.018	356.522	.018	267.599	.003	322.278
7	.012	303.888	.011	316.338	.013	282.844	.018	254.330	.008	332.533	.003	187.000
8	.006	88.843	.013	31.443	.009	326.277	.008	337.999	.008	357.811	.001	317.999
9	.008	20.996	.012	150.882	.010	78.446	.009	70.337	.009	123.448	.002	14.555
10	.308	20.996	.012	150.882	.010	78.446	.009	70.337	.009	123.448	.002	14.555

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.125		.125		.500		.650	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.861	278.991	3.942	334.244	11.019	157.000	1.442	214.777	7.650	97.664
2	.379	160.688	.137	200.999	.716	138.600	.395	166.199	.644	199.600
3	.571	154.433	.714	112.396	.611	358.600	.515	102.445	.487	208.511
4	.222	110.400	.253	157.822	.178	370.822	.175	102.445	.075	208.511
5	.106	163.133	.092	157.688	.180	147.000	.066	128.944	.132	283.988
6	.033	46.990	.153	1.600	.087	339.555	.037	298.944	.120	268.544
7	.037	175.990	.021	241.288	.089	228.144	.045	210.633	.090	124.266
8	.077	52.599	.078	102.188	.128	189.044	.094	89.338	.090	185.532
9	.039	191.033	.068	229.833	.069	189.044	.037	182.700	.015	136.374
10	.025	305.449	.055	352.600	.050	280.448	.027	309.001	.021	287.774

\*\*\* STABILITY PARAMETER

\* XI = .5799 \*  
 \* \* \* \* \*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 107 ALPHA-MCL = 6.0 PDP RUN-PT 22.09  
 RUN 22 ALPHA-PAR = .5 O-COMP = .33116  
 POINT 5 SIGMA = -45. V-REF = 201.82  
 COMPUTED FREQUENCY = 19.04, K = .1482

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-8	.996	8.112	-3.378	-2.565	-2.298	-2.078	-1.753
2	-.578	-.353	.151	.151	.114	.116	.097	.088
3	-.235	-.100	.060	.060	.050	.049	.058	.067
4	.020	.097	-.028	-.028	-.016	-.016	-.015	-.029
5	.025	.083	.076	.076	.009	.000	.025	.001
6	.015	.120	.024	.024	.016	.023	.011	.019
7	.009	.037	.011	.011	.034	.010	.027	.027
8	-.044	-.027	.036	.036	.006	.008	.003	.010
9	.013	-.006	.002	.002	.039	.041	.039	.046
10	.022	-.001	.037	.037	.003	.023	.003	.025

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-1	.496	-1.699	-1.234	3.361	1.484	.526	.088
2	.063	-.235	.082	.082	.022	.053	.077	.089
3	.071	.073	.034	.034	.055	.074	.067	.052
4	-.044	.073	-.034	-.034	.000	.055	.028	.032
5	.001	.018	.007	.007	.005	.005	.011	.000
6	.014	.046	.010	.010	.019	.019	.011	.030
7	-.008	.038	.004	.004	.001	.003	.006	.015
8	-.032	.050	.035	.035	.029	.030	.030	.018
9	.012	.027	.013	.013	.021	.014	.013	.017
10	.046	-.026	.048	.048	.050	.056	.065	.077

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	-.368	-.943	-.667	-.863	-.863	-1.165	-.463
2	.066	.026	.079	.067	.065	.055	.091
3	-.027	.046	.046	.047	.028	.029	.083
4	.003	.023	.022	.022	.019	.030	-.050
5	.012	.057	.065	.065	.036	.041	.031
6	-.004	.037	.044	.044	.052	.068	.005
7	-.022	.035	.037	.035	.026	.032	.035
8	.009	.006	.006	.006	.042	.040	.002
9	.048	-.027	.022	.022	.041	.021	.002
10	.048	-.027	.022	.022	.054	.025	.039

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 107 ALPHA-MCL = 6.0 POP RUN.PT 22.09  
 RUN 22 ALPHA-BAR = .5 Q-COMP = 33116  
 POINT 5 SIGMA = -45. V-REF = 201.82  
 COMPUTED FREQUENCY = 19.04, K = .1482

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	.012-UPPER		.148-UPPER		.261-UPPER		.392-UPPER		.530-UPPER		.661-UPPER	
	CP	PHI	CP	PHI	CP	PHI	CP	PHI	CP	PHI	CP	PHI
1	12.114	137.96	5.023	155.98	2.569	183.18	2.491	202.74	2.592	216.68	2.523	226.00
2	.677	328.59	.300	274.93	.304	292.13	.309	291.97	.276	290.60	.259	289.81
3	.255	202.98	.046	50.17	.060	34.05	.054	24.59	.058	114.55	.064	109.79
4	.106	67.31	.089	95.14	.074	102.15	.072	111.00	.075	115.97	.074	106.77
5	.086	76.31	.084	55.93	.040	176.45	.072	90.31	.071	115.06	.074	106.77
6	.121	275.93	.080	292.06	.078	281.84	.074	288.01	.071	291.06	.058	288.70
7	.039	275.93	.044	77.81	.044	82.41	.046	102.72	.054	105.81	.051	88.05
8	.015	211.60	.064	225.69	.057	233.71	.062	236.17	.054	242.85	.064	244.94
9	.022	334.36	.005	31.13	.007	147.68	.013	126.67	.038	113.98	.011	249.19
10	.022	356.23	.042	329.00	.045	330.21	.047	330.36	.046	327.19	.053	330.94

N	.774-UPPER		.910-UPPER		.012-LOWER		.062-LOWER		.148-LOWER		.261-LOWER	
	CP	PHI	CP	PHI	CP	PHI	CP	PHI	CP	PHI	CP	PHI
1	2.264	228.65	1.779	226.09	6.015	303.97	2.598	304.84	2.140	284.23	1.476	268.15
2	.245	286.16	.270	287.68	.261	265.25	.331	279.27	.306	284.58	.298	287.36
3	.072	10.74	.078	13.17	.075	42.57	.078	17.47	.076	29.17	.074	28.35
4	.085	121.17	.059	124.65	.062	89.75	.074	118.48	.068	114.40	.067	121.75
5	.018	193.31	.026	85.19	.029	97.32	.019	75.37	.021	101.23	.027	190.36
6	.048	281.00	.029	281.19	.037	294.25	.057	282.97	.026	281.23	.043	290.53
7	.039	107.35	.028	81.97	.027	87.73	.041	85.51	.044	97.70	.042	100.28
8	.059	237.47	.057	232.21	.050	235.12	.048	230.63	.052	235.28	.057	232.17
9	.014	151.22	.013	161.00	.022	194.10	.014	198.35	.023	197.09	.021	212.81
10	.053	330.69	.055	330.49	.061	325.64	.067	326.99	.072	333.79	.079	347.61

N	.392-LOWER		.530-LOWER		.774-LOWER		.860-LOWER		.910-LOWER	
	CP	PHI	CP	PHI	CP	PHI	CP	PHI	CP	PHI
1	1.012	248.68	1.077	231.76	.939	203.20	1.270	203.51	.837	236.38
2	.271	283.18	.337	286.07	.360	283.83	.244	283.07	.316	286.71
3	.053	120.55	.061	130.50	.101	22.47	.083	20.21	.084	10.00
4	.058	82.84	.022	75.86	.069	136.82	.058	116.51	.062	138.77
5	.058	281.75	.026	282.20	.053	169.17	.036	158.36	.041	183.76
6	.037	295.69	.048	282.73	.053	282.31	.070	281.98	.051	275.76
7	.048	227.67	.037	97.97	.028	113.86	.031	97.59	.033	102.02
8	.048	225.26	.055	230.95	.050	211.61	.046	200.39	.057	232.71
9	.011	335.49	.012	196.92	.013	159.52	.011	184.77	.016	171.99
10	.053	335.49	.056	337.09	.059	335.27	.046	333.24	.043	333.73

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 107 ALPHA-MCL = 6.0 POP RUN.PI 22.09  
 RUN 22 ALPHA-RAP = 5 Q-COMP = .33116  
 POINT 5 SIGMA = -45 V-REF = 201.82  
 COMPUTED FREQUENCY = 19.04, K = .1432

FOURIER COEFFICIENTS, REAL & IMAGINARY FORCE, AND MOMENT, PER RADIAN \*\*\*  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.148		.261		.392		.530		.561	
	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP
1	12.358	-13.101	6.077	-4.177	3.904	-2.896	2.517	-1.333	1.936	.020	1.412	.702	1.100	1.106
2	.600	.072	.024	.028	-.074	.032	-.025	-.003	-.054	.023	-.004	-.066	-.016	-.036
3	.290	.150	.045	.012	.006	-.019	.016	.002	.010	.010	.021	.035	.000	.039
4	.044	-.054	-.027	-.019	-.020	-.013	-.009	-.012	.003	-.008	-.033	-.034	.004	-.042
5	.008	.087	.002	.024	-.013	.019	.013	-.022	-.006	.014	-.011	-.009	-.009	.007
6	.004	-.014	-.016	.002	-.017	.000	-.021	.033	.006	-.008	.007	.007	-.006	.005
7	.015	.041	.015	.009	-.011	.004	.016	-.009	.001	.016	-.008	.008	-.008	.015
8	.034	-.031	.018	.007	-.011	-.004	.012	-.015	.001	-.013	-.008	.013	-.001	-.007
9	.028	-.033	.020	-.015	.028	-.010	-.038	.006	.008	-.017	-.023	.002	-.001	-.004
10														

X =	.774		.460		.910		.500		.500		.500		.500	
	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP
1	.633	1.330	.116	1.030	.770	.585	2.236	-.672	2.236	-.672	1.412	.533	1.100	1.106
2	.018	-.114	.024	.012	.009	-.046	-.036	-.016	-.023	-.016	-.004	-.005	-.000	-.008
3	.026	.026	.019	.016	.007	-.003	.026	.025	.025	.025	.021	.001	.000	.000
4	.015	-.018	.016	.003	-.016	.013	.006	-.006	.006	.006	-.002	-.002	-.002	-.002
5	.006	.006	.006	.005	-.005	-.001	.001	.011	.001	.011	.001	.000	.000	.000
6	.003	-.006	.007	.000	-.005	.005	-.005	.007	.007	.007	.001	.000	.000	.000
7	.004	-.012	.021	.003	-.011	-.001	.002	.007	.007	.007	.002	.002	.001	.001
8	.010	-.002	.003	.002	-.003	-.002	.002	.008	.008	.008	.002	.002	.001	.001
9	.000	.001	.003	.006	.009	.008	.014	-.000	.014	-.000	.003	.003	.002	.002
10	.006	.001	.003	.006	.009	.008	.014	-.000	.014	-.000	.003	.003	.002	.002

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.125		.125		.125		.125		.125		.125	
	N	CPREAL	N	CPREAL	N	CPREAL	N	CPREAL	N	CPREAL	N	CPREAL	N	CPREAL
1	1	-1.185	1	1.804	-1.360	-10.924	4.568	-2.508	-2.508	-2.508	-2.236	6.888	1	1.125
2	2	.170	.500	.737	.065	.047	.047	.115	.115	.115	.390	-.637	2	.5673
3	3	.075	.094	.031	.154	.015	.015	.043	.043	.043	.436	-.211	3	.5673
4	4	.034	.077	.043	.109	.091	.091	.026	.026	.026	.198	-.056	4	.5673
5	5	.031	.057	.043	.016	.098	.098	.023	.023	.023	.088	-.190	5	.5673
6	6	.015	.036	.077	.002	.117	.117	.034	.034	.034	.011	-.147	6	.5673
7	7	.006	.028	.151	.024	.084	.084	.005	.005	.005	.024	-.011	7	.5673
8	8	.049	.048	.071	.005	.013	.013	.002	.002	.002	.009	-.024	8	.5673
9	9	.010	.033	.010	.005	.040	.040	.002	.002	.002	.008	-.056	9	.5673
10	10	.079	.033	.040	.005	.040	.040	.002	.002	.002	.008	-.056	10	.5673

\*\*\* STABILITY PARAMETER \*\*\*

WALL NO. GAP FRACTION	.125		.125		.125		.125		.125		.125	
	N	CMREAL	N	CMREAL	N	CMREAL	N	CMREAL	N	CMREAL	N	CMREAL
1	1	.533	1	1.100	1	1.100	1	1.100	1	1.100	1	1.100
2	2	.012	2	.000	2	.000	2	.000	2	.000	2	.000
3	3	.005	3	.000	3	.000	3	.000	3	.000	3	.000
4	4	.001	4	.000	4	.000	4	.000	4	.000	4	.000
5	5	.002	5	.000	5	.000	5	.000	5	.000	5	.000
6	6	.000	6	.000	6	.000	6	.000	6	.000	6	.000
7	7	.001	7	.000	7	.000	7	.000	7	.000	7	.000
8	8	.002	8	.000	8	.000	8	.000	8	.000	8	.000
9	9	.002	9	.000	9	.000	9	.000	9	.000	9	.000
10	10	.003	10	.000	10	.000	10	.000	10	.000	10	.000

ORIGINAL FILE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 107 ALPHA-MCL = 6.0 POP RYN.PT 22.09  
 RUN 22 ALPHA-BAR = .5 Q-COMP = .3116  
 POINT 5 SIGMA = -.45 V-REF = 201.82  
 COMPUTED FREQUENCY = 19.04, K = .1482  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	18	.609	313.33	7.370	325.48	4.861	323.43	2.848	332.11	1.930	156.79	1.577	26.44
2	1	.607	171.24	.039	314.47	.080	156.27	.026	187.75	.059	30.38	.066	26.74
3	2	.327	227.38	.046	344.67	.020	288.65	.016	6.57	.019	156.79	.041	89.74
4	5	.059	220.82	.036	322.52	.013	268.20	.021	231.07	.036	276.67	.014	265.07
5	7	.087	246.12	.028	222.95	.021	195.12	.015	231.25	.009	290.25	.023	337.26
6	9	.013	89.68	.024	85.62	.023	123.36	.026	188.88	.017	129.28	.011	175.01
7	8	.013	232.15	.007	199.71	.008	179.11	.021	58.37	.016	309.86	.007	105.28
8	9	.034	178.15	.020	201.89	.008	324.99	.019	332.10	.016	81.77	.011	132.19
9	10	.043	310.84	.025	323.58	.030	339.39	.038	8.57	.008	265.04	.017	4.97
10										.006	8.06	.023	4.97

X	N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	1	.473	64.55	1.037	83.58	.967	37.21	2.335	343.78	2.335	343.78	.778	313.20
2	2	.115	278.86	.031	142.51	.047	281.35	.028	210.70	.041	210.70	.015	318.90
3	3	.026	258.33	.018	39.55	.008	335.35	.028	257.51	.028	257.51	.002	257.51
4	4	.023	50.97	.025	320.00	.017	198.55	.006	263.60	.006	263.60	.003	205.86
5	5	.007	245.77	.017	11.05	.004	248.71	.012	114.16	.012	114.16	.004	83.16
6	6	.012	251.54	.007	218.08	.005	196.85	.007	188.93	.007	188.93	.001	211.51
7	7	.026	117.42	.022	21.37	.001	279.73	.007	69.32	.007	69.32	.002	321.07
8	8	.002	276.35	.003	332.50	.004	213.03	.011	231.08	.011	231.08	.002	321.07
9	9	.008	7.50	.014	153.90	.012	138.95	.014	358.79	.014	358.79	.004	333.97
10	10												

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	W1	W2	W3	W4	W500	W6	W100	W1000	W10000
1	1	1.928	232.08	2.259	323.00	11.840	157.31	2.591	194.56	7.242	107.99		
2	3	.470	291.21	.890	304.12	.080	36.12	.358	289.88	.732	240.88		
3	4	.089	45.61	.099	18.27	.155	354.60	.052	34.07	.484	245.88		
4	5	.064	112.48	.078	248.68	.042	39.84	.082	108.25	.335	273.12		
5	6	.097	279.18	.088	257.34	.091	99.85	.051	62.88	.205	15.81		
6	7	.058	82.80	.075	250.47	.117	270.74	.077	295.71	.210	245.17		
7	8	.066	225.93	.151	50.76	.083	276.15	.067	247.49	.101	230.06		
8	9	.011	161.98	.033	18.39	.091	248.82	.076	241.06	.157	250.06		
9	10	.080	331.21	.113	339.29	.074	324.68	.063	336.12	.098	325.12		

\*\*\* STABILITY PARAMETER \*\*\*

STABILITY PARAMETER	W1	W2	W3	W4	W500	W6	W100	W1000	W10000
1	.5673								
2									
3									
4									
5									
6									
7									
8									
9									
10									

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 90 ALPHA-WCL = 6.0 PDP RUN-PT 20.04  
 RUN 20 ALPHA-RAR = .5 Q-COMP = .32345  
 POINT 1 ALPHA-SIGMA = 0. V-REF = 199.44  
 COMPUTED FREQUENCY = 9.09, K = .0716

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	1	-8.653	2.133	-1.570	.533	.293	.106	1.226
2	1	1.154	.032	-1.058	-.447	-.536	-.592	-1.285
3	1	2.268	-.216	-.135	.628	-.106	-.125	-1.748
4	1	-.021	.005	-.048	-.301	-.345	-.372	-.583
5	1	.099	.036	-.059	.096	.042	.046	.065
6	1	.062	.018	.103	.008	.007	.007	.026
7	1	.135	.018	.103	.008	.007	.007	.026
8	1	-.017	.036	-.020	.000	.000	.000	.008
9	1	-.042	.076	-.054	-.011	-.021	-.032	.035
10	1							-.064

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	1	1.365	-.097	1.389	-.046	-.046	-.046	1.895
2	1	-1.259	1.000	-1.262	.714	.714	.714	-.650
3	1	-.066	-.372	-.056	-.340	-.340	-.340	-.127
4	1	.050	.084	.056	.089	.089	.089	-.387
5	1	.094	.084	.094	.089	.089	.089	-.095
6	1	.094	.084	.094	.089	.089	.089	-.095
7	1	.094	.084	.094	.089	.089	.089	-.095
8	1	.094	.084	.094	.089	.089	.089	-.095
9	1	-.039	-.045	-.041	-.018	-.018	-.018	.011
10	1	-.068	-.045	-.065	-.053	-.053	-.053	.041

X	N	.302-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	1.454	1.627	1.307	1.233	1.217
2	1	-1.102	-1.777	-1.279	-1.192	-1.200
3	1	-.619	-.455	-.743	-.668	-.747
4	1	.079	.089	.069	.066	.076
5	1	.074	.089	.069	.066	.076
6	1	.074	.089	.069	.066	.076
7	1	.074	.089	.069	.066	.076
8	1	.074	.089	.069	.066	.076
9	1	-.035	-.043	-.037	-.027	-.043
10	1	-.042	-.043	-.045	-.027	-.050

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 90 ALPHA-MCL = 6.0 PCP RUN-PI 20.04  
 RUN 20 ALPHA-PAR = 0.5 G-COMP = 32345  
 POINT 1 CIRCMA = 0.0 V-REF = 199.44  
 COMPUTED FREQUENCY = 9.09, K = .0716

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI				
1	1	5.917	166.156	3.069	191.69	1.558	161.25	1.221	149.58	1.571	23.12	1.225	359.53	1.234	353.54	1.454	359.20	1.490	353.54	1.499	353.54		
1	2	157	168.21	1.724	247.92	1.148	347.86	1.637	250.43	1.544	206.14	1.794	351.20	1.787	206.14	1.787	351.20	1.787	351.20	1.787	351.20	1.787	351.20
1	3	329	180.92	1.613	293.49	1.642	347.86	1.667	211.17	1.699	349.99	1.736	351.20	1.736	351.20	1.736	351.20	1.736	351.20	1.736	351.20	1.736	351.20
1	4	564	27.98	1.097	302.89	1.098	293.49	1.118	309.39	1.134	311.55	1.146	307.79	1.146	307.79	1.146	307.79	1.146	307.79	1.146	307.79	1.146	307.79
1	5	861	36.08	1.128	302.35	1.118	293.49	1.134	309.39	1.134	311.55	1.146	307.79	1.146	307.79	1.146	307.79	1.146	307.79	1.146	307.79	1.146	307.79
1	6	1116	16.17	1.098	302.35	1.103	309.39	1.078	325.71	1.078	311.55	1.083	316.43	1.083	316.43	1.083	316.43	1.083	316.43	1.083	316.43	1.083	316.43
1	7	1418	17.32	1.083	302.35	1.055	327.69	1.029	325.71	1.029	311.55	1.029	316.43	1.029	316.43	1.029	316.43	1.029	316.43	1.029	316.43	1.029	316.43
1	8	1718	19.36	1.029	302.35	1.029	327.69	1.029	325.71	1.029	311.55	1.029	316.43	1.029	316.43	1.029	316.43	1.029	316.43	1.029	316.43	1.029	316.43
1	9	2018	113.86	1.029	302.35	1.029	327.69	1.029	325.71	1.029	311.55	1.029	316.43	1.029	316.43	1.029	316.43	1.029	316.43	1.029	316.43	1.029	316.43
1	10	2318	113.86	1.029	302.35	1.029	327.69	1.029	325.71	1.029	311.55	1.029	316.43	1.029	316.43	1.029	316.43	1.029	316.43	1.029	316.43	1.029	316.43
X	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1	1.368	355.92	1.421	357.10	1.390	358.12	1.490	346.93	1.629	357.10	1.732	347.43	1.708	357.10	1.629	357.10	1.629	357.10	1.629	357.10	1.629	357.10
1	2	1.429	352.14	1.756	351.94	1.459	352.49	1.732	347.43	1.708	357.10	1.732	347.43	1.708	357.10	1.732	347.43	1.732	347.43	1.732	347.43	1.732	347.43
1	3	1.729	352.82	1.672	351.28	1.671	352.49	1.675	347.43	1.675	357.10	1.675	347.43	1.675	357.10	1.675	347.43	1.675	347.43	1.675	347.43	1.675	347.43
1	4	1.881	308.59	1.094	323.27	1.129	316.42	1.088	319.75	1.088	306.66	1.088	319.75	1.088	306.66	1.088	319.75	1.088	319.75	1.088	319.75	1.088	319.75
1	5	1.266	318.23	1.130	323.27	1.129	316.42	1.129	319.75	1.129	306.66	1.129	319.75	1.129	306.66	1.129	319.75	1.129	319.75	1.129	319.75	1.129	319.75
1	6	1.082	359.64	1.116	359.20	1.077	352.93	1.059	316.13	1.059	355.07	1.059	316.13	1.059	355.07	1.059	316.13	1.059	316.13	1.059	316.13	1.059	316.13
1	7	1.021	359.64	1.077	359.20	1.077	352.93	1.077	316.13	1.077	355.07	1.077	316.13	1.077	355.07	1.077	316.13	1.077	316.13	1.077	316.13	1.077	316.13
1	8	1.021	359.64	1.077	359.20	1.077	352.93	1.077	316.13	1.077	355.07	1.077	316.13	1.077	355.07	1.077	316.13	1.077	316.13	1.077	316.13	1.077	316.13
1	9	1.021	359.64	1.077	359.20	1.077	352.93	1.077	316.13	1.077	355.07	1.077	316.13	1.077	355.07	1.077	316.13	1.077	316.13	1.077	316.13	1.077	316.13
1	10	1.021	359.64	1.077	359.20	1.077	352.93	1.077	316.13	1.077	355.07	1.077	316.13	1.077	355.07	1.077	316.13	1.077	316.13	1.077	316.13	1.077	316.13
X	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1	1.451	5.53	1.648	9.25	1.424	7.85	1.737	11.20	1.440	6.17	1.267	16.25	1.411	16.25	1.411	16.25	1.411	16.25	1.411	16.25	1.411	16.25
1	2	1.252	208.52	1.740	249.77	1.348	252.95	1.730	210.42	1.572	208.52	1.711	249.77	1.572	208.52	1.711	249.77	1.711	249.77	1.711	249.77	1.711	249.77
1	3	1.849	212.66	1.408	213.17	1.657	211.58	1.590	211.58	1.680	250.75	1.634	250.75	1.680	250.75	1.634	250.75	1.634	250.75	1.634	250.75	1.634	250.75
1	4	1.092	303.49	1.108	306.99	1.053	311.98	1.144	311.77	1.135	314.84	1.177	314.84	1.135	314.84	1.177	314.84	1.177	314.84	1.177	314.84	1.177	314.84
1	5	1.021	359.64	1.088	359.99	1.023	311.69	1.020	319.62	1.020	318.15	1.074	318.15	1.020	318.15	1.074	318.15	1.074	318.15	1.074	318.15	1.074	318.15
1	6	1.021	359.64	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99
1	7	1.021	359.64	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99
1	8	1.021	359.64	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99
1	9	1.021	359.64	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99
1	10	1.021	359.64	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99	1.077	359.99



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 76 ALPHA-WCL = 6.0 PSP RUN.PI 20.04  
 ROW 20 ALPHA-RAB = 0.5 C-COMP E 22.145  
 POINT 10 SIGMA = 0. V-SEP E 179.44  
 COMPUTED FREQUENCY = 9.09, Y = .0716

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012	.062	.142	.261	.392	.530	.661
N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	14.001	3.374	5.529	-.799	3.936	-.630	2.393
2	-.1.454	-.620	-.134	-.158	-.144	-.152	-.121
3	-.255	-.335	-.059	-.127	-.024	-.071	-.022
4	-.038	-.076	-.024	-.010	-.006	-.004	-.001
5	-.012	-.024	-.007	-.007	-.004	-.002	-.001
6	-.001	-.016	-.003	-.001	-.001	-.001	-.001
7	-.001	-.010	-.002	-.001	-.001	-.001	-.001
8	-.001	-.006	-.001	-.001	-.001	-.001	-.001
9	-.001	-.004	-.001	-.001	-.001	-.001	-.001
10	-.001	-.003	-.001	-.001	-.001	-.001	-.001

X =	.774	.850	.910
N	DELCP	DELCP	DELCP
1	-.052	-.373	-.173
2	-.020	-.066	-.062
3	-.021	-.023	-.026
4	-.018	-.014	-.016
5	-.016	-.010	-.012
6	-.014	-.008	-.010
7	-.012	-.006	-.008
8	-.010	-.005	-.007
9	-.008	-.004	-.006
10	-.007	-.003	-.005

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	.125	.200	.275	.350	.425	.500	.575	.650	.725	.800	.875	.950
GAP FRACTION	W	CPREAL	CPIMAG	W	CPREAL	CPIMAG	W	CPREAL	CPIMAG	W	CPREAL	CPIMAG
1	1.198	-.773	-.145	4.216	-.385	-.944	1.472	-.272	-.179	4.736	1.329	1.329
2	-.1.530	-.145	-.022	-1.700	-.158	-1.777	-1.523	-1.462	-.153	-1.231	-1.721	-1.721
3	-.051	-.077	-.002	-1.026	-.038	-.873	-.128	-.706	-.061	-.567	-.339	-.339
4	-.017	-.037	-.001	-.577	-.009	-.176	-.101	-.055	-.021	-.287	-.076	-.076
5	-.002	-.014	-.001	-.049	-.002	-.122	-.076	-.014	-.009	-.017	-.066	-.066
6	-.001	-.008	-.001	-.013	-.001	-.072	-.049	-.009	-.009	-.027	-.116	-.116
7	-.001	-.006	-.001	-.008	-.001	-.057	-.038	-.007	-.007	-.020	-.106	-.106
8	-.001	-.004	-.001	-.005	-.001	-.042	-.028	-.005	-.005	-.015	-.093	-.093
9	-.001	-.003	-.001	-.004	-.001	-.037	-.021	-.004	-.004	-.011	-.088	-.088
10	-.001	-.002	-.001	-.003	-.001	-.032	-.019	-.003	-.003	-.008	-.083	-.083

\*\*\* STABILITY PARAMETER

\* XI = .1414 \*  
 \* \*\*\*\*\*

MODE 1 -- CENTER PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 90 ALPHA-MCL = 6.0 POP RUN, PI 20.04  
 RUN 20 ALPHA-BAR = .5 Q-COMP = .32345  
 POINT I SIGMA = 0. V-REF = 199.44  
 COMPUTED FREQUENCY = 9.09, K = .0716

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	14	.012	346.45	5.586	351.78	3.988	350.91	2.406	354.08	1.206	359.19	.847	18.73
1	1	.212	210.80	.207	229.65	.211	227.20	.166	223.26	.069	165.01	.110	254.22
3	4	.458	7.58	.103	15.30	.059	10.01	.067	341.98	.069	165.01	.035	309.54
4	5	.085	232.76	.125	278.55	.075	288.71	.044	299.70	.083	287.30	.015	287.78
5	6	.224	276.47	.032	233.23	.007	211.71	.014	267.42	.018	277.11	.011	299.80
6	7	.016	258.36	.036	270.43	.021	321.46	.008	68.54	.018	171.11	.004	151.62
7	8	.215	207.71	.079	258.81	.020	210.66	.006	96.22	.021	220.83	.015	62.79
8	9	.024	218.43	.007	202.17	.041	241.26	.031	228.62	.021	243.81	.021	305.12
9	10	.180	266.09	.063	277.33	.013	216.05	.016	170.17	.007	114.87	.017	83.62
								.023	323.66	.028	5.73	.016	16.42

X	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	1	.377	98.84	.277	132.17	.436	132.35	1.773	354.29	1.773	354.29	.626	346.96
1	2	.072	298.55	.051	142.96	.071	132.04	.019	355.81	.019	355.81	.016	212.66
3	3	.034	137.16	.073	127.56	.037	144.74	.014	300.61	.014	300.61	.015	267.17
4	4	.023	323.03	.019	142.56	.018	26.82	.011	313.57	.011	313.57	.002	245.18
5	5	.014	286.44	.015	267.71	.014	123.30	.005	258.71	.005	258.71	.004	284.48
6	6	.014	103.31	.010	141.35	.002	94.73	.022	145.56	.022	145.56	.002	256.82
8	8	.002	22.17	.010	330.85	.009	76.55	.006	141.81	.006	141.81	.002	215.09
9	9	.017	82.17	.020	355.81	.025	51.02	.014	131.85	.014	131.85	.008	273.91

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1	1	1.192	4.65	4.233	354.78	9.554	171.14	.305	27.07	4.919	164.37	1.426	210.37
3	3	1	.861	206.67	2.023	212.49	1.853	196.39	.626	349.35	1.709	356.18	.656	211.06
4	4	1	.106	210.41	1.123	204.08	.874	189.00	.843	213.13	.297	345.13	.260	282.56
5	5	1	.192	298.79	.008	344.84	.170	323.63	.098	304.15	.220	162.86	.119	153.03
6	6	1	.082	292.32	.117	212.67	.235	318.06	.190	308.95	.119	153.03	.274	210.37
7	7	1	.085	320.32	.062	353.09	.168	334.64	.080	330.87	.119	153.03	.274	210.37
8	8	1	.082	229.94	.143	184.56	.089	195.03	.072	212.03	.274	210.37	.274	210.37
9	9	1	.104	219.96	.133	189.72	.089	167.79	.101	202.36	.274	210.37	.274	210.37

\*\*\* STABILITY PARAMETER

\* XI = .1414 \*  
 \* \* \*  
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ORIGINAL PAGE IS  
OF POOR QUALITY

OCMI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 92 ALPHA-MCL = 6.0 PDP RUN-PT 20.06  
 RUN 20 ALPHA-BAP = .5 O-COMP = .32019  
 POINT 3 ALPHA-SIGMA = 0. V-REF = 198.41  
 3 COMPUTED FREQUENCY = 15.53, K = .1230

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL	.012-UPPER CPIMAG	.062-UPPER CPREAL	.062-UPPER CPIMAG	.188-UPPER CPREAL	.188-UPPER CPIMAG	.261-UPPER CPREAL	.261-UPPER CPIMAG	.392-UPPER CPREAL	.392-UPPER CPIMAG	.530-UPPER CPREAL	.530-UPPER CPIMAG	.661-UPPER CPREAL	.661-UPPER CPIMAG
1	1	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885
2	2	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885
3	3	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885
4	4	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885
5	5	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885
6	6	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885
7	7	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885
8	8	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885
9	9	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885
10	10	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885	1.885

X	N	.774-UPPER CPREAL	.774-UPPER CPIMAG	.860-UPPER CPREAL	.860-UPPER CPIMAG	.910-UPPER CPREAL	.910-UPPER CPIMAG	.012-LOWER CPREAL	.012-LOWER CPIMAG	.062-LOWER CPREAL	.062-LOWER CPIMAG	.188-LOWER CPREAL	.188-LOWER CPIMAG	.261-LOWER CPREAL	.261-LOWER CPIMAG
1	1	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666
2	2	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666
3	3	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666
4	4	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666
5	5	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666
6	6	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666
7	7	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666
8	8	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666
9	9	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666
10	10	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666	1.666

X	N	.392-LOWER CPREAL	.392-LOWER CPIMAG	.530-LOWER CPREAL	.530-LOWER CPIMAG	.661-LOWER CPREAL	.661-LOWER CPIMAG	.774-LOWER CPREAL	.774-LOWER CPIMAG	.860-LOWER CPREAL	.860-LOWER CPIMAG	.910-LOWER CPREAL	.910-LOWER CPIMAG
1	1	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614
2	2	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614
3	3	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614
4	4	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614
5	5	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614
6	6	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614
7	7	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614
8	8	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614
9	9	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614
10	10	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614	1.614

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 92 ALPHA-MCL = 6.0 PDP RUN.PT 20.06  
RUN 20 ALPHA-BAR = .5 Q-COMP = .32019  
POINT 33 SIGMA = 0 V-REF = 1.98.41  
COMPUTED FREQUENCY = 0.15.53, K = .1230

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\* BLADE PRESSURES, PER RADIAN \*\*

N	X = .012-UPPER		.062-UPPER		.148-UPPER		.261-UPPER		.392-UPPER		.530-UPPER		.661-UPPER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	8.751	167.56	2.791	159.35	1.427	153.58	.419	120.85	.563	26.39	1.161	6.61	1.911	6.577
2	.035	264.03	.509	237.18	.200	234.40	.475	235.69	.492	253.93	.532	232.06	.155	231.74
3	.252	288.03	.216	288.68	.370	45.07	.170	292.80	.189	292.83	.158	302.48	.155	298.50
4	.305	75.46	.111	45.10	.086	33.18	.081	39.62	.405	38.50	.402	74.20	.472	83.51
5	.113	77.46	.111	32.21	.066	138.23	.065	147.79	.054	61.24	.038	155.12	.041	84.50
6	.106	148.18	.027	137.63	.037	145.53	.043	147.85	.052	136.23	.048	147.12	.060	145.50
7	.077	111.31	.066	237.93	.037	207.32	.059	204.32	.065	206.72	.063	197.23	.067	202.01
8	.073	234.87	.064	214.93	.021	180.26	.012	204.13	.012	258.74	.053	189.60	.017	211.03
9	.043	308.28	.035	171.27	.036	224.11	.045	224.45	.048	258.74	.053	215.90	.048	211.03
10	.033	308.28	.035	225.69	.036	224.11	.045	224.45	.048	258.74	.053	215.90	.048	211.03

N	X = .774-UPPER		.860-UPPER		.910-UPPER		.012-LOWER		.062-LOWER		.148-LOWER		.261-LOWER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.690	9.79	1.778	13.22	1.713	15.08	.371	355.04	.365	13.01	2.606	9.45	2.203	17.97
2	.521	232.56	.153	297.44	.169	231.03	.592	234.65	.515	238.16	.510	234.60	.517	235.63
3	.413	33.05	.445	33.33	.435	30.39	.124	334.57	.174	313.96	.162	306.24	.155	306.46
4	.069	82.55	.065	79.72	.046	85.24	.354	25.48	.374	28.42	.384	47.54	.385	40.46
5	.041	111.20	.039	121.41	.038	89.75	.041	90.35	.024	44.21	.024	47.54	.025	62.10
6	.046	259.98	.043	121.41	.048	247.74	.018	271.80	.032	265.73	.032	261.32	.025	229.64
7	.051	192.98	.065	195.91	.065	190.74	.057	188.71	.053	198.89	.052	199.84	.058	220.46
8	.013	232.18	.014	222.83	.012	223.01	.028	188.08	.029	243.56	.022	265.84	.021	251.46
9	.046	220.53	.046	228.16	.045	213.41	.022	192.89	.029	213.17	.027	228.98	.034	251.46
10	.046	220.53	.046	228.16	.045	213.41	.022	192.89	.029	213.17	.027	228.98	.034	251.46

N	X = .392-LOWER		.530-LOWER		.661-LOWER		.774-LOWER		.860-LOWER		.910-LOWER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.778	24.82	2.073	29.37	1.780	29.17	1.760	36.39	1.506	29.70	1.770	37.43
2	.485	236.03	.601	235.79	.539	234.84	.574	234.71	.566	237.19	.566	234.91
3	.136	292.47	.193	293.79	.174	294.63	.161	289.46	.160	294.25	.170	288.75
4	.072	53.01	.090	57.55	.067	69.33	.077	69.22	.057	65.09	.055	52.86
5	.026	109.28	.034	114.87	.033	115.90	.028	109.00	.034	140.99	.033	92.86
6	.032	268.79	.039	250.44	.034	255.23	.053	248.93	.055	262.38	.053	249.30
7	.059	198.63	.058	201.81	.054	193.49	.064	202.27	.055	199.45	.058	189.17
8	.019	266.41	.024	288.14	.018	269.50	.014	285.10	.019	304.40	.013	295.33
9	.033	233.41	.039	233.24	.037	229.20	.045	233.59	.042	223.59	.042	219.14
10	.033	233.41	.039	233.24	.037	229.20	.045	233.59	.042	223.59	.042	219.14

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCMI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 92 ALPHA-MCL = 6.0 PDP RUN.PT 20.06  
 RUN 20 ALPHA-RAP = .5 Q-COMP = .32019  
 POINT 3 SIGMA = 0. V-REF = 198.41  
 3 COMPUTED FREQUENCY = 15.53, K = .1230

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI
1	13	.897	-2	.350	5	.598	-2	.207	2	.311	1	.109	1	.109
2	13	.339	-2	.448	5	.024	-2	.092	2	.027	1	.019	1	.019
3	13	.034	-2	.166	5	.029	-2	.048	2	.027	1	.051	1	.051
4	13	.061	-2	.143	5	.045	-2	.055	2	.010	1	.006	1	.006
5	13	.040	-2	.024	5	.032	-2	.015	2	.009	1	.004	1	.004
7	13	.040	-2	.016	5	.052	-2	.018	2	.043	1	.030	1	.030
8	13	.007	-2	.034	5	.012	-2	.013	2	.009	1	.004	1	.004
9	13	.014	-2	.050	5	.002	-2	.009	2	.013	1	.011	1	.011
10	13	.003	-2	.070	5	.012	-2	.014	2	.014	1	.002	1	.002
		.042		.021		.000		.004		.021		.012		.016

\*\*\* STABILITY PARAMETER

WALL NO. GAP FRACTION	.125		.003		.125		.500		1.125	
	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG
1	1	1.430	4	.010	1	1.532	5	.510	1	1.161
2	2	.409	-4	.426	1	.354	5	.391	1	.550
3	3	.154	-3	.245	1	.497	5	.079	1	.533
4	4	.368	-4	.277	1	.185	5	.334	1	.777
5	5	.106	-5	.104	1	.086	5	.060	1	.148
7	7	.014	-7	.121	1	.111	5	.063	1	.148
9	9	.020	-9	.096	1	.006	5	.010	1	.088
8	8	.089	-8	.132	1	.049	5	.066	1	.107
10	10	.033	-10	.032	1	.015	5	.027	1	.040
		.000		.014	1	.076	5	.033	1	.005

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	.125		.003		.125		.500	
	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG
1	1	1.430	4	.010	1	1.532	5	.510
2	2	.409	-4	.426	1	.354	5	.391
3	3	.154	-3	.245	1	.497	5	.079
4	4	.368	-4	.277	1	.185	5	.334
5	5	.106	-5	.104	1	.086	5	.060
7	7	.014	-7	.121	1	.111	5	.063
9	9	.020	-9	.096	1	.006	5	.010
8	8	.089	-8	.132	1	.049	5	.066
10	10	.033	-10	.032	1	.015	5	.027

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 92 ALPHA-MCL = 6.0 PDP RUN-PT 20.06  
 RUN 20 ALPHA-BAR = .5 O-COMP = 32019  
 POINT 3 SIGMA = 0. V-REF = 198.41  
 COMPUTED FREQUENCY = 15.53, K = .1230

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.148		.261		.392		.530		.661	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	14.094	350.40	5.605	356.99	3.855	356.92	2.333	7.89	1.215	24.11	1.078	53.50	.685	93.86
2	.862	232.87	.011	234.06	.112	235.31	.043	234.99	.020	345.05	.044	262.22	.030	307.56
3	.189	79.53	.107	74.04	.048	81.70	.041	49.64	.061	147.54	.023	260.96	.033	267.12
4	.283	329.56	.099	297.39	.082	317.74	.026	66.65	.047	277.34	.091	59.82	.036	86.58
5	.065	158.35	.035	182.96	.021	135.63	.016	111.14	.028	262.82	.027	324.46	.030	332.13
6	.092	281.18	.057	334.74	.047	337.72	.046	339.49	.033	336.40	.007	37.39	.016	289.54
7	.034	281.23	.015	323.62	.011	112.26	.014	19.49	.020	379.50	.009	26.89	.014	276.09
8	.051	105.46	.020	53.07	.016	53.83	.016	305.37	.017	50.83	.007	331.90	.014	56.77
9	.071	272.83	.027	295.92	.030	311.48	.024	305.02	.008	283.04	.030	331.44	.014	322.87
10	.047	153.37	.009	87.78	.009	28.95	.021	357.17	.015	38.50	.020	.09	.016	356.59

X =	.774		.860		.910		N CM-MAG		PHIN		N CM-MAG		PHIM	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	.797	108.19	.542	141.27	.677	111.52	1.690	11.95	.052	254.92	1.690	11.95	.630	350.53
2	.056	255.21	.013	327.28	.039	321.16	.052	254.92	.015	101.20	.052	254.92	.012	220.98
3	.029	228.73	.026	264.35	.001	340.46	.031	359.50	.007	318.53	.031	359.50	.011	77.93
4	.095	20.10	.017	197.96	.030	354.51	.025	342.79	.006	38.99	.025	342.79	.006	164.46
5	.019	12.17	.026	314.98	.017	100.24	.006	38.99	.006	38.99	.006	38.99	.001	333.70
6	.012	296.20	.012	258.60	.011	62.56	.008	35.96	.008	35.96	.008	35.96	.002	89.97
7	.011	202.82	.011	357.80	.007	18.83	.019	312.15	.010	13.20	.019	312.15	.003	269.43
8	.012	341.18	.022	344.93	.005	340.14	.010	13.20	.010	13.20	.010	13.20	.001	110.97
9	.010	325.73	.006	81.56	.005	340.14	.010	13.20	.010	13.20	.010	13.20	.001	110.97
10	.010	325.73	.006	81.56	.005	340.14	.010	13.20	.010	13.20	.010	13.20	.001	110.97

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	W1		W2		W4		W6		W10		*** STABILITY PARAMETER	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.544	22.13	4.011	359.19	9.230	170.44	.621	34.76	5.337	197.43	.001	.1036
2	.622	228.83	.709	237.79	.797	206.38	.632	293.13	.765	226.70	.001	.1036
3	.238	310.40	.294	326.54	.112	290.61	.202	40.47	.051	79.88	.001	.1036
4	.481	40.03	.473	54.19	.726	50.32	.439	54.98	.790	79.88	.001	.1036
5	.125	21.85	.128	323.80	.202	2.78	.105	145.73	.325	5.54	.001	.1036
6	.033	232.89	.130	158.95	.180	141.79	.076	258.01	.325	152.16	.001	.1036
7	.099	206.57	.126	220.19	.024	165.16	.077	210.04	.105	237.16	.001	.1036
8	.033	188.96	.058	199.15	.066	219.68	.073	212.74	.113	251.04	.001	.1036
10	.020	241.98	.054	284.74	.081	1251.00	.033	228.91	.086	345.68	.001	.1036

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCMI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 94 ALPHA-MCL = 6.0 PDP RUN.PT 20.08  
RUN 20 ALPHA-BAR = .5 O-COMP = .32337  
POINT 5 ALPHA SIGMA = 0. V-REF = 190.41  
COMPUTED FREQUENCY = 19.04, K = .1500

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	8	.839	1.128	1.148	.180	.379	.401	.568
2	3	.134	.266	.400	.384	.380	.415	.378
3	4	.185	.127	.180	.202	.127	.189	.121
4	5	.090	.051	.052	.044	.056	.046	.052
5	7	.071	.002	.002	.043	.038	.043	.052
6	9	.090	.031	.077	.058	.051	.050	.064
7	8	.044	.045	.037	.038	.039	.030	.064
8	9	.008	.033	.011	.011	.014	.013	.047
9	10	.008	.022	.023	.015	.024	.022	.047
10		.006	.015	.005	.001	.016	.008	.017

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	8	.943	.362	.895	4.630	2.418	1.914	1.470
2	3	.368	.356	.371	.414	.415	.392	.370
3	4	.202	.101	.190	.198	.207	.187	.195
4	5	.019	.031	.012	.024	.032	.027	.019
5	6	.016	.050	.019	.010	.016	.030	.018
6	7	.026	.005	.044	.029	.032	.038	.038
7	8	.013	.048	.028	.007	.021	.028	.043
8	9	.013	.000	.018	.015	.019	.033	.043
9	10	.013	.012	.002	.018	.013	.011	.008
10		.001	.018	.002	.016	.005	.009	.016

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	8	.959	.301	.803	.628	.478	.753
2	3	.358	.311	.356	.361	.336	.348
3	4	.179	.128	.196	.216	.174	.177
4	5	.024	.027	.021	.006	.007	.022
5	6	.008	.008	.019	.023	.017	.018
6	7	.037	.037	.029	.052	.047	.035
7	8	.044	.038	.040	.038	.031	.046
8	9	.032	.040	.035	.030	.021	.033
9	10	.012	.031	.009	.001	.007	.015
10		.031	.012	.004	.007	.002	.006

ORIGINAL PAGE IS  
OF POOR QUALITY.

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 94 ALPHA-MCL = 6.0 POP RUN-PT 23.08  
RUN 20 ALPHA-BAR = .5 O-COMP = 3237  
POINT 5 SIGMA = 0. V-REF = 199.41  
COMPUTED FREQUENCY = 19.04, K = .1500

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	.062-UPPER CP-MAG	PHI	.148-UPPER CP-MAG	PHI	.261-UPPER CP-MAG	PHI	.392-UPPER CP-MAG	PHI	.530-UPPER CP-MAG	PHI	.661-UPPER CP-MAG	PHI
1	8	.910	172.73	3.216	176.51	1.906	185.42	.928	204.13	.557	249.59	.695	305.24	1.007	328.91
2	7	.261	332.20	.439	337.08	.529	340.92	.516	341.89	.557	343.08	.524	343.05	.543	343.11
3	6	.103	150.08	.087	195.86	.082	211.11	.072	229.71	.078	259.67	.083	270.37	.069	284.85
4	5	.071	181.95	.043	356.93	.052	358.91	.048	221.82	.065	33.92	.067	50.19	.039	242.47
5	6	.095	190.06	.066	222.63	.064	208.91	.077	221.21	.085	223.69	.082	232.86	.064	229.85
6	7	.025	120.26	.034	102.45	.041	106.12	.070	104.72	.051	112.36	.075	101.53	.051	118.10
7	8	.015	238.90	.012	193.97	.024	168.44	.015	193.30	.017	188.01	.022	191.62	.017	199.06
8	9	.016	291.74	.012	262.47	.014	288.80	.016	273.06	.009	248.32	.015	240.07	.017	288.99

X	N	CP-MAG	UPPER PHI	.860-UPPER CP-MAG	PHI	.910-UPPER CP-MAG	PHI	.012-LOWER CP-MAG	PHI	.062-LOWER CP-MAG	PHI	.148-LOWER CP-MAG	PHI	.261-LOWER CP-MAG	PHI
1	1	.010	338.99	.999	344.94	.909	350.02	4.736	347.85	2.423	37.82	1.915	358.53	1.433	7.09
2	2	.226	333.29	.510	344.02	.225	327.75	.233	328.21	.248	356.85	.236	322.22	.228	40.88
3	3	.053	248.20	.030	218.49	.031	247.78	.049	240.76	.061	258.29	.035	240.57	.044	328.99
4	4	.036	58.10	.011	49.56	.024	52.05	.026	67.14	.022	42.00	.034	31.19	.032	244.22
5	5	.062	235.00	.046	238.90	.056	240.05	.050	234.64	.052	241.40	.054	2236.81	.055	230.46
6	6	.073	119.74	.062	232.84	.043	114.72	.058	262.83	.054	247.27	.052	129.31	.052	242.92
7	7	.052	197.51	.046	126.84	.043	163.35	.062	103.13	.046	114.83	.033	219.74	.052	242.92
8	8	.013	265.41	.012	275.92	.015	277.51	.024	220.12	.014	190.25	.018	219.74	.015	240.07

X	N	CP-MAG	UPPER PHI	.530-LOWER CP-MAG	PHI	.661-LOWER CP-MAG	PHI	.774-LOWER CP-MAG	PHI	.860-LOWER CP-MAG	PHI	.910-LOWER CP-MAG	PHI
1	1	.014	17.25	1.114	26.25	.884	24.64	.814	39.47	.526	23.76	.918	38.68
2	2	.459	42.55	.575	43.07	.234	43.94	.270	44.97	.486	46.23	.524	46.75
3	3	.035	231.11	.027	215.62	.029	176.10	.027	327.22	.012	256.56	.028	142.71
4	4	.051	17.85	.035	24.08	.029	41.91	.061	24.76	.019	24.76	.028	49.37
5	5	.042	231.40	.056	217.04	.045	213.92	.061	227.32	.070	225.75	.058	217.37
6	6	.043	196.09	.052	129.88	.038	123.52	.055	226.61	.042	120.58	.055	115.04
7	7	.012	196.61	.011	193.01	.009	179.52	.046	194.62	.047	191.30	.039	190.05
8	8	.012	196.61	.011	193.01	.012	274.05	.007	208.62	.011	282.83	.015	247.05



MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 94 ALPHA-MCL = 6.0 PDP RUN.PI 20.08  
RUN 20 ALPHA-CAR = 0.5 Q-COMP = 32337  
PGINT 5 SIGMA = U. V-REF = 199.41  
COMPUTED FREQUENCY = 19.04, K = .1500

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.148		.261		.392		.530		.663	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	13.468	-2.125	5.628	-0.043	3.812	.131	2.269	.556	1.162	.821	.596	1.058	.059	.888
2	.291	.026	.071	.056	.008	.039	.014	.028	.068	.070	.033	.005	.041	.035
3	.013	.025	.032	.008	.007	.027	.007	.017	.039	.001	.024	.005	.009	.032
4	.066	.094	.052	.028	.043	.005	.028	.015	.033	.029	.024	.065	.011	.062
5	.035	.035	.027	.017	.022	.024	.023	.009	.030	.029	.012	.038	.002	.015
6	.036	.030	.047	.010	.009	.008	.015	.009	.028	.024	.011	.026	.002	.028
7	.034	.031	.028	.005	.009	.009	.023	.001	.026	.024	.011	.026	.002	.028
8	.092	.039	.013	.003	.021	.004	.039	.001	.006	.013	.021	.043	.004	.015
9	.010	.002	.003	.002	.012	.003	.007	.001	.001	.001	.010	.002	.004	.004
10	.010	.001	.007	.002	.005	.003	.007	.003	.004	.002	.008	.002	.001	.006

X =	.774		.850		.910		.950		.500		.500		.500	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	.315	.879	.486	.470	.142	.679	1.630	.555	1.630	.555	1.630	.555	1.630	.555
2	.007	.035	.036	.008	.023	.022	.009	.014	.009	.014	.009	.014	.009	.014
3	.014	.022	.046	.007	.013	.000	.024	.024	.024	.024	.024	.024	.024	.024
4	.004	.022	.021	.007	.011	.002	.013	.010	.013	.010	.013	.010	.013	.010
5	.015	.018	.010	.000	.003	.001	.019	.010	.019	.010	.019	.010	.019	.010
6	.026	.026	.027	.012	.004	.006	.010	.013	.010	.013	.010	.013	.010	.013
7	.037	.036	.007	.001	.003	.004	.006	.007	.006	.007	.006	.007	.006	.007
8	.011	.011	.008	.002	.001	.004	.006	.000	.006	.000	.006	.000	.006	.000
9	.012	.014	.001	.002	.003	.004	.003	.000	.003	.000	.003	.000	.003	.000
10	.006	.014	.001	.002	.003	.001	.003	.000	.003	.000	.003	.000	.003	.000

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. W1 W2 W3 W4 W5 W6 W7 W8 W9 W10  
GAP FRACTION CPREAL CPIMAG CPREAL CPIMAG CPREAL CPIMAG CPREAL CPIMAG CPREAL CPIMAG CPREAL CPIMAG

\*\*\* STABILITY PARAMETER \*\*\* XI = .0812 \*\*\*

WALL NO.	W1		W2		W3		W4		W5		W6		W7		W8		W9		W10		
	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	
1	.503	-359	2.888	-1.039	-9.815	.353	.321	-523	-5.474	.217	.210	.321	-523	-5.474	.217	.210	.321	-523	-5.474	.217	.210
2	.625	.394	.647	.029	.163	.650	.504	.435	.217	.179	.670	.504	.435	.217	.179	.670	.504	.435	.217	.179	.670
3	.281	.194	.366	.209	.183	.182	.264	.153	.179	.310	.310	.264	.153	.179	.310	.310	.264	.153	.179	.310	.310
4	.045	.066	.144	.096	.061	.063	.069	.077	.072	.121	.121	.069	.077	.072	.121	.121	.069	.077	.072	.121	.121
5	.060	.117	.122	.097	.061	.098	.076	.021	.169	.176	.176	.076	.021	.169	.176	.176	.076	.021	.169	.176	.176
6	.074	.053	.085	.097	.052	.098	.041	.074	.097	.105	.105	.041	.074	.097	.105	.105	.041	.074	.097	.105	.105
7	.072	.073	.027	.030	.057	.039	.034	.061	.010	.080	.080	.034	.061	.010	.080	.080	.034	.061	.010	.080	.080
8	.015	.032	.040	.021	.021	.039	.023	.061	.014	.080	.080	.023	.061	.014	.080	.080	.023	.061	.014	.080	.080
9	.052	.094	.024	.021	.021	.051	.023	.061	.014	.080	.080	.023	.061	.014	.080	.080	.023	.061	.014	.080	.080
10	.056	.012	.034	.024	.027	.051	.024	.061	.022	.022	.022	.024	.061	.022	.022	.022	.024	.061	.022	.022	.022

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 94 ALPHA-MCL = 6.0 PDP RUN-PT 20.08  
RUN 20 ALPHA-BAR = .5 Q-COMP = 32337  
POINT 5 SIGMA = 0. V-REF = 199.41  
COMPUTED FREQUENCY = 19.04, K = .1500

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.148		.261		.392		.530		.661	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	13.635	351.03	5.628	359.57	3.814	1.97	2.336	13.77	1.423	35.23	1.215	60.62	.890	93.80
2	.029	297.80	.033	345.55	.031	259.12	.031	242.73	.039	225.54	.037	131.45	.054	221.07
3	.115	304.94	.059	331.47	.044	283.70	.018	247.37	.044	181.29	.070	309.66	.033	254.57
4	.070	150.30	.032	148.51	.032	132.81	.022	29.23	.042	47.50	.039	69.67	.063	80.07
5	.068	333.74	.048	348.43	.040	6.66	.025	120.41	.035	54.25	.026	95.22	.015	279.04
6	.039	333.37	.024	350.13	.012	41.30	.035	40.59	.037	40.59	.028	113.50	.020	97.02
7	.011	193.08	.014	144.99	.021	178.58	.032	200.80	.014	242.76	.025	212.90	.016	285.28
8	.011	193.08	.003	30.04	.018	313.92	.003	335.05	.002	311.69	.011	10.12	.006	50.91
9	.010	193.08	.007	347.26	.005	330.06	.007	23.71	.005	330.48	.008	15.58	.006	78.49
10														

N	.774		.860		.910		CM-MAG		PHIN		N		CM-MAG		PHIM	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	.934	109.70	.676	136.00	.693	101.83	1.722	18.80	.016	237.96	1.478	182.20	.619	352.45	1	
2	.062	282.53	.037	193.24	.032	136.82	.016	237.96	.024	266.00	.007	349.77	.007	349.77	2	
3	.024	275.24	.022	18.74	.047	103.12	.034	44.86	.016	216.50	.005	310.25	.002	310.25	3	
4	.024	129.84	.016	206.24	.004	34.71	.016	44.86	.016	216.50	.005	353.12	.005	353.12	4	
5	.027	105.66	.024	61.77	.008	196.75	.016	57.45	.016	216.50	.004	331.96	.004	331.96	5	
6	.011	245.92	.006	353.73	.008	222.77	.016	57.45	.016	216.50	.003	150.57	.003	150.57	6	
7	.016	42.90	.008	192.05	.008	293.25	.004	358.67	.004	358.67	.001	279.27	.001	279.27	7	
8	.015	111.12	.002	533.86	.008	175.14	.003	40.39	.003	40.39	.001	330.94	.001	330.94	8	
9																
10																

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.000		.125		.500		.125		.500		.125		.500	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	.617	324.50	3.070	340.21	9.822	177.94	.614	238.47	5.478	182.20	1.125	182.20	.478	182.20	1	
2	.739	326.79	.648	1.81	.870	175.92	.666	40.79	.704	172.05	1.125	172.05	.704	172.05	2	
3	.108	217.75	.173	213.62	.258	315.19	.305	329.88	.357	300.02	1.125	300.02	.357	300.02	3	
4	.062	16.04	.133	336.93	.065	101.89	.104	229.05	.141	121.01	1.125	121.01	.141	121.01	4	
5	.092	216.65	.129	228.69	.134	18.58	.103	16.04	.170	218.86	1.125	218.86	.170	218.86	5	
6	.082	242.53	.043	230.66	.093	236.17	.085	241.23	.106	264.76	1.125	264.76	.106	264.76	6	
7	.026	171.89	.050	143.41	.040	100.06	.029	117.57	.082	277.83	1.125	277.83	.082	277.83	7	
8	.023	171.03	.032	139.21	.021	182.07	.034	187.40	.026	121.89	1.125	121.89	.026	121.89	8	
9	.013	298.96	.042	324.12	.058	297.90	.034	289.79	.036	308.51	1.125	308.51	.036	308.51	9	
10																

\*\*\* STABILITY PARAMETER

\* XI = .0812 \*  
\* \* \*  
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ORIGINAL PAGE IS  
OF POOR QUALITY

QCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

MCDE 1 -- ALPHA-MCL = 6.0 PDP RUN.PT 21.454  
 FILE 96 ALPHA-RAD = .5 O-COMP = 32119  
 RUN 21 ALPHA-SIGMA = 45. V-REF = 198.71  
 POINT 1 COMPUTED FREQUENCY = 9.08, K = .0718

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG					
1	1	-13.756	-5.179	-6.429	-3.397	1.113	483	-2.794	1.067	-2.332	1.529	-1.385	1.893
2	2	.674	.869	.592	.640	1.113	1.067	.704	1.200	.535	1.270	.769	1.262
3	3	.146	.344	.226	.472	.837	.900	.501	.955	.202	.639	.228	.942
4	4	.093	.233	.297	.321	.121	.155	.199	.248	.376	.146	.359	.232
5	5	.038	.123	.348	.358	.238	.369	.405	.369	.419	.279	.377	.355
6	6	.118	.069	.072	.074	.163	.177	.091	.151	.075	.371	.061	.185
7	7	.031	.027	.067	.083	.145	.151	.072	.151	.091	.168	.088	.162
8	8	.037	.031	.046	.047	.050	.053	.029	.066	.030	.046	.081	.057
9	9	.037	.031	.046	.047	.050	.053	.029	.066	.030	.046	.081	.057
10	10	.037	.031	.046	.047	.050	.053	.029	.066	.030	.046	.081	.057

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG					
1	1	-1.725	1.841	-1.697	4.837	3.721	826	2.842	.052	2.354	2.354	.052	2.071
2	2	.402	1.237	.552	.966	1.044	.802	1.209	.766	1.114	1.114	.766	1.162
3	3	.201	.139	.211	.531	.832	.547	.875	.519	.850	.850	.519	.879
4	4	.354	.327	.337	.174	.147	.181	.178	.200	.170	.170	.200	.147
5	5	.357	.327	.337	.245	.295	.307	.298	.314	.270	.270	.314	.252
6	6	.049	.176	.326	.369	.411	.387	.377	.373	.356	.356	.373	.306
7	7	.079	.156	.095	.128	.200	.142	.190	.063	.194	.194	.063	.179
8	8	.071	.156	.064	.090	.140	.125	.141	.087	.146	.146	.087	.162
9	9	.037	.057	.039	.024	.035	.111	.013	.086	.022	.022	.086	.042
10	10	.037	.057	.039	.024	.035	.111	.013	.086	.022	.022	.086	.042

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	
1	1	.505	1.620	.943	-1.544	1.378	-1.613	1.206
2	2	.651	1.080	1.157	.733	1.271	1.733	1.206
3	3	.479	.808	1.894	.549	.886	.515	1.914
4	4	.185	.231	.201	.211	.122	.140	.125
5	5	.323	.254	.342	.353	.289	.338	.253
6	6	.194	.194	.034	.033	.228	.319	.299
7	7	.059	.028	.098	.074	.164	.041	.180
8	8	.028	.028	.074	.074	.164	.113	.156
9	9	.027	.027	.074	.074	.164	.113	.156
10	10	.027	.027	.074	.074	.164	.113	.156

MODE 1 -- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 96 ALPHA-MCL = 6.0 PDP RUN-PT 21.04  
 RUM 21 ALPHA-PAR = 4.5 Q-COMP = 32119  
 POINT 21 SIGMA = 45.0 V-REF = 198.71  
 COMPUTED FREQUENCY = 9.08, K = .0718

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	CP-MAG	PHI	062-UPPER CP-MAG	PHI	148-UPPER CP-MAG	PHI	261-UPPER CP-MAG	PHI	392-UPPER CP-MAG	PHI	530-UPPER CP-MAG	PHI	661-UPPER CP-MAG	PHI
1	14.689	209.63	6.470	186.51	4.631	181.32	3.431	171.91	2.191	159.09	2.718	146.74	2.715	135.77
2	1.100	127.82	1.220	57.41	1.241	60.15	1.281	60.15	1.111	60.06	1.476	59.27	1.479	58.67
3	.623	83.85	.948	59.29	.539	60.19	.981	60.82	1.030	60.89	1.081	60.27	1.080	60.72
4	.153	163.39	.248	210.80	.277	215.25	.236	210.82	.419	217.90	.249	215.81	.243	212.97
5	.115	324.44	.394	323.03	.399	318.05	.400	323.39	.548	317.64	.559	318.50	.463	320.96
6	.236	279.37	.538	307.10	.530	310.97	.524	311.10	.198	317.27	.189	311.57	.184	318.17
7	.170	133.74	.203	110.81	.189	113.97	.179	115.58	.167	114.42	.191	111.69	.184	111.45
8	.106	139.35	.142	172.40	.148	163.15	.156	165.98	.101	164.43	.131	161.11	.109	161.45
9	.027	88.26	.085	20.48	.079	17.09	.087	17.09	.073	22.06	.083	27.11	.099	23.93
10	.049	220.26	.063	236.83	.067	227.27	.071	228.09	.073	246.06	.083	248.58	.076	237.13

X	CP-MAG	PHI	860-UPPER CP-MAG	PHI	910-UPPER CP-MAG	PHI	012-LOWER CP-MAG	PHI	062-LOWER CP-MAG	PHI	148-LOWER CP-MAG	PHI	261-LOWER CP-MAG	PHI
1	2.523	133.15	2.409	134.33	2.367	135.78	6.103	37.57	2.960	73.79	2.464	72.89	2.071	91.43
2	1.445	58.82	1.466	61.70	1.483	58.23	1.422	47.22	1.451	56.43	1.471	57.55	1.392	56.61
3	1.048	61.99	1.058	61.70	1.098	59.81	1.987	57.49	1.032	57.97	1.038	57.28	1.021	59.44
4	.445	214.76	.258	212.63	.257	219.36	.227	220.20	.254	224.50	.252	216.28	.248	216.32
5	.491	318.32	.504	319.21	.479	314.57	.553	309.66	.423	315.76	.405	316.25	.402	320.63
6	.183	105.54	.196	105.32	.191	98.05	.203	97.84	.194	102.35	.189	103.12	.189	109.52
7	.177	63.42	.192	58.95	.184	59.07	.189	47.57	.188	48.43	.185	48.16	.189	61.84
8	.090	37.58	.088	38.05	.081	37.39	.097	339.00	.111	6.92	.101	12.40	.097	23.00
10	.068	236.34	.069	234.24	.061	230.21	.043	236.22	.046	224.00	.054	215.40	.055	230.00

X	CP-MAG	PHI	530-LOWER CP-MAG	PHI	661-LOWER CP-MAG	PHI	774-LOWER CP-MAG	PHI	860-LOWER CP-MAG	PHI	910-LOWER CP-MAG	PHI		
1	1.697	107.32	2.043	116.81	1.769	122.21	2.069	138.24	1.921	138.59	2.178	146.37		
2	1.266	58.55	1.548	58.38	1.358	58.41	1.502	60.80	1.414	58.78	1.362	58.05		
3	.227	215.37	1.160	213.72	1.030	60.20	1.138	61.17	1.019	60.45	1.047	60.78		
4	.389	312.31	.472	310.69	.427	219.68	.456	209.99	.219	211.44	.217	211.20		
5	.453	315.58	.538	318.14	.474	316.07	.481	320.75	.417	318.44	.435	322.25		
6	.186	99.32	.224	101.71	.201	99.72	.231	98.24	.467	57.83	.484	57.55		
7	.082	56.74	.105	26.56	.197	60.01	.197	56.18	.182	61.37	.184	61.72		
8	.082	19.74	.105	26.56	.197	60.01	.197	56.18	.182	61.37	.184	61.72		
9	.054	210.67	.066	213.38	.062	210.76	.071	213.92	.070	218.93	.054	224.07		
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MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 96 ALPHA-MCL = 5.0 PFC RUN-PT 21.04  
RUN 21 ALPHA-RAP = 5.5 J-COMP = 32119  
POINT 1 SIGMA = 45.0 V-REF = 198.71  
COMPUTED FREQUENCY = 9.08, K = .0718

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.148		.261		.392		.530		.661	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	18.594	8.899	7.255	3.575	5.354	2.455	3.345	1.588	2.288	.553	1.410	.294	1.002	-.396
2	1.664	.175	.145	.181	.204	.025	.126	.049	.044	.143	.039	.049	-.058	-.207
3	.027	.213	.063	.060	.074	.035	.047	.043	-.021	-.092	.046	.065	-.016	-.048
4	.151	.228	.032	.058	.023	.010	.007	.026	.042	.023	-.020	-.002	.033	.015
5	.331	.179	.063	.052	.034	.007	.015	.017	-.042	.052	.039	.011	-.036	.026
6	.083	.077	.031	.001	.031	.022	.011	.016	.061	.067	.029	.051	.027	.023
7	.206	.071	.092	.005	.027	.014	.023	.017	.027	.001	.033	.019	.019	.008
8	.089	.091	.031	.016	.007	.012	.023	.018	.017	-.011	.054	.001	-.005	.005
9	.013	.005	.001	.021	.002	.018	.012	.010	-.017	.039	.025	.001	-.012	-.032
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X =	.774		.850		.910		CNREAL		CNIMAG		N		CMREAL		CMIMAG	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	.182	.492	.243	.453	.117	.405	2.676	.921	.064	.921	.064	1	.791	.529	.013	.007
2	.057	.072	.005	.028	.037	.022	.035	.011	.012	.011	.012	2	.013	.007	.006	.007
3	.010	.018	.005	.004	.071	.036	.009	.014	.014	.014	.014	3	.001	.007	.001	.001
4	.013	.019	.045	.007	.001	.042	.015	.015	.015	.015	.015	4	.003	.010	.001	.001
5	.016	.021	.058	.024	.021	.010	.015	.026	.026	.026	.026	5	.010	.001	.001	.001
6	.030	.025	.023	.005	.014	.002	.026	.033	.033	.033	.033	6	.007	.001	.001	.001
7	.002	.002	.027	.003	.018	.009	.007	.007	.007	.007	.007	7	.004	.001	.001	.001
8	.002	.002	.022	.003	.006	.010	.008	.008	.008	.008	.008	8	.002	.000	.000	.000
9	.002	.002	.022	.003	.006	.010	.008	.008	.008	.008	.008	9	.002	.000	.000	.000
10												10	.002	.000	.000	.000

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.000		.500		.125		.500		.125		.500		.125	
	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	-1.772	2.001	.469	.682	-14.231	-2.030	-3.100	.982	-5.820	-5.598	1.125	1.160	1.125	1.160	1.125	1.160
2	1.055	1.568	.862	1.167	.724	1.138	.829	1.410	.697	.838	.883	.838	.883	.838	.883	.838
3	.328	1.135	.422	.452	.402	1.147	.636	1.200	.025	.103	.025	.103	.025	.103	.025	.103
4	.379	.359	.371	.318	.497	-.275	.406	-.334	.302	.477	.302	.477	.302	.477	.302	.477
5	.464	.350	.371	.260	.477	-.275	.406	-.334	.302	.477	.302	.477	.302	.477	.302	.477
6	.464	.270	.371	.132	.477	-.275	.406	-.334	.302	.477	.302	.477	.302	.477	.302	.477
7	.028	.201	.170	.122	.078	.253	.674	.195	.074	.193	.074	.193	.074	.193	.074	.193
8	.141	.346	.136	.027	.056	.010	.110	.048	.026	.017	.026	.017	.026	.017	.026	.017
9	.056	.033	.037	.048	.028	-.113	.056	.048	.017	.017	.017	.017	.017	.017	.017	.017
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\*\*\* STABILITY PARAMETER

\* XI = -.287 \*  
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MODE 1 -- CCM PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 96 ALPHA-MCL = 6.0 PDP RUN.PT 21.04  
 RUN 21 ALPHA-PAR = .5 Q-COMP = 32119  
 POINT 1 SIGMA = 45. V-REF = 198.71  
 COMPUTED FREQUENCY = 9.03, K = .0718  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.066		.148		.261		.392		.530		.661	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	20.613	25.58	6.082	26.23	5.891	24.64	3.703	25.59	2.354	13.58	1.440	11.79	1.078	336.43
2	1.649	6.08	.232	51.26	.206	27.00	.135	21.77	.149	252.96	.079	54.77	.121	341.30
3	510	24.68	.082	43.42	.082	25.65	.064	42.94	.094	256.83	.079	54.77	.051	252.96
4	192	301.80	.060	302.75	.025	24.68	.026	276.92	.043	58.51	.030	186.58	.047	156.90
5	276	333.52	.059	259.41	.006	331.17	.015	242.43	.043	187.23	.053	247.09	.044	143.94
6	376	413.08	.031	358.94	.051	61.70	.078	276.08	.097	147.29	.050	147.29	.030	143.94
7	113	413.08	.031	358.94	.051	61.70	.078	276.08	.097	147.29	.050	147.29	.030	143.94
8	220	12.74	.082	331.98	.024	16.76	.028	54.82	.061	358.65	.038	60.62	.013	252.96
9	108	325.55	.025	331.98	.024	16.76	.028	54.82	.061	358.65	.038	60.62	.013	252.96
10	014	340.12	.023	86.67	.018	85.21	.016	41.16	.042	113.25	.048	120.60	.014	109.96

N	.774		.860		.910		CN-MAG		PHIN		N		CN-MAG		PHIM	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	.497	291.46	.514	298.19	.460	255.29	2.830	18.98	.899	28.47	1	.899	28.47	.899	28.47	
2	.076	101.81	.066	260.38	.121	240.23	.037	356.93	.045	17.10	2	.045	17.10	.045	17.10	
3	.091	118.37	.029	80.28	.074	222.81	.010	347.62	.015	30.04	3	.015	30.04	.015	30.04	
4	.019	267.16	.045	185.64	.036	88.509	.017	232.92	.007	292.28	4	.007	292.28	.007	292.28	
5	.013	176.53	.058	146.43	.047	116.04	.028	190.80	.010	7.94	5	.010	7.94	.010	7.94	
6	.031	79.43	.033	201.89	.019	352.38	.034	39.52	.004	8.90	6	.004	8.90	.004	8.90	
7	.028	141.52	.023	167.06	.010	121.38	.004	330.41	.004	16.88	7	.004	16.88	.004	16.88	
8											8					
9											9					
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\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	.125		.000		.125		.500		.125		.500		.125		.500	
		CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.673	131.52	.628	55.51	14.375	182.12	3.251	162.42	1.068	223.80	1.068	223.80	1.068	223.80	1.068	223.80	
2	1.890	56.06	1.830	61.91	1.349	157.56	1.636	159.45	1.317	43.51	1.317	43.51	1.317	43.51	1.317	43.51	
3	338	58.01	1.471	52.49	1.232	68.505	2.276	60.08	1.207	76.17	1.207	76.17	1.207	76.17	1.207	76.17	
4	320	316.73	.528	213.93	.444	193.02	3.441	320.56	.565	302.37	.565	302.37	.565	302.37	.565	302.37	
5	269	307.10	.937	265.38	.777	307.86	.528	314.78	.777	110.99	.777	110.99	.777	110.99	.777	110.99	
6	287	110.00	.172	129.67	.268	106.80	.710	118.34	.207	174.80	.207	174.80	.207	174.80	.207	174.80	
7	250	53.56	.329	77.50	.237	80.01	.173	62.73	.040	335.23	.040	335.23	.040	335.23	.040	335.23	
8	148	18.00	.135	11.15	.057	9.51	.103	225.97	.128	262.25	.128	262.25	.128	262.25	.128	262.25	
9																	
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\*\*\* STABILITY PARAMETER

N	.425		.500		.575		.650		.725		.800		.875		.950	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	.899	28.47	.899	28.47	.899	28.47	.899	28.47	.899	28.47	.899	28.47	.899	28.47	.899	28.47
2	.045	17.10	.045	17.10	.045	17.10	.045	17.10	.045	17.10	.045	17.10	.045	17.10	.045	17.10
3	.015	30.04	.015	30.04	.015	30.04	.015	30.04	.015	30.04	.015	30.04	.015	30.04	.015	30.04
4	.007	292.28	.007	292.28	.007	292.28	.007	292.28	.007	292.28	.007	292.28	.007	292.28	.007	292.28
5	.010	7.94	.010	7.94	.010	7.94	.010	7.94	.010	7.94	.010	7.94	.010	7.94	.010	7.94
6	.004	8.90	.004	8.90	.004	8.90	.004	8.90	.004	8.90	.004	8.90	.004	8.90	.004	8.90
7	.004	16.88	.004	16.88	.004	16.88	.004	16.88	.004	16.88	.004	16.88	.004	16.88	.004	16.88
8	.004	349.49	.004	349.49	.004	349.49	.004	349.49	.004	349.49	.004	349.49	.004	349.49	.004	349.49
9	.002	10.37	.002	10.37	.002	10.37	.002	10.37	.002	10.37	.002	10.37	.002	10.37	.002	10.37
10																

\*\*\* XI = -.4287 \*\*\*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 98 ALPHA-PCL = 6.0 PDP RUN.PT 21.06  
 RUN 21 ALPHA-PAP = .5 O-COMP = .32180  
 POINT 3 ALPHA-SIGMA = 45. V-REF = .198.90  
 COMPUTED FREQUNCY = 15.49, K = .1224

FOUPIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PPESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG	.921-UPPER CPREAL CPIMAG
1	-12	.921	-4.209	-.557	-.452	-.181	-.049	-.157	-.024
2	-.007	-.208	-.019	-.023	-.059	-.133	-.013	-.022	-.038
3	-.012	-.059	-.133	-.013	-.022	-.038	-.013	-.022	-.038
4	-.023	-.059	-.133	-.013	-.022	-.038	-.013	-.022	-.038
5	-.033	-.059	-.133	-.013	-.022	-.038	-.013	-.022	-.038
6	-.043	-.059	-.133	-.013	-.022	-.038	-.013	-.022	-.038
7	-.053	-.059	-.133	-.013	-.022	-.038	-.013	-.022	-.038
8	-.063	-.059	-.133	-.013	-.022	-.038	-.013	-.022	-.038
9	-.073	-.059	-.133	-.013	-.022	-.038	-.013	-.022	-.038
10	-.083	-.059	-.133	-.013	-.022	-.038	-.013	-.022	-.038

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.921-LOWER CPREAL CPIMAG
1	-.907	.643	-.823	-.853	5.374	1.616	1.834	1.358	1.171	1.160	.617	.921
2	-.062	-.112	-.204	-.187	-.037	-.045	-.097	-.045	-.097	-.045	-.045	-.045
3	-.222	-.199	-.233	-.243	-.212	-.146	-.162	-.146	-.162	-.146	-.146	-.146
4	-.048	-.086	-.047	-.016	-.036	-.001	-.064	-.064	-.064	-.064	-.064	-.064
5	-.025	-.092	-.033	-.022	-.014	-.001	-.046	-.046	-.046	-.046	-.046	-.046
6	-.028	-.058	-.028	-.007	-.006	-.000	-.000	-.000	-.000	-.000	-.000	-.000
7	-.028	-.058	-.028	-.007	-.006	-.000	-.000	-.000	-.000	-.000	-.000	-.000
8	-.028	-.058	-.028	-.007	-.006	-.000	-.000	-.000	-.000	-.000	-.000	-.000
9	-.028	-.058	-.028	-.007	-.006	-.000	-.000	-.000	-.000	-.000	-.000	-.000
10	-.028	-.058	-.028	-.007	-.006	-.000	-.000	-.000	-.000	-.000	-.000	-.000

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	-.126	.695	-.125	-.125	-.125	-.125	-.125
2	-.059	-.090	-.057	-.057	-.057	-.057	-.057
3	-.212	-.096	-.251	-.271	-.266	-.266	-.266
4	-.007	-.004	-.004	-.004	-.004	-.004	-.004
5	-.012	-.069	-.014	-.014	-.014	-.014	-.014
6	-.012	-.069	-.014	-.014	-.014	-.014	-.014
7	-.012	-.069	-.014	-.014	-.014	-.014	-.014
8	-.012	-.069	-.014	-.014	-.014	-.014	-.014
9	-.012	-.069	-.014	-.014	-.014	-.014	-.014
10	-.012	-.069	-.014	-.014	-.014	-.014	-.014

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 98 ALPHA-MCL = 6.0 POP RUN-PT 21.06  
 RUN 21 ALPHA-RAP = 0.5 O-COMP = 32180  
 POINT 23 SIGMA = 45.5 V-REF = 198.90  
 COMPUTED FREQUENCY = 15.49, M = .1224

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	13	.589	198.04	5.917	184.83	4.115	194.76	2.717	192.40	2.227	184.51	1.535	196.92
2	1	.717	140.96	.169	201.06	.189	176.06	.225	182.56	.227	187.31	.150	190.22
3	4	.213	31.44	.101	241.80	.127	230.97	.100	236.44	.147	137.62	.150	139.95
4	5	.209	268.10	.273	234.88	.282	231.97	.279	232.26	.294	229.81	.293	221.58
5	6	.063	68.45	.038	256.97	.126	264.43	.122	270.73	.117	276.81	.118	287.49
6	7	.136	277.19	.136	277.82	.133	281.69	.127	133.60	.128	155.04	.021	186.89
7	8	.023	107.16	.031	146.94	.045	104.68	.052	101.94	.051	107.20	.056	117.34
8	9	.013	122.30	.014	138.17	.016	165.88	.009	142.54	.010	171.21	.028	115.23
9	10	.042	64.00	.025	179.46	.023	195.56	.025	186.31	.024	173.44	.022	91.81

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	.112	144.67	.998	145.61	.997	148.82	5.784	21.71	2.444	48.63	1.747	40.51
2	1	.204	187.62	.207	169.63	.190	190.16	.146	256.44	.120	174.74	.175	193.51
3	4	.128	240.84	.119	246.02	.080	231.25	.102	231.73	.121	248.18	.114	253.03
4	5	.298	221.81	.324	223.99	.324	221.40	.267	217.31	.284	220.00	.289	226.42
5	6	.099	299.30	.089	303.51	.075	306.18	.153	253.18	.137	262.00	.113	264.47
6	7	.098	175.76	.104	155.98	.085	181.68	.065	181.68	.067	188.51	.073	164.69
7	8	.064	115.85	.066	116.44	.064	109.95	.049	107.88	.050	100.16	.049	102.01
8	9	.005	181.02	.026	113.45	.008	149.37	.006	14.38	.013	196.65	.027	105.41
9	10	.019	70.65	.026	76.42	.018	55.09	.013	226.36	.008	95.17	.008	79.48

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	.706	79.69	.750	99.62	.578	110.07	8.46	147.62	.404	150.63	1.087	151.94
2	1	.191	189.81	.231	143.31	.209	192.73	.212	181.35	.183	237.48	.229	192.35
3	4	.105	239.67	.129	227.46	.094	251.02	.073	245.77	.085	224.97	.070	227.03
4	5	.096	272.21	.103	280.77	.083	288.12	.086	287.78	.075	272.20	.061	301.21
5	6	.008	154.73	.014	93.82	.010	101.57	.015	83.60	.051	64.38	.020	172.00
6	7	.071	283.60	.084	286.21	.073	282.55	.062	284.80	.052	279.64	.080	176.00
7	8	.045	104.68	.056	104.73	.059	108.14	.027	97.83	.017	115.38	.060	211.30
8	9	.015	309.90	.029	318.67	.009	304.75	.025	325.08	.017	318.38	.003	117.53
9	10	.009	77.12	.017	65.59	.014	83.08	.025	55.79	.026	50.64	.018	74.53





ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 98 ALPHA-MCL = 6.0 PDP RUN-PT 21.06  
 RUN 23 ALPHA-BAR = 32.80  
 POINT SIGMA = 4.5 V-COMP = 198.90  
 COMPUTED FREQUENCY = 15.49, K = .1224

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012	.062	.148	.261	.392	.530	.661
N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM
1	19.365	19.14	8.064	24.54	5.777	22.48	3.601
2	.789	311.28	.023	277.04	.046	346.96	.037
3	.298	224.20	.069	147.16	.028	147.37	.042
4	.131	255.97	.018	300.86	.013	192.60	.026
5	.085	225.20	.052	234.32	.027	275.06	.019
6	.082	57.50	.072	87.84	.061	91.47	.052
7	.026	108.32	.016	86.21	.005	77.93	.009
8	.013	289.18	.026	307.53	.040	320.64	.007
10	.055	239.76	.017	252.19	.016	293.52	.015
1	1.424	15.93	1.424	24.76	2.301	32.06	2.301
2	.032	183.60	.038	332.06	.038	332.06	.038
3	.082	349.86	.042	314.06	.042	314.06	.042
4	.019	247.20	.016	217.64	.016	217.64	.016
5	.026	145.67	.009	57.70	.009	252.70	.015
6	.028	39.88	.063	77.64	.063	77.64	.063
7	.014	98.42	.016	212.64	.016	212.64	.016
8	.014	21.51	.032	320.64	.032	320.64	.032
10	.010	318.87	.015	247.77	.015	247.77	.015

X =	.774	.860	.910	CM-MAG	PHIM	
N	DELCPM	PHI	DELCPM	PHI	PHIM	
1	.271	315.42	.292	283.81	.106	182.37
2	.025	118.83	.042	306.56	.040	202.31
3	.078	239.46	.039	270.13	.016	289.38
4	.022	169.50	.046	161.69	.016	337.16
5	.037	121.17	.015	34.68	.005	223.40
6	.020	359.74	.013	317.44	.023	179.67
7	.031	22.74	.013	267.33	.005	285.31
8	.009	322.28	.021	333.81	.006	353.02
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\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	W1	W2	W4	W6	W10	W125
GAP FRACTION	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	.920	154.57	1.719	332.00	13.312	191.23
2	.260	188.67	.420	207.50	.486	200.89
3	.169	252.71	.073	221.85	.074	253.81
4	.373	230.98	.453	251.39	.399	210.89
5	.197	250.15	.118	248.01	.201	269.74
6	.049	269.18	.067	116.56	.096	117.53
7	.145	281.18	.169	275.56	.211	270.47
8	.060	293.19	.061	106.42	.053	150.13
9	.018	333.24	.042	345.89	.018	111.11
10	.038	113.71	.012	181.63	.036	114.48
1	8.024	234.87	2.176	190.55	8.024	234.87
2	.061	276.40	.278	185.99	.061	276.40
3	.150	86.66	.140	236.63	.150	86.66
4	.602	254.19	.345	268.68	.602	254.19
5	.310	227.36	.145	268.43	.310	227.36
6	.059	278.89	.047	138.43	.059	278.89
7	.138	289.44	.145	288.43	.138	289.44
8	.035	288.60	.063	100.76	.035	288.60
9	.049	132.29	.009	105.65	.049	132.29
10	.117		.035		.117	

\*\*\* STABILITY PARAMETER

\* XI = -.3421  
 \* \*\*\*\*\*

MODE 1 --- OCHI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 101 ALPHA-MCL = 6.0 PDP RUN.PT 21.09  
RUN 21 ALPHA-PAP = .5 G-COMP = 32150  
POINT 6 SIGMA = 45. V-REF = 198.81  
COMPUTED FREQUENCY = 19.07, K = .1507

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\* BLADE PRESSURES, PER RADIAN \*\*

X	N	CPREAL	CPIMAG	.062-UPPER	.148-UPPER	.261-UPPER	.392-UPPER	.530-UPPER	.661-UPPER
1	-12	.451	-3.660	-5.090	-3.353	-2.037	-1.370	-.809	-.382
2	-.231	.368	-3.369	.368	.297	.332	.371	.407	.397
3	.255	.151	.072	.151	.126	.155	.141	.140	.120
4	-.038	.045	.167	-.022	.166	-.016	.115	.140	.103
5	-.044	.042	.010	-.006	.002	.011	.017	.025	.019
6	-.045	.045	-.011	-.045	-.001	-.057	.064	.067	.062
7	-.095	.020	.305	.058	.025	.062	.044	.069	.073
8	-.014	-.020	.002	.029	.015	.030	.036	.037	.038
9	-.025	-.009	.008	.007	.010	.010	.009	.013	.011
10	-.015	.019	.001	.010	.006	.007	.014	.013	.024

X	N	CPREAL	CPIMAG	.860-UPPER	.910-UPPER	.012-LOWER	.062-LOWER	.148-LOWER	.261-LOWER
1	-.263	.685	.646	-.172	-.221	5.694	2.312	1.947	1.183
2	.402	-.383	-.394	.424	.391	.412	.418	.439	.379
3	.117	.382	.090	.132	.126	.179	.190	.178	.153
4	-.025	.185	.185	-.023	.017	.044	.014	.168	.161
5	.061	.002	-.004	.045	.038	.082	.067	.005	.023
6	.054	.045	.008	.062	.024	.032	.027	.012	.013
7	.032	.024	.048	.062	.064	.073	.069	.016	.070
8	.008	-.011	.336	.033	.030	.037	.034	.019	.025
9	.023	.062	.308	.035	.032	.036	.021	.009	.025
10						.021	.018	.002	.030

X	N	CPREAL	CPIMAG	.530-LOWER	.661-LOWER	.774-LOWER	.860-LOWER	.910-LOWER
1	.649	.816	.925	.516	.357	-.133	-.203	-.274
2	.359	.019	-.422	.434	.379	.416	.397	.377
3	-.014	.158	.104	.183	.157	.176	.162	.149
4	.005	.005	.192	-.022	-.018	-.027	-.025	-.022
5	.054	.007	.014	.067	.050	.070	.063	.027
6	.034	.034	.077	.038	.055	.044	.044	.045
7	.007	.007	.031	.028	.026	.026	.025	.024
8	.007	.007	.007	.014	.009	.005	.004	.004
9	.027	.027	.007	.034	.035	.035	.034	.033
10						.035	.034	.006

MODE 1 -- CENTER BLADE DATA, WALL STATIONS  
OCMI PERIODICITY TEST  
FILE 101 ALPHA-MCL = 6.0 PDP RUN.PT 21.09  
KUN 21 ALPHA-BAR = .5 O-COMP = 3215C  
POINT 6 ALPHA-SIGMA = 45 V-REF = 198.81  
COMPUTED FREQUENCY = 19.07, K = .1507  
FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X N	.012-UPPER CP-MAG	.012-LOWER PHI	.062-UPPER CP-MAG	.062-LOWER PHI	.148-UPPER CP-MAG	.148-LOWER PHI	.261-UPPER CP-MAG	.261-LOWER PHI	.392-UPPER CP-MAG	.392-LOWER PHI	.530-UPPER CP-MAG	.530-LOWER PHI	.661-UPPER CP-MAG	.661-LOWER PHI
1	12.978	196.38	5.292	194.68	3.467	194.71	2.471	194.36	1.377	185.85	.869	158.58	.565	120.23
2	.574	113.69	.521	114.96	.422	114.96	.471	114.90	.516	185.90	.572	158.33	.196	314.63
3	.339	40.28	.167	25.49	.146	30.25	.174	26.94	.166	30.80	.162	30.43	.149	34.99
4	.059	129.79	.011	97.51	.007	97.48	.012	95.56	.191	94.50	.236	90.83	.035	94.10
5	.666	131.78	.046	114.49	.007	140.88	.012	347.52	.018	34.76	.068	323.70	.062	337.50
6	.049	282.98	.046	346.31	.045	358.78	.057	3.02	.064	4.84	.082	10.42	.045	4.87
7	.021	255.10	.058	4.74	.073	20.05	.034	27.69	.074	52.91	.047	38.40	.016	26.87
8	.024	233.70	.030	3.30	.033	313.82	.012	323.13	.044	35.13	.049	311.05	.045	34.31
9	.026	200.96	.010	323.34	.010	46.09	.009	52.40	.017	35.22	.014	24.16	.024	4.23
10	.024	128.04	.009	60.93	.014	46.09	.009	52.40	.017	35.22	.014	24.16	.024	4.23

X N	.774-UPPER CP-MAG	.774-LOWER PHI	.860-UPPER CP-MAG	.860-LOWER PHI	.910-UPPER CP-MAG	.910-LOWER PHI	.012-UPPER CP-MAG	.012-LOWER PHI	.062-UPPER CP-MAG	.062-LOWER PHI	.148-UPPER CP-MAG	.148-LOWER PHI	.261-UPPER CP-MAG	.261-LOWER PHI
1	734	111.02	.669	104.93	.622	110.84	6.038	19.43	3.022	40.10	2.236	31.49	1.567	40.99
2	.556	316.38	.579	317.11	.558	314.47	.755	303.05	.906	313.63	.597	310.34	.550	313.55
3	.143	97.72	.160	34.32	.159	34.96	.189	18.96	.204	21.69	.188	24.60	.180	31.75
4	.040	349.49	.045	96.99	.038	95.79	.168	80.61	.168	85.38	.161	88.28	.160	100.97
5	.061	1.59	.063	8.08	.064	352.74	.044	2.37	.025	12.46	.024	11.54	.028	9.17
6	.070	39.49	.078	37.48	.078	6.74	.088	21.59	.068	9.99	.063	11.71	.091	16.47
7	.043	41.59	.048	47.24	.041	33.89	.092	37.59	.088	38.89	.085	55.99	.091	46.59
8	.013	306.03	.014	336.52	.012	297.15	.036	358.51	.039	28.96	.041	37.95	.042	46.59
9	.028	3.79	.036	13.59	.032	3.08	.021	14.56	.023	6.99	.022	33.45	.029	327.63
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X N	.392-UPPER CP-MAG	.392-LOWER PHI	.530-UPPER CP-MAG	.530-LOWER PHI	.661-UPPER CP-MAG	.661-LOWER PHI	.774-UPPER CP-MAG	.774-LOWER PHI	.860-UPPER CP-MAG	.860-LOWER PHI	.910-UPPER CP-MAG	.910-LOWER PHI		
1	1.042	51.51	1.059	60.83	.806	63.65	.695	101.00	.714	106.55	.739	111.77		
2	.520	313.65	.605	315.83	.528	315.93	.557	318.33	.548	316.37	.540	314.35		
3	.169	94.92	.210	29.71	.179	28.88	.203	10.78	.186	97.39	.163	27.37		
4	.052	18.80	.031	96.62	.026	96.19	.043	7.78	.034	8.60	.026	97.39		
5	.070	16.29	.065	12.55	.052	13.70	.070	1.75	.064	8.36	.058	21.82		
6	.037	50.46	.087	63.58	.079	45.70	.071	51.93	.069	49.95	.067	47.86		
7	.015	45.58	.042	47.75	.038	42.71	.039	43.38	.039	49.59	.039	50.81		
8	.017	333.09	.016	332.09	.013	323.27	.006	325.40	.008	326.92	.009	327.94		
9	.027	4.91	.036	6.74	.031	16.03	.036	9.26	.035	10.62	.033	12.07		
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ORDER OF  
OF POOR QUALITY

OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

MODE 1 -- ALPHA-MCL = 6.0 PDP RUN.PT 21.05  
 FILE 101 ALPHA-BAR = 45.0 O-COMP = 32150  
 KUN 21 SIGMA = 45.0 V-REF = 198.81  
 POINT 6 COMPUTED FREQUENCY = 19.07, K = .1507

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE, PER RADIAN \*\*\*  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012	.062	.148	.261	.392	.530	.661
N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM
1	19.011	17.35	8.096	23.99	5.645	21.29	3.574
2	1.325	299.01	.086	305.47	.150	298.00	.080
3	.173	243.74	.039	5.18	.045	5.81	.016
4	.137	61.57	.036	5.95	.027	350.67	.015
5	.100	332.05	.029	351.71	.018	197.62	.018
6	.105	46.95	.031	46.50	.022	39.29	.026
7	.109	44.32	.052	77.86	.050	114.99	.056
8	.070	41.76	.018	75.67	.011	75.77	.015
9	.061	8.00	.013	348.57	.011	334.16	.004
10	.038	339.10	.018	338.39	.015	351.89	.025

X =	.774	.860	.910	N	CM-MAG	PHIN	N	CM-MAG	PHIM
N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM
1	.131	358.69	.049	129.14	.118	116.66	1	2.754	22.01
2	.062	42.44	.031	150.13	.039	138.02	2	.069	300.31
3	.016	98.53	.002	142.82	.005	196.29	3	.026	358.75
4	.009	64.76	.002	142.82	.020	133.91	4	.012	292.99
5	.009	62.87	.002	286.73	.009	143.33	5	.011	70.67
6	.015	133.96	.019	164.83	.021	162.67	6	.028	116.69
7	.006	174.61	.010	217.85	.006	158.97	7	.007	118.32
8	.007	109.64	.007	167.95	.005	154.75	8	.006	111.91
9	.008	27.53	.002	252.77	.005	84.60	9	.013	352.77
10							10		

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*  
 \*\*\* STABILITY PARAMETER \*\*\*

WALL NO.	W1	W2	W4	W6	W10			
GAP FRACTION	CP-MAG	PHI	CP-MAG	PHI	CP-MAG			
1	.430	87.92	2.637	349.25	12.709	190.74	7.913	238.66
2	.687	307.18	.748	289.27	.384	314.74	.014	300.18
3	.266	16.51	.392	4.67	.306	4.67	.635	343.23
4	.199	92.59	.184	126.32	.368	110.28	.039	261.71
5	.011	54.05	.087	45.13	.077	190.54	.147	159.57
6	.060	347.60	.039	234.70	.048	298.76	.238	338.33
7	.116	40.73	.140	93.17	.077	359.80	.106	301.66
8	.045	39.14	.058	304.94	.035	86.82	.055	82.81
9	.042	42.70	.055	304.94	.020	228.85	.018	93.46
10	.019	42.70	.028	77.21	.020	125.85	.039	113.79



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCMI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 114 ALPHA-MCL = 6.0 PDP RUN-PT 24.42  
 RUN 24 ALPHA-RAR = .5 C-COMP 32.48  
 POINT 1 SIGMA = 9.0 V-PEF 196.46  
 COMPUTED FREQUENCY = 9.06, K = .5714  
 AND PHASE ANGLE

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	18	.590	197.79	.662	194.75	.148	193.56	.261	199.37	.392	177.97	.530	160.19
2	1	.059	177.10	.081	172.63	.037	146.04	.020	143.11	.097	137.62	.292	114.82
3	4	.440	294.20	.616	226.95	.937	328.05	.567	279.49	.674	217.89	.662	191.28
4	5	.251	340.41	.151	263.42	.152	219.57	.133	215.93	.174	215.93	.161	225.94
5	6	.364	293.00	.309	217.19	.291	218.86	.142	219.79	.167	215.95	.149	259.64
6	7	.277	511.93	.196	217.85	.132	339.91	.052	42.40	.083	43.22	.073	356.89
7	8	.124	8.65	.073	37.51	.079	39.91	.081	42.40	.057	43.22	.063	64.85
8	9	.076	340.23	.093	8.45	.079	27.37	.081	22.40	.072	33.10	.074	39.35
9	10												

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	.354	146.79	.763	147.42	.882	150.34	.052	13.46	.383	283.70	.531	24.41
2	3	.925	143.35	.249	144.47	.232	141.77	.972	139.19	.917	132.38	.908	129.40
3	4	.617	329.99	.629	329.47	.637	327.60	.565	324.96	.615	320.50	.597	328.07
4	5	.163	222.49	.175	224.45	.169	215.30	.205	249.13	.175	250.96	.167	202.29
5	6	.379	254.61	.321	224.45	.315	250.48	.331	205.94	.165	250.96	.173	209.98
6	7	.159	217.57	.176	339.47	.166	345.02	.175	285.94	.073	322.21	.173	233.33
7	8	.104	68.18	.142	339.47	.135	529.68	.057	43.44	.057	16.61	.052	22.77
8	9	.047	44.26	.050	43.95	.049	32.15	.067	43.44	.054	27.85	.059	22.77
9	10												

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	.445	28.41	.226	28.51	.851	26.60	.142	119.31	.191	168.76	.374	190.01
2	3	.837	140.84	.034	142.01	.277	142.08	.970	142.74	.923	143.55	.960	143.11
3	4	.561	328.61	.686	325.06	.631	329.51	.647	323.14	.628	322.93	.597	327.52
4	5	.189	251.80	.175	252.96	.163	226.69	.159	210.13	.139	220.12	.153	225.42
5	6	.289	217.18	.350	217.18	.304	251.69	.164	250.76	.121	248.73	.119	216.42
6	7	.156	337.04	.128	344.33	.178	249.17	.139	338.89	.156	335.88	.153	319.33
7	8	.095	48.11	.050	47.27	.111	50.37	.048	33.62	.027	35.40	.030	67.18
8	9	.749	20.37	.041	22.77	.032	28.78	.053	11.30	.046	20.04	.042	41.75
9	10												



ORIGINAL PAGE NO. 10  
OF 100

OCMI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 114 ALPHA-WCL = 6.0 POP RUMPT 34.52  
 SUN 24 ALPHA-PAR = .5 C-COMP = 32348  
 POINT 1 SIGMA = 90. V-DEF = 199.46  
 COMPUTED FREQUENCY = 9.06, K = .0714

FOURIER COEFFICIENTS, REAL & IMAGINARY, PER RADIAN \*\*\*  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.62		.66		.70		.74		.78		.82		.86		.90		.94		.98			
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP		
1	8.587	10.706	3.669	7.296	2.445	4.837	1.547	3.293	.615	2.036	.091	2.916	.036	2.198	.005	2.090	.001	2.038	.000	2.000	.000	2.000
2	-1.162	.075	.124	.016	.122	.043	.076	.073	.015	.092	.018	.073	.015	.038	.005	.034	.001	.032	.000	.029	.000	.025
3	-1.136	.075	.124	.016	.122	.043	.076	.073	.015	.092	.018	.073	.015	.038	.005	.034	.001	.032	.000	.029	.000	.025
4	-1.136	.075	.124	.016	.122	.043	.076	.073	.015	.092	.018	.073	.015	.038	.005	.034	.001	.032	.000	.029	.000	.025
5	-1.136	.075	.124	.016	.122	.043	.076	.073	.015	.092	.018	.073	.015	.038	.005	.034	.001	.032	.000	.029	.000	.025
6	-1.136	.075	.124	.016	.122	.043	.076	.073	.015	.092	.018	.073	.015	.038	.005	.034	.001	.032	.000	.029	.000	.025
7	-1.136	.075	.124	.016	.122	.043	.076	.073	.015	.092	.018	.073	.015	.038	.005	.034	.001	.032	.000	.029	.000	.025
8	-1.136	.075	.124	.016	.122	.043	.076	.073	.015	.092	.018	.073	.015	.038	.005	.034	.001	.032	.000	.029	.000	.025
9	-1.136	.075	.124	.016	.122	.043	.076	.073	.015	.092	.018	.073	.015	.038	.005	.034	.001	.032	.000	.029	.000	.025
10	-1.136	.075	.124	.016	.122	.043	.076	.073	.015	.092	.018	.073	.015	.038	.005	.034	.001	.032	.000	.029	.000	.025

X	.774		.810		.846		.882		.918		.954		.990	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	1.053	.612	.571	.397	.515	.418	.330	.252	.176	.104	.036	.000	.000	.000
2	1.053	.612	.571	.397	.515	.418	.330	.252	.176	.104	.036	.000	.000	.000
3	1.053	.612	.571	.397	.515	.418	.330	.252	.176	.104	.036	.000	.000	.000
4	1.053	.612	.571	.397	.515	.418	.330	.252	.176	.104	.036	.000	.000	.000
5	1.053	.612	.571	.397	.515	.418	.330	.252	.176	.104	.036	.000	.000	.000
6	1.053	.612	.571	.397	.515	.418	.330	.252	.176	.104	.036	.000	.000	.000
7	1.053	.612	.571	.397	.515	.418	.330	.252	.176	.104	.036	.000	.000	.000
8	1.053	.612	.571	.397	.515	.418	.330	.252	.176	.104	.036	.000	.000	.000
9	1.053	.612	.571	.397	.515	.418	.330	.252	.176	.104	.036	.000	.000	.000
10	1.053	.612	.571	.397	.515	.418	.330	.252	.176	.104	.036	.000	.000	.000

\*\*\* ALL PRESSURES, PER RADIAN \*\*\*

WALL NO. CAP FRACTION	.12		.16		.20		.24		.28		.32		.36		.40		.44		.48		.52		.56		.60		.64		.68		.72		.76		.80		.84		.88		.92		.96																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																															
	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																
1	1	1.084	.073	2	1.084	.073	3	1.084	.073	4	1.084	.073	5	1.084	.073	6	1.084	.073	7	1.084	.073	8	1.084	.073	9	1.084	.073	10	1.084	.073	11	1.084	.073	12	1.084	.073	13	1.084	.073	14	1.084	.073	15	1.084	.073	16	1.084	.073	17	1.084	.073	18	1.084	.073	19	1.084	.073	20	1.084	.073	21	1.084	.073	22	1.084	.073	23	1.084	.073	24	1.084	.073	25	1.084	.073	26	1.084	.073	27	1.084	.073	28	1.084	.073	29	1.084	.073	30	1.084	.073	31	1.084	.073	32	1.084	.073	33	1.084	.073	34	1.084	.073	35	1.084	.073	36	1.084	.073	37	1.084	.073	38	1.084	.073	39	1.084	.073	40	1.084	.073	41	1.084	.073	42	1.084	.073	43	1.084	.073	44	1.084	.073	45	1.084	.073	46	1.084	.073	47	1.084	.073	48	1.084	.073	49	1.084	.073	50	1.084	.073	51	1.084	.073	52	1.084	.073	53	1.084	.073	54	1.084	.073	55	1.084	.073	56	1.084	.073	57	1.084	.073	58	1.084	.073	59	1.084	.073	60	1.084	.073	61	1.084	.073	62	1.084	.073	63	1.084	.073	64	1.084	.073	65	1.084	.073	66	1.084	.073	67	1.084	.073	68	1.084	.073	69	1.084	.073	70	1.084	.073	71	1.084	.073	72	1.084	.073	73	1.084	.073	74	1.084	.073	75	1.084	.073	76	1.084	.073	77	1.084	.073	78	1.084	.073	79	1.084	.073	80	1.084	.073	81	1.084	.073	82	1.084	.073	83	1.084	.073	84	1.084	.073	85	1.084	.073	86	1.084	.073	87	1.084	.073	88	1.084	.073	89	1.084	.073	90	1.084	.073	91	1.084	.073	92	1.084	.073	93	1.084	.073	94	1.084	.073	95	1.084	.073	96	1.084	.073	97	1.084	.073	98	1.084	.073	99	1.084	.073	100	1.084	.073	101	1.084	.073	102	1.084	.073	103	1.084	.073	104	1.084	.073	105	1.084	.073	106	1.084	.073	107	1.084	.073	108	1.084	.073	109	1.084	.073	110	1.084	.073	111	1.084	.073	112	1.084	.073	113	1.084	.073	114	1.084	.073	115	1.084	.073	116	1.084	.073	117	1.084	.073	118	1.084	.073	119	1.084	.073	120	1.084	.073	121	1.084	.073	122	1.084	.073	123	1.084	.073	124	1.084	.073	125	1.084	.073	126	1.084	.073	127	1.084	.073	128	1.084	.073	129	1.084	.073	130	1.084	.073	131	1.084	.073	132	1.084	.073	133	1.084	.073	134	1.084	.073	135	1.084	.073	136	1.084	.073	137	1.084	.073	138	1.084	.073	139	1.084	.073	140	1.084	.073	141	1.084	.073	142	1.084	.073	143	1.084	.073	144	1.084	.073	145	1.084	.073	146	1.084	.073	147	1.084	.073	148	1.084	.073	149	1.084	.073	150	1.084	.073	151	1.084	.073	152	1.084	.073	153	1.084	.073	154	1.084	.073	155	1.084	.073	156	1.084	.073	157	1.084	.073	158	1.084	.073	159	1.084	.073	160	1.084	.073	161	1.084	.073	162	1.084	.073	163	1.084	.073	164	1.084	.073	165	1.084	.073	166	1.084	.073	167	1.084	.073	168	1.084	.073	169	1.084	.073	170	1.084	.073	171	1.084	.073	172	1.084	.073	173	1.084	.073	174	1.084	.073	175	1.084	.073	176	1.084	.073	177	1.084	.073	178	1.084	.073	179	1.084	.073	180	1.084	.073	181	1.084	.073	182	1.084	.073	183	1.084	.073	184	1.084	.073	185	1.084	.073	186	1.084	.073	187	1.084	.073	188	1.084	.073	189	1.084	.073	190	1.084	.073	191	1.084	.073	192	1.084	.073	193	1.084	.073	194	1.084	.073	195	1.084	.073	196	1.084	.073	197	1.084	.073	198	1.084	.073	199	1.084	.073	200	1.084	.073	201	1.084	.073	202	1.084	.073	203	1.084	.073	204	1.084	.073	205	1.084	.073	206	1.084	.073	207	1.084	.073	208	1.084	.073	209	1.084	.073	210	1.084	.073	211	1.084	.073	212	1.084	.073	213	1.084	.073	214	1.084	.073	215	1.084	.073	216	1.084	.073	217	1.084	.073	218	1.084	.073	219	1.084	.073	220	1.084	.073	221	1.084	.073	222	1.084	.073	223	1.084	.073	224	1.084	.073	225	1.084	.073	226	1.084	.073	227	1.084	.073	228	1.084	.073	229	1.084	.073	230	1.084	.073	231	1.084	.073	232	1.084	.073	233	1.084	.073	234	1.084	.073	235	1.084	.073	236	1.084	.073	237	1.084	.073	238	1.084	.073	239	1.084	.073	240	1.084	.073	241	1.084	.073	242	1.084	.073	243	1.084	.073	244	1.084	.073	245	1.084	.073	246	1.084	.073	247	1.084	.073	248	1.084	.073	249	1.0



ORIGINAL PAGE IS  
OF POOR QUALITY

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, LALL STATIONS

FILE 116 ALPHA=6.2 POP BUNPT 24.04  
RUY 24 ALPHA=PA6 37.588  
POINT 3 SIGMA=9.3 V CREF=199.46  
COMPUTED FREQUENCY = 15.51, K = .1222

FOUPIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	012-UPPER CPREAL	012-UPPER CPIMAG	148-UPPER CPREAL	148-UPPER CPIMAG	261-UPPER CPREAL	261-UPPER CPIMAG	392-UPPER CPREAL	392-UPPER CPIMAG	530-UPPER CPREAL	530-UPPER CPIMAG	661-UPPER CPREAL	661-UPPER CPIMAG
1	-17	558	073	154	561	757	1095	211	1661	967	253	464	534
2	-9	323	847	423	742	393	193	416	1035	442	257	186	131
3	1	235	146	174	354	194	094	207	122	191	139	101	146
4	0	294	036	053	055	023	082	027	052	045	028	019	018
5	0	297	065	002	067	010	079	007	076	011	075	005	002
6	0	213	376	009	003	022	040	003	046	007	042	003	005
7	0	335	349	031	025	002	003	003	044	006	001	003	005
8	0	300	320	003	025	004	003	003	046	006	001	003	005
9	0	010	000	000	000	000	000	000	000	000	000	000	000
10	0	000	000	000	000	000	000	000	000	000	000	000	000

X	N	774-UPPER CPREAL	774-UPPER CPIMAG	910-UPPER CPREAL	910-UPPER CPIMAG	012-LOWER CPREAL	012-LOWER CPIMAG	062-LOWER CPREAL	062-LOWER CPIMAG	148-LOWER CPREAL	148-LOWER CPIMAG	261-LOWER CPREAL	261-LOWER CPIMAG
1	-1	445	301	047	232	213	656	744	919	420	85	891	912
2	1	107	071	171	228	193	127	477	905	420	85	187	104
3	0	197	054	109	057	074	107	173	125	187	113	087	069
4	0	021	027	009	034	004	076	004	064	102	030	001	035
5	0	057	011	000	069	022	036	019	064	019	063	002	004
6	0	045	031	027	035	014	032	002	033	007	028	003	002
7	0	002	028	014	017	016	041	005	024	006	028	003	002
8	0	001	000	000	000	000	000	000	000	000	000	000	000
9	0	000	000	000	000	000	000	000	000	000	000	000	000
10	0	000	000	000	000	000	000	000	000	000	000	000	000

X	N	392-LOWER CPREAL	392-LOWER CPIMAG	561-LOWER CPREAL	561-LOWER CPIMAG	774-LOWER CPREAL	774-LOWER CPIMAG	062-LOWER CPREAL	062-LOWER CPIMAG	148-LOWER CPREAL	148-LOWER CPIMAG	261-LOWER CPREAL	261-LOWER CPIMAG
1	1	079	290	455	133	436	162	643	860	789	977	184	104
2	1	165	106	177	184	187	172	101	132	184	104	101	104
3	0	000	000	001	037	010	051	017	057	101	054	012	049
4	0	000	000	012	061	004	061	014	064	019	049	019	049
5	0	000	000	031	013	002	046	001	020	014	009	014	009
6	0	000	000	032	018	002	022	001	021	014	009	014	009
7	0	000	000	000	000	000	000	000	000	000	000	000	000
8	0	000	000	000	000	000	000	000	000	000	000	000	000
9	0	000	000	000	000	000	000	000	000	000	000	000	000
10	0	000	000	000	000	000	000	000	000	000	000	000	000

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 116 ALPHA-MCL = 6.0 POP RUN.PI 34.58  
 RUN 129 ALPHA-BAR = 9.5 Q-COMP = 323.88  
 POINT 3 SIGMA = 9.3 V-REF = 199.46  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP-MAG	012-UPPER PHI	052-UPPER PHI	143-UPPER PHI	261-UPPER PHI	392-UPPER PHI	CP-MAG	510-UPPER PHI	561-UPPER PHI
1	18.075	193.95	6.232	172.30	2.948	159.226	2.765	143.009	3.012
2	1.570	112.431	.259	66.376	1.061	330.59	1.222	168.873	1.128
3	.095	278.67	.061	320.21	.222	330.59	1.061	329.845	.111
4	.210	87.33	.055	85.900	.106	226.00	.151	125.311	.077
5	.049	244.54	.068	196.87	.083	116.87	.076	107.271	.065
6	.116	25.40	.049	128.01	.046	219.09	.012	233.24	.055
7	.019	80.77	.021	328.77	.024	339.32	.027	186.30	.013
8			.021	95.81				72.86	
9									
10									

X	CP-MAG	774-UPPER PHI	860-UPPER PHI	913-UPPER PHI	012-LOWER PHI	062-LOWER PHI	CP-MAG	148-LOWER PHI	261-LOWER PHI
1	2.817	119.80	7.597	117.35	9.439	46.24	4.280	46.55	3.389
2	.219	327.40	.109	328.15	.232	326.63	.219	328.68	.212
3	.114	228.71	.121	325.89	.134	326.63	.150	329.94	.119
4	.063	120.34	.067	89.89	.042	55.00	.066	106.49	.059
5	.097	114.35	.067	106.77	.041	102.00	.068	106.63	.059
6	.055	225.12	.049	121.91	.026	102.23	.049	139.88	.045
7	.027	124.35	.044	122.47	.021	133.34	.044	311.29	.045
8			.022	50.76	.027	53.96	.025	179.49	.027
9									
10									

X	CP-MAG	392-LOWER PHI	530-LOWER PHI	681-LOWER PHI	774-LOWER PHI	860-LOWER PHI	CP-MAG	210-LOWER PHI	261-LOWER PHI
1	2.510	67.80	7.736	74.76	3.208	101.38	1.973	109.12	1.054
2	.120	327.40	.135	329.19	.229	324.70	.233	324.52	.214
3	.060	163.50	.067	33.24	.138	36.43	.123	24.21	.110
4	.038	86.94	.065	92.00	.061	86.97	.065	86.57	.052
5	.033	106.94	.043	100.50	.038	97.09	.045	101.97	.047
6	.037	133.07	.041	126.31	.036	292.09	.037	260.94	.040
7	.022	137.09	.029	138.88	.027	222.47	.017	248.48	.024
8			.029	76.54		52.71		71.85	
9									
10									



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 116 ALPHA-MCL = 6.3 POP RUN-PT 24.04  
 ROW 24 ALPHA-PAR = 93.0 O-COMP = 32348  
 POINT 3 ALPHA-SIGMA = 199.46  
 COMPUTED FREQUENCY = 15.51, V-REF = 1.222  
 K = .1222

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	27	.283	19.74	10.690	21.05	7.555	19.517	4.972	22.81	3.701	10.92	2.726	7.78
2	1.369	228.03	87.38	.046	112.08	.032	119.60	.001	119.60	.043	135.75	.025	135.75
3	.213	272.57	152.54	.038	4.226	.025	108.39	.027	108.39	.013	152.18	.025	152.18
4	.230	268.38	281.15	.038	260.26	.025	324.97	.027	324.97	.023	245.15	.011	245.15
5	.040	177.74	181.10	.040	198.94	.013	144.00	.006	144.00	.022	67.55	.012	67.55
6	.050	194.89	185.16	.021	328.35	.012	258.25	.002	258.25	.001	280.35	.011	280.35
7	.053	246.60	205.77	.004	258.35	.007	293.19	.002	293.19	.001	260.35	.011	260.35
8	.013	12.56	137.89	.004	354.98	.007	151.44	.007	151.44	.005	226.67	.002	226.67

X	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	1.004	343.83	329.86	.923	329.86	.439	320.27	.439	320.27	.439	320.27	.439	320.27
2	.137	280.33	267.73	.017	313.11	.015	273.88	.015	273.88	.019	170.46	.004	170.46
3	.035	76.65	56.66	.016	273.88	.014	205.02	.014	205.02	.020	322.85	.007	322.85
4	.049	49.49	47.15	.010	178.97	.016	133.57	.016	133.57	.003	256.78	.001	256.78
5	.017	16.77	19.25	.009	167.90	.005	117.15	.005	117.15	.004	314.77	.002	314.77
6	.004	11.52	335.50	.008	335.50	.011	338.07	.011	338.07	.002	162.27	.001	162.27
7	.009		217.19	.011	217.19	.010	140.07	.010	140.07	.002		.001	

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP	MAG	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	1	3.240	76.29	1.614	3.464	1.698	182.46	2.599	139.76	9.071	273.70	1.112	273.70
2	1	.292	341.22	.412	352.08	.957	323.15	1.334	66.60	1.434	85.83	.009	85.83
3	4	.073	108.06	.075	84.96	.262	96.22	.135	334.70	.272	19.33	.004	19.33
4	5	.084	110.97	.118	76.13	.189	87.55	.060	111.99	.256	55.20	.007	55.20
5	7	.007	229.40	.120	29.65	.027	112.83	.109	112.83	.078	350.43	.001	350.43
6	8	.065	128.54	.102	117.59	.126	112.93	.059	112.93	.104	197.69	.002	197.69
7	9	.018	321.23	.082	226.44	.139	291.47	.081	253.69	.131	274.14	.001	274.14
8	10	.013	104.72	.082	190.85	.041	190.85	.035	102.69	.096	123.12	.001	123.12

\*\*\* STABILITY PARAMETER \*\*\*

\* XI = .0348 \*  
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ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- UCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 118 ALPHA-MCL = 6.0 PPR RUN.PT 34.56  
 SUM 24 ALPHA-RAR = 9.5 C-COMP = 32280  
 POINT 5 SIGMA = 9.3 V-REF = 1997.4  
 COMPUTED FREQUENCY = 19.15, K = .1510

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER PERIAN \*\*\*

X	CP=REAL	UPPER	CP=REAL	UPPER	CP=REAL	UPPER	CP=REAL	UPPER	CP=REAL	UPPER	CP=REAL	UPPER	CP=REAL	UPPER
1	-1.650	-3.786	-5.209	-3.704	-2.509	1.477	-1.273	1.041	-1.675	1.598	-1.368	1.846	-1.368	1.846
2	.554	.452	.319	.345	.250	.452	.273	.476	.454	.307	.454	.307	.454	.307
3	.454	.222	.221	.143	.170	.147	.078	.138	.133	.009	.066	.138	.133	.009
4	.377	.040	.362	.178	.070	.001	.004	.025	.003	.045	.004	.042	.004	.042
5	.086	.041	.223	.078	.016	.022	.023	.062	.013	.058	.004	.042	.004	.042
6	.027	.011	.002	.054	.017	.051	.023	.065	.010	.066	.017	.058	.017	.058
7	.027	.011	.002	.054	.017	.051	.023	.065	.010	.066	.017	.058	.017	.058
8	.027	.011	.002	.054	.017	.051	.023	.065	.010	.066	.017	.058	.017	.058
9	.027	.011	.002	.054	.017	.051	.023	.065	.010	.066	.017	.058	.017	.058
10	.027	.011	.002	.054	.017	.051	.023	.065	.010	.066	.017	.058	.017	.058

X	CP=REAL	UPPER	CP=REAL	UPPER	CP=REAL	UPPER	CP=REAL	UPPER	CP=REAL	UPPER	CP=REAL	UPPER	CP=REAL	UPPER
1	-1.127	1.792	-9.251	1.668	8.153	1.594	4.923	3.445	3.100	2.559	2.040	2.432	2.040	2.432
2	.046	.037	.002	.120	.015	.118	.020	.098	.029	.100	.047	.104	.047	.104
3	.014	.008	.005	.052	.027	.043	.019	.051	.016	.046	.009	.045	.009	.045
4	.007	.004	.004	.024	.017	.050	.017	.050	.016	.046	.004	.045	.004	.045
5	.007	.004	.004	.024	.017	.050	.017	.050	.016	.046	.004	.045	.004	.045
6	.007	.004	.004	.024	.017	.050	.017	.050	.016	.046	.004	.045	.004	.045
7	.007	.004	.004	.024	.017	.050	.017	.050	.016	.046	.004	.045	.004	.045
8	.007	.004	.004	.024	.017	.050	.017	.050	.016	.046	.004	.045	.004	.045
9	.007	.004	.004	.024	.017	.050	.017	.050	.016	.046	.004	.045	.004	.045
10	.007	.004	.004	.024	.017	.050	.017	.050	.016	.046	.004	.045	.004	.045

X	CP=REAL	UPPER	CP=REAL	UPPER	CP=REAL	UPPER	CP=REAL	UPPER	CP=REAL	UPPER	CP=REAL	UPPER	CP=REAL	UPPER
1	1.127	1.895	.274	2.122	-1.447	1.734	-2.293	1.634	-4.336	1.558	-2.040	2.432	-2.040	2.432
2	.046	.037	.002	.120	.015	.118	.020	.098	.029	.100	.047	.104	.047	.104
3	.014	.008	.005	.052	.027	.043	.019	.051	.016	.046	.009	.045	.009	.045
4	.007	.004	.004	.024	.017	.050	.017	.050	.016	.046	.004	.045	.004	.045
5	.007	.004	.004	.024	.017	.050	.017	.050	.016	.046	.004	.045	.004	.045
6	.007	.004	.004	.024	.017	.050	.017	.050	.016	.046	.004	.045	.004	.045
7	.007	.004	.004	.024	.017	.050	.017	.050	.016	.046	.004	.045	.004	.045
8	.007	.004	.004	.024	.017	.050	.017	.050	.016	.046	.004	.045	.004	.045
9	.007	.004	.004	.024	.017	.050	.017	.050	.016	.046	.004	.045	.004	.045
10	.007	.004	.004	.024	.017	.050	.017	.050	.016	.046	.004	.045	.004	.045

MODE 1 --- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 118 ALPHA-MCR = 6.0 PDR RUN-PI 2238  
 RUN 124 ALPHA-RAR = 9.5 O-COMP = 199.24  
 POINT 5 SIGMA = 9.5 V-REF = 199.24  
 COMPUTED FREQUENCY = 19.15, K = .1510

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	17.075	192.87	5.917	182.94	2.566	167.95	2.331	152.18	2.316	136.35	2.298	126.55
2	11.625	199.60	.521	170.36	.330	161.58	.351	159.74	.334	150.79	.336	136.45
3	4.996	332.60	.096	157.64	.073	153.11	.080	166.01	.193	260.73	.236	272.06
4	.074	334.40	.024	152.42	.026	143.23	.026	166.97	.047	199.35	.042	139.17
5	.088	349.17	.026	155.02	.026	149.91	.026	174.79	.047	211.57	.042	145.13
6	.056	323.37	.042	160.32	.046	169.91	.062	289.45	.059	300.21	.029	170.80
7	.054	191.68	.051	277.15	.035	287.50	.062	326.41	.071	357.91	.004	293.68
8	.055	455.40	.016	343.39	.009	13.48	.011	191.71	.006	148.33	.010	196.55
9	.053	300.66	.003	186.98	.005	174.60						

N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	2.117	136.87	1.998	159.71	8.898	233.90	5.201	40.58	.079	39.52	3.111	48.59
2	.137	266.75	.120	270.86	.090	260.58	.103	258.65	.104	36.43	.105	60.70
3	.056	218.34	.035	203.42	.059	192.45	.062	167.79	.056	253.73	.059	266.14
4	.079	150.98	.008	130.79	.032	148.45	.021	149.52	.046	113.42	.048	195.49
5	.055	83.41	.034	82.98	.031	81.15	.031	57.85	.061	67.74	.026	86.47
6	.059	297.16	.052	289.66	.021	301.02	.035	295.55	.060	286.36	.071	299.55
7	.007	96.82	.051	86.79	.028	233.52	.021	137.43	.012	172.38	.008	190.72
8	.008	184.59	.011	238.79	.030	133.52						

N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	2.429	57.72	2.398	65.35	1.717	94.90	1.662	102.12	1.607	105.63		
2	.116	252.18	.124	255.14	.648	257.05	.123	257.27	.128	257.48		
3	.047	146.28	.029	141.50	.022	147.52	.033	157.70	.021	160.91		
4	.031	80.00	.008	122.87	.037	193.62	.032	76.84	.033	76.71		
5	.054	70.94	.037	81.11	.031	73.31	.056	289.55	.049	291.69		
6	.050	285.45	.053	287.43	.063	285.57	.011	212.02	.010	197.02		
7	.057	178.68	.010	157.71	.008	187.16						
8	.006	193.00	.017	225.93	.030	226.24						

QUALITY OF POOR QUALITY





ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 118 ALPHA-MCL = 6.0 POP RUN.PT 24.06  
 RUY 24 ALPHA-BAR = .5 Q-COMP E 32280  
 POINT 5 SIGMA = 93 V-REF = 199.24  
 COMPUTED FREQUENCY = 19.15, K = .1510

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	25	.870	19.51	10.615	20.68	7.369	19.14	4.926	21.45	3.274	14.93	2.700	11.18
2	21	.656	214.13	.044	88.24	.047	85.25	.027	105.91	.037	247.75	.020	183.92
3	137	168.77	.044	284.27	.047	319.86	.030	204.86	.033	216.92	.009	108.18	.041
4	116	135.37	.046	110.64	.027	112.39	.016	134.89	.025	235.24	.009	217.87	.009
5	113	49.97	.033	28.75	.022	43.47	.021	332.91	.021	119.62	.009	123.60	.009
6	1.083	227.98	.031	211.69	.020	326.42	.015	192.38	.017	159.48	.014	165.22	.011
7	0.83	125.26	.031	129.77	.009	167.06	.007	265.42	.005	159.48	.015	284.99	.005

X	N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	983	355.28	.35	356.92	382	354.92	1.082	15.72	.002	1.082	1.082	1.082	1.082
2	116	86.23	.029	179.98	.033	191.57	.025	164.93	.033	267.93	.004	195.21	.004
3	0.52	167.95	.019	63.71	.022	192.38	.010	120.72	.010	177.62	.007	202.93	.007
4	0.12	355.51	.019	48.48	.003	25.02	.009	137.62	.009	431.54	.003	122.87	.003
5	0.12	308.86	.008	343.42	.006	338.50	.004	431.54	.004	351.01	.002	339.05	.002
6	0.13	328.44	.006	18.44	.007	174.29	.015	351.01	.015	152.54	.002	209.07	.002
7	0.10	228.04	.015	214.13	.004	195.52	.002	108.20	.002	152.54	.002	209.07	.002
8	0.07	285.08	.006	105.77	.004	108.20	.002	108.20	.002	152.54	.002	209.07	.002

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10
1	2	697	96.84	3.264	30.79	14.356	184.72	1.982	152.07	8.623	279.27	1.125	1.125	1.125
2	157	252.24	.106	154.05	31.99	342	254.91	1.500	269.81	.421	177.70	1.125	1.125	1.125
3	106	83.09	.044	158.14	222.99	403	114.23	.010	162.54	.174	164.65	1.125	1.125	1.125
4	0.553	51.20	.018	98.74	198.14	430	290.31	.032	74.54	.082	351.20	1.125	1.125	1.125
5	0.65	47.65	.011	188.26	168.26	465	126.01	.038	76.84	.088	321.65	1.125	1.125	1.125
6	0.21	277.00	.039	295.86	295.86	433	292.67	.011	352.25	.004	251.43	1.125	1.125	1.125
7	0.08	299.88	.042	191.54	239.43	.032	309.01	.011	215.21	.030	240.32	1.125	1.125	1.125
8	0.08	299.88	.042	191.54	239.43	.032	309.01	.011	215.21	.030	240.32	1.125	1.125	1.125
9	0.08	299.88	.042	191.54	239.43	.032	309.01	.011	215.21	.030	240.32	1.125	1.125	1.125
10	0.08	299.88	.042	191.54	239.43	.032	309.01	.011	215.21	.030	240.32	1.125	1.125	1.125

\*\*\* STABILITY PARAMETER

\* XI = -.3756 \*  
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MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 129 ALPHA-MCL = 6.0 POP RUN-FT 25.03  
 RUN 25 ALPHA-BAR = 0.5 O-COMP = 31784  
 POINT 1 SIGMA = 135.0 V-REF = 197.67  
 COMPUTED FREQUENCY = 9.14, K = .0726

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP	.012-UPPER PHI	.062-UPPER PHI	.148-UPPER PHI	.261-UPPER PHI	.392-UPPER PHI	.530-UPPER PHI	.661-UPPER PHI
1	13	161	175	179	170	155	150	146
2	1	386	311	203	123	99	80	70
3	1	301	203	107	43	23	23	22
4	1	201	141	72	27	18	18	18
5	1	171	111	51	19	13	13	13
6	1	151	91	41	11	7	7	7
7	1	131	71	27	6	4	4	4
8	1	111	51	17	3	2	2	2
9	1	91	31	9	1	1	1	1
10	1	71	11	3	0	0	0	0

X	CP	.774-UPPER PHI	.860-UPPER PHI	.910-UPPER PHI	.012-LOWER PHI	.062-LOWER PHI	.148-LOWER PHI	.261-LOWER PHI
1	3	317	934	142	243	855	860	860
2	2	213	1020	204	198	132	123	123
3	1	123	109	102	132	132	132	132
4	1	44	163	54	198	198	198	198
5	1	24	163	34	268	268	268	268
6	1	14	152	19	43	43	43	43
7	1	4	152	9	137	137	137	137
8	1	0	100	0	352	352	352	352
9	1	0	100	0	291	291	291	291
10	1	0	100	0	291	291	291	291

X	CP	.392-LOWER PHI	.530-LOWER PHI	.661-LOWER PHI	.860-LOWER PHI	.774-LOWER PHI	.661-LOWER PHI	.530-LOWER PHI
1	1	92	279	429	499	559	559	559
2	2	279	279	279	279	279	279	279
3	1	179	279	279	279	279	279	279
4	1	179	279	279	279	279	279	279
5	1	179	279	279	279	279	279	279
6	1	179	279	279	279	279	279	279
7	1	179	279	279	279	279	279	279
8	1	179	279	279	279	279	279	279
9	1	179	279	279	279	279	279	279
10	1	179	279	279	279	279	279	279



ORIGINAL RECORD  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 129 ALPHA-MCL = 6.0 PRP/RUN.PI 25.03  
 RUN 125 ALPHA-BAR = 31.84  
 POINT 1 SIGMA = 135.0  
 COMPUTED FREQUENCY = 9.14, K = .0726  
 V-REF = 197.67

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	27.262	10.99	11.269	12.14	5.596	17.80	4.073	3.47	3.632	246.51	3.175	351.26
2	1.798	282.72	206.85	178.09	110.4	272.12	233.1	100.23	1.032	230.86	3.424	351.26
3	.650	238.91	.085	179.91	.003	174.54	.331	30.233	.133	230.39	.132	351.26
4	.329	247.61	.116	231.36	.049	116.43	.143	81.338	.050	220.19	.075	195.46
5	.142	268.14	.084	273.20	.031	239.10	.075	167.318	.057	301.92	.058	197.04
6	.115	268.32	.029	289.89	.073	255.43	.014	277.233	.014	338.11	.026	41.56
7	.157	335.73	.266	49.75	.013	329.11	.024	12.692	.064	185.47	.032	105.77
8	.046	341.02	.033	328.20	.039	315.56	.027	377.12	.017	70.13	.024	105.77

N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	1.726	347.57	1.211	333.17	4.852	5.74	4.852	5.74	1.022	14.80	1.022	14.80
2	.148	223.72	.097	178.52	.058	194.85	.014	194.85	.019	174.62	.015	174.62
3	.076	260.68	.066	98.69	.033	220.93	.014	220.93	.000	222.70	.000	222.70
4	.009	352.78	.017	283.93	.043	294.15	.039	294.15	.011	175.09	.011	175.09
5	.040	357.53	.023	333.56	.008	349.48	.042	349.48	.002	91.55	.002	91.55
6	.015	359.18	.020	255.20	.019	54.62	.019	54.62	.003	325.73	.003	325.73

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2	2.262	69.47	3.263	173.84	16.296	120.78	3.192	152.94	11.350	310.89	1.125	310.89	1.125	310.89	
2	3	2.886	201.25	2.942	199.56	2.886	201.25	2.096	204.69	2.831	221.26	1.125	221.26	1.125	221.26	
3	4	1.537	247.88	1.665	242.93	1.257	237.38	1.046	251.69	1.242	274.82	1.125	274.82	1.125	274.82	
4	5	1.656	271.10	1.615	254.24	1.527	284.52	1.358	276.34	.841	308.82	1.125	308.82	1.125	308.82	
5	6	.361	51.85	.573	44.56	.372	68.79	.328	57.09	.293	81.21	1.125	81.21	1.125	81.21	
6	7	.214	288.26	.254	335.25	.221	298.28	.274	272.77	.593	308.82	1.125	308.82	1.125	308.82	
7	8	.137	158.26	.152	154.45	.177	182.57	.178	163.19	.129	247.16	1.125	247.16	1.125	247.16	
8	9	.137	198.11	.090	354.45	.118	237.56	.054	245.11	.122	212.51	1.125	212.51	1.125	212.51	
9	10															

\*\*\* STABILITY PARAMETER \*\*\*

N	CM-MAG	PHIN	N	CM-MAG	PHIN
1	1.022	14.80	1	1.022	14.80
2	.019	174.62	2	.019	174.62
3	.000	222.70	3	.000	222.70
4	.011	175.09	4	.011	175.09
5	.002	91.55	5	.002	91.55
6	.003	325.73	6	.003	325.73
7			7		
8			8		
9			9		
10			10		



MODE 1 -- CCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 122 ALPHA-MCL = 6.0 PDP RUN-PT 25.05  
 RUN 25 ALPHA-RAR = 135.0 C-COMP = 32.150  
 POINT 33 ALPHA-STGMA = 135.0 V-COFF = 198.84  
 COMPUTED FREQUENCY = 15.50, K = .1224

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	012-UPPER PHI		062-UPPER PHI		148-UPPER PHI		261-UPPER PHI		392-UPPER PHI		530-UPPER PHI		661-UPPER PHI	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	18.057	187.47	7.374	188.85	5.142	191.10	3.933	191.81	3.923	190.00	3.552	185.43	3.373	183.07
2	0.054	198.66	0.054	198.85	0.054	192.90	0.054	199.90	0.054	192.44	0.054	189.82	0.054	183.46
3	0.082	265.32	0.050	333.15	0.041	180.70	0.032	359.82	0.042	189.01	0.032	172.82	0.025	158.48
4	0.083	41.27	0.132	137.62	0.134	143.32	0.168	145.18	0.172	146.93	0.172	149.73	0.166	152.35
5	0.075	325.10	0.051	133.29	0.036	133.54	0.029	149.08	0.032	150.70	0.046	142.09	0.049	138.25
6	0.042	251.50	0.078	195.08	0.068	207.71	0.073	205.68	0.062	248.61	0.066	268.40	0.070	197.64
7	0.020	334.38	0.334	238.95	0.089	237.71	0.079	250.18	0.082	278.31	0.078	282.62	0.070	247.07
8	0.024	2.38	0.344	62.72	0.052	74.40	0.054	67.92	0.062	175.08	0.071	179.67	0.066	161.15

ORDER OF PHASE IS  
OF FOUR QUALITY

N	074-UPPER PHI		060-UPPER PHI		012-LOWER PHI		062-LOWER PHI		148-LOWER PHI		261-LOWER PHI	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.990	185.12	2.937	189.76	8.611	5.043	4.941	16.49	2.927	8.21	1.979	8.08
2	0.344	252.95	0.359	150.40	0.366	273.03	0.371	16.49	0.375	257.45	0.367	255.26
3	0.020	154.77	0.170	149.81	0.160	329.11	0.062	216.61	0.050	197.77	0.041	255.06
4	0.028	159.01	0.147	158.84	0.133	133.73	0.021	145.57	0.056	147.62	0.046	153.00
5	0.046	198.81	0.051	151.22	0.058	215.57	0.044	139.99	0.053	203.72	0.028	220.23
6	0.039	171.15	0.037	153.56	0.053	248.23	0.076	243.92	0.065	203.78	0.074	220.23
7	0.064	81.79	0.066	179.33	0.046	100.07	0.042	197.71	0.025	191.63	0.058	190.09

N	032-LOWER PHI		030-LOWER PHI		066-LOWER PHI		074-LOWER PHI		060-LOWER PHI		092-LOWER PHI	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	0.79	356.32	0.358	288.25	0.371	238.48	1.327	207.09	1.741	260.35	1.583	201.05
2	0.055	187.85	0.071	182.02	0.058	177.37	0.056	125.52	0.052	152.00	0.068	200.09
3	0.039	159.30	0.029	167.07	0.025	156.06	0.054	140.37	0.057	161.00	0.043	112.99
4	0.021	156.38	0.169	154.18	0.145	156.06	0.086	167.98	0.157	165.83	0.143	162.91
5	0.042	203.86	0.052	206.89	0.039	198.96	0.050	189.38	0.057	202.99	0.050	190.01
6	0.024	164.46	0.019	187.64	0.018	156.67	0.038	181.04	0.073	247.60	0.015	166.35
7	0.044	184.46	0.059	188.64	0.050	184.07	0.057	81.04	0.050	180.62	0.048	166.35







MODE 1 -- OCWT PERIODICITY TEST  
 CENTER BLADE DATA, WALL STATIONS

FILE 124 ALPHA-WCL E 5.7 PPR RUN.PI 25107  
 RUY 125 ALPHA-PAB E 5.7 C-COMP E 32108  
 POINT 25 ALPHA-SIGMA = 135 V-DEF = 192.97  
 COMPUTED FREQUENCY = 19.12, K = .1510

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	1	-19.423	1.947	-7.555	1.098	-5.379	0.264	-4.097	0.988	-3.877	0.757	-3.884	0.942
2	2	-2.258	0.270	-1.176	0.553	-0.719	0.312	-0.544	0.216	-0.435	0.139	-0.374	0.062
3	3	-0.253	0.023	-0.137	0.069	-0.146	0.077	-0.136	0.088	-0.142	0.094	-0.137	0.091
4	4	-0.158	0.013	-0.081	0.037	-0.084	0.027	-0.079	0.033	-0.082	0.036	-0.083	0.040
5	5	-0.093	0.004	-0.047	0.016	-0.049	0.007	-0.047	0.005	-0.047	0.004	-0.044	0.006
6	6	-0.053	0.002	-0.030	0.009	-0.031	0.005	-0.029	0.003	-0.029	0.004	-0.028	0.004
7	7	-0.032	0.001	-0.024	0.004	-0.025	0.003	-0.024	0.002	-0.024	0.002	-0.024	0.002
8	8	-0.046	0.001	-0.051	0.002	-0.049	0.001	-0.048	0.001	-0.048	0.001	-0.048	0.001
9	9	-0.046	0.001	-0.051	0.002	-0.049	0.001	-0.048	0.001	-0.048	0.001	-0.048	0.001
10	10	-0.046	0.001	-0.051	0.002	-0.049	0.001	-0.048	0.001	-0.048	0.001	-0.048	0.001

X	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	1	-3.273	0.773	-2.895	0.648	-2.668	0.527	-2.566	0.455	-2.491	0.438	-2.489	0.473
2	2	-0.022	0.081	-0.122	0.078	-0.119	0.077	-0.120	0.078	-0.123	0.072	-0.122	0.077
3	3	-0.170	0.037	-0.086	0.026	-0.086	0.027	-0.087	0.026	-0.086	0.026	-0.086	0.027
4	4	-0.114	0.024	-0.052	0.016	-0.052	0.016	-0.052	0.016	-0.052	0.016	-0.052	0.016
5	5	-0.079	0.014	-0.039	0.008	-0.039	0.008	-0.039	0.008	-0.039	0.008	-0.039	0.008
6	6	-0.056	0.009	-0.027	0.005	-0.027	0.005	-0.027	0.005	-0.027	0.005	-0.027	0.005
7	7	-0.037	0.006	-0.018	0.003	-0.018	0.003	-0.018	0.003	-0.018	0.003	-0.018	0.003
8	8	-0.024	0.004	-0.012	0.002	-0.012	0.002	-0.012	0.002	-0.012	0.002	-0.012	0.002
9	9	-0.017	0.003	-0.008	0.001	-0.008	0.001	-0.008	0.001	-0.008	0.001	-0.008	0.001
10	10	-0.012	0.002	-0.006	0.001	-0.006	0.001	-0.006	0.001	-0.006	0.001	-0.006	0.001

X	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	1	0.327	1.748	0.274	1.118	0.543	0.797	-1.599	0.673	-1.651	0.666	-1.702	0.560
2	2	0.042	0.034	0.077	0.038	0.078	0.042	-1.125	0.062	-1.173	0.056	-1.202	0.048
3	3	-0.041	0.009	-0.044	0.007	-0.044	0.007	-0.044	0.007	-0.044	0.007	-0.044	0.007
4	4	-0.027	0.005	-0.014	0.003	-0.014	0.003	-0.014	0.003	-0.014	0.003	-0.014	0.003
5	5	-0.015	0.003	-0.007	0.002	-0.007	0.002	-0.007	0.002	-0.007	0.002	-0.007	0.002
6	6	-0.009	0.002	-0.004	0.001	-0.004	0.001	-0.004	0.001	-0.004	0.001	-0.004	0.001
7	7	-0.006	0.001	-0.003	0.000	-0.003	0.000	-0.003	0.000	-0.003	0.000	-0.003	0.000
8	8	-0.004	0.000	-0.002	0.000	-0.002	0.000	-0.002	0.000	-0.002	0.000	-0.002	0.000
9	9	-0.003	0.000	-0.001	0.000	-0.001	0.000	-0.001	0.000	-0.001	0.000	-0.001	0.000
10	10	-0.002	0.000	-0.001	0.000	-0.001	0.000	-0.001	0.000	-0.001	0.000	-0.001	0.000

ORIGINAL PAGE IS  
 OF POOR QUALITY

ORIGINAL NAME IS  
OF POOR QUALITY,

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 124 ALPHA-PCL = 6.0 PDP RUN.PT 25.07  
 RUM 25 ALPHA-BAR = .5 G-COMP = .32198  
 POINT 5 SIGMA = 135. V-REF = 198.97  
 COMPUTED FREQUENCY = 19.12, K = .1510  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1.525	186.83	7.559	121.59	5.379	180.28	4.100	178.77	3.893	174.74	3.576	170.57
2	1.279	357.76	1.108	192.26	1.112	185.93	0.666	168.12	0.733	150.79	0.966	140.20
3	0.599	154.475	0.580	127.40	0.550	154.35	0.333	52.08	0.422	158.38	0.138	173.87
4	0.162	218.61	0.042	157.63	0.056	141.33	0.043	131.29	0.043	131.29	0.052	129.04
5	0.099	251.86	0.017	92.46	0.058	80.94	0.057	82.87	0.111	79.90	0.055	86.04
6	0.067	291.25	0.012	107.23	0.015	107.23	0.014	77.84	0.013	27.39	0.013	27.39
7	0.068	312.03	0.042	299.41	0.041	298.46	0.042	305.08	0.033	312.56	0.034	314.71
8												
9												
10												

X	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	3.363	165.71	2.966	167.77	2.739	166.61	2.588	15.09	4.461	33.00	3.023	31.23
2	1.115	135.275	1.122	142.80	1.119	137.32	0.994	42.84	0.633	78.77	0.359	102.70
3	0.620	170.694	0.423	186.63	0.350	171.97	0.258	196.17	0.258	182.35	0.147	197.84
4	0.060	130.694	0.059	80.59	0.052	133.78	0.072	196.57	0.057	195.23	0.047	199.34
5	0.014	62.34	0.008	72.70	0.012	65.09	0.013	129.74	0.021	81.90	0.028	53.80
6	0.021	33.34	0.029	64.25	0.012	40.62	0.038	62.47	0.032	54.14	0.021	80.87
7	0.040	306.19	0.051	303.80	0.043	306.34	0.040	301.75	0.047	302.28	0.065	306.15
8												
9												
10												

X	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1.028	72.68	1.439	137.46	0.936	123.50	1.792	153.27	1.789	157.48	1.797	161.67
2	0.722	142.88	0.637	141.90	0.624	147.89	0.336	153.91	0.321	153.05	0.103	152.55
3	0.422	181.88	0.371	191.36	0.220	190.84	0.136	197.19	0.222	193.72	0.199	189.71
4	0.046	116.40	0.033	86.58	0.045	171.88	0.019	87.53	0.050	159.40	0.043	145.65
5	0.014	72.69	0.007	58.50	0.041	63.65	0.054	69.43	0.050	170.72	0.046	172.26
6	0.013	11.36	0.019	15.74	0.010	72.52	0.019	83.33	0.017	87.86	0.015	93.88
7	0.045	319.56	0.034	328.40	0.044	327.75	0.043	326.08	0.034	338.14	0.026	348.13
8												
9												
10												



MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 124 ALPHA-MCL = 6.8 POP RUN.PI 25.07  
 RUN 125 ALPHA-RAM = 32198  
 POINT 125 SIGMA = 135 C-COMP = 198.97  
 V-REF = 198  
 COMPUTED FREQUENCY = 19.12, K = .1510

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.510		.661	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	27.028	8.27	11.600	17.07	8.124	13.33	5.234	13.58	4.261	9.34	3.643	7.34	3.149	58.01
2	15.57	152.062	1.145	37.02	1.173	14.77	0.400	41.77	0.251	257.920	0.003	271.78	0.047	223.021
3	238	120.52	0.071	165.78	0.062	278.91	0.052	201.31	0.033	322.68	0.038	275.95	0.039	282.81
4	138	180.52	0.053	165.74	0.032	188.91	0.031	201.31	0.033	215.68	0.008	228.02	0.028	282.19
5	196	237.07	0.049	263.75	0.036	136.20	0.011	283.16	0.013	269.76	0.025	301.80	0.013	287.00
6	177	237.07	0.049	263.75	0.036	136.20	0.011	283.16	0.013	269.76	0.025	301.80	0.013	287.00
7	177	237.07	0.049	263.75	0.036	136.20	0.011	283.16	0.013	269.76	0.025	301.80	0.013	287.00
8	177	237.07	0.049	263.75	0.036	136.20	0.011	283.16	0.013	269.76	0.025	301.80	0.013	287.00
9	177	237.07	0.049	263.75	0.036	136.20	0.011	283.16	0.013	269.76	0.025	301.80	0.013	287.00
10	177	237.07	0.049	263.75	0.036	136.20	0.011	283.16	0.013	269.76	0.025	301.80	0.013	287.00

X	.774		.860		.910		N		CN-MAG		PHIN		N		CM-MAG		PHIM	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	1.674	1.016	1.245	1.76	967	356.75	9.12	9.04	9.12	9.04	9.12	9.04	1.091	122.92	1.091	122.92	1.091	122.92
2	1.571	71.01	1.245	1.76	967	356.75	9.12	9.04	9.12	9.04	9.12	9.04	1.091	122.92	1.091	122.92	1.091	122.92
3	1.571	71.01	1.245	1.76	967	356.75	9.12	9.04	9.12	9.04	9.12	9.04	1.091	122.92	1.091	122.92	1.091	122.92
4	1.571	71.01	1.245	1.76	967	356.75	9.12	9.04	9.12	9.04	9.12	9.04	1.091	122.92	1.091	122.92	1.091	122.92
5	1.571	71.01	1.245	1.76	967	356.75	9.12	9.04	9.12	9.04	9.12	9.04	1.091	122.92	1.091	122.92	1.091	122.92
6	1.571	71.01	1.245	1.76	967	356.75	9.12	9.04	9.12	9.04	9.12	9.04	1.091	122.92	1.091	122.92	1.091	122.92
7	1.571	71.01	1.245	1.76	967	356.75	9.12	9.04	9.12	9.04	9.12	9.04	1.091	122.92	1.091	122.92	1.091	122.92
8	1.571	71.01	1.245	1.76	967	356.75	9.12	9.04	9.12	9.04	9.12	9.04	1.091	122.92	1.091	122.92	1.091	122.92
9	1.571	71.01	1.245	1.76	967	356.75	9.12	9.04	9.12	9.04	9.12	9.04	1.091	122.92	1.091	122.92	1.091	122.92
10	1.571	71.01	1.245	1.76	967	356.75	9.12	9.04	9.12	9.04	9.12	9.04	1.091	122.92	1.091	122.92	1.091	122.92

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	.125		.000		.125		.500		.125		.500		.125		.500	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.843	73.63	1.962	26.20	16.758	12.08	3.615	173.66	10.900	12.08	10.900	12.08	1.125	12.08	1.125	12.08
2	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66	0.602	171.02	0.602	171.02	1.125	171.02	1.125	171.02
3	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66	0.602	171.02	0.602	171.02	1.125	171.02	1.125	171.02
4	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66	0.602	171.02	0.602	171.02	1.125	171.02	1.125	171.02
5	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66	0.602	171.02	0.602	171.02	1.125	171.02	1.125	171.02
6	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66	0.602	171.02	0.602	171.02	1.125	171.02	1.125	171.02
7	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66	0.602	171.02	0.602	171.02	1.125	171.02	1.125	171.02
8	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66	0.602	171.02	0.602	171.02	1.125	171.02	1.125	171.02
9	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66	0.602	171.02	0.602	171.02	1.125	171.02	1.125	171.02
10	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66	0.602	171.02	0.602	171.02	1.125	171.02	1.125	171.02

\*\*\* STABILITY PARAMETER

X	.125		.500		.125		.500	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.843	73.63	1.962	26.20	16.758	12.08	3.615	173.66
2	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66
3	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66
4	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66
5	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66
6	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66
7	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66
8	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66
9	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66
10	1.800	35.05	1.177	175.07	3.243	171.02	0.670	173.66

POOR QUALITY

MODE 1 -- CENTER BLADE DATA, HALL STATIONS

FILE 132 ALPHA-WCL = 6.5 PDP RUN PI 27.89  
 RUN 21 ALPHA-PAB = 18.5 C-COMP = 25.89  
 POINT 1 ALPHA-SIGMA = 18.5 V-REF = 25.89  
 FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	19.858	1.265	5.436	-.412	-1.673	-.749	-1.175	-.870	-1.072	-.971	-.830	-.956	-.830	-.956
2	1.349	-.544	-.638	-.544	-.332	-.449	-.589	-.495	-.606	-.542	-.602	-.527	-.602	-.527
3	0.015	-.010	-.075	-.010	-.065	-.071	-.101	-.097	-.113	-.070	-.106	-.079	-.106	-.079
4	0.033	-.012	-.033	-.012	-.033	-.012	-.033	-.012	-.033	-.012	-.033	-.012	-.033	-.012
5	0.015	-.014	-.014	-.014	-.014	-.014	-.014	-.014	-.014	-.014	-.014	-.014	-.014	-.014
6	0.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001	-.001
10														

X	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	377	-.821	1.06	-.279	12.276	-1.385	2.253	-.474	6.396	-.755	4.717	-.681	4.717	-.681
2	253	-.610	-.236	-.626	-.212	-.875	-.233	-.538	-.210	-.566	-.208	-.568	-.208	-.568
3	138	-.410	-.107	-.443	-.178	-.774	-.169	-.435	-.141	-.479	-.137	-.479	-.137	-.479
4	75	-.242	-.038	-.318	-.057	-.672	-.033	-.351	-.024	-.403	-.025	-.403	-.025	-.403
5	35	-.111	-.004	-.133	-.017	-.556	-.013	-.192	-.002	-.225	-.009	-.225	-.009	-.225

X	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	324	-.579	3.381	-.662	1.786	-.518	1.147	-.880	1.458	-.719	1.458	-.719	1.458	-.719
2	220	-.464	2.652	-.570	-.223	-.639	-.217	-.566	-.209	-.607	-.207	-.607	-.207	-.607
3	148	-.317	1.822	-.409	-.095	-.515	-.062	-.450	-.050	-.433	-.033	-.433	-.033	-.433
4	75	-.187	1.064	-.259	-.046	-.404	-.144	-.337	-.027	-.392	-.017	-.392	-.017	-.392
5	31	-.081	0.521	-.115	-.027	-.288	-.077	-.220	-.014	-.217	-.009	-.217	-.009	-.217
10														







ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TFST  
CENTER BLADE DATA, WALL STATIONS

FILE 137 ALPHA-MOD = 6.0 POP RUN PT 37.838  
RUN 1 ALPHA-RAD = 183.0 C-COMP = 32.838  
POINT 1 SIGMA = 183.0 V-REF = 200.92  
COMPUTED FREQUENCY = 9.06 K = .0739

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, PER RADIAN \*\*\*

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	32.245	355.29	12.687	359.94	9.067	359.35	6.391	236.53	4.527	3.704	4.464	3.927	3.527	297.54
2	266	202.23	.069	341.72	.119	323.75	.015	299.91	.071	15.94	.067	218.54	.069	25.01
3	277	297.93	.065	325.62	.034	253.62	.029	19.05	.030	113.07	.019	160.20	.031	159.66
4	311	130.86	.059	347.20	.044	41.37	.021	112.39	.054	211.92	.052	244.66	.010	97.01
5	376	12.04	.066	54.17	.044	41.37	.061	61.16	.044	270.19	.022	237.75	.015	90.95
6	229	159.23	.019	106.94	.053	114.90	.029	98.50	.053	149.51	.036	267.45	.015	159.00
7	131	154.17	.052	175.62	.050	105.10	.036	207.52	.027	236.49	.019	188.81	.011	315.10

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	2.195	9.76	1.039	1.64	1.120	26.95	1.120	139.25	5.592	1.27	1.238	359.36	1.040	259.05
2	110	316.20	.034	63.98	.042	342.11	.015	299.91	.071	15.94	.067	218.54	.069	25.01
3	436	253.08	.031	141.11	.026	298.22	.029	19.05	.030	113.07	.019	160.20	.031	159.66
4	253	166.42	.026	197.07	.016	95.41	.021	112.39	.054	211.92	.052	244.66	.010	97.01
5	150	150.89	.010	133.80	.015	124.22	.061	61.16	.044	270.19	.022	237.75	.015	159.00
6	121	121.17	.005	132.05	.008	201.44	.029	98.50	.053	149.51	.036	207.52	.027	236.49
7	220	220.63	.005	259.59	.008	217.57	.036	207.52	.027	236.49	.019	188.81	.011	315.10

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	4.762	348.87	1.068	349.53	1.068	349.53	1.068	349.53	1.068	349.53	1.068	349.53	1.068	349.53
2	816	220.09	.676	247.86	.676	247.86	.676	247.86	.676	247.86	.676	247.86	.676	247.86
3	251	322.09	.309	298.26	.309	298.26	.309	298.26	.309	298.26	.309	298.26	.309	298.26
4	676	113.70	.107	41.26	.107	41.26	.107	41.26	.107	41.26	.107	41.26	.107	41.26
5	172	284.01	.299	287.99	.299	287.99	.299	287.99	.299	287.99	.299	287.99	.299	287.99
6	101	275.96	.255	297.60	.255	297.60	.255	297.60	.255	297.60	.255	297.60	.255	297.60
7	101	130.85	.128	267.60	.128	267.60	.128	267.60	.128	267.60	.128	267.60	.128	267.60
8	101	130.85	.086	108.21	.086	108.21	.086	108.21	.086	108.21	.086	108.21	.086	108.21
9	101	130.85	.086	108.21	.086	108.21	.086	108.21	.086	108.21	.086	108.21	.086	108.21
10	101	130.85	.086	108.21	.086	108.21	.086	108.21	.086	108.21	.086	108.21	.086	108.21

\*\*\* STABILITY PARAMETER

\* XI = .0757 \*  
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ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTFR BLADE DATA, WALL STATIONS

FILE 134 ALPHA-MCL = 6.0 POP RUN-PI 33269  
 277 ALPHA-KAR = 19.5 C-COMP = 35269  
 3 POINT SIGMA = 19.5 V-DEF = 29769  
 3 COMPUTED FREQUENCY = 15.44, N = 31238

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\* BLADE PRESSURES, PER RADIAN \*\*

X	N	012-UPPER CPREAL	012-UPPER CPIMAG	062-UPPER CPREAL	062-UPPER CPIMAG	148-UPPER CPREAL	148-UPPER CPIMAG	261-UPPER CPREAL	261-UPPER CPIMAG	392-UPPER CPREAL	392-UPPER CPIMAG	517-UPPER CPREAL	517-UPPER CPIMAG	661-UPPER CPREAL	661-UPPER CPIMAG
1	1	1.049	0.000	7.537	0.000	3.46	0.000	4.136	0.000	4.936	0.000	4.147	0.000	3.974	0.000
2	2	1.049	0.000	6.939	0.000	6.69	0.000	6.779	0.000	7.33	0.000	6.44	0.000	6.147	0.000
3	3	1.049	0.000	6.341	0.000	6.041	0.000	6.122	0.000	6.733	0.000	5.866	0.000	5.598	0.000
4	4	1.049	0.000	5.743	0.000	5.39	0.000	5.473	0.000	6.122	0.000	5.244	0.000	4.974	0.000
5	5	1.049	0.000	5.145	0.000	4.74	0.000	4.826	0.000	5.517	0.000	4.595	0.000	4.326	0.000
6	6	1.049	0.000	4.547	0.000	4.09	0.000	4.178	0.000	4.908	0.000	3.946	0.000	3.677	0.000
7	7	1.049	0.000	3.949	0.000	3.44	0.000	3.528	0.000	4.299	0.000	3.295	0.000	3.026	0.000
8	8	1.049	0.000	3.351	0.000	2.79	0.000	2.87	0.000	3.69	0.000	2.642	0.000	2.373	0.000
9	9	1.049	0.000	2.753	0.000	2.14	0.000	2.222	0.000	3.081	0.000	2.089	0.000	1.814	0.000
10	10	1.049	0.000	2.155	0.000	1.49	0.000	1.574	0.000	2.472	0.000	1.436	0.000	1.16	0.000

X	N	012-LOWER CPREAL	012-LOWER CPIMAG	062-LOWER CPREAL	062-LOWER CPIMAG	148-LOWER CPREAL	148-LOWER CPIMAG	261-LOWER CPREAL	261-LOWER CPIMAG	392-LOWER CPREAL	392-LOWER CPIMAG	517-LOWER CPREAL	517-LOWER CPIMAG	661-LOWER CPREAL	661-LOWER CPIMAG
1	1	1.049	0.000	3.46	0.000	4.136	0.000	4.936	0.000	5.733	0.000	6.530	0.000	7.327	0.000
2	2	1.049	0.000	6.041	0.000	6.779	0.000	7.517	0.000	8.256	0.000	9.054	0.000	9.851	0.000
3	3	1.049	0.000	8.622	0.000	9.36	0.000	10.098	0.000	10.836	0.000	11.574	0.000	12.312	0.000
4	4	1.049	0.000	11.203	0.000	11.94	0.000	12.68	0.000	13.418	0.000	14.156	0.000	14.894	0.000
5	5	1.049	0.000	13.784	0.000	14.52	0.000	15.26	0.000	16.00	0.000	16.738	0.000	17.476	0.000
6	6	1.049	0.000	16.365	0.000	17.10	0.000	17.84	0.000	18.58	0.000	19.318	0.000	20.056	0.000
7	7	1.049	0.000	18.946	0.000	19.64	0.000	20.38	0.000	21.12	0.000	21.86	0.000	22.6	0.000
8	8	1.049	0.000	21.527	0.000	22.38	0.000	23.12	0.000	23.86	0.000	24.6	0.000	25.34	0.000
9	9	1.049	0.000	24.108	0.000	25.14	0.000	25.88	0.000	26.62	0.000	27.36	0.000	28.1	0.000
10	10	1.049	0.000	26.689	0.000	27.9	0.000	28.64	0.000	29.38	0.000	30.12	0.000	30.86	0.000

X	N	062-UPPER CPREAL	062-UPPER CPIMAG	148-UPPER CPREAL	148-UPPER CPIMAG	261-UPPER CPREAL	261-UPPER CPIMAG	392-UPPER CPREAL	392-UPPER CPIMAG	517-UPPER CPREAL	517-UPPER CPIMAG	661-UPPER CPREAL	661-UPPER CPIMAG
1	1	1.049	0.000	3.46	0.000	4.136	0.000	4.936	0.000	5.733	0.000	6.530	0.000
2	2	1.049	0.000	6.041	0.000	6.779	0.000	7.517	0.000	8.256	0.000	9.054	0.000
3	3	1.049	0.000	8.622	0.000	9.36	0.000	10.098	0.000	10.836	0.000	11.574	0.000
4	4	1.049	0.000	11.203	0.000	11.94	0.000	12.68	0.000	13.418	0.000	14.156	0.000
5	5	1.049	0.000	13.784	0.000	14.52	0.000	15.26	0.000	16.00	0.000	16.738	0.000
6	6	1.049	0.000	16.365	0.000	17.10	0.000	17.84	0.000	18.58	0.000	19.318	0.000
7	7	1.049	0.000	18.946	0.000	19.64	0.000	20.38	0.000	21.12	0.000	21.86	0.000
8	8	1.049	0.000	21.527	0.000	22.38	0.000	23.12	0.000	23.86	0.000	24.6	0.000
9	9	1.049	0.000	24.108	0.000	25.14	0.000	25.88	0.000	26.62	0.000	27.36	0.000
10	10	1.049	0.000	26.689	0.000	27.9	0.000	28.64	0.000	29.38	0.000	30.12	0.000

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 134 ALPHA-MCL = 6.0 PDP RUN-PI = 2276  
 RUN 27 ALPHA-BAR = 6.5 C-COMP = 2276  
 POINT 3 ALPHA-SIGMA = 180.0 V-REF = 200.69  
 COMPUTED FREQUENCY = 15.44, K = .1208

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	19.256	176.90	7.620	178.92	5.352	182.67	4.150	188.95	3.191	191.20	2.411	194.70
2	19.256	176.90	7.620	178.92	5.352	182.67	4.150	188.95	3.191	191.20	2.411	194.70
3	19.256	176.90	7.620	178.92	5.352	182.67	4.150	188.95	3.191	191.20	2.411	194.70
4	19.256	176.90	7.620	178.92	5.352	182.67	4.150	188.95	3.191	191.20	2.411	194.70
5	19.256	176.90	7.620	178.92	5.352	182.67	4.150	188.95	3.191	191.20	2.411	194.70
6	19.256	176.90	7.620	178.92	5.352	182.67	4.150	188.95	3.191	191.20	2.411	194.70
7	19.256	176.90	7.620	178.92	5.352	182.67	4.150	188.95	3.191	191.20	2.411	194.70
8	19.256	176.90	7.620	178.92	5.352	182.67	4.150	188.95	3.191	191.20	2.411	194.70
9	19.256	176.90	7.620	178.92	5.352	182.67	4.150	188.95	3.191	191.20	2.411	194.70
10	19.256	176.90	7.620	178.92	5.352	182.67	4.150	188.95	3.191	191.20	2.411	194.70

X	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	3.516	197.57	3.722	192.54	2.814	191.43	1.998	188.01	1.379	187.23	0.955	186.73
2	3.516	197.57	3.722	192.54	2.814	191.43	1.998	188.01	1.379	187.23	0.955	186.73
3	3.516	197.57	3.722	192.54	2.814	191.43	1.998	188.01	1.379	187.23	0.955	186.73
4	3.516	197.57	3.722	192.54	2.814	191.43	1.998	188.01	1.379	187.23	0.955	186.73
5	3.516	197.57	3.722	192.54	2.814	191.43	1.998	188.01	1.379	187.23	0.955	186.73
6	3.516	197.57	3.722	192.54	2.814	191.43	1.998	188.01	1.379	187.23	0.955	186.73
7	3.516	197.57	3.722	192.54	2.814	191.43	1.998	188.01	1.379	187.23	0.955	186.73
8	3.516	197.57	3.722	192.54	2.814	191.43	1.998	188.01	1.379	187.23	0.955	186.73
9	3.516	197.57	3.722	192.54	2.814	191.43	1.998	188.01	1.379	187.23	0.955	186.73
10	3.516	197.57	3.722	192.54	2.814	191.43	1.998	188.01	1.379	187.23	0.955	186.73

X	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	5.820	351.13	1.450	362.28	0.911	370.05	0.606	374.68	0.421	377.05	0.280	378.28
2	5.820	351.13	1.450	362.28	0.911	370.05	0.606	374.68	0.421	377.05	0.280	378.28
3	5.820	351.13	1.450	362.28	0.911	370.05	0.606	374.68	0.421	377.05	0.280	378.28
4	5.820	351.13	1.450	362.28	0.911	370.05	0.606	374.68	0.421	377.05	0.280	378.28
5	5.820	351.13	1.450	362.28	0.911	370.05	0.606	374.68	0.421	377.05	0.280	378.28
6	5.820	351.13	1.450	362.28	0.911	370.05	0.606	374.68	0.421	377.05	0.280	378.28
7	5.820	351.13	1.450	362.28	0.911	370.05	0.606	374.68	0.421	377.05	0.280	378.28
8	5.820	351.13	1.450	362.28	0.911	370.05	0.606	374.68	0.421	377.05	0.280	378.28
9	5.820	351.13	1.450	362.28	0.911	370.05	0.606	374.68	0.421	377.05	0.280	378.28
10	5.820	351.13	1.450	362.28	0.911	370.05	0.606	374.68	0.421	377.05	0.280	378.28

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 134 ALPHA-MCL = 6.2 POP EUMPT 27.75  
 POINT 3 ALPHA-PAR = 32.763  
 C-COMP = 200.69  
 SIGMA = 193.0  
 V-DEF = 200.69  
 COMPUTED FREQUENCY = 15.45, K = .1208

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	N	DELCP <sup>012</sup>	DELCP <sup>62</sup>	DELCP <sup>148</sup>	DELCP <sup>261</sup>	DELCP <sup>392</sup>	DELCP <sup>530</sup>	DELCP <sup>661</sup>
1	2	0.192	-1.823	11.869	2.96	8.396	0.75	5.801
3	4	0.306	-1.131	0.193	-0.163	0.019	0.075	0.041
5	6	0.176	0.153	0.133	0.019	0.059	0.055	0.009
7	8	0.125	0.178	0.115	0.021	0.037	0.026	0.016
9	10	0.073	0.145	0.082	0.021	0.028	0.014	0.008
11	12	0.021	0.041	0.029	0.012	0.016	0.011	0.003
13	14	0.002	0.033	0.014	0.006	0.008	0.010	0.005

X	N	DELCP <sup>774</sup>	DELCP <sup>960</sup>	DELCP <sup>910</sup>	DELCP <sup>910</sup>	DELCP <sup>910</sup>	DELCP <sup>910</sup>	DELCP <sup>910</sup>
1	2	0.073	0.576	1.017	0.472	0.022	0.022	0.022
3	4	0.108	0.119	0.010	0.006	0.006	0.006	0.006
5	6	0.089	0.024	0.009	0.007	0.007	0.007	0.007
7	8	0.024	0.009	0.019	0.001	0.001	0.001	0.001
9	10	0.007	0.011	0.006	0.002	0.002	0.002	0.002
11	12	0.002	0.002	0.005	0.003	0.003	0.003	0.003

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10
1	0.371	0.403	2.629	-16.937	-3.882	5.285	3.09	1.032	1.125	1.032
3	0.186	0.153	0.259	0.599	0.878	0.024	0.025	0.024	0.024	0.024
5	0.157	0.263	0.044	0.371	0.244	0.188	0.116	0.052	0.052	0.052
7	0.046	0.009	0.073	0.330	0.42	0.077	0.009	0.009	0.009	0.009
9	0.009	0.016	0.016	0.280	0.027	0.027	0.022	0.022	0.022	0.022
11	0.021	0.016	0.019	0.064	0.053	0.053	0.022	0.022	0.022	0.022

\*\*\* STABILITY PARAMETER

\* XI = .0460 \*  
 \* \* \* \* \*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE I -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 137 ALPHA-MAG = 6.9 PDP RUN/PT 27.06  
 RUN POINT 3 ALPHA-MAG = 180.0 G-COMP = 32763  
 3 V-REF = 200.69  
 COMPUTED FREQUENCY = 15.44, K = 1208

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	28.351	356.70	11.872	1.78	8.397	280.51	5.813	3.46	4.633	163.71	4.339	6.44
2	41.17	322.46	0.086	302.71	0.086	320.55	0.124	292.98	0.083	123.53	0.025	329.52
3	268	151.06	0.010	181.69	0.041	284.76	0.024	330.40	0.033	218.53	0.025	10.82
4	052	299.05	0.032	162.40	0.032	189.99	0.026	179.84	0.014	194.73	0.014	205.19
5	043	251.09	0.033	356.09	0.018	134.36	0.030	339.17	0.019	218.94	0.025	252.14
6	043	240.93	0.015	197.51	0.009	135.88	0.016	75.66	0.025	239.26	0.025	349.05
7							0.011		0.023	168.28	0.021	174.54
8												
9												
10												

X	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	2.137	17.70	1.087	206.50	1.473	15.83	1.029	3.33	5.299	279.06	1.100	197.61
2	035	242.48	0.025	177.95	0.073	141.76	0.026	229.06	0.029	229.06	0.061	223.43
3	030	187.92	0.003	156.38	0.019	111.93	0.020	311.23	0.004	183.64	0.008	309.75
4	012	228.26	0.004	110.58	0.019	183.02	0.004	184.58	0.004	245.16	0.003	165.32
5	011	258.63	0.028	58.50	0.018	256.23	0.015	245.16	0.015	105.69	0.003	76.48
6	012	323.88	0.007	312.29	0.006	255.37	0.016	105.69	0.016	172.69	0.002	327.83
7	009	194.00	0.013	193.45	0.006	206.98	0.013	172.69	0.013		0.000	325.10
8												
9												
10												

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	0.989	335.16	2.677	348.95	16.911	178.81	3.728	188.97	10.235	356.01	1.125	309.02
2	0.229	344.21	1.139	319.79	1.4047	308.84	1.193	321.00	1.462	309.02	1.125	309.02
3	0.271	158.19	0.264	10.79	0.233	198.81	0.244	35.00	0.338	1.07	1.07	1.07
4	0.169	153.89	0.120	134.08	0.221	148.24	0.152	163.25	0.322	192.58	1.125	309.02
5	0.087	331.89	0.109	294.75	0.089	66.60	0.087	43.88	0.076	337.42	1.125	309.02
6	0.009	267.63	0.087	25.59	0.089	213.39	0.101	27.02	0.076	337.42	1.125	309.02
7	0.009	267.63	0.042	40.85	0.076	213.39	0.066	245.94	0.053	288.05	1.125	309.02
8	0.042	338.23	0.029	135.40	0.069	5.72	0.051	331.15	0.047	292.85	1.125	309.02
9												
10												

\*\*\* STABILITY PARAMETER \*\*\*  
 \* XI = 0.0460 \*  
 \* \* \* \* \*

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 136 ALPHA-MCL = 6.0 PDP RUN-PT 27.78  
 RUN 27 ALPHA-RAP = .5 O-COMP = 32716  
 POINT 5 SIGMA = 18.0 W-REF = 200.55  
 COMPUTED FREQUENCY = 10.76, K = .1493

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	-19	.497	1.908	-7.727	.663	-.549	.294	-.392	.047	-.301	-.078	-.407	-.146	-.179	-.111	-.497	-.157	-.154	-.179
2	19	.317	1.668	.329	-.172	.286	-.006	.122	-.027	.123	-.034	-.035	-.005	.128	-.057	.157	-.005	.128	.154
3	17	.275	1.275	.374	-.070	.118	.007	.033	-.072	.063	-.001	-.065	-.006	.046	-.006	.058	-.006	.046	.046
4	15	.281	1.081	.477	-.027	.112	.036	.039	-.065	.044	-.045	-.065	-.034	.028	-.034	.034	-.034	.028	.028
5	13	.237	.937	.578	.033	.104	.051	.013	-.062	.037	-.014	-.062	-.011	.008	-.011	.011	-.011	.008	.008
6	11	.226	.826	.679	.016	.094	.005	.019	-.062	.022	-.014	-.062	-.035	.022	-.014	.035	-.035	.022	.022
7	9	.177	.717	.780	-.015	.086	-.007	.018	-.069	.019	-.024	-.069	-.019	.001	-.019	.019	-.019	.001	.001
8	7	.117	.617	.881	-.017	.078	-.011	.015	-.076	.011	-.024	-.076	-.019	.001	-.019	.019	-.019	.001	.001
9	5	.056	.516	.982	-.017	.070	-.011	.015	-.084	.011	-.024	-.084	-.019	.001	-.019	.019	-.019	.001	.001
10	3	.053	.413	1.083	-.016	.062	-.010	.013	-.092	.010	-.024	-.092	-.019	.001	-.019	.019	-.019	.001	.001
11	1	.056	.316	1.184	-.016	.054	-.010	.013	-.100	.010	-.024	-.100	-.019	.001	-.019	.019	-.019	.001	.001
12	1	.056	.216	1.285	-.016	.046	-.009	.013	-.108	.009	-.024	-.108	-.019	.001	-.019	.019	-.019	.001	.001
13	2	.056	.116	1.386	-.016	.038	-.008	.013	-.116	.008	-.024	-.116	-.019	.001	-.019	.019	-.019	.001	.001
14	3	.056	.016	1.487	-.016	.030	-.007	.013	-.124	.007	-.024	-.124	-.019	.001	-.019	.019	-.019	.001	.001
15	4	.056	.016	1.588	-.016	.022	-.006	.013	-.132	.006	-.024	-.132	-.019	.001	-.019	.019	-.019	.001	.001
16	5	.056	.016	1.689	-.016	.014	-.005	.013	-.140	.005	-.024	-.140	-.019	.001	-.019	.019	-.019	.001	.001
17	6	.056	.016	1.790	-.016	.006	-.004	.013	-.148	.004	-.024	-.148	-.019	.001	-.019	.019	-.019	.001	.001
18	7	.056	.016	1.891	-.016	.000	-.003	.013	-.156	.003	-.024	-.156	-.019	.001	-.019	.019	-.019	.001	.001
19	8	.056	.016	1.992	-.016	.000	-.002	.013	-.164	.002	-.024	-.164	-.019	.001	-.019	.019	-.019	.001	.001
20	9	.056	.016	2.093	-.016	.000	-.001	.013	-.172	.001	-.024	-.172	-.019	.001	-.019	.019	-.019	.001	.001
21	10	.056	.016	2.194	-.016	.000	-.000	.013	-.180	.000	-.024	-.180	-.019	.001	-.019	.019	-.019	.001	.001
22	11	.056	.016	2.295	-.016	.000	-.000	.013	-.188	.000	-.024	-.188	-.019	.001	-.019	.019	-.019	.001	.001
23	12	.056	.016	2.396	-.016	.000	-.000	.013	-.196	.000	-.024	-.196	-.019	.001	-.019	.019	-.019	.001	.001
24	13	.056	.016	2.497	-.016	.000	-.000	.013	-.204	.000	-.024	-.204	-.019	.001	-.019	.019	-.019	.001	.001
25	14	.056	.016	2.598	-.016	.000	-.000	.013	-.212	.000	-.024	-.212	-.019	.001	-.019	.019	-.019	.001	.001
26	15	.056	.016	2.699	-.016	.000	-.000	.013	-.220	.000	-.024	-.220	-.019	.001	-.019	.019	-.019	.001	.001
27	16	.056	.016	2.800	-.016	.000	-.000	.013	-.228	.000	-.024	-.228	-.019	.001	-.019	.019	-.019	.001	.001
28	17	.056	.016	2.901	-.016	.000	-.000	.013	-.236	.000	-.024	-.236	-.019	.001	-.019	.019	-.019	.001	.001
29	18	.056	.016	3.002	-.016	.000	-.000	.013	-.244	.000	-.024	-.244	-.019	.001	-.019	.019	-.019	.001	.001
30	19	.056	.016	3.103	-.016	.000	-.000	.013	-.252	.000	-.024	-.252	-.019	.001	-.019	.019	-.019	.001	.001
31	20	.056	.016	3.204	-.016	.000	-.000	.013	-.260	.000	-.024	-.260	-.019	.001	-.019	.019	-.019	.001	.001
32	21	.056	.016	3.305	-.016	.000	-.000	.013	-.268	.000	-.024	-.268	-.019	.001	-.019	.019	-.019	.001	.001
33	22	.056	.016	3.406	-.016	.000	-.000	.013	-.276	.000	-.024	-.276	-.019	.001	-.019	.019	-.019	.001	.001
34	23	.056	.016	3.507	-.016	.000	-.000	.013	-.284	.000	-.024	-.284	-.019	.001	-.019	.019	-.019	.001	.001
35	24	.056	.016	3.608	-.016	.000	-.000	.013	-.292	.000	-.024	-.292	-.019	.001	-.019	.019	-.019	.001	.001
36	25	.056	.016	3.709	-.016	.000	-.000	.013	-.300	.000	-.024	-.300	-.019	.001	-.019	.019	-.019	.001	.001
37	26	.056	.016	3.810	-.016	.000	-.000	.013	-.308	.000	-.024	-.308	-.019	.001	-.019	.019	-.019	.001	.001
38	27	.056	.016	3.911	-.016	.000	-.000	.013	-.316	.000	-.024	-.316	-.019	.001	-.019	.019	-.019	.001	.001
39	28	.056	.016	4.012	-.016	.000	-.000	.013	-.324	.000	-.024	-.324	-.019	.001	-.019	.019	-.019	.001	.001
40	29	.056	.016	4.113	-.016	.000	-.000	.013	-.332	.000	-.024	-.332	-.019	.001	-.019	.019	-.019	.001	.001
41	30	.056	.016	4.214	-.016	.000	-.000	.013	-.340	.000	-.024	-.340	-.019	.001	-.019	.019	-.019	.001	.001
42	31	.056	.016	4.315	-.016	.000	-.000	.013	-.348	.000	-.024	-.348	-.019	.001	-.019	.019	-.019	.001	.001
43	32	.056	.016	4.416	-.016	.000	-.000	.013	-.356	.000	-.024	-.356	-.019	.001	-.019	.019	-.019	.001	.001
44	33	.056	.016	4.517	-.016	.000	-.000	.013	-.364	.000	-.024	-.364	-.019	.001	-.019	.019	-.019	.001	.001
45	34	.056	.016	4.618	-.016	.000	-.000	.013	-.372	.000	-.024	-.372	-.019	.001	-.019	.019	-.019	.001	.001
46	35	.056	.016	4.719	-.016	.000	-.000	.013	-.380	.000	-.024	-.380	-.019	.001	-.019	.019	-.019	.001	.001
47	36	.056	.016	4.820	-.016	.000	-.000	.013	-.388	.000	-.024	-.388	-.019	.001	-.019	.019	-.019	.001	.001
48	37	.056	.016	4.921	-.016	.000	-.000	.013	-.396	.000	-.024	-.396	-.019	.001	-.019	.019	-.019	.001	.001
49	38	.056	.016	5.022	-.016	.000	-.000	.013	-.404	.000	-.024	-.404	-.019	.001	-.019	.019	-.019	.001	.001
50	39	.056	.016	5.123	-.016	.000	-.000	.013	-.412	.000	-.024	-.412	-.019	.001	-.019	.019	-.019	.001	.001
51	40	.056	.016	5.224	-.016	.000	-.000	.013	-.420	.000	-.024	-.420	-.019	.001	-.019	.019	-.019	.001	.001
52	41	.056	.016	5.325	-.016	.000	-.000	.013	-.428	.000	-.024	-.428	-.019	.001	-.019	.019	-.019	.001	.001
53	42	.056	.016	5.426	-.016	.000	-.000	.013	-.436	.000	-.024	-.436	-.019	.001	-.019	.019	-.019	.001	.001
54	43	.056	.016	5.527	-.016	.000	-.000	.013	-.444	.000	-.024	-.444	-.019	.001	-.019	.019	-.019	.001	.001
55	44	.056	.016	5.628	-.016	.000	-.000	.013	-.452	.000	-.024	-.452	-.019	.001	-.019	.019	-.019	.001	.001
56	45	.056	.016	5.729	-.016	.000	-.000	.013	-.460	.000	-.024	-.460	-.019	.001	-.019	.019	-.019	.001	.001
57	46	.056	.016	5.830	-.016	.000	-.000	.013	-.468	.000	-.024	-.468	-.019	.001	-.019	.019	-.019	.001	.001
58	47	.056	.016	5.931	-.016	.000	-.000	.013	-.476	.000	-.024	-.476	-.019	.001	-.019	.019	-.019	.001	.001
59	48	.056	.016	6.032	-.016	.000	-.000	.013	-.484	.000	-.024	-.484	-.019	.001	-.019	.019	-.019	.001	.001
60	49	.056	.016	6.133	-.016	.000	-.000	.013	-.492	.000	-.024	-.492	-.019	.001	-.019	.019	-.019	.001	.001
61	50	.056	.016	6.234	-.016	.000	-.000	.013	-.500	.000	-.024	-.500	-.019	.001	-.019	.019	-.019	.001	.001

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 136 ALPHA-MCR = 6.0 PBR RUN.PI = 37.08  
 RUN POINT 27 ALPHA-RAR = 18.5 Q-COMP = 27.19  
 5 SIGMA = 18.3 V-CREF = 200.25  
 COMPUTED FREQUENCY = 19.06, K = .1493  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	PHI	062-UPPER	PHI	CP-MAG	PHI	261-UPPER	PHI	CP-MAG	PHI	392-UPPER	PHI	CP-MAG	PHI	530-UPPER	PHI	CP-MAG	PHI	661-UPPER	PHI		
1	19	.589	174.41	7.769	175.19	5.557	176.97	4.325	179.39	4.301	185.96	4.301	185.96	4.301	185.96	4.301	185.96	4.301	185.96	4.301	185.96	4.301	
2	1	.458	323.10	.048	327.88	.018	314.94	.122	317.04	.053	317.70	.163	329.71	.063	330.66	.197	325.47	.058	265.47	.047	297.61	.183	297.61
3	4	.098	113.33	.090	139.55	.035	111.82	.075	117.82	.061	128.08	.057	180.63	.054	182.11	.050	168.45	.064	105.45	.051	107.35	.051	107.35
4	5	.242	351.81	.056	108.90	.045	128.08	.015	170.71	.013	170.71	.023	277.17	.044	277.17	.019	114.15	.016	132.15	.014	117.60	.014	117.60
5	7	.037	313.80	.016	269.28	.010	248.36	.020	205.12	.017	205.12	.044	277.17	.024	277.17	.016	114.15	.016	132.15	.014	117.60	.014	117.60
6	8	.043	293.70	.014	327.24	.023	348.46	.020	205.12	.017	205.12	.044	277.17	.024	277.17	.016	114.15	.016	132.15	.014	117.60	.014	117.60
7	9	.011	223.70	.018	197.24	.023	348.46	.020	205.12	.017	205.12	.044	277.17	.024	277.17	.016	114.15	.016	132.15	.014	117.60	.014	117.60
8	10	.022	285.93	.017	279.89	.012	340.70	.017	288.98	.017	288.98	.024	272.87	.024	272.87	.024	285.93	.024	285.93	.023	192.81	.023	192.81

X	N	CP-MAG	PHI	062-LOWER	PHI	CP-MAG	PHI	012-LOWER	PHI	CP-MAG	PHI	062-LOWER	PHI	CP-MAG	PHI	148-LOWER	PHI	CP-MAG	PHI	261-LOWER	PHI
1	3	.656	182.55	3.230	183.05	2.943	182.36	8.814	357.33	4.438	12.33	4.438	12.33	4.438	12.33	2.919	8.75	1.560	17.24	1.560	17.24
2	3	.184	295.18	.066	293.53	.038	299.70	.068	259.79	.023	310.73	.033	310.73	.023	310.73	.029	215.81	.037	286.92	.041	286.92
3	4	.056	177.26	.051	176.69	.045	176.23	.074	130.05	.040	127.42	.033	127.42	.033	127.42	.030	151.72	.035	163.92	.035	163.92
4	5	.022	119.56	.028	113.57	.022	107.93	.031	107.59	.021	100.97	.021	100.97	.021	100.97	.020	111.05	.020	123.95	.020	123.95
5	7	.025	189.36	.024	135.47	.022	128.93	.034	182.58	.023	255.36	.023	255.36	.023	255.36	.019	176.66	.019	275.64	.021	275.64
6	8	.028	260.95	.017	193.33	.026	184.01	.013	179.26	.026	179.26	.026	179.26	.026	179.26	.012	176.66	.012	275.64	.024	275.64

X	N	CP-MAG	PHI	062-LOWER	PHI	CP-MAG	PHI	069-LOWER	PHI	CP-MAG	PHI	069-LOWER	PHI	CP-MAG	PHI	069-LOWER	PHI	CP-MAG	PHI	069-LOWER	PHI
1	6	.627	50.28	.628	133.91	.670	144.30	1.729	158.71	2.383	171.04	2.383	171.04	2.383	171.04	1.651	162.97	1.651	162.97	1.651	162.97
2	6	.162	282.17	.065	281.10	.053	294.92	.060	291.77	.058	292.05	.058	292.05	.058	292.05	.078	232.06	.078	232.06	.078	232.06
3	4	.039	160.56	.065	154.95	.048	156.10	.057	151.94	.053	173.66	.053	173.66	.053	173.66	.059	154.92	.059	154.92	.059	154.92
4	5	.037	41.32	.047	114.77	.048	108.99	.047	106.00	.064	113.93	.064	113.93	.064	113.93	.041	102.08	.041	102.08	.041	102.08
5	7	.021	197.97	.018	219.69	.029	185.99	.037	196.83	.021	162.16	.021	162.16	.021	162.16	.032	149.08	.032	149.08	.032	149.08
6	8	.011	170.31	.018	181.70	.021	183.90	.028	166.38	.021	162.16	.021	162.16	.021	162.16	.032	149.08	.032	149.08	.032	149.08
7	9	.026	264.28	.023	260.07	.027	267.76	.018	248.49	.027	268.46	.027	268.46	.027	268.46	.030	254.96	.030	254.96	.030	254.96







TABLE 7

MODE 1 DATA FOR  $\alpha_{MCL} = 6 \text{ deg}$ ,  $\bar{\alpha} = 2 \text{ deg}$ 

<u><math>\sigma</math> (deg)</u>	<u>k</u>	<u>page</u>
-135	.0707	312
"	.1217	316
"	.1489	320
-90	.0712	324
"	.1209	328
"	.1499	332
-45	.0718	336
"	.1221	340
"	.1509	344
0	.0716	348
"	.1214	352
"	.1501	356
45	.0710	360
"	.1213	364
"	.1493	368
90	.0717	372
"	.1231	376
"	.1504	380
135	.0709	384
"	.1207	388
"	.1487	392
180	.0713	396
"	.1211	400
"	.1493	404

PRECEDING PAGE BLANK NOT FILMED

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCMT PERIODICITY TEST  
CENTRF BLADE DATA, WALL STATIONS

FILE 168 ALPHA-MCL = 6.0 POP RUN-PT 33.02  
 RUN 33 ALPHA-CAR = 2.0 O-COMP = 33246  
 POINT 1 SIGMA = 135. V-REF = 202.22  
 CGMUTER FREQUENCY = 9.16, K = .8707

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CPREAL	CPIMAG	.062-UPPER	.148-UPPER	.261-UPPER	.392-UPPER	.530-UPPER	.661-UPPER
1	-25	.284	4.513	.991	.267	-2.754	-1.127	-2.702	-2.507
2	-3	.542	1.654	.017	.068	.195	.155	.274	.249
3	-3	.114	2.609	.017	.192	.318	.188	.401	.404
4	-	.319	.208	.208	.071	-.028	.097	.029	.023
5	-	.409	.610	.002	.036	.004	.065	.031	.024
6	-	.212	.058	.016	.002	.041	.006	.037	.034
7	-	.121	.058	.117	.001	.002	.002	.025	.018
8	-	.170	.135	.001	.018	.002	.009	.014	.007
9	-	.118	.022	.001	.001	.002	.008	.014	.003
10	-	.026	.035	.000	.001	.006	.008	.008	.000

X	N	CPREAL	CPIMAG	.660-UPPER	.910-UPPER	.012-LOWER	.082-LOWER	.148-LOWER	.261-LOWER
1	-2	.330	-.791	-1.595	-1.309	10.038	-2.071	4.133	2.802
2	-	.208	-.061	.193	.144	-.662	-1.596	.022	.103
3	-	.388	-.213	.403	.409	.430	-.327	.425	.276
4	-	.020	.119	.016	.016	-.020	-.012	.414	.224
5	-	.009	.028	.006	.002	.014	.037	.014	.066
6	-	.022	.004	.031	.002	.026	.008	.032	.026
7	-	.004	-.022	.014	-.018	-.016	-.005	-.022	.006
8	-	.007	.014	.001	.013	-.010	.005	.026	.002
9	-	.002	.000	-.001	.006	.026	.001	.021	.004
10	-	.002	-.000	-.001	.006	.026	.001	.000	.003

X	N	CPREAL	CPIMAG	.530-LOWER	.661-LOWER	.774-LOWER	.860-LOWER	.910-LOWER
1	1	.625	-.151	1.271	.509	.179	-.212	-.195
2	1	.111	-.194	.146	.091	.145	.155	.116
3	1	.013	.108	.228	.160	.602	.371	.444
4	1	.028	.028	.015	.088	.061	.000	.010
5	1	.007	.007	.046	.024	.047	.008	.040
6	1	.023	.015	.041	.010	.020	.026	.009
7	1	.007	.013	.022	.022	.020	.007	.023
8	1	.013	.014	.008	.003	.004	.007	.016
9	1	.007	.004	.002	.001	.003	.012	.004
10	1	.000	.000	.000	.000	.001	.002	.003

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 166 ALPHA-MCL = 6.0 POP RUN-PI 33.02  
RUM 133 ALPHA-BAR = 2.0 C-COMP = 332246  
POINT 1 SIGMA = 135. V-REF = 202.22  
COMPUTED FREQUENCY = 9.13, K = .0707

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP	MAG	PHI	UPPER	PHI	LOWER	CP	MAG	PHI	UPPER	PHI	LOWER	CP	MAG	PHI	UPPER	PHI	LOWER
1	25	.683	169.88	.012	176.10	2.756	182.64	.592	189.83	2.595	189.83	.530	195.07	.661	199.41	.530	195.07	.661	199.41
2	2	.261	147.01	.249	345.48	.249	321.49	.429	316.16	.429	316.16	.288	342.28	.288	340.87	.455	28.34	.455	28.34
3	4	.063	140.05	.369	30.58	.369	106.23	.125	80.90	.125	80.90	.123	76.60	.123	79.44	.024	88.32	.024	88.32
4	3	.330	195.96	.067	86.27	.067	8.52	.553	355.29	.553	355.29	.037	77.98	.037	77.98	.039	233.60	.039	233.60
5	5	.734	123.84	.041	9.45	.041	316.32	.555	229.88	.555	229.88	.029	127.03	.029	119.08	.013	127.03	.013	127.03
6	2	.200	15.31	.002	172.92	.002	255.61	.008	128.54	.008	128.54	.013	73.04	.013	73.04	.032	161.11	.032	161.11
7	6	.220	205.43	.009	112.14	.009	235.60	.010	116.72	.010	116.72	.010	116.72	.010	116.72	.010	116.72	.010	116.72
8	7	.334	339.89	.031	46.13	.031	46.13	.031	46.13	.031	46.13	.031	46.13	.031	46.13	.031	46.13	.031	46.13
9	4	.244	17.82	.010	161.72	.010	161.72	.010	161.72	.010	161.72	.010	161.72	.010	161.72	.010	161.72	.010	161.72
10	10	.044	53.06	.010	161.72	.010	161.72	.010	161.72	.010	161.72	.010	161.72	.010	161.72	.010	161.72	.010	161.72

X	N	CP	MAG	PHI	UPPER	PHI	LOWER	CP	MAG	PHI	UPPER	PHI	LOWER	CP	MAG	PHI	UPPER	PHI	LOWER
1	2	.174	201.28	.910	209.14	10.250	348.34	6.505	347.50	6.505	347.50	.170	350.48	.261	352.23	.170	350.48	.261	352.23
2	3	.299	342.81	.174	326.12	.174	37.20	.667	54.08	.667	54.08	.431	27.79	.431	28.96	.431	27.79	.431	28.96
3	4	.442	28.81	.463	81.77	.463	210.60	.405	327.61	.405	327.61	.058	78.24	.058	76.91	.058	78.24	.058	76.91
4	5	.120	80.58	.033	78.99	.033	69.62	.076	339.71	.076	339.71	.033	349.09	.033	347.01	.033	349.09	.033	347.01
5	6	.033	81.79	.028	3.18	.027	343.72	.051	202.79	.051	202.79	.035	209.13	.035	209.13	.035	209.13	.035	209.13
6	7	.034	233.75	.013	222.52	.013	196.77	.012	45.75	.012	45.75	.036	4.85	.036	4.85	.036	4.85	.036	4.85
7	8	.015	105.87	.014	82.76	.032	287.76	.024	122.21	.024	122.21	.031	130.13	.031	130.13	.031	130.13	.031	130.13
8	9	.124	115.39	.006	113.23	.041	119.85	.009	158.32	.009	158.32	.013	130.13	.013	130.13	.013	130.13	.013	130.13
9	10	.002	187.66	.006	124.40	.026	1.81	.006	158.32	.006	158.32	.013	130.13	.013	130.13	.013	130.13	.013	130.13

X	N	CP	MAG	PHI	UPPER	PHI	LOWER	CP	MAG	PHI	UPPER	PHI	LOWER	CP	MAG	PHI	UPPER	PHI	LOWER
1	1	.632	354.70	.530	10.17	.213	332.18	.535	246.64	.535	246.64	.347	124.23	.347	124.23	.535	246.64	.535	246.64
2	2	.155	315.96	.227	358.31	.181	322.88	.304	328.19	.304	328.19	.228	239.61	.228	239.61	.304	328.19	.304	328.19
3	3	.474	27.32	.457	20.47	.496	325.89	.454	36.83	.454	36.83	.510	85.54	.510	85.54	.454	36.83	.454	36.83
4	4	.075	80.77	.039	62.99	.114	57.41	.034	89.80	.034	89.80	.027	95.20	.027	95.20	.034	89.80	.034	89.80
5	5	.029	87.77	.051	72.21	.041	72.98	.028	19.03	.028	19.03	.041	12.14	.041	12.14	.028	19.03	.028	19.03
6	6	.024	348.96	.026	346.94	.025	343.31	.023	227.11	.023	227.11	.016	209.02	.016	209.02	.023	227.11	.023	227.11
7	7	.028	212.69	.026	210.19	.019	211.01	.011	170.04	.011	170.04	.016	82.04	.016	82.04	.011	170.04	.011	170.04
8	8	.013	56.22	.028	32.83	.014	59.38	.014	154.15	.014	154.15	.019	1132.86	.019	1132.86	.014	154.15	.014	154.15
9	9	.019	133.29	.013	141.87	.007	154.15	.007	154.15	.007	154.15	.019	1132.86	.019	1132.86	.007	154.15	.007	154.15
10	10	.007	133.29	.013	141.87	.007	154.15	.007	154.15	.007	154.15	.019	1132.86	.019	1132.86	.007	154.15	.007	154.15

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 158 ALPHA-WCL = 6.0 POP RUN-PT 33.02  
 RUN 33 ALPHA-BAR = 2.0 C-COMP = 33246  
 POINT 1 SIGMA = -135. V-REF = 202.22  
 COMPUTED FREQUENCY = 9.10, K = .0707

FOUPIER COEFFICIENTS, REAL & IMAGINARY PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012	.0362	.148	.261	.392	.530	.661
N	DELCPR	DELCPD	DELCPR	DELCPD	DELCPR	DELCPD	DELCPR
1	35.324	-6.584	13.179	-2.396	8.020	-1.956	5.555
2	-2.204	-3.250	-1.514	-2.623	-2.211	-2.207	-2.207
3	3.545	-2.429	1.111	-.061	-.148	-.032	-.090
4	.422	-.573	-.042	-.326	.009	-.010	-.047
5	-.186	-.066	-.209	-.043	-.009	-.008	-.002
6	-.135	-.053	-.016	-.097	-.012	-.011	-.011
7	-.100	-.032	-.011	-.019	-.014	-.020	-.020
8			-.034	-.017	-.016	-.012	-.012
9					-.016	-.010	-.010
10					-.016	-.010	-.010

X =	.774	.560	.910
N	DELCPR	DELCPD	DELCPR
1	2.209	.907	1.383
2	-.055	-.047	-.031
3	.014	-.077	-.018
4	.008	-.023	-.003
5	.015	-.019	-.005
6	.000	-.013	-.002
7	.008	-.002	-.006
8	-.001	-.002	-.006
9	-.004	-.002	-.005
10			-.003

WALL NO.	W1	W2	W3	W4	W5	W6	W10	W125	W10
GAP FRACTION	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	2.262	-.470	3.558	-.272	-13.200	-1.750	-2.326	7.684	5.279
2	.191	-.054	.667	-.136	-.322	-1.743	.486	.128	-.585
3	.357	.470	.801	-.098	-.395	-.294	.446	.128	.621
4	-.032	1.266	.016	-.015	-.064	-.278	.029	.218	.083
5	-.010	.339	-.036	-.003	-.123	-.238	.006	-.218	.142
6	-.059	.529	-.056	-.025	-.098	-.170	.043	-.052	.079
7	-.027	-.334	-.036	-.020	-.100	-.060	.033	-.052	-.020
8	-.025	-.310	-.032	-.054	-.067	-.033	.017	-.037	-.024
9	-.012	.305	-.032	-.020	-.058	-.081	.003	-.037	-.016
10								.017	-.038

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

\*\*\* STABILITY PARAMETER

\* XI = .2888 \*  
 \* \*\*\*\*\*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 168 ALPHA-MCL = 6.0 PDP KUN-PT 33.02  
MUN 33 ALPHA-PAR = 2.0 Q-COMP = 33246  
POINT 1 SIGMA = -135.0 V-PEF = 232.22  
COMPUTED FREQUENCY = 9.10, K = .0707

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.148		.261		.392		.530		.661	
	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM
1	35.930	349.44	13.395	349.70	6.079	353.20	5.561	357.37	4.192	359.48	4.026	10.07	3.170	17.91
2	3.926	235.26	.808	230.46	.299	224.49	.093	187.94	.083	136.48	.128	184.65	.083	105.70
3	4.216	327.23	.728	211.22	.151	112.18	.097	222.80	.083	209.37	.065	355.96	.057	295.08
4	3.708	114.57	.331	259.56	.056	312.91	.050	243.06	.080	224.87	.046	236.63	.042	301.62
5	7.12	306.38	.159	254.65	.013	312.44	.038	273.44	.006	46.96	.028	58.34	.028	243.47
6	1.92	199.38	.213	348.44	.023	343.15	.017	230.58	.019	186.36	.017	284.36	.028	141.50
7	1.16	26.66	.099	80.69	.018	228.34	.022	203.74	.030	165.77	.015	83.87	.016	185.50
8	3.75	160.95	.013	27.70	.022	306.67	.015	172.34	.028	333.74	.025	329.35	.022	26.16
9	1.32	180.95	.041	151.61	.042	178.15	.021	162.63	.013	155.15	.026	169.14	.013	249.66
10	.034	269.54	.026	310.08	.016	178.15	.016	151.58	.020	317.92	.018	24.57	.003	54.02

X =	.774		.850		.920		N		CM-MAG		PHIM	
	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	N	CM-MAG	N	CM-MAG	PHIM
1	2.368	220.46	1.320	315.78	1.353	34.60	1	5.375	359.29	1	1.267	346.82
2	.079	279.73	.066	118.42	.049	44.38	2	.252	221.17	2	.085	239.86
3	.047	331.57	.029	229.96	.013	122.03	3	.164	554.50	3	.065	346.81
4	.014	54.10	.005	28.15	.011	213.78	4	.047	281.96	4	.015	296.25
5	.024	338.72	.005	170.23	.014	30.52	5	.011	309.46	5	.005	317.50
6	.013	88.69	.009	101.73	.006	147.36	6	.016	82.36	6	.003	58.76
7	.003	342.46	.013	48.89	.003	178.36	7	.002	47.06	7	.003	158.45
8	.003	238.59	.004	233.72	.003	297.99	8	.016	175.21	8	.005	155.63
9	.004	333.08	.005	332.49	.003	173.02	9	.008	552.39	9	.002	328.08
10							10			10		

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.125		.500		1.125		*** STABILITY PARAMETER	
	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	***
1	2.310	348.25	3.316	172.45	2.399	182.40	9.320	34.50	* XI =	*
2	.199	344.21	1.772	259.55	.481	321.56	.933	321.19	*	.2888
3	.591	52.75	.492	143.37	.481	211.73	.634	78.31	*	*****
4	.130	104.11	.286	257.04	.144	78.21	.227	21.42	*	*****
5	.040	104.85	.268	117.36	.034	80.78	.260	147.01	*	*****
6	.008	136.09	.198	248.05	.044	111.76	.089	82.71	*	*****
7	.035	257.90	.116	329.19	.027	45.43	.056	230.82	*	*****
8	.028	199.89	.059	181.43	.027	141.24	.047	149.63	*	*****
9	.026	168.26	.056	105.15	.014	177.83	.034	332.37	*	*****
10	.019	157.55	.100	54.62	.012	138.48	.042	86.23	*	*****

INITIAL PARTS  
OF POOR QUALITY

MODE I --- OCMI PERIODICITY TEST  
CENTRE BLADE DATA, WALL STATIONS

FILE 17U ALPHA-WCL = 6.0 PDP RUN.PI 33.06  
 RUN 33 ALPHA-PAR = 2.0 C-COMP = 36473  
 POINT 3 SIGMA = 135. V-PER = 199.82  
 COMPUTED FREQUENCY = 15.48, K = .1217  
 FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.592-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	1	-25.070	5.526	-4.243	.007	-2.602	-2.991	-2.729
2	2	1.396	.971	.024	.243	.130	.013	.023
3	3	-2.774	.289	-.066	-.035	-.017	.047	.002
4	4	-.695	-.222	-.066	-.043	.043	.043	.018
5	5	-.132	.435	-.015	-.066	.017	.033	.015
6	6	.186	.626	.014	.062	-.014	.024	.002
7	7	.105	-.139	.015	.009	.014	.004	.001
8	8	.152	-.175	.004	.008	.016	.012	.001
9	9	.151	.059	.004	.005	.016	.012	.001
10	10	.516	.627	-.005	-.007	-.001	-.004	.008

X	N	.774-UPPER CPREAL CPIMAG	.866-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	1	-2.324	-1.256	-1.470	-.972	6.908	4.266	2.794
2	2	.074	.399	.013	-.310	.789	.066	.51
3	3	.005	-.038	.017	.110	.425	.020	.007
4	4	.020	.047	-.006	-.058	-.100	.038	.025
5	5	.031	.034	.017	.010	.038	.017	.009
6	6	.001	.004	.004	-.045	.055	.013	.004
7	7	.023	.025	.004	-.028	.016	.012	.001
8	8	.003	.000	.004	-.034	.008	.003	.001
9	9	.003	.000	.007	-.002	.008	.003	.001
10	10	.008	.005	.007	-.001	.008	.003	.002

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.866-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	1.562	1.132	.955	.097	.769	.116
2	2	.139	.144	.023	.335	.120	.316
3	3	.046	.033	.039	.014	.016	.044
4	4	.057	.021	.089	-.013	.046	.033
5	5	.004	.004	.017	-.063	.052	.049
6	6	.023	.002	.013	-.005	.018	.002
7	7	.002	.002	.006	-.024	.010	.017
8	8	.002	.001	.002	.011	.005	.007
9	9	.004	.001	.002	.005	.002	.004
10	10	.004	.001	.002	.006	.005	.004



OCWT PERIODICITY TEST  
 CODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 173 ALPHA-MCL = 6.0 PDP RUN.PI 33.96  
 RUN 33 ALPHA-PAR = 2.0 Q-COMP = 32473  
 POINT 3 SIGMA = 135. V-REF = 199.82  
 COMPUTED FREQUENCY = 15.48. K = .1217

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\* BLADE PRESSURES, PER RADIAN \*\*

X	N	CP-MAG	PHI	.062-UPPER	CP-MAG	PHI	.148-UPPER	CP-MAG	PHI	.261-UPPER	CP-MAG	PHI	.392-UPPER	CP-MAG	PHI	.530-UPPER	CP-MAG	PHI	.661-UPPER	CP-MAG	PHI
1	26	.649	168.03	7.340	172.34	4.243	179.90	3.084	186.15	2.546	196.02	2.150	201.60	3.217	201.60	3.048	206.45	3.048	206.45	.048	206.45
2	3	.700	130.80	.291	82.36	.666	182.90	.843	130.62	.188	126.94	.216	110.01	.271	87.31	.284	94.90	.284	94.90	.284	94.90
3	4	.820	212.01	.270	341.90	.103	233.42	.063	222.96	.049	308.46	.069	105.09	.041	272.43	.041	272.43	.041	272.43	.041	272.43
4	5	.694	106.31	.124	72.68	.030	120.56	.066	96.04	.028	102.47	.049	105.09	.018	126.72	.018	126.72	.018	126.72	.018	126.72
5	6	.243	323.31	.074	208.62	.014	15.62	.027	35.71	.019	322.90	.019	226.61	.022	257.74	.022	257.74	.022	257.74	.022	257.74
6	7	.192	62.75	.017	28.84	.037	88.70	.015	72.81	.019	64.61	.019	64.61	.027	81.54	.027	81.54	.027	81.54	.027	81.54
7	8	.131	85.85	.021	85.85	.008	118.00	.015	242.84	.016	168.88	.016	168.88	.025	183.54	.025	183.54	.025	183.54	.025	183.54
8	9	.049	289.02	.024	99.81	.005	196.75	.015	210.02	.002	240.82	.002	240.82	.035	216.72	.035	216.72	.035	216.72	.035	216.72
9	10																				

X	N	CP-MAG	PHI	.261-UPPER	CP-MAG	PHI	.910-UPPER	CP-MAG	PHI	.912-LOWER	CP-MAG	PHI	.002-LOWER	CP-MAG	PHI	.148-LOWER	CP-MAG	PHI	.261-LOWER	CP-MAG	PHI
1	2	.554	209.46	2.067	211.93	1.709	210.62	10.913	344.58	6.949	341.98	.797	188.11	4.734	345.50	4.734	345.50	4.734	345.50	4.734	345.50
2	3	.318	103.40	.341	111.36	.332	115.16	1.736	224.58	.110	188.11	.473	235.96	.097	152.21	.097	152.21	.097	152.21	.097	152.21
3	4	.039	273.39	.047	273.81	.045	262.66	.110	3.72	.197	239.54	.197	239.54	.045	243.08	.045	243.08	.045	243.08	.045	243.08
4	5	.036	122.68	.042	124.42	.040	115.44	.058	201.80	.114	270.53	.114	270.53	.020	98.40	.020	98.40	.020	98.40	.020	98.40
5	6	.013	17.80	.008	131.39	.009	27.57	.047	196.94	.076	223.78	.076	223.78	.035	248.43	.035	248.43	.035	248.43	.035	248.43
6	7	.022	273.26	.025	262.54	.019	266.29	.059	241.85	.014	267.82	.014	267.82	.015	247.74	.015	247.74	.015	247.74	.015	247.74
7	8	.025	82.39	.004	92.54	.022	80.44	.017	249.93	.019	245.76	.019	245.76	.013	282.16	.013	282.16	.013	282.16	.013	282.16
8	9	.003	169.37	.004	191.75	.005	170.87	.034	273.50	.034	268.43	.034	268.43	.030	260.86	.030	260.86	.030	260.86	.030	260.86
9	10	.010	220.61	.013	234.53	.012	234.88	.040	268.43												

CP POOR QUALITY

X	N	CP-MAG	PHI	.392-LOWER	CP-MAG	PHI	.661-LOWER	CP-MAG	PHI	.774-LOWER	CP-MAG	PHI	.800-LOWER	CP-MAG	PHI	.910-LOWER	CP-MAG	PHI			
1	1	.605	349.60	1.161	347.40	.337	359.75	.097	298.80	.097	298.80	.769	222.34	.153	210.46	.153	210.46	.153	210.46	.153	210.46
2	2	.299	117.79	.381	112.17	.101	93.39	.337	117.22	.337	117.22	.265	116.94	.442	134.46	.442	134.46	.442	134.46	.442	134.46
3	3	.071	309.78	.112	269.92	.096	283.22	.041	270.33	.041	270.33	.023	44.65	.073	307.02	.073	307.02	.073	307.02	.073	307.02
4	4	.053	251.04	.056	233.13	.090	150.13	.060	279.21	.064	101.21	.054	251.24	.047	278.56	.047	278.56	.047	278.56	.047	278.56
5	5	.060	108.51	.073	126.96	.096	150.25	.064	101.21	.019	159.30	.013	59.43	.059	124.04	.059	124.04	.059	124.04	.059	124.04
6	6	.007	210.12	.004	183.95	.015	61.99	.024	254.72	.018	269.43	.018	269.43	.015	356.63	.015	356.63	.015	356.63	.015	356.63
7	7	.004	259.02	.002	170.03	.013	240.62	.011	265.94	.011	265.94	.018	54.65	.018	273.93	.018	273.93	.018	273.93	.018	273.93
8	8	.004	168.60	.004	168.79	.005	184.76	.011	98.98	.005	154.83	.005	154.83	.009	140.09	.009	140.09	.009	140.09	.009	140.09
9	9	.004	212.11	.004	212.11	.005	184.76	.005	172.02	.005	172.02	.005	172.02	.012	251.96	.012	251.96	.012	251.96	.012	251.96
10	10	.018	258.26	.023	259.12	.017	242.06	.015	244.99												

MODE I -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 170 ALPHA=CL = 6.0 PDP RUN.PI 33.095  
 RUT 33 ALPHA-RAR = 2.0 Q-COMP = .32473  
 PRINT 3 SIGMA = -135. V-REF = 199.82  
 COMPUTED FREQUENCY = 15.48, K = .1217

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, MOMENT, AND FORCE, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	36.591	-8.427	13.882	-5.128	8.420	-1.087	5.839	-.187	4.364	.539	4.124	.931	3.134	1.291
2	-2.611	-3.229	.822	-.491	-.284	-.111	-.130	-.056	-.009	-.092	-.156	-.062	-.021	-.053
3	.894	.411	.455	.429	.131	-.042	-.010	-.006	.063	-.102	-.036	-.064	.014	-.042
4	.637	-.610	-.356	-.096	.041	.030	-.009	.006	-.060	.004	-.043	.005	-.014	-.045
5	-.232	-.171	-.027	-.155	-.007	-.030	-.025	-.016	-.028	.014	-.025	-.008	-.006	-.013
6	-.158	-.271	.046	.015	-.024	-.037	-.030	-.019	.009	-.017	-.036	-.014	-.009	.007
7	-.057	-.154	-.012	-.020	-.007	-.022	-.009	-.016	-.009	-.017	-.036	-.014	-.011	-.023
8	-.017	.006	.005	-.060	.000	-.028	.005	-.034	-.002	-.015	-.013	-.023	.001	-.001
9														
10														

X	.774		.910		.910		.910		.910		.910		.910	
	N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	2.270	1.172	1.162	.573	1.338	.794	5.614	-.027	5.614	-.027	5.614	-.027	5.614	-.027
2	-.661	-.038	.066	-.057	.164	.005	.227	-.073	.227	-.073	.227	-.073	.227	-.073
3	.010	.052	.007	.001	.031	-.002	.165	-.101	.165	-.101	.165	-.101	.165	-.101
4	.012	-.045	-.019	.001	-.013	.012	-.007	.010	-.007	.010	-.007	.010	-.007	.010
5	.007	-.054	.007	.007	.007	-.004	-.006	-.011	-.006	-.011	-.006	-.011	-.006	-.011
6	-.003	-.022	-.000	.006	-.007	-.005	-.007	-.015	-.007	-.015	-.007	-.015	-.007	-.015
7	-.005	-.015	.006	-.006	.001	-.005	-.002	-.016	-.002	-.016	-.002	-.016	-.002	-.016
8	-.003	-.066	-.001	-.003	-.003	-.005	-.002	-.009	-.002	-.009	-.002	-.009	-.002	-.009
9	.001	-.007	.002	-.002	.003	-.001	.002	-.017	.002	-.017	.002	-.017	.002	-.017
10														

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.125		.125		.125		.125		.125		.125		.125		.125	
	N	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL
1	2.288	-.354	-.354	3.312	-.525	-13.581	1.873	-2.670	5.670	-.500	7.259	5.052	1.289	-.062	-.062	-.062	-.062	-.062
2	-.387	.018	.018	.113	-.224	-.796	-1.462	-.086	-.086	.164	.419	-.124	-.062	-.062	-.062	-.062	-.062	-.062
3	.064	-.041	-.041	.003	-.077	-.171	-.694	-.016	-.016	-.066	-.289	-.053	-.062	-.062	-.062	-.062	-.062	-.062
4	-.043	-.040	-.040	-.040	.053	.012	-.160	-.012	-.012	.055	-.211	.168	-.062	-.062	-.062	-.062	-.062	-.062
5	.043	-.030	-.030	.039	-.020	.005	.087	.024	.024	-.024	.000	-.062	-.062	-.062	-.062	-.062	-.062	-.062
6	-.033	-.033	-.033	-.033	.013	.015	.045	-.004	-.004	.000	-.036	-.047	-.062	-.062	-.062	-.062	-.062	-.062
7	-.032	-.032	-.032	-.032	-.013	-.013	.045	.006	.006	-.000	-.036	-.047	-.062	-.062	-.062	-.062	-.062	-.062
8	.036	-.036	-.036	-.036	-.013	-.013	.045	-.006	-.006	-.000	-.036	-.047	-.062	-.062	-.062	-.062	-.062	-.062
9																		
10																		

\*\*\* STABILITY PARAMETER

\* XI = .3603 \*  
 \* \*\*\*\*\*

MODE 1 -- CWI PERIODICITY TEST  
 CENTER BLADE DATA, WALL STATIONS

FILE 170 ALPHA-MCL = 6.0 PDP RUN-PT 33.06  
 RUN 33 ALPHA-DR = 2.0 C-COMP = 32.473  
 POINT 3 SIGMA = -135. V-REF = 199.82  
 COMPUTED FREQUENCY = 15.4e, K = .1217

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012	.062	.148	.261	.392	.530	.661	
N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	37.540	347.033	1.490	352.64	5.842	358.16	4.397	7.05
2	3.394	214.770	.305	201.27	.142	156.83	.120	95.88
3	4.330	311.770	.626	43.35	.076	221.21	.060	301.64
4	.759	32.85	.366	193.60	.039	350.96	.060	176.64
5	.642	250.598	.104	78.07	.020	122.81	.032	154.91
6	.263	151.055	.155	212.33	.030	212.53	.032	154.91
7	.302	143.591	.051	16.02	.036	212.69	.019	241.54
8	.187	147.534	.162	288.15	.006	320.91	.014	249.96
9	.162	252.34	.028	265.72	.025	295.32	.014	268.19
10	.018	160.36	.028	265.72	.025	295.32	.020	268.19

X =	.774	.950	.910	
N	DELCPH	PHI	DELCPH	PHI
1	2.555	27.50	1.556	30.70
2	.082	185.51	.164	178.22
3	.047	60.05	.042	316.86
4	.047	284.64	.013	351.42
5	.033	77.55	.020	141.42
6	.029	231.50	.008	212.75
7	.004	212.92	.005	97.75
8	.016	251.19	.005	285.32
9	.003	174.47	.002	112.62
10	.007	279.06	.004	335.76

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	
			.125	.125	.125	.125	.125	.125	.125	.125	.125	.125	
1	2	419	341.83	3.353	351.20	13.769	172.15	2.716	190.61	8.443	34.84	1.338	343.38
2	3	513	139.04	.540	55.29	1.727	237.81	.185	117.64	.437	343.48	.083	217.41
3	4	016	357.45	.251	298.90	.796	180.18	.074	257.55	.520	123.83	.073	327.88
4	5	062	145.00	.866	272.34	.175	65.90	.657	102.34	.288	140.97	.007	90.44
5	6	013	307.79	.244	206.22	.057	272.22	.025	343.17	.092	190.17	.005	284.56
6	7	052	324.56	.257	258.04	.098	79.51	.234	267.96	.069	247.89	.006	250.74
7	8	033	180.26	.016	180.26	.048	109.52	.033	97.73	.055	120.63	.002	140.81
8	9	004	124.36	.013	257.53	.088	109.52	.006	179.59	.023	213.25	.001	333.10
9	10	040	342.93	.040	272.99	.042	82.29	.008	216.89	.032	273.80	.010	272.84

\*\*\* STABILITY PARAMETER \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	
			.125	.125	.125	.125	.125	.125	.125	.125	.125	.125	
1	2	419	341.83	3.353	351.20	13.769	172.15	2.716	190.61	8.443	34.84	1.338	343.38
2	3	513	139.04	.540	55.29	1.727	237.81	.185	117.64	.437	343.48	.083	217.41
3	4	016	357.45	.251	298.90	.796	180.18	.074	257.55	.520	123.83	.073	327.88
4	5	062	145.00	.866	272.34	.175	65.90	.657	102.34	.288	140.97	.007	90.44
5	6	013	307.79	.244	206.22	.057	272.22	.025	343.17	.092	190.17	.005	284.56
6	7	052	324.56	.257	258.04	.098	79.51	.234	267.96	.069	247.89	.006	250.74
7	8	033	180.26	.016	180.26	.048	109.52	.033	97.73	.055	120.63	.002	140.81
8	9	004	124.36	.013	257.53	.088	109.52	.006	179.59	.023	213.25	.001	333.10
9	10	040	342.93	.040	272.99	.042	82.29	.008	216.89	.032	273.80	.010	272.84



ORIGINAL PAGE IS  
OF POOR QUALITY

CCMI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 172 ALPHA-MCL = 6.0 PDP RUN-PT 33.408  
 MUR 33 ALPHA-PAR = 2.0 C-CCMP E 32962  
 POINT 55 SIGMA = 135 V-REF = 2LI.34  
 COMPUTED FREQUENCY = 19.09, K = .1489

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER PAIRIAN \*\*\*

X	CP-MAG	PHI	.062-UPPER	CP-MAG	PHI	.148-UPPER	CP-MAG	PHI	.261-UPPER	CP-MAG	PHI	.392-UPPER	CP-MAG	PHI	.530-UPPER	CP-MAG	PHI	.661-UPPER	CP-MAG	PHI				
1	25	.820	169	.17	7	332	169	.35	2	.911	185	.95	2	.763	195	.37	3	.012	198	.97	2	.795	204	.27
2	2	.059	27	.92	7	253	27	.92	.030	.279	234	.52	6	.437	43	.41	4	.422	35	.77	2	.395	40	.11
3	4	.192	120	.44	7	273	278	.24	.077	.077	216	.48	6	.654	92	.11	4	.026	252	.74	2	.032	261	.63
4	4	.166	205	.37	7	265	348	.24	.037	.077	169	.84	6	.093	31	.39	4	.019	181	.49	2	.022	177	.40
5	6	.689	68	.45	7	213	60	.16	.027	.027	17	.21	6	.022	352	.19	4	.024	328	.90	2	.025	337	.05
6	2	.019	275	.72	7	093	142	.27	.027	.027	39	.29	6	.022	318	.51	4	.025	19	.17	2	.022	44	.21
7	2	.200	71	.93	7	041	252	.32	.023	.023	22	.64	6	.011	120	.08	4	.036	121	.66	2	.005	18	.10
8	2	.191	232	.80	7	019	320	.28	.005	.005	34	.01	6	.011	28	.08	4	.032	32	.13	2	.005	86	.91
9	2	.143	15	.76	7	012	433	.06	.014	.014	31	.29	6	.005	296	.93	4	.037	297	.98	2	.007	317	.21
10	2	.075	256	.58	7	024	233	.23	.013	.013	29	.66	6	.022	325	.22	4	.018	330	.64	2	.007	317	.21

X	CP-MAG	PHI	.060-JPPER	CP-MAG	PHI	.012-LOWER	CP-MAG	PHI	.148-LOWER	CP-MAG	PHI	.261-LOWER	CP-MAG	PHI										
1	2	.314	207	.21	1	.807	209	.31	10	.878	344	.72	6	.953	342	.99	4	.249	348	.60	2	.900	351	.95
2	2	.036	49	.44	1	.364	56	.74	1	.453	231	.21	6	.446	183	.28	4	.156	63	.93	2	.269	60	.48
3	2	.025	178	.12	1	.041	276	.36	1	.102	287	.06	6	.113	357	.18	4	.070	280	.01	2	.052	283	.82
4	2	.024	335	.39	1	.026	342	.60	1	.059	293	.97	6	.164	178	.18	4	.026	151	.89	2	.020	172	.90
5	2	.020	45	.01	1	.020	42	.06	1	.076	87	.27	6	.043	150	.75	4	.022	299	.27	2	.023	112	.92
6	2	.010	25	.29	1	.013	32	.25	1	.028	328	.49	6	.030	12	.88	4	.022	94	.53	2	.024	158	.14
7	2	.005	56	.27	1	.002	103	.44	1	.014	69	.01	6	.008	35	.58	4	.024	22	.96	2	.003	312	.13
8	2	.006	304	.45	1	.009	335	.37	1	.024	203	.55	6	.017	200	.30	4	.026	250	.36	2	.007	319	.64
9	2	.006	304	.45	1	.005	85	.20	1	.024	51	.20	6	.014	48	.68	4	.017	121	.40	2	.014	149	.73

X	CP-MAG	PHI	.530-LOWER	CP-MAG	PHI	.774-LOWER	CP-MAG	PHI	.800-LOWER	CP-MAG	PHI	.910-LOWER	CP-MAG	PHI										
1	1	1.241	3	.56	1	.471	23	.58	6	.499	192	.28	4	.073	86	.52	4	.073	86	.52	2	.900	351	.95
2	1	.308	57	.57	1	.121	274	.69	1	.284	53	.13	4	.034	80	.09	4	.034	80	.09	2	.269	60	.48
3	1	.051	173	.74	1	.065	162	.82	1	.037	359	.32	4	.021	191	.60	4	.021	191	.60	2	.052	283	.82
4	1	.015	36	.37	1	.025	145	.20	1	.046	227	.56	4	.035	179	.11	4	.035	179	.11	2	.020	172	.90
5	1	.015	36	.37	1	.025	145	.20	1	.033	159	.72	4	.037	359	.32	4	.037	359	.32	2	.020	172	.90
6	1	.019	37	.57	1	.021	173	.02	1	.003	136	.78	4	.017	63	.25	4	.017	63	.25	2	.023	112	.92
7	1	.005	317	.40	1	.002	48	.73	1	.016	64	.73	4	.011	87	.46	4	.016	67	.46	2	.003	312	.13
8	1	.004	264	.90	1	.009	318	.27	1	.007	14	.83	4	.016	343	.42	4	.016	343	.42	2	.007	317	.21
9	1	.007	159	.26	1	.008	187	.46	1	.006	305	.32	4	.008	292	.62	4	.006	299	.61	2	.007	317	.21
10	1	.007	159	.26	1	.008	187	.46	1	.004	212	.63	4	.009	279	.45	4	.009	279	.45	2	.007	317	.21

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER SLADE DATA, WALL STATIONS

FILE 172 ALPHA-CL = 6.0 POP RUN.PT 33.08  
 RUN 33 ALPHA-PAR = 2.0 Q-COMP = 32962  
 POINT 5 SIGMA = -175. V-PER = 201.34  
 COMPUTED FREQUENCY = 19.09, k = .1489

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* SLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012	.062	.149	.261	.392	.530	.661
N	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR
1	35.566	-9.036	13.254	-3.390	6.321	-1.097	5.767
2	-2.780	-1.972	-0.560	-1.444	-0.072	-0.075	-0.097
3	2.154	3.711	3.17	2.55	1.43	0.43	0.43
4	0.580	4.18	4.43	3.23	1.44	0.23	0.23
5	0.11	7.20	0.37	2.24	0.16	0.04	0.04
6	-0.18	2.95	0.47	0.24	0.12	0.11	0.11
7	-0.38	2.95	0.68	0.22	0.09	0.09	0.09
8	-0.37	2.95	0.68	0.17	0.02	0.02	0.02
9	-0.159	0.48	0.24	0.15	0.02	0.02	0.02
10	0.333	0.92	0.24	0.18	0.02	0.02	0.02

X	.774	.860	.910	.910	.910	.910	.910
N	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR
1	2.234	1.267	1.089	0.777	1.300	0.723	0.723
2	-0.853	-0.010	-0.229	-0.777	-0.125	-0.13	-0.13
3	-0.653	0.030	0.227	0.40	0.06	0.14	0.14
4	-0.13	0.034	0.05	0.03	0.07	0.04	0.04
5	-0.013	0.015	0.01	0.02	0.07	0.08	0.08
6	-0.022	0.010	0.01	0.02	0.05	0.06	0.06
7	-0.004	0.002	0.01	0.01	0.06	0.09	0.09
8	-0.004	0.002	0.01	0.01	0.10	0.12	0.12
9	-0.011	0.004	0.01	0.01	0.10	0.11	0.11
10	-0.011	0.004	0.01	0.01	0.10	0.11	0.11

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	W1	W2	W4	W6	W125	W125	W125
GAP FRACTION	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	2	339	-319	-151	-13.066	2.371	-220
2	3	044	500	440	536	-1.401	131
3	4	057	-013	-251	795	192	-055
4	5	070	021	065	106	112	001
5	6	070	021	065	106	112	001
6	7	070	021	065	106	112	001
7	8	070	021	065	106	112	001
8	9	070	021	065	106	112	001
9	10	070	021	065	106	112	001

\*\*\* STABILITY PARAMETER \*\*\*

N	CHREAL	CHIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	1.272	-0.380	7.235	5.169	1.125	0.111
2	0.043	-0.056	2.175	4.96	0.125	0.111
3	0.002	-0.011	0.079	0.113	0.125	0.111
4	0.002	-0.006	0.055	0.138	0.125	0.111
5	0.002	-0.004	0.024	0.166	0.125	0.111
6	0.002	-0.004	0.016	0.194	0.125	0.111
7	0.002	-0.004	0.010	0.222	0.125	0.111
8	0.002	-0.004	0.007	0.250	0.125	0.111
9	0.002	-0.004	0.005	0.278	0.125	0.111
10	0.002	-0.004	0.004	0.306	0.125	0.111

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 172 ALPHA-WCL = 6.0 PDP KUM-PT 33.08  
 RUM 33 ALPHA-BAR = 2.0 Q-COMP = 32962  
 POINT SE SIGMA = -135. V-REF = 201.34  
 COMPUTED FREQUENCY = 19.09, K = .1489

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.148		.261		.392		.530		.661	
N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	35.696	345.74	14.263	346.25	8.393	352.49	5.748	358.96	4.353	363.93	3.356	369.49	2.421	374.99
2	4.408	215.75	.887	192.19	.268	195.67	.123	192.34	.058	93.93	.034	14.49	.021	14.49
3	2.291	300.73	.447	38.88	.154	292.35	.073	308.25	.036	280.36	.021	131.13	.014	131.13
4	.715	35.77	.448	171.88	.058	48.74	.026	332.78	.013	173.54	.007	155.21	.004	155.21
5	.295	270.84	.213	260.00	.019	239.51	.030	228.96	.010	183.10	.005	172.65	.003	172.65
6	.208	93.54	.051	331.90	.027	115.10	.030	172.11	.014	116.10	.008	162.04	.004	162.04
7	.203	259.49	.071	18.38	.014	311.18	.007	126.69	.007	324.61	.004	310.79	.002	310.79
8	.166	186.87	.029	209.80	.022	184.50	.007	192.74	.002	180.77	.001	227.43	.001	227.43
9	.097	170.54	.039	51.54	.026	121.13	.026	133.96	.029	148.41	.024	161.82	.015	161.82
10														

X =	.774		.800		.910		1.000		1.100		1.200		1.300	
N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	2.579	29.94	1.335	35.38	1.498	73.09	1.725	285.16	2.024	141.06	2.352	359.99	2.679	343.35
2	.063	189.23	.082	50.67	.125	285.16	.173	331.13	.224	141.06	.270	306.20	.317	208.85
3	.035	260.49	.066	145.60	.098	331.13	.134	134.10	.173	141.06	.212	106.36	.250	106.36
4	.013	17.43	.008	14.93	.011	134.10	.010	122.67	.017	124.85	.024	124.85	.031	124.85
5	.021	219.74	.007	276.85	.006	212.67	.008	161.44	.011	161.44	.014	161.44	.017	161.44
6	.011	100.32	.008	159.61	.011	122.67	.010	101.42	.013	101.42	.016	101.42	.019	101.42
7	.005	332.85	.017	339.25	.010	348.84	.011	190.450	.013	190.450	.015	190.450	.017	190.450
8	.000	357.58	.006	298.77	.001	224.82	.010	269.82	.015	269.82	.020	269.82	.024	269.82
9	.012	197.58	.014	274.06	.010	269.82	.010	269.82	.015	269.82	.020	269.82	.024	269.82
10														

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	.125		.000		.125		.250		.375		.500		.625		.750		.875		
GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	
1	2	.360	352.23	3.383	357.44	13.280	169.72	2.522	185.00	8.888	35.50	1.125	110.22	1.125	110.22	1.125	110.22	1.125	110.22
2	3	.502	95.02	.282	298.77	.817	166.44	.305	258.94	.549	115.37	.776	125.18	.776	125.18	.776	125.18	.776	125.18
3	4	.635	338.12	.643	206.07	.623	241.90	.631	182.20	.638	158.94	.645	138.72	.645	138.72	.645	138.72	.645	138.72
4	5	.032	220.89	.066	274.42	.154	46.45	.044	353.20	.122	162.72	.122	162.72	.122	162.72	.122	162.72	.122	162.72
5	6	.047	148.81	.026	76.72	.081	230.23	.010	82.98	.025	351.47	.025	351.47	.025	351.47	.025	351.47	.025	351.47
6	7	.052	138.79	.028	6.09	.014	268.12	.007	57.18	.017	114.63	.017	114.63	.017	114.63	.017	114.63	.017	114.63
7	8	.009	202.76	.011	40.30	.047	268.12	.009	305.64	.016	110.22	.016	110.22	.016	110.22	.016	110.22	.016	110.22
8	9	.055	111.87	.010	262.64	.003	346.68	.008	319.63	.012	110.22	.012	110.22	.012	110.22	.012	110.22	.012	110.22
9	10	.010	144.43	.002	332.64	.003	346.68	.008	319.63	.012	110.22	.012	110.22	.012	110.22	.012	110.22	.012	110.22
10																			

\*\*\* STABILITY PARAMETER \*\*\*

\* XI = .3803 \*





MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 162 ALPHA-WCL = 6.0 PDP RUN.PI 32.01  
 RUM, 52 ALPHA-EAR = 2.0 Q-COMP = 32567  
 POINT 1 SIG-RA = -90.0 V-REF = 200.14  
 COMPUTED FREQUENCY = 9.06, K = .0712

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	PHI	.062-UPPER	.148-UPPER	.261-UPPER	.392-UPPER	.530-UPPER	.661-UPPER
1	25	.904	156.70	6.495	164.27	2.549	295.14	2.546	217.48
1	1	.930	354.90	.511	339.09	.289	303.49	.312	332.73
2	4	.396	192.38	.421	176.97	.509	176.28	.438	178.00
3	4	.651	152.15	.126	67.66	.185	101.33	.114	82.35
4	5	.532	226.38	.081	352.80	.077	323.64	.049	283.96
5	7	.354	246.52	.144	135.53	.106	182.59	.101	174.32
6	9	.097	306.83	.049	171.11	.033	300.84	.036	243.60
7	8	.289	228.95	.034	317.16	.016	115.88	.013	31.51
8	9	.086	350.39	.002	185.85	.026	117.21	.020	124.03
9	10	.171	133.40	.037	171.18	.036	100.84	.017	109.59

X	N	CP-MAG	PHI	.062-LOWER	.148-LOWER	.261-LOWER	.392-LOWER	.530-LOWER	.661-LOWER
1	2	.144	233.44	1.766	237.13	9.901	328.58	4.019	327.77
1	1	.173	330.31	.141	318.15	1.461	198.61	.143	322.83
2	4	.417	77.24	.421	77.74	.608	150.99	.366	70.63
3	4	.103	81.63	.113	60.87	.116	248.75	.085	73.42
4	5	.053	292.51	.095	295.55	.037	35.85	.048	311.82
5	6	.091	176.62	.014	175.58	.136	173.81	.119	164.47
6	7	.012	242.99	.011	242.99	.037	84.92	.021	171.47
7	8	.007	69.98	.002	158.35	.025	164.85	.047	122.43
8	9	.024	123.52	.033	134.39	.040	208.36	.037	241.09
9	10	.014	108.64	.009	87.77	.015	208.36	.005	122.61

X	N	CP-MAG	PHI	.530-LOWER	.661-LOWER	.774-LOWER	.860-LOWER	.910-LOWER	.910-LOWER
1	1	.714	324.65	1.469	322.52	.552	259.17	.358	339.14
1	2	.109	394.43	.118	313.73	.157	295.94	.111	323.26
2	3	.348	73.41	.429	75.98	.481	74.28	.376	78.51
3	4	.089	81.78	.136	83.62	.086	84.74	.125	69.00
4	5	.050	309.35	.081	311.72	.071	299.19	.047	297.59
5	6	.098	174.71	.131	177.59	.113	176.19	.087	178.56
6	7	.009	106.73	.009	107.24	.013	132.49	.013	133.54
7	8	.035	132.50	.007	230.25	.007	307.05	.033	135.76
8	9	.035	82.76	.042	136.04	.039	140.06	.033	143.05
9	10	.035	82.76	.010	83.98	.014	88.03	.013	102.25

ORIGINAL DATA  
OF POOR QUALITY



MODE 1 -- OCWI PERIODICITY TEST  
CENTR BLADE DATA, WALL STATIONS

FILE 162 ALPHA-MCL = 6.0 PDP RUM.PT 32.01  
RUM 32 ALPHA-PAR = 2.0 Q-COMP = 32567  
POINT 1 SIGMA = -9.0 V-REF = 200.14  
COMPUTED FREQUENCY = 9.00, K = .0712

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	35.774	335.24	12.467	336.68	7.57J	340.03	5.005	346.00	3.506	359.81	3.253	11.633
2	3.267	188.39	1.053	120.59	3.43	158.17	2.06	136.14	1.51	133.56	1.79	168.32
3	4.074	275.18	4.44	24.34	3.01	280.00	0.63	297.18	1.58	263.51	0.32	284.91
4	6.36	333.79	2.43	248.18	0.73	319.54	0.89	307.69	0.28	153.40	0.25	83.70
5	9.38	213.62	0.58	147.50	0.12	170.44	0.37	170.44	0.25	22.89	0.44	343.59
6	3.93	89.30	0.90	256.74	0.14	125.03	0.27	107.51	0.20	45.22	0.30	188.62
7	1.11	112.08	0.68	29.38	0.58	119.78	0.44	87.99	0.02	240.18	0.40	87.82
8	0.259	158.71	0.58	173.57	0.42	116.94	0.17	252.65	0.37	148.73	0.20	217.82
9	1.13	151.91	0.39	122.11	0.42	116.94	0.27	177.44	0.16	148.73	0.23	146.14
10	0.205	279.15	0.49	239.25	0.51	270.09	0.31	277.44	0.15	312.36	0.09	319.89

X	N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	2	0.71	38.12	1.170	44.68	1.586	44.42	4.662	351.73	1.282	330.81	1.282	330.81
2	3	0.74	51.87	0.64	249.38	1.120	175.40	2.77	284.24	0.64	177.37	0.64	177.37
3	4	0.37	304.66	0.14	117.90	0.22	19.58	1.69	307.98	0.18	201.33	0.18	201.33
4	5	0.21	329.54	0.09	329.95	0.16	92.78	0.14	188.66	0.09	101.36	0.09	101.36
5	6	0.22	174.43	0.16	43.29	0.10	295.78	0.12	195.66	0.05	190.13	0.05	190.13
6	7	0.02	305.93	0.06	192.80	0.04	172.73	0.13	134.18	0.04	114.73	0.04	114.73
7	8	0.13	225.74	0.12	320.74	0.01	218.76	0.13	190.23	0.04	130.05	0.04	130.05
8	9	0.15	175.61	0.03	244.57	0.06	186.24	0.21	147.88	0.04	147.88	0.04	147.88
9	10	0.06	1.33	0.06	88.42	0.04	112.90	0.21	280.98	0.07	267.32	0.07	267.32

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2	0.209	312.75	3.390	350.45	12.450	163.99	2.167	194.36	8.381	76.90	8.381	76.90	
2	3	0.106	15.39	0.983	351.11	1.556	238.64	4.06	305.76	1.125	33.19	1.125	33.19	
3	4	0.554	89.64	0.176	322.52	1.275	122.59	4.58	80.54	1.34	135.09	1.34	135.09	
4	5	0.128	118.29	0.073	25.76	4.84	200.86	1.49	80.54	4.02	134.09	4.02	134.09	
5	6	0.080	343.50	0.152	300.52	1.234	194.86	0.171	284.57	0.52	359.44	0.52	359.44	
6	7	0.174	212.49	0.210	320.11	1.78	303.79	0.139	176.20	0.62	193.33	0.62	193.33	
7	8	0.034	66.10	0.041	324.07	1.34	345.77	0.236	13.81	0.13	184.83	0.13	184.83	
8	9	0.43	178.81	0.07	101.03	0.44	309.14	0.019	106.69	0.58	179.58	0.58	179.58	
9	10	0.020	232.92	0.045	159.15	0.75	344.99	0.024	118.94	0.20	186.38	0.20	186.38	

\*\*\* STABILITY PARAMETER \*\*\*

W1	W2	W3	W4	W5	W6	W10	XI
1.125	0.000	0.125	0.125	0.500	1.125	1.125	0.6251

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTRE BLADE DATA, WALL STATIONS

FILE 164 ALPHA-MCL = 6.0 POP RUN-PT 32.03  
 KUM 52 ALPHA-PAR = 2.0 O-COMP = 32862  
 POINT 3 SIGMA = -90. V-REF = 201.08  
 COMPUTED FREQUENCY = 15.47, K = .1209

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	1	-23.190	11.644	-6.322	2.196	-3.923	0.740	-2.816
2	2	1.335	-0.269	0.009	0.102	0.044	0.174	0.051
3	3	0.591	3.790	0.001	0.332	0.228	0.174	0.229
4	4	-0.628	-0.419	0.056	0.614	0.555	0.002	0.034
5	5	-0.083	0.247	0.044	0.324	0.507	0.035	0.052
6	6	0.119	-0.344	0.045	0.533	0.518	0.006	0.019
7	7	-0.185	0.001	0.009	0.316	0.006	0.002	0.004
8	8	0.053	-0.033	0.017	0.512	0.034	0.010	0.016
9	9	0.065	0.044	0.021	0.304	0.006	0.017	0.009
10	10			0.013	0.004	0.007	0.011	0.015

X	N	.774-UPPER CPREAL CPIMAG	.060-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	1	-1.729	-1.493	-1.377	-1.257	4.658	-2.927	2.956
2	2	0.040	0.004	0.039	0.310	0.500	0.311	1.884
3	3	0.035	0.035	0.066	0.092	0.211	0.009	0.065
4	4	0.007	-0.039	0.009	0.441	0.330	0.022	0.024
5	5	0.011	0.007	0.015	0.007	0.337	0.013	0.024
6	6	0.007	0.006	0.006	0.304	0.228	0.016	0.006
7	7	0.003	0.007	0.003	0.228	0.226	0.008	0.007
8	8	0.001	0.007	0.001	0.228	0.265	0.027	0.017
9	9	0.001	0.007	0.001	0.227	0.265	0.027	0.017
10	10			0.008	0.004	0.009	0.010	0.016

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	0.983	-0.701	0.667	-0.499	-0.671	0.015
2	2	-0.012	0.203	0.126	0.243	0.071	0.108
3	3	0.052	-0.002	0.142	-0.025	0.097	0.070
4	4	0.017	0.035	0.059	0.035	0.077	0.031
5	5	-0.016	-0.035	0.117	0.000	0.113	0.018
6	6	0.007	0.014	0.003	0.003	0.044	0.023
7	7	0.004	0.004	0.002	0.002	0.024	0.016
8	8	0.004	0.004	0.002	0.002	0.024	0.016
9	9	0.004	0.004	0.002	0.002	0.024	0.016
10	10			0.002	0.002	0.007	0.017

ORIGINAL FILED IN  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 164 ALPHA-MCL = 6.0 POP RUN-PI 32.03  
 RUN 32 ALPHA-PAR = 2.0 G-COMP = 22868  
 POINT 3 SIGMA = 90. V-REF = 201.08  
 COMPUTED FREQUENCY = 15.47, N = 1209

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PLR RADIAN \*\*\*

X	N	CP-MAG	PHI	.062-UPPER CP-MAG	PHI	.148-UPPER CP-MAG	PHI	.261-UPPER CP-MAG	PHI	.592-UPPER CP-MAG	PHI	.530-UPPER CP-MAG	PHI	.661-UPPER CP-MAG	PHI
1	25	949	153.34	6.692	160.95	3.992	169.31	2.819	182.75	2.644	197.29	2.840	208.71	2.691	217.43
2	1	361	348.81	.246	24.53	.083	83.69	.113	113.21	.176	97.27	.243	70.48	.274	79.23
3	3	836	81.14	.032	92.65	.044	88.04	.044	109.79	.066	64.43	.040	177.37	.035	166.15
4	5	754	146.59	.061	48.82	.137	97.73	.118	175.44	.025	22.65	.077	43.20	.043	45.50
5	3	64	351.76	.060	336.94	.042	286.98	.066	33.53	.025	253.59	.035	270.40	.043	273.19
6	7	251	251.50	.071	51.76	.027	339.98	.021	305.75	.019	346.48	.025	346.65	.013	357.07
7	0	29	302.77	.056	143.52	.024	290.96	.013	248.18	.008	202.25	.011	157.61	.013	171.69
8	8	185	189.29	.010	8.67	.024	46.27	.030	74.52	.047	49.24	.027	35.74	.016	352.59
9	1	116	297.29	.020	324.59	.009	22.47	.021	39.75	.011	57.08	.020	61.05	.027	71.29
10	0	079	34.17	.021	357.19	.013	17.47	.014	356.29	.008	322.14	.013	327.81	.016	335.33

X	N	CP-MAG	PHI	.660-UPPER CP-MAG	PHI	.910-UPPER CP-MAG	PHI	.012-LOWER CP-MAG	PHI	.062-LOWER CP-MAG	PHI	.148-LOWER CP-MAG	PHI	.261-LOWER CP-MAG	PHI
1	2	284	220.91	1.664	222.39	1.578	219.35	9.246	328.89	5.501	327.65	3.520	327.11	2.260	326.45
2	0	293	174.27	.040	177.19	.031	171.55	1.186	181.93	.589	148.15	.329	110.13	.306	98.37
3	0	078	44.69	.062	37.86	.083	37.28	.061	220.38	.217	357.48	.072	186.58	.065	181.81
4	0	039	279.58	.042	282.39	.041	282.42	.023	251.18	.039	330.50	.016	25.64	.062	333.38
5	0	017	78.13	.007	323.11	.017	330.57	.034	213.79	.028	215.59	.014	295.24	.036	312.07
6	0	007	15.28	.023	32.31	.008	42.20	.038	346.61	.027	17.83	.018	227.02	.014	243.20
7	0	024	82.68	.028	14.90	.020	3.93	.015	96.69	.026	7.77	.028	17.06	.012	32.89
8	0	014	326.73	.012	320.27	.012	311.11	.027	234.86	.015	98.46	.010	110.05	.032	31.87
9	0	005	268.26	.005	268.26	.005	268.26	.007	279.34	.005	279.34	.005	290.02	.006	246.99

X	N	CP-MAG	PHI	.530-LOWER CP-MAG	PHI	.661-LOWER CP-MAG	PHI	.774-LOWER CP-MAG	PHI	.860-LOWER CP-MAG	PHI	.910-LOWER CP-MAG	PHI
1	1	203	324.51	.820	323.02	.209	323.56	.110	210.05	.335	197.23	.058	285.97
2	0	059	182.26	.085	188.17	.144	183.92	.084	104.99	.223	107.13	.348	108.02
3	0	039	35.39	.094	43.09	.069	33.30	.027	104.99	.096	36.77	.071	176.95
4	0	015	248.08	.018	295.44	.011	298.74	.007	298.34	.043	287.26	.029	308.59
5	0	010	15.38	.011	210.66	.004	126.54	.005	179.84	.029	296.37	.018	294.18
6	0	021	111.92	.046	125.47	.026	126.54	.043	80.88	.005	142.81	.033	263.50
7	0	005	255.31	.005	268.26	.021	17.18	.039	27.14	.027	90.72	.036	28.59
8	0	005	268.26	.005	268.26	.011	280.61	.007	279.34	.005	311.17	.005	290.02

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 164 ALPHA-MCL = 6.0 POP RUN.PT 32.03  
 RUN 32 ALPHA-PAR = 2.0 Q-COMP = 32868  
 POINT 3 SIGMA = -90. V-REF = 201.78  
 COMPUTED FREQUENCY = 15.47, W = .1209

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661													
	N	DELCPR	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP												
1	31	106	-16	.422	10	.960	-5	.123	6	.679	-2	.652	4	.699	-1	.114	3	.507	3	.118	.846	2	.303	1	.508	
2	-2	.520	-3	.829	-1	.724	.208	.208	-1	.122	-2	.230	4	.000	-1	.199	.010	.085	.085	.097	.112	.074	2	.303	1	.508
3	-6	.37	-3	.379	-1	.212	-1	.041	-1	.074	-1	.070	-1	.050	-1	.043	-1	.061	.061	.045	.014	-1	.109	-1	.033	
4	-7	.09	-1	.013	-1	.016	-1	.083	.005	.005	-1	.107	-1	.027	-1	.025	-1	.011	.026	.013	.020	.009	-1	.020	-1	.020
5	-5	.53	.230	.230	-1	.067	-1	.071	-1	.035	-1	.001	-1	.018	-1	.004	-1	.010	.026	.039	.003	.002	-1	.029	-1	.029
6	.200	.003	.016	.016	-1	.071	-1	.025	.009	.012	-1	.008	-1	.015	-1	.018	-1	.010	.020	.019	.000	.006	-1	.009	-1	.009
7	.059	.153	.022	.022	-1	.016	-1	.048	.019	.008	-1	.028	-1	.019	-1	.012	-1	.026	.020	.020	.004	.009	-1	.010	-1	.010
8	.059	.153	.022	.022	-1	.016	-1	.048	.019	.008	-1	.028	-1	.019	-1	.012	-1	.026	.020	.020	.004	.009	-1	.010	-1	.010
9	.059	.153	.022	.022	-1	.016	-1	.048	.019	.008	-1	.028	-1	.019	-1	.012	-1	.026	.020	.020	.004	.009	-1	.010	-1	.010
10	.059	.153	.022	.022	-1	.016	-1	.048	.019	.008	-1	.028	-1	.019	-1	.012	-1	.026	.020	.020	.004	.009	-1	.010	-1	.010

X	.774		.860		.910		.910		.910		.910		.910	
	N	DELCPR	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	1	.631	1	.441	1	.068	1	.235	1	.496	1	.663	1	.846
2	-1	.014	-1	.010	-1	.042	-1	.046	-1	.027	-1	.095	-1	.149
3	-1	.010	-1	.046	-1	.007	-1	.002	-1	.029	-1	.144	-1	.209
4	-1	.024	-1	.014	-1	.009	-1	.017	-1	.003	-1	.005	-1	.005
5	-1	.001	-1	.000	-1	.019	-1	.008	-1	.021	-1	.005	-1	.005
6	-1	.017	-1	.014	-1	.001	-1	.008	-1	.011	-1	.003	-1	.003
7	-1	.006	-1	.005	-1	.016	-1	.016	-1	.017	-1	.001	-1	.001
8	-1	.005	-1	.004	-1	.011	-1	.006	-1	.017	-1	.012	-1	.012
9	-1	.005	-1	.004	-1	.011	-1	.006	-1	.017	-1	.012	-1	.012
10	-1	.005	-1	.004	-1	.011	-1	.006	-1	.017	-1	.012	-1	.012

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	.125		.000		.125		.125		.500		.125		.125		.125		
		N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	1	1	.056	-1	.272	3	.005	-2	.643	4	.155	-2	.464	2	.123	8	.585	
2	-1	.181	-1	.046	-1	.033	-1	.258	-1	.510	-1	.232	-1	.062	2	.123	8	.585
3	-1	.023	-1	.062	-1	.141	-1	.086	-1	.365	-1	.365	-1	.007	2	.123	8	.585
4	-1	.061	-1	.043	-1	.043	-1	.107	-1	.157	-1	.105	-1	.006	2	.123	8	.585
5	-1	.001	-1	.009	-1	.023	-1	.014	-1	.047	-1	.021	-1	.005	2	.123	8	.585
6	-1	.021	-1	.009	-1	.009	-1	.009	-1	.022	-1	.004	-1	.005	2	.123	8	.585
7	-1	.011	-1	.019	-1	.019	-1	.016	-1	.016	-1	.016	-1	.005	2	.123	8	.585
8	-1	.012	-1	.011	-1	.011	-1	.011	-1	.016	-1	.026	-1	.005	2	.123	8	.585
9	-1	.012	-1	.011	-1	.011	-1	.011	-1	.016	-1	.026	-1	.005	2	.123	8	.585
10	-1	.012	-1	.011	-1	.011	-1	.011	-1	.016	-1	.026	-1	.005	2	.123	8	.585

\*\*\* STABILITY PARAMETER

\* XI = .6561 \*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 164 ALPHA-MCL = 6.0 FOP RUN.PI 32.03  
 RUN 192 ALPHA-PAR = 2.0 G-COMP = 32868  
 POINT 3 SIGMA = -90.0 V-REF = 201.08  
 COMPUTED FREQUENCY = 15.47, M = .1209

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012	.062	.148	.261	.392	.530	.661							
N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI						
1	35.175	332.17	12.116	354.99	7.372	335.92	4.830	346.67	3.508	1.339	3.221	15.18	2.753	33.222
2	2.531	174.81	.715	163.86	.260	117.96	.199	90.04	.109	84.79	.148	130.73	.079	340.60
3	.882	260.56	.216	349.08	.101	223.39	.067	220.84	.047	215.21	.047	197.30	.021	196.97
4	.804	331.86	.118	224.97	.133	306.06	.083	285.77	.014	100.68	.017	42.62	.044	283.82
5	.236	182.03	.021	150.39	.007	45.91	.019	124.22	.026	336.35	.033	321.97	.029	278.65
6	.036	176.56	.099	227.18	.035	181.88	.030	167.38	.019	201.71	.040	184.56	.011	236.85
7	.036	359.68	.017	347.76	.030	372.78	.024	150.70	.016	37.19	.020	359.74	.013	237.47
8	.164	111.06	.017	114.59	.032	125.60	.023	328.22	.017	251.70	.019	171.96	.009	196.81
9	.105	219.57	.033	199.87	.022	217.01	.033	162.89	.017	174.38	.025	171.96	.013	195.81
10							.017	194.50	.008	179.63	.012	168.14	.013	195.16

X =	.774	.910	CM-MAG	PHIN	PHIM	
N	DELCPM	PHI	DELCPM	PHI	PHIM	
1	2.176	41.45	1.556	37.45	1.257	329.47
2	.040	257.78	.039	31.35	.064	264.22
3	.046	257.78	.039	31.35	.016	313.37
4	.026	180.14	.015	30.60	.003	181.08
5	.026	180.14	.015	30.60	.004	326.51
6	.022	252.16	.019	286.34	.004	326.51
7	.022	252.16	.019	286.34	.004	326.51
8	.007	220.53	.017	174.28	.006	220.53
9	.007	175.09	.011	174.28	.006	220.53
10			.006	148.33	.003	220.53

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI		
W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	W11	W12	W13	W14	W15	W16	W17	W18	W19		
1	1.653	349.79	3.012	356.14	13.308	161.61	2.477	185.83	8.843	76.11	1.125	130.04	1.125	130.04	1.125	130.04	1.125	130.04	1.125	130.04
2	.547	109.29	.930	16.09	1.949	219.20	.064	105.13	.963	52.63	.632	217.35	.632	217.35	.632	217.35	.632	217.35	.632	217.35
3	.057	212.47	.165	276.49	.687	247.84	.038	161.07	.273	130.04	.164	358.25	.164	358.25	.164	358.25	.164	358.25	.164	358.25
4	.076	110.59	.109	31.25	.442	214.39	.078	293.96	.058	374.58	.058	374.58	.058	374.58	.058	374.58	.058	374.58	.058	374.58
5	.011	36.82	.027	148.57	.051	326.20	.023	13.96	.023	13.96	.023	13.96	.023	13.96	.023	13.96	.023	13.96	.023	13.96
6	.041	61.59	.010	203.64	.099	284.44	.024	346.08	.024	346.08	.024	346.08	.024	346.08	.024	346.08	.024	346.08	.024	346.08
7	.041	203.64	.010	203.64	.104	345.52	.024	346.08	.024	346.08	.024	346.08	.024	346.08	.024	346.08	.024	346.08	.024	346.08
8	.039	195.79	.043	54.76	.054	335.80	.026	62.00	.026	62.00	.026	62.00	.026	62.00	.026	62.00	.026	62.00	.026	62.00
9	.039	195.79	.043	54.76	.055	335.80	.026	62.00	.026	62.00	.026	62.00	.026	62.00	.026	62.00	.026	62.00	.026	62.00
10	.050	129.09	.016	311.40	.055	335.80	.026	62.00	.026	62.00	.026	62.00	.026	62.00	.026	62.00	.026	62.00	.026	62.00

\*\*\* STABILITY PARAMETER

\* XI = .6561  
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ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 169 ALPHA-PCL = 6.0 PDP RUN.PT 32.05  
 RUN 32 ALPHA-PAR = 2.0 Q-COMP = 32498  
 POINT 5 SIGMA = -90. V-REF = 199.98  
 COMPUTED FREQUENCY = 19.08, K = .1499

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CPREAL	CPIMAG	062-UPPER	CPREAL	CPIMAG	148-UPPER	CPREAL	CPIMAG	261-UPPER	CPREAL	CPIMAG	392-UPPER	CPREAL	CPIMAG	530-UPPER	CPREAL	CPIMAG	661-UPPER	CPREAL	CPIMAG
1	22	-.667	12.148	-6.152	2.279	-.640	-.663	-2.546	-.264	-2.235	-.935	-2.153	-1.494	-1.793	-1.791						
2	1	.447	-.620	.142	-.206	.031	-.170	-.010	-.142	.021	-.069	.118	-.046	.084	.000						
3	3	1.265	3.733	.059	-.082	.069	.034	.042	.066	.078	.019	.017	-.047	.004	.000						
4	5	-.582	-.036	.043	.021	-.027	.065	-.001	.047	.005	-.011	-.028	-.001	-.004	.002						
5	7	-.603	-.241	.053	.060	.011	-.012	-.009	-.012	-.006	.001	-.031	-.008	-.019	-.004						
6	9	-.125	-.038	-.052	.046	-.005	-.006	-.014	-.008	-.008	.017	-.015	-.007	-.010	-.006						
7	11	-.030	-.083	-.002	-.014	-.006	-.003	-.014	-.008	-.001	.010	-.014	-.003	-.010	-.008						
8	13	-.065	-.031	-.002	-.012	-.000	-.004	-.006	-.003	-.003	-.000	-.011	-.002	-.006	-.007						
9	15																				
10	17																				

X	N	CPREAL	CPIMAG	861-UPPER	CPREAL	CPIMAG	910-UPPER	CPREAL	CPIMAG	012-LOWER	CPREAL	CPIMAG	052-LOWER	CPREAL	CPIMAG	145-LOWER	CPREAL	CPIMAG	261-LOWER	CPREAL	CPIMAG
1	22	-.378	-1.638	-.088	-1.394	-.829	-1.131	8.395	-5.170	-1.077	-.253	.175	-3.226	3.379	-2.077	2.268	-1.351				
2	1	.036	-.042	.000	-.045	.002	-.040	-.123	-.078	-.025	-.064	-.150	-.111	-.057	-.049	.049	-.043				
3	3	-.019	-.004	-.012	-.003	-.009	-.006	-.025	-.032	-.025	-.062	-.062	-.013	-.037	-.006	-.037	-.043				
4	5	-.010	-.011	-.008	-.003	-.012	-.004	-.045	-.034	-.062	-.032	-.062	-.009	-.028	-.003	-.019	-.009				
5	7	-.007	-.006	-.003	-.008	-.001	-.006	-.038	-.019	-.032	-.013	-.026	-.011	-.014	-.012	-.011	-.011				
6	9	-.012	-.007	-.001	-.009	-.001	-.004	-.024	-.036	-.019	-.013	-.026	-.026	-.024	-.025	-.027	-.013				
7	11	-.013	-.008	-.001	-.011	-.001	-.004	-.026	-.033	-.019	-.028	-.022	-.028	-.024	-.025	-.025	-.013				
8	13																				
9	15																				
10	17																				

X	N	CPREAL	CPIMAG	530-LOWER	CPREAL	CPIMAG	661-LOWER	CPREAL	CPIMAG	774-LOWER	CPREAL	CPIMAG	860-LOWER	CPREAL	CPIMAG	910-LOWER	CPREAL	CPIMAG
1	22	1.313	-.765	1.076	-.546	.531	-.154	.285	-.073	-.077	.041	-.033	-.033	-.183	.380	-.256		
2	1	-.064	-.030	-.076	.021	.188	-.039	.059	.010	-.025	-.033	.041	.033	.030	-.030	.078		
3	3	-.033	-.006	-.021	-.002	-.043	-.021	-.042	-.024	-.024	-.033	-.033	-.033	-.015	-.015	-.028		
4	5	-.008	-.005	-.008	-.001	-.014	-.014	-.015	-.002	-.002	-.002	-.002	-.002	-.014	-.014	-.008		
5	7	-.010	-.005	-.009	-.001	-.003	-.003	-.006	-.002	-.002	-.002	-.002	-.002	-.008	-.008	-.008		
6	9	-.018	-.004	-.020	-.001	-.002	-.002	-.016	-.010	-.002	-.002	-.002	-.002	-.002	-.002	-.002		
7	11	-.011	-.007	-.014	-.001	-.003	-.003	-.012	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002		
8	13																	
9	15																	
10	17																	



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 159 ALPHA-MCL = 2.0 PDP HUNPT 32.75  
 HUL 32 ALPHA-PRR = 6.0 C-COMP = 32495  
 SIGMA = -90.0 V-REF = 199.90  
 PCIT COMPUTED FREQUENCY = 19.06, K = .1499

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	25.717	151.61	6.558	159.66	3.700	169.68	2.559	185.93	2.430	203.14	2.621	218.75
2	1.574	326.92	.250	354.60	.173	380.40	.142	406.02	.089	430.42	.126	456.72
3	1.942	171.21	.101	305.70	.077	25.88	.047	7.87	.080	13.35	.047	278.47
4	.669	150.41	.027	301.34	.080	125.52	.017	92.55	.042	176.88	.028	262.89
5	.241	354.45	.040	26.19	.016	178.43	.015	273.68	.006	164.50	.008	178.52
6	.228	269.48	.070	48.32	.008	312.80	.018	203.44	.019	116.26	.009	126.25
7	.324	96.27	.031	138.49	.008	231.82	.015	209.85	.010	165.72	.005	227.65
8	.174	143.35	.014	296.31	.012	161.08	.003	198.45	.058	181.02	.002	227.65
9	.670	113.35	.012	260.92	.005	267.36	.007	327.94	.012	255.60	.007	297.85
10	.372	205.31										

X	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.141	224.93	1.708	234.68	1.403	233.75	1.106	238.37	0.998	228.07	0.967	328.47
2	.054	276.86	.049	270.55	.051	107.64	.145	122.59	.099	169.89	.043	328.47
3	.008	210.98	.018	230.69	.011	212.21	.068	111.21	.112	175.39	.037	178.36
4	.020	191.10	.018	183.58	.016	186.74	.032	132.32	.063	147.63	.029	354.86
5	.005	184.10	.008	200.92	.013	197.00	.046	174.64	.035	165.22	.016	334.17
6	.013	152.56	.009	253.08	.007	187.68	.034	124.82	.029	133.25	.017	329.27
7	.010	151.36	.013	141.43	.012	149.49	.054	137.33	.040	139.29	.034	139.27
8	.015	333.11	.018	336.66	.013	316.68	.042	238.24	.024	303.25	.033	139.27
9												
10												

X	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1.520	324.76	1.185	332.56	.553	343.84	.300	341.95	.597	218.28	.458	326.28
2	.052	234.76	.074	232.04	.097	203.87	.067	320.40	.149	312.58	.032	242.22
3	.009	189.80	.025	175.24	.046	206.07	.048	209.39	.016	258.70	.028	236.39
4	.010	147.28	.019	115.53	.011	253.34	.015	171.05	.011	164.39	.038	107.34
5	.019	150.48	.005	20.09	.003	43.36	.009	151.66	.004	125.34	.038	183.08
6	.013	325.15	.016	166.66	.022	167.98	.016	107.99	.012	69.17	.032	192.94
7	.013	370.74	.021	80.07	.013	167.22	.012	187.99	.005	191.97	.032	172.74
8												
9												
10												

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 196 ALPHA-WCL = 6.0 PDP RUN-PI 32.06  
 HUB 32 ALPHA-BAR = 2.0 Q-COMP = 324.90  
 POINT S SIGMA = -90. V-REF = 199.90  
 COMPUTED FREQUENCY = 19.08, K = .1499

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.148		.261		.392		.530		.661	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	31.062	-17.317	11.325	-5.505	7.019	-2.740	4.813	-1.487	3.548	.063	190	3.205	.948	2.324
2	-2.524	.367	-.535	.276	-.136	.083	-.059	.177	-.063	.120	-.039	.077	-.104	1.637
3	-1.388	-3.811	-.091	-.029	-.036	-.083	-.085	-.049	-.108	-.061	-.039	-.053	-.012	-.054
4	-.557	-.267	-.168	-.101	.056	-.059	.018	-.054	-.038	-.038	-.011	-.024	-.008	-.002
5	-.108	-.216	-.052	-.032	-.022	-.023	-.027	.023	-.002	.005	-.010	-.017	-.025	-.040
6	-.043	-.245	-.078	-.051	-.019	-.022	-.027	.004	-.002	.004	-.017	-.010	-.006	-.006
7	.031	-.348	-.078	-.051	-.019	-.022	-.027	.004	-.002	.004	-.017	-.010	-.006	-.006
8	.035	-.370	-.078	-.051	-.019	-.022	-.027	.004	-.002	.004	-.017	-.010	-.006	-.006
9	.034	-.366	-.078	-.051	-.019	-.022	-.027	.004	-.002	.004	-.017	-.010	-.006	-.006
10	.092	-.064	.024	.040	.024	.040	.024	.040	.024	.040	.024	.040	.024	.040

N	.774		.850		.910		.960		.990		N	CMREAL		CMIMAG	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP		CMREAL	CMIMAG	CMREAL	CMIMAG
1	1.664	1.545	1.210	1.210	1.210	.875	.875	.875	.875	.875	1	1.086	-.687	1.086	-.687
2	.005	-.008	-.014	-.014	-.014	.030	.030	.030	.030	.030	2	-.054	-.026	-.054	-.026
3	-.035	-.006	-.006	-.006	-.006	-.015	-.015	-.015	-.015	-.015	3	-.004	-.004	-.004	-.004
4	.005	-.006	.003	-.006	.003	-.009	-.009	-.009	-.009	-.009	4	-.005	-.005	-.005	-.005
5	.004	-.007	.004	-.005	.004	.007	.007	.007	.007	.007	5	-.004	-.004	-.004	-.004
6	-.002	-.014	-.002	-.012	-.002	.007	.007	.007	.007	.007	6	-.004	-.004	-.004	-.004
7	-.005	-.008	-.004	-.012	-.004	.007	.007	.007	.007	.007	7	-.004	-.004	-.004	-.004
8	-.005	-.008	-.004	-.012	-.004	.007	.007	.007	.007	.007	8	-.004	-.004	-.004	-.004
9	-.005	-.008	-.004	-.012	-.004	.007	.007	.007	.007	.007	9	-.004	-.004	-.004	-.004
10	-.012	-.005	-.014	-.014	-.014	.001	.001	.001	.001	.001	10	-.003	-.003	-.003	-.003

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	N	.125		.202		.325		.500		.687		N	CPREAL		CPIMAG	
		CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG		CPREAL	CPIMAG		
1	1	1.500	-1.275	3.267	-.301	-12.288	4.405	-2.056	-.375	2.691	8.532	1	1.086	-.687	1.086	-.687
2	2	.094	-.001	1.091	-.117	-1.767	-1.531	.017	-.226	.656	.493	2	-.054	-.026	-.054	-.026
3	3	.076	-.001	.068	-.082	-.380	-.337	.037	-.038	-.442	-.270	3	-.004	-.004	-.004	-.004
4	4	-.031	-.001	.023	-.034	.054	-.028	.039	.007	-.185	.141	4	-.005	-.005	-.005	-.005
5	5	-.022	-.001	.024	-.031	.012	-.024	.034	.011	.098	.054	5	-.004	-.004	-.004	-.004
6	6	.023	-.001	.024	-.025	-.023	-.024	.034	.011	.048	.009	6	-.004	-.004	-.004	-.004
7	7	.024	-.001	.024	-.025	-.023	-.024	.034	.011	.048	.009	7	-.004	-.004	-.004	-.004
8	8	.024	-.001	.024	-.025	-.023	-.024	.034	.011	.048	.009	8	-.004	-.004	-.004	-.004
9	9	.024	-.001	.024	-.025	-.023	-.024	.034	.011	.048	.009	9	-.004	-.004	-.004	-.004
10	10	.024	-.001	.024	-.025	-.023	-.024	.034	.011	.048	.009	10	-.004	-.004	-.004	-.004

\*\*\* STABILITY PARAMETER \*\*\*

\* XI = .6874 \*

ORIGINAL CASE IS  
OF POOR QUALITY.

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 169 ALPHA-MCL = 6.0 PDP KUM-PT 32.05  
RUM 32 ALPHA-PAR = 2.0 Q-COMP = 32490  
POINT 35 SIGMA = -90.0 V-REF = 199.90  
COMPUTED FREQUENCY = 19.35, K = .1499

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012	.062	.149	.261	.392	.530	.661
N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM
1	35.563	330.86	12.592	334.08	7.535	377.27	3.553
2	2.555	171.75	.602	132.71	.218	171.53	.124
3	4.056	249.59	.095	142.43	.159	237.02	.051
4	6.18	334.43	.196	149.03	.064	237.21	.027
5	2.49	188.30	.039	298.01	.056	356.60	.005
6	257	100.06	.101	210.49	.032	96.27	.028
7	057	302.73	.096	322.88	.019	322.88	.024
8	110	339.75	.057	195.33	.034	147.64	.020
9	119	296.79	.047	318.41	.030	327.40	.018
10	112	35.00	.047	59.76	.039	84.28	.028

X =	.774	.860	.910
N	DELCPM	PHI	DELCPM
1	2.271	42.89	1.493
2	.030	278.86	.023
3	.055	8.02	.023
4	.040	209.08	.015
5	.009	54.16	.016
6	.009	67.23	.005
7	.015	97.94	.007
8	.010	240.71	.005
9	.007	48.07	.008
10	.013	150.95	.014

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	W1	W2	W3	W4	W5	W6	W10
GAP FRACTION	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG
1	1.988	319.63	3.281	354.74	13.054	160.26	8.946
2	.283	170.53	1.097	353.87	2.524	157.33	.820
3	.051	358.65	.269	284.58	.508	221.80	.519
4	.079	197.09	.082	573.85	.069	321.59	.233
5	.055	124.02	.040	503.44	.030	293.70	.098
6	.036	231.67	.031	97.13	.036	222.21	.073
7	.024	160.63	.009	325.93	.069	298.62	.028
8	.032	277.14	.024	174.81	.029	293.80	.014
9	.029	113.52	.017	323.21	.029	533.02	.034
10	.033	119.52	.028	45.44	.035	293.02	.003

\*\*\* STABILITY PARAMETER \*\*\*  
\* XI = .6874 \*  
\* \* \* \* \*



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 144 ALPHA-MCL = 6.0 PDP RUN.PT 29.03  
 RUN 29 ALPHA-PAR = 2.0 Q-COMP = .32009  
 POINT 1 SIGMA = -45. V-REF = 198.39  
 COMPUTED FREQUENCY = 9.07, K = .C718  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	
1	23	.565	145.73	5	.075	156.82	2	.777	168.76	1	.715	191.75	1	.562	222.28
2	333	241.48	.023	346.59	.023	374.06	.026	65.69	.001	226.55	.001	249.46	2	.156	257.44
3	1	.789	58.61	.311	226.19	.271	224.85	.294	226.58	.294	226.58	.369	224.16	.359	224.16
4	5	.124	348.54	.068	349.98	.076	354.95	.071	319.86	.193	296.48	.067	316.54	.066	320.10
5	6	.473	190.54	.068	42.87	.073	36.83	.079	37.84	.069	68.65	.083	26.94	.073	26.45
6	7	.124	268.02	.020	220.76	.045	230.05	.012	176.96	.009	160.21	.030	177.33	.029	178.57
7	8	.345	145.91	.082	186.13	.077	170.99	.062	171.34	.004	135.06	.035	165.41	.049	184.41
8	9	.193	336.18	.021	342.65	.007	322.35	.024	314.34	.009	135.06	.012	165.41	.012	187.75
9	10	.055	61.56	.017	208.43	.011	309.43	.010	212.59	.009	295.62	.015	325.41	.014	334.75
10															

X	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	
1	1	.882	264.18	1	.687	269.66	1	.496	271.50	7	.941	319.41	4	.698	316.65
2	3	.154	277.25	.350	26.13	.146	290.74	.702	290.74	.289	288.89	.329	141.82	.160	147.53
3	5	.066	217.38	.067	319.04	.068	312.56	.073	312.56	.124	289.24	.124	258.88	.081	258.88
4	6	.050	50.69	.075	51.27	.075	51.01	.095	71.43	.082	66.89	.082	66.89	.085	64.88
5	7	.029	333.84	.030	28.20	.030	23.93	.059	11.01	.043	180.90	.043	180.90	.084	149.27
6	8	.047	184.61	.052	168.50	.046	155.05	.019	119.09	.031	155.73	.041	159.69	.033	194.89
7	9	.012	181.62	.046	179.09	.009	177.41	.037	175.56	.023	174.24	.015	151.71	.041	172.00
8	10	.011	341.93	.011	339.86	.011	338.28	.030	180.23	.009	175.56	.019	358.25	.019	344.00
9															
10															

X	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	
1	1	.603	308.93	1	.559	367.74	1	.117	396.64	8	.859	304.60	8	.844	287.12
2	3	.111	65.35	.126	69.75	.125	216.05	.121	47.54	.338	227.54	.117	297.28	.116	94.50
3	5	.068	300.52	.082	259.16	.071	324.16	.082	287.54	.071	314.04	.316	221.91	.064	221.91
4	6	.057	57.01	.073	53.65	.063	46.52	.084	50.25	.073	45.29	.073	303.44	.073	303.44
5	7	.031	184.09	.034	26.13	.034	23.67	.032	28.37	.030	20.61	.028	423.75	.028	423.75
6	8	.046	169.24	.059	181.39	.056	167.97	.056	170.86	.051	169.25	.048	158.52	.048	158.52
7	9	.309	172.57	.007	172.99	.009	177.96	.009	174.89	.009	177.00	.048	180.53	.048	180.53
8	10	.308	332.88	.009	179.77	.009	159.10	.009	195.58	.007	159.23	.004	157.35	.004	157.35
9															
10															



MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 144 ALPHA-MCL = 6.0 POP RUN.PI 29.03  
 RUN 21 ALPHA-PAR = 2.0 Q-COMP = 32009  
 POINT 1 SIGMA = .45 V-REF = 198.39  
 COMPUTED FREQUENCY = 9.07, K = .0718

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012	.062	.148	.261	.392	.530	.661
N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM
1	31.474	324.14	9.613	326.84	5.805	329.00	3.558
2	1.997	104.07	.536	151.67	.163	179.92	.103
3	.086	233.90	.172	20.50	.051	138.05	.028
4	.426	158.65	.129	243.97	.069	189.96	.036
5	.568	110.62	.045	44.30	.046	142.92	.023
6	.151	130.27	.031	314.40	.026	145.57	.018
7	.328	328.50	.064	121.43	.029	190.83	.023
8	.229	159.50	.044	168.74	.020	150.28	.019
9	.055	293.39	.035	12.41	.010	152.40	.030
10						5.70	.019

X =	.774	.860	.910
N	DELCPM	PHI	DELCPM
1	1.349	59.79	1.269
2	.023	348.25	.042
3	.041	235.14	.009
4	.004	42.78	.011
5	.010	6.82	.008
6	.003	142.82	.002
7	.012	133.58	.003
8	.008	132.78	.006
9	.003	146.63	.006
10			.008

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	W1	W2	W4	W6	W10
GAP FRACTION	CP-MAG	PHI	CP-MAG	PHI	CP-MAG
1	1.858	285.34	3.835	349.62	10.762
2	.331	51.78	1.310	347.40	1.786
3	.455	219.68	.686	243.90	.691
4	.100	297.48	.327	287.75	.367
5	.091	60.33	.062	120.10	.186
6	.106	26.23	.095	27.44	.128
7	.053	198.90	.086	184.66	.086
8	.073	168.77	.084	153.51	.078
9	.006	246.70	.006	261.84	.078
10	.019	353.73	.024	60.45	.058

\*\*\* STABILITY PARAMETER

N	CM-MAG	PHIM
1	1.107	320.56
2	.038	113.74
3	.028	233.28
4	.005	271.89
5	.012	152.81
6	.004	143.22
7	.009	146.68
8	.007	151.63
9	.003	151.63
10		

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 146 ALPHA-MCL = 6.0 POP RUN.PI 29.05  
 SUN 23 ALPHA-BAD = 2.0 O-COMP = 32138  
 POINT 3 SIGMA = -45. V-REF = 198.79  
 COMPUTED FREQUENCY = 15.46, K = .1221

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG							
1	1	-17.091	14.958	-4.361	2.466	-2.331	.856	-1.434	-.125	-1.013	-.839	-.689	-1.398	-.332	-1.725
2	2	-.419	-.258	-.439	-.164	-.208	-.204	.261	.251	.340	.292	.409	.309	.363	.330
3	3	1.425	1.071	-.012	-.056	-.006	-.039	.039	-.022	.041	-.043	-.028	-.063	-.022	-.054
4	4	-.057	-.260	.042	.035	.062	-.006	.042	-.018	-.036	-.044	-.037	-.020	-.028	-.021
5	5	-.279	-.144	.014	.012	.013	-.016	-.020	-.041	.007	.021	-.011	-.019	-.005	-.028
6	6	-.650	-.135	-.017	-.002	-.019	.012	-.005	-.017	-.007	.021	-.017	-.015	-.005	-.009
7	7	-.096	-.080	-.027	-.015	-.019	-.009	.011	-.026	.007	-.022	-.017	-.014	-.003	-.016
8	8	-.061	-.037	-.027	-.016	-.018	-.013	-.013	-.020	.015	-.014	-.018	-.014	-.016	-.008
9	9	-.061	-.037	-.027	-.016	-.018	-.013	-.013	-.020	.015	-.014	-.018	-.014	-.016	-.008
10	10	-.061	-.037	-.027	-.016	-.018	-.013	-.013	-.020	.015	-.014	-.018	-.014	-.016	-.008

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG							
1	1	-.085	-1.624	.337	.170	-.170	-1.239	5.395	-5.363	3.146	-3.207	2.092	-2.270	1.431	-1.575
2	2	-.316	-.017	-.022	-.024	-.024	-.044	-.028	-.020	.172	-.072	.035	-.022	.321	-.224
3	3	-.008	-.022	.023	-.005	-.019	-.018	.017	-.034	-.052	-.013	-.009	-.020	-.004	-.020
4	4	-.028	-.022	.023	-.005	-.019	-.018	.017	-.034	-.052	-.013	-.009	-.020	-.004	-.020
5	5	-.078	-.021	-.010	-.006	-.010	-.009	.018	-.031	-.056	-.024	-.013	-.017	-.039	-.023
6	6	-.033	-.010	-.010	-.006	-.010	-.009	.018	-.031	-.056	-.024	-.013	-.017	-.039	-.023
7	7	-.007	-.018	-.010	-.006	-.010	-.009	.018	-.031	-.056	-.024	-.013	-.017	-.039	-.023
8	8	-.017	-.016	-.010	-.006	-.010	-.009	.018	-.031	-.056	-.024	-.013	-.017	-.039	-.023
9	9	-.017	-.016	-.010	-.006	-.010	-.009	.018	-.031	-.056	-.024	-.013	-.017	-.039	-.023
10	10	-.017	-.016	-.010	-.006	-.010	-.009	.018	-.031	-.056	-.024	-.013	-.017	-.039	-.023

X	N	.592-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG								
1	1	.941	-.994	.917	-.875	-.875	-.881	.797	-.381	.410	-.410	.797	-.381	.410	-.410
2	2	-.299	-.017	-.369	-.040	-.040	-.040	.602	-.373	.382	-.382	.330	-.300	.330	-.300
3	3	-.093	-.014	-.017	-.020	-.020	-.020	-.004	-.071	.600	-.057	-.032	-.022	-.032	-.022
4	4	-.039	-.010	-.006	-.008	-.008	-.008	.040	-.003	.004	-.013	-.036	-.022	.004	-.022
5	5	-.001	-.010	-.006	-.008	-.008	-.008	-.002	-.036	.002	-.004	-.000	-.006	-.000	-.006
6	6	-.001	-.010	-.006	-.008	-.008	-.008	-.002	-.036	.002	-.004	-.000	-.006	-.000	-.006
7	7	-.001	-.010	-.006	-.008	-.008	-.008	-.002	-.036	.002	-.004	-.000	-.006	-.000	-.006
8	8	-.001	-.010	-.006	-.008	-.008	-.008	-.002	-.036	.002	-.004	-.000	-.006	-.000	-.006
9	9	-.001	-.010	-.006	-.008	-.008	-.008	-.002	-.036	.002	-.004	-.000	-.006	-.000	-.006
10	10	-.001	-.010	-.006	-.008	-.008	-.008	-.002	-.036	.002	-.004	-.000	-.006	-.000	-.006



ORIGINAL PAGE IS  
OF POOR QUALITY

OCMI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 146 ALPHA-MCL = 6.0 PDP RUN-PT 29.05  
 RUN 29 ALPHA-BAR = 2.0 O-COMP = 32188  
 POINT 3 SIGMA = -45 V-REF = 196.79  
 COMPUTED FREQUENCY = 15.46, K = .1221  
 FOURIER COEFFICIENTS, AMPLITUDE  
 AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	22	.712	138.81	4.752	148.73	2.483	159.82	1.440	184.96	1.315	219.63	1.528	243.76	1.756	259.11
2	3	.492	211.92	.062	273.62	.039	258.29	.045	330.31	.448	410.68	.269	473.11	.490	490.28
3	1	.782	336.92	.014	319.92	.019	354.69	.018	375.22	.059	395.77	.048	446.43	.059	477.78
4	5	.882	357.04	.014	409.02	.062	378.05	.048	416.01	.057	450.50	.048	499.59	.033	518.55
5	6	.301	155.54	.018	419.24	.025	218.96	.046	116.55	.024	252.42	.019	292.05	.029	331.69
6	7	.069	210.17	.014	190.58	.025	218.96	.018	285.55	.024	252.42	.015	292.05	.011	328.69
7	8	.128	41.25	.011	209.95	.021	236.53	.028	330.50	.024	228.11	.016	297.14	.019	328.69
8	9	.072	31.55	.020	55.71	.022	36.19	.028	57.79	.021	44.38	.022	51.14	.019	55.71
9	10														

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	.626	267.81	1.451	274.82	1.250	277.83	7.607	315.18	4.493	314.45	3.067	312.97	2.128	312.97
2	2	.555	251.46	.052	253.72	.050	241.27	.472	136.59	.366	178.65	.379	36.97	.386	315.82
3	4	.023	250.90	.029	248.11	.022	257.66	.038	243.13	.146	330.52	.013	294.06	.020	276.81
4	5	.036	39.33	.026	248.11	.031	36.21	.041	18.44	.059	197.33	.021	246.20	.045	259.52
5	6	.023	109.75	.026	111.67	.019	107.22	.036	120.95	.027	117.63	.022	127.85	.017	131.32
6	7	.018	287.45	.010	305.29	.009	265.44	.026	338.79	.015	329.10	.014	322.22	.005	332.30
7	8	.018	271.29	.021	270.15	.014	260.57	.032	228.69	.022	241.82	.034	266.31	.034	286.79
8	9	.020	214.29	.021	205.65	.018	212.55	.001	265.89	.011	250.71	.015	204.61	.018	232.55
9	10														

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	.369	313.43	1.268	316.33	915	319.35	7.08	328.22	4.97	305.51	884	334.46	2.854	334.46
2	2	.025	36.95	.041	37.62	.064	182.87	.446	30.86	.444	46.31	.446	42.25	.446	42.25
3	4	.014	258.35	.022	243.26	.024	308.54	.028	266.90	.025	270.12	.022	257.75	.022	257.75
4	5	.013	129.93	.052	127.11	.036	136.32	.045	187.20	.038	150.45	.038	18.83	.038	18.83
5	6	.001	204.90	.010	211.31	.004	175.04	.006	108.72	.005	146.24	.006	91.54	.006	91.54
6	7	.023	283.73	.035	287.23	.004	287.02	.009	222.44	.011	222.67	.014	220.17	.014	220.17
7	8	.015	214.73	.024	215.82	.014	206.91	.021	286.51	.018	291.73	.017	222.73	.017	222.73
8	9	.014	52.49	.016	49.31	.015	46.10	.016	44.83	.015	46.08	.014	51.14	.014	51.14
9	10														

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 146 ALPHA-MCL = 6.0 PDP RUN-PT 29.055  
 RUN 29 ALPHA-PAR = 2.0 O-COMP = 32.138  
 POINT 3 SIGMA = -4.5 V-REF = 198.79  
 COMPUTED FREQUENCY = 15.46, K = .1221

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI
1	22.497	-20.320	7.207	-5.674	4.393	-3.127	2.865	-1.451	1.954	-.155	1.606	-.026	1.026	1.129
2	.076	.582	-.367	.195	.033	.024	.053	-.027	-.041	-.075	-.041	-.026	-.041	-.122
3	-1.397	-1.050	-.154	-.016	-.014	-.026	-.036	-.002	-.050	.019	-.021	-.023	-.041	.051
4	-.040	.143	-.014	-.018	-.014	-.023	-.005	-.034	.031	.029	-.012	-.026	.026	-.002
5	-.255	-.093	-.026	-.012	-.016	.005	-.003	-.028	.010	-.011	-.005	-.011	-.001	-.020
6	.084	-.023	-.026	-.025	-.027	.000	.003	-.015	.006	-.022	.002	-.011	-.009	.010
7	-.017	-.102	-.018	-.046	-.012	-.030	-.001	-.027	-.002	-.060	.003	-.020	-.012	-.002
8	-.051	.089	-.018	.009	-.012	.003	.008	.006	.004	-.006	.002	-.002	.005	-.002
9	-.057	-.031	-.005	-.009	-.012	-.004	-.006	-.006	-.006	-.004	-.002	-.002	-.005	-.005

X	.774		.860		.911		.911		.911		.911		.911	
	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI
1	.697	1.251	.165	1.336	.627	.859	2.734	-1.063	2.734	-1.063	2.734	-1.063	2.734	-1.063
2	.014	-.019	.015	-.007	.016	-.018	-.043	-.013	-.043	-.013	-.043	-.013	-.043	-.013
3	-.020	.018	.014	-.009	-.008	-.001	.001	.005	.001	.005	.001	.005	.001	.005
4	.012	-.002	.009	-.006	.011	-.006	-.006	-.012	-.006	-.012	-.006	-.012	-.006	-.012
5	.006	-.004	.006	-.001	.005	-.000	.005	-.009	.005	-.009	.005	-.009	.005	-.009
6	-.009	.004	-.006	.001	-.010	.002	-.003	.004	-.003	.004	-.003	.004	-.003	.004
7	-.006	-.004	-.006	-.003	-.005	-.001	-.003	-.006	-.003	-.006	-.003	-.006	-.003	-.006
8	-.000	-.003	-.003	-.007	-.003	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002
9	-.000	-.003	-.003	-.007	-.003	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002
10	-.000	-.003	-.003	-.007	-.003	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.125		.125		.125		.125		.125		.125	
	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG
1	.840	-1.376	3.973	-4.489	-9.011	4.415	-1.107	-4.415	-2.274	6.137	1.125	1.111	1.125	1.111
2	.387	.603	1.892	-2.593	-1.150	.156	.399	-.252	.064	.064	.064	.064	.064	.064
3	.026	-.029	.046	-.040	-.345	-.156	-.027	-.066	.132	-.013	.132	-.013	.132	-.013
4	.038	-.016	.027	-.058	-.152	.122	.042	.017	-.019	-.009	-.019	-.009	-.019	-.009
5	.008	-.089	.015	-.032	.103	.005	-.005	.017	.008	.008	.008	.008	.008	.008
6	-.032	.021	.015	-.045	.042	.006	.004	-.019	.015	-.030	.015	-.030	.015	-.030
7	.052	-.027	.008	-.044	.040	.007	.007	-.023	.018	-.009	.018	-.009	.018	-.009
8	.055	-.032	.010	-.047	.043	.007	.007	-.019	.016	-.009	.016	-.009	.016	-.009
9	.055	-.032	.010	-.047	.043	.007	.007	-.019	.016	-.009	.016	-.009	.016	-.009
10	.055	-.032	.010	-.047	.043	.007	.007	-.019	.016	-.009	.016	-.009	.016	-.009

\*\*\* STABILITY PARAMETER

\* XI = .7434 \*  
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MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 146 ALPHA-MCL = 6.0 PDP RUN:PI 29.05  
 SUB 29 ALPHA-BAR = 2.0 Q-COMP = 13213E  
 POINT COMPUTED FREQUENCY = 15.46, N = .1221  
 V-REF = 198.79

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE

\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.148		.261		.392		.530		.661	
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	30.308	317.90	9.172	321.79	5.392	324.56	3.212	333.15	1.960	335.46	1.669	18.02	1.525	47.73
2	.587	82.56	.415	152.02	.C41	35.89	.059	332.91	.85	241.42	.049	212.32	.122	269.71
3	1.748	216.94	.155	354.98	.C29	62.76	.037	176.45	.J54	159.23	.031	46.98	.066	129.29
4	.364	131.35	.067	197.89	.L40	249.23	.006	201.50	.U46	47.33	.001	178.35	.076	155.68
5	.271	339.88	.029	308.83	.C27	121.51	.035	295.55	.U22	275.63	.016	317.81	.013	302.61
6	.088	18.79	.026	155.52	.C17	161.50	.030	287.42	.J15	226.96	.013	244.49	.020	266.67
7	.150	222.74	.026	348.92	.U29	19.02	.015	89.85	.U23	75.07	.013	65.24	.013	133.48
8	.108	55.58	.018	147.93	.C32	248.22	.027	268.41	.U02	190.36	.017	279.56	.017	313.04
9	.065	208.79	.010	240.36	.005	32.08	.010	37.05	.007	61.49	.032	192.66	.005	223.57
10					.012	197.58	.009	224.48	.007	209.52	.007	193.82	.007	223.04

N	.774		.860		.910		CN-MAG		PHIN		
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	N	CP-MAG	PHIN		
1	1.427	61.23	1.048	81.23	1.062	53.82	2.933	338.75	1	1.057	315.29
2	.127	302.06	.031	261.88	.C32	299.89	.021	219.49	2	.J23	115.81
3	.027	136.83	.014	335.94	.L20	114.34	.047	203.86	3	.024	223.17
4	.017	348.97	.010	327.46	.001	260.71	.005	81.32	4	.007	174.08
5	.017	290.12	.010	240.65	.013	330.40	.007	181.53	5	.002	330.55
6	.010	157.43	.014	175.01	.010	264.94	.015	288.43	6	.004	13.16
7	.007	326.55	.008	36.79	.010	178.51	.015	259.55	7	.005	221.49
8	.002	269.09	.004	312.22	.009	346.51	.008	40.46	8	.003	51.82
9	.006	216.27	.009	235.09	.006	195.10	.009	212.37	9	.001	212.85
10									10		

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.125		.500		.500		.703	
	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	N	CP-MAG	PHI
1	1.612	301.42	4.001	353.11	10.034	153.90	1.183	200.92	6.544	110.33
2	.716	57.34	1.914	351.20	1.223	199.91	.472	32.29	1.114	85.67
3	.039	311.51	.403	276.96	.379	155.67	.072	247.73	.366	2.08
4	.042	84.61	.190	283.96	.323	215.39	.030	270.36	.134	349.14
5	.038	146.73	.064	294.71	.195	321.32	.049	31.36	.021	153.18
6	.032	335.26	.022	301.94	.103	2.99	.018	105.01	.029	773.61
7	.032	294.50	.047	227.58	.042	8.34	.019	283.56	.034	237.11
8	.030	315.65	.009	214.54	.082	299.04	.024	286.98	.015	242.61
9	.032	135.09	.010	243.74	.041	33.16	.025	219.80	.052	242.51
10					.054		.022	53.32	.018	67.68

\*\*\* STABILITY PARAMETER

\* XI = .703 \*  
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MODE 1 -- OCUT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 148 ALPHA-MCL = 6.0 PDP RUN\*PT 29.07  
 RUN 29 ALPHA-PAR = 2.0 Q-COMP = .32013  
 POINT 5 SIGMA = -45. V-REF = 198.40  
 COMPUTED FREQUENCY = 19.06, K = .1509

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CPREAL	CPIMAG	.062-UPPER	.148-UPPER	.261-UPPER	.392-UPPER	.530-UPPER	.661-UPPER
1	-16	.952	15.232	-4.546	2.464	-2.921	.819	-2.071	-1.189
2	-474	.410	.891	.123	.193	.038	.121	.041	.127
3	1.320	.891	.410	.014	.193	.000	.007	.047	.012
4	.001	.353	.014	.015	.022	.001	.036	.014	.029
5	.060	.187	.028	.028	.024	.009	.005	.012	.030
6	.230	.127	.028	.013	.024	.005	.004	.038	.023
7	.077	.073	.011	.007	.014	.001	.007	.030	.011
8	.044	.110	.012	.004	.012	.001	.006	.038	.015
9	.040	.105	.003	.003	.002	.008	.012	.039	.001
10	.025	.059	.014	.001	.007	.007	.007	.034	.016

X	N	CPREAL	CPIMAG	.062-LOWER	.148-LOWER	.261-LOWER	.392-LOWER	.530-LOWER	.661-LOWER
1	-864	-1.642	.084	-1.465	1.465	-4.363	-5.350	2.271	-3.095
2	.015	.012	.002	.010	.010	.023	.014	.079	.063
3	.020	.038	.024	.034	.025	.070	.005	.078	.000
4	.008	.018	.009	.025	.027	.027	.030	.018	.020
5	.034	.017	.031	.015	.021	.027	.031	.024	.022
6	.000	.010	.000	.005	.009	.007	.026	.001	.017
7	.004	.009	.001	.006	.014	.014	.018	.003	.014
8	.001	.002	.000	.001	.001	.003	.022	.000	.005
9	.001	.003	.000	.004	.001	.000	.014	.000	.005
10	.001	.003	.000	.004	.002	.000	.014	.000	.005

X	N	CPREAL	CPIMAG	.062-UPPER	.148-UPPER	.261-UPPER	.392-UPPER	.530-UPPER	.661-UPPER
1	199	.025	.165	.009	.787	-2.249	3.330	1.822	-2.177
2	.007	.012	.000	.022	.028	.056	.037	.036	.026
3	.035	.031	.039	.041	.052	.010	.037	.015	.010
4	.005	.029	.004	.033	.033	.000	.025	.012	.023
5	.014	.014	.004	.024	.018	.004	.025	.020	.017
6	.005	.008	.007	.015	.006	.004	.006	.036	.010
7	.000	.010	.000	.006	.006	.004	.000	.039	.004
8	.000	.009	.000	.004	.001	.002	.014	.039	.004
9	.001	.002	.000	.001	.001	.000	.014	.039	.004
10	.001	.003	.000	.004	.002	.000	.014	.039	.004

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWI PERIODICITY TEST  
MODE 1 -- CENIFP BLADE DATA, WALL STATIONS

FILE 146 ALPHA-VCL = 6.0 PGP KUN.PI 29.07  
MUM 29 ALPHA-PAR = 2.0 32013  
POINT 5 SIGMA = -45 0-COMP = 168.40  
COMPUTEL FREQUENCY = 19.06, K = .1509

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	22.794	138.06	5.171	151.54	3.033	164.34	2.079	185.21	1.997	206.94	2.079	224.14
2	.627	230.97	.229	372.61	.156	250.67	.123	259.95	.133	288.24	.135	303.36
3	1.353	267.91	.026	353.55	.011	277.29	.054	277.95	.049	236.14	.031	245.93
4	.196	287.87	.036	137.02	.010	207.26	.023	176.25	.042	206.68	.033	116.21
5	.253	151.46	.031	336.42	.026	325.18	.022	13.40	.038	338.56	.045	329.04
6	.106	316.45	.017	326.76	.035	164.66	.014	5.53	.008	28.48	.011	88.57
7	.113	263.58	.016	233.69	.004	273.48	.012	229.27	.012	288.44	.017	273.23
8	.064	113.23	.014	175.42	.014	225.33	.010	226.75	.020	190.11	.019	173.23
10	.003	125.80	.004	87.29	.002	162.86	.014	89.60	.008	218.57	.014	126.47

X	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1.685	232.25	1.608	245.63	1.396	243.67	6.954	309.20	3.829	306.27	2.492	299.37
2	.032	267.92	.010	264.56	.009	300.32	.027	31.34	.024	208.35	.197	268.23
3	.036	235.78	.041	234.99	.027	238.92	.070	176.01	.078	179.72	.019	321.44
4	.029	106.59	.027	110.53	.025	103.19	.040	51.32	.035	59.43	.056	204.54
5	.038	333.74	.034	333.74	.033	329.86	.041	310.73	.033	317.53	.026	320.14
6	.010	295.59	.005	48.25	.003	102.15	.027	108.13	.017	87.13	.012	61.88
7	.010	295.59	.006	278.38	.012	293.70	.023	308.10	.014	283.66	.017	213.74
8	.002	125.80	.001	273.64	.004	162.86	.022	97.36	.014	89.60	.014	51.84
10	.003	282.80	.004	87.29	.002	227.51	.014	270.03	.008	218.57	.014	126.47

X	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	.937	261.61	.767	269.35	.551	259.58	.420	233.69	.592	216.01	.473	279.70
2	.167	300.17	.192	292.03	.037	130.04	.038	213.43	.035	278.12	.119	287.98
3	.046	160.45	.057	226.27	.054	254.37	.048	213.88	.052	241.65	.048	243.25
4	.023	321.64	.028	329.25	.023	321.71	.030	322.65	.028	333.14	.027	329.11
5	.009	253.08	.009	38.28	.008	46.72	.006	89.04	.006	89.04	.019	83.26
6	.010	253.08	.012	255.57	.013	258.23	.012	259.00	.015	270.87	.016	282.64
7	.008	93.25	.007	101.92	.006	84.74	.006	140.14	.007	145.69	.019	150.06
10	.012	165.06	.016	174.23	.011	160.25	.013	178.32	.013	204.96	.014	213.51

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 148 ALPHA-MCL = 6.0 PDP RUN.PT 29.07  
RUN 29 ALPHA-PAR = 2.0 G-COMP = .32013  
POINT 5 SIGMA = -45. V-PEF = 198.60  
COMPUTED FREQUENCY = 19.06, K = .1509

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X = .012		.062		.148		.261		.392		.530		.661	
N	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI
1	21.315	20.542	6.81P	-5.559	4.143	-2.991	-1.286	1.969	-.014	1.483	-.054	1.021	1.199
2	-.111	-.077	-.021	-.047	-.043	-.047	-.018	-.040	-.038	-.048	-.010	-.019	-.113
3	-.1297	-.077	-.093	-.045	-.017	-.017	-.018	-.040	-.001	-.018	-.010	-.019	-.038
4	-.035	-.358	-.044	-.006	-.022	-.038	-.028	-.017	-.020	-.015	-.003	-.006	-.027
5	-.257	-.158	-.004	-.010	-.001	-.009	-.017	-.017	-.012	-.015	-.009	-.015	-.002
6	-.084	-.100	-.010	-.024	-.011	-.009	-.012	-.002	-.004	-.006	-.006	-.015	-.004
7	-.056	-.129	-.015	-.023	-.014	-.014	-.014	-.008	-.008	-.011	-.004	-.007	-.003
8	-.042	-.073	-.008	-.006	-.002	-.021	-.010	-.004	-.021	-.011	-.004	-.002	-.006
10	-.025	-.073	-.008	-.006	-.002	-.021	-.010	-.004	-.021	-.011	-.004	-.002	-.007

X = .774		.P60		.910		.910		.910		.910		.910	
N	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI
1	615	1.304	.185	1.117	.625	.779	.779	2.600	-.980	1.483	-.054	1.021	1.199
2	-.041	-.146	-.003	-.026	-.006	-.013	-.013	-.015	-.033	-.048	-.010	-.019	-.113
3	-.020	-.005	-.002	-.013	-.000	-.007	-.007	-.022	-.008	-.048	-.010	-.019	-.038
4	-.008	-.005	-.004	-.002	-.003	-.002	-.002	-.013	-.015	-.015	-.003	-.006	-.027
5	-.011	-.005	-.004	-.002	-.003	-.002	-.002	-.013	-.015	-.015	-.003	-.006	-.027
6	-.004	-.005	-.004	-.002	-.003	-.002	-.002	-.013	-.015	-.015	-.003	-.006	-.027
7	-.007	-.005	-.004	-.002	-.003	-.002	-.002	-.013	-.015	-.015	-.003	-.006	-.027
8	-.003	-.005	-.004	-.002	-.003	-.002	-.002	-.013	-.015	-.015	-.003	-.006	-.027
9	-.003	-.005	-.004	-.002	-.003	-.002	-.002	-.013	-.015	-.015	-.003	-.006	-.027
10	-.013	-.003	-.003	-.003	-.010	-.006	-.006	-.006	-.007	-.011	-.004	-.002	-.007

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

W1		.125		.050		.500		.500		.500		.500	
WALL NO.	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI
1	-.089	-1.564	3.134	-1.451	-.638	4.306	-1.933	468	-2.859	5.826	1.125	7339	7339
2	-.217	-.005	1.470	-1.055	-1.432	-.202	-.012	-.013	-.0375	-.030	-.0375	-.030	-.030
3	-.016	-.043	-.044	-.165	-.199	-.42	-.020	-.022	-.043	-.098	-.043	-.098	-.098
4	-.042	-.000	-.007	-.007	-.026	-.323	-.038	-.037	-.039	-.019	-.039	-.019	-.019
5	-.024	-.049	-.012	-.041	-.073	-.016	-.004	-.005	-.031	-.038	-.031	-.038	-.038
6	-.024	-.049	-.012	-.041	-.073	-.016	-.004	-.005	-.031	-.038	-.031	-.038	-.038
7	-.024	-.049	-.012	-.041	-.073	-.016	-.004	-.005	-.031	-.038	-.031	-.038	-.038
8	-.024	-.049	-.012	-.041	-.073	-.016	-.004	-.005	-.031	-.038	-.031	-.038	-.038
9	-.024	-.049	-.012	-.041	-.073	-.016	-.004	-.005	-.031	-.038	-.031	-.038	-.038
10	-.024	-.049	-.012	-.041	-.073	-.016	-.004	-.005	-.031	-.038	-.031	-.038	-.038

\*\*\* STABILITY PARAMETER

\* XI = .7339 \*  
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ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTEK BLADE DATA, WALL STATIONS

FILE 148 ALPHA-MCL = 6.0 PDP RUN.PI 29.07  
 RUN 23 ALPHA-BAR = 2.0 Q-COMP = 32013  
 POINT 3 SIGMA = -45. V-REF = 198.40  
 COMPUTED FREQUENCY = 19.06, K = .1509

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE

\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPM	PHI	.062	PHI	DELCPM	.261	PHI	DELCPM	.392	PHI	DELCPM	.530	PHI	DELCPM	.661	PHI
1	.632	315.00	8.797	320.81	5.114	325.17	2.967	334.32	1.969	359.60	1.624	24.03	24.03	1.575	49.91	
2	.331	110.19	.333	104.76	.054	305.90	.079	306.59	.342	246.46	.072	233.60	233.60	.115	281.52	
3	.566	214.07	.104	334.03	.012	288.12	.047	203.27	.040	178.51	.020	331.10	331.10	.042	117.12	
4	.325	100.98	.094	166.41	.054	198.45	.026	176.76	.020	90.87	.015	205.13	205.13	.009	288.78	
5	.321	99.08	.044	160.99	.002	160.99	.037	50.27	.017	325.48	.015	173.95	173.95	.015	49.74	
6	.302	323.33	.010	245.97	.002	229.27	.017	181.12	.017	181.12	.017	146.70	146.70	.015	173.95	
7	.130	150.34	.021	112.44	.014	40.28	.015	280.84	.004	123.71	.009	317.88	317.88	.007	329.78	
8	.141	294.35	.017	329.35	.006	175.18	.012	129.88	.011	137.01	.011	161.88	161.88	.008	204.94	
9	.134	108.41	.023	82.21	.021	46.63	.024	155.46	.015	40.67	.010	139.43	139.43	.006	68.82	
10	.076	289.12	.010	323.41	.021	85.26	.016	127.83	.022	101.87	.023	120.37	120.37	.013	145.84	

X	DELCPM	PHI	.860	PHI	DELCPM	.910	PHI	N	CM-MAG	PHIN	N	CM-MAG	PHIM
1	.442	64.73	1.132	80.61	.998	51.26	1	2.779	339.35	1	1.021	314.04	
2	.152	285.61	.016	10.59	.031	310.02	2	.043	249.80	2	.016	137.38	
3	.027	292.94	.016	275.68	.015	121.86	3	.054	217.05	3	.024	220.73	
4	.020	168.39	.013	262.48	.007	168.25	4	.023	160.24	4	.009	131.22	
5	.010	31.89	.004	27.28	.003	328.13	5	.020	147.45	5	.006	169.80	
6	.011	185.91	.004	156.20	.006	153.15	6	.006	266.42	6	.006	322.83	
7	.006	306.77	.001	192.85	.003	354.20	7	.006	103.59	7	.004	120.65	
8	.007	199.22	.008	265.08	.005	263.39	8	.005	229.48	8	.002	303.81	
9	.003	150.38	.008	139.36	.005	133.99	9	.014	173.06	9	.004	76.97	
10	.014	166.37	.015	219.50	.011	213.44	10	.009	131.08	10	.002	8.22	

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	W1	W2	W3	W4	W5	W6	W7	W8	W9	W10	PHI	STABILITY PARAMETER
1	.566	296.74	3.106	351.93	10.559	155.93	1.989	193.62	6.489	116.14	6.502	199.92	116.14	1.125	1.125	*
2	.239	334.88	1.810	324.33	.380	147.85	.233	279.55	.376	355.40	.317	226.61	376	1.125	1.125	* XI =
3	.046	250.27	.161	254.23	.244	215.41	.042	227.92	.143	318.01	.042	116.40	143	1.125	1.125	*
4	.047	180.15	.094	184.40	.077	311.95	.045	328.04	.046	199.14	.043	334.43	199.14	1.125	1.125	*
5	.047	58.86	.042	245.44	.052	342.74	.008	37.28	.049	338.07	.049	338.07	338.07	1.125	1.125	*
6	.019	113.88	.037	145.44	.009	266.62	.009	238.58	.007	142.07	.007	142.07	142.07	1.125	1.125	*
7	.030	342.92	.005	272.79	.017	306.62	.009	210.32	.017	246.94	.017	246.94	246.94	1.125	1.125	*
8	.031	82.29	.011	163.09	.022	160.74	.009	210.32	.023	121.45	.023	121.45	121.45	1.125	1.125	*
9	.051	303.58												1.125	1.125	*
10														1.125	1.125	*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 138 ALPHA-MCL = 6.0 PDP RUN.PT 28.04  
 RUN 28 ALPHA-RAP = 2.0 O-COMP = .32297  
 POINT 1 ALPHA-SIGMA = 0. V-REF = .199.30  
 COMPUTED FREQUENCY = 9.08, K = .0716  
 FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	X	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER
1	-18	.550	4	.321	-3	.082	1	.197	-2	.158	743	-1	.161
2	.238	.156	.068	.111	.060	.060	.060	.060	.060	.060	.060	.060	.060
3	.406	.158	.236	.176	.236	.176	.236	.176	.236	.176	.236	.176	.236
4	.076	.079	.016	.052	.058	.022	.058	.022	.058	.022	.058	.022	.058
5	.185	.014	.072	.071	.040	.056	.044	.063	.029	.012	.034	.011	.006
6	.033	.157	.020	.009	.023	.009	.011	.000	.012	.000	.011	.000	.003
7	.066	.157	.007	.015	.006	.009	.011	.000	.012	.000	.011	.000	.003
8	.079	.140	.007	.033	.008	.030	.008	.032	.004	.023	.004	.023	.003

N	X	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER
1	.814	.126	.129	.213	.237	.143	.237	.143	.237	.143	.237	.143	.237
2	.254	.266	.265	.265	.273	.248	.273	.248	.273	.248	.273	.248	.273
3	.010	.004	.003	.003	.001	.001	.001	.001	.001	.001	.001	.001	.001
4	.045	.000	.001	.001	.002	.002	.002	.002	.002	.002	.002	.002	.002
5	.016	.007	.007	.008	.021	.043	.034	.034	.034	.034	.034	.034	.034
6	.306	.006	.006	.005	.006	.006	.006	.006	.006	.006	.006	.006	.006
7	.003	.017	.017	.017	.013	.013	.013	.013	.013	.013	.013	.013	.013

N	X	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER	CPREAL	UPPER
1	.893	.319	.319	.468	.779	.383	.611	.489	.575	.320	.463	.463	.556
2	.218	.241	.241	.297	.242	.262	.262	.262	.262	.262	.262	.262	.262
3	.051	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001	.001
4	.044	.046	.046	.058	.042	.051	.051	.051	.051	.051	.051	.051	.051
5	.009	.005	.005	.010	.009	.010	.010	.010	.010	.010	.010	.010	.010
6	.003	.005	.005	.010	.003	.003	.003	.003	.003	.003	.003	.003	.003
7	.003	.005	.005	.008	.003	.003	.003	.003	.003	.003	.003	.003	.003
8	.003	.005	.005	.008	.003	.003	.003	.003	.003	.003	.003	.003	.003
9	.003	.005	.005	.008	.003	.003	.003	.003	.003	.003	.003	.003	.003
10	.003	.005	.005	.008	.003	.003	.003	.003	.003	.003	.003	.003	.003



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 138 ALPHA-MCL = 6.0 PDP RUNPT 28.04  
 RUN 28 ALPHA-PRAR = 2.0 Q-COMP = 32297  
 POINT 1 SIGMA = 0. V-REF = 199.30  
 COMPUTED FREQUENCY = 9.00, K = .0716

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	PHI	.062-UPPER	PHI	CP-MAG	PHI	.148-UPPER	PHI	CP-MAG	PHI	.261-UPPER	PHI	CP-MAG	PHI	.392-UPPER	PHI	CP-MAG	PHI	.530-UPPER	PHI	CP-MAG	PHI	.661-UPPER	PHI	
1	19	.047	166.89	4	.084	152.96	2	.282	160.99	1	.267	156.40	.584	142.42	.584	142.42	.376	48.93	.376	48.93	.376	48.93	.376	48.93	.376	48.93
2	3	.285	148.77	107	140.45	125	108.15	125	108.15	.300	110.63	.300	110.63	.364	118.24	.364	118.24	.395	131.84	.395	131.84	.395	131.84	.395	131.84	
3	4	.613	48.34	.368	181.92	.073	178.58	.053	178.58	.055	176.46	.055	176.46	.050	178.38	.050	178.38	.069	182.38	.069	182.38	.069	182.38	.069	182.38	
4	5	.115	313.68	.054	287.10	.054	287.10	.054	287.10	.054	287.10	.054	287.10	.054	287.10	.054	287.10	.054	287.10	.054	287.10	.054	287.10	.054	287.10	
5	4	.185	355.68	.051	224.55	.051	224.55	.051	224.55	.051	224.55	.051	224.55	.051	224.55	.051	224.55	.051	224.55	.051	224.55	.051	224.55	.051	224.55	
6	9	.152	261.06	.017	124.52	.017	124.52	.017	124.52	.017	124.52	.017	124.52	.017	124.52	.017	124.52	.017	124.52	.017	124.52	.017	124.52	.017	124.52	
7	6	.085	69.06	.010	113.72	.010	113.72	.010	113.72	.010	113.72	.010	113.72	.010	113.72	.010	113.72	.010	113.72	.010	113.72	.010	113.72	.010	113.72	
8	9	.173	247.10	.034	220.15	.034	220.15	.034	220.15	.034	220.15	.034	220.15	.034	220.15	.034	220.15	.034	220.15	.034	220.15	.034	220.15	.034	220.15	
9	10	.161	119.41	.034	102.06	.034	102.06	.034	102.06	.034	102.06	.034	102.06	.034	102.06	.034	102.06	.034	102.06	.034	102.06	.034	102.06	.034	102.06	

X	N	CP-MAG	PHI	.774-UPPER	PHI	CP-MAG	PHI	.910-UPPER	PHI	CP-MAG	PHI	.012-LOWER	PHI	CP-MAG	PHI	.062-LOWER	PHI	CP-MAG	PHI	.148-LOWER	PHI	CP-MAG	PHI	.261-LOWER	PHI	
1	2	.837	13.51	.889	14.23	.862	15.97	.4	.967	350.08	2	.448	264.94	2	.448	264.94	.204	248.94	.204	248.94	.204	248.94	.204	248.94	.204	248.94
2	3	.368	182.64	.373	183.05	.369	179.26	.336	190.14	.336	190.14	.319	178.34	.319	178.34	.319	178.34	.319	178.34	.319	178.34	.319	178.34	.319	178.34	
3	4	.055	259.90	.057	260.95	.061	267.44	.054	231.24	.054	231.24	.058	242.75	.058	242.75	.058	242.75	.058	242.75	.058	242.75	.058	242.75	.058	242.75	
4	5	.069	335.47	.070	230.14	.067	229.09	.048	217.24	.048	217.24	.042	219.41	.042	219.41	.042	219.41	.042	219.41	.042	219.41	.042	219.41	.042	219.41	
5	6	.049	335.47	.052	336.65	.049	329.93	.048	314.58	.048	314.58	.042	319.41	.042	319.41	.042	319.41	.042	319.41	.042	319.41	.042	319.41	.042	319.41	
6	7	.017	152.07	.018	146.39	.018	146.39	.018	146.39	.018	146.39	.019	199.57	.019	199.57	.019	199.57	.019	199.57	.019	199.57	.019	199.57	.019	199.57	
7	8	.009	142.63	.008	147.10	.007	146.37	.013	358.43	.013	358.43	.017	70.85	.017	70.85	.017	70.85	.017	70.85	.017	70.85	.017	70.85	.017	70.85	
8	9	.017	99.72	.017	96.59	.017	96.59	.017	96.59	.017	96.59	.017	96.59	.017	96.59	.017	96.59	.017	96.59	.017	96.59	.017	96.59	.017	96.59	

X	N	CP-MAG	PHI	.392-LOWER	PHI	CP-MAG	PHI	.661-LOWER	PHI	CP-MAG	PHI	.530-LOWER	PHI	CP-MAG	PHI	.910-LOWER	PHI	CP-MAG	PHI	.910-LOWER	PHI	CP-MAG	PHI	.910-LOWER	PHI
1	2	.948	19.69	.948	19.69	.948	19.69	.948	19.69	.948	19.69	.948	19.69	.948	19.69	.948	19.69	.948	19.69	.948	19.69	.948	19.69	.948	19.69
2	3	.325	312.09	.325	312.09	.325	312.09	.325	312.09	.325	312.09	.325	312.09	.325	312.09	.325	312.09	.325	312.09	.325	312.09	.325	312.09	.325	312.09
3	4	.051	179.32	.051	179.32	.051	179.32	.051	179.32	.051	179.32	.051	179.32	.051	179.32	.051	179.32	.051	179.32	.051	179.32	.051	179.32	.051	179.32
4	5	.064	226.70	.064	226.70	.064	226.70	.064	226.70	.064	226.70	.064	226.70	.064	226.70	.064	226.70	.064	226.70	.064	226.70	.064	226.70	.064	226.70
5	6	.018	125.87	.018	125.87	.018	125.87	.018	125.87	.018	125.87	.018	125.87	.018	125.87	.018	125.87	.018	125.87	.018	125.87	.018	125.87	.018	125.87
6	7	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87
7	8	.011	125.87	.011	125.87	.011	125.87	.011	125.87	.011	125.87	.011	125.87	.011	125.87	.011	125.87	.011	125.87	.011	125.87	.011	125.87	.011	125.87
8	9	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87	.006	125.87
9	10	.010	97.42	.010	97.42	.010	97.42	.010	97.42	.010	97.42	.010	97.42	.010	97.42	.010	97.42	.010	97.42	.010	97.42	.010	97.42	.010	97.42

MODE 1 -- CENTER SLAB DATA, WALL STATIONS

FILE 128 ALPHA-WCL = 9.8 PCF PUN.FI 28.84  
 PUN 128 ALPHA-PAB = 7.8 C-COMP.E 22.97  
 POINT 1 SIGMA = 1.0 V-DEF = 199.30  
 COMPUTER FREQUENCY = 9.08, K.E = .0716

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* SLAB PRESSURES, ANGULAR FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.520		.661	
	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP
1	23	.443	-5	.174	6	.357	-1	.157	3	.978	2	.462	-2	.251
2	144	-.617	-.617	-.617	-.617	-.617	-.617	-.617	-.617	-.617	-.617	-.617	-.617	-.617
3	.751	-.497	-.497	-.497	-.497	-.497	-.497	-.497	-.497	-.497	-.497	-.497	-.497	-.497
4	-.484	-.531	-.531	-.531	-.531	-.531	-.531	-.531	-.531	-.531	-.531	-.531	-.531	-.531
5	-.227	-.518	-.518	-.518	-.518	-.518	-.518	-.518	-.518	-.518	-.518	-.518	-.518	-.518
6	-.059	-.320	-.320	-.320	-.320	-.320	-.320	-.320	-.320	-.320	-.320	-.320	-.320	-.320
7	-.059	-.126	-.126	-.126	-.126	-.126	-.126	-.126	-.126	-.126	-.126	-.126	-.126	-.126
8	.092	-.141	-.141	-.141	-.141	-.141	-.141	-.141	-.141	-.141	-.141	-.141	-.141	-.141
9														
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X	.774		.820		.910		.980		1.125		1.25		1.500		1.750		2.000	
	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP	N	DELCP
1	203	-.294	-.294	-.294	-.294	-.294	-.294	-.294	-.294	-.294	-.294	-.294	-.294	-.294	-.294	-.294	-.294	-.294
2	.015	-.317	-.317	-.317	-.317	-.317	-.317	-.317	-.317	-.317	-.317	-.317	-.317	-.317	-.317	-.317	-.317	-.317
3	-.010	-.307	-.307	-.307	-.307	-.307	-.307	-.307	-.307	-.307	-.307	-.307	-.307	-.307	-.307	-.307	-.307	-.307
4	-.010	-.292	-.292	-.292	-.292	-.292	-.292	-.292	-.292	-.292	-.292	-.292	-.292	-.292	-.292	-.292	-.292	-.292
5	.009	-.284	-.284	-.284	-.284	-.284	-.284	-.284	-.284	-.284	-.284	-.284	-.284	-.284	-.284	-.284	-.284	-.284
6	.009	-.275	-.275	-.275	-.275	-.275	-.275	-.275	-.275	-.275	-.275	-.275	-.275	-.275	-.275	-.275	-.275	-.275
7	.008	-.267	-.267	-.267	-.267	-.267	-.267	-.267	-.267	-.267	-.267	-.267	-.267	-.267	-.267	-.267	-.267	-.267
8	.008	-.259	-.259	-.259	-.259	-.259	-.259	-.259	-.259	-.259	-.259	-.259	-.259	-.259	-.259	-.259	-.259	-.259
9	.002	-.251	-.251	-.251	-.251	-.251	-.251	-.251	-.251	-.251	-.251	-.251	-.251	-.251	-.251	-.251	-.251	-.251
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WALL NO.	CAP FRACTION	.125		.250		.500		1.000		1.125		1.250		1.500		1.750		2.000	
		N	CPREAL	N	CPREAL	N	CPREAL	N	CPREAL	N	CPREAL	N	CPREAL	N	CPREAL	N	CPREAL	N	CPREAL
1		212	-.297	-.297	-.297	-.297	-.297	-.297	-.297	-.297	-.297	-.297	-.297	-.297	-.297	-.297	-.297	-.297	-.297
2		.051	-.374	-.374	-.374	-.374	-.374	-.374	-.374	-.374	-.374	-.374	-.374	-.374	-.374	-.374	-.374	-.374	-.374
3		-.051	-.352	-.352	-.352	-.352	-.352	-.352	-.352	-.352	-.352	-.352	-.352	-.352	-.352	-.352	-.352	-.352	-.352
4		-.051	-.337	-.337	-.337	-.337	-.337	-.337	-.337	-.337	-.337	-.337	-.337	-.337	-.337	-.337	-.337	-.337	-.337
5		.051	-.324	-.324	-.324	-.324	-.324	-.324	-.324	-.324	-.324	-.324	-.324	-.324	-.324	-.324	-.324	-.324	-.324
6		.051	-.311	-.311	-.311	-.311	-.311	-.311	-.311	-.311	-.311	-.311	-.311	-.311	-.311	-.311	-.311	-.311	-.311
7		.051	-.298	-.298	-.298	-.298	-.298	-.298	-.298	-.298	-.298	-.298	-.298	-.298	-.298	-.298	-.298	-.298	-.298
8		.051	-.285	-.285	-.285	-.285	-.285	-.285	-.285	-.285	-.285	-.285	-.285	-.285	-.285	-.285	-.285	-.285	-.285
9		.051	-.272	-.272	-.272	-.272	-.272	-.272	-.272	-.272	-.272	-.272	-.272	-.272	-.272	-.272	-.272	-.272	-.272
10																			

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

\*\*\* STABILITY PARAMETER

\* XI = .1708 \*  
 \* \*\*\*\*\*

MODE 1 -- GCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 138 ALPHA-WCL = 6.0 PDP KUR.PT 28.34  
 RUN 128 ALPHA-BAR = 2.0 Q-COMP = .32297  
 POINT COMPUTED SIGMA = 0. V-REF = .199.30  
 9.08, K = .0716

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012 PHI	.062 PHI	.148 PHI	.261 PHI	.392 PHI	.530 PHI	.661 PHI
1	DELCPM 347.55	DELCPM 349.68	DELCPM 350.52	DELCPM 354.18	DELCPM 358.45	DELCPM 366.81	DELCPM 373.73
2	DELCPM 327.53	DELCPM 333.34	DELCPM 332.36	DELCPM 319.55	DELCPM 278.99	DELCPM 266.81	DELCPM 270.93
3	DELCPM 1.159	DELCPM 1.12	DELCPM 1.03	DELCPM 1.03	DELCPM .015	DELCPM .011	DELCPM .025
4	DELCPM 223.44	DELCPM 5.97	DELCPM 328.42	DELCPM 219.58	DELCPM 231.06	DELCPM 239.34	DELCPM 149.01
5	DELCPM .114	DELCPM 179.73	DELCPM 122.53	DELCPM 158.33	DELCPM 61.33	DELCPM 235.77	DELCPM 235.77
6	DELCPM .227	DELCPM 184.51	DELCPM 122.53	DELCPM 158.33	DELCPM 61.33	DELCPM 235.77	DELCPM 235.77
7	DELCPM .136	DELCPM 164.50	DELCPM 122.53	DELCPM 158.33	DELCPM 61.33	DELCPM 235.77	DELCPM 235.77
8	DELCPM .112	DELCPM 233.20	DELCPM 199.61	DELCPM 253.89	DELCPM 31.55	DELCPM 72.17	DELCPM 40.58
9	DELCPM .198	DELCPM 277.54	DELCPM 171.66	DELCPM 63.33	DELCPM 26.73	DELCPM 72.93	DELCPM 52.55
10	DELCPM .168	DELCPM 303.28	DELCPM 291.66	DELCPM 287.57	DELCPM 281.02	DELCPM 279.50	DELCPM 275.81

X =	.774 PHI	.860 PHI	.910 PHI	N	CM-MAG	PHIN	N	CM-MAG	PHIM
1	DELCPM 357	DELCPM 124.64	DELCPM 495	1	124	253.85	1	827	347.86
2	DELCPM .040	DELCPM 349.58	DELCPM 198.75	2	133	282.03	2	827	284.40
3	DELCPM .019	DELCPM 295.77	DELCPM 141.58	3	137	325.50	3	827	331.52
4	DELCPM .007	DELCPM 190.44	DELCPM 85.58	4	133	226.14	4	827	231.08
5	DELCPM .010	DELCPM 269.87	DELCPM 249.14	5	122	186.00	5	827	174.93
6	DELCPM .010	DELCPM 170.36	DELCPM 9.78	6	110	118.72	6	827	142.08
7	DELCPM .008	DELCPM 325.21	DELCPM 103.67	7	107	321.58	7	827	142.08
8	DELCPM .006	DELCPM 60.69	DELCPM 353.46	8	105	231.58	8	827	223.70
9	DELCPM .009	DELCPM 340.75	DELCPM 301.39	9	114	62.05	9	827	174.93
10	DELCPM .005	DELCPM 290.75	DELCPM 87.37	10	118	290.61	10	827	297.11

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	W1	W2	W4	W500	W10	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1	1	.439	.269	8.959	.792	5.628	172.64	148.02	148.02	172.64	148.02	148.02	
2	2	2	.049	.021	1.477	.051	.261	258.86	313.38	313.38	258.86	313.38	313.38	
3	3	3	.478	.608	252.66	.454	.122	193.21	177.92	177.92	193.21	177.92	177.92	
4	4	4	.065	.145	245.91	.061	.160	230.56	224.50	224.50	230.56	224.50	224.50	
5	5	5	.052	.102	211.25	.097	.098	76.52	142.55	142.55	76.52	142.55	142.55	
6	6	6	.045	.091	168.74	.037	.038	318.00	148.49	148.49	318.00	148.49	148.49	
7	7	7	.021	.069	108.93	.019	.018	95.02	110.80	110.80	95.02	110.80	110.80	
8	8	8	.017	.057	64.49	.034	.035							
9	9	9	.022	.057										
10	10	10												

\*\*\* STABILITY PARAMETER

\* XI = .1708 \*  
 \* \*\*\*\*\*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 140 ALPHA-MCL = 6.0 PDP RUN.PT 28.06  
RUN 2E ALPHA-RAJ = 2.0 Q-COMP = 32435  
POINT 3 ALPHA-SIGMA = 0. V-REF = 199.73  
COMPUTED FREQUENCY = 15.44, K = .1214

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	X	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG					
1	-17.888	2.677	-3.944	630	-2.339	.266	-1.454	.071	.026	-.246	-.052	.023	.006
2	-.095	.342	-.012	.225	-.064	.120	.018	.191	.041	.037	.183	.040	.146
3	.370	.470	-.009	-.021	.028	-.007	-.035	-.004	-.006	-.008	-.019	-.013	-.017
4	.004	-.005	.011	-.004	.028	-.007	.053	.004	.030	.034	-.011	.037	-.011
5	.210	-.005	.021	-.008	.033	.009	.066	.023	.002	.001	.006	.007	.030
6	-.023	-.128	-.021	-.003	-.022	-.006	.015	.010	.017	.010	.006	.007	.006
7	.039	.028	-.001	.018	-.002	.014	-.005	.012	.023	.015	-.002	-.011	.002
8	-.011	-.061	.001	-.065	.007	-.004	-.002	-.001	.002	-.002	-.001	-.002	.004
9	.012	-.007	.007	.002	.002	-.004	.003	.006	.003	.001	.008	.000	.000
10				.002	.004	.004	.003	.006	.003	.001	.008	.000	.009

N	X	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG		
1	293	.064	.314	.132	.248	.184	1.898	1.258	.731	.187	.381
2	.042	.108	.101	.048	.048	.091	.075	.064	.053	.083	.107
3	.041	-.010	-.017	.020	.014	-.010	-.053	-.041	-.016	-.012	-.017
4	.004	.026	.024	.044	.022	.021	.025	.017	.039	.020	.028
5	.006	.006	.006	.005	.005	.005	.007	.017	.010	.026	.004
6	-.008	.006	.008	.014	.009	.009	.005	.006	.000	.001	.000
7	-.001	.005	.003	.003	.015	.003	.003	.014	.020	.010	.004
8	.001	.002	.003	.001	.009	.001	.002	.022	.024	.024	.004
9	.001	.002	.003	.001	.009	.001	.002	.022	.024	.024	.004
10				.002	.002	.010	.006	.007	.004	.037	.004

N	X	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	
1	371	.466	.264	.171	.045	.066	.038	.661
2	.047	.101	.125	.053	.080	.032	.030	.110
3	-.020	.019	-.028	-.023	-.026	.017	-.033	.000
4	.003	.003	.034	.014	.029	.007	.004	.027
5	.012	-.001	.007	.008	.007	.010	.013	.001
6	.006	.006	.005	.005	.005	.008	.002	.002
7	-.018	.004	-.015	.008	.025	.018	.014	.001
8	.001	.002	.001	.008	.001	.002	.001	.001
9	.002	.002	.001	.008	.001	.000	.001	.000
10				.003	.003	.001	.003	.009

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 149 ALPHA-VCL = 6.0 PDP RUN.PT 28.06  
 RUN 28 ALPHA-PAR = 2.0 G-COMP = 32435  
 POINT 3 SIGMA = 0. V-PEF = 199.73  
 COMPUTED FREQUENCY = 15.44, K = .1214

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	18	.087	171.49	3.994	173.92	2.354	173.51	1.456	177.19	.677	181.70	.252	192.04
2	355	105.41	.226	226	257.23	.120	257.23	.036	256.81	.028	256.81	.020	246.95
3	598	164.80	.023	291.90	.053	348.02	.024	348.02	.033	340.76	.035	340.76	.036
4	923	280.80	.022	339.99	.034	94.74	.019	75.55	.018	86.97	.012	87.50	.035
5	1226	210.29	.031	185.11	.023	14.90	.018	19.97	.025	24.79	.015	33.55	.012
6	137	263.13	.048	368.13	.014	196.08	.012	213.80	.020	205.79	.015	189.27	.015
7	.062	359.38	.007	278.26	.008	329.56	.002	113.70	.002	21.87	.002	108.59	.004
8	.014	329.92	.007	24.14	.004	63.45	.007	345.55	.008	342.69	.008	325.05	.002
9													
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X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	300	12.54	.116	22.51	.341	22.51	.309	36.65	4.197	350.24	1.907	5.48	1.272
2	.024	217.46	.042	217.29	.028	207.07	.013	97.49	.021	132.04	.021	132.04	.021
3	.026	89.99	.009	88.74	.044	352.39	.050	336.28	.055	342.46	.025	51.77	.042
4	.009	56.51	.007	49.40	.021	84.69	.023	25.82	.011	129.54	.010	123.59	.031
5	.001	169.03	.004	147.41	.017	145.90	.011	49.20	.009	292.24	.017	142.71	.017
6	.002	53.12	.013	81.45	.002	142.61	.015	257.47	.008	73.36	.026	137.37	.026
7	.010	92.70	.010	114.94	.010	104.32	.009	153.47	.008	139.95	.008	139.95	.006
8													
9													
10													

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	598	51.45	.111	64.73	.704	68.02	.551	71.94	.630	94.14	.429	104.37	.602
2	.028	355.38	.036	342.44	.037	27.75	.035	229.32	.036	173.08	.110	173.08	.121
3	.022	342.44	.007	67.79	.042	3.32	.032	61.74	.042	229.55	.027	16.55	.041
4	.019	161.34	.028	170.52	.007	67.89	.027	339.18	.032	76.91	.027	80.41	.033
5	.016	345.31	.032	344.81	.017	152.07	.009	351.03	.011	343.47	.013	3.20	.027
6	.002	130.44	.002	145.96	.016	740.17	.026	165.18	.019	169.43	.014	171.06	.015
7	.005	130.44	.007	117.46	.003	203.74	.009	257.18	.010	259.68	.014	145.15	.014
8													
9													
10													

MODE 1 -- OCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 14G ALPHA-MCL = 5.0 PDP RUN,PT 28.06  
 RUN 28 ALPHA-PAP = 2.0 O-COMP = 32435  
 POINT 3 SIGMA = 0. V-PEF = 199.73  
 COMPUTED FREQUENCY = 15.44, K = .1214

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.148		.261		.392		.530		.661	
	N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	21.943	-3.375	5.843	-4.48	3.597	-0.880	2.186	0.310	1.248	0.492	0.510	0.706	0.147	0.518
2	.124	-0.537	0.663	-0.179	0.668	-0.227	0.635	-0.089	0.307	-0.122	0.019	-0.058	0.013	-0.039
3	.957	-0.255	0.002	0.069	0.47	-0.012	0.020	-0.013	-0.014	0.008	-0.017	-0.009	-0.009	-0.010
4	.324	-0.490	0.043	-0.004	0.013	-0.003	0.014	0.005	0.016	0.007	0.008	0.013	0.004	-0.011
5	.030	-0.372	0.027	-0.016	0.007	-0.002	0.004	0.006	0.014	0.008	0.003	-0.006	0.001	-0.001
6	.230	-0.144	0.025	-0.011	0.008	-0.001	0.005	0.014	0.005	0.008	0.013	0.007	0.004	-0.009
7	.042	-0.073	0.003	-0.002	0.007	-0.001	0.002	0.016	0.003	0.012	0.004	-0.016	0.017	-0.006
8	.016	-0.070	0.001	-0.002	0.007	-0.001	0.002	0.004	0.003	0.003	0.004	-0.004	0.004	-0.001
9	.002	-0.011	0.001	-0.002	0.007	-0.001	0.008	0.002	0.007	0.004	0.005	-0.003	0.004	-0.002
10	.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000

X =	.774		.860		.910		.910		.910		.910		.910	
	N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	.338	.564	.426	.283	.283	.477	1.897	1.897	2.388	2.388	7.339	7.339	7.339	7.339
2	.007	.010	.005	.004	.010	.017	.028	.030	.010	.010	.013	.013	.013	.013
3	.002	.002	.000	.000	.000	.006	.007	.007	.009	.009	.007	.007	.007	.007
4	.013	.002	.007	.008	.003	.006	.010	.010	.003	.003	.007	.007	.007	.007
5	.003	.002	.004	.004	.006	.005	.016	.016	.008	.008	.007	.007	.007	.007
6	.017	.003	.006	.004	.007	.007	.015	.015	.012	.012	.002	.002	.002	.002
7	.002	.004	.008	.004	.000	.000	.015	.015	.003	.003	.001	.001	.001	.001
8	.002	.001	.005	.002	.001	.001	.005	.005	.001	.001	.000	.000	.000	.000
9	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000
10	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000	.000

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.125		.125		.36		.500		.7125		.861	
	N	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL	CPREAL
1	.367	.151	2.622	2.622	0.63	0.63	-8.832	0.661	-1.114	0.08	-5.533	-0.207	-0.207	-0.207
2	.073	.255	.242	.242	.758	.758	-1.67	.569	.059	.028	.355	.052	.052	.052
3	.024	.037	.117	.117	.100	.100	.023	.319	.011	.022	.332	.049	.049	.049
4	.055	.011	.053	.053	.146	.146	.042	.025	.046	.041	.052	.000	.000	.000
5	.013	.004	.006	.006	.004	.004	.025	.027	.007	.000	.031	.028	.028	.028
6	.005	.002	.002	.002	.009	.009	.025	.027	.002	.000	.054	.058	.058	.058
7	.002	.006	.003	.003	.002	.002	.026	.027	.003	.002	.026	.026	.026	.026
8	.004	.006	.007	.007	.005	.005	.026	.027	.003	.002	.026	.026	.026	.026
9	.005	.006	.007	.007	.005	.005	.026	.027	.003	.002	.026	.026	.026	.026
10	.005	.006	.007	.007	.005	.005	.026	.027	.003	.002	.026	.026	.026	.026

\*\*\* STABILITY PARAMETER

W1	W2	W3	W4	W5	W6	W7	W8	W9	W10
.125	.300	.300	.36	.500	.7125	.861	.861	.861	.861
.1031	.1031	.1031	.1031	.1031	.1031	.1031	.1031	.1031	.1031

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCMI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 14C ALPHA-WCL = 6.0 PDP KUMAPT 28.06  
KUM 28 ALPHA-RAR = 2.0 O-COMP = 32435  
POINT 3 SIGMA = 0.0 V-REF = 199.73  
COMPUTED FREQUENCY = 15.44, K = .1214

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	22	.012	351.26	.062	355.61	.149	358.77	.261	361.41	.392	363.11	.530	364.16
2	.551	283.00	.189	269.36	.073	338.54	.095	291.41	.122	273.11	.151	.870	54.16
3	.990	345.08	.069	291.56	.048	345.26	.024	326.63	.016	148.62	.081	.061	288.13
4	.588	236.53	.044	255.82	.015	348.11	.005	207.50	.010	150.80	.013	.020	207.92
5	.033	68.35	.015	265.82	.013	307.91	.008	252.50	.013	157.47	.013	.013	109.94
6	.247	197.50	.032	150.19	.039	190.86	.018	200.41	.017	209.76	.007	.007	278.35
7	.147	173.02	.028	273.11	.019	303.81	.014	110.60	.018	72.70	.014	.014	120.31
8	.060	273.11	.026	273.11	.036	310.26	.034	331.25	.012	255.40	.037	.007	331.28
9	.072	77.67	.013	63.70	.012	121.77	.004	115.20	.004	132.07	.009	.009	196.76
10	.023	151.26	.017	170.10	.007	188.49	.008	195.93	.007	209.13	.004	.004	212.69

X	N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	658	129.97	.507	146.04	.556	126.96	.910	126.96	1.902	7.19	.746	.746	352.06
2	.042	234.06	.008	145.62	.019	80.49	.074	292.45	.074	341.31	.020	.020	287.24
3	.018	53.20	.016	321.81	.012	238.36	.031	341.31	.031	232.32	.017	.017	355.92
4	.013	350.18	.010	49.69	.007	166.30	.010	205.39	.010	205.39	.009	.009	289.61
5	.008	290.96	.007	291.64	.007	328.54	.012	293.49	.012	319.53	.007	.007	183.40
6	.017	177.30	.007	217.13	.007	258.54	.012	293.49	.012	319.53	.004	.004	60.60
7	.019	352.58	.004	226.43	.017	320.77	.055	113.00	.055	113.00	.003	.003	255.49
8	.004	245.62	.005	343.18	.001	223.28	.003	192.62	.003	192.62	.002	.002	97.78
9	.003	206.92	.005	343.18	.001	223.28	.003	192.62	.003	192.62	.001	.001	169.43
10													

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	397	157.66	.2	.023	358.63	.125	175.72	.500	179.57	1.125	182.14	5.036	182.14
2	.265	174.03	.787	285.64	.593	253.69	.235	175.58	.113	175.58	.064	.064	215.67
3	.044	237.68	.154	220.92	.659	182.84	.040	334.54	.051	334.54	.359	.359	197.81
4	.056	346.39	.155	289.92	.049	274.16	.051	334.54	.041	80.65	.032	.032	203.51
5	.043	322.19	.556	155.95	.049	307.79	.041	80.65	.041	80.65	.032	.032	179.47
6	.006	322.19	.007	128.63	.055	42.58	.013	11.82	.013	11.82	.041	.041	42.04
7	.023	174.14	.344	168.15	.034	233.57	.022	180.66	.022	180.66	.061	.061	206.94
8	.009	38.33	.303	32.59	.070	73.29	.003	127.36	.003	127.36	.038	.038	53.39
9	.007	53.41	.018	17.43	.028	198.23	.004	326.12	.004	326.12	.009	.009	317.30
10	.008	132.61	.015	144.70	.025	50.14	.007	81.81	.007	81.81	.007	.007	96.91

\*\*\* STABILITY PARAMETER

\* XI = .1031 \*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 142 ALPHA-VCL = 6.0 POP RUN-PT 28.08  
RUN 26 ALPHA-PAR = 2.0 C-COMP = 32292  
POINT 5 SIGMA = .0 V-REF = 199.28  
COMPUTED FREQUENCY = 19.04, K = .1501

FOUPIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-17	.664	2.521	-1.787	.057	-.231	.445	.730
2	.116	.326	.409	-.040	.981	-.006	.022	-.001
3	-.971	.513	.227	-.059	.071	-.015	.015	-.020
4	.340	.382	-.029	-.017	-.009	-.001	-.011	-.005
5	-.015	.041	-.003	-.017	-.003	.000	-.008	-.005
6	.166	.013	-.004	.014	.006	.005	.008	-.007
7	.079	.023	-.007	.011	.004	.017	.012	.004
8	-.005	.032	.009	.009	.003	.006	.005	.003
9	.028	.054	.001	.001	.002	.001	.000	.000
10	-.012	.028	.000	.011	.003	.019	.015	.010

X	N	.774-UPPER CPREAL CPIMAG	.862-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	1.015	-.001	1.051	.973	4.843	2.705	1.985	1.433
2	.000	.016	.007	.006	.001	.040	.043	.036
3	-.026	.047	-.003	-.021	-.045	.022	-.026	-.022
4	-.003	.003	-.008	-.011	-.027	.010	-.026	-.018
5	-.007	.007	-.004	-.001	.010	.019	.038	-.015
6	.002	.002	-.004	-.001	-.024	.014	-.018	-.015
7	.016	.002	.006	.007	.015	.006	.024	-.014
8	-.033	.002	.008	.001	-.011	.010	-.016	-.006
9	-.000	.002	.008	.001	.005	.003	.002	-.004
10	.024	.016	.022	.001	-.010	.011	-.024	-.024

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	.988	.552	1.010	.817	.638	.510	.656
2	.035	.032	.044	.039	.020	.001	.048
3	-.017	.014	-.016	-.026	-.013	.018	-.023
4	-.002	.005	-.004	-.011	-.018	.003	-.009
5	-.010	.009	-.009	-.004	-.006	.004	-.003
6	.019	.009	-.016	-.004	-.013	.002	-.004
7	.009	.005	.007	.003	.023	.017	.020
8	.005	.007	-.008	.005	-.001	.006	.000
9	-.001	.007	-.003	-.003	-.003	.004	-.004
10	.009	.009	-.005	.005	.007	.005	.006



MODE 1 -- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 142 ALPHA-MCL = 6.0 POP KUN-PI 28.06  
KUN 28 ALPHA-PAR = 2.0 Q-COMP = 32292  
POINT 25 SIGMA = 0.0 V-REF = 199.28  
COMPUTED FREQUENCY = 19.04, K = .1501

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	17	.840	171.94	3.462	173.22	1.788	178.18	.867	189.11	.320	223.73	.408	335.54
2	34	.098	109.65	.227	72.09	.092	116.05	.140	102.76	.191	102.21	.107	91.07
3	51	.148	77.37	.047	72.09	.018	129.58	.067	132.18	.003	106.85	.012	106.59
4	68	.063	103.78	.013	267.47	.028	192.42	.008	246.22	.007	258.84	.008	210.51
5	85	.081	339.54	.015	62.87	.015	23.12	.003	6.58	.011	242.65	.007	187.00
6	102	.034	261.54	.006	301.26	.009	45.21	.004	23.67	.020	34.49	.012	18.20
7	119	.061	297.75	.003	302.20	.003	291.87	.007	342.38	.003	286.30	.001	74.63
8	136	.031	247.59	.011	2.51	.012	16.27	.014	37.83	.020	16.70	.018	29.91

X	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1	.015	359.92	1.008	67.60	.987	9.76	4.897	351.48	2.711	374	1.997	6.18
2	3	.054	119.52	.015	116.11	.009	25.69	.340	270.17	.054	307.92	.036	1.54
3	5	.007	232.87	.003	209.51	.013	114.04	.029	159.20	.022	198.60	.026	128.59
4	7	.007	102.58	.005	107.30	.007	205.99	.022	296.95	.008	293.09	.029	192.93
5	9	.016	6.23	.020	147.38	.007	142.22	.028	166.28	.017	357.28	.025	212.05
6	11	.008	145.26	.008	19.13	.018	16.96	.016	336.37	.010	156.85	.016	15.44
7	13	.008	91.84	.009	101.03	.007	82.92	.015	162.48	.011	172.83	.015	182.97
8	15	.017	76.01	.021	96.29	.016	86.07	.026	112.76	.023	119.83	.032	138.66

X	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1	.132	29.16	1.291	38.50	1.054	39.17	1.025	51.52	.739	46.30	1.037	45.37
2	3	.045	117.72	.024	42.83	.050	33.68	.047	116.38	.040	116.38	.038	35.58
3	5	.005	222.51	.008	231.69	.037	134.18	.022	234.93	.004	258.05	.016	128.58
4	7	.014	220.54	.008	242.06	.005	235.33	.006	99.86	.009	155.96	.004	122.34
5	9	.021	215.54	.031	30.72	.010	246.98	.015	237.94	.009	250.88	.023	259.33
6	11	.009	101.37	.011	226.09	.022	27.41	.007	243.44	.019	277.73	.023	273.35
7	13	.012	131.57	.008	112.10	.007	120.31	.005	123.04	.004	150.42	.007	156.73

MODE 1 -- OCHI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 142 ALPHA-MCL = 6.0 PDP RUN.PT 28.08  
 RUN 28 ALPHA-RAR = 2.0 O-COMP = .32292  
 POINT 5 SIGMA = 0. V-REF = 199.28  
 COMPUTED FREQUENCY = 19.04, K = .1501

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012		.062		.149		.261		.392		.530		.661	
	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI	N	DELCPR DELCPI
1	22	.507	3	.772	158	.289	2	.289	1.219	.772	.566	1.009	.088	.768
2	.666	.071	.683	.083	.083	.067	.067	.067	.041	.132	.046	.066	.040	.031
3	.826	.037	.837	.037	.008	.027	.027	.027	.001	.019	.039	.015	.005	.022
4	.372	.008	.008	.002	.002	.006	.006	.006	.016	.011	.074	.013	.000	.011
5	.081	.006	.006	.021	.021	.005	.005	.005	.005	.012	.012	.010	.004	.006
6	.189	.003	.003	.032	.032	.015	.015	.015	.001	.001	.013	.012	.003	.007
7	.061	.022	.022	.004	.004	.018	.018	.018	.009	.009	.015	.011	.006	.007
8	.066	.017	.017	.002	.002	.006	.006	.006	.002	.002	.013	.009	.001	.001
9	.023	.012	.012	.001	.001	.017	.017	.017	.002	.002	.003	.009	.003	.001
10	.002	.020	.020	.035	.035	.018	.018	.018	.027	.027	.024	.009	.015	.007

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.000		.125		.500		1.125		.003	
	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG	N	CPREAL CPIMAG
1	483	.015	3	.425	-9.196	.396	.378	-.175	-5.192	-.403	.771	.003
2	.027	.028	.161	.121	.159	.658	.001	.163	.065	.070	.005	.003
3	.028	.006	.007	.007	.610	.107	.022	.054	.368	.038	.015	.001
4	.006	.006	.007	.059	.018	.123	.024	.009	.037	.032	.007	.001
5	.014	.007	.007	.023	.023	.030	.005	.005	.079	.003	.002	.001
6	.014	.009	.009	.011	.026	.018	.004	.003	.015	.003	.000	.001
7	.037	.007	.007	.027	.008	.030	.016	.010	.008	.020	.002	.001
8	.055	.007	.007	.006	.009	.006	.002	.002	.006	.016	.000	.001
9	.036	.017	.017	.006	.009	.006	.003	.003	.006	.006	.000	.003
10	.036	.017	.017	.005	.006	.021	.004	.018	.967	.003	.003	.003

\*\*\* STABILITY PARAMETER

\* XI = .0935 \*  
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ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 150 ALPHA-MCL = 6.0 PDP RUN.PI 30.01  
 RUN 50 ALPHA-RAP = 2.0 Q-COMP = 32578  
 POINT 1 SIGMA = 45. V-PEF = 200.16  
 COMPUTED FREQUENCY = 9.05, K = .0710

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG						
1	-22	.825	-8.51C	-1.627	-1.766	-2.000	-2.218	-1.357	318	.869	.433	1.214	.433	1.214
2	-.051	-.195	-.296	.173	-.023	-.119	.010	-.150	.053	.123	-.109	.113	-.109	.113
3	-.836	-1.959	.013	-.013	.023	.051	-.009	.053	-.010	.042	.033	-.026	.033	-.026
4	-.166	-.308	.041	-.041	-.087	-.049	.084	-.052	.137	.088	.004	-.050	.004	-.050
5	-.400	-.305	-.008	-.030	-.034	-.039	-.042	-.022	.052	.038	.052	-.041	.052	-.041
6	.068	.390	.036	.054	.033	.037	.052	.032	.022	.025	.038	-.017	.038	-.017
7	-.137	-.320	-.002	-.025	-.041	-.050	-.020	-.032	.014	.025	.038	-.017	.038	-.017
8	-.143	-.025	.002	.025	.041	.050	.020	.032	.014	.025	.038	-.017	.038	-.017
9	.057	-.119	.011	-.012	-.025	-.015	-.008	.009	-.068	.011	.007	-.014	.007	-.014
10														

X	N	.774-UPPER CPREAL CPIMAG	.660-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG						
1	-.232	1.203	-.167	-.135	6.488	3.441	2.190	2.238	1.635	1.417	1.325	1.417	1.325	
2	.087	.046	.091	.040	.624	.588	.345	.345	.090	.056	.049	.056	.049	
3	-.027	-.022	-.026	-.026	.158	.051	.019	.019	.016	.016	.016	.016	.016	
4	.005	.126	.041	.121	-.026	.028	.052	.052	.118	.118	.112	.118	.112	
5	.052	.042	.008	.044	.045	.123	.127	.127	.045	.045	.041	.045	.041	
6	-.033	-.042	.039	-.044	.020	.014	.027	.027	.043	.043	.041	.043	.041	
7	.002	.014	.008	.017	-.042	.006	.017	.017	.043	.043	.041	.043	.041	
8	.000	-.000	.000	-.012	.719	.012	.015	.015	.013	.013	.013	.013	.013	
9														
10														

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	
1	.819	.989	.699	.413	.061	.008	.371	.591
2	-.023	-.046	-.120	-.136	-.156	-.052	-.154	-.354
3	.017	.007	.021	.036	.044	.020	.015	.020
4	.040	.105	.044	.036	-.048	.110	.045	.111
5	-.001	-.019	-.001	-.003	-.008	.025	.007	.022
6	.055	.039	.066	.061	.048	.047	.051	.042
7	-.024	-.016	-.034	-.031	-.036	.023	.028	.021
8	.004	-.016	.002	-.014	.009	.021	.013	.020
9	.004	-.016	.002	-.014	.009	.021	.013	.020
10								



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 150 ALPHA-WCL = 6.0 PDP RUN.PI 30.01  
 RUN 30 ALPHA-BAR = 2.0 Q-COMP = 32578  
 POINT 1 SIGMA = 45. V-REF = 200.16  
 COMPUTED FREQUENCY = 9.05, K = .0710

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X N	.022		.062		.198		.261		.392		.530		.661	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	.29	.314	11.681	9.002	3.617	5.492	2.401	3.417	1.543	2.176	1.566	1.888	.846	-.405
2	.685	.010	.393	.450	.516	.124	.114	.066	.077	.067	.034	.188	.051	-.025
3	.994	.215	.134	.006	.006	.046	.033	.063	.058	.052	.028	.006	.035	.001
4	.122	.437	.037	.037	.017	.037	.021	.000	.028	.013	.030	.007	.007	-.004
5	.420	.277	.014	.003	.003	.012	.015	.042	.026	.002	.009	.013	.007	.007
6	.016	.076	.030	.030	.027	.008	.011	.021	.019	.019	.014	.005	.009	.007
7	.095	.315	.009	.009	.008	.009	.017	.016	.010	.003	.001	.008	.007	.002
8	.162	.014	.019	.019	.008	.009	.009	.028	.004	.004	.012	.008	.012	.000
9	.068	.115	.001	.001	.001	.011	.009	.006	.008	.005	.003	.004	.009	.000
10														

X N	.774		.800		.910		.910		.910		.910		.910	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	.293	.471	.060	.466	.236	.236	.406	.406	.130	3.130	1.015	1.015	1.015	.476
2	.012	.017	.002	.017	.014	.014	.014	.014	.053	.053	.083	.083	.037	-.020
3	.016	.022	.006	.006	.009	.009	.009	.009	.011	.011	.006	.006	.013	.034
4	.013	.001	.002	.002	.002	.002	.002	.002	.007	.007	.006	.006	.000	-.001
5	.019	.011	.001	.001	.002	.002	.002	.002	.012	.012	.019	.019	.002	.009
6	.033	.005	.004	.004	.006	.006	.006	.006	.012	.012	.004	.004	.002	.003
7	.007	.012	.001	.001	.003	.003	.003	.003	.016	.016	.004	.004	.002	.006
8	.003	.006	.001	.001	.003	.003	.003	.003	.007	.007	.004	.004	.002	.000
9														
10														

\*\*\* STABILITY PARAMETER

\* XI = -.4757 \*  
 \*\*\*\*\*

WALL NO. GAP FRACTION	.125		.125		.125		.125		.125		.125		.125		.125	
	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	.005	.946	2.561	-.198	-11.122	-2.735	-1.676	.089	-4.233	-6.097	1.015	1.015	1.015	1.015	1.015	1.015
2	.110	.140	.221	.306	.569	.349	.117	.065	.399	.229	.489	.229	.489	.229	.489	.229
3	.017	.176	.025	.114	.043	.177	.008	.160	.094	.055	.011	.011	.011	.011	.011	.011
4	.034	.176	.057	.183	.115	.177	.043	.160	.011	.011	.011	.011	.011	.011	.011	.011
5	.021	.176	.057	.183	.061	.059	.010	.033	.039	.063	.039	.063	.039	.063	.039	.063
7	.019	.176	.057	.183	.147	.065	.057	.054	.042	.108	.042	.108	.042	.108	.042	.108
8	.036	.176	.057	.183	.031	.001	.050	.044	.052	.039	.052	.039	.052	.039	.052	.039
9	.033	.176	.057	.183	.031	.001	.054	.022	.034	.035	.034	.035	.034	.035	.034	.035
10																

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 150 ALPHA-PCL = 6.0 PDP JM.PT 30.01  
SUM 30 ALPHA-FAR = 2.0 Q-OMP = .32578  
POINT I SIGMA = 45. V-REF = 200.16  
COMPUTED FREQUENCY = 9.05, K = .0710  
FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012	.062	.148	.261	.392	.530	.661
N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM
1	9.778	22.98	3.749	24.29	2.277	17.14	.938
2	.686	319.98	.102	310.36	.126	302.05	.131
3	.134	177.38	.037	42.74	.076	46.52	.055
4	.242	331.78	.034	176.73	.050	354.41	.035
5	.448	103.76	.039	109.39	.050	255.47	.014
6	.503	333.39	.019	111.75	.016	84.84	.011
7	.078	318.08	.023	332.27	.023	321.87	.011
8	.329	11.43	.014	352.07	.003	216.97	.008
9	.162	21.521	.015	39.17	.003	22.71	.008
10	.133	124.56	.015	140.73	.006	218.91	.009
					.006	260.98	.008
					.009	348.33	.008
					.009	178.73	.009

X =	.774	.910	1.000	1.125	1.250	1.375	1.500
N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM
1	.554	301.90	.473	239.97	3.291	17.95	1.121
2	.100	210.82	.123	224.31	.138	265.43	.042
3	.029	304.92	.015	66.31	.098	57.41	.036
4	.027	348.99	.010	23.72	.012	16.44	.009
5	.013	173.42	.009	258.17	.026	137.94	.010
6	.015	48.51	.008	87.65	.013	48.42	.004
7	.006	242.59	.007	190.92	.013	341.16	.006
8	.014	90.326	.004	6.95	.019	60.36	.004
9	.006	293.26	.004	142.88	.007	163.13	.004
10					.007	163.13	.004

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	.125	.250	.375	.500	.625	.750	.875	1.000
GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG
1	.949	19.75	2.569	355.58	11.453	193.81	7.422	255.23
2	.177	152.28	.849	209.04	1.093	292.26	.460	29.72
3	.026	227.11	.377	54.19	.668	211.55	.490	3.44
4	.179	100.92	.116	257.54	.475	308.04	.199	149.91
5	.052	311.48	.191	72.77	.211	57.03	.236	87.36
6	.088	77.81	.093	314.30	.085	287.30	.064	277.76
7	.094	273.81	.096	209.31	.157	24.39	.115	98.74
8	.045	137.00	.040	209.31	.005	179.38	.065	216.88
9	.034	357.66	.014	167.36	.022	279.89	.049	45.82
10					.066	216.13	.039	344.79

\*\*\* STABILITY PARAMETER

\* XI = -.4757 \*  
\*\*\*\*\*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
BLADE DATA, WALL STATIONS

FILE 152 ALPHA-WCL = 5.0 PDP RUN/WT 30.02  
 RUN 39 ALPHA-AR = 2.0 C-COMP = .32506  
 POINT 3 SLOPA = 45.0 V-REF = 199.93  
 COMPUTED FREQUENCY = 15.44, K = .1213

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	X	CPREAL	CPIMAG	UPPER	LOWER	UPPER	LOWER	UPPER	LOWER	UPPER	LOWER	UPPER	LOWER
1	-22	.649	-6.354	-.741	-.344	-.121	-.109	-.288	-.515	.769	.020	1.296	1.605
2	-1	.087	-1.582	-.004	-.097	.006	.057	-.009	.061	-.000	.000	.030	.039
3	-27	.017	-.398	-.012	-.012	-.006	-.014	.104	-.034	-.150	.037	.125	.115
4	-21	.013	-.024	-.005	-.005	-.002	-.027	.016	-.012	-.001	.001	.009	.007
5	-13	.035	-.059	-.011	-.011	-.005	.029	.014	.035	.001	.003	.003	.006
6	-39	.075	-.370	-.004	-.004	-.002	-.009	.039	.010	.015	.004	.004	.028
7	-23	.005	-.033	-.005	-.004	-.006	-.004	.000	.010	.015	.001	.011	.013
8	-40	.005	-.033	-.005	-.004	-.006	-.004	.000	.010	.015	.001	.011	.013
9	-40	.005	-.033	-.005	-.004	-.006	-.004	.000	.010	.015	.001	.011	.013
10	-40	.005	-.033	-.005	-.004	-.006	-.004	.000	.010	.015	.001	.011	.013

N	X	CPREAL	CPIMAG	UPPER	LOWER	UPPER	LOWER	UPPER	LOWER	UPPER	LOWER	UPPER	LOWER
1	-41	.606	-1.606	-.563	-.343	1.476	6.090	3.063	3.089	2.514	1.919	2.009	1.842
2	-19	.323	-.323	-.010	-.022	.022	.113	.043	.169	.393	.197	.171	.134
3	-10	.114	-.114	-.033	-.033	.115	.039	.123	.048	.151	.123	.124	.114
4	-09	.034	-.034	-.011	-.011	.033	.020	.046	.032	.048	.014	.035	.037
5	-07	.017	-.017	-.005	-.005	.007	.013	.005	.001	.007	.018	.007	.002
6	-05	.007	-.007	-.002	-.002	.007	.005	.005	.001	.007	.018	.007	.002
7	-04	.004	-.004	-.001	-.001	.004	.005	.005	.001	.007	.018	.007	.002
8	-03	.001	-.001	-.000	-.000	.001	.001	.001	.001	.001	.001	.001	.001
9	-02	.001	-.001	-.000	-.000	.001	.001	.001	.001	.001	.001	.001	.001
10	-01	.001	-.001	-.000	-.000	.001	.001	.001	.001	.001	.001	.001	.001

N	X	CPREAL	CPIMAG	UPPER	LOWER	UPPER	LOWER	UPPER	LOWER	UPPER	LOWER	UPPER	LOWER
1	-56	.533	-1.533	-.174	-.174	1.456	6.245	1.489	3.526	1.264	1.919	2.009	1.842
2	-23	.019	-.019	-.010	-.010	.016	.103	.019	.123	.063	.110	.124	.114
3	-14	.011	-.011	-.006	-.006	.009	.033	.036	.009	.038	.039	.034	.037
4	-10	.005	-.005	-.002	-.002	.005	.002	.001	.002	.001	.003	.003	.002
5	-09	.003	-.003	-.001	-.001	.003	.002	.002	.001	.001	.001	.001	.001
6	-08	.002	-.002	-.000	-.000	.002	.001	.001	.001	.001	.001	.001	.001
7	-07	.001	-.001	-.000	-.000	.001	.001	.001	.001	.001	.001	.001	.001
8	-06	.001	-.001	-.000	-.000	.001	.001	.001	.001	.001	.001	.001	.001
9	-05	.001	-.001	-.000	-.000	.001	.001	.001	.001	.001	.001	.001	.001
10	-04	.001	-.001	-.000	-.000	.001	.001	.001	.001	.001	.001	.001	.001



ORIGINAL LABEL  
OF POOR QUALITY

MODE 1 -- OCMV PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 152 ALPHA-MCL = 6.0 POP RUN-PT 30.03  
 RUN 30 ALPHA-PAR = 2.0 Q-COMP = 32500  
 POINT 3 ALPHA-SIGMA = 45 V-CORR = 199.93  
 COMPUTED FREQUENCY = 15.44, K = .1213  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP	.012-UPPER PHI	.062-UPPER PHI	.145-UPPER PHI	.261-UPPER PHI	.392-UPPER PHI	.530-UPPER PHI	.661-UPPER PHI
1	23	516	195.62	5.65C	197.54	2.129	172.02	1.699	153.50
2	3	050	327.37	.377	147.25	.238	135.80	.479	128.63
3	1	902	235.16	.104	357.59	.058	350.07	.161	190.95
4	3	392	135.06	.076	90.04	.105	97.64	.112	15.72
5	6	219	267.51	.030	247.27	.073	241.97	.154	192.38
6	7	399	186.31	.027	10.65	.031	148.74	.012	261.49
7	8	120	29.16	.038	18.35	.031	28.51	.029	262.61
8	9	045	150.96	.055	77.24	.039	96.61	.036	351.69
9	10	102	136.85	.007	204.66	.009	178.03	.014	90.99
10		034	62.10	.006	115.56	.005	314.06	.010	236.11

X	N	CP	.774-UPPER PHI	.860-UPPER PHI	.910-UPPER PHI	.012-LOWER PHI	.062-LOWER PHI	.148-LOWER PHI	.261-LOWER PHI
1	1	657	104.33	1.63F	102.48	6.817	26.76	3.983	39.13
2	3	196	173.28	.20F	16.72	.121	220.72	.423	247.63
3	1	108	91.28	.117	92.81	.129	72.29	.102	79.33
4	3	314	264.52	.033	263.19	.044	243.29	.158	248.42
5	6	010	210.00	.014	216.97	.052	210.49	.035	203.85
6	7	023	15.45	.014	24.73	.014	158.79	.019	99.99
7	8	027	84.32	.024	76.11	.008	150.79	.019	68.59
8	9	017	235.66	.022	241.31	.024	246.49	.016	278.72
9	10	011	272.94	.014	278.55	.024	276.49	.016	278.72

X	N	CP	.392-LOWER PHI	.530-LOWER PHI	.661-LOWER PHI	.774-LOWER PHI	.860-LOWER PHI	.91J-LOWER PHI	
1	1	633	59.80	1.824	78.00	1.509	99.80	1.546	111.75
2	3	109	243.24	.315	199.51	.282	180.80	.273	189.23
3	1	115	35.14	.127	8.92	.104	10.35	.112	10.53
4	3	015	252.58	.141	66.07	.149	84.42	.111	89.42
5	6	014	231.72	.017	261.88	.037	264.56	.014	263.70
6	7	003	21.78	.002	239.45	.011	257.37	.013	250.99
7	8	019	65.18	.030	357.29	.006	15.27	.013	350.54
8	9	003	235.01	.025	63.58	.032	66.84	.028	72.12
9	10	009	293.04	.011	297.56	.022	227.99	.015	240.58

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTIFR BLADE DATA, WALL STATIONS

FILE 152 ALPHA-MCL = 6.0 POP RUN.PT 30.03  
RUN 30 ALPHA-PAR = 2.0 O-COMP = 32506  
POINT 3 SIGMA = 45. V-REF = 199.93  
COMPUTED FREQUENCY = 15.44, K = .1213

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.148		.261		.392		.530		.661													
	N	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI												
1	28	.739	9	.397	8	.690	3	.254	5	.263	2	.171	3	.232	1	.554	2	.079	1	.417	4	.487	7	.740
2		.194		.157		.085		.105		.021		.176		.065		.113		.046		.019		.203		.029
3		1.200		1.604		.046		.004		.026		.018		.061		.032		.044		.018		.015		.023
4		.310		.359		.007		.021		.004		.035		.014		.009		.044		.015		.006		.014
5		.168		.003		.058		.019		.023		.019		.025		.034		.003		.000		.006		.008
6		.045		.112		.035		.003		.036		.011		.015		.012		.020		.007		.006		.001
7		.064		.095		.006		.018		.019		.023		.024		.012		.001		.018		.007		.014
8		.002		.057		.005		.021		.009		.012		.002		.022		.000		.008		.009		.012
9										.007		.006		.003		.010		.001		.006		.009		.004
10										.009		.006		.003		.010		.001		.006		.000		.005
										.007		.006		.003		.010		.001		.006		.000		.005
										.009		.006		.003		.010		.001		.006		.000		.005

X	.774		.860		.910		.910		.910		.910													
	N	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI	DELCPR DELCPI												
1		.166		.117		.040		.029		.215		.079		.018		.018		.028		.028		.028		.028
2		.000		.013		.023		.023		.004		.004		.004		.004		.004		.004		.004		.004
3		.022		.034		.018		.009		.004		.004		.004		.004		.004		.004		.004		.004
4		.000		.002		.005		.005		.003		.003		.003		.003		.003		.003		.003		.003
5		.000		.002		.005		.005		.003		.003		.003		.003		.003		.003		.003		.003
6		.016		.006		.005		.007		.005		.010		.010		.010		.010		.010		.010		.010
7		.010		.006		.005		.007		.005		.010		.010		.010		.010		.010		.010		.010
8		.035		.002		.002		.001		.002		.003		.003		.003		.003		.003		.003		.003
9		.002		.002		.000		.004		.002		.003		.003		.003		.003		.003		.003		.003
10								.004		.002		.002		.002		.002		.002		.002		.002		.002

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	.125		.125		.125		.125		.125		.125		.125		.125		.125		.125		.125		.125		
		N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	N	CPREAL	CPIMAG	
1		.522	1	.542	2	.184	2	.184	2	.184	2	.184	2	.184	2	.184	2	.184	2	.184	2	.184	2	.184	2	.184
2		.315	3	.117	3	.274	3	.274	3	.274	3	.274	3	.274	3	.274	3	.274	3	.274	3	.274	3	.274	3	.274
3		.111	4	.099	4	.012	4	.012	4	.012	4	.012	4	.012	4	.012	4	.012	4	.012	4	.012	4	.012	4	.012
4		.026	5	.019	5	.032	5	.032	5	.032	5	.032	5	.032	5	.032	5	.032	5	.032	5	.032	5	.032	5	.032
5		.006	6	.001	6	.001	6	.001	6	.001	6	.001	6	.001	6	.001	6	.001	6	.001	6	.001	6	.001	6	.001
6		.034	7	.014	7	.008	7	.008	7	.008	7	.008	7	.008	7	.008	7	.008	7	.008	7	.008	7	.008	7	.008
7		.034	8	.013	8	.008	8	.008	8	.008	8	.008	8	.008	8	.008	8	.008	8	.008	8	.008	8	.008	8	.008
8		.025	9	.006	9	.011	9	.011	9	.011	9	.011	9	.011	9	.011	9	.011	9	.011	9	.011	9	.011	9	.011
9			10		10		10		10		10		10		10		10		10		10		10		10	
10																										

\*\*\* STABILITY PARAMETER

\*\* XI = -.3861 \*

ORIGINAL PAGE 1  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
DCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 152 ALPHA-WCL = 6.0 PDP RUN-PI 30.03  
MUN 30 ALPHA-RAR = 250 Q-COMP = .32506  
POINT 33 SIGMA = 45.0 V-REF = 199.93  
COMPUTED FREQUENCY = 15.44, K = .1213

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012	.066	.148	.261	.392	.530	.661	
N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	30.237	18.11	9.280	20.53	5.93	22.42	3.586	25.67
2	.739	253.21	.619	284.70	.178	276.94	.113	272.50
3	.003	334.63	.033	48.71	.033	32.55	.068	27.41
4	.359	390.42	.022	250.02	.033	79.22	.041	52.53
5	.168	359.12	.061	198.06	.030	219.19	.037	293.71
6	.130	234.21	.038	106.92	.038	162.66	.031	202.49
7	.047	301.92	.019	291.81	.019	321.05	.019	266.36
8	.114	303.92	.016	291.81	.011	264.84	.010	181.36
9	.057	268.12	.022	283.03	.011	287.27	.001	359.12
10								

X =	.774	.900	.910	
N	DELCPM	PHI	DELCPM	PHI
1	.203	324.83	.301	292.30
2	.013	197.45	.064	196.75
3	.040	299.45	.007	322.24
4	.002	265.86	.007	322.66
5	.009	315.39	.005	186.53
6	.017	199.59	.011	241.09
7	.010	11.50	.003	41.44
8	.005	201.40	.004	57.76
9	.003	41.61	.003	47.59
10				

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	W1	W2	W4	W6	W10	
GAP FRACTION	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	.628	102.70	2.310	19.04	1.943	158.64
2	.339	202.42	1.348	213.15	.332	175.72
3	.164	422.58	.321	31.45	.149	19.54
4	.046	138.35	.041	97.15	.132	93.66
5	.030	304.79	.041	181.15	.054	254.75
6	.015	230.80	.040	5.59	.027	17.03
7	.053	166.25	.034	34.93	.024	149.58
8	.038	338.91	.034	114.19	.017	64.44
9	.025	346.70	.018	308.82	.017	275.08
10						

\*\*\* STABILITY PARAMETER \*\*\*

N	CM-MAG	PHIM
1	.063	21.29
2	.037	294.07
3	.036	58.63
4	.005	358.12
5	.007	82.15
6	.002	269.72
7	.004	183.50
8	.003	289.11
9	.002	279.24
10	.002	278.96

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 154 ALPHA-MCL = 6.0 POP RUN.PT 30.05  
RUN 30 ALPHA-BAR = 2.0 O-COMP = 32779  
POINT 5 SIGMA = 45. V-REF = 200.79  
S COMPUTED FREQUENCY = 19.09, K = 1.493

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAL \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	1	-22.052	-5.887	-2.995	-1.773	-1.199	-.637	-.210
2	2	-.096	-.048	-.011	-.017	-.017	-.033	-.130
3	3	-1.273	-1.175	-.016	-.053	-.045	-.019	-.017
4	4	-.030	-.197	-.028	-.044	-.015	-.004	-.006
5	5	-.030	-.235	-.018	-.021	-.011	-.016	-.014
6	6	-.040	-.025	-.007	-.005	-.011	-.015	-.002
7	7	-.076	-.061	-.002	-.017	-.004	-.017	-.004
8	8	-.050	-.032	-.002	-.002	-.004	-.002	-.002
9	9	-.052	-.014	-.014	-.010	-.009	-.001	-.010
10	10	-.052	-.014	-.014	-.010	-.009	-.001	-.010

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	1	-.089	1.220	-.035	6.195	3.429	2.124	1.337
2	2	-.142	-.036	-.122	-.705	-.148	-.104	-.080
3	3	-.017	-.019	-.017	-.068	-.054	-.027	-.029
4	4	-.004	-.018	-.003	-.058	-.007	-.024	-.010
5	5	-.006	-.011	-.005	-.006	-.001	-.003	-.004
6	6	-.003	-.006	-.002	-.003	-.000	-.004	-.004
7	7	-.002	-.004	-.001	-.002	-.000	-.004	-.005
8	8	-.002	-.002	-.001	-.002	-.000	-.004	-.002
9	9	-.002	-.002	-.001	-.002	-.000	-.004	-.002
10	10	-.002	-.002	-.001	-.002	-.000	-.004	-.002

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	-.750	1.312	-.435	1.243	-.144	-.207
2	2	-.059	-.067	-.060	-.083	-.084	-.055
3	3	-.009	-.028	-.005	-.017	-.004	-.027
4	4	-.002	-.018	-.002	-.009	-.003	-.004
5	5	-.003	-.010	-.002	-.005	-.002	-.005
6	6	-.001	-.012	-.001	-.006	-.001	-.008
7	7	-.001	-.007	-.001	-.005	-.001	-.007
8	8	-.001	-.007	-.001	-.005	-.001	-.007
9	9	-.001	-.007	-.001	-.005	-.001	-.007
10	10	-.001	-.007	-.001	-.005	-.001	-.007

ORIGINAL PAGE IS  
OF POOR QUALITY.

MODE 1 -- OCWJ PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 154 ALPHA-MCL = 6.0 POP RUN-PT 30.05  
RUN 30 ALPHA-BAR = 2.0 O-COMP = 32779  
POINT 5 SIGMA = 45. V-REF = 200.79  
COMPUTED FREQUENCY = 19.09, K = .1493

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP	.012-UPPER PHI	CP	.062-UPPER PHI	CP	.148-UPPER PHI	CP	.261-UPPER PHI	CP	.392-UPPER PHI	CP	.530-UPPER PHI	CP	.661-UPPER PHI
1	22	.624	194.95	5.284	140.12	3.624	187.91	1.774	181.70	1.251	163.38	1.096	128.85	1.209	100.91
2		.399	353.03	.196	82.80	.101	6.02	.075	346.62	.069	170.71	.031	50.79	.145	26.91
3	1	.735	122.79	.028	91.75	.059	163.86	.054	188.70	.046	170.71	.021	27.67	.030	54.79
4		.214	253.08	.049	300.00	.042	243.25	.031	263.01	.015	142.27	.012	273.67	.029	250.79
5		.250	253.14	.004	340.71	.042	309.89	.012	224.24	.015	345.17	.019	325.71	.015	335.03
6		.237	186.14	.025	324.70	.011	343.96	.017	115.34	.013	307.25	.017	168.64	.004	128.05
7		.082	58.66	.019	81.90	.017	117.37	.017	103.76	.018	75.10	.017	187.45	.006	115.42
8		.058	210.05	.016	271.24	.012	178.08	.003	120.60	.005	316.06	.022	334.04	.006	115.42
9		.083	350.62	.026	30.55	.021	47.59	.021	60.53	.027	71.29		86.59	.018	124.32
10															

X	N	CP	.774-UPPER PHI	CP	.860-UPPER PHI	CP	.910-UPPER PHI	CP	.012-LOWER PHI	CP	.062-LOWER PHI	CP	.148-LOWER PHI	CP	.261-LOWER PHI
1	1	.223	94.17	1.195	90.97	1.142	91.76	6.696	22.30	3.903	34.13	2.734	39.03	2.047	49.21
2		.126	14.29	.027	43.90	.025	48.25	.069	304.64	.020	292.14	.036	304.16	.130	309.57
3		.022	259.57	.014	247.64	.014	255.75	.069	213.08	.020	141.34	.047	238.82	.037	235.79
4		.013	288.66	.012	298.85	.009	309.82	.009	340.56	.018	259.81	.047	300.70	.006	318.94
5		.012	329.21	.006	327.51	.003	335.25	.003	100.15	.009	292.20	.011	254.71	.012	286.95
6		.005	123.80	.001	86.22	.003	122.30	.005	52.76	.006	90.67	.015	76.52	.019	104.36
7		.005	116.00	.001	169.04	.005	172.91	.009	259.11	.006	279.23	.014	266.66	.014	278.36
8		.003	129.71	.008	108.70	.014	88.70	.023	101.80	.015	108.73	.014	129.80	.008	151.53
9		.016	119.85	.017	146.56	.014	122.18	.022	159.80	.022	159.80		182.08	.017	189.32
10															

X	N	CP	.392-LOWER PHI	CP	.530-LOWER PHI	CP	.661-LOWER PHI	CP	.774-LOWER PHI	CP	.860-LOWER PHI	CP	.910-LOWER PHI
1	1	.526	59.25	1.660	67.06	1.317	70.72	1.280	88.78	1.061	97.81	1.213	99.82
2		.089	311.27	.088	310.06	.070	328.79	.089	21.78	.103	324.82	.061	335.59
3		.029	251.62	.034	351.35	.039	352.79	.017	8.27	.025	272.02	.030	24.59
4		.010	252.40	.010	279.17	.006	291.40	.015	300.62	.012	277.23	.023	281.76
5		.008	292.49	.014	274.78	.012	296.82	.011	261.00	.012	261.93	.013	293.74
6		.012	92.71	.017	97.46	.014	110.37	.013	302.62	.010	322.37	.007	317.42
7		.005	307.33	.011	316.32	.005	313.28	.006	134.34	.010	134.34	.007	117.41
8		.005	157.79	.003	171.28	.007	156.62	.002	261.82	.008	229.63	.008	306.96
9		.009	159.19	.009	150.94	.007	156.30	.007	117.53	.009	276.19	.011	376.96
10													



MODE 1 -- OCAT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 154 ALPHA-MCL = 6.0 PDP RUN/MT 30.05  
 RUN 30 ALPHA-FAR = 2.0 Q-COMP = .32779  
 POINT 5 SIGMA = 45. V-REF = 200.79  
 COMPUTED FREQUENCY = 19.09, K = .1493

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	29.478	16.61	8.989	20.29	5.547	22.666	3.499	27.26	2.197	25.72	1.493	26.94
2	.663	277.93	.561	202.71	.164	271.34	.086	275.08	.102	269.59	.176	261.35
3	1.684	41.32	.052	104.33	.051	320.17	.062	353.83	.073	348.47	.030	288.94
4	.219	289.76	.016	140.55	.040	165.59	.009	221.39	.036	272.26	.014	258.68
5	.230	69.90	.016	201.49	.040	100.83	.030	333.16	.018	200.35	.004	161.92
6	.068	239.94	.024	141.35	.010	192.72	.024	291.10	.011	138.23	.015	192.04
7	.078	17.25	.037	216.92	.017	94.11	.010	171.50	.001	196.88	.016	178.61
8	.069	43.90	.026	266.15	.030	283.11	.031	281.34	.004	271.80	.025	285.77
9	.113	167.99	.044	107.33	.042	232.61	.035	217.80	.009	146.53	.035	163.84
10							.028	233.26			.020	241.48

X	N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	1	.131	27.55	.190	229.19	.180	162.868	.168	129.304	.141	264.15	.131	20.01
2	2	.014	270.28	.017	204.07	.012	313.79	.011	313.79	.006	16.76	.028	38.39
3	3	.006	216.74	.007	186.80	.005	267.52	.002	270.16	.002	256.50	.003	231.00
4	4	.006	211.45	.001	187.54	.004	210.83	.002	299.47	.002	270.16	.003	59.11
5	5	.008	104.18	.007	174.44	.004	100.83	.005	124.72	.001	294.72	.001	8.90
6	6	.011	315.78	.009	18.28	.002	346.95	.001	294.21	.002	288.29	.002	235.06
7	7	.009	301.50	.017	357.20	.010	352.59	.016	118.97	.006	118.97	.006	186.92

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1	1.185	96.60	2.645	7.09	10.575	168.97	1.410	167.91	6.923	253.40			
2	2	.093	31.61	.624	246.15	1.154	304.20	.095	31.94	.501	331.79			
3	3	.030	16.95	.149	65.86	.669	201.57	.017	73.65	.455	331.28			
4	4	.071	302.92	.161	244.24	.404	310.31	.047	277.11	.078	119.46			
5	5	.009	249.37	.011	49.88	.028	199.59	.007	336.49	.088	67.63			
6	6	.031	80.20	.041	273.84	.033	328.13	.019	316.68	.027	277.84			
7	7	.046	160.19	.013	30.74	.026	155.32	.015	86.38	.033	120.44			
8	8	.034	218.26	.012	358.64	.049	159.31	.012	93.73	.033	254.52			
9	9	.005	281.93	.011	116.91	.039	287.93	.004	195.13	.019	41.49			
10	10	.057	217.28	.021	103.57	.020	25.62	.016	87.82					

\*\*\* STABILITY PARAMETER

\* XI = -.3529 \*  
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ORIGINAL DATA IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
 CENTER BLADE DATA, WALL STATIONS

FILE 156 ALPHA-MCL = 6.0 PDP RUN.PT 31.04  
 RUN 31 ALPHA-PAR = 2.0 Q-COMP = 32399  
 POINT 1 V-REF = 199.62  
 COMPUTED FREQUENCY = 9.11, K = .0717

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	1	-24.585	-6.665	-5.807	-1.014	-3.355	-.348	-2.098
2	2	-.337	-.760	.123	.415	.317	.123	.083
3	3	-1.543	-2.354	.261	.080	.282	.121	.259
4	4	-.372	-.191	.149	.033	.140	.018	.092
5	5	-.828	-.275	-.049	-.035	.057	-.114	-.076
6	6	-.149	-.128	-.042	.037	-.015	.025	-.031
7	7	-.150	-.016	.014	-.028	.012	-.038	-.004
8	8	-.067	.018	-.033	.030	-.003	-.002	-.020
9	9							
10	10							

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	1	-.858	1.295	-.502	8.681	3.119	5.083	2.350
2	2	.377	.159	.396	.918	-1.064	.586	-4.464
3	3	.060	.057	.331	.252	.055	.107	.161
4	4	-.026	.031	.025	.049	.010	.045	.204
5	5	-.043	-.117	-.044	-.011	.060	.017	.017
6	6	-.007	.043	-.014	.011	-.080	-.094	-.003
7	7	-.002	-.010	-.006	-.080	.030	.008	-.019
8	8	-.037	-.006	-.002	.040	-.011	.056	-.005
9	9				-.011	.023	.013	-.033
10	10							

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	1	1.492	1.066	.696	.407	.625	.411	1.792
2	2	.287	.126	.246	.310	.209	.283	-.095
3	3	.061	.023	.397	.291	.187	.415	-.108
4	4	-.021	.023	.068	.042	.041	.283	.052
5	5	-.042	.034	.037	.026	.026	.077	.030
6	6	-.003	.034	-.036	-.052	-.100	.013	-.100
7	7	-.002	-.022	.022	-.007	.045	-.047	-.017
8	8	-.002	-.002	-.003	.028	-.032	.010	-.025
9	9			-.004	.000	.002	-.013	-.006
10	10			-.004	-.004	-.007	-.001	-.019



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 159 ALPHA-PCL = 6.0 PDP RUN-PI 31.04  
RUP 31 ALPHA-PAR = 2.0 O-COMP = 33399  
POINT 1 SIGMA = 90.0 V-REF = 199.62  
COMPUTED FREQUENCY = 9.11, K = .0717

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\* BLADE PRESSURES, PER RADIAN \*\*

X	CP	.012-UPPER PHI	.062-UPPER PHI	.146-UPPER PHI	.261-UPPER PHI	.392-UPPER PHI	.530-UPPER PHI	.661-UPPER PHI			
1	25	.559	195.11	5.895	199.90	3.373	185.91	1.742	159.07	1.817	129.19
2	879	100.20	173.30	.433	173.30	.340	23.16	.342	21.74	.474	25.81
3	2	.879	16.95	.273	16.95	.307	23.20	.277	22.15	.368	26.99
4	4	.335	35.11	.150	30.91	.142	7.29	.096	16.36	.085	42.35
5	6	.686	203.63	.060	250.05	.152	15.11	.137	46.68	.041	42.99
6	7	.314	77.28	.146	113.28	.049	248.11	.140	249.25	.131	250.40
7	8	.151	174.02	.029	246.71	.049	120.95	.168	110.25	.045	106.81
8	9	.659	165.10	.045	137.36	.034	255.11	.033	274.85	.013	255.72
9	10			.045	137.36	.030	172.92	.016	261.71	.014	206.12
10											

X	CP	.774-UPPER PHI	.865-UPPER PHI	.910-UPPER PHI	.012-LOWER PHI	.062-LOWER PHI	.143-LOWER PHI	.261-LOWER PHI			
1	1	.554	123.95	1.471	117.92	1.423	119.06	5.600	249.81	2.802	31.47
2	3	.355	26.93	.370	26.24	.378	26.24	.166	104.70	.323	321.47
3	4	.003	43.78	.081	39.94	.050	12.01	.230	62.16	.084	42.83
4	5	.040	49.25	.038	39.28	.061	99.92	.048	61.00	.030	51.81
5	6	.124	249.77	.129	250.04	.080	246.44	.095	251.56	.104	253.47
6	7	.032	108.91	.046	107.51	.032	239.25	.008	22.58	.024	100.29
7	8	.010	259.60	.037	255.47	.081	187.94	.058	198.77	.048	122.43
8	9	.009	217.62	.012	215.80	.046	256.06	.025	112.50	.008	28.75
9	10							.035	248.91	.014	257.87

X	CP	.392-LOWER PHI	.530-LOWER PHI	.661-LOWER PHI	.774-LOWER PHI	.860-LOWER PHI	.910-LOWER PHI		
1	1	.634	35.54	1.039	47.40	.805	75.11	471	119.29
2	3	.313	23.97	.433	25.25	.321	23.71	.219	26.54
3	4	.031	41.55	.080	31.57	.100	65.33	.358	40.00
4	5	.031	41.55	.045	33.47	.029	24.67	.042	32.07
5	6	.054	245.59	.118	258.30	.113	242.76	.114	245.12
6	7	.035	233.95	.036	109.70	.046	98.18	.044	103.80
7	8	.083	319.27	.005	148.50	.002	237.89	.031	255.07
8	9	.012	229.67	.007	233.50	.008	86.39	.014	225.51
9	10								



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 --- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 156 ALPHA-PCL = 6.0 POP KUH.PT 31.04  
KUM 31 ALPHA-RAR = 2.0 O-COMP = .32399  
POINT 1 SIGMA = 90. V-REF = 199.62  
COMPUTED FREQUENCY = 9.11, K E .0717

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012	.064	.148	.261	.392	.530	.661
N	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH
1	34.771	10.34	7.103	17.53	3.151	8.09	1.952
2	137	300.06	2.219	264.29	.121	225.81	2.850
3	3.073	51.94	.622	323.74	.337	35.06	358.76
4	390	207.58	1.84	155.21	.455	309.46	268.67
5	454	81.97	.526	107.05	.428	225.71	116.63
6	654	17.32	.347	60.27	.339	170.55	.017
7	159	263.43	.135	397.78	.228	120.70	.004
8	274	75.31	.083	150.28	.136	305.43	.008
9	190	2.39	.047	44.26	.015	196.74	.014
10	684	311.99	.030	323.20	.014	319.55	.016

X	.774	.850	.910	
N	DELCPH	PHI	DELCPH	
1	1.400	334.61	.601	296.84
2	122	236.62	.227	175.75
3	336	222.62	.618	177.73
4	119	118.48	.620	219.76
5	19	269.37	.507	346.66
6	18	118.35	.610	50.85
7	99	16.97	.021	341.25
8	14	184.23	.002	274.55
9	12	180.31	.003	125.27
10	004	341.43	.003	239.18

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	.125	.000	.125	.500	.100
GAP FRACTION	CP-MAG	PHI	CP-MAG	PHI	CP-MAG
1	2.171	51.93	3.355	8.75	11.793
2	.323	44.78	.174	178.14	1.464
3	.454	41.67	.666	26.75	1.599
4	.137	53.60	.157	351.95	.544
5	.061	81.23	.042	82.54	.057
6	.173	292.80	.180	262.14	.259
7	.067	149.51	.328	116.35	.131
8	.074	283.82	.058	254.09	.043
9	.027	22.54	.043	525.77	.014
10	.033	270.81	.044	226.92	.121

\*\*\* STABILITY PARAMETER

N	CM-MAG	PHIM
1	1.220	20.70
2	.045	300.39
3	.009	158.54
4	.009	86.24
5	.013	23.36
6	.007	291.44
7	.006	107.17
8	.005	121.50
9	.005	303.27
10		

N	CM-MAG	PHI
1	310	10.01
2	.024	269.21
3	.022	55.00
4	.040	160.80
5	.012	99.43
6	.023	43.67
7	.041	303.28
8	.019	133.53
9	.018	150.46
10		313.22

N	CM-MAG	PHI
1	1.662	166.42
2	.391	223.98
3	.456	235.59
4	.104	35.66
5	.053	42.60
6	.164	252.84
7	.062	106.44
8	.041	265.01
9	.022	294.17
10	.024	178.23

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2	.391	223.98
3	.456	235.59
4	.104	35.66
5	.053	42.60
6	.164	252.84
7	.062	106.44
8	.041	265.01
9	.022	294.17
10	.024	178.23

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCMT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 158 ALPHA-WCL = 6.0 POP RUN-PT 31.06  
 RUN 31 ALPHA-RAP = 2.0 O-COMP = 31951  
 POINT 33 SIGMA = 9.0 V-REF = 198.21  
 COMPUTED FREQUENCY = 15.53, K = .1231

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-2.851	-6.010	-3.539	-2.299	-1.884	-1.714	-1.352
2	.090	.035	.030	.064	.090	.091	.055
3	-2.197	-0.335	-0.236	-.054	-.066	-.036	-.008
4	.127	.048	.077	.040	.023	.033	.033
5	-.220	-.045	-.070	-.091	-.048	-.045	-.044
6	.342	.045	.006	-.013	.021	.033	.001
7	-.084	-.044	.005	.007	.015	.001	.004
8	-.067	-.062	-.004	-.005	-.009	.001	.010
9	.089	.017	-.017	-.006	.009	.002	.002
10							

X N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-1.068	-.878	-.763	8.354	4.739	3.147	2.103
2	.031	.037	.044	-.216	-.209	-.221	-.215
3	-.037	-.007	-.000	.097	.210	.038	-.228
4	.035	.013	.035	-.051	.136	.045	-.043
5	-.042	-.015	-.042	.050	.067	.037	-.052
6	.009	.009	.005	-.013	.006	.038	-.009
7	-.012	.011	.011	.015	.010	.039	.009
8	-.010	.013	.011	.017	.010	.011	.016
9	.001	.004	.001	-.017	.008	.011	.004
10							

X N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1.241	1.033	.471	.100	.239	.450
2	-.189	-.025	-.136	-.155	-.234	-.450
3	.045	.055	.037	.021	.044	.022
4	-.005	-.008	.038	-.029	.062	.036
5	.005	.008	-.002	.009	.046	.038
6	-.008	.000	.002	-.004	.014	.001
7	.007	.000	.015	.001	.001	.003
8	-.014	.006	.007	.002	.006	.002
9	.001	.000	.001	.000	.003	.004
10						

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWT PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 158 ALPHA-MCL = 6.0 PDP RUN-PT 31.06  
 RUN 31 ALPHA-BAS = 2.0 Q-COMP = 31.951  
 POINT 31 SIGMA = 90.0 V-REF = 198.21  
 COMPUTED FREQUENCY = 15.53, N = 1231  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	25.542	193.26	6.049	166.55	3.542	152.58	2.311	173.99	2.114	159.32	2.110	144.31
2	7.153	277.24	1.251	120.10	0.691	250.62	0.165	245.18	0.133	220.47	0.072	172.61
3	3.250	197.60	0.877	329.10	0.095	324.37	0.053	317.07	0.027	302.93	0.037	243.09
4	3.325	222.73	0.533	155.80	0.071	189.63	0.033	189.63	0.027	183.38	0.047	132.06
5	3.352	166.39	0.466	351.83	0.014	307.94	0.017	294.12	0.015	281.91	0.016	221.96
6	2.066	301.52	0.027	201.93	0.011	277.94	0.007	228.23	0.015	219.43	0.014	175.73
7	0.666	208.25	0.020	277.39	0.014	259.16	0.006	334.32	0.022	287.56	0.015	279.50
8	0.092	165.79	0.030	125.01	0.018	155.74	0.007	145.90	0.012	138.68	0.010	150.76

N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1.758	127.45	1.558	134.27	1.394	123.17	8.920	20.64	5.445	29.51	3.767	33.78
2	0.110	224.47	0.077	261.19	0.037	273.72	1.115	147.99	0.292	136.01	0.339	165.01
3	0.045	331.74	0.043	201.21	0.033	200.49	0.052	168.44	0.017	201.47	0.045	142.75
4	0.015	259.21	0.013	318.50	0.007	283.40	0.027	203.32	0.011	187.89	0.017	123.43
5	0.009	291.81	0.013	318.50	0.007	315.40	0.018	92.78	0.009	127.73	0.013	130.70
6	0.014	201.50	0.021	298.81	0.019	305.22	0.013	349.30	0.014	349.30	0.009	158.83
7	0.011	284.51	0.013	266.84	0.014	267.87	0.023	317.87	0.012	312.83	0.017	319.02
8	0.001	296.49	0.005	130.83	0.001	134.37						

N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1.906	49.37	1.871	56.49	1.328	69.19	1.178	85.13	0.960	104.50	1.031	114.39
2	0.241	190.90	0.266	220.20	0.076	187.26	0.162	189.67	0.213	252.53	0.117	209.94
3	0.045	352.63	0.055	189.12	0.047	322.56	0.064	227.22	0.067	342.11	0.037	287.28
4	0.013	188.84	0.017	313.46	0.029	193.84	0.010	155.73	0.022	307.45	0.040	198.40
5	0.005	170.44	0.017	273.53	0.015	265.33	0.010	247.88	0.006	349.84	0.014	306.01
6	0.008	356.97	0.001	66.51	0.010	175.02	0.003	274.38	0.006	357.29	0.003	290.16
7	0.015	296.28	0.023	290.93	0.016	295.67	0.020	278.38	0.014	288.29	0.018	293.23
8	0.002	24.43	0.003	99.55	0.002	341.01	0.007	127.26	0.005	121.70	0.006	128.65

OCWT PERIODICITY TEST  
MODE 1 -- CENTFF BLADE DATA, WALL STATIONS

FILE 158 ALPHA-MCL = 6.0 PDP RUN.PT 31.06  
 RUN 31 ALPHA-PAR = 2.0 Q-COMP = 31951  
 POINT 3 SIGMA = 90.0 V-REF = 198.21  
 COMPUTED FREQUENCY = 15.53, K = .1231

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	33.215	9.004	10.749	3.371	6.686	2.265	4.402	1.601	3.125	.736	2.747	.329	1.824	-.286
2	3.07	-1.941	-.081	-.795	-.190	-.185	-.151	-.069	-.099	-.051	-.114	-.187	-.082	-.027
3	2.096	-.063	-.175	-.298	-.012	-.065	-.026	-.032	-.045	-.027	-.020	-.006	-.082	-.020
4	-.377	-.232	-.062	-.057	-.033	-.047	-.003	-.038	-.022	-.021	-.004	-.012	-.004	-.007
5	-.188	-.093	-.018	-.048	-.016	-.001	-.039	-.000	-.001	-.002	-.019	-.000	-.004	-.004
6	-.316	-.093	-.056	-.005	-.011	-.007	-.011	-.033	-.026	-.019	-.005	-.005	-.001	-.012
7	-.085	-.154	-.011	-.009	-.013	-.042	-.014	-.019	-.026	-.019	-.001	-.008	-.018	-.057
8	-.081	-.027	-.016	-.009	-.013	-.010	-.014	-.004	-.014	-.013	-.001	-.009	-.000	-.019
9	-.081	-.025	-.007	-.013	-.014	-.001	-.010	-.013	-.000	-.007	-.001	-.007	-.000	-.006
10	-.026	-.034	-.026	-.034	-.024	-.014	-.009	-.005	-.012	-.007	-.008	-.002	-.003	-.001

X	.774		.866		.913		.913		.913		.913		.913	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	1.158	-.220	-.638	-.358	-.342	-.173	-.173	-.173	-.173	-.173	-.173	-.173	-.173	-.173
2	-.027	-.087	-.042	-.145	-.021	-.031	-.031	-.031	-.031	-.031	-.031	-.031	-.031	-.031
3	-.043	-.003	-.017	-.016	-.001	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002
4	-.022	-.043	-.016	-.007	-.004	-.004	-.004	-.004	-.004	-.004	-.004	-.004	-.004	-.004
5	-.016	-.001	-.006	-.005	-.005	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002
6	-.007	-.010	-.011	-.006	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002
7	-.004	-.014	-.004	-.006	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002	-.002
8	-.000	-.014	-.005	-.008	-.008	-.007	-.007	-.007	-.007	-.007	-.007	-.007	-.007	-.007
9	-.000	-.014	-.005	-.008	-.008	-.007	-.007	-.007	-.007	-.007	-.007	-.007	-.007	-.007
10	-.004	-.004	-.004	-.000	-.003	-.004	-.004	-.004	-.004	-.004	-.004	-.004	-.004	-.004

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.125		.125		.125		.125		.125		.125	
	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	-.698	2.133	-.202	2.835	1.119	-.11	-.870	-1.4741	-1.642	592	1.163	-7.772	1.133	-.399
2	-.295	-.040	-.047	-.086	-.071	-.071	-.869	-1.248	-.092	-.147	-.539	-.476	-.028	-.051
3	-.040	-.070	-.033	-.066	-.089	-.089	-.309	-.451	-.038	-.015	-.197	-.476	-.006	-.002
4	-.070	-.099	-.099	-.101	-.032	-.032	-.108	-.073	-.061	-.001	-.246	-.142	-.004	-.002
5	-.007	-.009	-.009	-.009	-.009	-.009	-.038	-.038	-.007	-.009	-.020	-.010	-.002	-.005
6	-.007	-.009	-.009	-.009	-.009	-.009	-.038	-.038	-.007	-.009	-.020	-.010	-.002	-.005
7	-.007	-.009	-.009	-.009	-.009	-.009	-.038	-.038	-.007	-.009	-.020	-.010	-.002	-.005
8	-.007	-.009	-.009	-.009	-.009	-.009	-.038	-.038	-.007	-.009	-.020	-.010	-.002	-.005
9	-.007	-.009	-.009	-.009	-.009	-.009	-.038	-.038	-.007	-.009	-.020	-.010	-.002	-.005
10	-.013	-.005	-.005	-.000	-.008	-.008	-.067	-.044	-.009	-.007	-.008	-.029	-.004	-.003

\*\*\* STABILITY PARAMETER

\* XI = -.3991 \*  
 \* \*\*\*\*\*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 158 ALPHA-MCL = 6.0 POP RUN.PT 31.06  
 RUN 31 ALPHA-PAR = 2.0 Q-COMP = 31951  
 POINT 3 SIGMA = 9.0 V-REF = 198.21  
 COMPUTED FREQUENCY = 15.53, M = .1231

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT PER RADIAN \*\*\*

X =	.012 PHI		.562 PHI		.149 PHI		.261 PHI		.392 PHI		.530 PHI		.661 PHI	
	N	DELCPM	N	DELCPM	N	DELCPM	N	DELCPM	N	DELCPM	N	DELCPM	N	DELCPM
1	34.414	15.17	11.265	17.41	7.660	18.72	4.684	19.98	3.211	13.25	2.706	6.83	1.846	351.09
2	1.565	278.98	.799	204.16	.263	224.81	.166	204.51	.111	207.39	.219	238.66	.086	198.40
3	.1234	49.60	.346	120.41	.667	100.70	.041	50.49	.052	330.13	.021	162.15	.084	346.14
4	.382	189.95	.091	47.26	.038	123.75	.039	85.55	.030	318.13	.025	179.06	.008	302.85
5	.296	150.97	.051	248.96	.018	248.96	.039	359.69	.012	278.83	.019	47.59	.007	39.17
6	.329	342.65	.056	174.91	.015	207.71	.035	288.69	.012	144.49	.008	96.23	.012	269.04
7	.176	118.81	.059	97.87	.045	196.67	.024	129.10	.019	42.16	.008	93.87	.020	159.71
8	.219	25.81	.029	57.60	.017	37.90	.014	14.28	.007	89.90	.009	310.13	.011	89.71
9	.081	3.75	.015	02.50	.014	3.70	.016	309.46	.007	328.64	.009	345.49	.011	324.60
10	.113	339.53	.042	307.26	.027	330.96	.010	331.61	.014	328.64	.009	345.49	.009	347.41

X =	.774 PHI		.560 PHI		.910 PHI		PHIN		CM-MAG		PHIM			
	N	DELCPM	N	DELCPM	N	DELCPM	N	DELCPM	N	DELCPM	N	DELCPM		
1	1.198	345.02	7.32	330.74	3.57	331.01	4	305	142.29	1	202	19.40		
2	.054	163.00	.146	199.78	.182	189.70	.123	142.30	.243	60.61	.058	272.62		
3	.053	163.87	.018	338.85	.003	291.72	.015	92.14	.009	314.90	.006	157.89		
4	.016	193.87	.007	140.53	.006	38.46	.009	314.17	.013	314.17	.004	309.15		
5	.015	139.94	.012	151.68	.004	244.10	.021	128.80	.019	156.25	.005	113.75		
6	.007	187.26	.014	102.01	.004	120.92	.019	156.25	.009	344.70	.002	325.46		
7	.015	107.19	.014	102.01	.005	127.54	.013	331.17	.009	344.70	.005	325.46		
8	.010	271.68	.005	359.87	.005	127.54	.013	331.17	.009	344.70	.005	325.46		
9	.006	133.49	.001	25.92	.005	127.54	.013	331.17	.009	344.70	.005	325.46		
10														

\*\*\* STABILITY PARAMETER

WALL NO.	.125		.000		.125		.500		.125		.125		PHI
	N	CP-MAG	N	CP-MAG	N	CP-MAG	N	CP-MAG	N	CP-MAG	N	CP-MAG	
1	2.244	71.86	5.648	21.53	11.997	128.34	1.935	162.18	7.858	278.51	7.858	278.51	
2	.358	214.33	.806	207.09	1.483	302.91	.174	308.95	.667	143.92	.667	143.92	
3	.071	221.00	.112	39.38	.903	195.91	.019	308.95	.515	112.42	.515	112.42	
4	.052	339.94	.106	162.24	.547	304.90	.046	326.09	.257	343.21	.257	343.21	
5	.121	239.64	.130	162.24	.130	213.90	.061	179.04	.144	279.71	.144	279.71	
6	.009	359.26	.035	306.89	.140	344.33	.012	307.59	.023	123.21	.023	123.21	
7	.011	127.63	.008	330.55	.057	14.86	.013	307.69	.075	282.90	.075	282.90	
8	.009	213.83	.029	295.37	.041	189.06	.021	293.21	.049	270.49	.049	270.49	
9	.016	235.83	.005	87.96	.026	268.04	.012	289.78	.020	106.07	.020	106.07	
10	.014	20.43	.005	87.96	.080	146.82	.011	144.17	.031	106.07	.031	106.07	

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 101 ALPHA-MCL = 6.7 P/P RUMPT 31.68  
 POINT 5 ALPHA-CAB = 2.7 C-COMP = 37.68  
 3 SIGMA = 9.1 V-REF = 237.89  
 COMPUTED FREQUENCY = 17.19, K = 15.74

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

N	X = 012-UPPER CPREAL CPIMAG	062-UPPER CPREAL CPIMAG	148-UPPER CPREAL CPIMAG	261-UPPER CPREAL CPIMAG	392-UPPER CPREAL CPIMAG	530-UPPER CPREAL CPIMAG	661-UPPER CPREAL CPIMAG	012-LOWER CPREAL CPIMAG	148-LOWER CPREAL CPIMAG	261-LOWER CPREAL CPIMAG	392-LOWER CPREAL CPIMAG	530-LOWER CPREAL CPIMAG	661-LOWER CPREAL CPIMAG
1	-25.776	-6.232	-3.731	-2.454	-2.037	-1.888	-1.481	0.368	0.257	0.229	0.276	0.229	1.958
2	3.734	0.291	0.137	0.107	0.073	0.067	0.122	0.134	0.051	0.051	0.057	0.051	0.049
3	0.137	0.046	0.025	0.025	0.017	0.016	0.011	0.014	0.007	0.007	0.007	0.007	0.007
4	0.046	0.018	0.010	0.010	0.007	0.006	0.004	0.004	0.002	0.002	0.002	0.002	0.002
5	0.018	0.009	0.005	0.005	0.003	0.003	0.002	0.002	0.001	0.001	0.001	0.001	0.001
6	0.009	0.004	0.002	0.002	0.001	0.001	0.001	0.001	0.000	0.000	0.000	0.000	0.000
7	0.004	0.002	0.001	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
8	0.002	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
9	0.001	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
10	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000



MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 167      ALPHA-MCL = 6.0      POP      RUN-PT = 33683  
 POINT 5      ALPHA-RAB = 6.0      G-COMP = 33683  
 SIGMA = 6.0      V-REF = 200.49  
 COMPUTED FREQUENCY = 19.19, K = .1504

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	25	.012	193.76	3.755	136.58	2.456	182.24	2.064	170.75	2.067	155.99	1.865	192.52
2	2917	.012	193.76	3.755	136.58	2.456	182.24	2.064	170.75	2.067	155.99	1.865	192.52
3	2917	.012	193.76	3.755	136.58	2.456	182.24	2.064	170.75	2.067	155.99	1.865	192.52
4	2917	.012	193.76	3.755	136.58	2.456	182.24	2.064	170.75	2.067	155.99	1.865	192.52
5	2917	.012	193.76	3.755	136.58	2.456	182.24	2.064	170.75	2.067	155.99	1.865	192.52
6	2917	.012	193.76	3.755	136.58	2.456	182.24	2.064	170.75	2.067	155.99	1.865	192.52
7	2917	.012	193.76	3.755	136.58	2.456	182.24	2.064	170.75	2.067	155.99	1.865	192.52
8	2917	.012	193.76	3.755	136.58	2.456	182.24	2.064	170.75	2.067	155.99	1.865	192.52
9	2917	.012	193.76	3.755	136.58	2.456	182.24	2.064	170.75	2.067	155.99	1.865	192.52
10	2917	.012	193.76	3.755	136.58	2.456	182.24	2.064	170.75	2.067	155.99	1.865	192.52

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1.675	199.17	137.79	1.230	137.36	1.147	137.02	5.253	136.67	3.557	136.46	2.533	136.24
2	1.445	255.49	8.46	1.346	259.32	1.147	137.02	5.253	136.67	3.557	136.46	2.533	136.24
3	0.228	152.48	33.07	0.230	145.73	0.422	137.16	1.255	123.66	0.357	206.35	0.431	228.51
4	0.113	121.97	149.07	0.113	145.73	0.422	137.16	1.255	123.66	0.357	206.35	0.431	228.51
5	0.013	118.30	123.82	0.013	110.61	0.033	148.66	0.023	198.62	0.016	160.69	0.010	110.74
6	0.016	173.82	33.79	0.016	38.46	0.024	194.28	0.017	219.23	0.018	230.75	0.010	258.86
7	0.009	199.00	195.10	0.009	89.86	0.027	223.45	0.017	219.23	0.018	230.75	0.010	258.86

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1.667	48.18	56.33	1.031	71.55	0.937	91.69	0.332	119.12	0.215	129.62	0.215	129.62
2	0.554	244.87	245.19	0.196	53.79	0.097	327.79	0.047	220.29	0.028	252.16	0.028	252.16
3	0.031	157.70	343.44	0.026	338.29	0.044	148.63	0.039	153.68	0.014	146.59	0.011	112.45
4	0.011	192.86	148.31	0.029	136.29	0.018	89.68	0.009	101.66	0.011	194.80	0.011	194.80
5	0.013	80.17	99.86	0.016	133.19	0.019	119.63	0.009	117.70	0.011	112.45	0.011	112.45
6	0.006	274.33	329.95	0.004	327.55	0.007	281.91	0.003	323.51	0.004	308.65	0.004	308.65
7	0.002	208.82	347.59	0.005	46.17	0.007	255.51	0.003	49.49	0.002	60.82	0.002	60.82



ORIGINAL PAGE IS  
OF POOR QUALITY

OCMI PERIODICITY TFST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 167 ALPHA-MCL = 9.0 POP RUN.PI = 31.08  
RUN 31 ALPHA-PAR = 9.0 Q-COMP = 32.683  
POINT 5 SIGMA = 9.0 V-DEF = 200.49  
COMPUTED FREQUENCY = 19.19, K = .1534  
PHASE ANGLE

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	34.623	14.07	11.404	16.83	7.134	18.65	4.729	21.08	3.272	16.13	2.812	9.85	1.821	356.66
2	1.112	251.93	.765	152.92	.245	209.42	.157	187.70	.107	192.12	.067	231.16	.037	183.02
3	2.876	159.83	.089	175.94	.050	182.78	.042	197.48	.053	177.66	.024	231.22	.008	321.45
4	.250	356.49	.049	242.15	.022	330.54	.042	348.41	.014	249.50	.021	316.19	.008	300.63
5	.197	359.19	.049	182.37	.022	130.71	.011	278.59	.012	323.53	.008	192.73	.003	300.81
6	.124	33.25	.061	195.67	.034	227.18	.011	252.44	.025	323.54	.009	12.94	.003	374.28
7	.094	165.05	.032	144.50	.016	227.64	.026	272.29	.006	291.56	.004	257.71	.004	265.05
8	.063	219.49	.044	232.20	.033	244.80	.026	254.42	.027	242.82	.022	251.34	.010	297.22

X	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	1.192	354.57	.624	341.24	.389	349.73	.154	177.87	.436	4.23	1.207	18.32	.053	249.48
2	.077	184.70	.048	173.46	.016	230.97	.009	347.45	.107	55.20	.006	131.14	.003	131.14
3	.077	142.64	.013	120.55	.003	337.33	.009	346.50	.004	17.98	.002	337.96	.002	337.96
4	.016	19.36	.009	359.41	.006	352.00	.002	280.40	.013	19.98	.004	12.51	.003	12.51
5	.003	126.26	.004	327.40	.002	280.40	.006	291.34	.008	233.58	.003	206.32	.003	206.32
6	.003	301.24	.012	335.71	.004	291.34	.004	215.60	.008	249.52	.005	61.43	.005	61.43
7	.007	322.58	.007	335.65	.006	215.60	.006		.019	249.52	.005	228.60	.005	228.60

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	1.729	174.35	2.743	17.93	2.82	158.71	2.064	174.51	8.427	274.58	1.125	47	.427	274.58
2	.133	266.78	.059	223.42	.784	233.81	.152	165.45	.744	102.08	1.125	48	.744	102.08
3	.093	232.68	.076	261.26	.574	132.65	.348	147.90	.268	111.62	1.125	49	.268	111.62
4	.054	167.49	.021	162.43	.085	104.26	.022	108.20	.081	127.86	1.125	50	.081	127.86
5	.126	333.68	.023	336.93	.054	104.26	.019	103.24	.048	114.86	1.125	51	.048	114.86
6	.112	151.34	.019	234.29	.047	234.29	.010	253.65	.019	114.86	1.125	52	.019	114.86
7	.004	257.20	.009	201.82	.027	286.80	.010	267.33	.023	208.33	1.125	53	.023	208.33

\*\*\* STABILITY PARAMETER

\* XI = -.3793

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 174 ALPHA-MCL = 6.0 PDP RUN-PT 34.01  
 RUN 34 ALPHA-PAR = 2.0 O-COMB = 33049  
 POINT 1 SIGMA = 135. V-REF = 201.61  
 COMPUTED FREQUENCY = 9.10, K = .0709

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	012-UPPER CPREAL CPIMAG	062-UPPER CPREAL CPIMAG	140-UPPER CPREAL CPIMAG	261-UPPER CPREAL CPIMAG	392-UPPER CPREAL CPIMAG	530-UPPER CPREAL CPIMAG	661-UPPER CPREAL CPIMAG
1	-25	.594	-2.627	.280	-.017	-.020	.163	.419
2	-.045	-1.825	-.267	-.168	-.511	.122	-.109	-.445
3	.346	-.300	-.237	-.215	-.186	-.343	-.273	-.178
4	-.449	-.300	-.123	-.075	-.159	-.046	-.097	-.245
5	-.161	-.129	-.103	-.070	-.035	-.059	-.063	-.044
6	-.216	-.018	-.103	-.047	-.038	-.028	-.017	-.024
7	-.008	-.287	-.033	-.029	-.015	-.006	-.001	-.035
8	-.114	-.183	-.006	-.009	-.022	-.005	-.001	-.006
9								
10								

X	N	774-UPPER CPREAL CPIMAG	860-UPPER CPREAL CPIMAG	910-UPPER CPREAL CPIMAG	012-LOWER CPREAL CPIMAG	062-LOWER CPREAL CPIMAG	140-LOWER CPREAL CPIMAG	261-LOWER CPREAL CPIMAG
1	-2	.158	-.741	-.571	.393	.603	.619	2.392
2	-.138	-.161	-.463	-.277	-.180	-.026	-.006	-.031
3	-.025	-.228	-.253	-.090	-.021	-.491	-.224	-.029
4	-.056	-.023	-.004	-.063	-.062	.133	-.041	-.058
5	-.016	-.019	-.026	-.008	-.006	-.101	-.076	-.057
6	-.003	-.022	-.001	-.008	-.003	-.005	-.027	-.066
7								-.010
8								-.044
9								-.007
10								-.008

X	N	392-LOWER CPREAL CPIMAG	530-LOWER CPREAL CPIMAG	661-LOWER CPREAL CPIMAG	774-LOWER CPREAL CPIMAG	860-LOWER CPREAL CPIMAG	910-LOWER CPREAL CPIMAG
1	1	.334	1.015	.306	-.056	-.402	-.737
2	-.059	-.325	-.242	-.110	-.309	-.280	-.120
3	-.056	-.006	-.174	-.009	-.073	-.009	-.123
4	-.007	-.015	-.249	-.013	-.026	-.015	-.046
5	-.071	-.010	-.010	-.061	-.060	-.036	-.016
6	-.011	-.010	-.012	-.019	-.017	-.020	-.004
7			-.006	-.045	-.005	-.016	-.001
8			-.006	-.001	-.004	-.001	-.001
9							
10							

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 174 ALPHA-MCL = 6.0 POP RUN-PT 34.01  
 RUN 34 ALPHA-BAR = 2.0 Q-COMP = 33049  
 POINT 1 SIGMA = 135. V-REF = 201.61  
 I COMPUTED FREQUENCY = 9.10, K = .0709  
 \*\* FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\* BLADE PRESSURES, PER RADIAN \*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	25	.734	185.99	.017	180.29	.871	176.74	.588	171.03	2.907	165.87	.735	162.07
2	33	.775	205.47	.481	290.251	.534	286.96	.557	282.60	.458	283.83	.466	285.07
3	4	.376	205.56	.373	210.334	.339	215.39	.246	208.98	.325	212.07	.317	211.09
4	5	.572	307.19	.150	177.127	.176	183.16	.046	174.98	.264	173.28	.255	171.47
5	6	.207	213.70	.031	308.107	.080	323.16	.062	349.61	.076	1725.06	.068	1731.12
6	7	.209	141.22	.048	164.805	.048	166.80	.023	159.84	.030	126.84	.030	119.98
7	8	.359	169.89	.024	147.726	.048	167.82	.027	159.525	.020	166.62	.036	173.75
8	9	.148	272.63	.054	137.511	.023	254.06	.018	250.88	.020	267.12	.019	267.26
9	10	.148	166.19	.010	197.458	.018	154.87	.015	254.95	.012	247.12	.012	239.68

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	2	.287	187.66	1.665	169.697	9.533	9.81	5.754	13.33	3.791	17.33	.569	24.42
2	3	.308	211.64	.327	212.333	1.814	167.39	.529	158.07	.244	202.84	.264	208.77
3	4	.246	177.09	.263	185.133	2.03	83.46	.347	167.41	.240	299.21	.244	103.87
4	5	.053	333.26	.063	183.90	.082	182.47	.391	207.03	.062	182.21	.068	185.48
5	6	.025	328.73	.034	331.80	.099	356.79	.101	275.54	.076	342.38	.068	339.07
6	7	.015	175.58	.042	184.804	.049	279.88	.029	250.20	.008	190.84	.013	177.35
7	8	.018	280.98	.017	276.44	.071	182.23	.065	183.88	.053	189.56	.047	201.63
8	9	.008	280.98	.007	270.87	.035	226.11	.021	148.88	.021	159.38	.014	171.63
9	10					.016	26.11	.006	32.12	.010	249.38	.009	173.28

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI
1	1	.494	27.00	.593	58.97	.450	97.13	.407	189.77	.820	157.94	.620	157.94
2	2	.246	210.50	.228	227.68	.357	283.93	.333	212.74	.259	207.55	.261	207.55
3	3	.056	186.60	.052	186.42	.075	189.36	.076	194.27	.061	186.25	.048	186.25
4	4	.017	191.92	.016	227.21	.062	353.97	.070	328.73	.048	344.27	.035	344.27
5	5	.042	193.09	.034	220.39	.045	186.42	.038	204.86	.035	189.86	.033	189.86
6	6	.014	192.93	.016	204.30	.016	216.14	.012	241.82	.003	242.51	.003	242.51
7	7	.007	46.63	.006	114.88	.003	67.54	.001	41.82	.003	1275.11	.003	1275.11



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 174 ALPHA-MCL = 6.0 PDP RUN,PT 34.01  
JN 34 ALPHA-RAR = 2.0 Q-COMP = 33049  
JOINT 1 SIGMA = 135. V-REF = 201.61  
COMPUTED FREQUENCY = 9.10. K = .0709

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X N	.012		.062		.148		.261		.392		.530		.661	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	35.251	7.02	12.471	8.56	7.722	8.39	5.214	8.16	3.594	3.72	3.634	359.57	2.927	353.45
2	1.932	273.14	4.83	188.45	1.145	148.16	1.147	152.23	.164	112.40	.098	263.77	.121	395.29
3	4.772	116.88	2573	56.42	.097	82.60	.089	77.82	.146	207.28	.077	6.90	.119	357.86
4	.172	332.54	.013	187.40	.031	187.40	.023	357.32	.014	226.81	.031	193.76	.027	343.55
5	.293	93.67	.132	66.16	.051	66.16	.027	43.02	.012	293.85	.036	68.69	.016	229.82
6	.120	326.75	.136	339.22	.034	339.22	.037	356.94	.012	227.19	.010	317.94	.004	128.80
7	.324	296.49	.045	214.97	.041	214.97	.057	254.79	.024	236.53	.020	134.43	.021	265.50
8	.212	98.61	.055	80.03	.054	80.03	.025	107.34	.024	145.84	.018	134.43	.023	132.02
9	.160	349.79	.024	23.54	.020	23.54	.025	354.05	.025	167.30	.018	61.65	.018	41.90

X N	.774		.860		.910		CM-MAG		PHIN		N	CM-MAG		PHI
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI		CM-MAG	PHI	
1	2.123	352.04	1.508	333.79	.856	347.15	5.145	4.04	1.145	225.23	1	1.213	10.16	
2	.866	254.42	.191	203.86	.304	192.19	.190	239.04	.190	239.04	2	.071	262.18	
3	.050	170.80	.045	332.58	.073	49.66	.045	59.86	.045	59.86	3	.012	41.89	
4	.024	219.21	.011	298.42	.036	204.01	.010	18.06	.010	18.06	4	.007	75.63	
5	.022	177.05	.011	295.16	.003	340.20	.022	53.87	.022	53.87	5	.006	99.82	
6	.004	155.90	.009	257.81	.005	107.61	.017	298.17	.017	298.17	6	.006	32.18	
7	.012	216.91	.015	272.70	.011	398.85	.031	256.06	.031	256.06	7	.007	297.00	
8	.011	147.15	.008	139.92	.002	99.09	.027	110.43	.027	110.43	8	.004	265.28	
9	.011	192.39	.008	83.92	.002	73.97	.018	133.26	.018	133.26	9	.004	359.04	
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\*\*\* STABILITY PARAMETER

\* XI = -.2141 \*  
\* \*\*\*\*\*

WALL NO. GAP FRACTION	N	.125		.500		1.125	
		CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2	.077	39.48	3.015	11.92	8.350	322.60
2	3	.413	294.23	.555	268.11	.904	249.24
3	4	.381	223.10	.321	211.91	.685	249.92
4	5	.318	132.99	.327	109.52	.490	122.47
5	6	.075	217.07	.081	169.23	.205	179.07
6	7	.126	10.77	.077	312.49	.207	25.07
7	8	.020	161.59	.055	205.57	.099	83.30
8	9	.041	273.50	.074	209.63	.022	81.39
9	10	.015	2.16	.029	190.63	.033	133.54
10		.020	1.16	.012	18.11	.025	178.10

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 176 ALPHA-MCL = 6.0 PDP RUN-PT 34.03  
RUN 34 ALPHA-BAR = 2.0 Q-COMP = 33064  
POINT 3 SIGMA = 1.55 V-PREF = 201.66  
COMPUTED FREQUENCY = 15.49, K = .1207

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\* BLADE PRESSURES, PER RADIAN \*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-25	.424	-2.610	-4.11	-2.787	-2.603	-2.731	-2.493
2	-.020	.568	-.029	.189	-.018	.048	-.054	.444
3	-3.676	-.908	.085	.041	.047	-.001	.084	.258
4	-.310	-.343	-.067	.036	.011	.032	.027	.088
5	-.024	.251	-.037	.024	-.001	.005	-.040	.193
6	-.128	.06	.033	.021	.010	.004	.015	.028
7	-.061	.081	.007	.011	.008	.007	.019	.003
8	-.026	.143	.010	.008	.008	.012	.014	.009
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X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-2	.074	.494	-1.411	9.395	1.650	1.432	2.412
2	-.037	.259	.241	.033	.320	-.751	.274	.126
3	.080	.084	.046	.083	.250	.018	.274	.092
4	.043	.043	.101	.064	.064	-.018	.039	.063
5	-.041	.064	-.066	-.027	-.053	-.023	-.076	-.056
6	.017	.023	.011	.027	-.019	.004	.004	-.000
7	.011	.018	.002	.025	-.001	.021	.001	.000
8	.005	.018	.005	.037	.041	.017	.015	.023
9	.021	.011	.005	.017	.005	.010	.005	.001
10								

X	N	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG
1	1	.365	.762	-.341	-.043	-.006	-.600
2	-.060	.261	.280	.023	.063	.007	.244
3	.090	.071	.001	.026	.032	.007	.104
4	.024	.059	.090	.064	.046	.063	.034
5	-.003	.009	-.061	.025	.031	-.061	.111
6	.013	-.003	-.006	.008	.006	.000	-.011
7	.011	.013	.019	.011	.008	.000	.019
8	.003	.002	.003	.015	.007	.003	.010
9	-.002	.004	.003	.004	.007	.003	.004
10							



MODE 1 -- OCMI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 176 ALPHA-MCL = 6.0 PDP RUNPT 34.03  
 RUN 34 ALPHA-BAR = 2.0 Q-COMP = 33064  
 POINT 3 SIGMA = 135. V-REF = 201.66  
 COMPUTED FREQUENCY = 15.49, K = .1207  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP-MAG	UPPER PHI	148-UPPER CP-MAG	UPPER PHI	261-UPPER CP-MAG	UPPER PHI	392-UPPER CP-MAG	UPPER PHI	530-UPPER CP-MAG	UPPER PHI	661-UPPER CP-MAG	UPPER PHI	
1	25	.558	185.86	6.714	193.51	3.969	183.10	2.788	181.45	2.907	176.47	2.562	166.66
2	3	.569	189.01	.191	198.68	.638	193.41	.096	190.81	.134	191.80	.256	199.62
3	3	.786	288.07	.094	25.83	.133	60.51	.059	37.46	.134	191.81	.256	199.62
4	5	.659	288.07	.216	91.39	.036	28.18	.071	72.46	.134	80.61	.101	74.51
5	6	.462	227.92	.116	235.02	.084	295.22	.071	269.16	.489	300.16	.081	300.70
6	7	.184	94.11	.048	296.60	.029	60.38	.029	109.20	.078	295.65	.024	115.80
7	8	.145	57.94	.048	214.11	.005	88.23	.005	117.73	.013	329.83	.017	355.78
8	9	.145	57.94	.019	79.26	.017	46.90	.017	46.90	.013	329.83	.017	355.78
9	10	.146	100.42	.013	301.06	.011	319.90	.011	319.90	.013	329.83	.016	329.78
10				.029	69.74	.036	82.85	.037	90.32	.013	87.90	.023	88.63

X	CP-MAG	UPPER PHI	148-UPPER CP-MAG	UPPER PHI	261-UPPER CP-MAG	UPPER PHI	392-UPPER CP-MAG	UPPER PHI	530-UPPER CP-MAG	UPPER PHI	661-UPPER CP-MAG	UPPER PHI	
1	2	.132	166.58	1.721	167.27	1.449	166.87	9.539	9.96	5.798	14.30	2.627	23.37
2	3	.262	98.80	.096	28.40	.092	25.31	.250	283.65	.280	78.26	.104	101.20
3	3	.096	33.80	.110	66.83	.067	65.80	.159	2.62	.159	14.24	.093	8.94
4	5	.105	71.91	.079	304.39	.053	347.95	.076	14.81	.060	14.81	.060	61.94
5	6	.077	303.26	.020	121.59	.025	215.08	.005	227.33	.005	227.33	.005	138.33
6	7	.025	115.11	.019	327.60	.025	356.57	.021	35.86	.021	35.86	.022	57.16
7	8	.017	32.79	.015	37.71	.048	58.77	.032	58.67	.032	58.67	.032	189.15
8	9	.017	32.79	.013	335.88	.018	164.52	.010	168.47	.010	168.47	.003	189.15
9	10	.021	95.03	.018	94.87	.021	211.85	.010	170.04	.010	170.04	.010	138.05

X	CP-MAG	UPPER PHI	530-UPPER CP-MAG	UPPER PHI	661-UPPER CP-MAG	UPPER PHI	774-UPPER CP-MAG	UPPER PHI	860-UPPER CP-MAG	UPPER PHI	910-UPPER CP-MAG	UPPER PHI	
1	1	.569	22.18	1.287	36.53	.678	58.73	.489	95.08	.612	171.43	.337	144.53
2	3	.090	66.94	.111	359.69	.165	56.20	.247	104.68	.036	85.98	.336	136.53
3	4	.064	292.09	.068	296.03	.115	56.14	.152	39.20	.036	28.02	.110	177.22
4	5	.009	95.23	.015	296.24	.102	305.48	.061	293.67	.038	296.87	.073	297.79
5	6	.017	349.23	.020	342.68	.011	306.57	.021	65.89	.011	123.05	.019	1351.84
6	7	.017	349.23	.015	40.94	.009	351.22	.018	17.56	.008	15.02	.010	235.02
7	8	.004	317.28	.005	328.80	.016	343.87	.004	39.17	.008	339.64	.009	335.02
8	9	.008	106.58	.005	104.30	.018	98.81	.019	93.51	.019	92.94	.019	90.62
10													

MODE 1 --- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 176 ALPHA-MCL = 6.0 PDP RUN.PT 34.03  
 RUN 34 ALPHA-BAR = 2.0 Q-COMP = 33064  
 POINT 3 SIGMA = 135. V-REF = 201.66  
 COMPUTED FREQUENCY = 15.49, K = .1207

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	34.819	4.259	12.319	1.843	7.617	1.434	5.199	1.113	3.967	602	3.778	.317	2.835	-.041
2	.234	-1.319	.041	-1.165	-.041	.134	-.050	-.197	-.012	.136	-.027	.049	.083	-.115
3	.926	.609	.160	-.177	.013	-.050	.033	.048	.091	-.032	.027	-.015	.037	-.070
4	.108	-.300	-.036	.070	-.015	.012	.005	.021	-.014	-.012	-.014	.012	.038	-.017
5	.077	-.102	-.064	-.022	.035	-.004	.005	-.024	-.004	-.040	-.014	-.013	.001	-.027
6	.153	-.027	.014	.512	.002	-.004	.014	-.004	-.024	-.006	-.006	.013	-.007	-.014
7	.079	-.086	-.017	.014	-.011	.032	.002	.009	-.001	.020	-.006	.013	-.006	-.007
8	.009	-.154	-.020	-.025	-.011	-.033	-.007	-.030	-.003	-.015	-.004	-.013	-.009	-.014
9														
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X	.774		.860		.910		.910		.910		.910		.910	
N	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	2.031	-.010	1.073	-.288	.811	.099	5.075	.654	1.198	.213	1.010	.198	.014	-.022
2	.026	-.020	.043	-.143	.211	-.021	-.027	.015	.065	-.022	.022	.065	.003	.005
3	.054	-.032	.029	-.019	.001	-.013	.031	.011	.008	.005	.003	.008	.002	.005
4	.019	-.008	.002	-.005	-.007	-.008	.012	.017	.002	.002	.002	.002	.002	.002
5	.009	-.005	.014	-.008	.002	-.009	.002	-.006	.002	.002	.002	.002	.002	.002
6	.006	-.008	.009	-.010	.002	-.002	.003	.011	.003	.003	.003	.003	.003	.003
7	.001	-.004	.001	-.002	.002	-.002	.002	.008	.002	.002	.002	.002	.002	.002
8	.001	-.003	.002	-.001	.002	-.002	.002	.008	.002	.002	.002	.002	.002	.002
9	.001	-.003	.002	-.001	.002	-.002	.002	.008	.002	.002	.002	.002	.002	.002
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\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	.125		.125		.125		.125		.125		.125		.125	
GAP FRACTION	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	
1	1.536	1.407	.494	3.144	.547	-.13	.034	-.828	-.465	.107	7.059	-5.591		
2	.250	.112	.093	.170	.095	-.285	-.079	-1.668	.015	.153	-.997	-.189		
3	.063	.007	.018	.055	.085	-.596	-.324	.050	.119	.050	.048	.433		
4	.093	-.039	.010	.018	.093	-.073	.195	-.090	.047	.119	-.127	.029		
5	.012	-.016	.012	.010	.008	-.071	.089	.023	.015	.023	.110	.054		
6	.002	-.002	.002	.002	.002	-.006	.006	.009	.032	.009	.045	.071		
7	.002	-.002	.002	.002	.002	-.002	.002	.003	.020	.003	.063	.011		
8	.002	-.002	.002	.002	.002	-.002	.002	.003	.008	.003	.005	.012		
9	.002	-.002	.002	.002	.002	-.002	.002	.003	.008	.003	.005	.012		
10														

\*\*\* STABILITY PARAMETER \*\*\*

\* XI = -.2132 \*

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- CENTER PERIODICITY TEST  
OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 176 ALPHA-MCL = 6.0 PDP RUN PT 34.03  
RUN 34 ALPHA-BAR = 2.0 Q-COMP = 33064  
POINT 3 STGMA = 135 V-REF = 207.66  
COMPUTED FREQUENCY = 15.49, K = .1207

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =		.012		.062		.148		.261		.392		.530		.661		
N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	35.074	6.97	12.456	8.50	7.751	10.66	5.317	12.08	4.413	8.63	3.791	4.80	2.635	359.18		
2	34.2	280.08	.170	243.80	.146	107.16	.203	104.33	.197	95.08	.024	111.09	.015	386.81		
3	4.032	113.18	.235	296.79	.119	349.47	.060	340.61	.061	340.40	.056	299.01	.037	319.88		
4	.623	102.97	.063	312.01	.059	59.24	.058	55.39	.018	300.49	.031	331.25	.027	356.13		
5	.300	269.37	.076	117.04	.024	122.24	.044	28.03	.040	139.52	.018	137.83	.027	322.72		
6	.204	29.85	.068	119.24	.019	219.31	.024	282.03	.025	194.76	.014	245.13	.015	271.52		
7	.155	350.04	.018	40.47	.014	342.43	.013	344.49	.020	93.08	.015	116.44	.011	114.04		
8	.116	132.47	.019	141.36	.035	125.62	.013	149.11	.016	165.37	.010	163.44	.006	142.90		
9	.154	273.17	.032	232.36	.035	252.13	.031	256.72	.015	257.49	.014	252.87	.006	238.26		

X =		.774		.860		.910		.910		.910		.910		.910		
N	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	2.031	359.71	1.111	344.36	.817	174.29	.817	174.29	.817	174.29	.817	174.29	.817	174.29	.817	174.29
2	.033	217.94	.068	209.63	.222	345.27	.013	345.27	.013	345.27	.013	345.27	.013	345.27	.013	345.27
3	.053	156.26	.019	161.40	.007	290.92	.008	290.92	.008	290.92	.008	290.92	.008	290.92	.008	290.92
4	.020	345.82	.009	248.62	.008	270.74	.009	270.74	.009	270.74	.009	270.74	.009	270.74	.009	270.74
5	.010	231.37	.013	229.09	.005	286.03	.005	286.03	.005	286.03	.005	286.03	.005	286.03	.005	286.03
6	.018	103.48	.011	129.78	.005	292.18	.005	292.18	.005	292.18	.005	292.18	.005	292.18	.005	292.18
7	.012	157.99	.005	149.51	.003	176.52	.003	176.52	.003	176.52	.003	176.52	.003	176.52	.003	176.52
8	.003	285.46	.002	136.15	.003	308.14	.003	308.14	.003	308.14	.003	308.14	.003	308.14	.003	308.14
9	.003	285.46	.002	136.15	.003	308.14	.003	308.14	.003	308.14	.003	308.14	.003	308.14	.003	308.14
10	.003	285.46	.002	136.15	.003	308.14	.003	308.14	.003	308.14	.003	308.14	.003	308.14	.003	308.14

WALL NO.		.125		.125		.125		.125		.125		.125		.125		.125	
GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2	.083	42.49	3.191	9.87	13.060	183.64	2.458	177.52	9.005	321.62	1.015	269.26	1.438	278.26	3.24	93.14
2	3	.153	46.92	.195	29.04	.601	187.53	.121	81.08	.324	167.18	.123	25.96	.084	57.07	.026	100.42
3	4	.112	123.93	.101	57.21	.208	249.45	.102	297.54	.123	116.04	.084	57.07	.026	100.42	.021	118.58
4	5	.093	355.86	.095	281.15	.337	285.66	.028	122.34	.084	57.07	.026	100.42	.021	118.58	.021	118.58
5	6	.040	107.43	.013	220.02	.054	308.45	.033	19.63	.026	100.42	.021	118.58	.021	118.58	.021	118.58
6	7	.027	117.52	.030	349.78	.018	295.28	.020	306.50	.026	100.42	.021	118.58	.021	118.58	.021	118.58
7	8	.044	300.64	.024	182.12	.096	344.08	.014	306.50	.026	100.42	.021	118.58	.021	118.58	.021	118.58
8	9	.065	300.64	.024	182.12	.096	344.08	.014	306.50	.026	100.42	.021	118.58	.021	118.58	.021	118.58
9	10	.038	195.16	.013	101.65	.137	89.00	.030	89.50	.026	100.42	.021	118.58	.021	118.58	.021	118.58

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

\*\*\* STABILITY PARAMETER

\* XI = -.2132 \*  
\* \* \*\*\*\*\*

MODE 1 -- OCWT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 178 ALPHA-MCL = 6.0 PDP RUN-PI 34.05  
 RUN 35 ALPHA-PR = 2.0 Q-COMP = 33077  
 POINT 5 SIGMA = 135. V-REF = 201.71  
 COMPUTED FREQUENCY = 19.09, K = .1487

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-25.415	-2.261	-3.920	-2.730	-2.509	-2.648	-2.390
2	-.068	-.424	-.056	-.154	-.186	-.198	-.178
3	-3.679	-.034	-.056	-.045	-.002	-.018	-.014
4	-.418	-.081	-.000	-.035	-.001	-.036	-.020
5	-.058	-.172	-.006	-.022	-.027	-.037	-.025
6	-.119	-.098	-.021	-.008	-.026	-.005	-.006
7	-.021	-.198	-.009	-.005	-.003	-.005	-.001
8	-.042	-.007	-.012	-.014	-.008	-.007	-.011
9							
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X	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.912-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	-1.970	-4.703	-1.316	9.639	5.904	3.737	2.516
2	-.152	-.021	-.002	-.086	-.147	-.027	-.128
3	-.026	-.055	-.032	-.122	-.000	-.057	-.045
4	-.005	-.022	-.001	-.007	-.021	-.030	-.001
5	-.504	-.003	-.001	-.024	-.016	-.005	-.001
6	-.009	-.002	-.006	-.005	-.017	-.017	-.029
7	-.000	-.012	-.002	-.005	-.005	-.010	-.004
8							
9							
10							

X	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.910-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG
1	1.435	1.118	4.18	7.04	5.85	4.56	5.15
2	-.136	-.028	-.070	-.027	-.138	-.272	-.080
3	-.003	-.030	-.009	-.018	-.039	-.027	-.035
4	-.005	-.014	-.024	-.011	-.008	-.002	-.044
5	-.016	-.033	-.016	-.026	-.000	-.006	-.002
6	-.003	-.037	-.016	-.020	-.015	-.010	-.012
7	-.004	-.008	-.006	-.002	-.001	-.006	-.004
8	-.007	-.002	-.005	-.001	-.001	-.003	-.003
9							
10							

MODE 1 -- OCMI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 178 ALPHA-MCL = 6.0 POP RUN-PT 34.05  
 HUM. 34 ALPHA-REF = 135.0 Q-COMP = 330.79  
 POINT 25 SUGMA = 251.71  
 34 COMPUTED FREQUENCY = 19.09, K = .1487  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	25	.515	185.08	6.629	192.74	3.925	132.95	2.731	181.99	2.13	177.16	2.679	171.22
2	274	104.34	163.57	.215	228.32	.094	228.32	.259	233.64	.129	229.96	.075	209.16
3	703	186.39	112.88	.155	158.44	.022	346.02	.075	126.86	.105	144.77	.075	105.88
4	456	297.39	88.06	.084	197.03	.049	269.55	.040	101.86	.009	88.56	.026	283.91
5	181	108.61	67.37	.034	271.37	.006	81.21	.024	82.95	.043	275.93	.022	71.05
6	154	219.49	49.81	.034	354.81	.027	201.83	.028	179.07	.029	50.40	.030	239.49
7	207	122.13	33.13	.026	111.61	.007	123.87	.017	101.67	.014	191.99	.010	128.15
8	139	261.22	25.28	.036	253.28	.021	123.85	.017	264.09	.021	101.67	.010	128.15
9	646	151.60	15.60	.036	329.94	.012	355.22	.016	33.54	.020	356.99	.017	29.95

X	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2	.026	169.51	1.620	156.81	1.361	165.23	9.791	10.09	6.386	14.04	4.020	19.60
2	183	213.34	103.34	.051	96.95	.046	92.70	1.202	280.02	.463	251.51	.144	222.34
3	661	115.34	77.34	.066	120.64	.056	125.95	1.139	308.54	.239	89.90	.029	340.97
4	113	277.30	62.30	.025	90.69	.013	257.27	1.22	175.86	.024	24.47	.067	147.90
5	805	143.39	32.39	.046	119.19	.027	65.88	.065	83.06	.017	129.26	.026	89.70
6	609	168.75	15.47	.011	150.47	.009	152.07	.032	94.51	.029	105.69	.038	22.83
7	344	47.47	1.47	.011	344.47	.025	177.79	.017	251.55	.012	242.42	.018	231.72
8	90	90.66	167.43	.016	167.43	.005	100.23	.005	359.48	.020	108.76	.018	156.09
9	2	.778	25.11	2.778	25.11	2.778	25.11	2.778	25.11	2.778	25.11	2.778	25.11
10	208	357.69	145.03	.055	145.03	.014	302.42	.042	137.67	.010	137.67	.010	137.67

X	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	1	.699	31.89	1.445	39.33	.819	59.33	.619	87.11	.656	153.07	.698	131.53
2	147	205.40	42.17	.024	171.17	.074	341.06	.208	214.84	.274	240.18	.332	195.30
3	423	138.21	3.43	.054	157.53	.071	109.13	.056	131.68	.258	131.68	.042	162.31
4	606	118.19	1.19	.014	290.19	.012	297.67	.012	137.26	.009	159.27	.008	279.91
5	607	46.40	46.40	.046	135.57	.033	131.53	.021	133.62	.001	144.51	.020	144.37
6	310	121.46	1.46	.003	175.03	.002	190.41	.002	151.41	.001	219.26	.001	89.86
7	101	60.72	60.72	.011	60.72	.014	68.46	.003	190.07	.006	297.86	.005	92.80
8	196	196.41	196.41	.009	205.70	.005	189.46	.003	227.13	.003	322.45	.006	328.64

CHINA WALL IS  
OF POOR QUALITY

MODE 1 -- OCMI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 178 ALPHA-MCL = 6.0 PDP RUNPT 34.05  
 RUN 34 ALPHA-SAR = 2.0 Q-COMP = 33079  
 POINT 5 SIGMA = 135. V-DEF = 201.71  
 COMPUTED FREQUENCY = 19.09, K = .1487

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.148		.261		.392		.530		.661	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	35.054	3.977	12.524	1.817	7.707	1.551	5.245	1.274	3.944	.768	3.766	.041	.507	2.807
2	3.277	-1.449	.056	-.427	.340	-.065	.025	-.139	.053	.159	.045	.014	.014	.078
3	3.765	.316	.035	.157	.083	-.085	.057	-.060	.121	-.060	.045	.054	.054	.084
4	.426	.711	-.064	-.123	-.000	.047	-.034	.033	-.004	.014	-.019	.039	.008	.008
5	.083	-.269	.016	.050	.004	-.004	-.002	.023	.023	-.028	.036	.018	.012	.031
6	.116	-.172	-.046	.031	.007	-.010	.001	.029	.013	.031	.028	.040	.022	.028
7	.114	-.150	.007	.042	.007	-.010	-.004	.020	.005	.016	.003	.025	.005	.008
8	.017	-.162	-.009	.044	.019	.003	.009	.030	.005	.029	.004	.025	.005	.020
9	.048	-.023	-.002	.006	.027	.006	-.030	-.015	.027	-.001	.025	.007	.005	.015

N	.774		.860		.910		.910		.500		1.125		.205	
	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP	DELCP
1	2.001	.145	.990	-.079	.860	.168	5.140	.779	1.213	1.213	1.213	1.213	1.213	.205
2	.011	-.028	.017	-.114	.128	-.057	.030	-.015	.013	.013	.013	.013	.013	.028
3	.043	.005	-.032	-.007	.021	-.010	.162	-.024	.063	.063	.063	.063	.063	.010
4	.013	-.027	-.008	-.033	.005	-.002	-.044	.004	.010	.010	.010	.010	.010	.007
5	.016	.020	-.008	.018	.001	-.007	.018	.031	.007	.007	.007	.007	.007	.004
6	.018	-.022	-.021	-.026	.006	-.006	.009	.020	.010	.010	.010	.010	.010	.004
7	.007	.002	-.021	.014	.019	.006	.009	.030	.017	.017	.017	.017	.017	.005
8	.009	-.011	-.012	.006	.006	-.002	.006	.027	.001	.001	.001	.001	.001	.005
9	.002	-.014	-.008	.019	.007	-.014	.012	.027	.002	.002	.002	.002	.002	.001

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	.125		.000		.125		.500		1.125		.205	
	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	1.553	1.602	3.019	715	-12.703	-601	-2.337	125	7.079	-5.561	1.125	-.2046
2	.178	-.003	.420	-.017	.024	-2.033	.158	-.231	.839	-.378	.125	*****
3	.028	.013	.064	.093	-.695	.022	.002	.059	.128	-.278	.125	*****
4	.027	-.011	.002	.016	-.146	.012	.012	.079	.093	.210	.125	*****
5	.017	.015	-.004	-.006	.124	.033	.012	.033	.117	.141	.125	*****
6	.022	-.015	.004	.012	.030	.027	.004	.027	.083	.015	.125	*****
7	.012	-.026	.008	.008	.006	-.054	.002	.001	.017	.042	.125	*****
8	.012	.014	.016	-.004	.011	.038	.008	.008	.023	.031	.125	*****
9	.012	.014	.002	.004	-.001	-.022	.003	.014	.011	.046	.125	*****
10	.007	.014	.002	.001	.031	.016	.008	.007	.021	.017	.125	*****



ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCHT PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 180 ALPHA-MCL = 6.0 PDP RUMPT 35.01  
RUN 35 ALPHA-RAR = 2.0 Q-COMP = 32482  
POINT 1 SIGMA = 180. V-REF = 199.86  
COMPUTED FREQUENCY = 9.07 K = .0713

FOURIER COEFFICIENTS, REAL & IMAGINARY  
\*\* BLADE PRESSURES, PER RADIAN \*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	26	.600	1.041	-.02	-.849	-.2966	-.2915	-.430
2	204	.204	1.855	-.286	-.227	-.258	-.117	-.130
3	991	.195	1.912	-.260	-.083	-.024	-.117	-.212
4	558	.006	1.48	-.174	-.039	-.100	-.043	-.057
5	324	.050	1.027	-.134	-.026	-.079	-.025	-.068
6	104	.024	1.027	-.075	-.021	-.072	-.026	-.091
7	324	.050	1.027	-.075	-.021	-.072	-.026	-.091
8	104	.024	1.027	-.075	-.021	-.072	-.026	-.091
9	324	.050	1.027	-.075	-.021	-.072	-.026	-.091
10	104	.024	1.027	-.075	-.021	-.072	-.026	-.091

X	N	.774-UPPER CPREAL CPIMAG	.910-UPPER CPREAL CPIMAG	.012-L-LOWER CPREAL CPIMAG	.062-L-LOWER CPREAL CPIMAG	.188-L-LOWER CPREAL CPIMAG	.392-L-LOWER CPREAL CPIMAG	.530-L-LOWER CPREAL CPIMAG	.661-L-LOWER CPREAL CPIMAG
1	26	.127	-.420	11.015	7.388	-.691	-.476	-.162	-.133
2	204	.108	-.207	-.017	-.015	-.215	-.256	-.196	-.120
3	991	.094	-.053	-.108	-.168	-.027	-.112	-.252	-.103
4	558	.004	-.069	-.108	-.137	-.147	-.105	-.060	-.039
5	324	.030	-.084	-.113	-.136	-.104	-.128	-.067	-.079
6	104	.012	-.005	-.009	-.025	-.021	-.014	-.027	-.019
7	324	.001	-.009	-.017	-.002	-.008	-.019	-.008	-.006
8	104	.001	-.009	-.017	-.002	-.008	-.019	-.008	-.006
9	324	.001	-.009	-.017	-.002	-.008	-.019	-.008	-.006
10	104	.001	-.009	-.017	-.002	-.008	-.019	-.008	-.006

X	N	.392-L-LOWER CPREAL CPIMAG	.530-L-LOWER CPREAL CPIMAG	.661-L-LOWER CPREAL CPIMAG	.774-L-LOWER CPREAL CPIMAG	.910-L-LOWER CPREAL CPIMAG
1	26	.872	-.076	-.727	-.405	-.062
2	204	.127	-.226	-.186	-.283	-.092
3	991	.086	-.042	-.109	-.081	-.205
4	558	.007	-.044	-.029	-.138	-.079
5	324	.016	-.067	-.151	-.101	-.077
6	104	.017	-.009	-.008	-.035	-.014
7	324	.007	-.009	-.008	-.025	-.006
8	104	.007	-.009	-.008	-.025	-.006
9	324	.007	-.009	-.008	-.025	-.006
10	104	.007	-.009	-.008	-.025	-.006



MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 180 ALPHA-MCL = 6.0 PDP RUM.PI 35.01  
 RUN 35 ALPHA-PAR = 2.0 O-COMP = 324.82  
 POINT 1 SIGMA = 180.0 V-REF = 199.86  
 COMPUTED FREQUENCY = 9.07, K = .0713  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	PHI	.062-UPPER	PHI	CP-MAG	PHI	.148-UPPER	PHI	CP-MAG	PHI	.261-UPPER	PHI	CP-MAG	PHI	.392-UPPER	PHI	CP-MAG	PHI	.530-UPPER	PHI	CP-MAG	PHI	.661-UPPER	PHI	
1	26	1.626	171.76	7.195	140.01	4.669	133.32	2.872	187.20	2.596	188.50	2.946	188.39	2.709	189.27	2.946	188.39	2.709	189.27	2.946	188.39	2.709	2.709	189.27	2.709	189.27
1	1	1.866	167.12	3.190	318.21	1.779	286.33	2.203	294.12	1.735	277.84	2.442	235.82	2.256	297.33	2.442	235.82	2.256	297.33	2.442	235.82	2.256	2.256	297.33	2.256	297.33
3	4	1.098	253.29	3.314	56.25	0.663	68.05	0.040	354.95	0.799	89.25	0.168	34.30	0.302	85.95	0.168	34.30	0.302	85.95	0.168	34.30	0.302	0.302	85.95	0.302	85.95
5	6	0.881	196.54	3.243	127.59	0.700	68.05	0.088	110.16	0.799	89.25	0.155	215.74	0.142	215.36	0.155	215.74	0.142	215.36	0.155	215.74	0.142	0.142	215.36	0.142	215.36
6	7	0.858	146.30	3.433	222.73	1.170	212.45	0.145	113.94	0.134	104.94	0.026	315.84	0.026	315.84	0.026	315.84	0.026	315.84	0.026	315.84	0.026	0.026	315.84	0.026	315.84
7	8	1.119	120.49	3.123	322.73	0.233	346.25	0.031	104.94	0.134	104.94	0.018	318.84	0.018	318.84	0.018	318.84	0.018	318.84	0.018	318.84	0.018	0.018	318.84	0.018	318.84
8	9	1.055	187.91	3.076	230.81	0.116	163.68	0.057	116.43	0.018	104.94	0.011	327.22	0.011	327.22	0.011	327.22	0.011	327.22	0.011	327.22	0.011	0.011	327.22	0.011	327.22
10	10	1.206	153.51	3.021	125.13	0.016	193.37	0.021	5.35	0.017	153.37	0.011	143.28	0.011	143.28	0.011	143.28	0.011	143.28	0.011	143.28	0.011	0.011	143.28	0.011	143.28

X	N	CP-MAG	PHI	.860-UPPER	PHI	CP-MAG	PHI	.910-UPPER	PHI	CP-MAG	PHI	.062-LOWER	PHI	CP-MAG	PHI	.148-LOWER	PHI	CP-MAG	PHI	.261-LOWER	PHI	CP-MAG	PHI			
1	2	1.855	191.37	1.746	194.12	1.383	195.40	1.1	024	357.14	7.416	355.04	3	133	357.92	4.479	357.92	3	133	357.92	4.479	357.92	3	133	357.92	
1	1	2.35	297.64	2.252	299.76	2.251	295.96	2.251	273.71	2.251	273.71	1.1	024	1.1	024	2.251	273.71	1.1	024	2.251	273.71	1.1	024	2.251	273.71	
3	4	1.04	30.27	1.14	30.60	0.664	27.94	0.111	26.43	0.118	26.43	0.118	165.46	0.118	165.46	0.118	165.46	0.118	165.46	0.118	165.46	0.118	0.118	165.46	0.118	165.46
5	6	0.69	93.33	1.46	214.94	0.338	212.40	0.138	90.17	0.118	90.17	0.118	290.89	0.118	290.89	0.118	290.89	0.118	290.89	0.118	290.89	0.118	0.118	290.89	0.118	290.89
6	7	1.40	215.94	0.333	311.19	0.333	304.98	0.027	311.19	0.017	311.19	0.017	311.19	0.017	311.19	0.017	311.19	0.017	311.19	0.017	311.19	0.017	0.017	311.19	0.017	311.19
7	8	0.31	6.73	0.200	291.66	0.113	297.06	0.013	297.06	0.017	342.97	0.017	342.97	0.017	342.97	0.017	342.97	0.017	342.97	0.017	342.97	0.017	0.017	342.97	0.017	342.97
8	9	0.15	299.52	0.028	291.66	0.009	191.54	0.009	191.54	0.018	342.97	0.018	342.97	0.018	342.97	0.018	342.97	0.018	342.97	0.018	342.97	0.018	0.018	342.97	0.018	342.97
10	10	0.09	95.52	0.028	291.66	0.009	191.54	0.009	191.54	0.018	342.97	0.018	342.97	0.018	342.97	0.018	342.97	0.018	342.97	0.018	342.97	0.018	0.018	342.97	0.018	342.97

X	N	CP-MAG	PHI	.530-LOWER	PHI	CP-MAG	PHI	.661-LOWER	PHI	CP-MAG	PHI	.776-LOWER	PHI	CP-MAG	PHI	.860-LOWER	PHI	CP-MAG	PHI	.910-LOWER	PHI	CP-MAG	PHI			
1	1	1.873	357.07	1.558	357.10	1.383	354.77	1.1	024	357.14	7.416	355.04	3	133	357.92	4.479	357.92	3	133	357.92	4.479	357.92	3	133	357.92	
1	1	2.42	175.00	2.294	171.30	2.251	145.04	2.251	120.27	2.251	120.27	1.1	024	1.1	024	2.251	120.27	1.1	024	2.251	120.27	1.1	024	2.251	120.27	
3	3	0.69	297.30	0.335	300.94	0.333	303.67	0.229	311.56	0.229	311.56	0.229	311.56	0.229	311.56	0.229	311.56	0.229	311.56	0.229	311.56	0.229	0.229	311.56	0.229	311.56
4	4	0.42	99.48	0.69	102.67	0.229	209.12	0.229	217.77	0.229	217.77	0.229	217.77	0.229	217.77	0.229	217.77	0.229	217.77	0.229	217.77	0.229	0.229	217.77	0.229	217.77
5	5	1.34	209.88	0.63	212.67	0.229	209.12	0.173	217.77	0.173	217.77	0.173	217.77	0.173	217.77	0.173	217.77	0.173	217.77	0.173	217.77	0.173	0.173	217.77	0.173	217.77
6	6	0.19	28.72	0.34	38.00	0.229	18.58	0.229	21.73	0.229	21.73	0.229	21.73	0.229	21.73	0.229	21.73	0.229	21.73	0.229	21.73	0.229	0.229	21.73	0.229	21.73
7	7	0.20	331.78	0.039	331.58	0.016	253.62	0.016	253.62	0.012	305.02	0.012	305.02	0.012	305.02	0.012	305.02	0.012	305.02	0.012	305.02	0.012	0.012	305.02	0.012	305.02
8	8	0.11	310.78	0.020	276.95	0.009	253.62	0.009	253.62	0.012	305.02	0.012	305.02	0.012	305.02	0.012	305.02	0.012	305.02	0.012	305.02	0.012	0.012	305.02	0.012	305.02
10	10	0.09	35.78	0.012	276.95	0.009	253.62	0.009	253.62	0.012	305.02	0.012	305.02	0.012	305.02	0.012	305.02	0.012	305.02	0.012	305.02	0.012	0.012	305.02	0.012	305.02

ORIGINAL DATA IS  
 OF POOR QUALITY

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 180 ALPHA-WCL = 6.0 PDP RUN-PT 35.01  
 RUN 05 ALPHA-PAR = 2.0 0-COMP = 32482  
 POINT 1 SIGMA = 180. V-DEF = 199.86  
 COMPUTED FREQUENCY = 9.07, K = .8733

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	.012		.062		.148		.261		.392		.530		.661	
	N	DELCPR	DELCPR	DELCPPI	DELCPR	DELCPPI	DELCPR	DELCPPI	DELCPR	DELCPPI	DELCPR	DELCPPI	DELCPR	DELCPPI
1	37	.610	-1.591	14.583	-1.640	8.536	-.321	.073	5.988	-.261	4.537	-.325	3.396	.369
2	4	.007	-1.167	-.276	-1.475	.061	-.080	.037	-.037	-.065	.103	-.052	-.078	.066
3	4	.007	-1.167	-.276	-1.475	.061	-.080	.037	-.037	-.065	.103	-.052	-.078	.066
4	5	.295	-.371	.111	-.290	-.037	.109	.064	-.064	-.063	-.018	-.042	.031	-.020
5	6	.107	-.089	.215	-.129	.015	-.034	.024	-.024	.092	-.029	.005	-.035	-.068
6	7	-.070	-.128	-.133	.054	-.027	-.021	.027	-.027	-.029	.009	-.032	-.030	-.010
7	8	-.333	-.292	-.048	-.012	-.022	-.020	-.041	-.022	-.017	-.002	-.037	-.021	-.004
8	9	-.118	-.171	.013	-.005	-.023	-.007	-.006	-.006	-.007	-.002	-.032	-.006	-.020
9	10	-.105	-.171	.017	-.003	-.015	-.011	-.005	-.005	-.010	-.023	-.002	-.015	-.009

X	.774		.860		.910		.910		.910		.910		.910	
	N	DELCPR	DELCPR	DELCPPI	DELCPR	DELCPPI	DELCPR	DELCPPI	DELCPR	DELCPPI	DELCPR	DELCPPI	DELCPR	DELCPPI
1	2	.529	-.068	.002	1.533	-.183	1.331	-.287	229	-.098	5.870	-.150	1.317	-.059
2	3	-.028	.072	-.005	-.070	-.037	-.016	-.017	-.017	-.143	-.143	-.256	-.055	-.008
3	4	.048	.072	-.005	-.070	-.037	-.016	-.017	-.017	.026	.026	-.042	-.008	-.005
4	5	.010	.005	-.004	-.004	-.015	-.002	-.002	-.002	.005	.005	-.019	.005	-.008
5	6	.012	.011	-.001	-.001	.000	.010	.010	.010	-.001	-.001	.010	-.001	-.003
6	7	.006	.014	-.001	-.002	-.003	-.000	-.000	-.000	-.001	-.001	-.016	-.001	-.005
7	8	-.031	.004	-.002	-.002	-.001	-.001	-.001	-.001	-.008	-.008	-.016	-.001	-.005
8	9	-.008	.000	-.001	-.001	-.006	-.006	-.006	-.006	-.007	-.007	-.006	-.001	-.004
9	10	-.008	.000	-.001	-.001	-.006	-.006	-.006	-.006	-.007	-.007	-.006	-.001	-.004

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO. GAP FRACTION	.125		.125		.125		.125		.125		.125		.125		.125		.125		
	N	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG	CPREAL	CPIMAG
1	1	2.680	-.347	-.012	3.230	-.305	-13.654	311	-2.432	-.340	9.808	-.771	1.317	-.059	1.125	-.058	1.125	-.058	1.125
2	2	.347	-.012	-.012	-.012	-.347	-.012	-.012	-.012	-.012	-.012	-.012	-.012	-.012	-.012	-.012	-.012	-.012	-.012
3	3	.043	-.089	.128	-.089	.043	-.089	.128	-.089	.043	-.089	.128	-.089	.043	-.089	.128	-.089	.043	-.089
4	4	-.062	-.042	-.042	-.042	-.062	-.042	-.042	-.042	-.062	-.042	-.042	-.042	-.062	-.042	-.042	-.042	-.062	-.042
5	5	-.062	-.042	-.042	-.042	-.062	-.042	-.042	-.042	-.062	-.042	-.042	-.042	-.062	-.042	-.042	-.042	-.062	-.042
6	6	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030
7	7	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030
8	8	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030
9	9	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030
10	10	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030	.030

\*\*\* STABILITY PARAMETER

\* XI = .0588 \*  
 \* \* \* \* \*

ORIGINAL PAGE IS  
OF POOR QUALITY

OCWI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 180 ALPHA-MCL = 6.0 POP RUN-PT 35.01  
RUN 35 ALPHA-PAR = 2.0 Q-COMP E 32482  
POINT 1 SIGMA = 180. V-REF E 189.86  
COMPUTED FREQUENCY = 9.07, K = .0713

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE, PER RADIAN \*\*\*  
\*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.148		.261		.392		.530		.661	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	37.844	357.58	14.597	357.49	8.524	2.50	5.986	2.50	4.549	4.02	4.498	4.49	3.418	67.18
2	6.822	264.76	1.246	262.81	.124	260.28	.113	260.03	.116	350.04	.097	324.52	.060	97.98
3	4.174	343.76	.557	307.55	.101	300.03	.075	300.03	.118	333.04	.097	338.32	.082	319.52
4	1.759	67.12	.298	219.14	.128	44.07	.046	291.07	.039	258.17	.019	182.18	.030	81.41
5	.654	326.85	.120	338.82	.047	299.63	.002	299.63	.022	167.74	.012	168.75	.035	294.83
6	.339	219.85	.143	157.85	.035	317.58	.037	317.58	.033	105.80	.023	127.39	.010	183.04
7	.146	298.71	.050	194.55	.022	202.35	.044	202.35	.027	269.41	.016	234.13	.021	190.35
8	.443	221.51	.014	337.36	.024	46.84	.009	46.84	.020	296.75	.013	221.30	.017	173.45
9	.201	238.46	.017	350.94	.019	243.59	.011	243.59	.023	353.92	.013	211.30	.017	30.11

N	.774		.850		.910		CM-MAG		PHIN		N		CM-MAG		PHIM	
	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI	DELCPM	PHI
1	2.553	7.95	1.544	62.81	1.350	9.76	5.872	1.47	1.47	1.47	1.47	1.318	357.44	1.318	357.44	
2	.028	179.08	.078	122.06	.210	204.95	.149	243.78	.249	343.78	.249	343.78	.056	358.26	.056	358.26
3	.058	133.95	.022	258.79	.041	153.30	.032	299.66	.042	36.28	.042	36.28	.010	333.42	.010	333.42
4	.014	22.20	.004	190.70	.017	208.13	.042	299.66	.042	62.66	.042	62.66	.003	31.12	.003	31.12
5	.013	62.05	.004	80.59	.002	85.79	.006	103.33	.006	103.33	.006	103.33	.003	240.76	.003	240.76
6	.019	310.97	.015	93.31	.010	91.92	.006	217.97	.006	217.97	.006	217.97	.010	209.76	.010	209.76
7	.008	100.77	.006	204.28	.003	142.26	.019	321.44	.019	321.44	.019	321.44	.004	355.38	.004	355.38
8	.008	102.11	.003	85.64	.009	50.09	.009	50.09	.009	50.09	.009	50.09	.004	233.25	.004	233.25

\*\*\* STABILITY PARAMETER

\* XI = .0588 \*  
\* \* \* \* \*

WALL NO.	GAP FRACTION	.125		.125		.125		.500		.125		.125		.125		
		CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	
1	2.660	329.75	3.442	355.45	13.857	178.69	2.455	187.95	9.838	357.51	9.838	357.51	9.838	357.51	9.838	357.51
2	.381	155.14	.481	121.54	1.598	247.38	.285	160.30	.685	217.52	.685	217.52	.685	217.52	.685	217.52
3	.375	53.82	.169	5.29	.773	271.10	.324	300.59	.666	359.71	.666	359.71	.666	359.71	.666	359.71
4	.153	133.42	.096	112.29	.185	120.54	.061	97.58	.241	8.94	.241	8.94	.241	8.94	.241	8.94
5	.062	252.83	.184	201.10	.281	231.07	.183	211.53	.366	346.62	.366	346.62	.366	346.62	.366	346.62
6	.214	62.92	.017	343.60	.042	351.85	.027	5.87	.057	346.62	.057	346.62	.057	346.62	.057	346.62
7	.045	47.92	.033	25.57	.062	292.51	.020	294.96	.082	355.48	.082	355.48	.082	355.48	.082	355.48
8	.019	265.63	.029	118.84	.108	66.87	.025	132.45	.019	93.48	.019	93.48	.019	93.48	.019	93.48

ORIGINAL PAGE IS  
OF POOR QUALITY

MODE 1 -- OCWT PERIODICITY TEST  
CENTRE BLADE DATA, ALL STATIONS

FILE 172 ALPHA-MCL = 6.7 PMP RUN PT 35.03  
RUV 25 ALPHA-SAB = 2.0 C-COAB = 32.61  
POINT 3 SIGMA = 18.3 V-DEF = 199.88  
COMPUTED FREQUENCY = 15.38, K = .1211

FOUCIER COEFFICIENTS, REAL & IMAGINARY  
\*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	012-UPPER CPREAL CPIMAG	062-UPPER CPREAL CPIMAG	148-UPPER CPREAL CPIMAG	261-UPPER CPREAL CPIMAG	392-UPPER CPREAL CPIMAG	530-UPPER CPREAL CPIMAG	661-UPPER CPREAL CPIMAG
1	26.557	2.145	-4.325	-7.115	-2.967	-3.238	-2.473
2	3.723	1.415	.280	.115	.066	.036	.557
3	5.700	1.159	.117	.008	.001	.012	.408
4	3.437	.633	.047	.043	.003	.010	.005
5	.637	.286	.025	.071	.000	.024	.045
6	.277	.087	.011	.020	.000	.032	.000
7	.177	.191	.022	.016	.018	.021	.004
8	.085	.039	.005	.004	.021	.021	.013
9	.085	.039	.005	.004	.011	.006	.002
10	.085	.039	.005	.004	.011	.006	.007

X	012-LOWER CPREAL CPIMAG	062-LOWER CPREAL CPIMAG	148-LOWER CPREAL CPIMAG	261-LOWER CPREAL CPIMAG	392-LOWER CPREAL CPIMAG	530-LOWER CPREAL CPIMAG	661-LOWER CPREAL CPIMAG
1	2.838	1.113	-1.657	10.817	7.004	4.237	2.634
2	1.071	.016	.010	.235	.064	.160	.051
3	.009	.000	.010	.265	.002	.058	.027
4	.041	.002	.005	.016	.003	.032	.025
5	.013	.017	.005	.039	.003	.051	.056
6	.011	.019	.005	.008	.023	.013	.014
7	.008	.016	.005	.028	.035	.013	.007
8	.005	.017	.005	.018	.021	.009	.013
9	.005	.017	.005	.018	.021	.009	.005
10	.005	.017	.005	.018	.021	.009	.011

X	032-UPPER CPREAL CPIMAG	074-UPPER CPREAL CPIMAG	100-UPPER CPREAL CPIMAG	174-UPPER CPREAL CPIMAG	282-UPPER CPREAL CPIMAG	380-UPPER CPREAL CPIMAG
1	1.533	1.518	4.139	0.037	0.058	0.033
2	1.533	1.518	4.139	0.037	0.058	0.033
3	1.533	1.518	4.139	0.037	0.058	0.033
4	1.533	1.518	4.139	0.037	0.058	0.033
5	1.533	1.518	4.139	0.037	0.058	0.033
6	1.533	1.518	4.139	0.037	0.058	0.033
7	1.533	1.518	4.139	0.037	0.058	0.033
8	1.533	1.518	4.139	0.037	0.058	0.033
9	1.533	1.518	4.139	0.037	0.058	0.033
10	1.533	1.518	4.139	0.037	0.058	0.033

THIS PAGE IS  
OF POOR QUALITY

OCMI PERIODICITY TEST  
MODE I -- CENTER BLADE DATA, WALL STATIONS

FILE 122 ALPHA-MCL E 6.0 POP RUG.PI 35.73  
 RUN 35 ALPHA-WAP E 9.0 C-COMP E 32.361  
 POINT 3 ALPHA-SIGMA E 19.0 V-REF E 196.46  
 COMPUTED FREQUNCY E 15.38, K E .1211  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	CP-MAG	UPPER PHI	062-UPPER CP-MAG	UPPER PHI	148-UPPER CP-MAG	UPPER PHI	261-UPPER CP-MAG	UPPER PHI	392-UPPER CP-MAG	UPPER PHI	533-UPPER CP-MAG	UPPER PHI	661-UPPER CP-MAG	UPPER PHI
1	27.242	172.93	7.333	173.48	4.334	176.32	1.117	179.74	2.963	172.54	3.238	179.36	2.933	179.97
2	1.522	161.67	.208	163.62	.032	174.88	.031	179.50	.023	172.87	.082	179.06	.074	175.16
3	7.749	135.84	1.139	135.76	.051	137.69	.034	141.49	.031	137.84	.056	135.97	.043	135.11
4	6.238	155.84	.163	155.97	.001	157.72	.014	161.66	.042	149.54	.057	149.90	.028	149.40
5	2.134	222.84	.178	217.49	.025	208.16	.013	177.66	.043	243.16	.027	246.17	.019	257.32
6	2.45	47.25	.043	47.58	.022	98.67	.014	48.46	.026	234.06	.024	87.89	.036	120.59
7	1.51	89.64	.033	91.82	.023	256.89	.021	335.09	.015	293.06	.019	250.84	.018	249.57
8	.033	277.35	.047	275.35	.022	256.89	.021	335.09	.015	293.06	.019	250.84	.018	249.57

X	CP-MAG	UPPER PHI	060-UPPER CP-MAG	UPPER PHI	912-UPPER CP-MAG	UPPER PHI	012-LOWER CP-MAG	LOWER PHI	082-LOWER CP-MAG	LOWER PHI	148-LOWER CP-MAG	LOWER PHI	261-LOWER CP-MAG	LOWER PHI
1	2.428	197.29	2.091	192.60	1.633	177.17	1.815	358.90	7.004	355.42	4.224	289.07	2.889	11.79
2	.038	170.95	.023	174.22	.017	169.91	.027	186.70	.025	169.37	.112	179.07	.107	179.02
3	.018	162.00	.013	166.84	.005	169.39	.022	190.70	.024	171.98	.055	179.55	.050	179.49
4	.018	191.00	.013	181.31	.005	187.07	.034	209.56	.053	193.93	.057	201.53	.060	201.84
5	.017	260.05	.014	257.13	.012	246.11	.034	320.50	.053	248.77	.016	169.32	.014	201.99
6	.019	349.38	.024	357.31	.014	344.70	.035	445.04	.033	375.89	.013	336.39	.014	336.25
7	.017	251.80	.021	249.79	.022	251.62	.029	255.84	.024	216.22	.011	212.92	.011	212.22

X	CP-MAG	LOWER PHI	052-LOWER CP-MAG	LOWER PHI	074-LOWER CP-MAG	LOWER PHI	148-LOWER CP-MAG	LOWER PHI	062-LOWER CP-MAG	LOWER PHI	092-LOWER CP-MAG	LOWER PHI	148-LOWER CP-MAG	LOWER PHI
1	1.635	182.59	1.347	181.51	1.068	174.87	1.574	358.90	6.933	355.42	4.224	289.07	2.889	11.79
2	.038	170.95	.023	174.22	.017	169.91	.027	186.70	.025	169.37	.112	179.07	.107	179.02
3	.018	162.00	.013	166.84	.005	169.39	.022	190.70	.024	171.98	.055	179.55	.050	179.49
4	.018	191.00	.013	181.31	.005	187.07	.034	209.56	.053	193.93	.057	201.53	.060	201.84
5	.017	260.05	.014	257.13	.012	246.11	.034	320.50	.053	248.77	.016	169.32	.014	201.99
6	.019	349.38	.024	357.31	.014	344.70	.035	445.04	.033	375.89	.013	336.39	.014	336.25
7	.017	251.80	.021	249.79	.022	251.62	.029	255.84	.024	216.22	.011	212.92	.011	212.22



ORIGINAL PAGE  
OF FOUR

OCMI PERIODICITY TEST  
MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 185 ALPHA-MCL = 6.0 PDP RUN-PT 35.03  
 ROW 35 ALPHA-PAR = 2.0 C-COMP = .32561  
 POINT 3 SIGMA = 18.0 V-PEP = .19948  
 COMPUTED FREQUENCY = 15.38 K = .2211

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	37.844	356.44	14.330	356.91	0.559	1.120	5.968	4.522	4.555	6.229	7.815	9.604
2	37.474	342.01	1.400	295.47	0.364	192.69	0.134	255.16	0.088	295.95	237.81	280.43
3	8.719	54.98	1.147	245.55	0.137	153.37	0.049	204.42	0.036	236.57	195.99	152.43
4	7.709	311.14	0.136	355.26	0.177	232.26	0.035	296.68	0.035	204.06	125.72	190.67
5	2.614	109.54	0.124	109.22	0.216	277.82	0.027	277.82	0.045	275.92	251.28	106.57
6	1.245	334.39	0.167	392.98	0.021	64.06	0.038	307.29	0.021	259.70	310.86	121.41
7	0.299	252.95	0.341	183.95	0.048	313.82	0.024	307.29	0.022	133.60	0.354	162.41
8	0.062	77.42	0.762	156.79	0.030	53.59	0.022	172.20	0.019	257.0	46.76	125.97

X	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	2.553	13.51	1.516	15.21	1.379	12.11	5.849	2.69	5.849	2.69	1.318	356.39
2	0.553	246.26	0.072	135.53	0.333	181.01	0.254	244.25	0.254	244.25	0.047	350.40
3	0.350	324.90	0.114	173.87	0.088	190.47	0.040	338.33	0.040	338.33	0.014	352.91
4	0.324	311.77	0.009	179.90	0.076	182.05	0.020	331.71	0.020	331.71	0.005	336.12
5	0.017	311.77	0.021	184.89	0.036	186.61	0.036	287.06	0.036	287.06	0.005	289.70
6	0.017	311.77	0.330	325.17	0.021	195.67	0.036	291.68	0.022	291.68	0.005	289.70
7	0.021	191.71	0.721	188.30	0.015	191.08	0.022	181.76	0.022	181.76	0.003	227.50
8	0.012	152.43	0.718	157.87	0.010	130.26	0.022	157.76	0.022	157.76	0.003	69.50

\*\*\* STABILITY PARAMETER

\* XI = .028  
 \* \*\*\*\*\*

WALL NO.	GAP FRACTION	N	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2	316	22.16	13.764	175.75	2.742	17.483	9.673	358.02	1.125	1.125	1.125
2	226	27.33	1.422	7.94	192.32	.137	28.08	.345	332.49	1.125	1.125	1.125
3	135	287.77	.254	7.29	192.32	.137	28.08	.485	332.49	1.125	1.125	1.125
4	145	112.23	.099	4.22	149.62	.272	19.55	.252	302.40	1.125	1.125	1.125
5	090	269.48	.053	2.90	87.36	.229	17.79	.101	248.02	1.125	1.125	1.125
6	025	192.65	.043	1.56	37.96	.133	27.46	.041	248.19	1.125	1.125	1.125
7	030	355.32	.023	0.97	31.50	.113	27.17	.041	248.19	1.125	1.125	1.125
8	019	359.49	.011	0.16	10.57	.034	32.02	.027	334.26	1.125	1.125	1.125
9	031	38.65	.010	0.35	23.31	.019	26.33	.027	334.26	1.125	1.125	1.125

MODE 1 -- 3CWI PERIODICITY TEST  
 CENTER BLADE DATA, WALL STATIONS

FILE 134 ALPHA-WCL = 6.0 PCP RUM.PI 35.05  
 135 ALPHA-RAB = 2.0 G-COMP = 32390  
 POINT 5 SIGMA = 180. V-REF = 139.54  
 COMPUTED FREQUENCY = 18.97, K = 1492

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	.012-UPPER CPREAL CPIMAG	.062-UPPER CPREAL CPIMAG	.148-UPPER CPREAL CPIMAG	.261-UPPER CPREAL CPIMAG	.392-UPPER CPREAL CPIMAG	.530-UPPER CPREAL CPIMAG	.661-UPPER CPREAL CPIMAG
1	-26	.975	2.157	-4.239	-3.021	-2.884	-3.139	-2.851
2	.807	1.319	.312	.150	.104	.048	.135	.113
3	-3.233	1.585	-3.312	-1.027	-0.19	-0.566	-0.062	-0.005
4	.459	-.374	.027	.031	.056	.070	.046	.042
5	-.374	1.346	-0.23	.018	.022	.024	.031	.011
6	.042	-.020	.054	.011	.004	.004	.009	.004
7	-.049	.081	-0.333	.006	.004	.022	.006	.002
8	.022	.013	.001	.005	.001	.007	.002	.001
9	.022	.013	.001	.005	.001	.007	.002	.001
10	.022	.013	.001	.005	.001	.007	.002	.001

X	N	.774-UPPER CPREAL CPIMAG	.860-UPPER CPREAL CPIMAG	.916-UPPER CPREAL CPIMAG	.012-LOWER CPREAL CPIMAG	.062-LOWER CPREAL CPIMAG	.148-LOWER CPREAL CPIMAG	.261-LOWER CPREAL CPIMAG	.392-LOWER CPREAL CPIMAG	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG
1	-2	.307	-.566	-1.842	10.804	-2.784	7.103	-.691	-.691	4.406	2.971
2	.029	-.055	.011	.037	-.275	.037	.447	.118	.118	.067	.070
3	-.029	.038	-0.026	.037	.267	.037	.118	.118	.118	.067	.070
4	.010	-.034	.005	.037	-.011	.037	.226	.009	.009	.023	.023
5	-.010	.011	-0.008	.037	.021	.037	.010	.005	.005	.016	.016
6	.010	-.034	.005	.037	-.027	.037	.007	.001	.001	.016	.016
7	-.010	.034	-0.001	.037	.015	.037	.007	.001	.001	.016	.016
8	.010	-.034	.001	.037	.015	.037	.007	.001	.001	.016	.016
9	-.010	.034	-0.001	.037	.015	.037	.007	.001	.001	.016	.016
10	.010	-.034	.001	.037	.015	.037	.007	.001	.001	.016	.016

X	N	.530-LOWER CPREAL CPIMAG	.661-LOWER CPREAL CPIMAG	.774-LOWER CPREAL CPIMAG	.860-LOWER CPREAL CPIMAG	.916-LOWER CPREAL CPIMAG
1	1	.166	.546	.206	.140	.173
2	.025	.166	.166	.093	.131	.029
3	-.025	.132	.134	-.038	.108	.028
4	.013	.027	.019	.010	.007	.001
5	-.013	.017	.017	.002	.002	.001
6	.001	.006	.006	.001	.001	.001
7	-.001	.002	.002	.001	.001	.001
8	.002	.002	.002	.001	.001	.001
9	-.002	.002	.002	.001	.001	.001
10	.002	.002	.002	.001	.001	.001



ORIGINAL PAGE IS  
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MODE 1 -- OCWI PERIODICITY TEST  
CENTER BLADE DATA, WALL STATIONS

FILE 184 ALPHA-MCL = 6.0 POP RUM.PI 35.05  
 RUN 35 ALPHA-BAR = 2.0 C-COMP = 32382  
 POINT 5 SIGMA = 18.0 V-REF = 199.54  
 COMPUTED FREQUENCY = 18.97; K = .1493  
 FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, PER RADIAN \*\*\*

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI				
1	27	.061	175.43	7	.222	177.52	4	.242	181.87	3	.046	187.30	2	.933	190.51	3	.185	189.77	2	.904	191.05
2	3	.546	158.89		.433	164.89		.219	246.76		.115	255.50		.359	193.20		.138	176.12		.113	158.73
3	67	.601	153.89		.144	306.89		.065	203.80		.057	174.16		.058	165.20		.046	185.04		.055	260.73
4	5	.509	137.24		.103	105.19		.015	333.77		.023	84.68		.064	16.86		.013	305.38		.044	325.89
5	6	.047	134.84		.095	214.68		.019	199.70		.009	100.38		.025	10.37		.019	72.24		.015	112.89
6	7	.115	135.35		.044	311.43		.011	87.82		.014	72.80		.035	217.57		.014	294.44		.024	1336.54
7	8	.121	43.34		.025	172.26		.013	198.31		.005	282.44		.007	281.00		.001	339.23		.012	211.49
8	9	.042	58.04		.019	250.53		.015	326.67		.018	329.09		.021	331.15		.016	335.35		.006	34.65

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI				
1	2	.375	193.78	1	.926	197.01	1	.584	197.00	19	.932	355.89	7	.137	354.68	4	.406	290.60	2	.976	313.31
2	3	.058	250.23		.850	253.23		.060	249.29		.231	200.52		.163	44.95		.117	224.75		.102	278.46
3	4	.012	331.87		.037	100.99		.037	89.43		.103	49.30		.024	180.56		.044	258.61		.036	313.46
4	5	.014	394.84		.009	327.70		.008	303.83		.019	235.47		.027	18.88		.021	211.86		.017	215.35
5	6	.017	321.95		.016	108.99		.018	70.77		.064	63.79		.011	124.64		.029	188.32		.020	182.88
6	7	.009	203.73		.021	336.24		.015	328.59		.060	243.43		.006	350.25		.012	132.18		.012	157.88
7	8	.001	64.50		.011	197.50		.005	159.27		.015	351.75		.012	151.85		.005	124.44		.012	157.88
8	9	.000	2.81		.008	68.10		.006	11.90		.028	107.97		.005	199.85		.015	148.32		.010	160.63

X	N	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI	CP-MAG	UPPER PHI				
1	1	.722	5.53	1	.339	8.82	1	.577	18.85	5	.252	33.70	4	.420	176.38	2	.209	144.27	2	.209	144.27
2	3	.066	340.11		.137	255.27		.178	261.86		.046	198.12		.047	124.64		.042	250.23		.042	250.23
3	4	.018	277.82		.029	125.86		.023	40.18		.013	25.25		.010	141.80		.031	288.33		.031	288.33
4	5	.014	189.08		.016	104.18		.027	128.86		.006	331.04		.011	103.56		.012	187.96		.012	187.96
5	6	.009	172.42		.018	168.87		.006	186.21		.013	160.47		.004	160.47		.011	197.29		.011	197.29
6	7	.002	136.73		.004	218.34		.012	124.61		.005	185.54		.004	194.68		.010	152.62		.010	152.62
7	8	.000	122.98		.007	40.79		.007	14.78		.007	107.04		.001	107.04		.010	156.18		.010	156.18
8	9	.005	212.95		.007	246.54		.006	260.88												

OCWT PERIODICITY TEST  
 MODE 1 -- CENTER BLADE DATA, WALL STATIONS

FILE 184 ALPHA-MCL = 6.0 POP RUN-PT 35.05  
 RUN 35 ALPHA-BAR = 2.0 G-COMP = 32380  
 POINT 5 SIGMA = 180. V-REF = 199.54  
 COMPUTED FREQUENCY = 18.97, K = .1493

FOURIER COEFFICIENTS, REAL & IMAGINARY  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

X =	.012	.062	.148	.261	.392	.530	.661
N	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR	DELCPR
1	37.878	-2.941	14.318	-1.003	8.645	.184	.598
2	-1.081	-3.376	-.671	-.874	-.083	-.343	.014
3	.526	-1.578	-.094	-.233	-.032	-.033	.013
4	.353	-.362	-.049	-.078	-.080	-.069	-.102
5	-.021	-.081	-.069	-.059	-.030	-.036	-.037
6	-.109	-.047	-.032	-.038	-.016	-.014	-.009
7	-.126	-.118	-.034	-.038	-.017	-.017	-.008
8	-.008	-.116	-.004	-.005	-.012	-.010	-.005
9	-.031	-.009	-.007	-.009	-.003	-.002	-.001
10							

X =	.774	.860	.910
N	DELCPR	DELCPR	DELCPR
1	2.517	.706	1.434
2	-.043	-.034	-.006
3	-.045	-.019	-.000
4	-.001	-.014	-.001
5	-.006	-.017	-.003
6	-.003	-.009	-.004
7	-.004	-.003	-.002
8	-.004	-.001	-.001
9	-.006	-.001	-.001
10			

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	W1	W2	W4	W6	W10
GAP FRACTION	N	CPREAL	CPIMAG	CPREAL	CPIMAG
1	2	.428	.533	-13.560	.778
2	3	.027	-.166	-.235	-1.528
3	4	.043	-.120	-.707	-.076
4	5	.066	-.098	-.746	-.449
5	6	.092	-.079	-.026	-.077
6	7	.034	-.005	-.042	-.105
7	8	.019	-.033	-.025	-.021
8	9	.034	-.013	-.016	-.007
9	10	-.016	-.003	-.006	-.004
10					

\*\*\* STABILITY PARAMETER

N	CMREAL	CMIMAG
1	1.320	-.102
2	-.036	-.021
3	.008	-.011
4	.006	-.009
5	.003	-.005
6	-.002	-.002
7	-.001	-.001
8	-.001	-.001
9	-.001	-.001
10	-.003	-.003

\* XI = .1023 \*

MODE 1 -- OCWJ PERIODICITY TEST  
 CENTER BLADE DATA, WALL STATIONS

FILE 194 ALPHA-MCL = 6.0 PDP RUN-PT 35205  
 RUN 35 ALPHA-PAR = 2.0 Q-COMP = 32580  
 POINT 5 SIGMA = 180.0 V-REF = 199.54  
 COMPUTED FREQUENCY = 18.97, K = .1493

FOURIER COEFFICIENTS, AMPLITUDE AND PHASE ANGLE  
 \*\*\* BLADE PRESSURES, NORMAL FORCE, AND MOMENT, PER RADIAN \*\*\*

N	.012		.062		.148		.261		.392		.530		.661	
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI
1	37.992	355.56	14.353	355.99	8.647	1.222	6.019	255.27	4.951	8.666	4.524	9.49	3.477	12.334
2	3.545	337.09	11.101	232.48	.353	259.38	.150	221.23	.019	41.47	.075	223.10	.087	122.64
3	.446	337.09	.232	232.48	.076	213.68	.045	20.61	.106	229.85	.031	213.44	.036	222.81
4	.782	347.70	.092	221.23	.105	40.84	.037	240.08	.018	193.64	.021	113.56	.043	327.29
5	.512	314.10	.091	191.23	.030	171.20	.011	130.44	.029	163.09	.009	145.61	.013	148.24
6	.083	349.02	.050	40.64	.019	224.18	.022	120.67	.029	150.60	.008	145.61	.030	161.86
7	.112	349.02	.008	130.68	.015	278.24	.025	141.98	.007	102.81	.002	59.16	.019	110.57
8	.158	227.97	.017	324.73	.011	324.73	.021	141.98	.007	102.81	.002	59.16	.019	110.57
9	.017	195.85	.023	108.29	.030	147.49	.029	161.17	.024	161.47	.017	179.12	.011	238.49
10	.032	195.85												

N	.774		.800		.910		CN-MAG		PHIN		N		CM-MAG		PHIM		
	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	DELCPH	PHI	
1	2.614	15.66	1.454	62.70	1.389	14.44	5.884	3.43	.239	244.72	1.23	1.329	355.57	.350	3248.25	.011	304.45
2	.055	141.73	.061	118.49	.021	271.88	.105	316.72	.028	184.53	3	.011	304.45	.006	345.13	.003	373.47
3	.014	92.55	.019	91.91	.008	196.89	.021	271.88	.014	150.90	4	.003	373.47	.001	3219.37	.004	133.51
4	.018	293.10	.025	299.67	.007	196.89	.014	150.90	.011	133.06	5	.004	133.51				
5	.028	160.53	.005	156.95	.024	169.48	.014	150.90	.014	133.06	6						
6	.004	45.50	.007	19.06	.009	15.79	.014	133.06	.014	175.09	7						
7	.004	350.64	.004	170.47	.004	196.88	.014	175.09			8						
8	.010	231.28	.018	283.13	.012	280.21					9						
9											10						
10																	

\*\*\* WALL PRESSURES, PER RADIAN \*\*\*

WALL NO.	.125		.200		.300		.500		.600		.800		.925		.975	
	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI	CP-MAG	PHI
1	2.486	12.37	3.557	61.61	13.582	176.72	2.581	186.12	10.416	333.43	1.125	1.416	1.329	355.57	.350	3248.25
2	.168	279.29	.210	289.92	.171	268.11	.031	259.05	.449	298.37	1.125	1.416	1.329	355.57	.350	3248.25
3	.048	154.63	.024	277.53	.452	264.19	.038	343.15	.217	192.92	1.125	1.416	1.329	355.57	.350	3248.25
4	.010	84.50	.014	105.65	.081	108.59	.017	126.82	.069	154.42	1.125	1.416	1.329	355.57	.350	3248.25
5	.035	299.77	.004	213.90	.112	248.18	.010	301.92	.040	276.99	1.125	1.416	1.329	355.57	.350	3248.25
6	.038	299.77	.007	115.90	.018	157.45	.014	184.64	.016	181.64	1.125	1.416	1.329	355.57	.350	3248.25
7	.013	168.47	.007	292.33	.010	78.23	.002	348.53	.011	191.15	1.125	1.416	1.329	355.57	.350	3248.25
8	.016	168.47									1.125	1.416	1.329	355.57	.350	3248.25
9																
10																

\*\*\* STABILITY PARAMETER

\* XI = .1023 \*  
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