NASA Technical Memorandum 81321

NASA-TM-81321 19810023594

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August 1981

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A Full-Scale Wind Tunnel Investigation of a Helicopter Bearingless Main Rotor

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N81-32137

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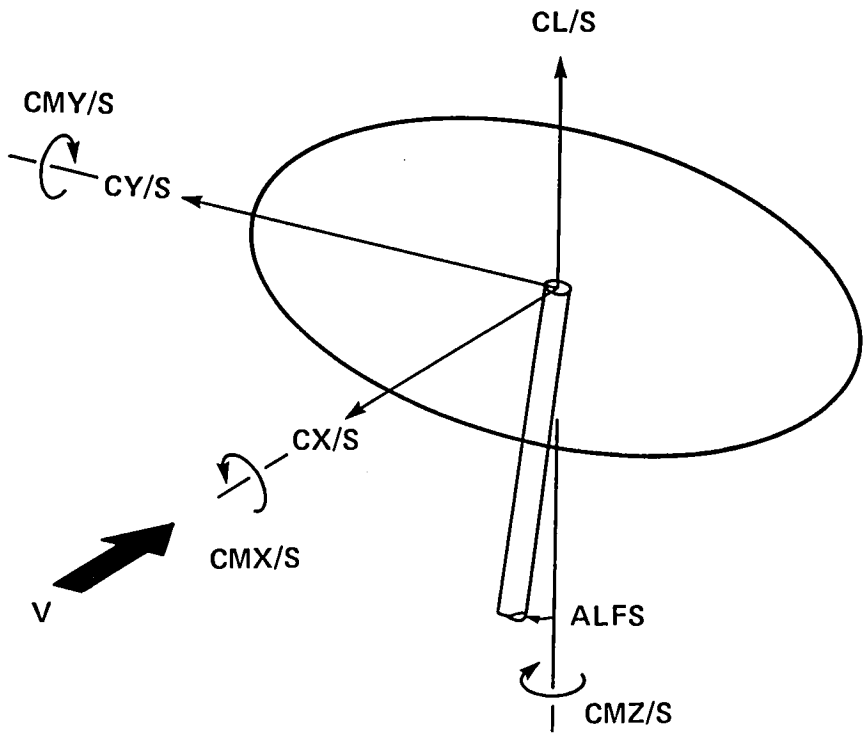

ALFC	angle of attack of control axis relative to vertical, positive tilt aft, ALFC = (ALFS - B1), degrees
ALFS, α	angle of rotor shaft from vertical, positive shaft tilt aft, degrees
A1, B1	coefficients in the representation of rotor blade cyclic pitch, -A1 cos(ψ + 10°) - B1 sin (ψ +10°), degrees
a_1, b_1	coefficients of cos ψ and sin ψ in Fourier expansion of measurement signal, respectively

CL/S	rotor lift coefficient in wind-axes system, positive vertical, $\frac{\text{lift}}{\rho S(\Omega R)^2}$
CMX/S	resultant rolling moment coefficient about rotor center in wind-axes system, positive advancing side of rotor disk down, $\frac{\text{rolling moment}}{\rho S(\Omega R)^2 R}$
CMY/S	resultant pitching moment coefficient about rotor center, positive leading side of rotor disk up, $\frac{\text{pitching moment}}{\rho S(\Omega R)^2 R}$
CMZ/S	resultant yawing moment coefficient about rotor center in wind-axes system, positive opposing direction of rotation $\frac{\text{yawing moment}}{\rho S(\Omega R)^2 R}$
CP/S	rotor power coefficient, $\frac{(\text{torque})(\Omega)}{\rho S(\Omega R)^3}$
CPO/S	non-ideal rotor power coefficient, eqn (7)
CT/S	rotor thrust coefficient, shaft-axis, positive vertical, thrust
CX/S	rotor propulsive force coefficient in wind-axes system, positive toward leading side of rotor disk, $\frac{-\text{drag}}{\rho S(\Omega R)^2}$
CY/S	rotor side-force coefficient, positive toward advancing side of rotor disk, $\frac{\text{side force}}{\rho S(\Omega R)^2}$
FE	equivalent drag flat plate area of rotor propulsive force, $\frac{-\text{drag}}{0.5\ (\rho V)^2}$, ft^2

MAT	rotor blade tip Mach number at 90 degree azimuth position
OMEG*R, ΩR	rotor blade tip speed, ft/sec
R	rotor radius, ft
ROD	rate of descent assuming 14.5 ft^2 fuselage/hub equivalent flat plate drag area, fpm
RHO	air density, $slugs/ft^3$
RPM	rotor revolution rate
S	reference area [(number of blades) x (blade chord) x (rotor radius)], ft^2
$T_{1/2}$	time-to-half amplitude, seconds
THETA, θ_7	collective pitch setting at 0.7R, degrees
V/OR	advance ratio
VKNOTS, V	free stream velocity, knots
ζ_F	fixed system percent critical damping coefficient
σ	rotor solidity, $\frac{S}{\pi R^2}$
ψ	rotor blade azimuth angle measured from downwind position in direction of rotation, degrees
Ω	rotor rotation frequency, rad/sec
ω_R	frequency of fundamental rotating inplane bending frequency, rad/sec
ω_S	frequency of support motion, rad/sec

Subscripts

$(\ )_{TR}$	dimensional aerodynamic tare quantity

A FULL-SCALE WIND TUNNEL INVESTIGATION OF A HELICOPTER BEARINGLESS MAIN ROTOR

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SUMMARY

A helicopter bearingless main rotor was tested in the NASA Ames 40- by 80-Foot Wind Tunnel on the Ames rotor test apparatus. Areas of investigation included aeroelastic stability, aerodynamic performance, and rotor loads as a function of collective pitch setting, RPM, airspeed and shaft angle. The rotor/support system was tested with the wind tunnel balance dampers installed and, subsequently, removed. Modifications to the rotor hub were tested. These included a reduction in the rotor control system stiffness and increased flexbeam structural damping. The primary objective of the test was to determine aeroelastic stability of the fundamental flexbeam/blade chordwise bending mode. The rotor was stable for all conditions. Damping of the rotor chordwise bending mode increases with increased collective pitch angle at constant operating conditions. No significant decrease in rotor damping occurred due to frequency coalescence between the blade chordwise fundamental bending mode and the support system.

I. Introduction

A bearingless main rotor built under U.S. Army - sponsorship by the Boeing Vertol Company was tested in the NASA-Ames 40- by 80-Foot Wind Tunnel on the Ames rotor test apparatus. The rotor installed on the test apparatus is shown in Figure 1. The bearingless main rotor hub design replaces the hinges, bearings, and dampers of a conventional articulated helicopter rotor with non-mechanical flexural straps (flexbeams). This hub configuration promises to simplify hub design methodology and increase main rotor reliability and dependability.

The primary objective of the wind tunnel test was to investigate the aeroelastic stability characteristics of rotor by studying the damping level in the fundamental chordwise bending mode and to determine how it changed with operating conditions, different support system dynamics, and hub configuration changes. This investigation provides insight into the aeroelastic behavior of bearingless helicopter rotor designs and the impact of variations in certain hub design parameters. Secondary objectives were to determine rotor performance and loads in hover and in forward flight.

This report documents the test and the rotor configurations tested. It presents the rotor aeroelastic stability data, rotor loads data, and resultant vibration levels in the rotor test apparatus. The rotor and other test hardware are described in Section II. The run conditions and the rotor configurations tested are reviewed in Section III. The testing procedure is discussed in Section IV. The aerodynamic tares, Section V, and the rotor performance data, Section VI and Appendixes A and B, are presented. Aeroelastic stability data are given in Section VII and in Appendix C. Rotor

loads for forward flight test conditions are listed in Section VIII and Appendix D. Typical vibration levels in the rotor test apparatus are presented in Section IX and Appendix E.

II. Test Hardware

The bearingless main rotor development program is reviewed in Reference 1. The same rotor hardware used in the flight test program was used in the Ames 40- by 80-Foot Wind Tunnel investigation. New hardware was designed and manufactured to install the rotor on the Ames rotor test apparatus, including new upper rotor controls (pitch links, rotating and nonrotating swashplates) and the interfacing hardware between the shaft (a splined collar) and the hub (a hub adapter).

As discussed in Reference 1, the bearingless main rotor was designed to be flown on a BO-105 helicopter, a 4600 lb gross weight aircraft. The rotor's major dimensions are listed in Table 1.

The rotor hub consists of four flexbeam/torque tube/clevis assemblies as shown in Figure 2. Each flexbeam is composed of two fiberglass beams with open-channel C cross sections set back-to-back. The beams are cantilevered to the hub at a pre-pitch angle of 12.5 degrees and zero coning. A graphite filament-wound torque tube runs between the two beams. The beams and torque tube are secured together at the outboard end by a clevis. The blade root end is clamped in the clevis with a 2.5 degree pre-droop angle. The blades are modified BO-105 rotor blades with a 0.50 deg/ft linear twist rate and have constant chord (10.63 in).

The flexbeam is designed to be soft in torsion relative to the torque tube. Blade pitch control is achieved by rotating the root end of the torque tube which twists the clevis and the blade root, while the flexbeam elastically twists. The torque tube is designed to be soft in bending relative to

the flexbeam. The flexbeam is designed to withstand large flapping moments. Calculated rotating blade frequencies, taken from Reference 1 are presented in Table 2.

Due to the bearingless hub configuration, there was no direct means available to measure the actual blade pitch angle during testing. Consequently, an estimate of the blade pitch angle was made by measuring the positions of the three nonrotating control actuators. This in turn gave a measure of swashplate tilt and, indirectly, the blade clevis angle. This measurement was calibrated for the extreme pitch control positions statically (nonrotating). The blade pitch settings presented herein are referenced to radial station .7R. It should be noted that this is at best only an estimate of blade pitch setting. This estimated blade pitch setting was used to establish a nominal test condition. For the changes made to the hub configuration, the relative stiffnesses between the load carrying members (flexbeam, torque tube, and pitch link) changed. No attempt was made to re-calibrate the blade pitch setting estimate for each configuration change. Consequently the actual blade setting may differ for test points with modified hub configurations.

The rotor was installed on the rotor test apparatus for the wind tunnel test. This apparatus is a special purpose drive and support system for operating helicopter rotors in the wind tunnel. It houses two constant-torque, variable frequency 1500 horsepower electric motors and the electro hydraulic servo actuators of the primary and dynamic control systems; the dynamic control system is capable of inputting perturbations to the swashplate (collective and tilt), at frequencies up to 30 hertz. For the wind tunnel investigation, the dynamic control system was used to excite the rotor at its

fundamental inplane bending frequency. The rotor hub and the rotor shaft interfacing hardware installed on the test apparatus are shown in Figure 3. A schematic diagram of the rotor on the test apparatus in the 40- by 80-Foot Wind Tunnel test section is shown in Figure 4. The eight balance frame dampers can be disconnected. This directly alters the support system dynamics, including modal frequencies and damping. This information is presented in Reference 2 for the rotor test apparatus mounted on 15 foot struts. The first modal frequencies are summarized in Table 3, taken from Reference 2.

To reduce the control system stiffness to 89 percent of the baseline value, a second set of pitch link barrels were made incorporating bellville spring washers to provide axial flexibility. To increase the rotor system structural damping, elastomeric damping strip material was manufactured by Lord Kinematics, Inc. Each strip consisted of a .02 in thick layer of Lord Kinematic BTR VI elastomeric material sandwiched between a .01 in thick layer of fiberglass reinforced epoxy laminate. One strip was adhesive bonded to the inner surface (upper and lower) of each beam flange (sixteen total). Static tests showed the damping strips increased structural damping in the flexbeam assembly to 2.1 percent critical from a baseline 1.1 percent critical.

The rotor hardware, upper rotor controls, and the test apparatus were instrumented to measure flexbeam, individual beam, torque tube, blade, pitch link, nonrotating swashplate, rotor shaft, and module moments, forces and vibrations. A complete list of rotor/module instrumentation is given in Tables 4 and 5. Throughout this report the leading edge beam of the flexbeam is referred to as beam A and the trailing beam as beam B (see Figure 2). Accelerometer locations on the rotor test apparatus are shown in Figure 5. Due to the large amount of data obtained, only selected loads data are presented here.

III. Run Conditions

The rotor was tested in hover and at the forward flight speeds and rotor speeds shown in Figure 6. The rotor and test apparatus configurations for each run are listed in Table 6. Runs 1 through 4, 9, 10, 24, and 25 were model checkout runs which did not produce recorded data. The baseline configuration is designated as the rotor flown in the flight test program and with the tunnel balance dampers in place. Changes in the baseline configuration included disconnecting the wind tunnel balance dampers, reducing the control system stiffness, and bonding damping material to the flexbeams (Section II). Table 6 lists the forward speeds at the design 425 RPM condition for each run and point number of the baseline test configuration.

IV. Testing Procedures

A data acquisition run began by establishing rotor RPM at a shaft tilt of -10 degrees and a THETA of 4 degrees. The rotor console operator continuously adjusted cyclic pitch to minimize once-per-revolution flapping. Shaft tilt and collective pitch would then be set to minimize rotor loads during tunnel velocity increases. As velocity increased, once-per-revolution flapping was continuously minimized using cyclic pitch. When the desired tunnel airspeed was reached, rotor RPM, shaft angle, and collective pitch were set for the desired run conditions. A data point was then taken for performance and steady-state dynamic data.

After obtaining performance and loads data, aeroelastic stability data were taken. The dynamic control system was used to oscillate the non-rotating swashplate at the regressing rotor inplane bending frequency ($\Omega - \omega_R$). A chordwise flexbeam bending moment signal was monitored and the amplitude of the swashplate oscillation was increased until either an adequate response at the forcing frequency was noted or until other dynamic rotor loads became excessive. The excitation was then abruptly terminated and the transient decay of the chordwise flexbeam bending moment signal was recorded and analyzed using the moving block analysis technique on a mini-computer based analysis system. (A more detailed description of the stability determination process is presented in Section VI.) Within minutes, critical damping levels expressed in both rotating and nonrotating systems were calculated. This information was then used to help select the next run condition. The rotor operating conditions were changed and the data acquisition and stability determination sequence repeated.

V. Aerodynamic Tares

Aerodynamic tares were obtained for the rotor test module with a completely bare hub. Lift, drag, and side force are denoted by L, D, and Y respectively. Pitch, yaw, and roll moment are denoted by M, N, and RL respectively. The positive sign conventions used for the tares are shown in Figure 7. The tares were curve-fit to be functions of shaft angle of attack α and tunnel dynamic pressure Q as shown below.

$$\left(\frac{L}{Q}\right)_{TR} = 7.09078 + 1.18592\alpha - 0.02105\alpha^2 + 0.00055\alpha^3 + 0.07315Q - 0.00045Q^2 \quad (1)$$

$$\left(\frac{D}{Q}\right)_{TR} = 10.93790 + 0.04706\alpha + 0.01324\alpha^2 - 0.00029\alpha^3 - 0.01300Q + 0.00015Q^2 \quad (2)$$

$$\left(\frac{Y}{Q}\right)_{TR} = 0.14413 + 0.08139\alpha - 0.00051\alpha^2 - 0.00037\alpha^3 - 0.00690Q + 0.00010Q^2 \quad (3)$$

$$\left(\frac{M}{Q}\right)_{TR} = -48.61450 + 4.97416\alpha + 0.02943\alpha^2 - 0.00615\alpha^3 - 0.53526Q + 0.00349Q^2 \quad (4)$$

$$\left(\frac{N}{Q}\right)_{TR} = 5.69364 - 0.90674\alpha + 0.00496\alpha^2 + 0.00377\alpha^3 - 0.11802Q - 0.00017Q^2 \quad (5)$$

$$\left(\frac{RL}{Q}\right)_{TR} = 1.56534 - 0.60213\alpha - 0.03828\alpha^2 + 0.00478\alpha^3 + 0.14027Q - 0.00224Q^2 \quad (6)$$

The data and curve fit relations are shown in Figure 8.

The influence of the flexbeam/torque tube/clevis assemblies and the instrumentation package was investigated by measuring the loads on the test apparatus with the rotor hub rotating without the rotor blades. This configuration is shown in Figure 9. Data was obtained for tunnel dynamic pressures

of 12, 48, and 103 psf. Figure 10 shows the incremental lift and drag forces obtained. The hub assembly, with the flexbeams prepitched 12.5 degrees, generate a small amount of lift for the shaft angles and wind speeds tested. The equivalent flat plate drag area of the hub is increased by 4 - 6 ft^2. This drag increase is in part due to the large, bulky blade root attachment clevises located at .25R, and in part due to the open section C beams and torque tube, neither of which are faired. These degrade rotor performance.

Reference 1 estimates the drag area of the center hub, flexbeam/torque tube/clevis assemblies to be a 2.0 square feet increase above BO-105 values. This estimate seems overly optimistic.

Although not shown, the impact of the hub assembly on side force is negligible. The hub assembly does slightly influence yaw moment which increases by approximately 300 ft lbs for the conditions tested. Roll moment is increased by 200 ft lbs maximum. The pitching moment is virtually unaffected by the hub assembly.

VI. Performance

Performance data and rotor control positions for hover are presented in tabular form in Appendix A for all test configurations. The data are presented with test points grouped for conditions of the same tip speed (OMEG*R). Table 5 lists the hub configurations tested. All hover testing was at a shaft angle ALFS of -10 degrees with the wind tunnel access doors open. Yet as a data run progressed, a slight buildup of tunnel air velocity occurred within the closed tunnel circuit. This yields a dynamic pressure indication in the tunnel's instrumentation and data system which results in nonzero VKNOTS for some data points at hover conditions.

Performance data and rotor control positions at forward flight conditions are presented in tabular form in Appendix B. All test configurations are included and Table 5 should be consulted.

The forward flight performance data of Appendix B are further presented in Figures 11-22 for the baseline configuration. Wind tunnel airspeeds of 60, 90, and 120 knots and a tip speed of 717 ft/sec (425 RPM) are included. The baseline configuration is the hub configured as flown in flight tests and with the wind tunnel balance dampers on.

The rotor when installed on the BO-105 helicopter was designed to operate at 425 RPM. The necessary rotor force coefficients for assumed 1-G level flight of the rotor on a BO-105 aircraft are shown in Figure 23 for the airspeeds and rotor RPMs tested. These coefficients were calculated using a 5000 lb gross weight vehicle with a drag area of 90 ft^2. These trim values appear on Figures 11-14 to provide wind tunnel control settings for BO-105 level flight

conditions. Coefficients for various rate of descent and climb conditions for 60, 90, and 120 knots are shown in Figure 24.

The control settings for baseline rotor testing at tunnel speeds of 60, 90, and 120 knots and 425 RPM are shown in Figures 11-13, respectively. The data points used in computing this plot are shown. The same data at each airspeed are used to create the other performance plots. The corresponding run and point numbers for each airspeed are listed in Table 6.

Figure 11 and the other multi-parameter plots that follow are computer-generated using an algorithm which smooths and interpolates contours from a limited data base. For the figures presented here, the surface of the dependent parameter z, z = f(x,y), is first smoothed by defining

$$z = c_{ij} x^i y^j \qquad i,j = 0, N$$
$$i + j < N + 1$$

where x and y are the independent parameters. In Figures 11-13, x = ALFC and y = CL/S. In subsequent figures, x is replaced by CX/S. An estimate of the goodness of fit for this approximation is given by the parameter ε appearing in the top left hand corner of each plot. The parameter ε is the square root of the average squared-difference between the smoothed and original data. For the graphs presented in this report, N was typically 3.

Variation of shaft angle ALFS versus rotor lift and propulsion coefficients CL/S and CX/S at 60 knots is shown in Figure 14. The trim condition for 60 knots 1-G level flight would just fit within the range of rotor force coefficients tested. Similar plots for 90 and 120 knots airspeed are given in Figures 15 and 16. Note that although the 1-G flight trim condition is easily

bracketed by the tunnel data at 90 knots, 120 knot data was not simultaneously obtained for the CL/S and CX/S conditions required for trim 1-G flight. At 120 knots and higher airspeeds, high oscillatory flexbeam loads were experienced. This limited testing at high propulsive flight conditions at high airspeeds.

Rotor power coefficient CP/S is plotted in Figures 17-19. Likewise rotor non-ideal power coefficient CPO/S is presented in Figures 20-22. The coefficient is defined by

$$CPO/S = CP/S - (CL/S)^2 \frac{\sigma}{2(V/\Omega R)} - (CX/S) \frac{V}{\Omega R} \qquad (7)$$

and is equal to the sum of the rotor profile power and non-ideal induced power losses.

VII. Aeroelastic Stability Data

The primary objective of the wind tunnel test was to investigate the rotor's aeroelastic stability characteristics. Calculated rotating blade frequencies, taken from Reference 1, are presented in Table 2. The flexbeam/torque tube were designed to approximate the natural frequencies of a BO-105 rotor. The rotor is a soft inplane hingeless rotor configuration. The fundamental inplane bending frequency ω_R is less than the rotation rate Ω. The fundamental blade chordwise bending mode is typically the least damped rotor mode. The damping level of this mode can be sensitive to couplings with other blade modes, support dynamics, and run conditions. The stability level of this mode was investigated during the test.

It is important to note that the rotor's collective pitch setting THETA was used as an independent variable in establishing a given test condition. Data acquisition runs (performance and stability) were made at a particular pitch setting, rotor RPM, and shaft angle ALFS. The collective pitch, though expressed as the 0.7R radial station value, was determined by measuring the position of the nonrotating swashplate (height and tilt) and accounting for the mechanical gearing. It was recognized there would be elastic deformations of the pitch link/torque tube/flexbeam hardware so that systematic errors could occur in the THETA measurement. Furthermore, the several hub configurations changed the relative stiffnesses of the control system components. Due to the measurement technique, THETA and the cyclic pitch inputs A1 and B1 do not reflect the resulting changes in control system deflections. Therefore THETA is not considered an independent variable for this investigation. Instead, rotor thrust coefficient CT/S in hover, or lift coefficient CL/S and rotor shaft angle at forward flight conditions are considered independent variables

for this investigation. This does not imply the rotor's thrust or lift loading is the primarily mechanism which affects the aeroelastic damping. Rather, only that the rotor thrust or lift coefficient are better indicators of the .7R radial station blade angle than the swashplate position measurement.

The moving block analysis method, Reference 3, was used to determine stability levels. A decaying transient edgewise bending moment signal from the leading edge beam at station 0.06R was primarily utilized. Eight second record lengths were used to record the transient signal. A block size of one-half (four seconds) was used exclusively. The stability data are presented in time-to-half-amplitude, $T_{1/2}$.

The hover stability levels for the baseline configuration (the rotor as flight tested and the wind tunnel balance dampers on) are plotted in Figure 25. The constant RPM contours are faired through the data points and the constant CT/S contours are interpolated from the data points. At constant RPM, stability increases with increasing thrust coefficient (increasing blade pitch). At constant thrust coefficient levels, no significant decrease in stability is observed as tip speed is increased, except for low thrust coefficient levels at 425 RPM. This may be due to a coalesence between the rotor regressive inplane bending mode and the longitudinal balance mode. Hover stability with the wind tunnel balance dampers removed is shown in Figure 26. The damping levels are approximately the same as the baseline configuration, although the stability trend with increasing tip speed at constant thrust coefficient is different.

An effort was made to evaluate the repeatability of the stability determinations. In addition, sensitivity to the type of excitation, excitation amplitude, and analysis signal were also investigated. Table 8 summarizes

stability determinations in hover at 375 RPM and CT/S = 0.05 for the baseline configuration. Despite changing the type of swashplate excitation, its amplitude, and the bending moment signal analyzed, all times-to-half-amplitude are within 10 percent of the average for the determinations at constant CT/S. The sensitivity to excitation amplitude was further studied with the reduced control system stiffness configuration in hover at 425 RPM and CT/S = 0.026. The results are presented in Table 9. Given adequate excitation (> 0.1 deg) the stability determinations are all within 3 percent of the average. From these and other results, the test technique used to determine rotor stability gave repeatable results when excitation amplitude was sufficient. The only exception was at run conditions where the rotor system was heavily damped. Here it was difficult to excite the inplane bending mode sufficiently to obtain a good transient decay signal of sufficient time length. These run conditions are characterized by times-to-half-amplitude less than 0.8 seconds. The repeatability for these damping levels were poor. Fortunately, when the system is heavily damped the stability determination is not critical.

The effect of cyclic pitch inputs on rotor stability levels in hover were investigated at 375 RPM at CT/S = 0.048. Stability determinations at this nominal run condition have been previously presented in Table 8 for different excitation amplitudes. In Table 10, longitudinal and lateral cyclic trim pitch inputs were varied in an attempt to evaluate their effect on rotor stability. Although only a small number of stability determinations were performed, it is apparent the rotor inplane damping is sensitive to the trim condition during hover testing in the wind tunnel.

The effect of rotor RPM on stability at 90 knots is shown in Figure 27 for the baseline configuration. The rotor is most stable for 335 RPM. Very little change in damping levels are obtained by increasing RPM at constant lift coefficient CL/S and rotor shaft angle ALFS. Compared with Figure 25, for a given lift and 400 or 425 RPM, the rotor is less at 90 knots with ALFS = -6 or -8 degrees than at hover. At any tip speed and constant lift coefficient CL/S, damping increases as the shaft is tilted forward from -6 to -8 degrees (the sole exception is for 425 RPM and CL/S = 0.03).

The impact of removing the balance dampers on stability levels at 90 knots and 425 RPM is shown in Figure 28. The baseline configuration data is extrapolated to -4 degrees from -6 to -8 degrees shaft angle for comparison. No significant changes in the times-to-half-amplitude were obtained at 90 knots and 425 RPM due to removal of the balance dampers.

Stability of the rotor versus airspeed is shown in Figures 29-31 for the baseline configuration. All three figures are for 425 RPM. Figure 29 and 30 are for shaft angles of -6 and -8 degrees, respectively. The corresponding hover data at 425 RPM from Figure 25 are repeated (where CT/S data has been expressed as CL/S). In both cases stability decreases from hover to 60 knots and increases at 90 knots for constant lift coefficient CL/S. This trend is most evident at low lift levels, CL/S = 0.04. Rotor stability decreases at 120 knots. Stability data beyond 120 knots are shown in Figure 31. Stability determinations at 143 knots and 425 RPM were made for a shaft angle of -10 degrees, consequently the data of Figures 29 and 30 have been extrapolated to 10 degrees. Increasing airspeed to 143 knots increases damping levels for

low lift coefficient CL/S. For CL/S = 0.06, the rotor is essentially as stable at 143 knots as in hover.

The effect on stability by reducing the control system stiffness of the rotor is shown in Figures 32-34. In Figure 32, the damping level in hover is shown for the reduced stiffness pitch link configuration. The more flexible control system configuration was tested with the balance dampers off. The RPM and CT/S contours from Figure 26 are also shown. Reducing the control system stiffness increases times-to-half-amplitude at 400 RPM and at 375 RPM and CT/S = .06. The change in control system stiffness has little impact at 425 RPM. At 90 knots and a shaft angle of -8 degrees, Figure 33 shows that removal of the balance dampers did not alter rotor stability. However reducing the control system stiffness did significantly increase damping at 335 and 425 RPM and -8 degrees shaft angle. Figure 34 shows this trend is not evident at 90 knots, 425 RPM and ALFS = -4 degrees. For this operating condition, the inplane bending mode is less stable than the baseline configuration with the balance dampers off.

The increase in stability both in hover and at 90 knots from installation of the elastomeric damping material is shown in Figures 35 and 36. This configuration was tested with the balance dampers on. The corresponding results from Figures 25 and 27 are shown for comparison. For all hover test points, Figure 35, the time-to-half-amplitude is significantly decreased at the low thrust levels tested and for the thrust sweep at 425 RPM. A similar increase in stability was obtained at 90 knots for all three RPMs and both shaft angles tested, Figure 36. It should be noted the elastomeric material loosened from the flexbeam flanges during only a few hours of wind tunnel testing. This was probably due to an uncontrolled 24 hour curing process. However the data

obtained was considered indicative of the impact on stability of increased flexbeam structural damping.

The stability data obtained during this investigation are presented in tabular format in Appendix C. The hover and forward flight data are grouped in the same order as Appendices A and B, respectively.

VIII. Rotor Loads Data

Steady-state dynamic loads data were obtained at each test condition. Due to the large amount of rotor instrumentation, Table 4, only a selected number of measurements are presented here for all forward flight test conditions. The measurements included and their positive sign convention are given in Table 11. In Appendix D the data are presented with test points of the same wind speed (VKNOTS) and tip speed (OMEG*R) grouped. All test configurations are included (Table 6).

For each of the measurements, the periodic steady-state data are presented in Appendix D as follows: the time-average mean, root-mean-square value, the one-half peak-to-peak value (absolute maximum minus absolute minimum divided by 2), and the first five harmonics expressed in terms of magnitude and phase.

Selected flexbeam, torque tube, and pitch link loads are shown in Figures 37 through 60 for 60, 90, and 120 knots as a function of lift and propulsive force coefficients. The data for each airspeed correspond to the same run and point numbers given in Table 7. All data plotted are for the baseline configuration.

Figures 37-39 present the mean flexbeam chordwise bending moment of th A beam at radial station 0.06R. This signal was normally used to determine aeroelastic stability levels (Section VII). Note that the mean value is typically negative, i.e. the beam is bending in the direction of rotation. Constant moment contours are typically a function of both lift (CL/S) and propulsive (CX/S) force coefficients. Figures 40-42 present the one-half peak-to-peak moments for the same chordwise bending measurement. Unlike the mean value

value contours, the constant oscillatory moment contours are practically independent of propulsive force coefficient CX/S at constant airspeed.

Figures 43-45 present the mean flexbeam flapwise bending moment of the A beam also at radial station 0.06R. The constant mean contours are independent of CX/S and depend directly on CL/S. The corresponding flapwise bending moment of the B beam is shown in Figures 46-48. At all three airspeeds and CL/S less than 0.07 the B beam is more heavily loaded than the A beam. For CL/S greater than 0.07 the load is equally shared between the two beams.

Figures 49-51 present the oscillatory torque tube chordwise bending moment at station 0.20R. The constant oscillatory moment contours are not strongly dependent on CX/S at a given airspeed, similar to the flexbeam chordwise bending moment trends of Figures 40-42. For a given CL/S level, the magnitude of the torque tube oscillatory chord bending moment increases with airspeed.

The mean flexbeam torsion moment at station 0.08R is shown in Figures 52-54. At 60 knots, the mean moment is primarily dependent on lift coefficient CL/S and independent of thrust coefficient CX/S. Yet at 120 knots the moment is only weakly dependent on CL/S and primarily a function of CX/S. This is perhaps due to the nature of the redundant load path for control loads between the flexbeam and the torque tube/pitch link, and structural couplings between flexbeam bending and torsion which vary with flight condition.

The mean pitch link load is shown in Figures 55-57. This load is directly proportional to the mean torque applied at the torque tube root. Comparisons with the flexbeam torsion moment, Figures 52-54, show that at all three airspeeds the contours have identical dependence on flight conditions, as they

should, since they are a measure of total moment resisted at the blade root clevis attachment. On the other hand, oscillatory pitch link loads, Figure 58-60, show a more direct dependence on CL/S than the mean pitch link load for all three airspeeds.

An azimuthal plot of rotor flap bending moment is presented in Figure 61 for a typical hover test condition, 425 RPM and CT/S = .069. Flap bending instrumentation at stations 0.08R, 0.30R and 0.57R were used to construct the plot. Very little azimuthal dependence or eccentricity of blade moment is seen. The large (and almost constant) moment gradient exists only for the flexbeam and blade root. A similar plot is shown in Figure 62 for 143 knots, 425 RPM (V/OR = .34), CL/S = 0.040 and CX/S = 0.0035. The bending moment contours show a much greater azimuthal dependence and do not have as large a gradient at a given flexbeam radial station since the rotor is less lightly loaded.

IX. Rotor Test Apparatus Vibration Data

Vibration data were obtained for the rotor test apparatus at all conditions tested. The accelerometers used are listed in Table 5. Their locations are shown in Figure 5. The fourth harmonic magnitude expressed in g's and phase angle data are presented in Appendix E for all forward flight test conditions. The channel designations used in Appendix E are given in Table 12.

X. Conclusions

A helicopter bearingless main rotor was tested in the NASA Ames 40- by 80-Foot Wind Tunnel. The rotor operating characteristics were investigated in hover and at airspeeds up to 165 knots. Rotor shaft angle, pitch setting, rate of rotation and airspeed were varied. Performance and rotor loads data were obtained at all run conditions. Vibration levels in the test module were recorded.

Aeroelastic stability characteristics of the fundamental rotor inplane bending mode were investigated in hover and in forward flight up to 143 knots using the moving block analysis tehnique. The rotor was stable for all flight conditions. Removing the wind tunnel balance dampers did not significantly change rotor damping levels. Reducing the control system stiffness resulted in changes in damping levels for both hover and 90 knots. Finally, the installation of elastomeric damping strips significantly increased damping levels for all conditions.

References

1. Dixon, P.G.C.; "Design, Development, and Flight Demonstration of the Loads and Stability Characteristics of a Bearingless Main Rotor", USAAVRADCOM-TR-80-D3, June 1980.

2. Johnson, W. and Biggers, J.C.; " Shake Test of Rotor Test Apparatus with Balance Dampers in the 40- by 80-Foot Wind Tunnel", NSA TM X-62470, July 1975.

3. Hammond, C.E., and Doggett, R.; "Demonstration of Subcritical Damping by Moving-Block/Randomdec Applications", NASA SP-415, Flutter Testing Techniques Conference Proceedings, 1976, pp. 59-76.

TABLE 1. ROTOR GEOMETRY

Rotor radius, R	16.11 feet
Blade chord, c	0.89 feet
Clevis radius	4.45 feet
Cut out radius	5.33 feet
Reference area, S	57.10 feet
Solidity ratio, σ	0.070
Flexbeam coning angle	0 degrees
Blade pre-droop angle	-2.5 degrees
Pre-pitch angle	
Root	12.5 degrees
Clevis	12.5 degrees
.7R (linear from cutout)	9.55 degrees

	FREQUENCY		
	FIRST MODE	SECOND MODE	THIRD MODE
FLAPWISE	1.119	2.575	4.336
EDGEWISE	0.739	3.854	8.912
TORSION	3.698	7.683	

Table 2. Rotating blade frequencies per rev.
425 RPM.

	MODE		
	LONGITUDINAL	LATERAL	YAW
WITH BALANCE DAMPERS INSTALLED			
BALANCE	2.17	1.74	2.68
STRUT	4.23	4.04	
WITHOUT BALANCE DAMPERS INSTALLED			
BALANCE	1.62	2.32	2.67
STRUT	4.02	4.50	

Table 3. System support frequencies. Hertz.

TABLE 4. ROTOR INSTRUMENTATION

	Blade No.	Station*	Units	Positive Sign Convention
Flexbeam				
Flap Bending	1-4	14.25	in-lbs	flapping up
Chord Bending	1-4	14.25	in-lbs	leading beam tension
Torsion	1-4	15.25	in-lbs	leading edge up
Beam				
Flap Bending	1	7.5A	in-lbs	flapping up
		7.5B		
		10.5A		
		10.5B		
		18.0A		
		18.0B		
		45.0A		
		45.0B		
Chord Bending	1	11.0A	in-lbs	leading edge in tension
		11.0B		
		43.0A		
		43.0B		
Blade				
Flap Bending	1	55.4	in-lbs	flapping up
		110.0		
Chord Bending	1	55.4	in-lbs	leading edge in tension
		110.0		
Torsion	1	65.0	in-lbs	leading edge up
Torque Tube				
Flap Bending	1	38.1	in-lbs	flapping up
Chord	1	38.1	in-lbs	leading edge tension
Torsion	1	37.0	in-lbs	leading edge up
Pitch Link	1		lbs	tension
Rotor Shaft Torque			in-lbs	direction of rotation

*Stations specified in inches. A beam leads in direction of rotation.

TABLE 5. ROTOR TEST APPARATUS ACCELEROMETERS

Direction	Location in RTA*	Channel**	Units
Vertical	Nose	1	g's
Longitudinal	Transmission	2	g's
	Tail	3	
	Right hand side	4	
Lateral	Transmission	5	g's
	Tail	6	
	Right hand side	7	
	Left hand side	8	

*See Figure 5

**Designation used in Appendix E.

TABLE 6. RUN CONFIGURATIONS

RUN NUMBERS	BALANCE ON	DAMPERS OFF	TRIMMED YES	1-P FLAPPING* NO	PITCH LINKS BASELINE	PITCH LINKS SOFT	CONFIGURATION
5,6,7,8,11	X			X	X		BASELINE
12,13,14,15 16,17,18,20	X		X		X		BASELINE
19,21	X			X	X		BASELINE
22,23		X	X		X		BASELINE
26,27		X	X			X	SOFT PITCH LINKS
28	X		X		X		DAMPING MATERIAL
29		X		X	X		DAMPING MATERIAL

*Cyclic Pitch Used to Reduce Once-Per-Revolution Flapping

Tunnel Speed Knots	Run Number	Point Number
55-65	15	5-15
	19	5
	21	2
85-95	14	3-12
	15	2-4
	19	7
	20	13,14
	21	7
115-125	16	2-9
140-150	17	3-6
	18	2-12

TABLE 7. BASELINE CONFIGURATION RUN AND DATA POINT NUMBERS

SIGNAL ANALYZED	EXCITATION	CT/S	T 1/2
CHANNEL I	Oscillatory lateral cyclic (app. 0.05 deg)	0.048	1.02 sec
	Oscillatory lateral cyclic (app. 0.1 deg)	0.048	1.16 sec
	Oscillatory lateral cyclic (app. 0.2 deg)	0.048	1.20 sec
	Oscillatory lateral cyclic (app. 0.4 deg)	0.048	1.11 sec
	Oscillatory lateral cyclic (app. 0.3 deg)	0.052	0.95 sec
	Oscillatory lateral cyclic (app. 0.5 deg)	0.052	1.01 sec
	Swashplate wobble (app. 0.5 deg)	0.052	0.89 sec
CHANNEL II	Oscillatory lateral cyclic (app. 0.5 deg)	0.052	0.97 sec

Run Conditions: Hover, 375 RPM, baseline configuration

CHANNEL I: Leading-edge beam edgewise bending moment, 0.06R

CHANNEL II: Total flexbeam edgewise bending moment, 0.07R

TABLE 8. REPEATED STABILITY EVALUATION

OSCILLATORY LATERAL CYCLIC AMPLITUDE (APPROX.)	T 1/2
0.05 deg	1.82 secs.
0.1 deg	2.29 secs.
0.2 deg	1.99 secs.
0.25 deg*	2.13 secs.
0.3 deg	1.97 secs.
0.4 deg	1.90 secs.
0.5 deg	1.99 secs.

Run Conditions: Hover, 425 RPM, CT/S = 0.026
Balance dampers off; Run 26, Point 12
*Run 22, Point 17, CT/S = 0.027

TABLE 9. EFFECT OF EXCITATION AMPLITUDE ON REPEATED STABILITY EVALUATIONS

COLLECTIVE PITCH SETTING	A1	B1	FLEXBEAM FLAPPING† 0.07R IN LBS†		TORQUE TUBE TORSION† 0.19R IN LBS		T 1/2 seconds
			a 1	b 1	a 1	b 1	
6.1	-0.8*	0.5*	-173	322	-66	19	0.95
6.0	-1.0	1.5	3833	-1018	-151	160	1.09
6.0	-0.7	-0.5	-5136	3668	-26	-157	0.86
6.0	0.6	0.3	-4374	-5320	152	42	1.08
6.0	-1.3	0.0	238	5720	-170	-102	1.24

* Cyclic Pitch Inputs Required to Minimize 1P Flapping.
† For Positive Sign Convention, See Table 4.
Run Conditions: Hover, 375 RPM Baseline Configuration
Analysis Signal: Leading-edge Beam Edgewise Bending Moment, 0.06R
Excitation: Oscillatory Lateral Cyclic (app. 0.3 degs)

TABLE 10. EFFECT OF CYCLIC PITCH INPUTS ON STABILITY LEVELS IN HOVER

MEASUREMENT*	CHANNEL DESIGNATION	POSITIVE SIGN CONVENTION
A Beam Chord Bend STA = 11.0	A	Leading edge in tension
B Beam Chord Bend STA = 11.0	B	Leading edge in tension
A Beam Flap Bend STA = 10.5	C	Flapping up
B Beam Flap Bend STA = 10.5	D	Flapping up
A Beam Flap Bend STA = 18.0	E	Flapping up
B Beam Flap Bend STA = 18.0	F	Flapping up
A Beam Flap Bend STA = 45.0	G	Flapping up
B Beam Flap Bend STA = 45.0	H	Flapping up
Blade Chord Bending STA = 55.4	I	Leading edge in tension
Blade Flap Bending STA = 55.4	J	Flapping up
Blade Torsion STA = 65.0	K	Leading edge up
Torque Tube Chord Bend STA = 38.1	L	Leading edge in tension
Torque Tube Flap Bend STA = 38.1	M	Flapping up
Torque Tube Torsion STA = 37.0	N	Leading edge up
Flexbeam Torsion STA = 15.2	O	Leading edge up
Pitch Link	P	Tension

*All engineering units are inch-pounds except the pitch link load which is pounds.

TABLE 11. DYNAMIC LOAD MEASUREMENTS

CHANNEL DESIGNATION	DIRECTION	LOCATION ON TEST APPARATUS*
1	Vertical	Nose
2	Longitudinal	Transmission
3	Longitudinal	Tail
4	Longitudinal	Left side
5	Longitudinal	Right side
6	Lateral	Tail
7	Lateral	Left side
8	Lateral	Right side

*See Figure 5.

TABLE 12. ACCELEROMETER CHANNEL DESIGNATIONS

(a) Front view

Figure 1. Rotor installed on test apparatus

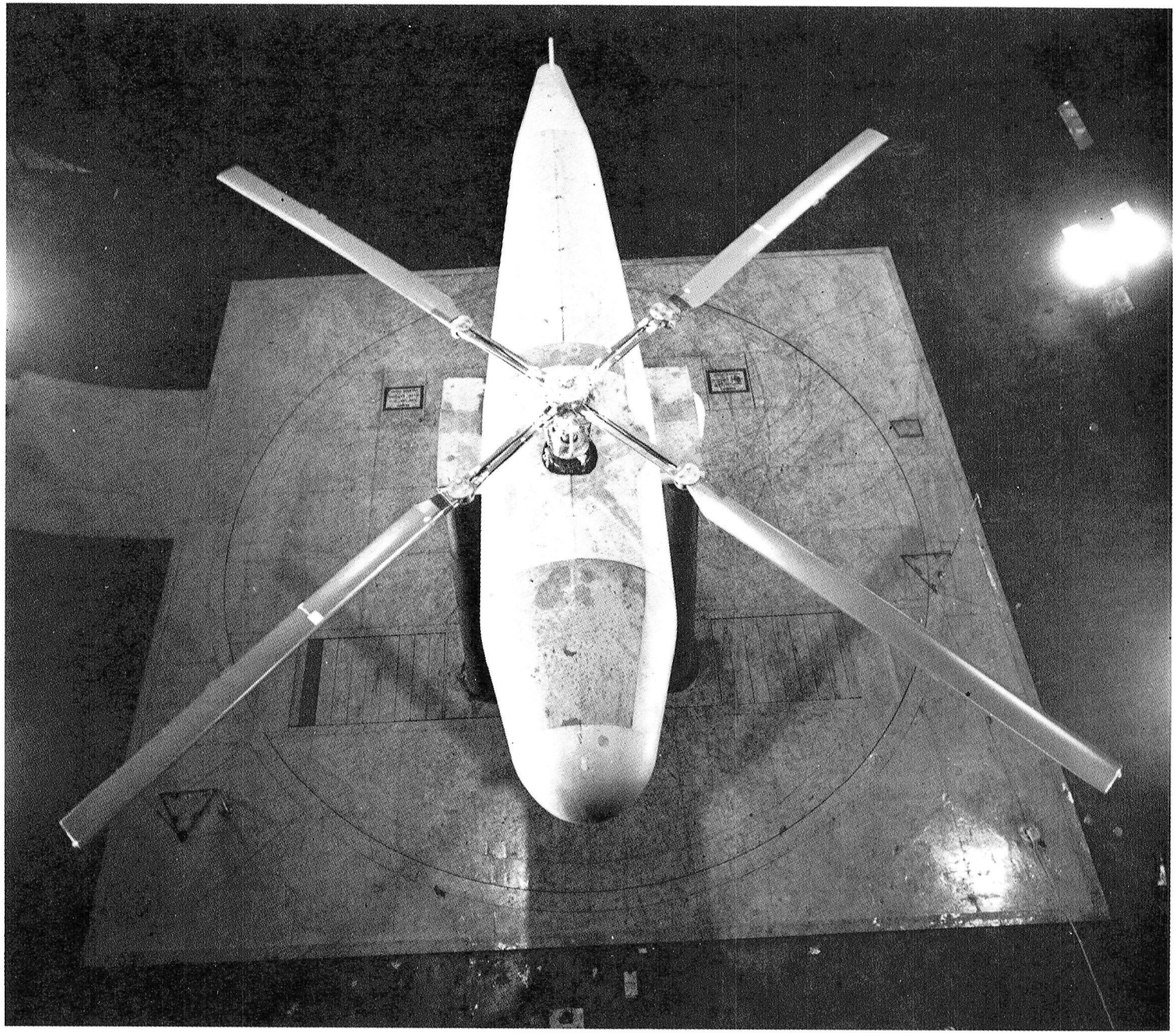


Figure 1. (b) Top view

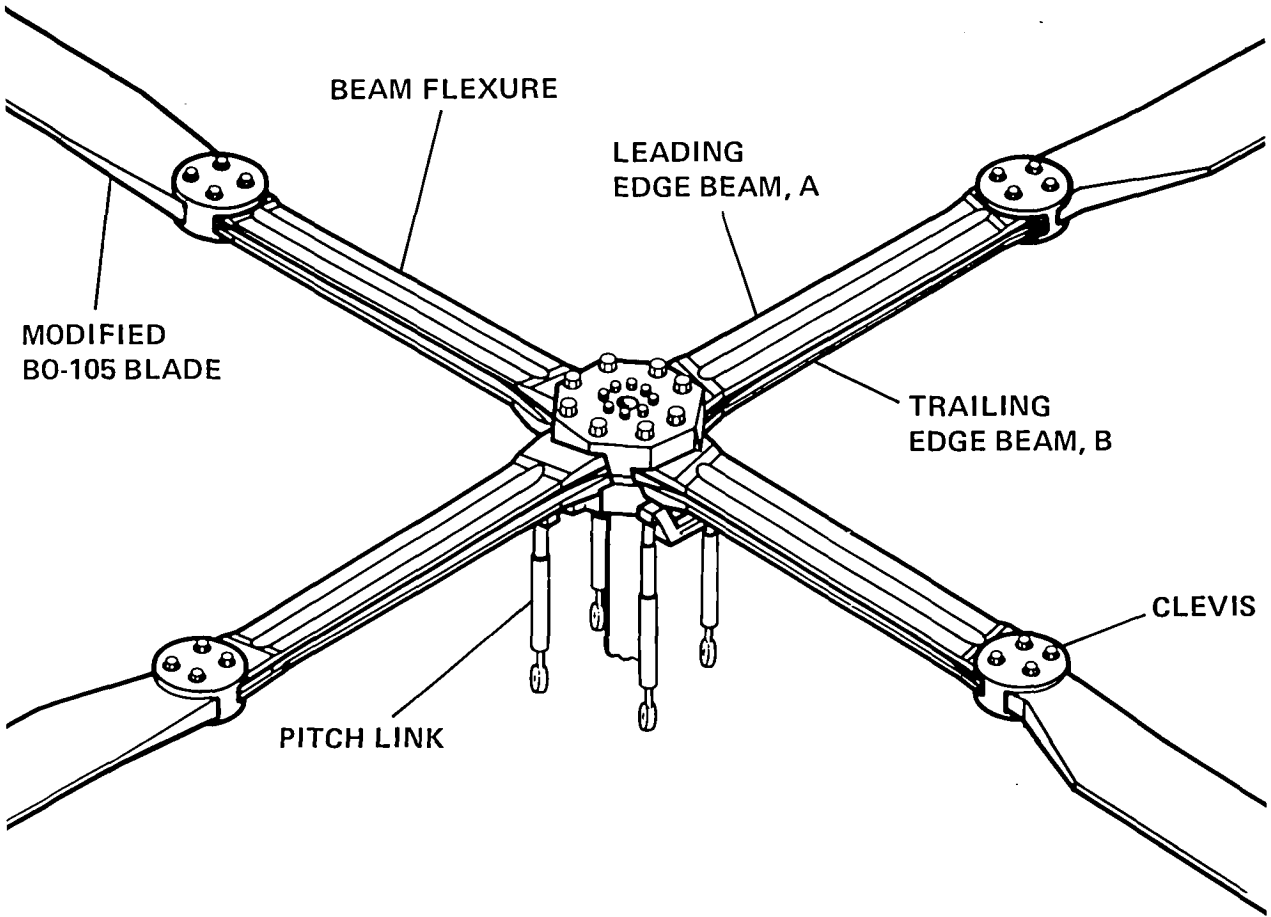


Figure 2. Bearingless main rotor

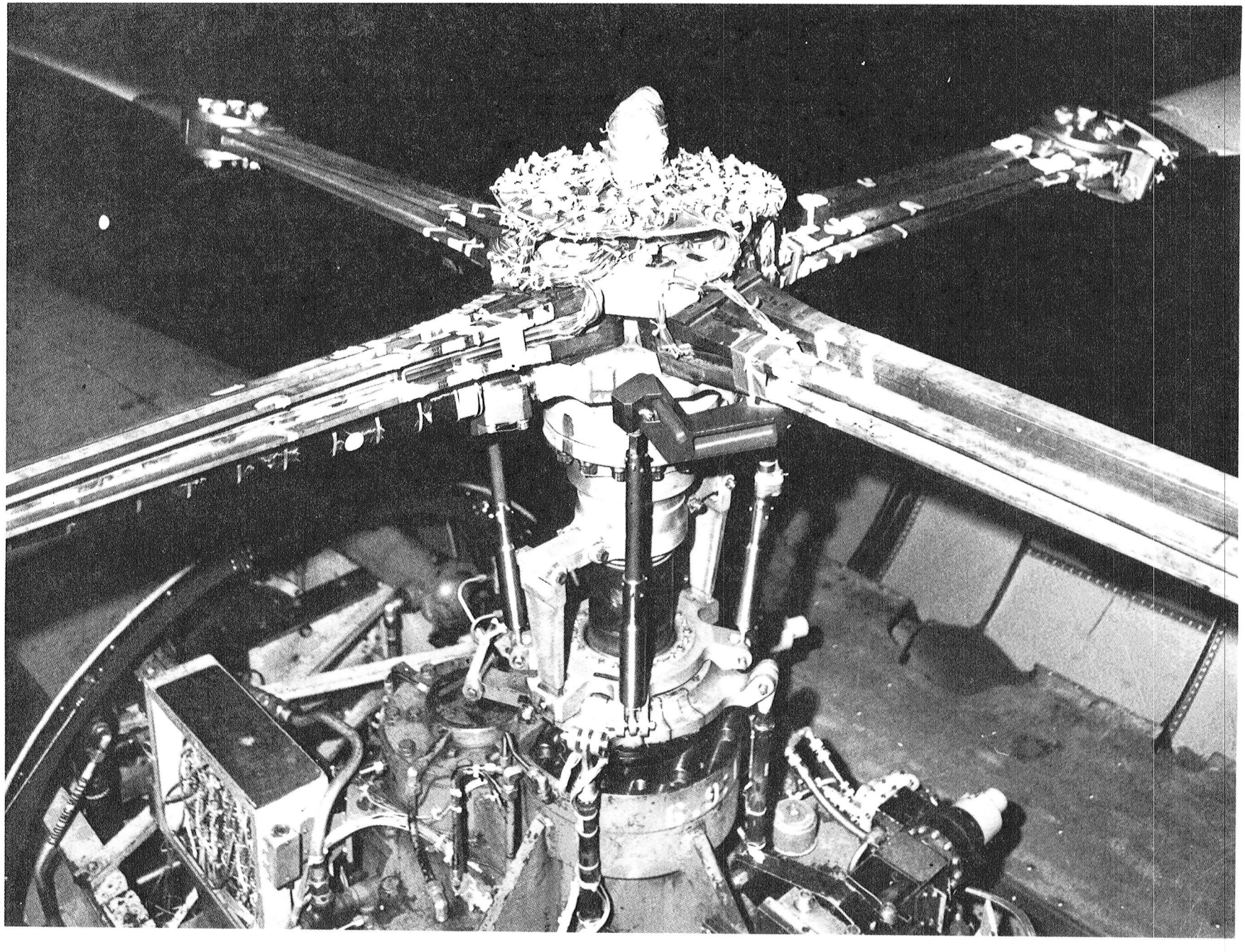


Figure 3. Rotor hub installed on test apparatus

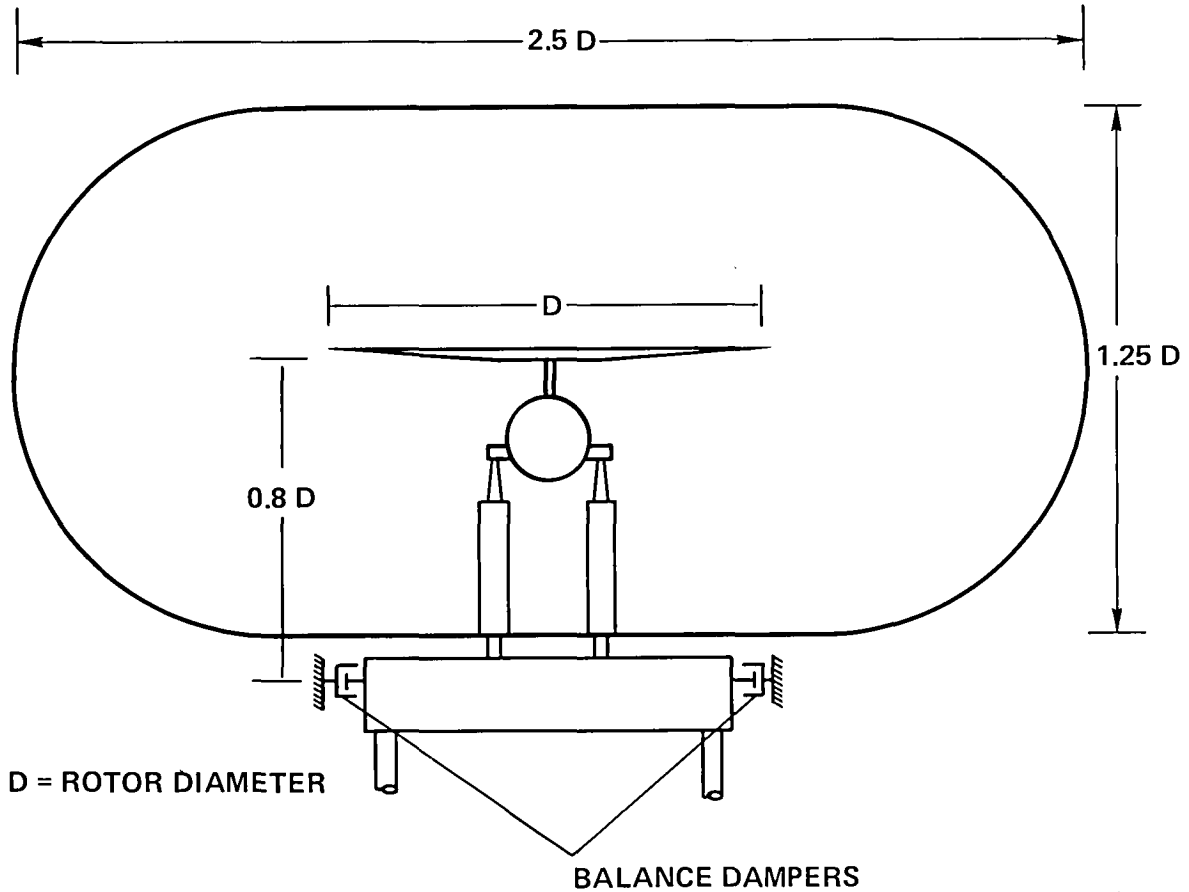
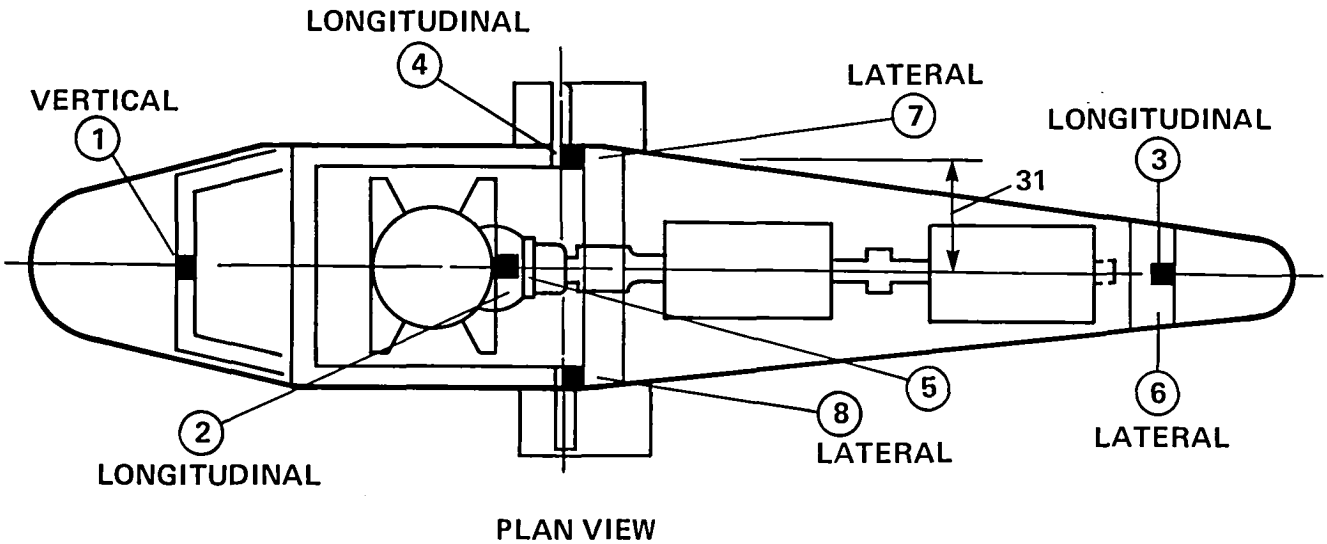


Figure 4. Schematic of rotor on test apparatus in 40- by 80-Foot Wind Tunnel test section.



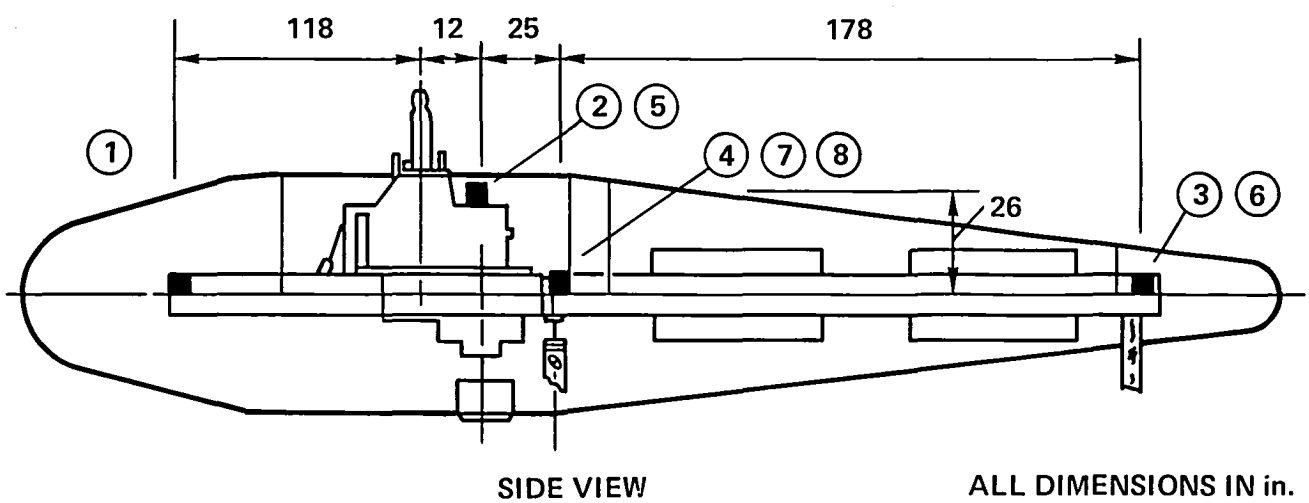


Figure 5. Location of accelerometers on rotor test apparatus.

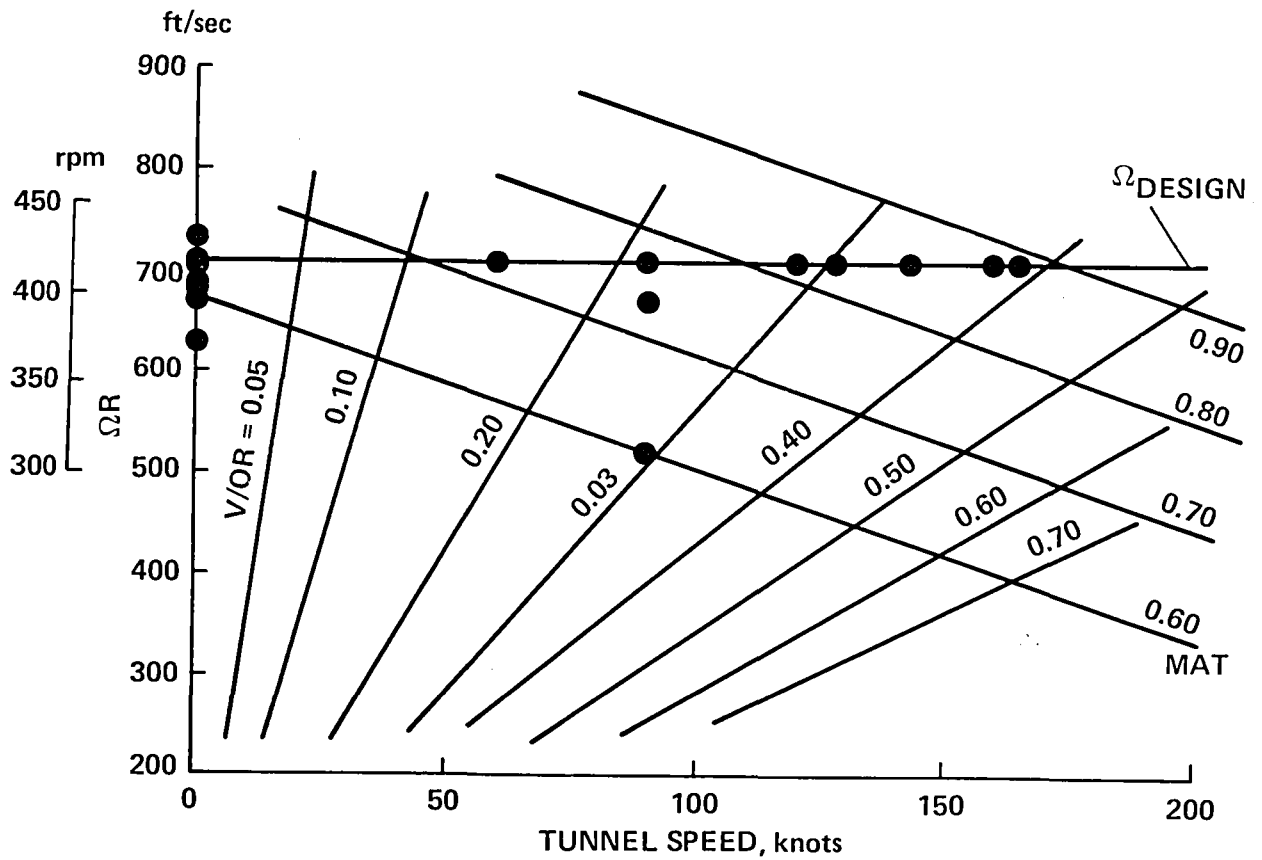


Figure 6. Test conditions.

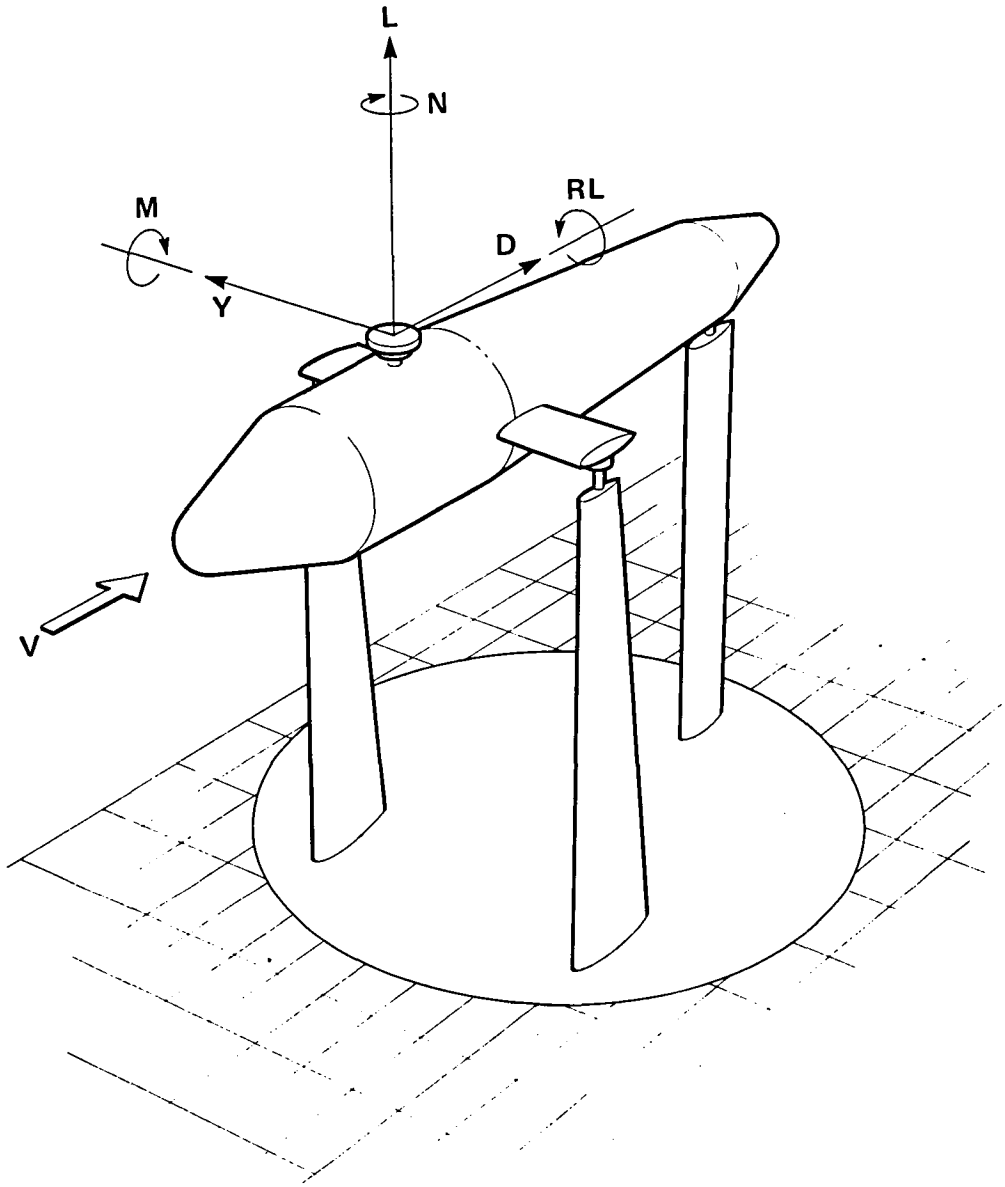


Figure 7. Direction of positive aerodynamic force and moment tares.

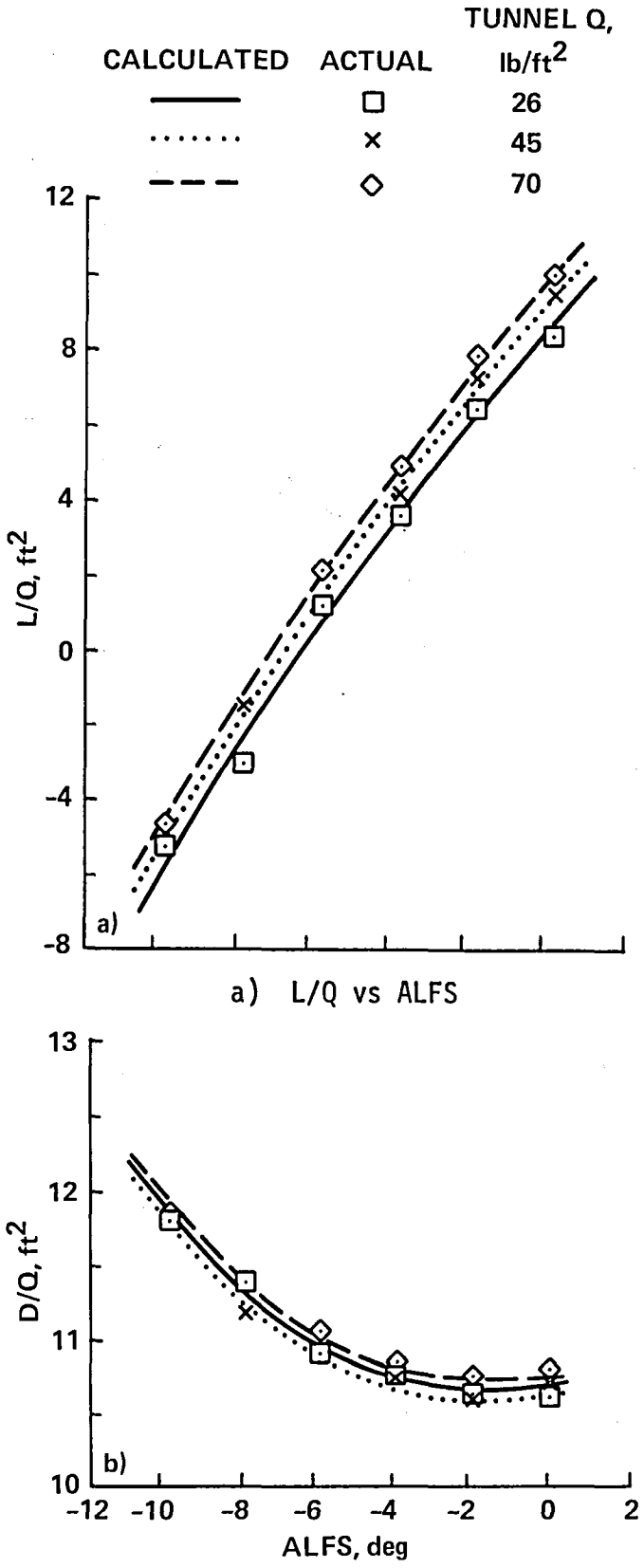


Figure 8. Bare shaft/test module aerodynamic tares

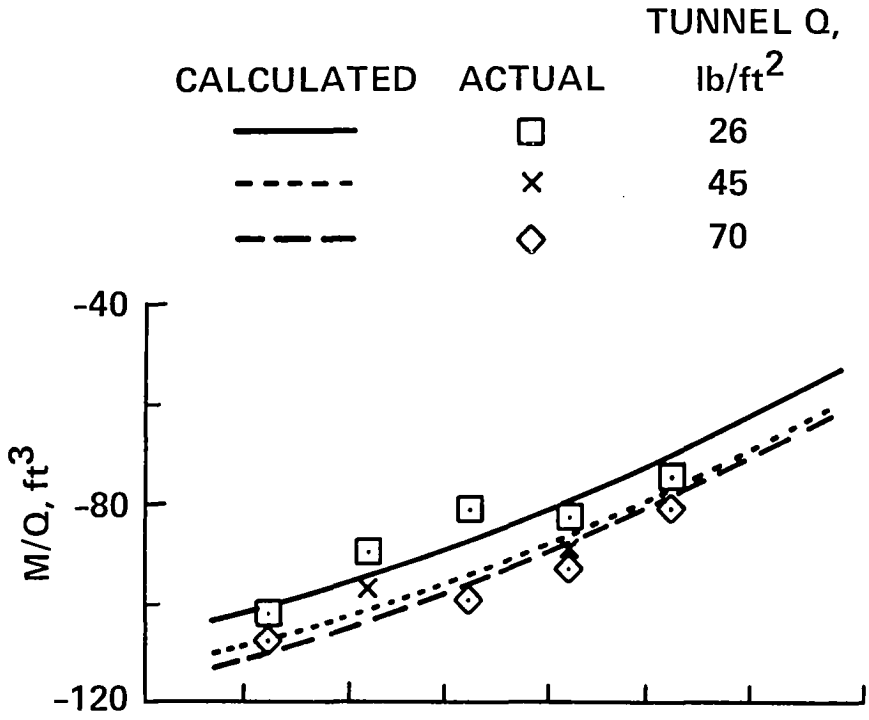


Figure 8 (c). M/Q vs ALFS

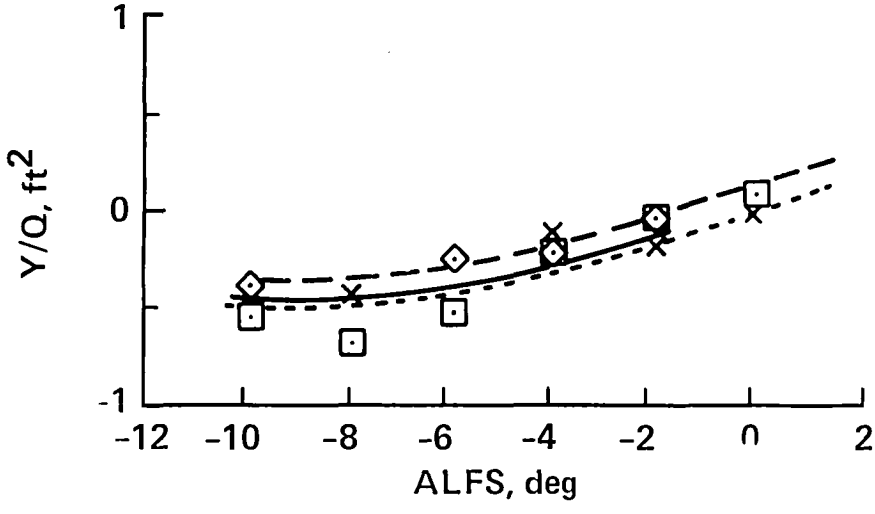


Figure 8 (d). Y/Q vs ALFS

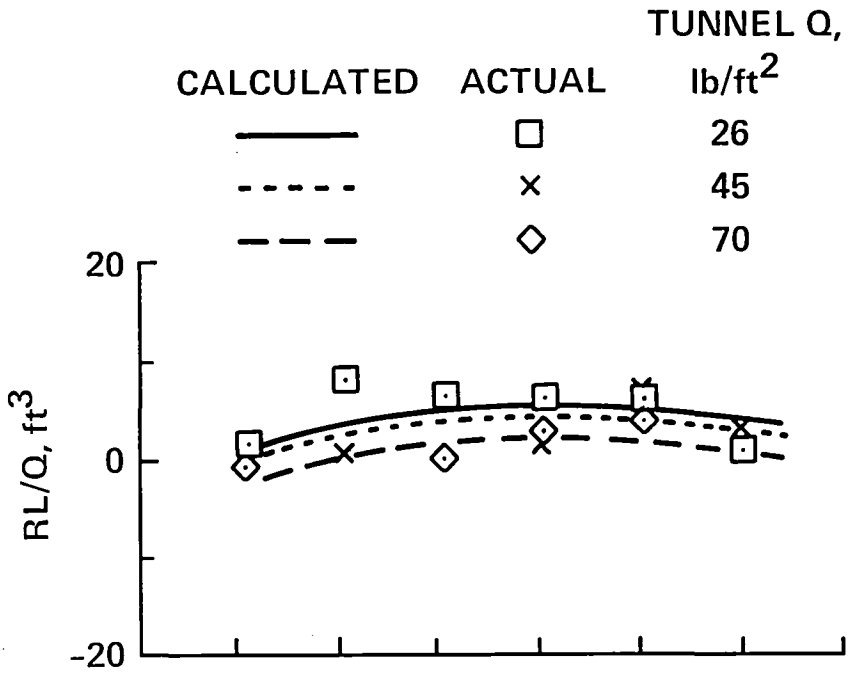


Figure 8 (e). RL/Q vs ALFS

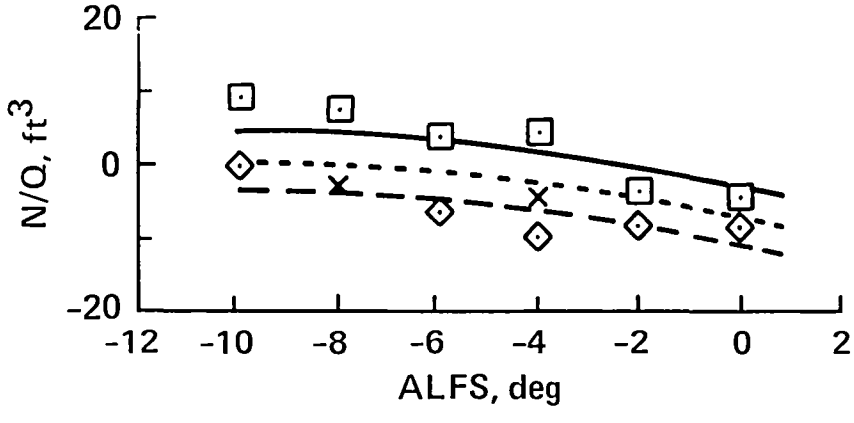


Figure 8 (f). N/Q vs ALFS

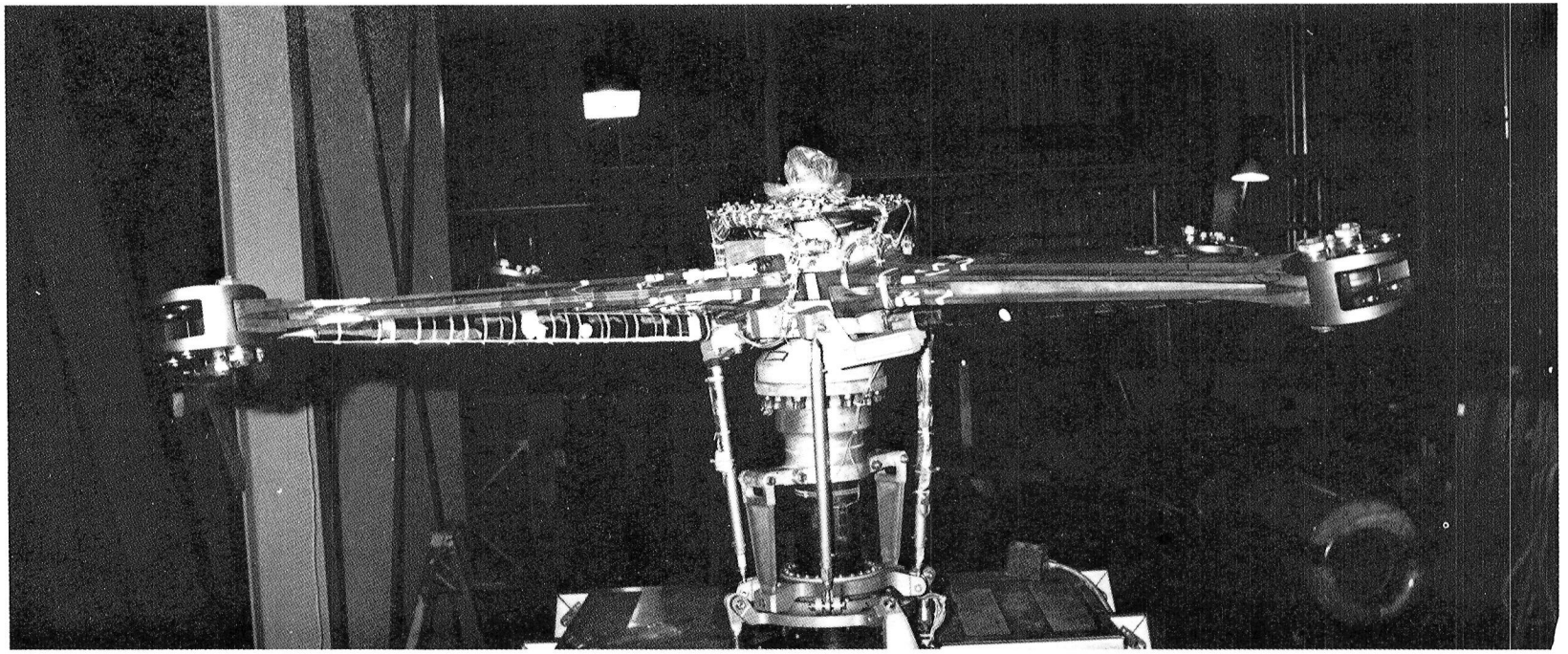
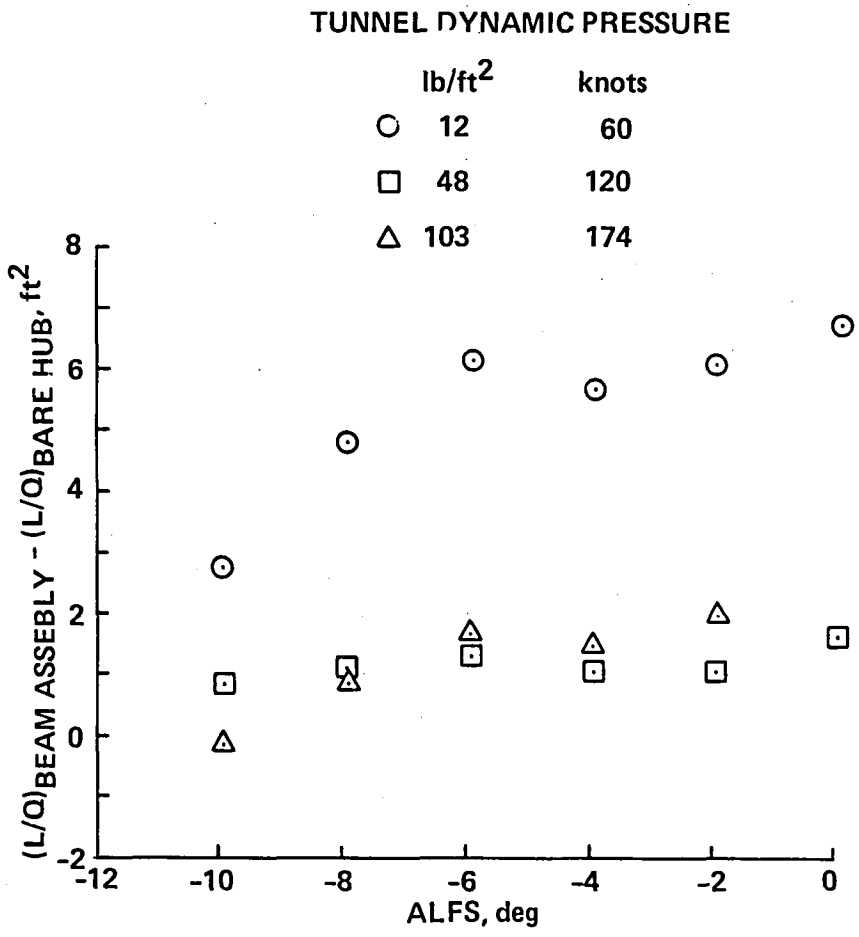


Figure 9. Hub aerodynamic tare configuration



a) (L/Q) vs ALFS

Figure 10. Flexbeam-torque tube assembly/clevis tares.

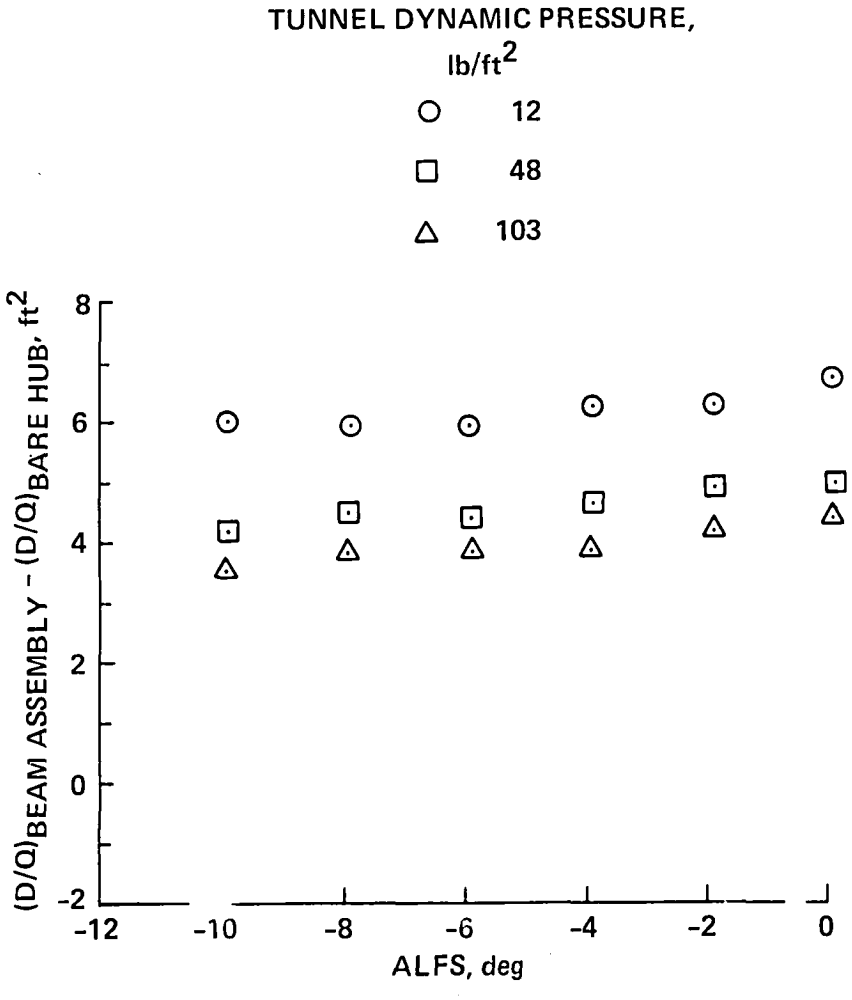


Figure 10 (b). (D/Q) vs ALFS

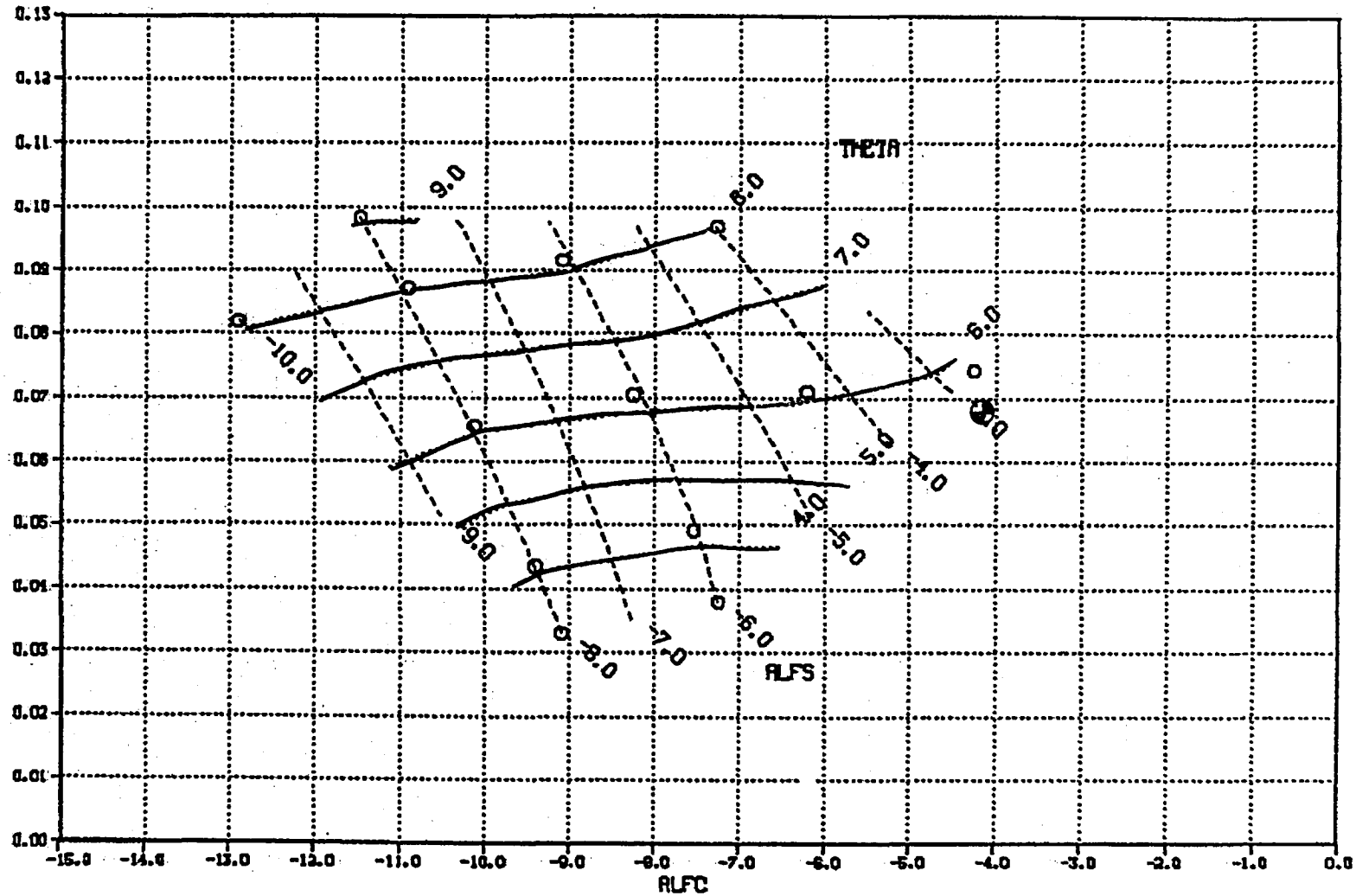


Figure 11. Rotor control positions, 60 knots.

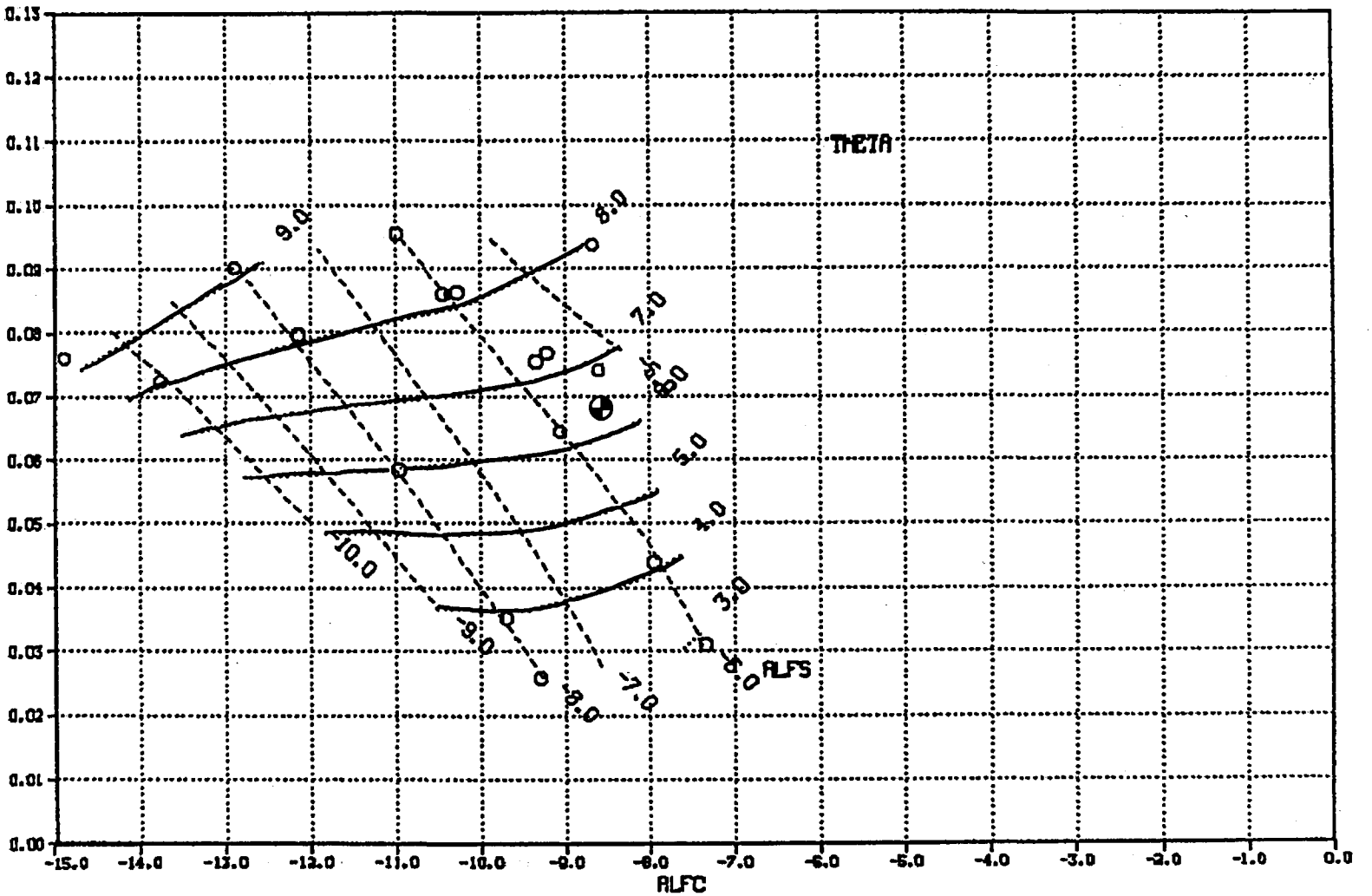


Figure 12. Rotor control positions, 90 knots.

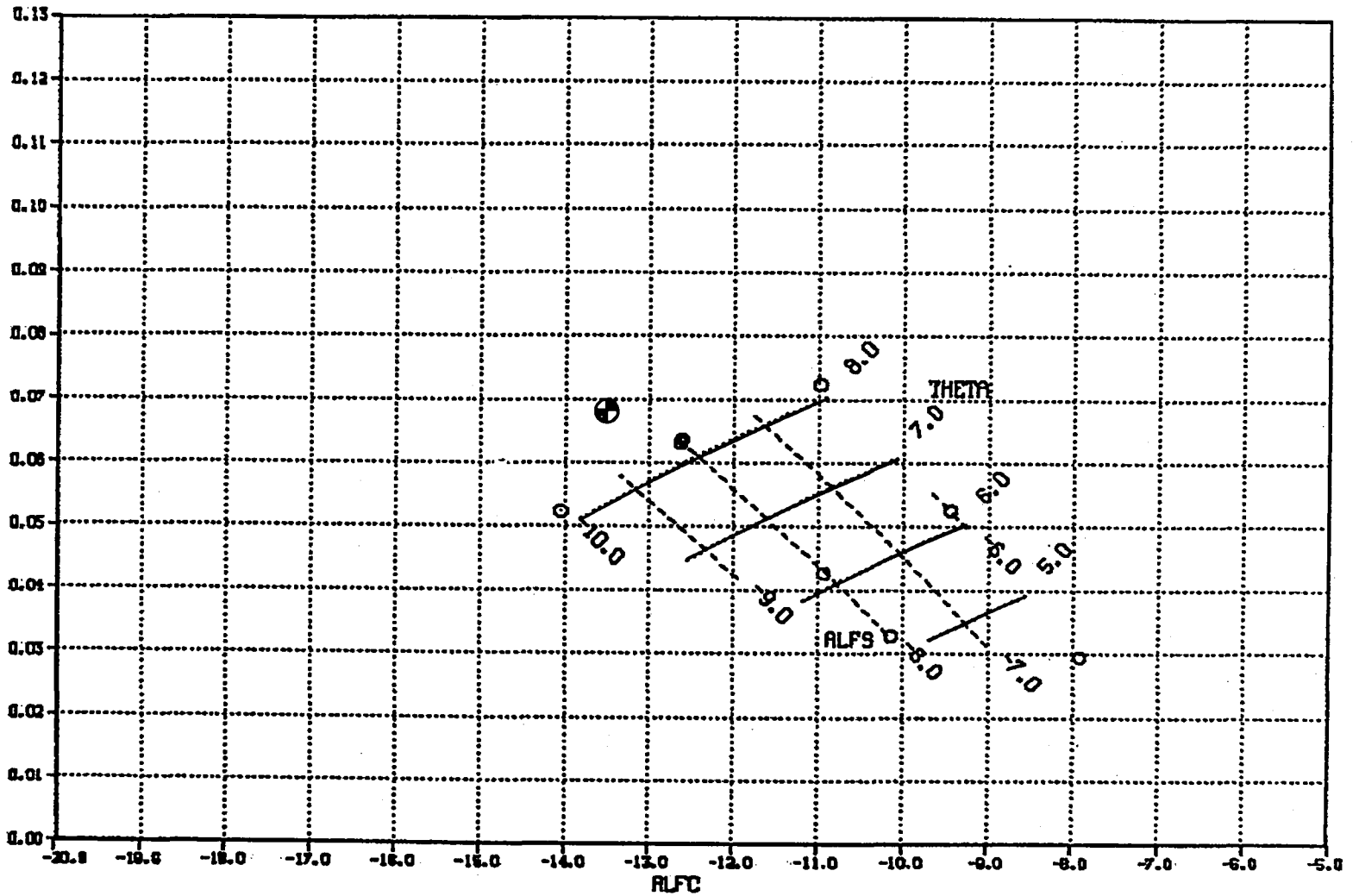


Figure 13. Rotor control positions, 120 knots.

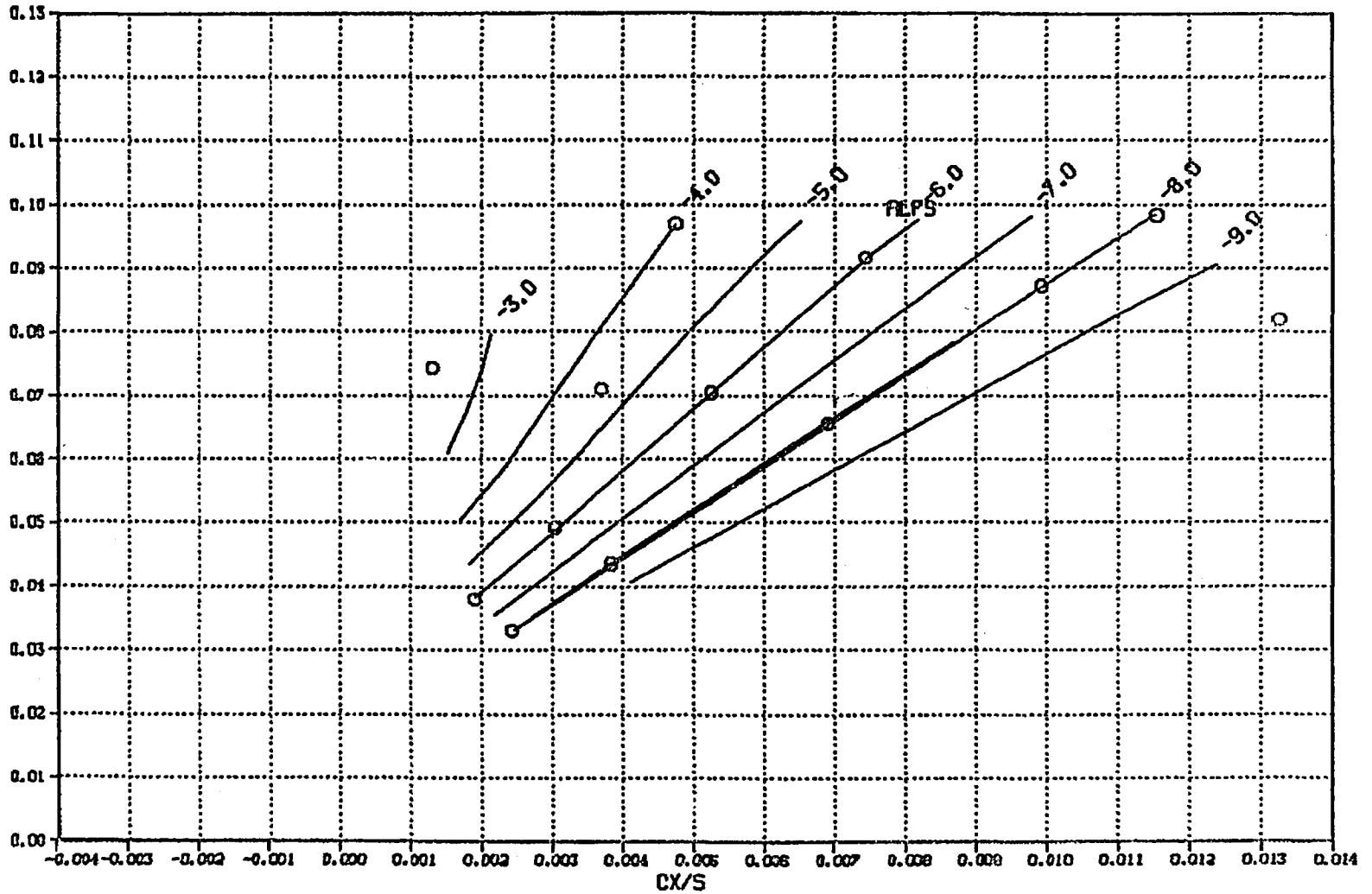


Figure 14. Rotor performance - ALFS. 60 knots.

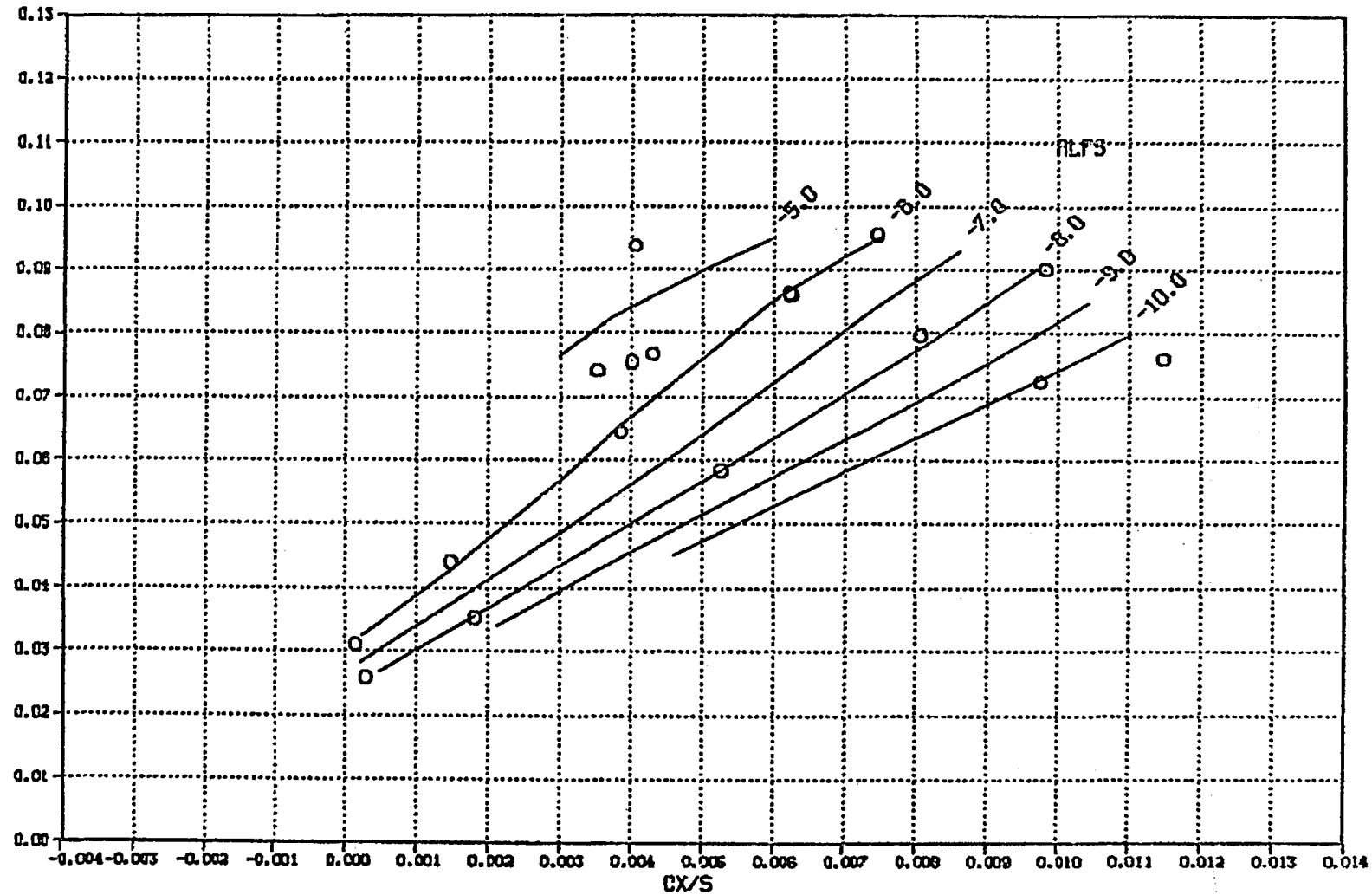


Figure 15. Rotor performance - ALFS. 90 knots.

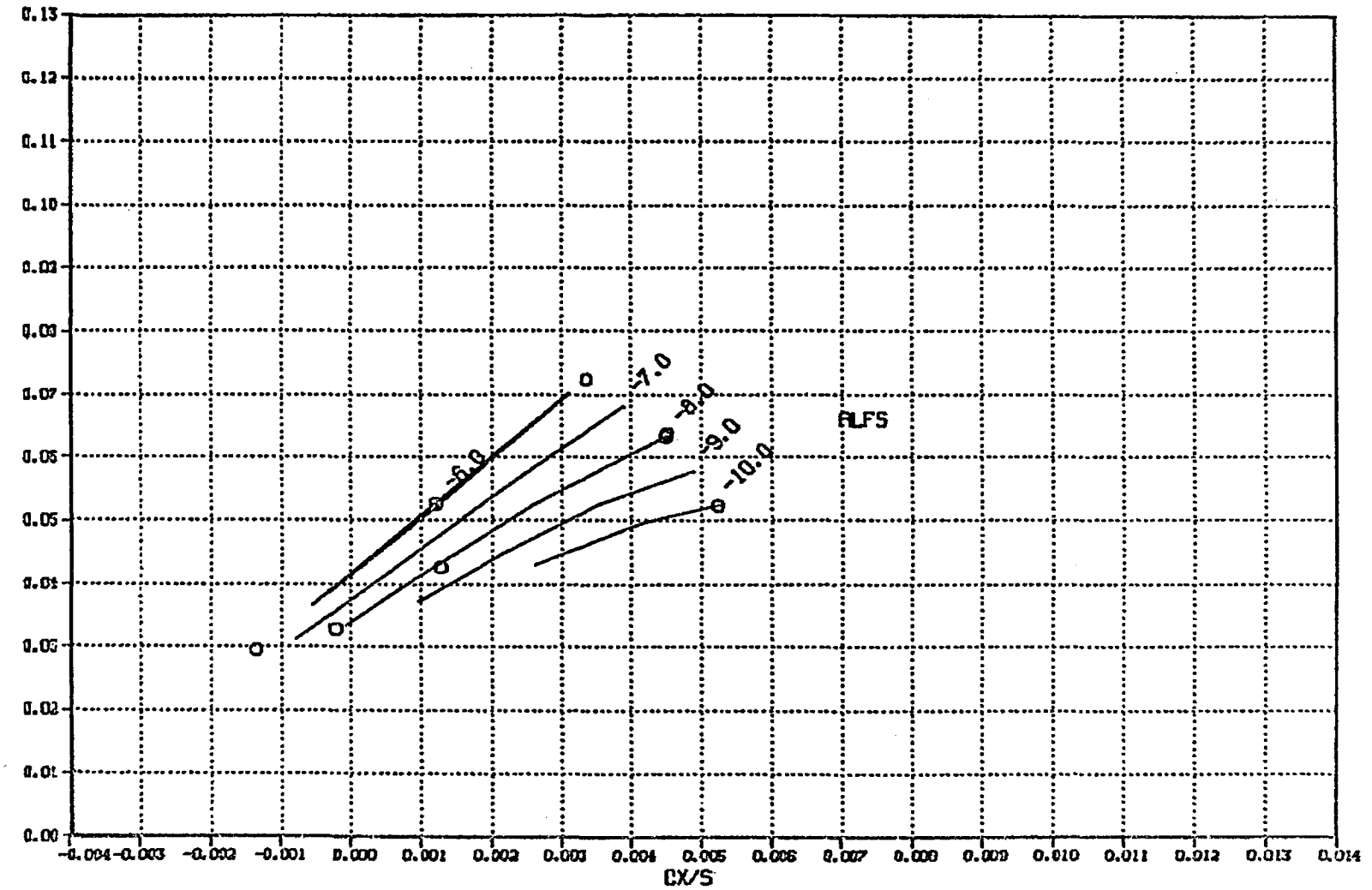


Figure 16. Rotor performance - ALFS. 120 knots.

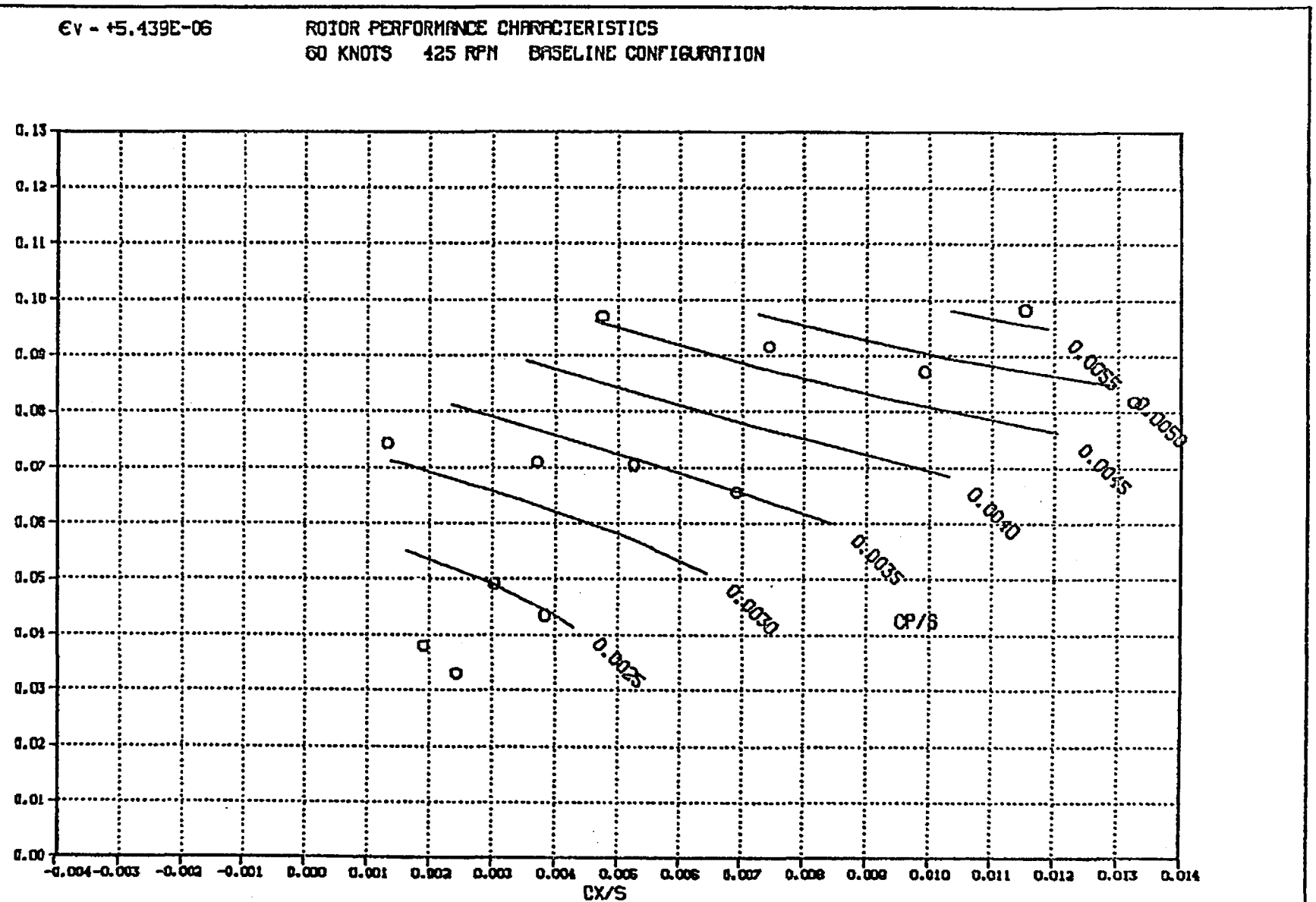


Figure 17. Rotor performance - CP/S. 60 knots.

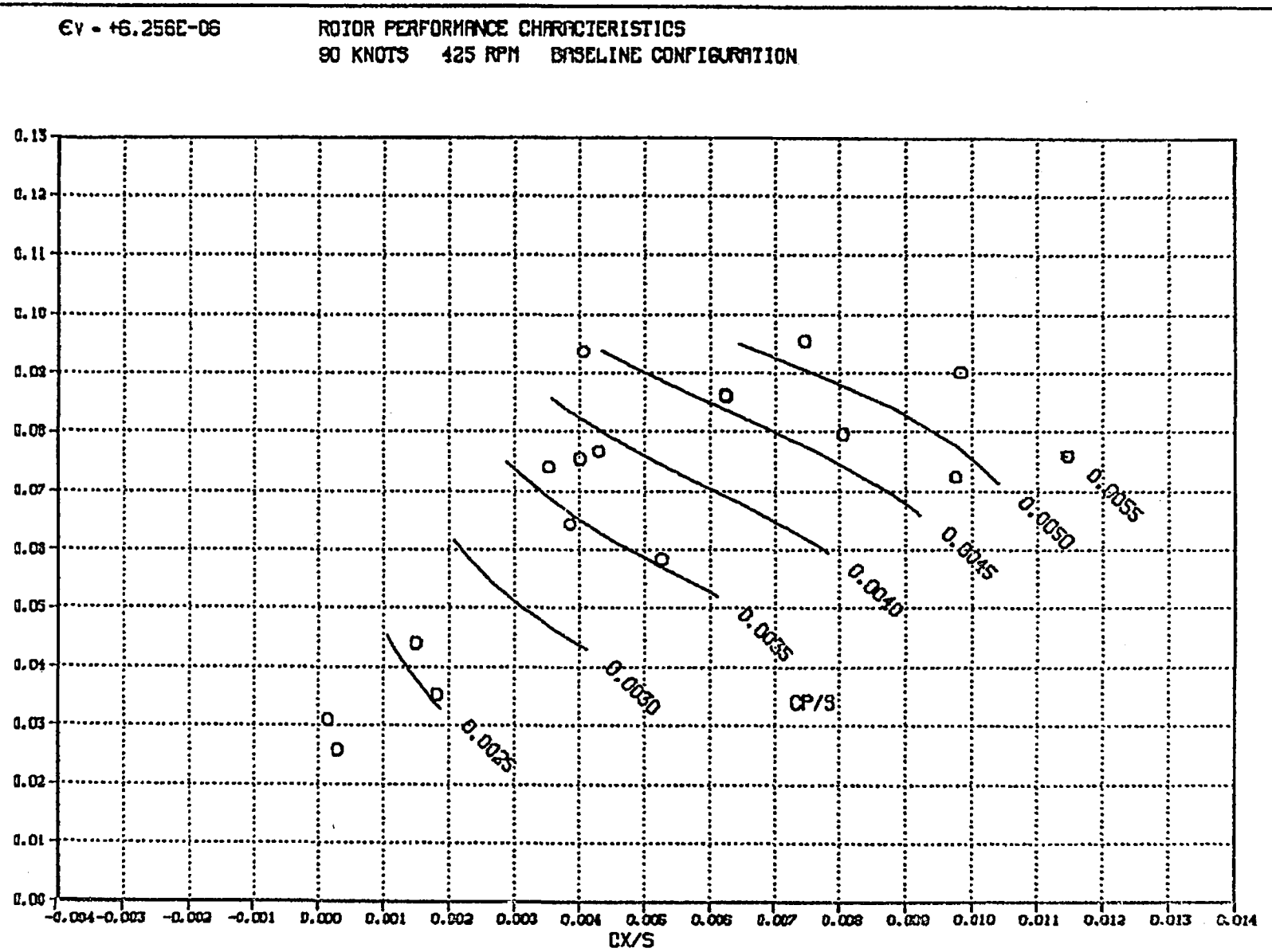


Figure 18. Rotor performance - CP/S. 90 knots.

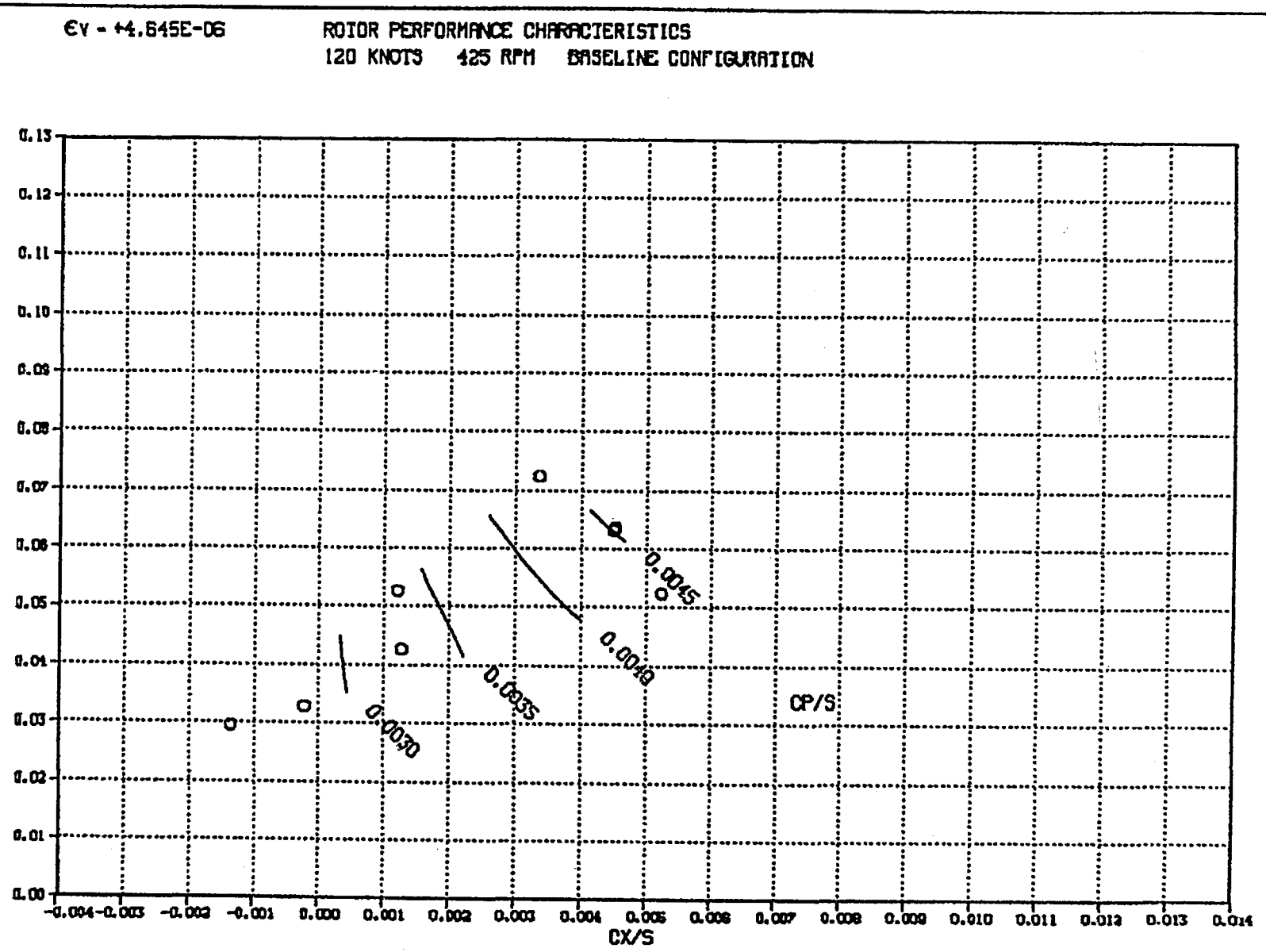


Figure 19. Rotor performance - CP/S. 120 knots

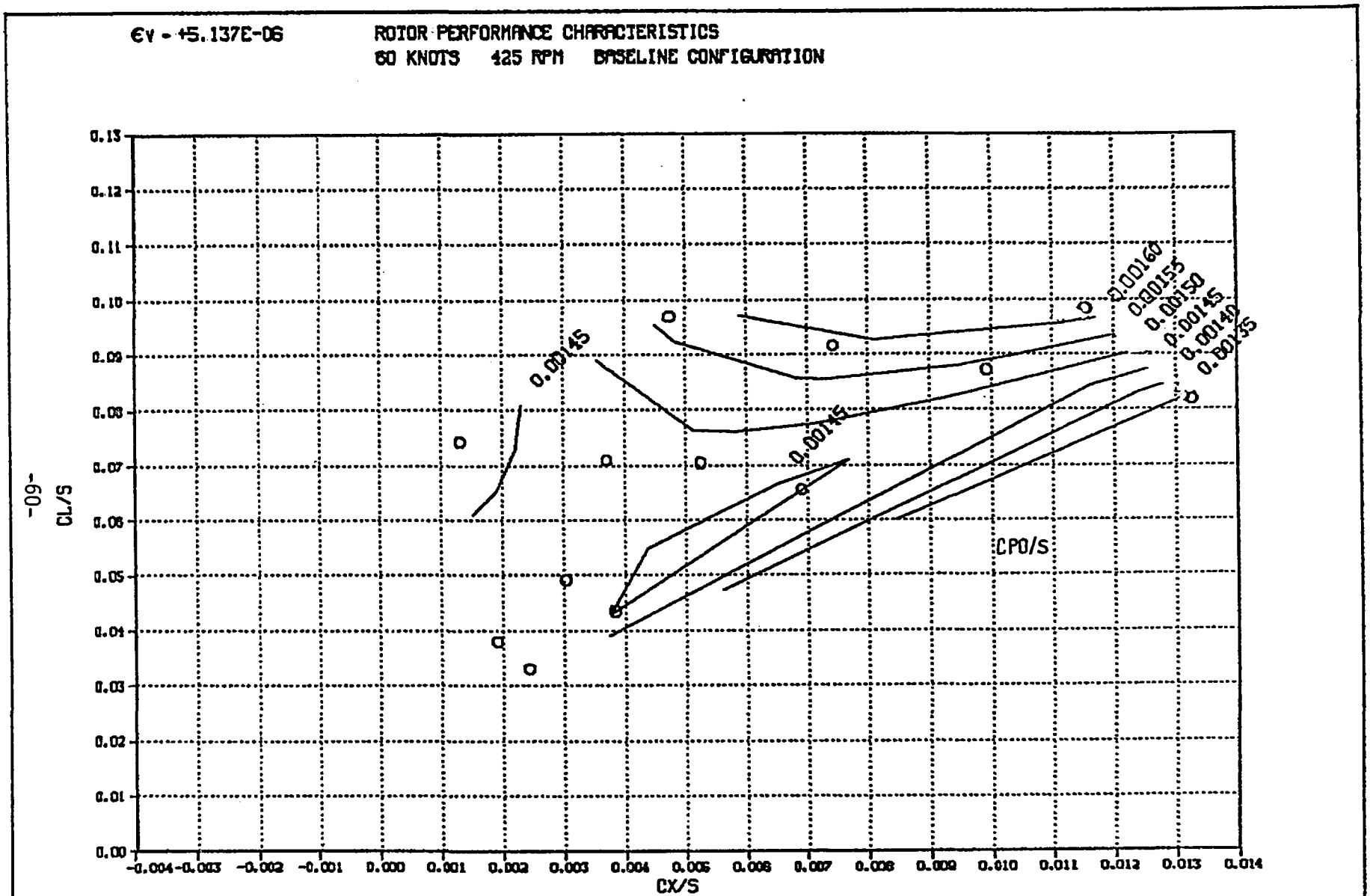


Figure 20. Rotor performance - CPO/S. 60 knots.

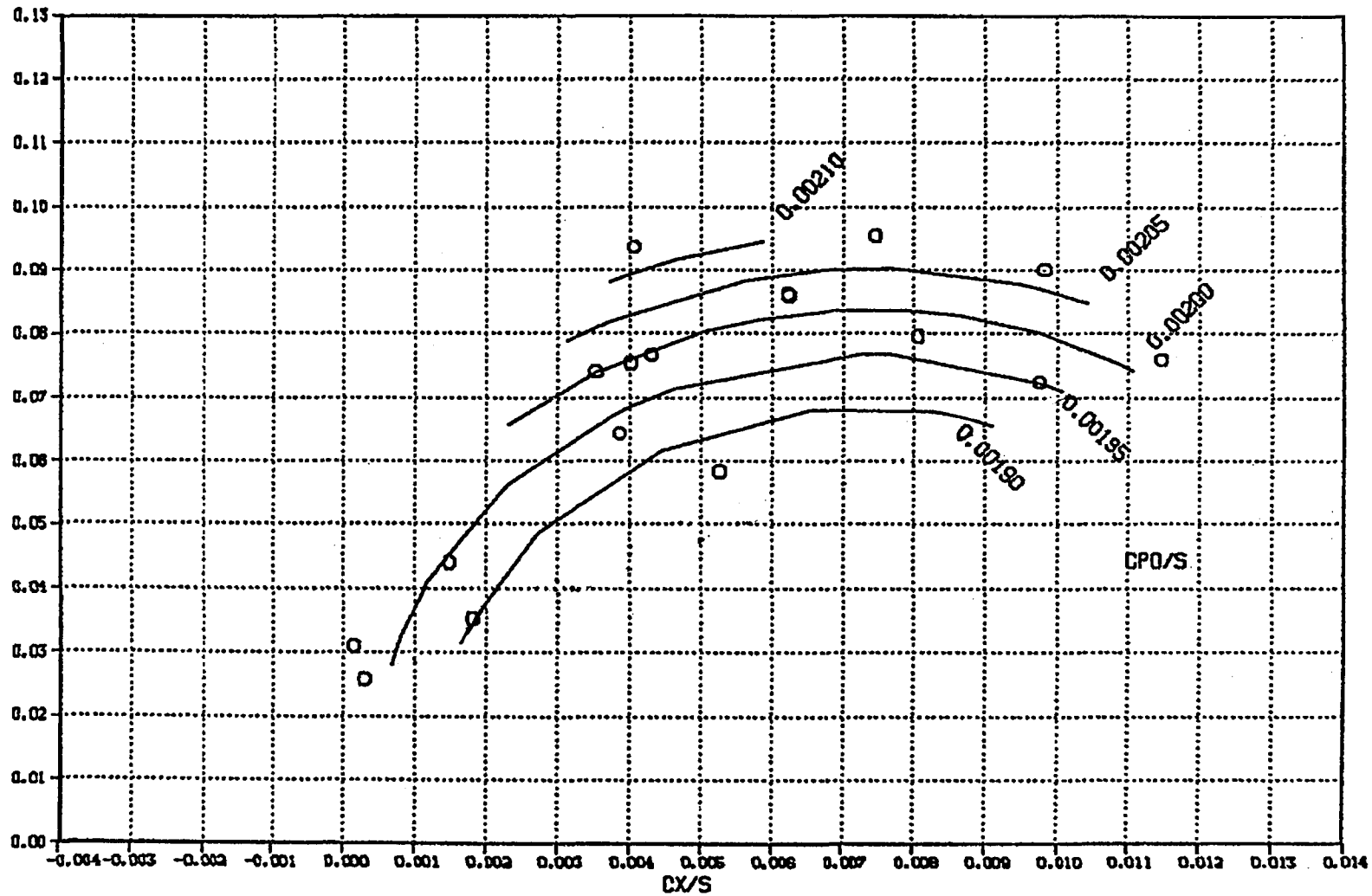


Figure 21. Rotor performance - CPO/S. 90 knots.

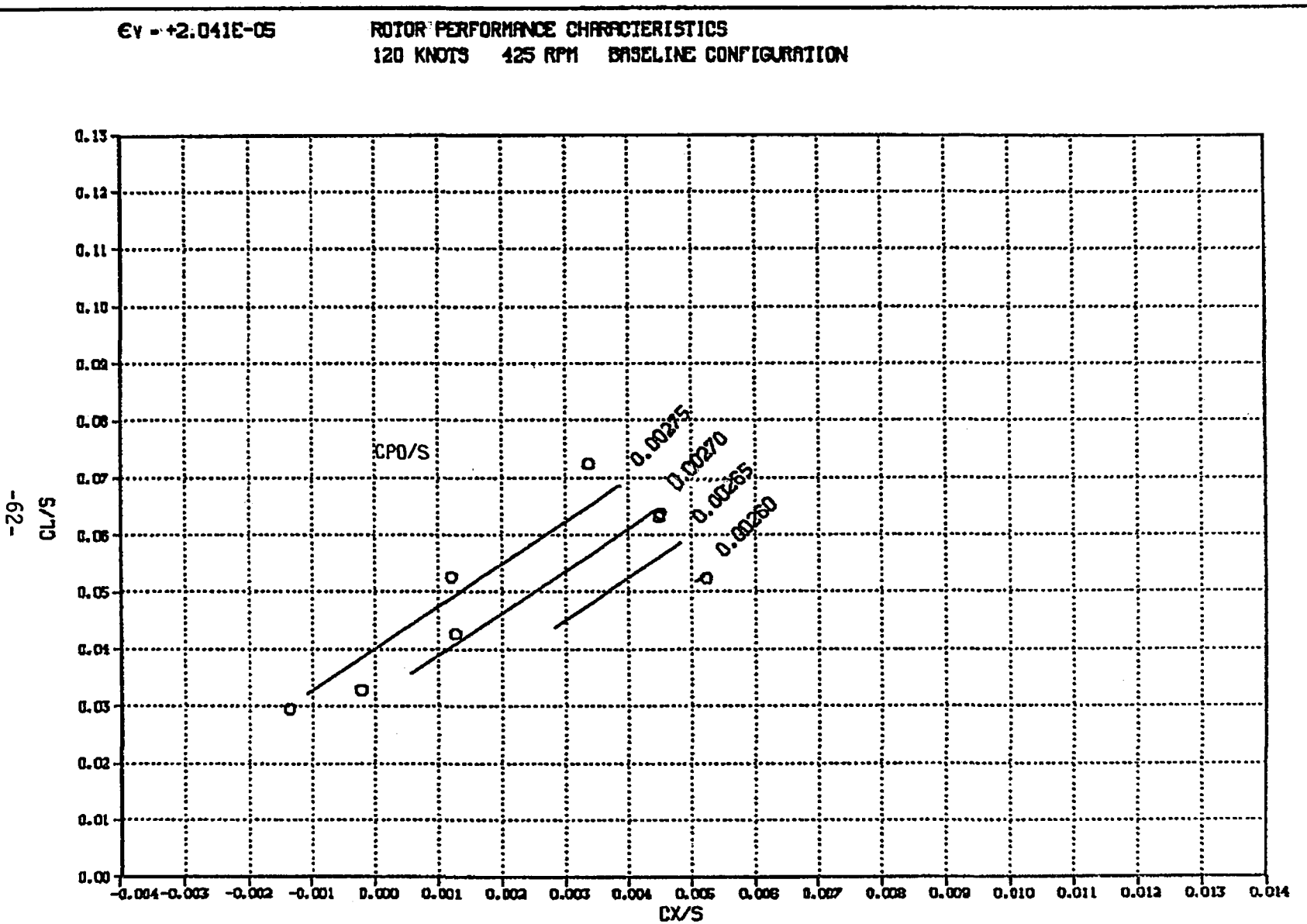


Figure 22. Rotor performance - CPO/S. 120 knots.

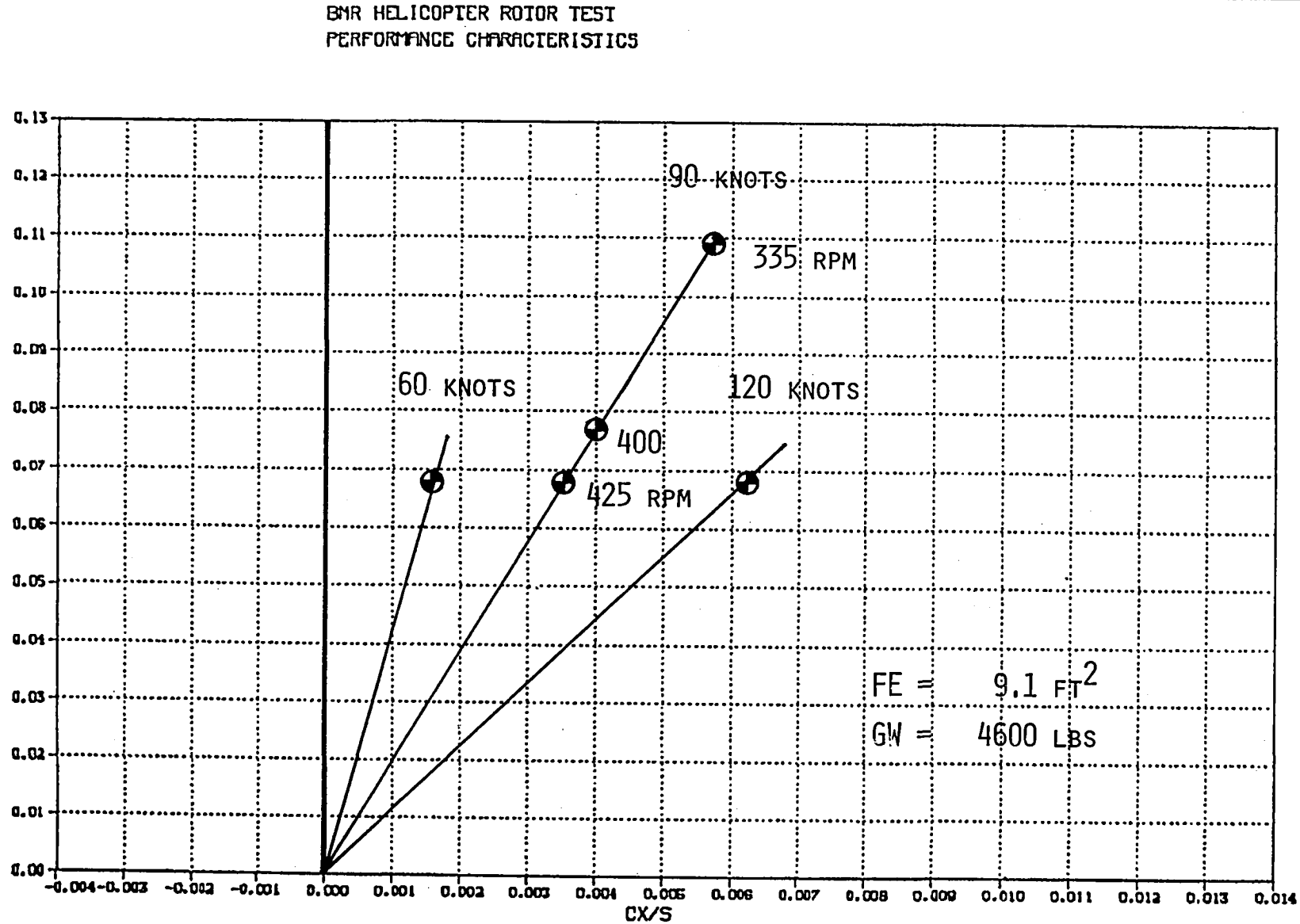
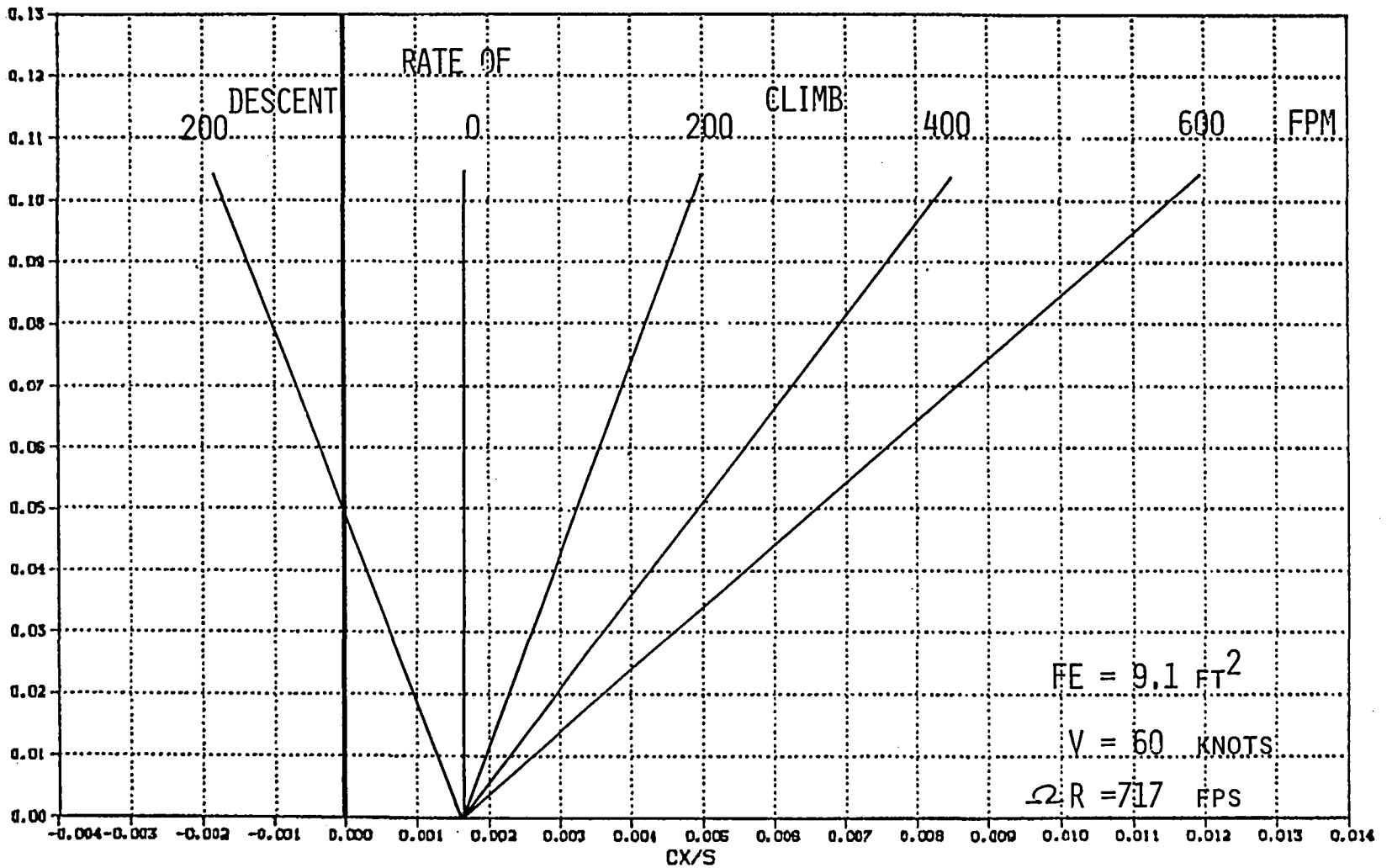
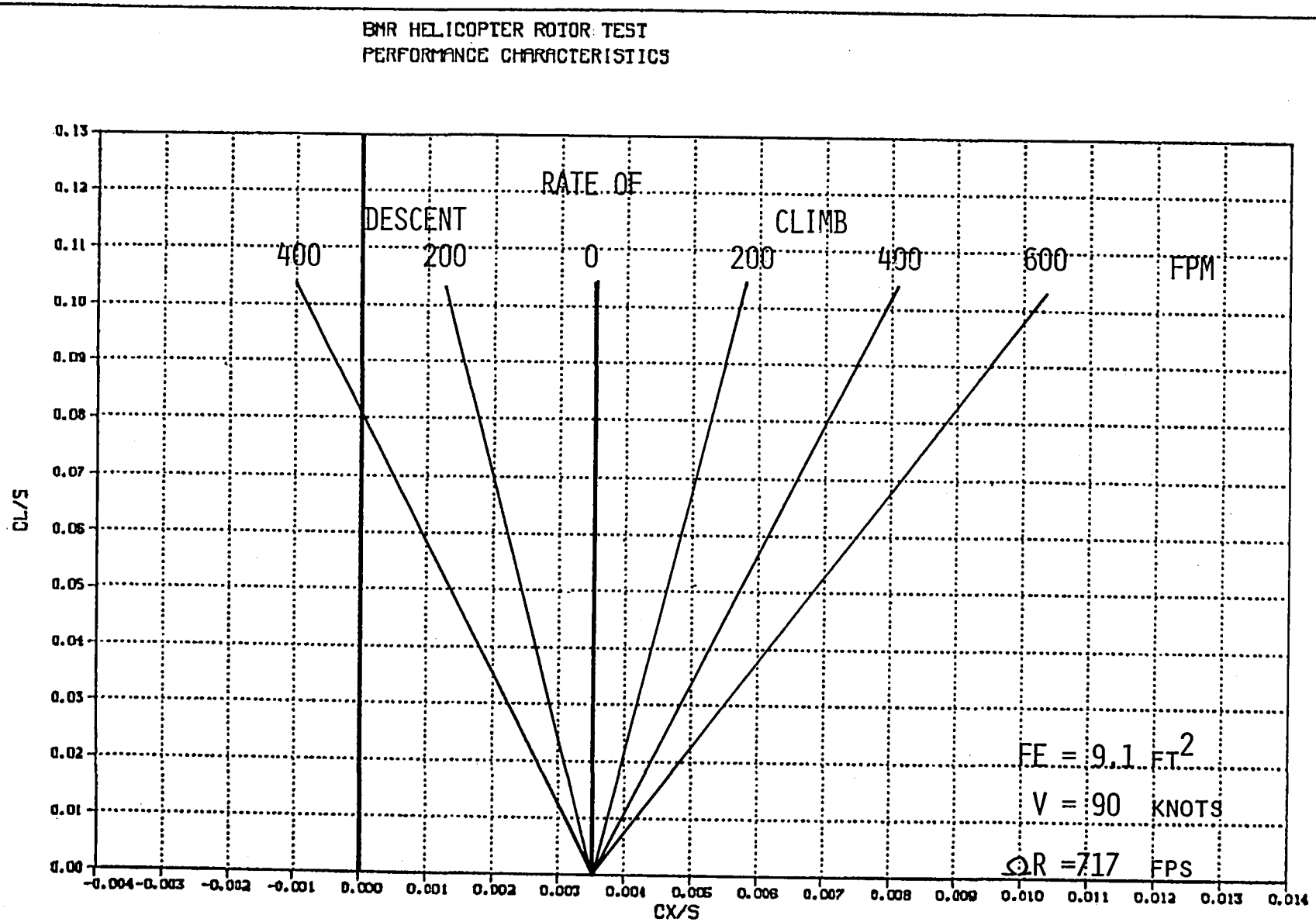


Figure 23. Rotor force coefficients for 1 - G flight conditions.



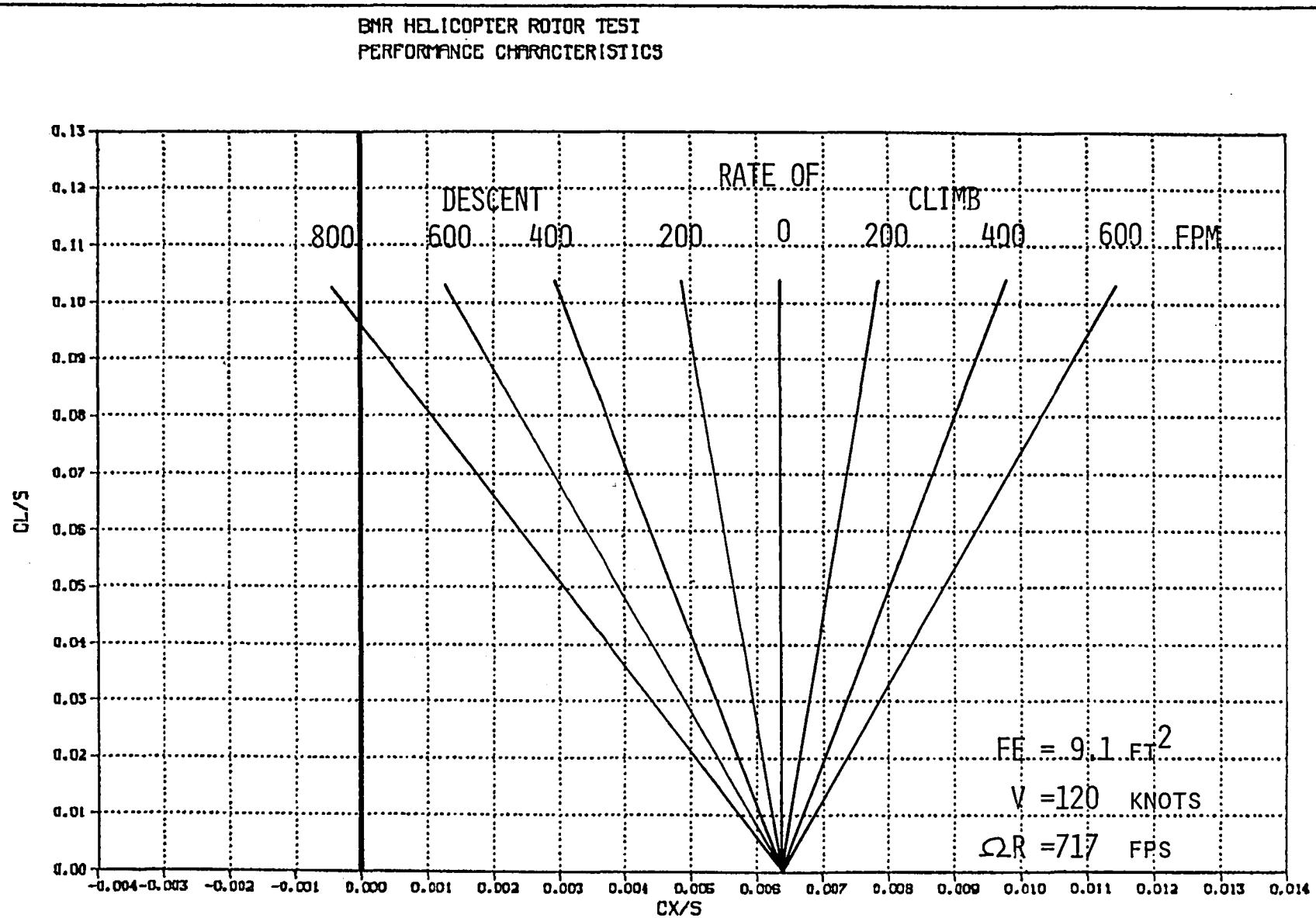
a) 60 knots

Figure 24. Rotor operating characteristics



b) 90 knots

Figure 24. Continued



c) 120 knots

Figure 24. Continued

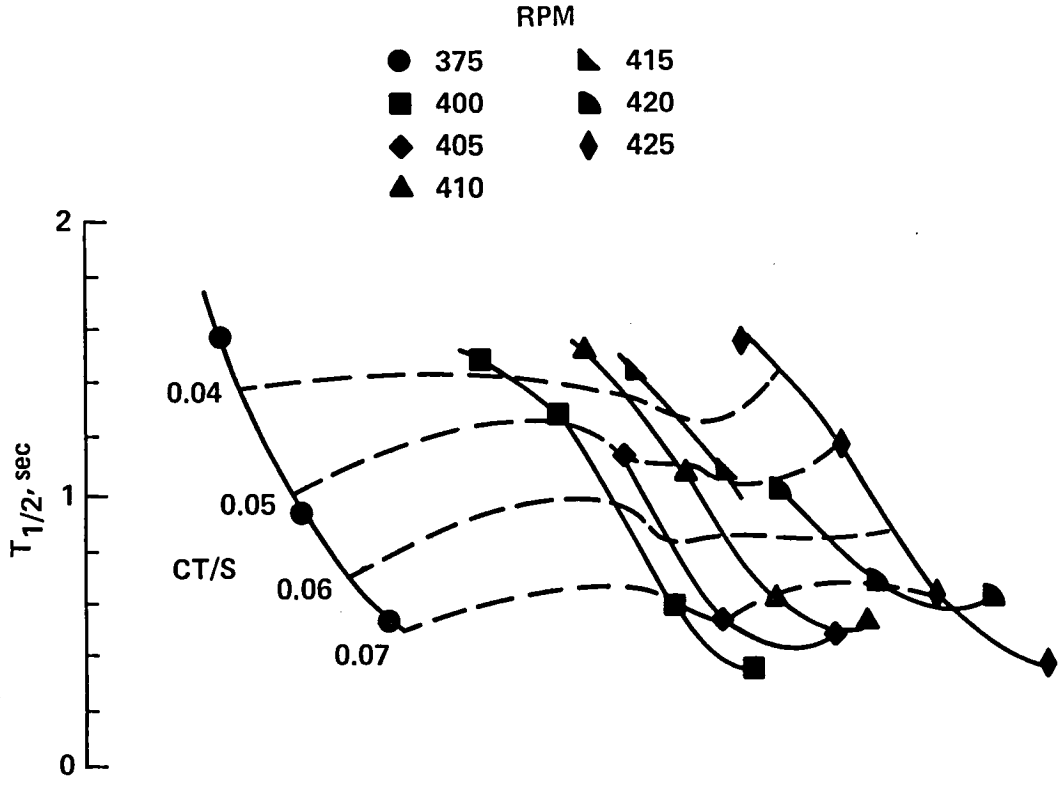


Figure 25. Hover stability. Baseline configuration.

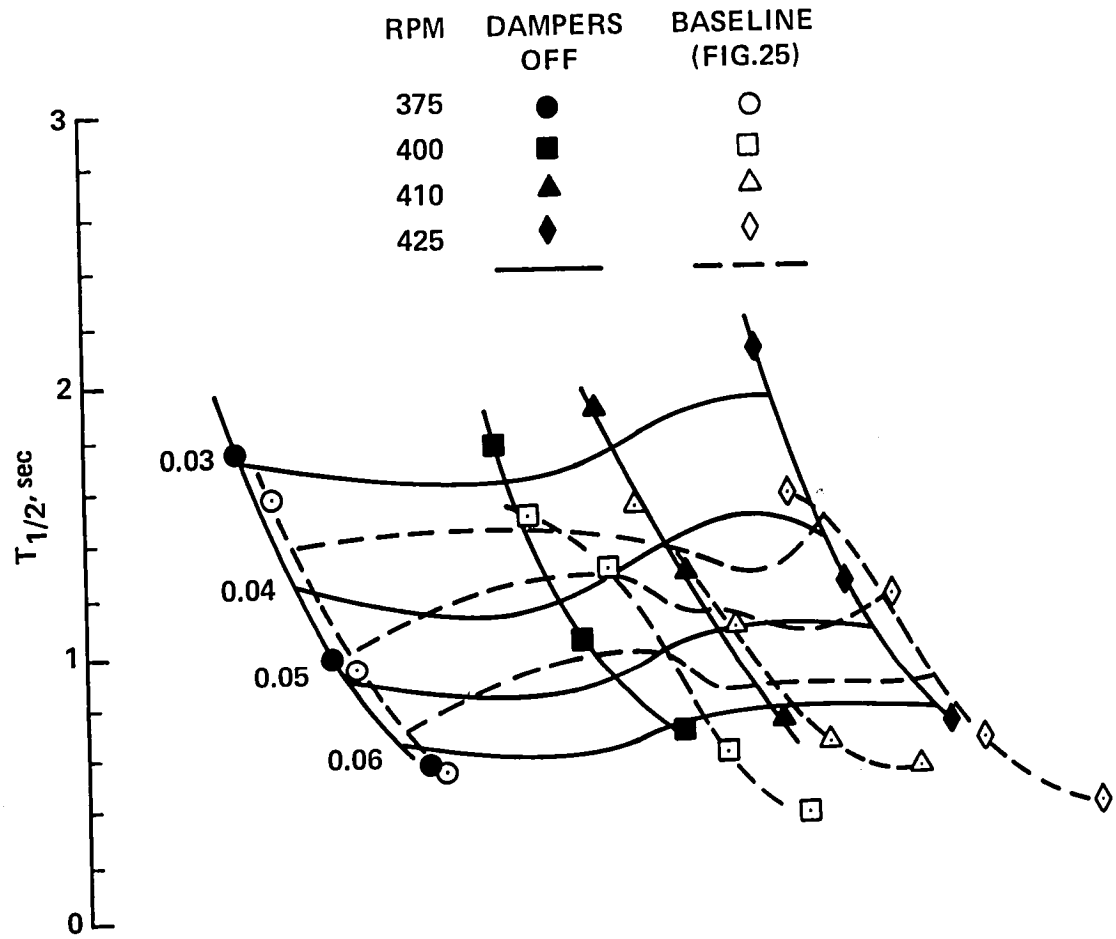


Figure 26. Hover stability. Wind tunnel balance dampers removed.

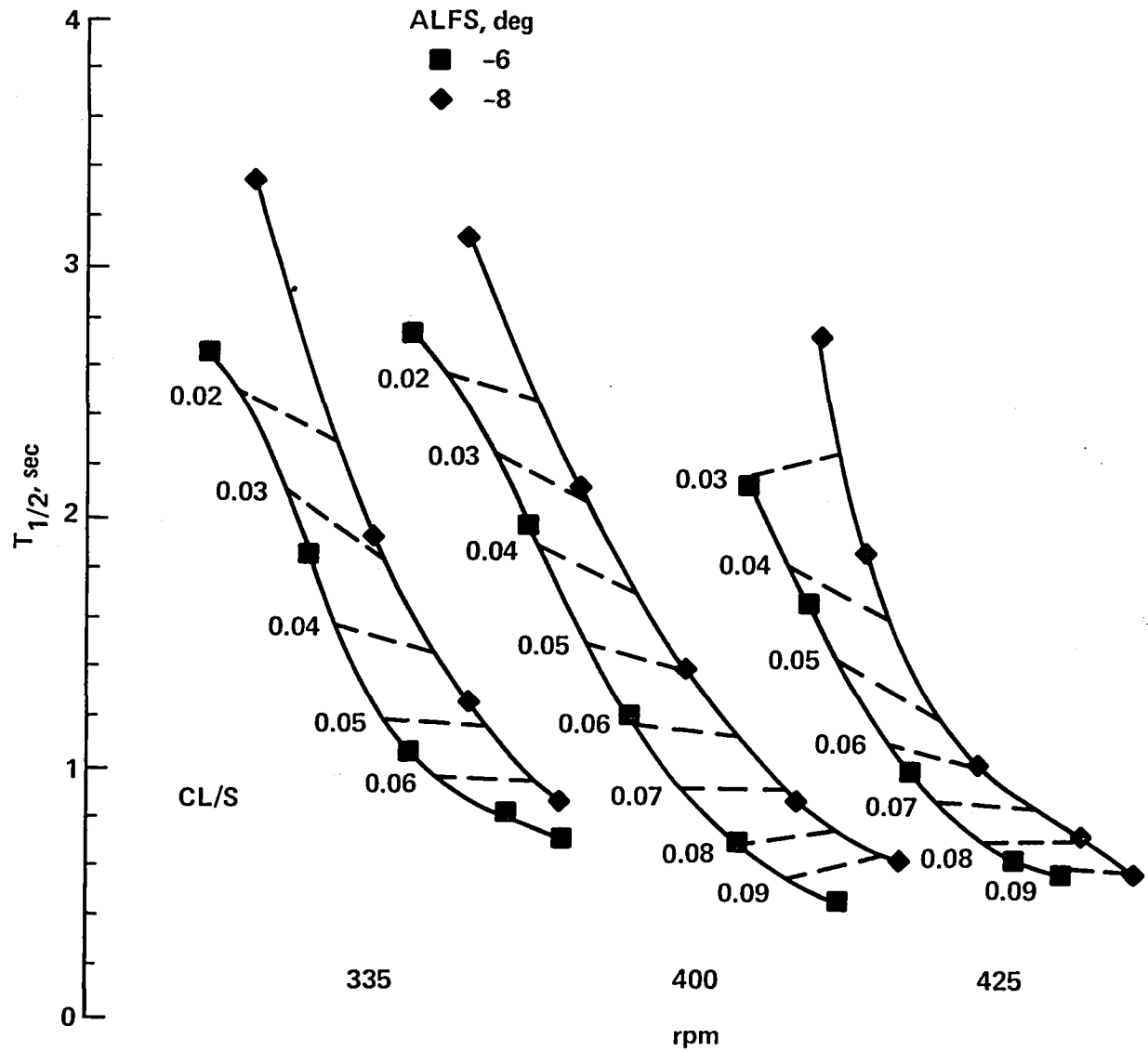


Figure 27. Effect of tip speed on stability at 90 knots. Baseline configuration.

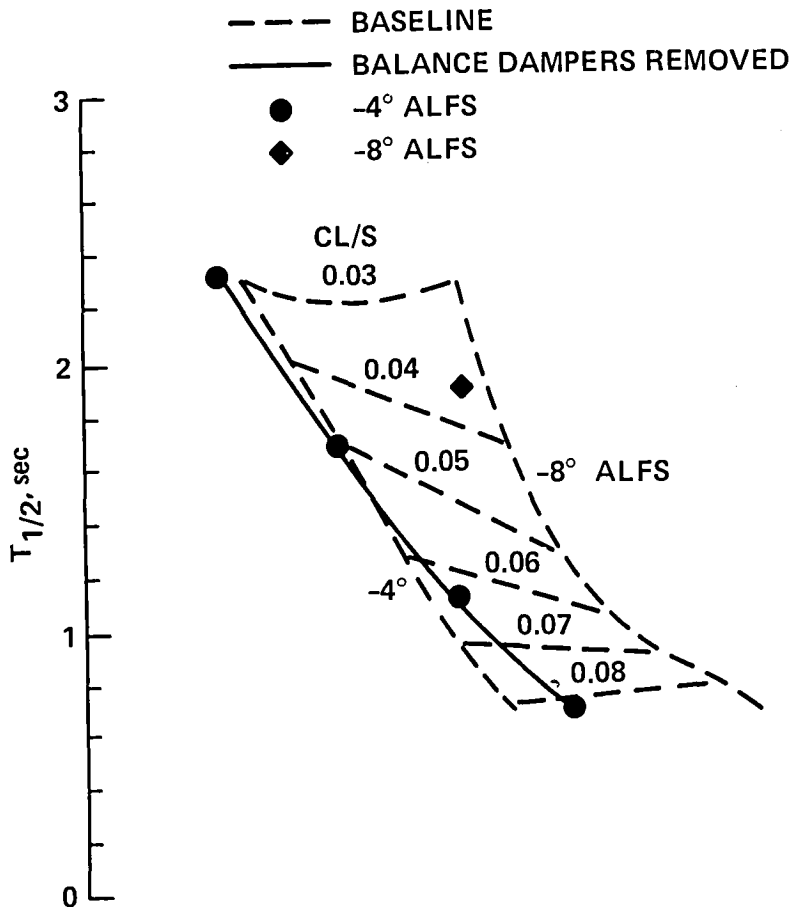


Figure 28. 90 knot stability, 425 RPM. Wind tunnel balance dampers removed.

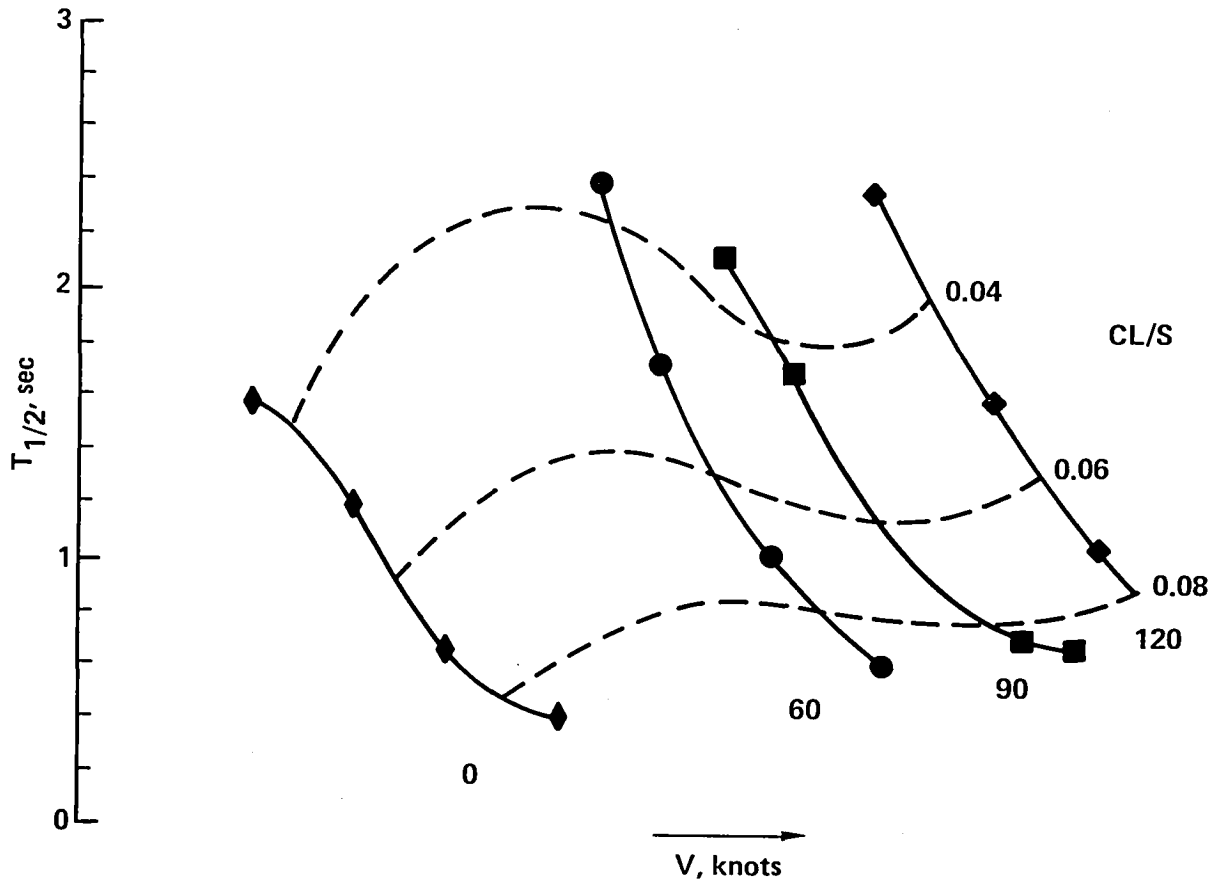


Figure 29. Stability versus airspeed, ALFS = -6 degrees, 425 RPM. Baseline configuration.

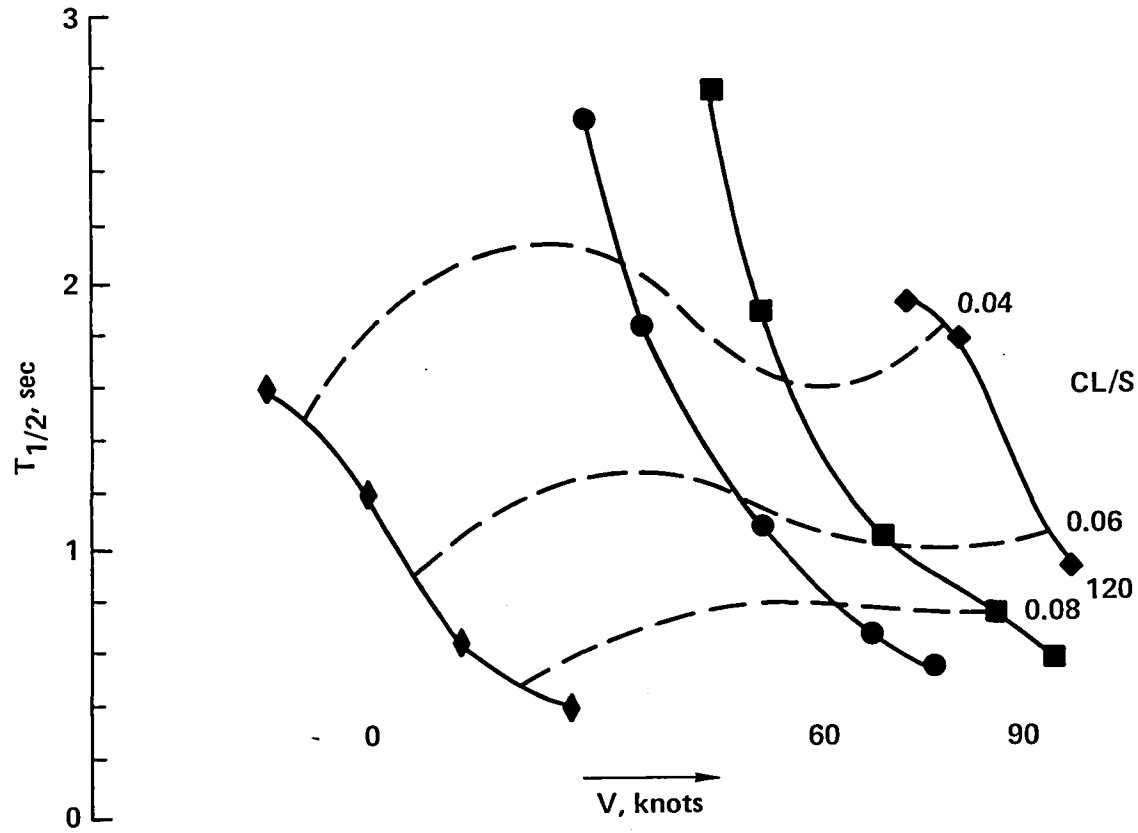


Figure 30. Stability versus airspeed, ALFS = -8 degrees, 425 RPM. Baseline configuration.

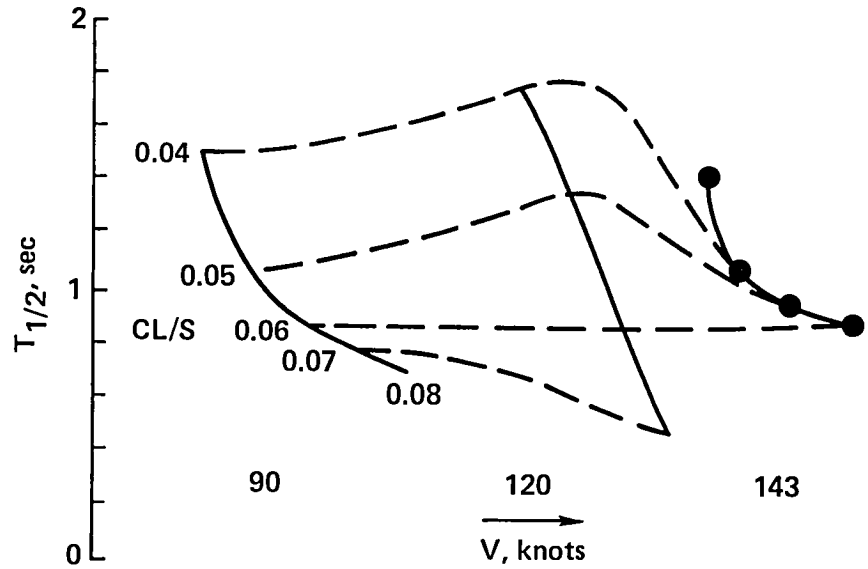


Figure 31. Stability versus airspeed, ALFS = -10 degrees, 425 RPM. Baseline configuration.

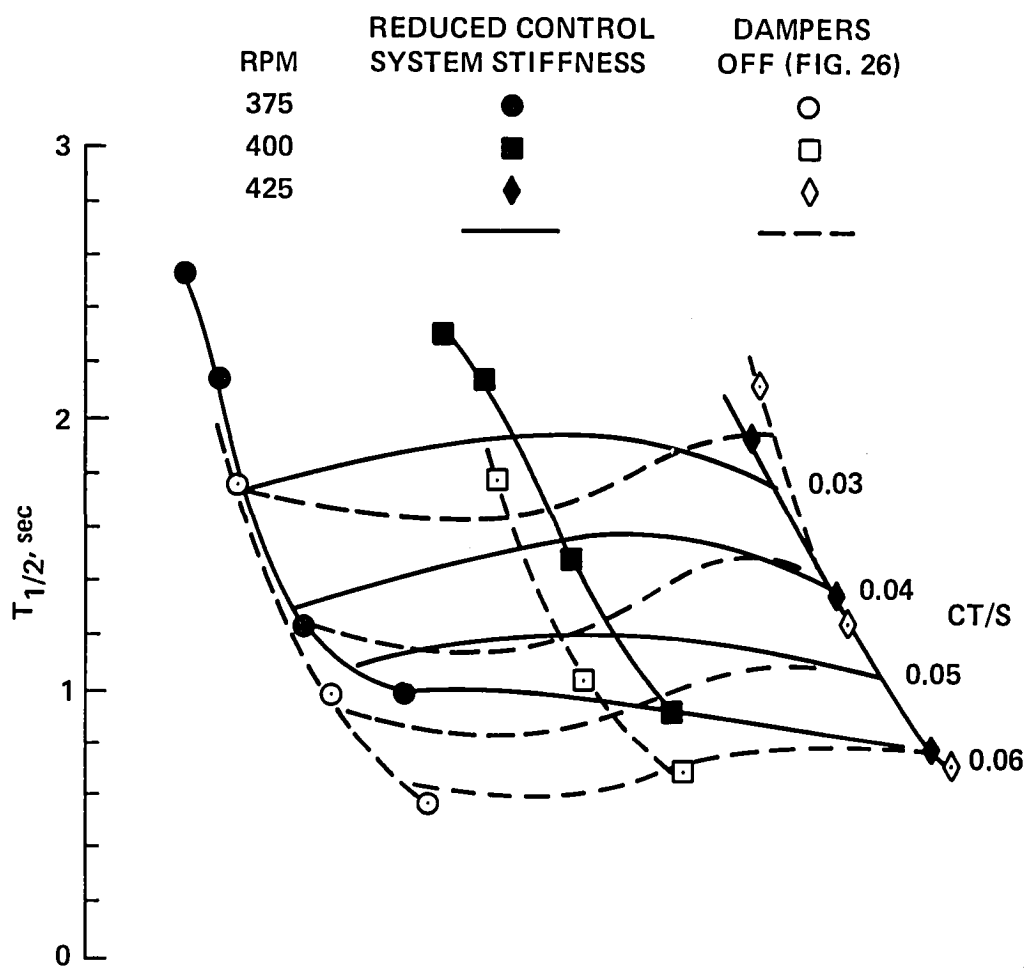


Figure 32. Hover stability. Balance dampers off and reduced control system stiffness.

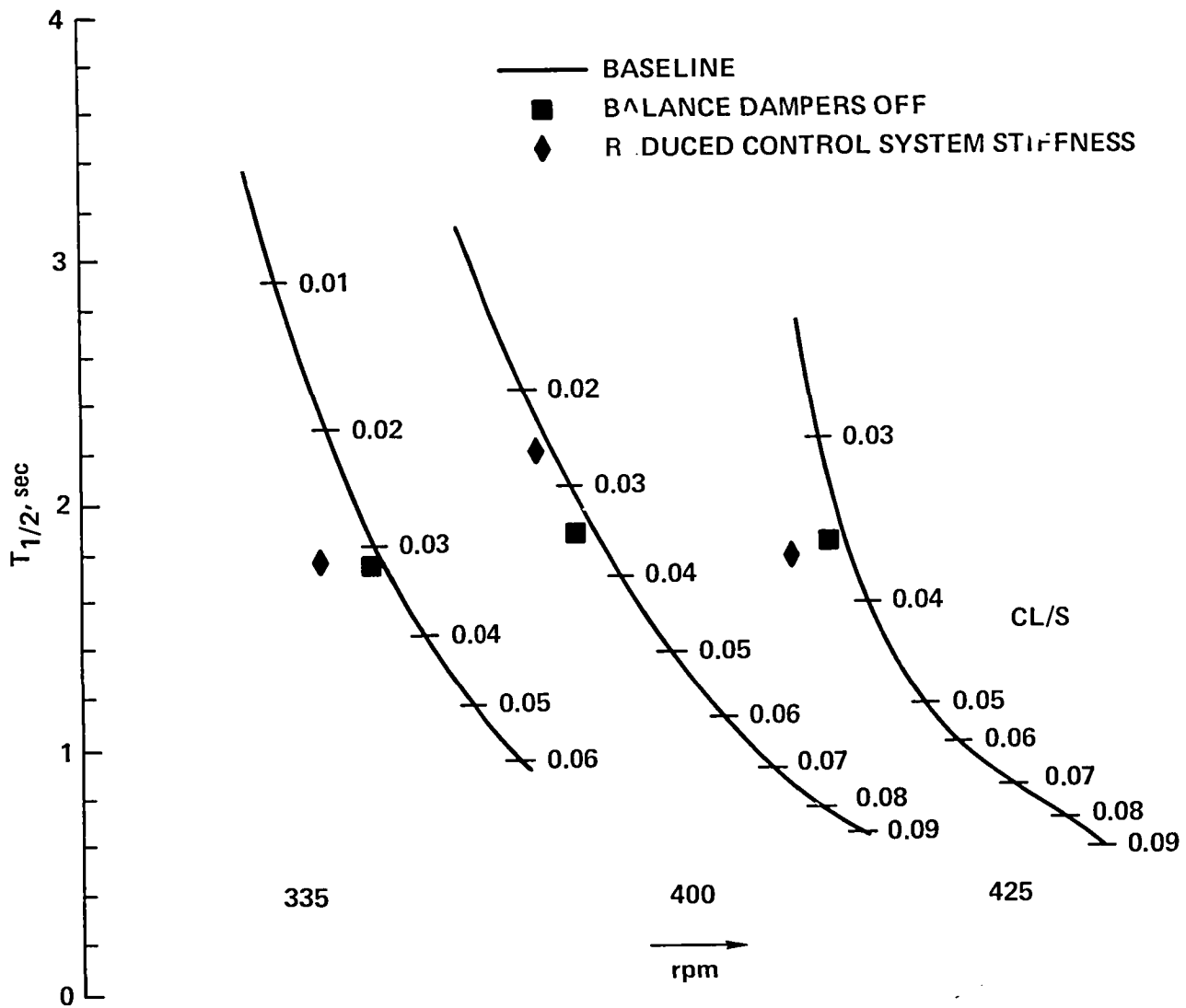


Figure 33. 90 knot stability, ALFS = -8 degrees. Balance dampers off and reduced control system stiffness.

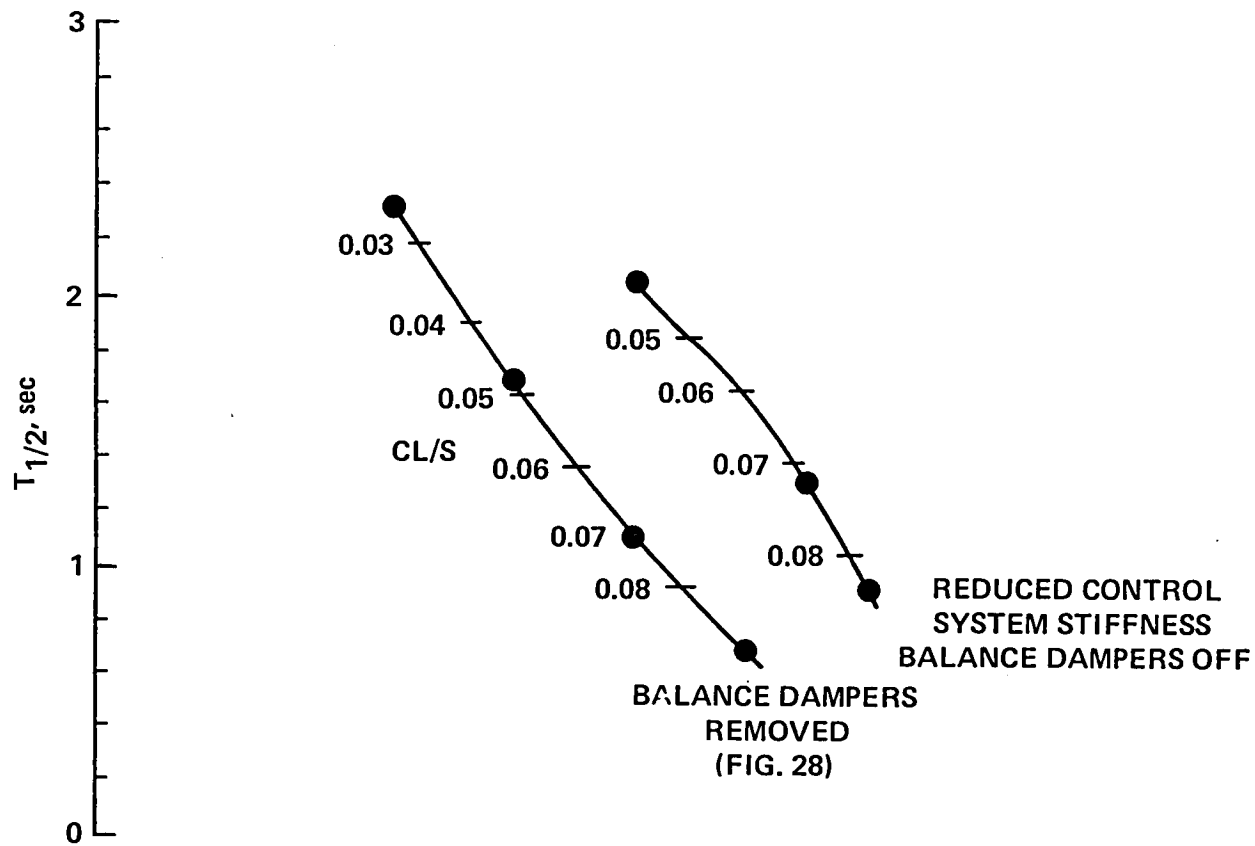


Figure 34. 90 knot stability with reduced control system stiffness. 425 RPM, alfs = -4 degrees.

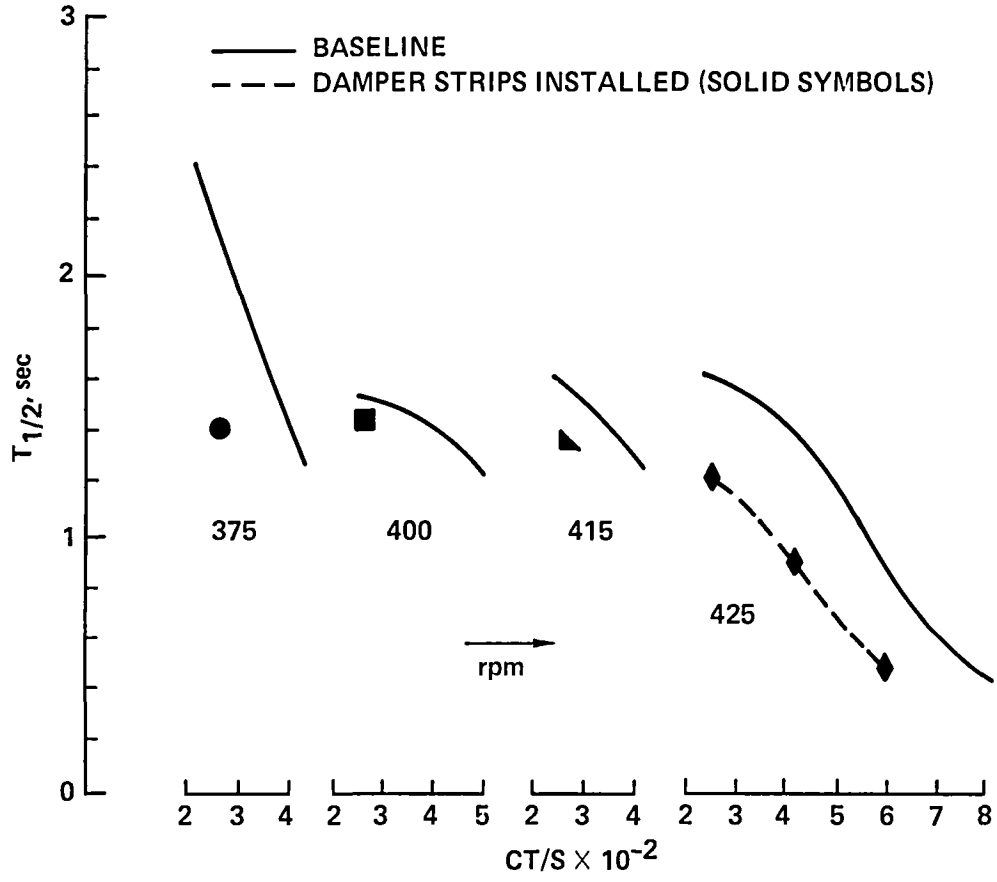


Figure 35. Hover stability. Damper strips installed.

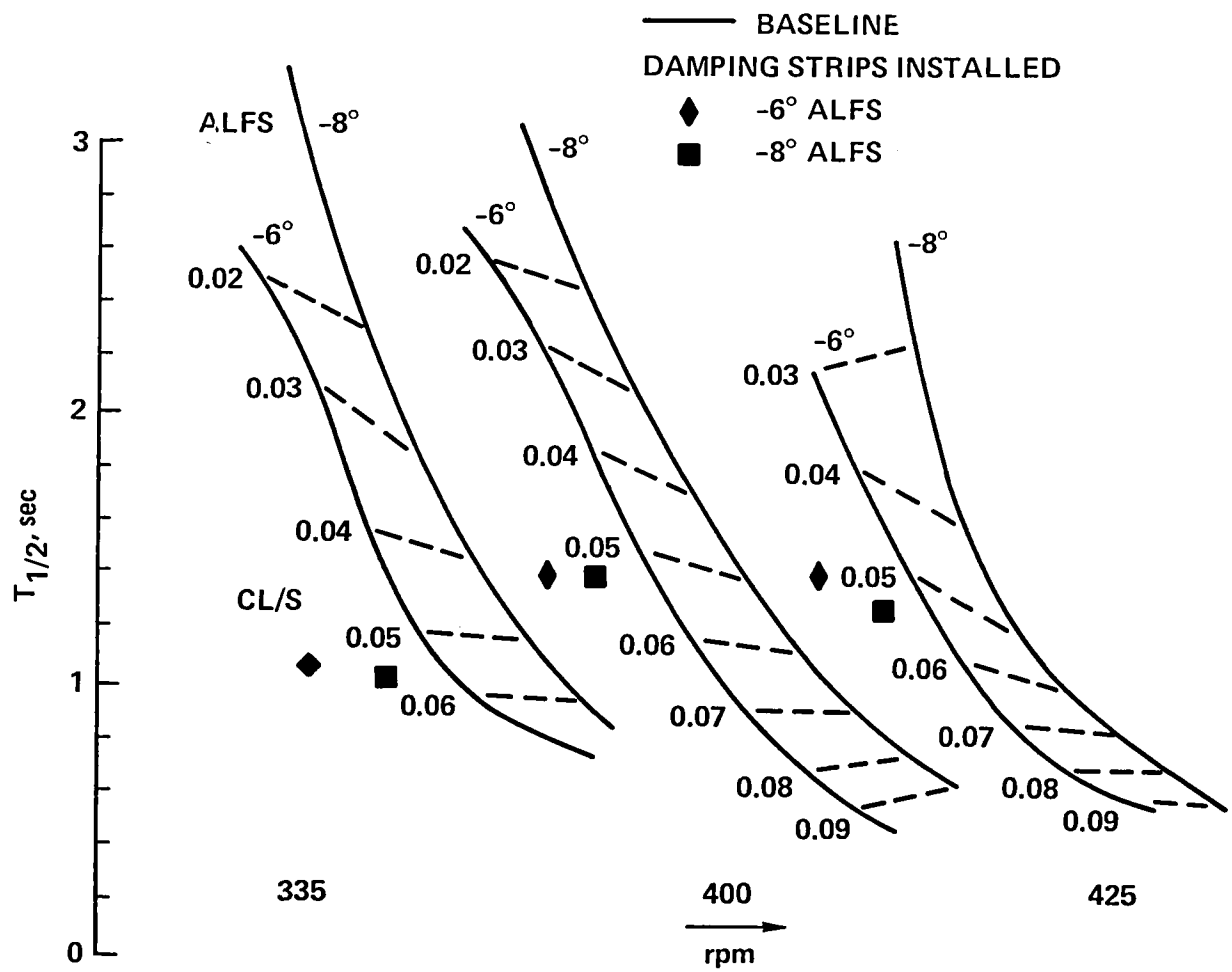


Figure 36. 90 knot stability. Damper strips installed.

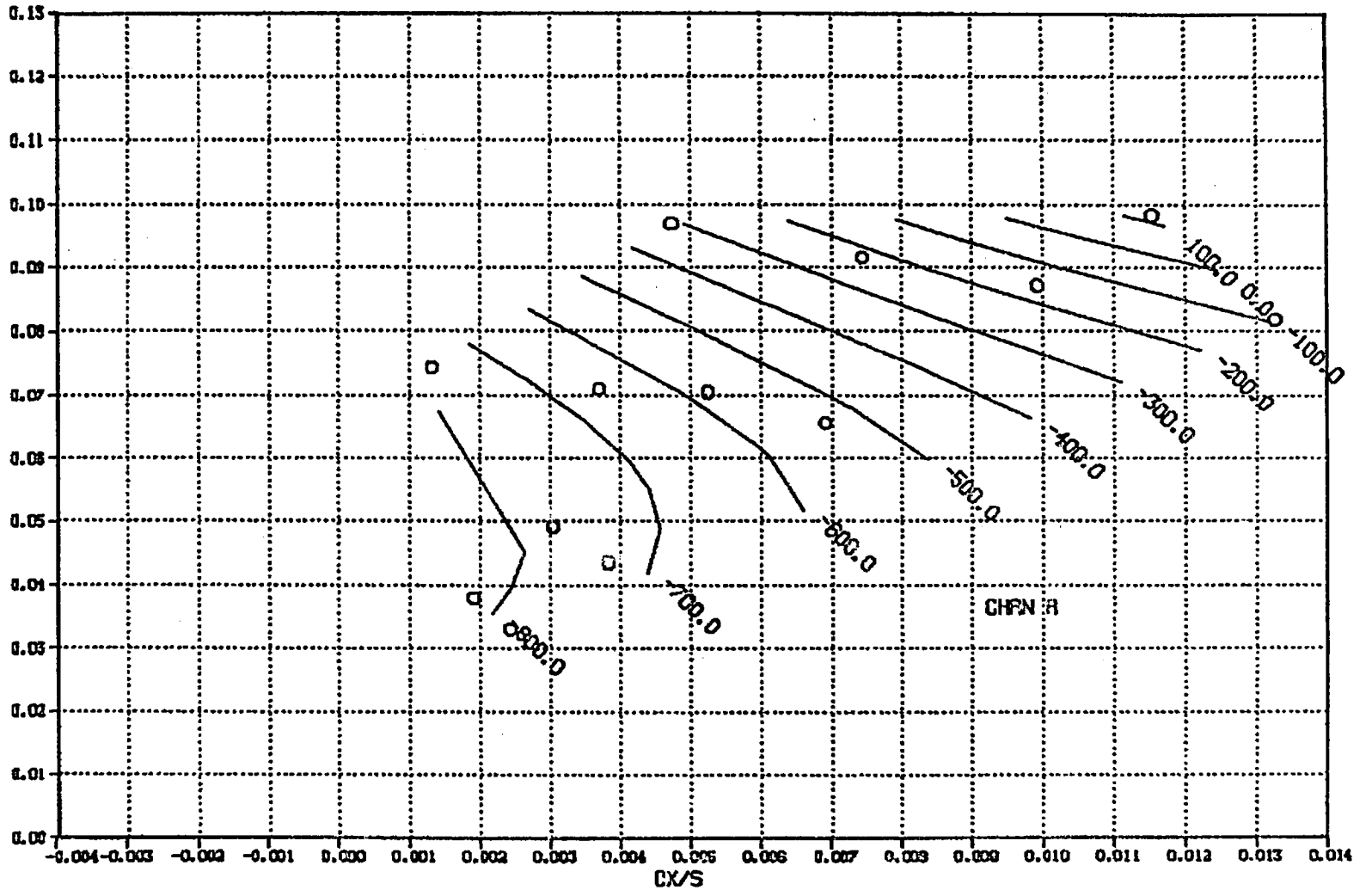


Figure 37. Mean flexbeam chordwise bending moment, A beam. 60 knots.

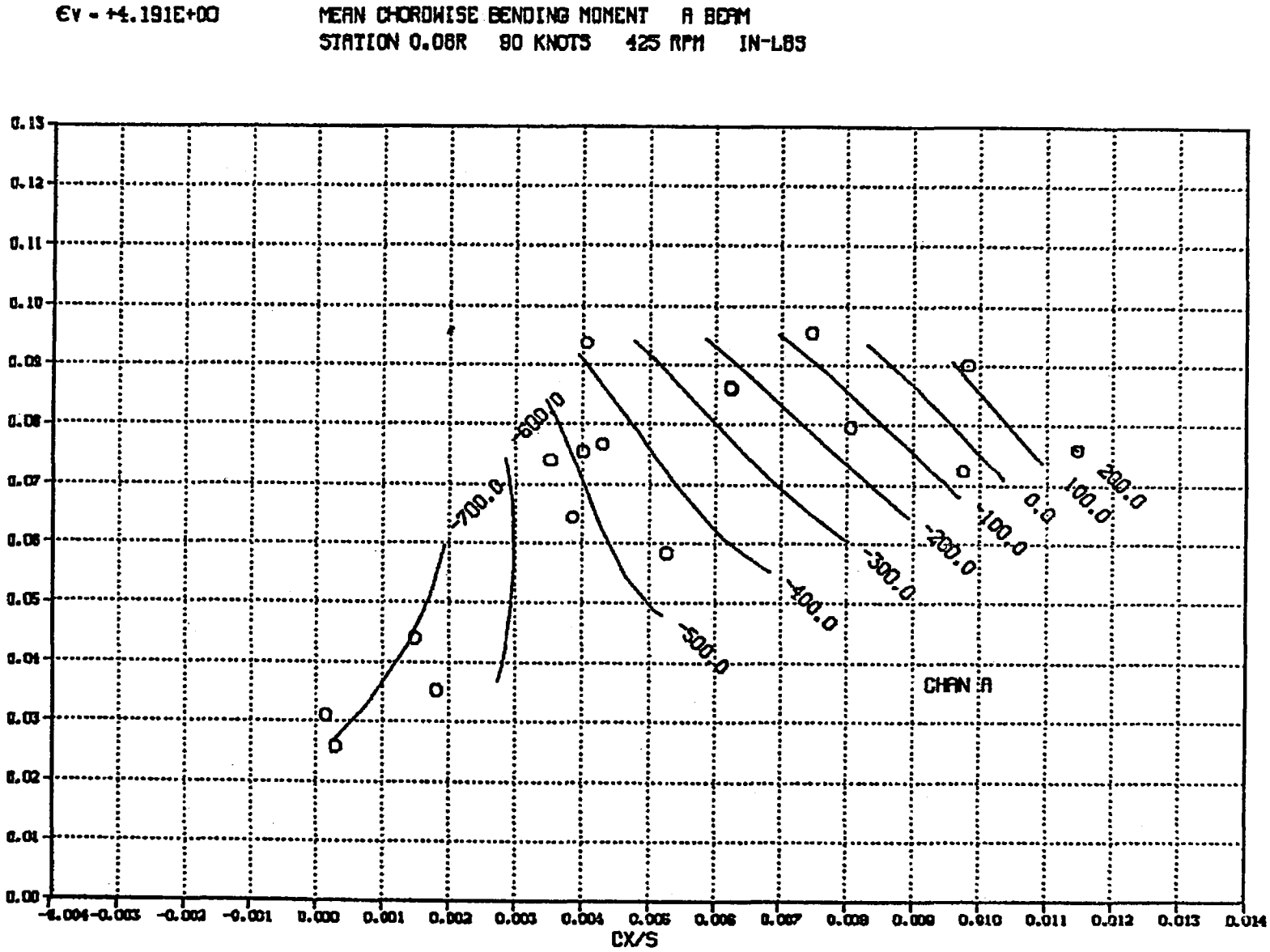


Figure 38. Mean flexbeam chordwise bending moment, A beam. 90 knots.

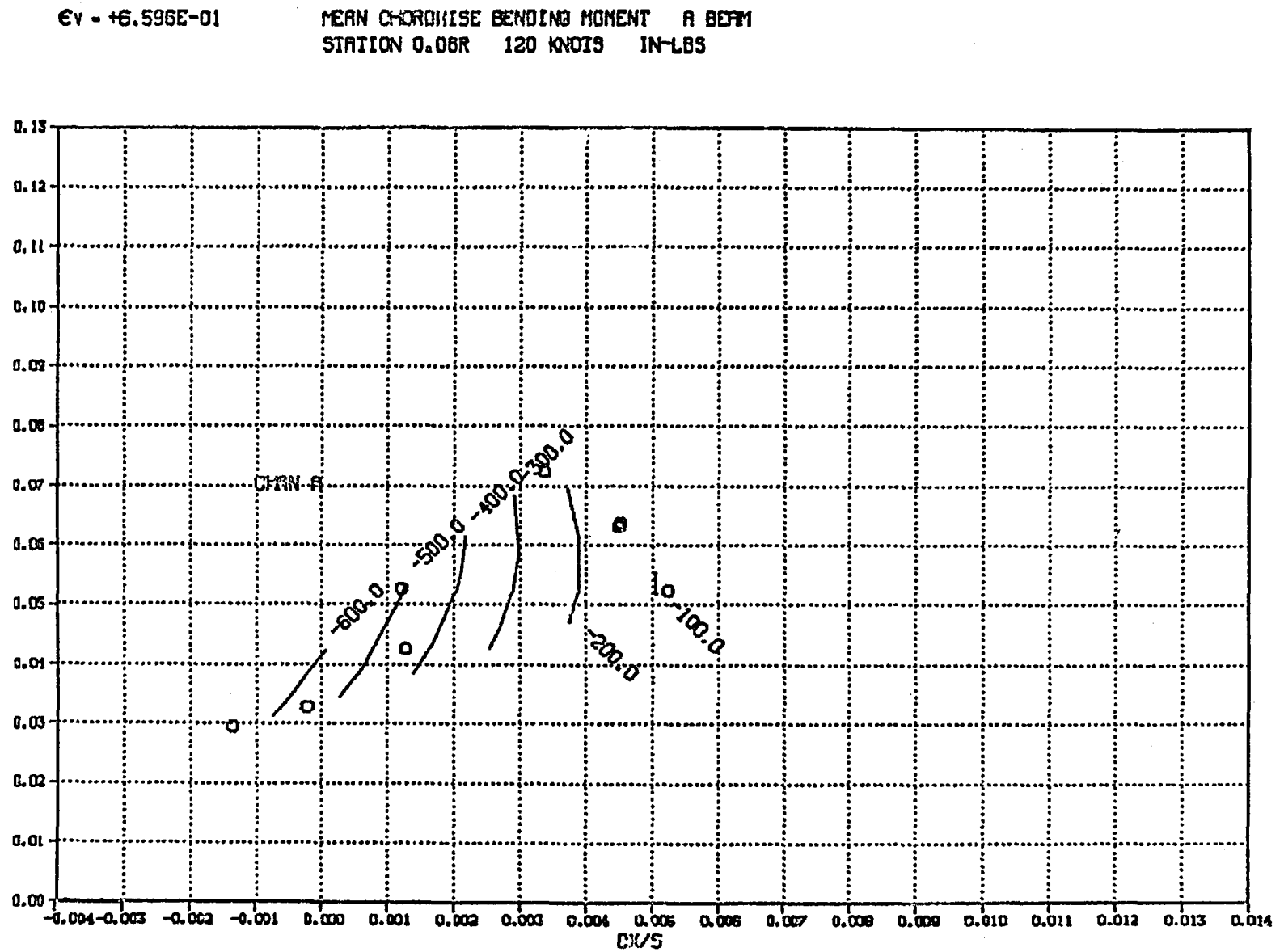


Figure 39. Mean flexbeam chordwise bending moment, A beam. 120 knots.

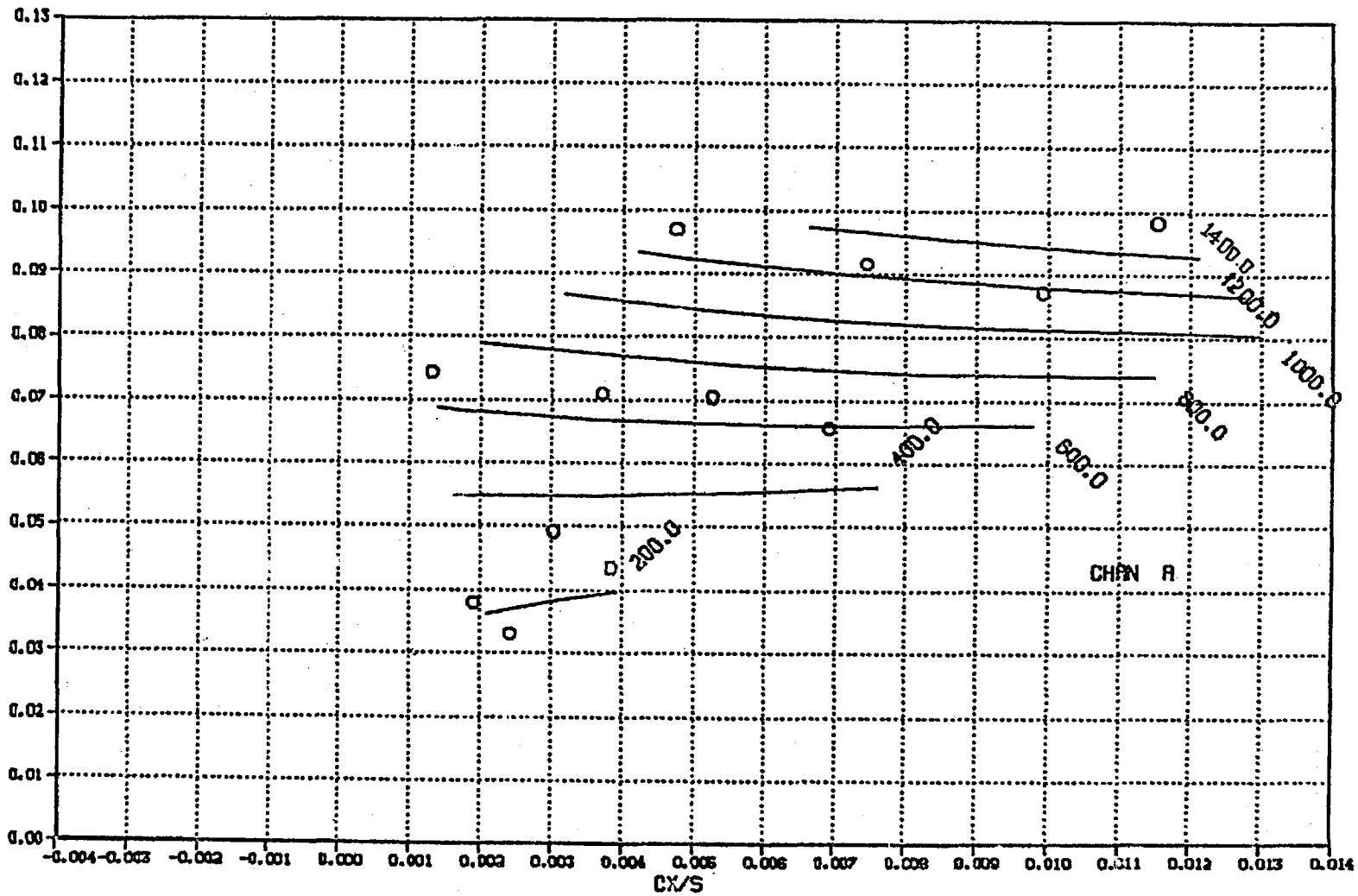


Figure 40. Ocillatory flexbeam chordwise bending moment, A beam. 60 knots.

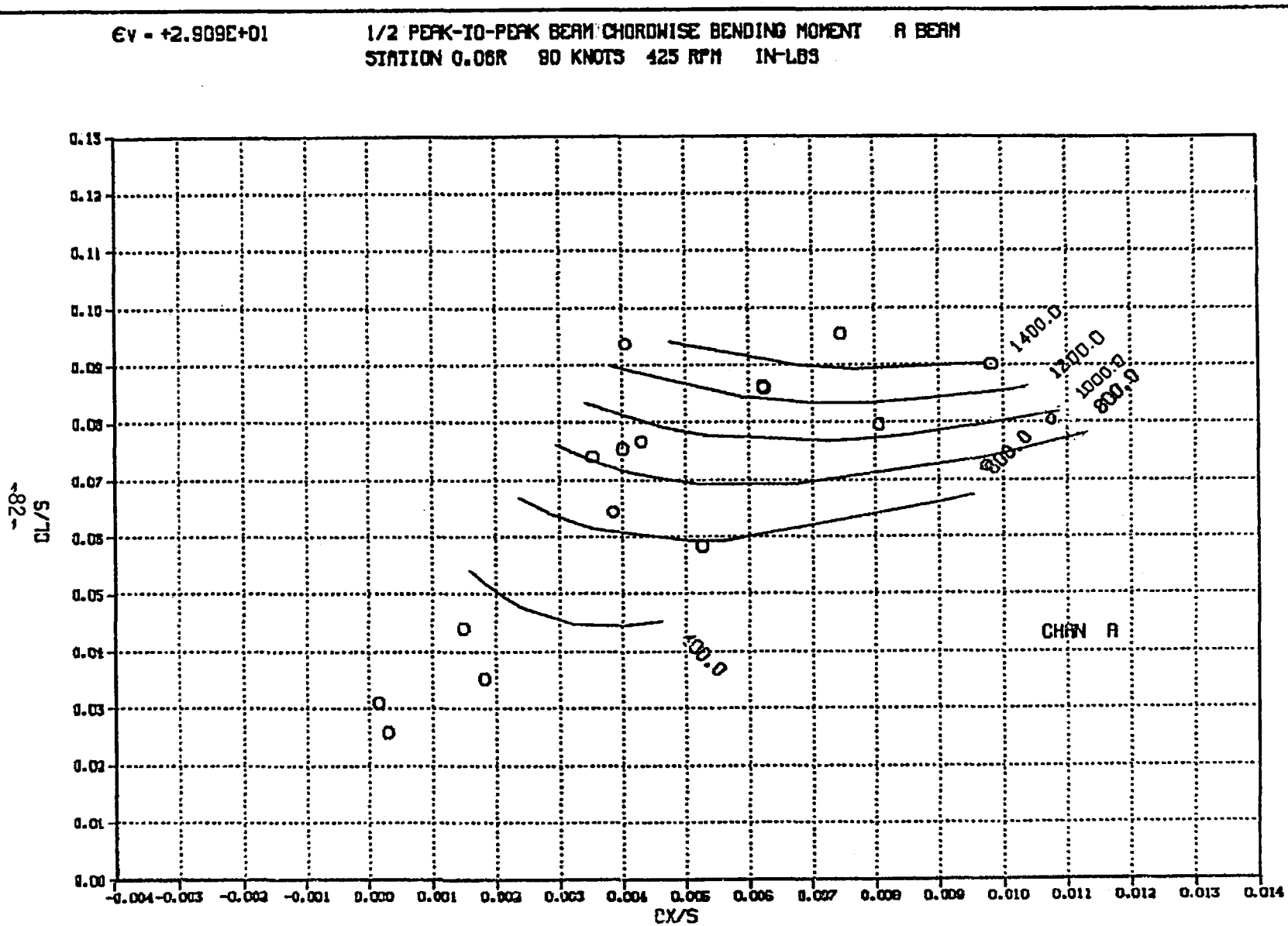


Figure 41. Oscillatory flexbeam chordwise bending moment, A beam. 90 knots.

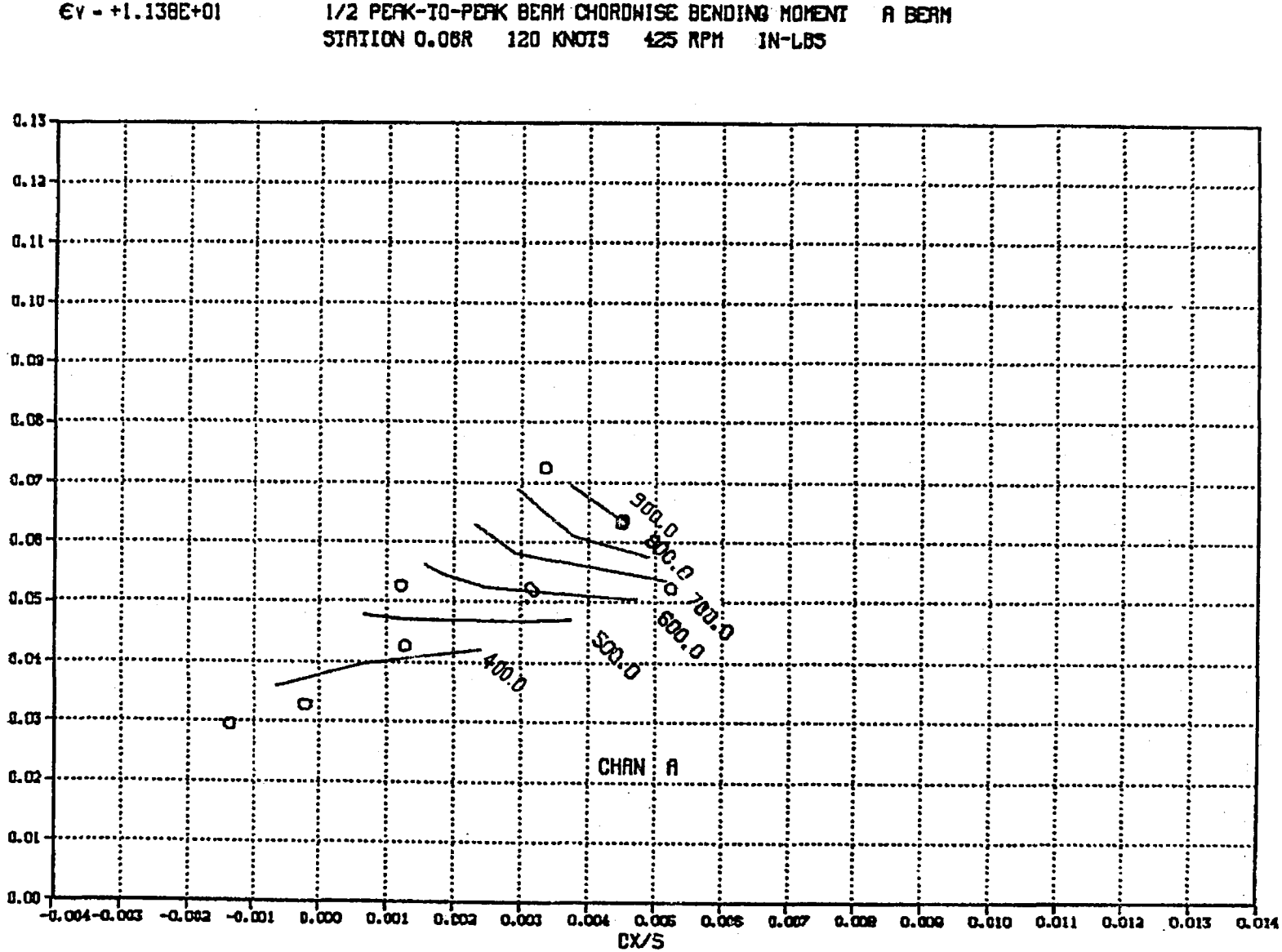


Figure 42. Oscillatory flexbeam chordwise bending moment, A beam. 120 knots.

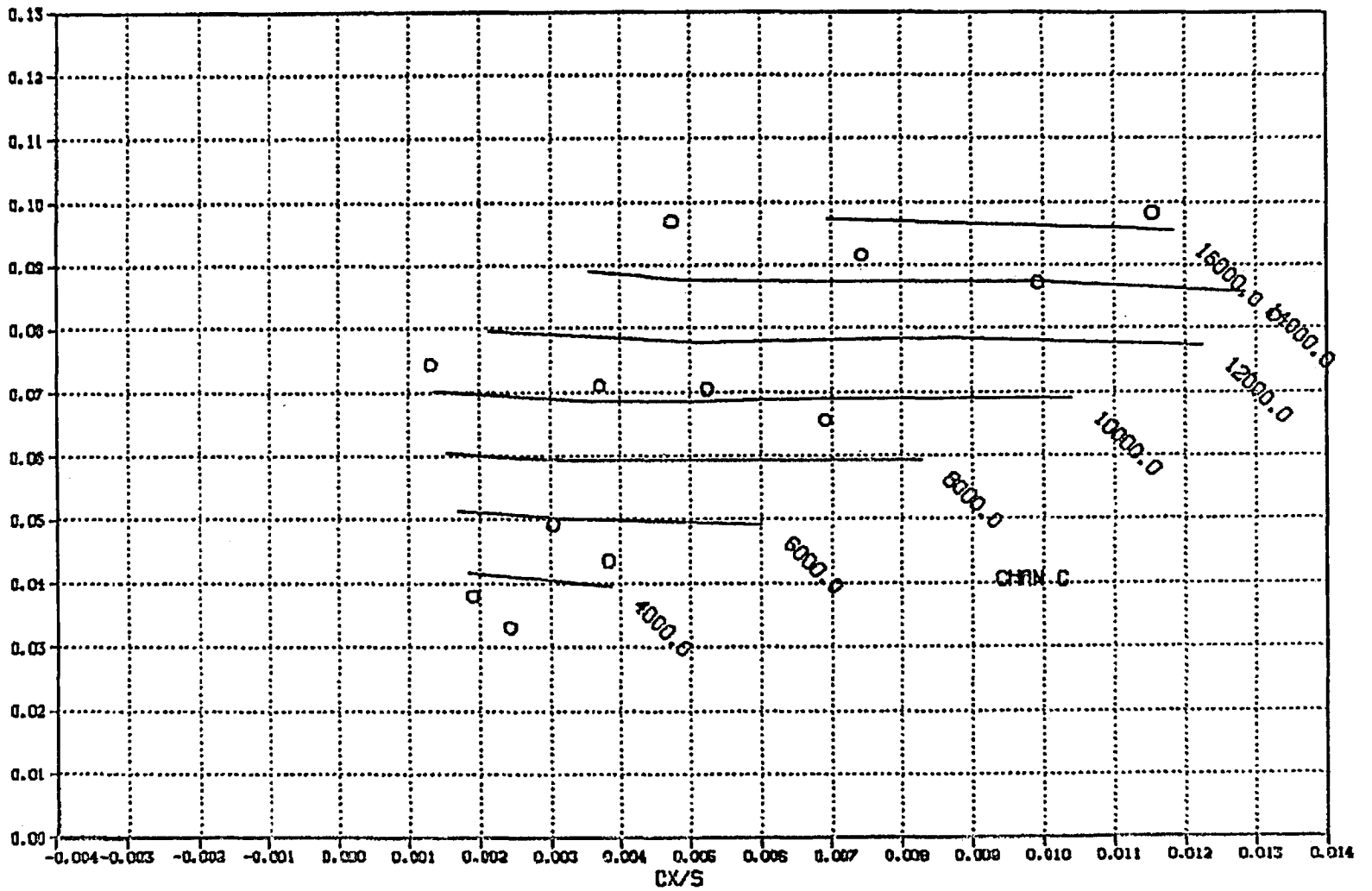


Figure 43. Mean flexbeam flapwise bending moment, A beam. 60 knots.

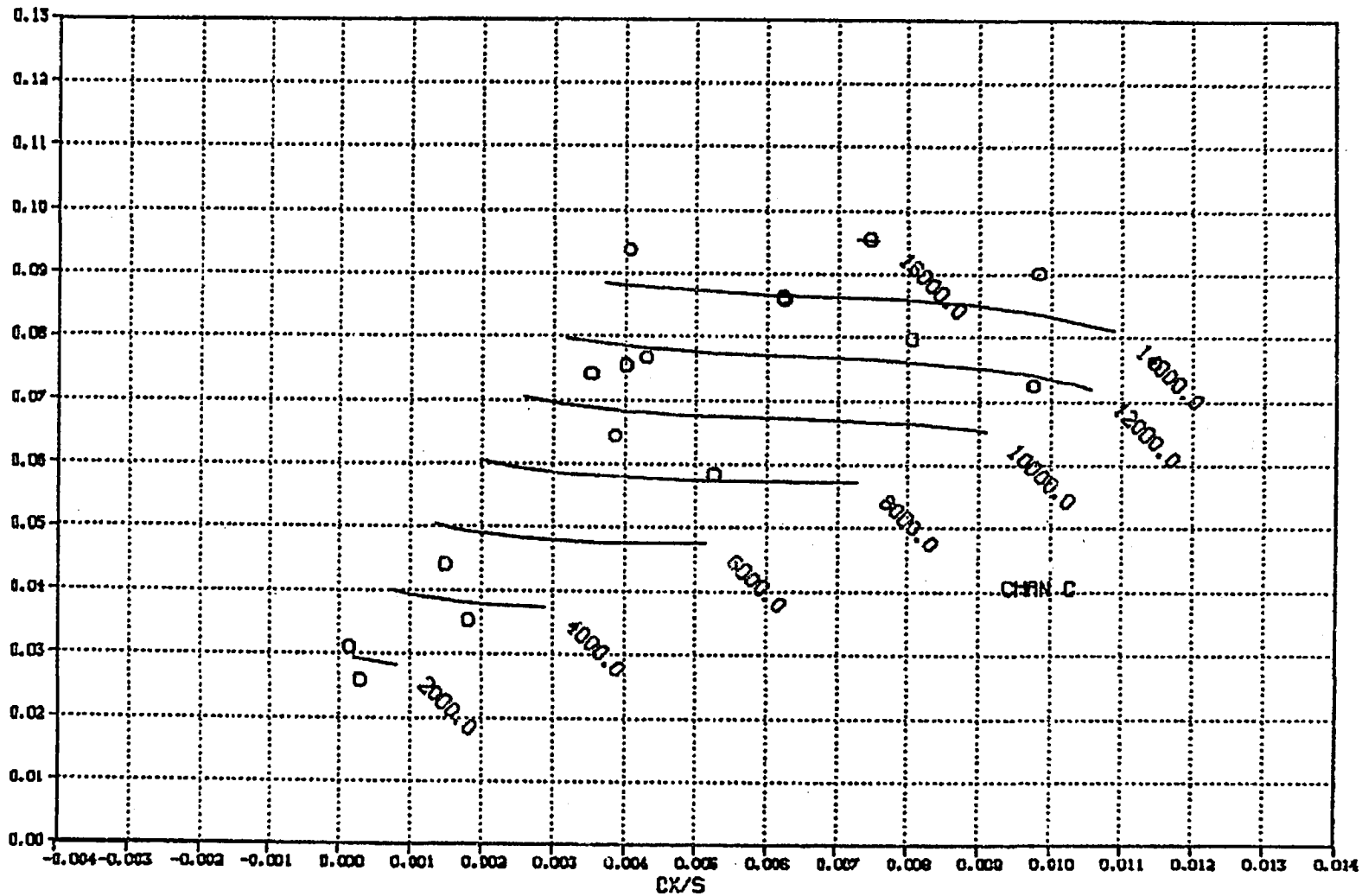


Figure 44. Mean flexbeam flapwise bending moment, A beam. 90 knots.

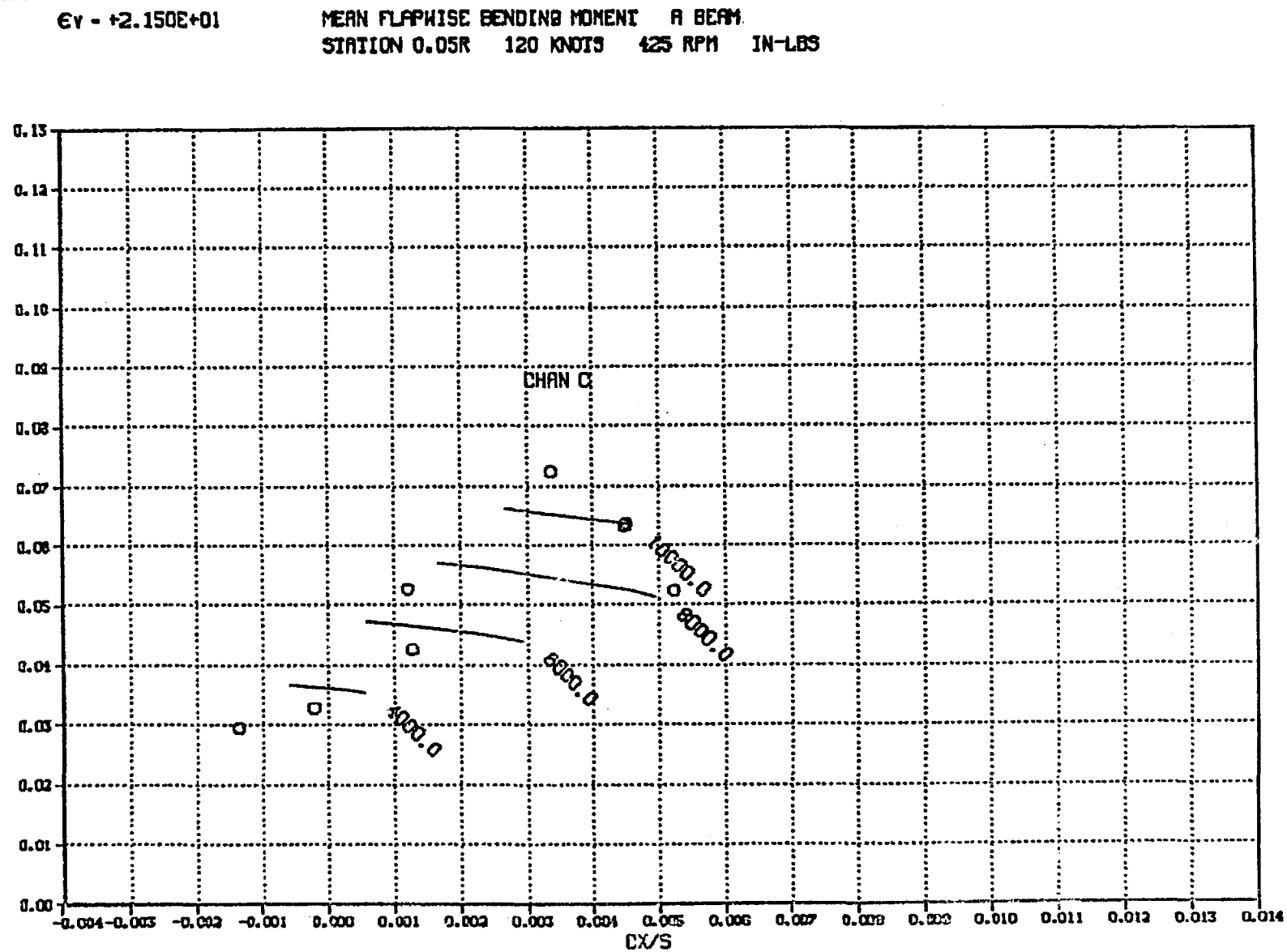


Figure 45. Mean flexbeam flapwise bending moment, A beam. 120 knots.

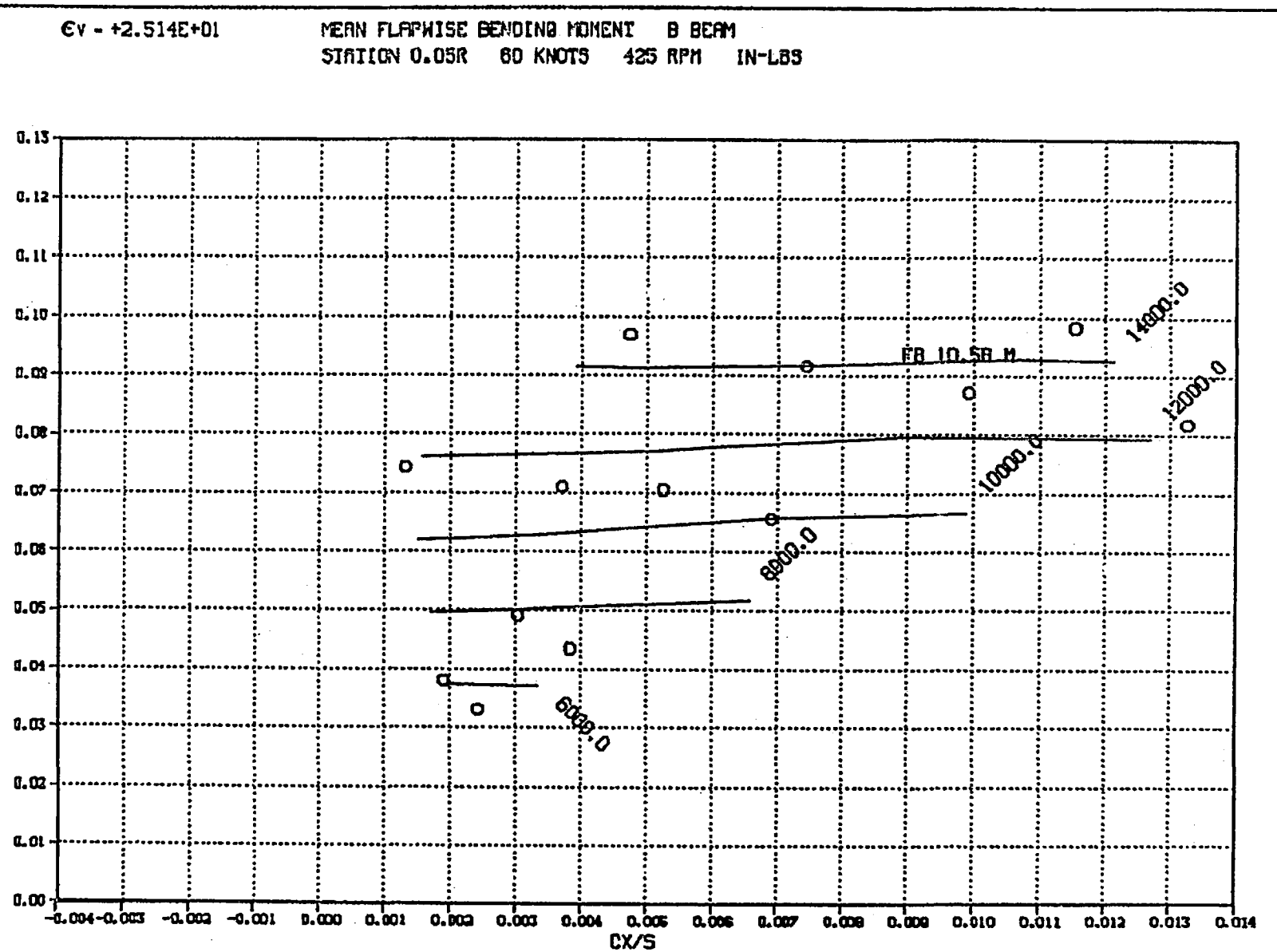


Figure 46. Mean flexbeam flapwise bending moment, B beam. 60 knots.

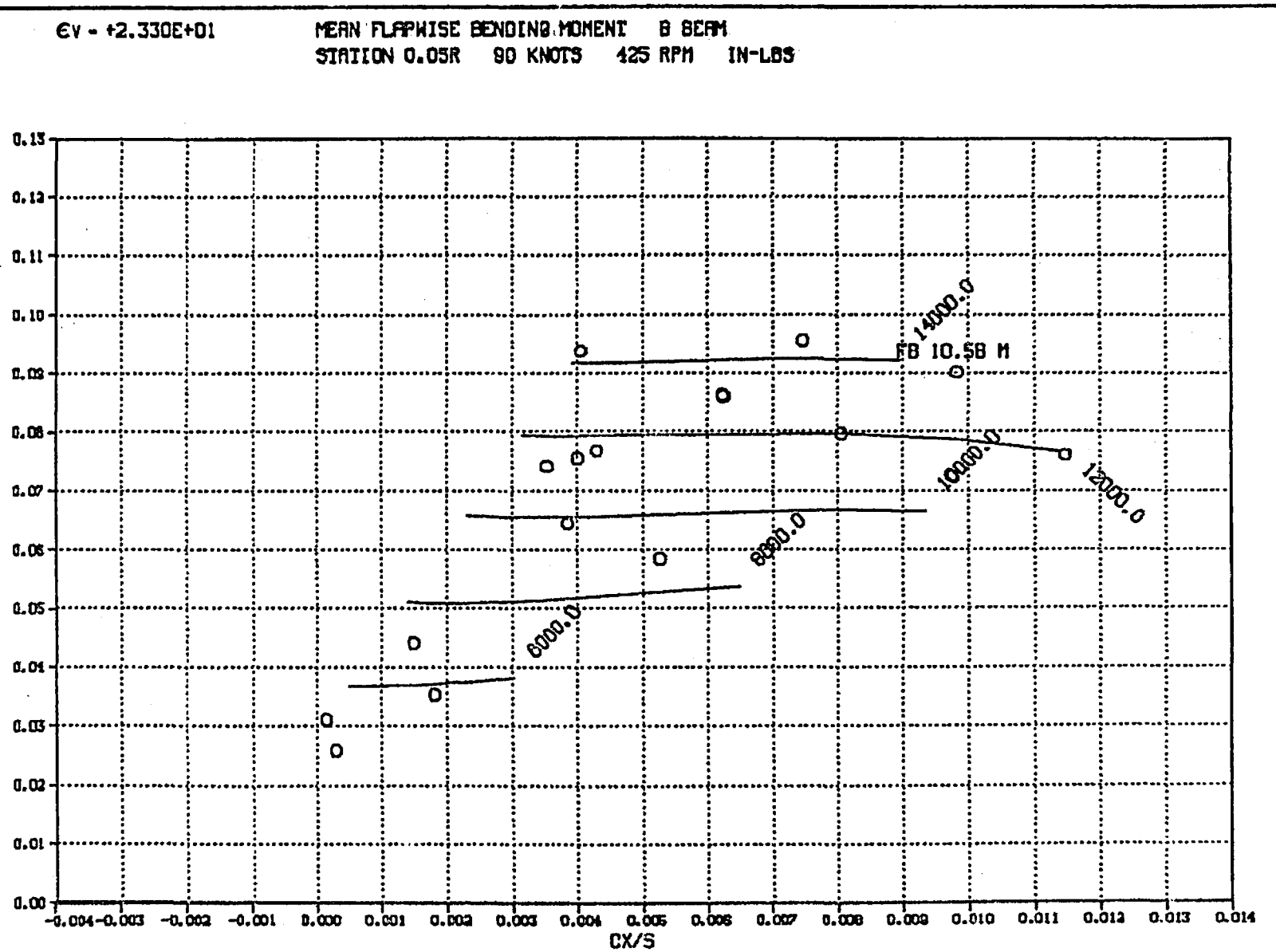


Figure 47. Mean flapwise bending moment, B beam. 90 knots.

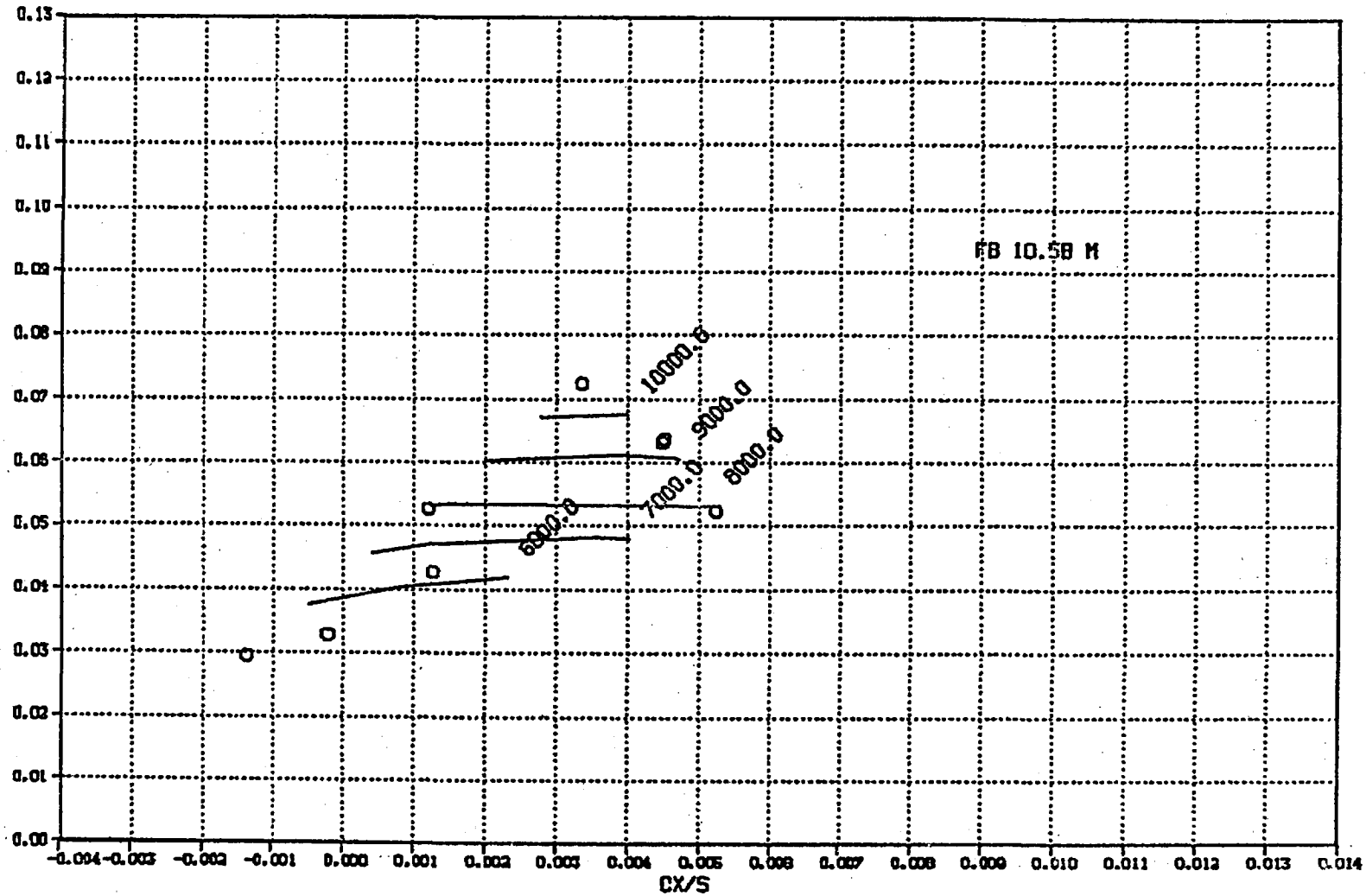


Figure 48. Mean flapwise bending moment, B beam. 120 knots.

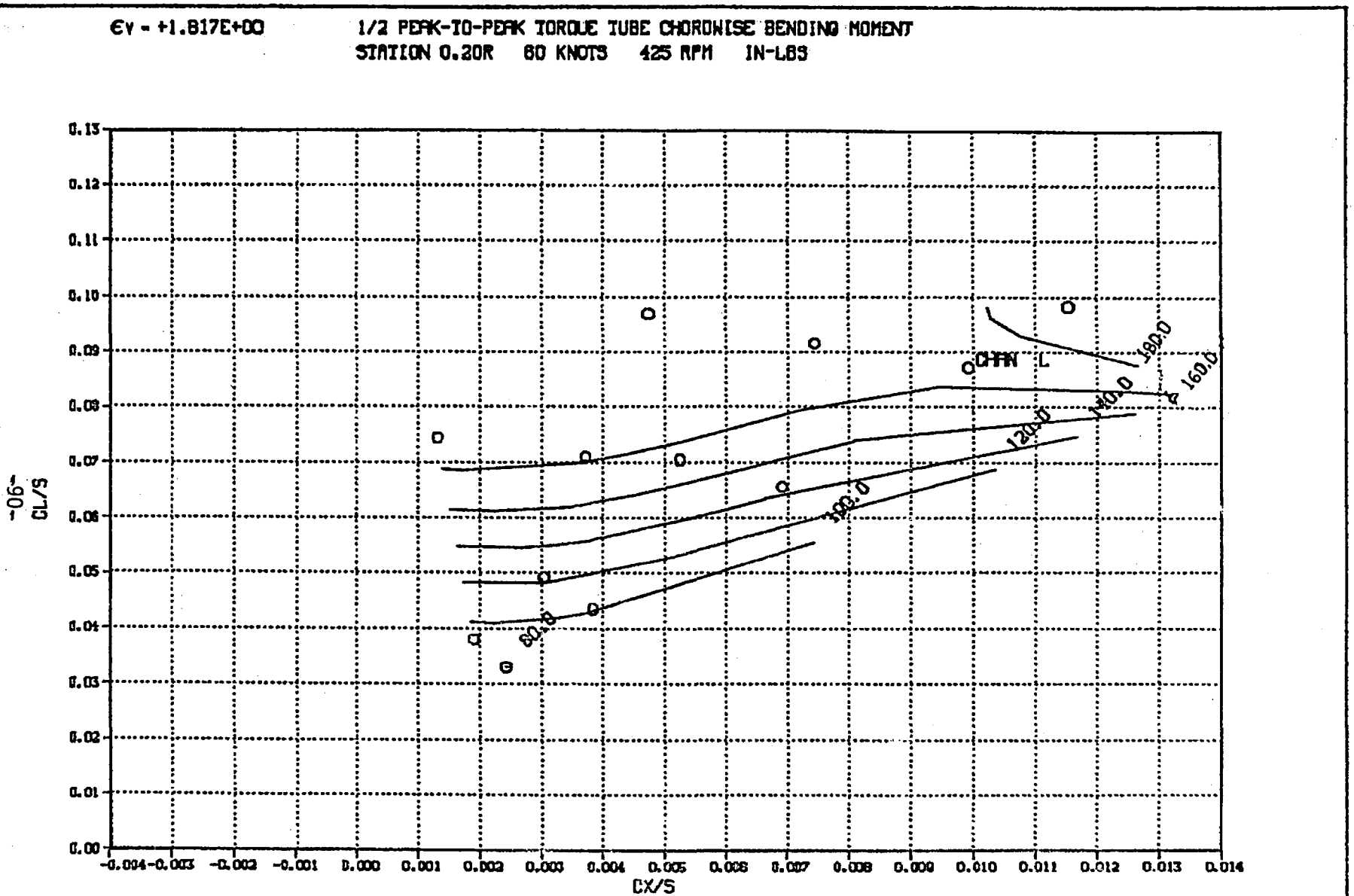


Figure 49. Oscillatory torque tube chordwise bending moment, 60 knots.

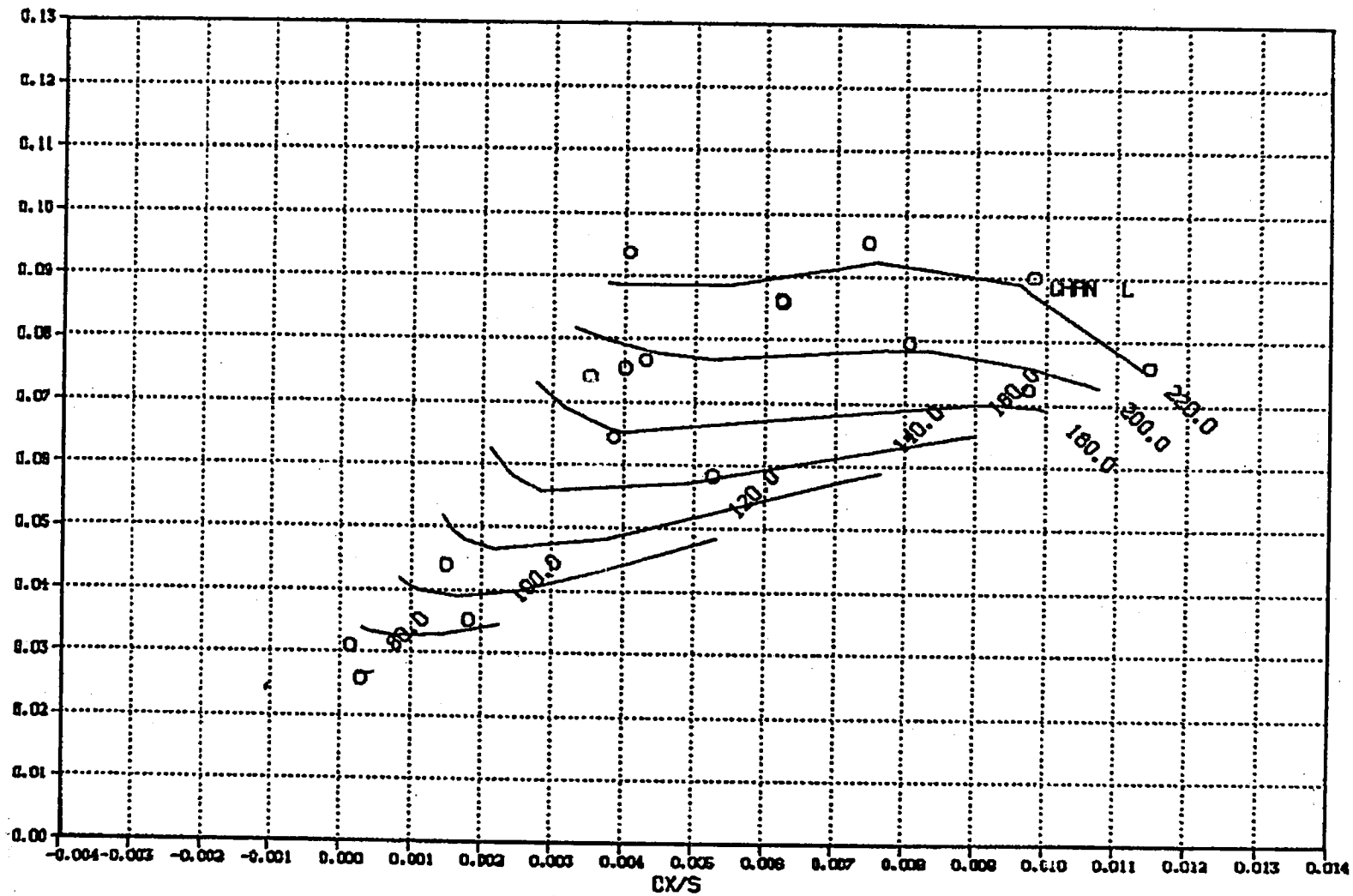


Figure 50. Oscillatory torque tube chordwise bending moment, 90 knots.

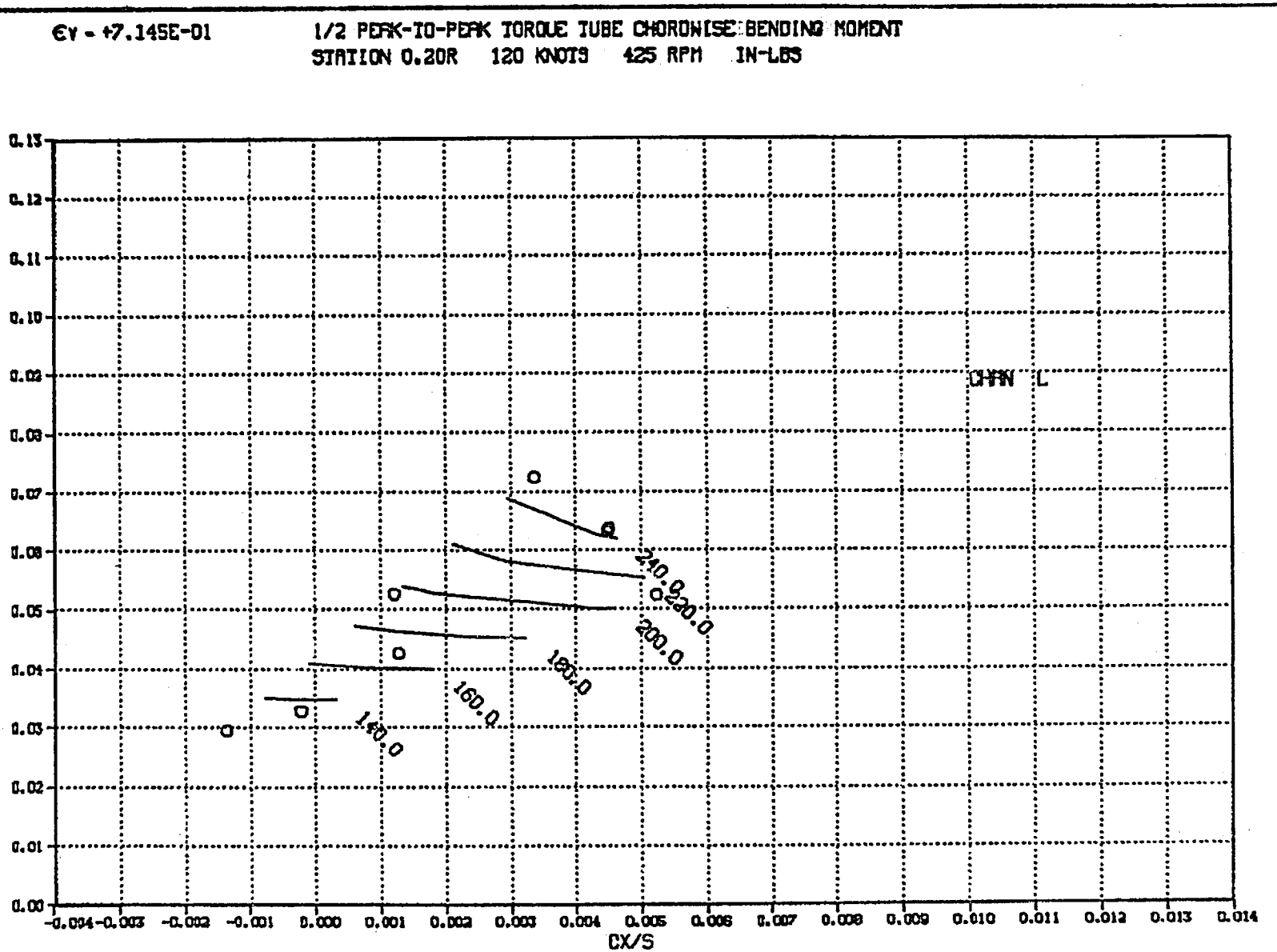


Figure 51. Oscillatory torque tube chordwise bending moment, 120 knots.

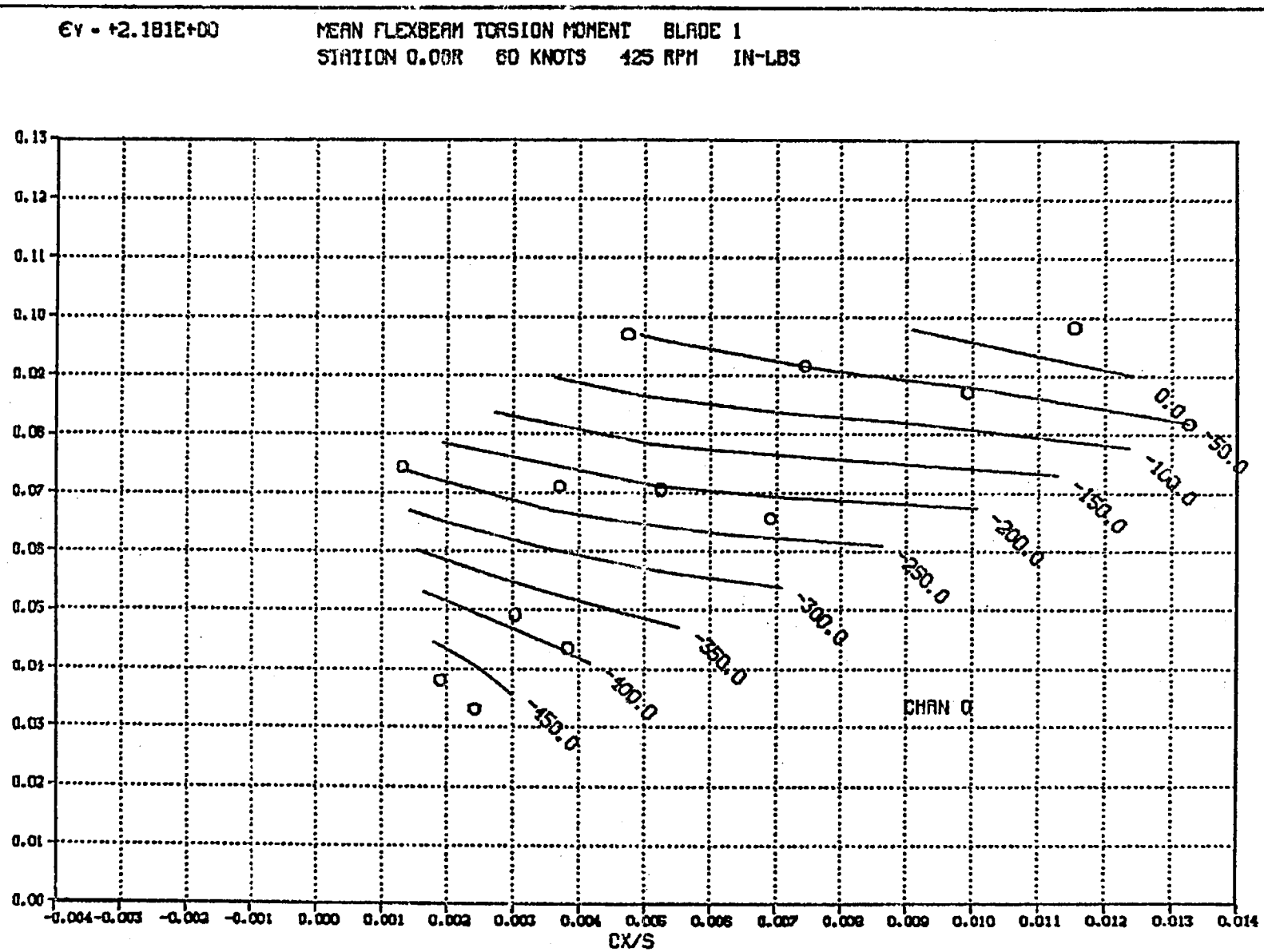


Figure 52. Mean flexbeam torsion moment, 60 knots.

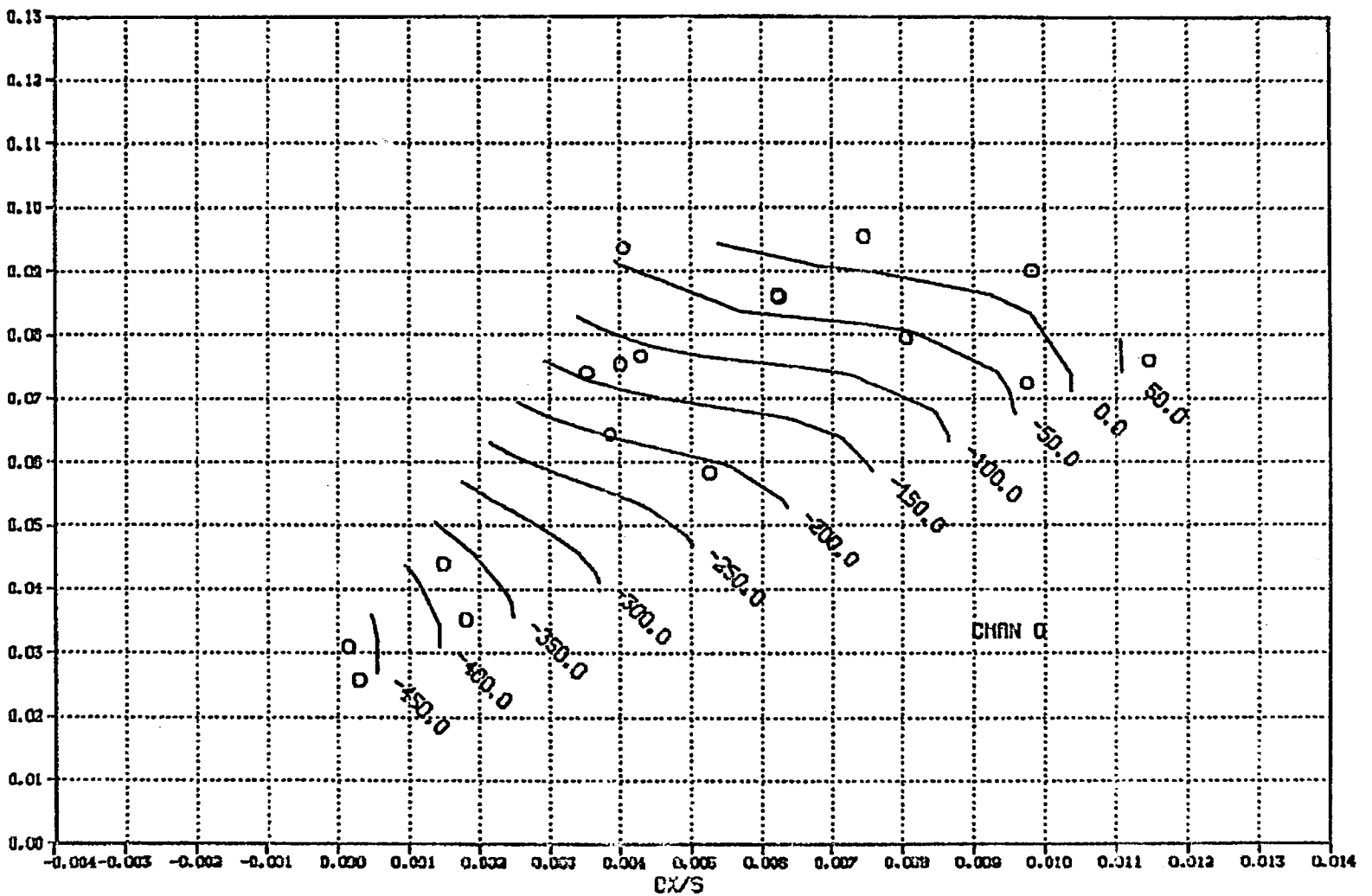


Figure 53. Mean flexbeam torsion moment, 90 knots.

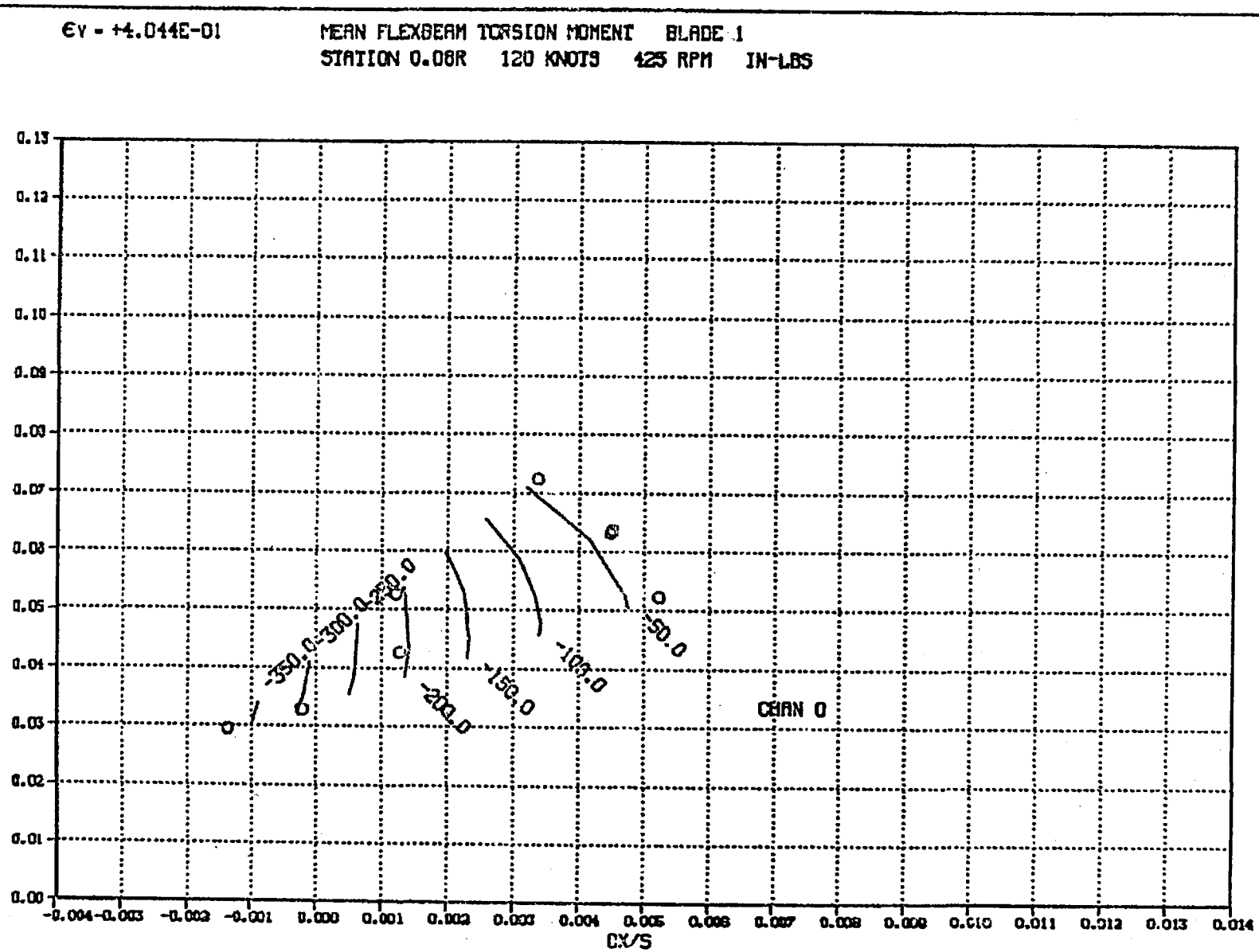


Figure 54. Mean flexbeam torsion moment, 120 knots.

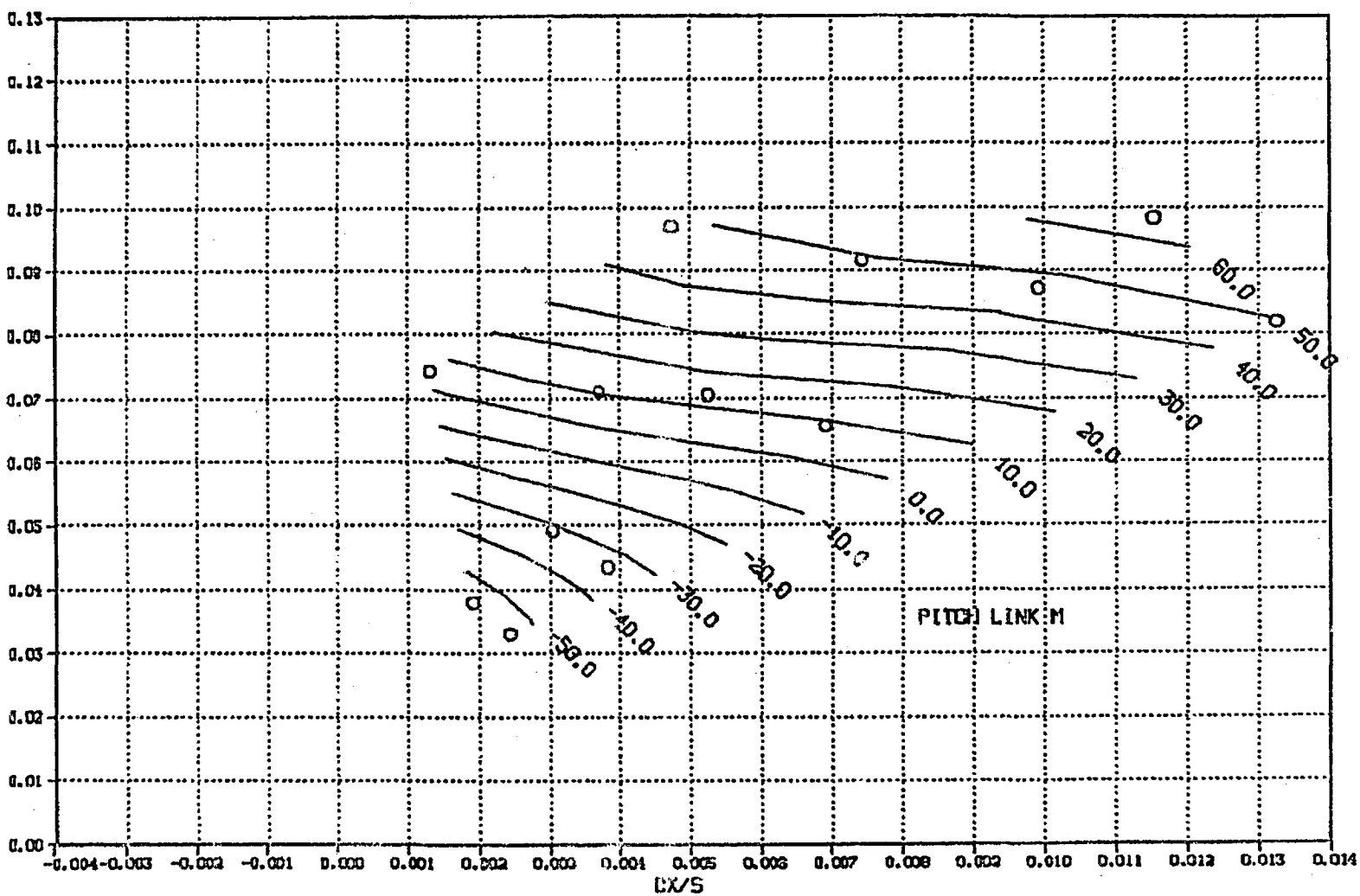


Figure 55. Mean pitch link load, 60 knots.

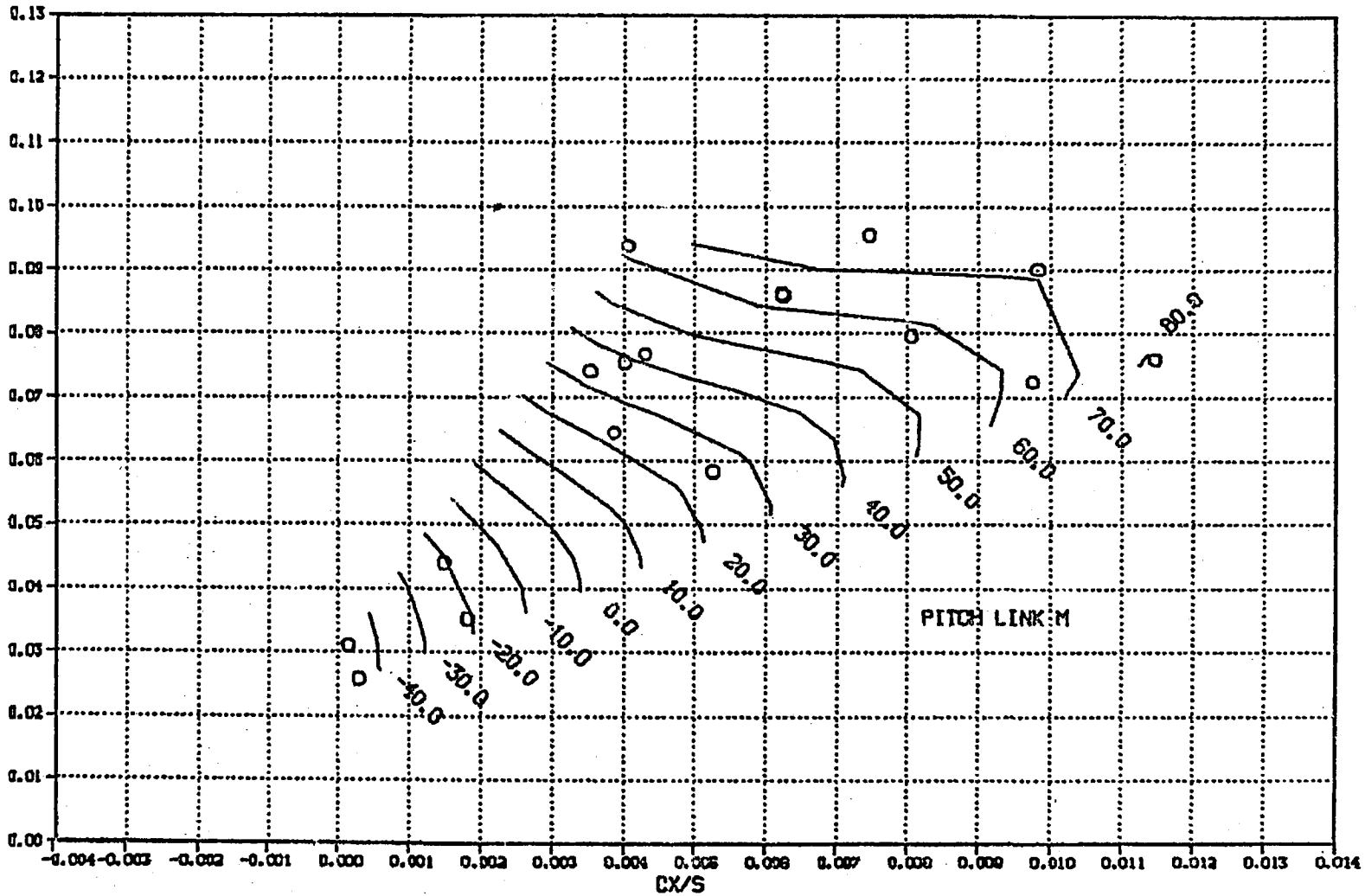


Figure 56. Mean pitch link load, 90 knots.

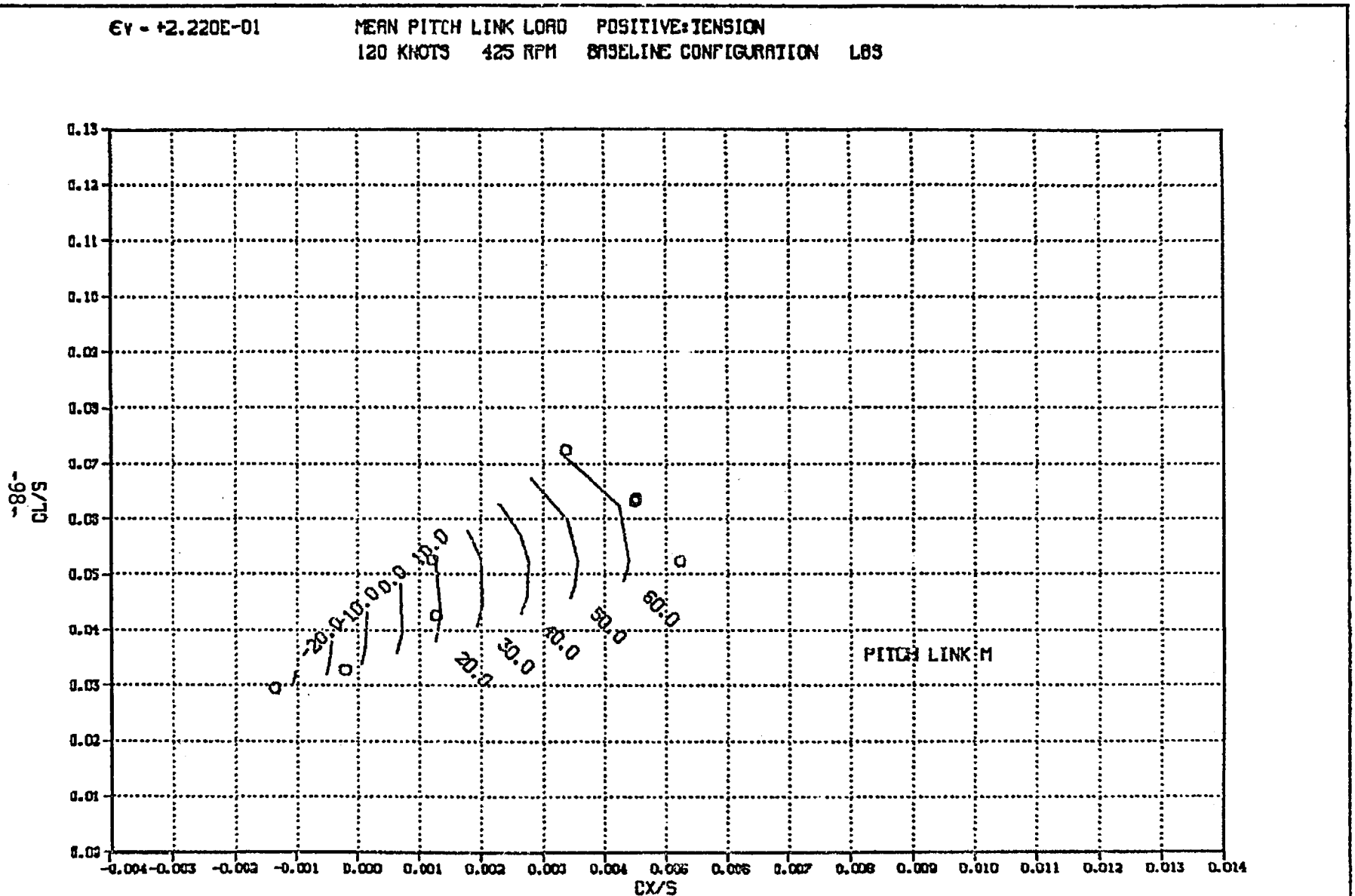


Figure 57. Mean pitch link load, 120 knots.

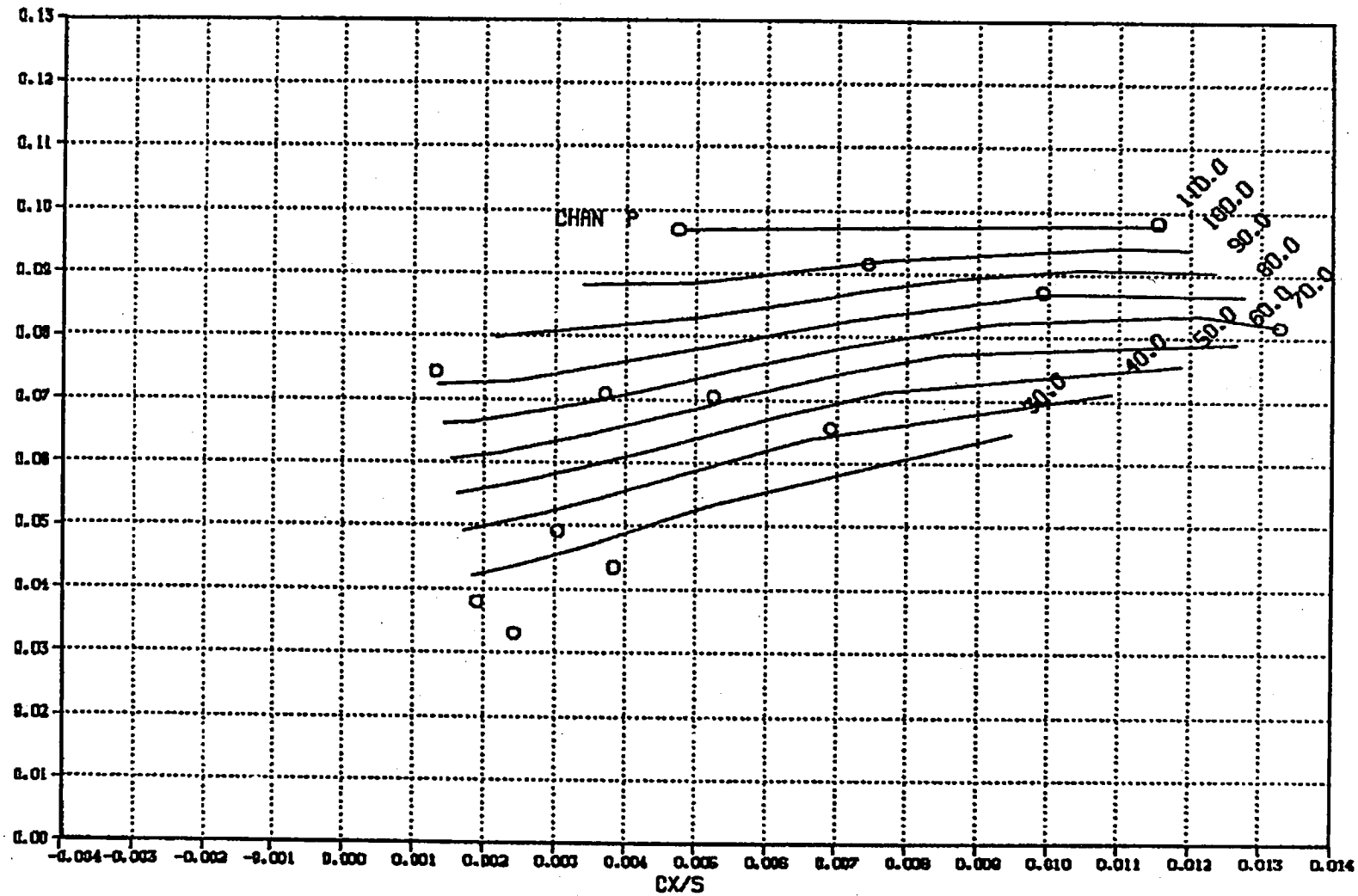


Figure 58. Oscillatory pitch link load, 60 knots.

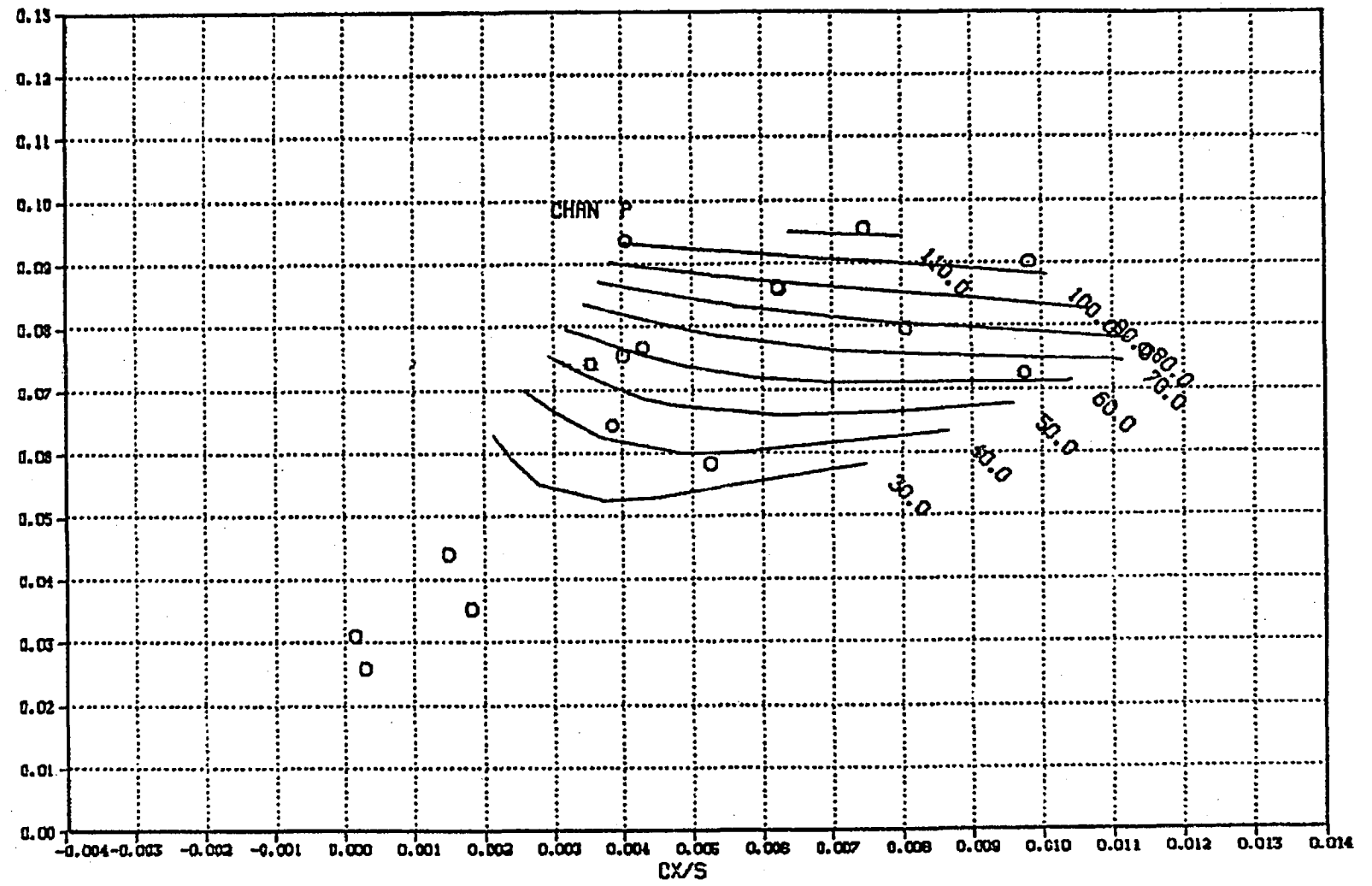


Figure 59. Oscillatory pitch link load, 90 knots.

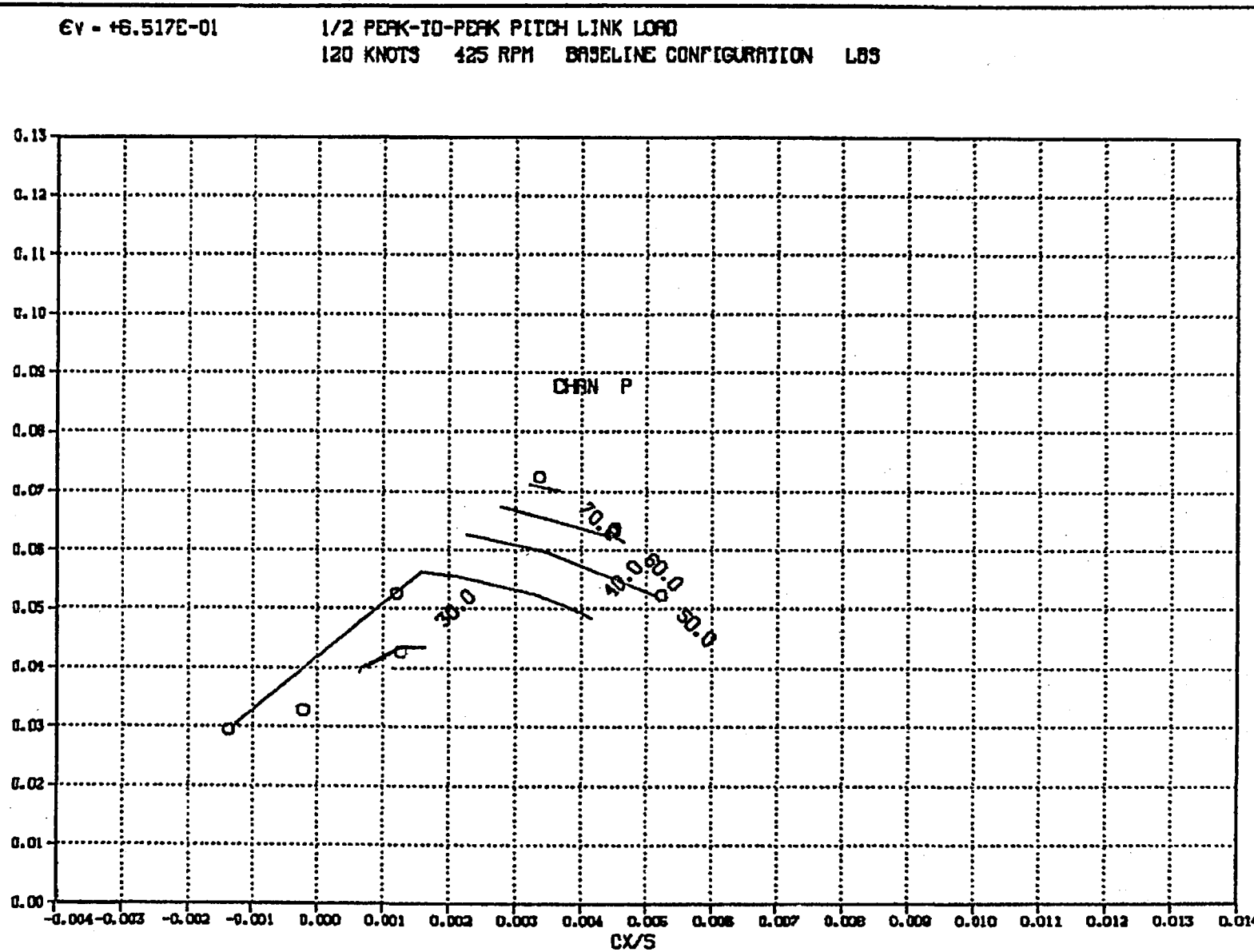


Figure 60. Oscillatory pitch link load, 120 knots.

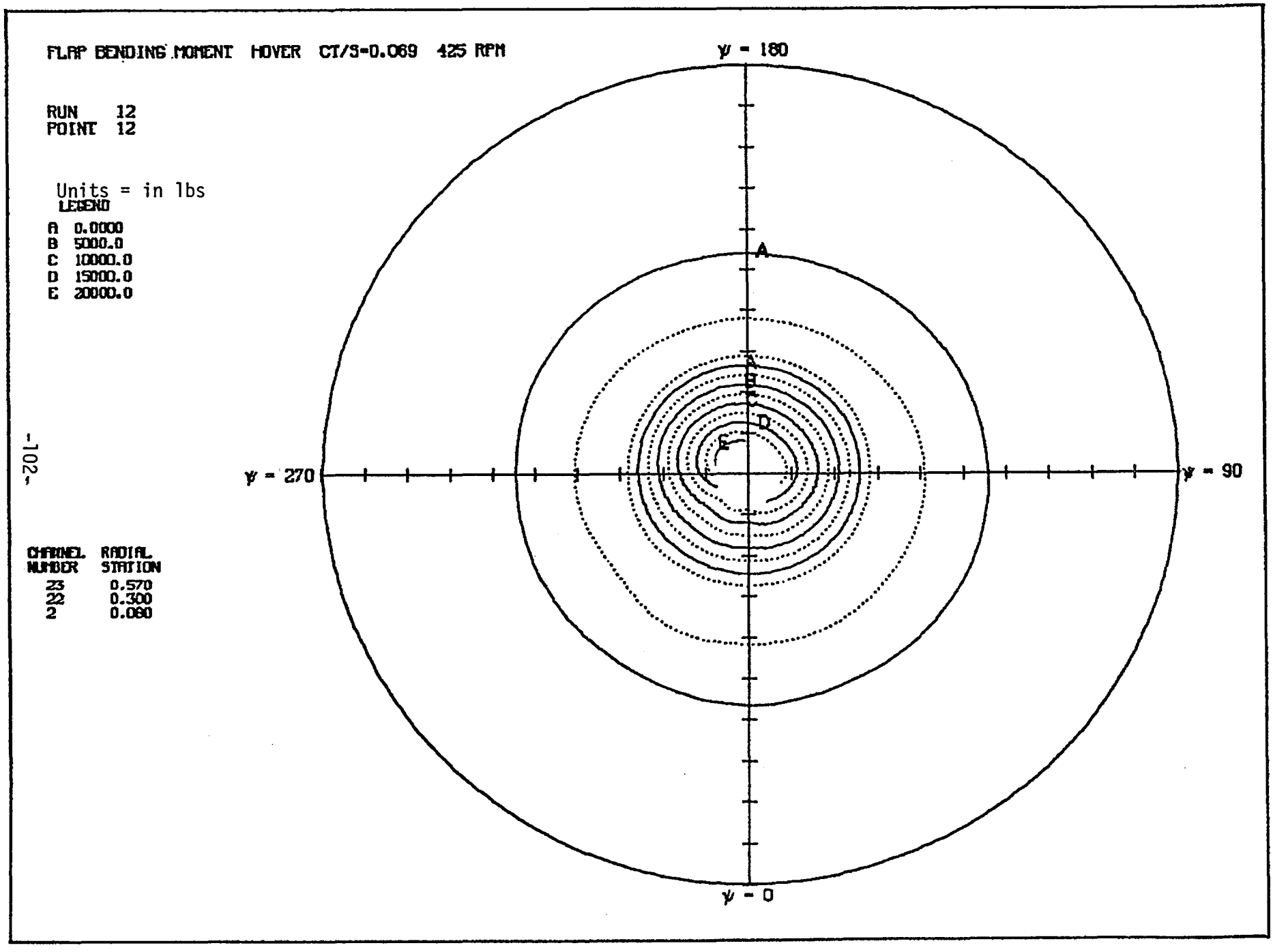


Figure 61. Rotor flap bending, hover.

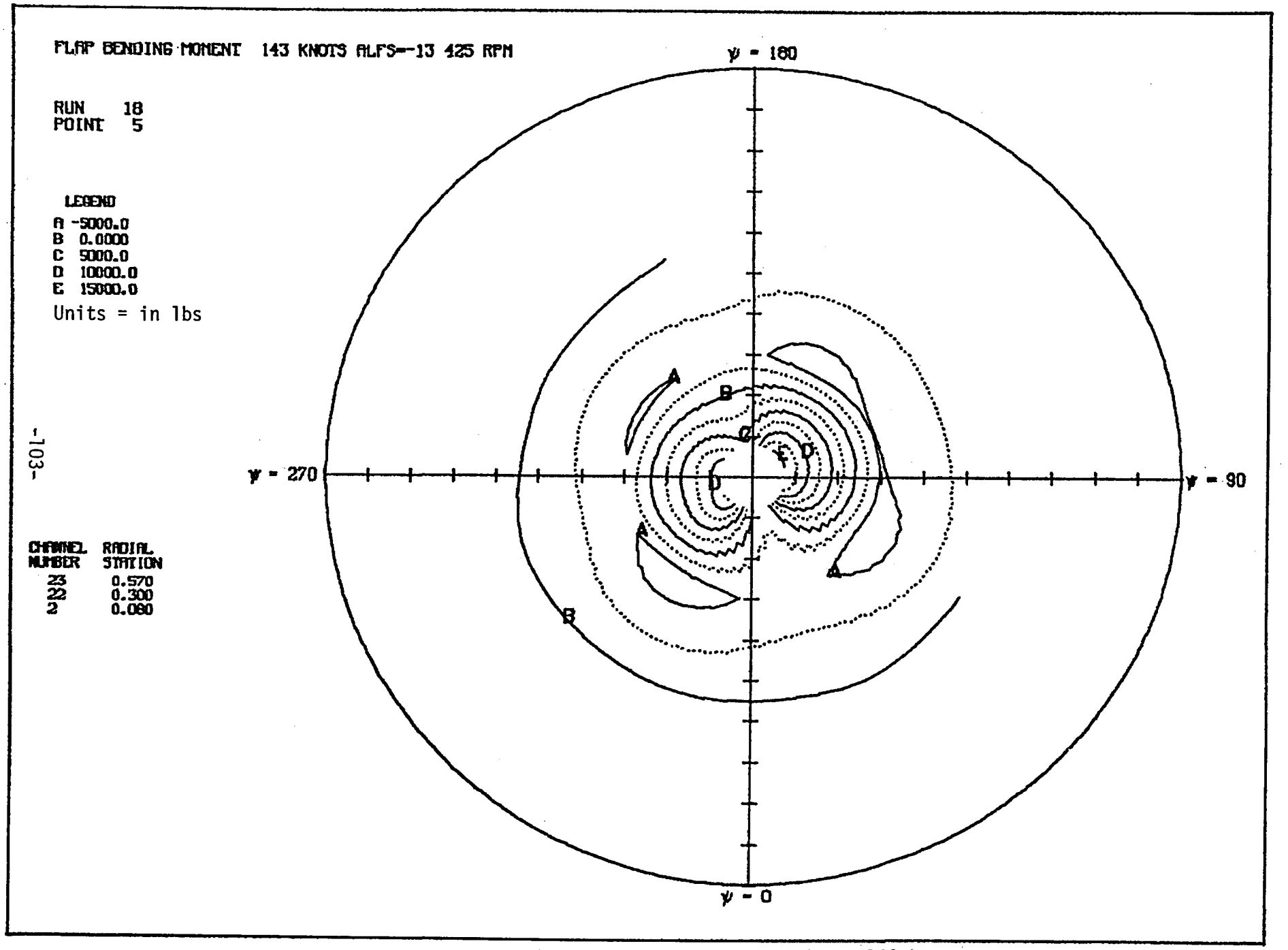


Figure 62. Rotor flap bending, 143 knots.

APPENDIX A

The following tables present bearingless main rotor hover performance and control positions data.

RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS	THETA ALFC	A1 B1	CL/S CMY/S	CX/S CMZ/S	CY/S CMX/S	CP/S CPO/S	RHO
6.10	0.0000	590.5	0.0	0.0	0.006725	0.001046	-0.000705	0.001568	
0.0	0.5255	-10.0	-10.0	0.0	0.001436	0.002021	-0.000709	0.001463	0.002353
6. 8	0.0000	590.5	2.0	0.0	0.018749	0.002961	-0.000277	0.001941	
0.0	0.5260	-10.0	-10.0	0.0	0.001921	0.002331	-0.000195	0.001452	0.002358
6. 9	0.0000	588.8	2.0	0.0	0.018213	0.003000	-0.000793	0.001935	
0.0	0.5245	-10.0	-10.0	0.0	0.000530	0.001955	-0.002580	0.001466	0.002358
5. 3	0.0000	590.5	4.0	0.0	0.032197	0.004738	-0.000043	0.002553	
0.0	0.5235	-10.0	-10.0	0.0	0.003820	0.002825	-0.000247	0.001456	0.002332
5. 4	0.0000	590.5	4.0	0.0	0.030794	0.005211	-0.001400	0.002445	
0.0	0.5235	-10.0	-10.0	0.0	-0.000718	0.002054	-0.001558	0.001412	0.002333
6. 2	0.0000	590.5	4.0	0.0	0.032884	0.005622	-0.000085	0.002669	
0.0	0.5270	-10.0	-10.0	0.0	0.003058	0.002939	0.000286	0.001529	0.002368
6. 7	0.0000	590.5	4.0	0.0	0.034130	0.005465	-0.000553	0.002746	
0.0	0.5265	-10.0	-10.0	0.0	0.002392	0.003496	0.000398	0.001544	0.002362
6. 6	0.0000	590.5	6.0	0.0	0.049769	0.008298	-0.000785	0.003806	
0.0	0.5270	-10.0	-10.0	0.0	0.003002	0.004593	0.000011	0.001686	0.002367

RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	RHO
6. 5	0.0000	590.5	8.0	0.0	0.069479	0.011562	-0.000233	0.005424	
0.0	0.5270	-10.0	-10.0	0.0	0.003005	0.005777	-0.000084	0.001927	0.002368
6. 3	0.0000	590.5	11.2	0.0	0.102040	0.016674	-0.000276	0.008840	
0.0	0.5270	-10.0	-10.0	0.0	0.003587	0.009746	-0.001330	0.002621	0.002368
6. 4	0.0000	588.8	10.0	0.0	0.089190	0.014147	-0.000576	0.007136	
0.0	0.5255	-10.0	-10.0	0.0	0.004082	0.008044	0.000354	0.002060	0.002368
26. 5	0.0119	632.6	3.1	-0.6	0.019421	0.003370	-0.000358	0.001865	
4.5	0.5593	-10.0	-10.3	0.3	0.000383	0.001682	-0.000244	0.001347	0.002322
12. 6	0.0000	632.6	4.2	-0.8	0.035375	0.006027	-0.000074	0.002520	
0.0	0.5690	-10.0	-10.5	0.5	-0.000313	0.002432	-0.001113	0.001248	0.002381
22.14	0.0094	631.0	4.0	-0.7	0.028854	0.005217	-0.000824	0.002359	
3.5	0.5599	-10.0	-10.3	0.3	-0.000385	0.002462	-0.000732	0.001420	0.002348
26. 4	0.0119	632.6	3.9	-0.6	0.025450	0.004462	-0.000471	0.002155	
4.5	0.5593	-10.0	-10.2	0.2	0.000439	0.002329	-0.000271	0.001378	0.002322
28. 2	0.0000	632.6	4.0	-0.8	0.026605	0.004656	-0.001053	0.002138	
0.0	0.5635	-10.0	-10.8	0.8	-0.000926	0.002470	0.000302	0.001307	0.002368

RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	RHO
12. 2	0.0000	632.6	6.1	-0.8	0.050895	0.008785	0.000092	0.003588	
0.0	0.5695	-10.0	-10.5	0.5	-0.000259	0.003599	-0.000894	0.001393	0.002386
21.21	0.0156	632.6	6.0	-1.0	0.048870	0.009274	-0.000784	0.003371	
5.9	0.5603	-10.0	-11.5	1.5	-0.001356	0.004061	-0.000005	0.001296	0.002342
21.22	0.0093	634.3	6.0	-0.7	0.047760	0.007498	-0.001300	0.003328	
3.5	0.5618	-10.0	-9.5	-0.5	0.001597	0.003504	-0.001628	0.001339	0.002342
21.23	0.0093	632.6	6.1	0.6	0.046897	0.007800	0.000505	0.003341	
3.5	0.5603	-10.0	-10.3	0.3	0.001658	0.003919	0.000910	0.001402	0.002342
21.24	0.0093	632.6	6.0	-1.3	0.047090	0.007841	-0.001622	0.003329	
3.5	0.5609	-10.0	-10.0	0.0	-0.000010	0.003581	-0.002604	0.001378	0.002347
22. 6	0.0093	632.6	6.0	-0.7	0.046213	0.008133	-0.001360	0.003421	
3.5	0.5614	-10.0	-10.3	0.3	0.000375	0.003425	-0.000343	0.001519	0.002349
26. 3	0.0119	632.6	5.9	-0.7	0.041667	0.007199	-0.000827	0.003034	
4.4	0.5598	-10.0	-10.3	0.3	0.000936	0.003606	-0.000509	0.001407	0.002327
5. 5	0.0000	632.6	4.0	0.0	0.029088	0.004954	-0.000657	0.002381	
0.0	0.5609	-10.0	-10.0	0.0	0.001176	0.002336	0.000253	0.001433	0.002332

RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	RHO
7. 2	0.0119	632.6	4.0	0.0	0.034962	0.005812	0.000417	0.002634	
4.5	0.5582	-10.0	-10.0	0.0	0.002016	0.002510	-0.001251	0.001386	0.002310
7. 4	0.0094	632.6	6.0	0.0	0.051705	0.008466	-0.000282	0.003701	
3.5	0.5598	-10.0	-10.0	0.0	0.001997	0.004043	-0.000498	0.001458	0.002323
12. 5	0.0000	632.6	8.1	-0.7	0.067847	0.011681	-0.001100	0.005116	
0.0	0.5695	-10.0	-10.4	0.4	0.000962	0.004934	-0.000762	0.001737	0.002386
22. 2	0.0156	632.6	8.0	0.0	0.063827	0.010944	-0.000428	0.004902	
5.9	0.5614	-10.0	-10.0	-0.0	0.002159	0.005451	-0.001188	0.001819	0.002349
26. 2	0.0094	632.6	8.0	-0.1	0.060068	0.009916	-0.000188	0.004455	
3.5	0.5598	-10.0	-9.7	-0.3	0.002519	0.004949	-0.001096	0.001645	0.002328
26.13	0.0140	631.0	8.0	-0.9	0.060764	0.011013	-0.001746	0.004511	
5.2	0.5573	-10.0	-10.4	0.4	0.001562	0.005013	-0.000885	0.001640	0.002317
7. 3	0.0119	632.6	8.0	0.0	0.071715	0.011704	0.000341	0.005369	
4.5	0.5582	-10.0	-10.0	0.0	0.001782	0.005735	-0.001106	0.001705	0.002310
12. 3	0.0000	632.6	10.2	-0.7	0.089298	0.015403	-0.000862	0.007098	
0.0	0.5695	-10.0	-10.3	0.3	0.001939	0.007550	-0.001666	0.001995	0.002386

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RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	RHO
12. 4	0.0000	632.6	11.1	-0.6	0.098833	0.016649	-0.001907	0.008168	
0.0	0.5695	-10.0	-10.3	0.3	0.002599	0.008953	-0.000665	0.002232	0.002386
22.10	0.0000	657.9	8.1	-0.5	0.061764	0.010820	-0.001585	0.004854	
0.0	0.5839	-10.0	-10.1	0.1	0.001439	0.005435	0.000090	0.001917	0.002348
22.13	0.0112	666.4	8.0	-0.7	0.062904	0.011131	-0.001041	0.004911	
4.4	0.5913	-10.0	-10.3	0.3	0.001104	0.004947	-0.001336	0.001891	0.002348
26. 9	0.0131	674.8	3.0	-0.8	0.017736	0.003215	-0.000563	0.001820	
5.2	0.5966	-10.0	-10.4	0.4	-0.000135	0.001663	-0.000232	0.001367	0.002322
22.15	0.0087	674.8	4.0	-0.7	0.027437	0.004921	-0.000049	0.002321	
3.5	0.5988	-10.0	-10.3	0.3	-0.000327	0.002020	-0.002351	0.001450	0.002348
26. 8	0.0131	674.8	4.1	-0.8	0.025770	0.004607	-0.000745	0.002153	
5.2	0.5966	-10.0	-10.4	0.4	0.000189	0.002100	-0.000397	0.001361	0.002322
28. 3	0.0000	674.8	4.1	-0.6	0.025793	0.004540	-0.000244	0.002147	
0.0	0.6005	-10.0	-10.6	0.6	-0.000598	0.002390	-0.000400	0.001354	0.002363
13. 3	0.0130	673.1	4.6	-0.9	0.033947	0.006013	-0.000544	0.002563	
5.2	0.6013	-10.0	-10.2	0.2	0.000151	0.002379	-0.000551	0.001365	0.002341

RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	RHO
13. 2	0.0130	674.8	6.5	-0.7	0.048727	0.008611	-0.001051	0.003635	
5.2	0.6028	-10.0	-10.1	0.1	0.000594	0.003300	0.000203	0.001576	0.002341
22. 7	0.0087	674.8	6.0	-0.7	0.043814	0.007804	-0.000753	0.003354	
3.5	0.5988	-10.0	-10.3	0.3	0.000708	0.003409	-0.001377	0.001597	0.002348
26. 7	0.0148	673.1	6.1	-0.9	0.041636	0.007315	-0.000732	0.003117	
5.9	0.5951	-10.0	-10.3	0.3	0.000332	0.003543	-0.000764	0.001491	0.002322
5. 6	0.0000	674.8	4.0	0.0	0.029535	0.005329	-0.000346	0.002406	
0.0	0.5983	-10.0	-10.0	0.0	0.000443	0.002591	0.000396	0.001433	0.002331
5. 7	0.0000	674.8	4.0	0.0	0.029037	0.005279	-0.001270	0.002387	
0.0	0.5983	-10.0	-10.0	0.0	-0.000935	0.001959	-0.001493	0.001439	0.002331
8. 5	0.0000	674.8	6.0	0.0	0.050471	0.008706	-0.000539	0.003676	
0.0	0.6063	-10.0	-10.0	0.0	0.001286	0.003931	-0.000401	0.001508	0.002355
13.11	0.0111	673.1	8.4	-0.9	0.070300	0.011910	-0.001056	0.005203	
4.4	0.6019	-10.0	-10.2	0.2	0.001355	0.005731	-0.000437	0.001641	0.002342
22. 5	0.0111	674.8	8.0	-0.7	0.062646	0.011280	-0.000917	0.004833	
4.4	0.5988	-10.0	-10.4	0.4	0.000820	0.004879	-0.001762	0.001829	0.002349

RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	RHO
22.11	0.0130	674.8	8.0	-0.5	0.062494	0.011073	-0.001130	0.004882	
5.2	0.5988	-10.0	-10.2	0.2	0.001649	0.005064	-0.000986	0.001891	0.002348
26. 6	0.0131	674.8	8.1	-0.2	0.060969	0.010719	0.000216	0.004593	
5.2	0.5966	-10.0	-10.2	0.2	0.001258	0.005183	-0.001057	0.001712	0.002322
8. 2	0.0110	674.8	8.0	0.0	0.072150	0.011588	0.000359	0.005474	
4.4	0.6069	-10.0	-10.0	0.0	0.002327	0.005825	-0.000887	0.001779	0.002359
11. 2	0.0130	676.5	8.0	0.0	0.070059	0.012295	0.000463	0.005415	
5.2	0.6032	-10.0	-10.0	0.0	0.002063	0.005801	-0.001051	0.001866	0.002319
11. 3	0.0111	674.8	8.0	0.0	0.069082	0.012219	0.000133	0.005239	
4.5	0.6017	-10.0	-10.0	0.0	0.002277	0.005960	0.001099	0.001763	0.002319
11. 4	0.0111	674.8	8.0	-0.8	0.068668	0.012352	-0.001111	0.005294	
4.5	0.6017	-10.0	-10.5	0.5	0.001450	0.005405	-0.000161	0.001847	0.002319
11. 5	0.0131	673.1	8.0	-0.8	0.069180	0.013619	-0.000599	0.005394	
5.2	0.6002	-10.0	-11.5	1.5	-0.000364	0.005563	0.000495	0.001893	0.002319
11. 6	0.0088	674.8	8.0	-0.8	0.068245	0.011335	-0.001293	0.005243	
3.5	0.6017	-10.0	-9.5	-0.5	0.003238	0.005294	-0.001443	0.001839	0.002319

RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	RHO
11. 7	0.0088	674.8	8.0	0.3	0.068487	0.012345	0.000382	0.005289	
3.5	0.6017	-10.0	-10.5	0.5	0.002063	0.006025	0.001421	0.001855	0.002319
11. 8	0.0111	674.8	8.0	-1.8	0.067790	0.012540	-0.002525	0.005242	
4.5	0.6011	-10.0	-10.5	0.5	0.001034	0.005526	-0.001345	0.001856	0.002315
11.10	0.0131	673.1	8.0	-0.8	0.069043	0.010436	-0.000868	0.005187	
5.2	0.5996	-10.0	-8.5	-1.5	0.004004	0.005409	-0.002247	0.001736	0.002315
11.11	0.0112	674.8	8.0	0.0	0.068909	0.011613	-0.000565	0.005315	
4.5	0.6005	-10.0	-10.0	0.0	0.003172	0.005862	0.000601	0.001859	0.002311
8. 3	0.0110	674.8	10.0	0.0	0.091635	0.014735	0.000392	0.007173	
4.4	0.6069	-10.0	-10.0	0.0	0.002324	0.007746	-0.001413	0.001884	0.002359
11. 9	0.0112	673.1	8.0	-0.8	0.068629	0.014656	-0.001185	0.005317	
4.5	0.5996	-10.0	-12.2	2.2	-0.000961	0.006141	0.001377	0.001842	0.002315
13.10	0.0162	674.8	10.3	-0.8	0.085853	0.015045	-0.000590	0.006979	
6.5	0.6034	-10.0	-10.1	0.1	0.001395	0.007412	-0.001307	0.002164	0.002343
8. 4	0.0210	674.8	11.0	0.0	0.101366	0.017281	-0.000423	0.007488	
8.4	0.6069	-10.0	-10.0	0.0	0.002855	0.009046	-0.001998	0.001319	0.002359

RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	RHO
12.10	0.0086	681.6	6.3	-0.9	0.050757	0.008842	-0.001047	0.003670	
3.5	0.6124	-10.0	-10.5	0.5	0.000277	0.003807	-0.000828	0.001482	0.002377
12. 9	0.0000	684.9	8.3	-0.8	0.069331	0.012029	-0.001351	0.005201	
0.0	0.6154	-10.0	-10.5	0.5	0.000861	0.005551	-0.000995	0.001709	0.002377
22.12	0.0109	683.2	8.0	-0.6	0.062388	0.011003	-0.000639	0.004873	
4.4	0.6063	-10.0	-10.3	0.3	0.001770	0.004800	-0.001821	0.001890	0.002348
12. 8	0.0086	683.2	10.3	-0.5	0.090659	0.014831	-0.000189	0.007106	
3.5	0.6145	-10.0	-10.2	0.2	0.002138	0.007448	-0.002407	0.001897	0.002382
12. 7	0.0000	683.2	11.1	-0.4	0.096721	0.016430	-0.000536	0.007250	
0.0	0.6145	-10.0	-10.2	0.2	0.002918	0.008806	-0.002168	0.001502	0.002382
12.17	0.0000	691.7	4.3	-0.7	0.033704	0.005767	-0.000387	0.002487	
0.0	0.6203	-10.0	-10.3	0.3	0.000340	0.002657	-0.000892	0.001305	0.002368
22.16	0.0000	690.0	4.0	-0.7	0.026599	0.004880	-0.000141	0.002343	
0.0	0.6117	-10.0	-10.3	0.3	-0.000352	0.002025	-0.001609	0.001511	0.002344
12.16	0.0000	691.7	6.3	-0.7	0.052256	0.008967	-0.000216	0.003665	
0.0	0.6203	-10.0	-10.3	0.3	0.000336	0.003855	-0.001146	0.001381	0.002368

RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	RHO
22. 8	0.0085	691.7	6.0	-0.7	0.043570	0.007926	-0.000717	0.003360	
3.5	0.6138	-10.0	-10.3	0.3	0.000938	0.003503	-0.001600	0.001617	0.002349
12.15	0.0000	691.7	8.3	-0.6	0.069888	0.011859	-0.000170	0.005200	
0.0	0.6203	-10.0	-10.3	0.3	0.000997	0.005585	-0.001187	0.001669	0.002367
22. 3	0.0085	691.7	8.0	-0.6	0.061496	0.010966	-0.001060	0.004810	
3.5	0.6138	-10.0	-10.3	0.3	0.001589	0.004891	-0.001178	0.001889	0.002348
12.14	0.0000	691.7	10.1	-0.6	0.086496	0.014954	-0.000201	0.006954	
0.0	0.6209	-10.0	-10.3	0.3	0.001136	0.007412	-0.002728	0.002088	0.002372
28. 4	0.0000	700.1	4.1	-0.4	0.025247	0.004520	-0.000499	0.002101	
0.0	0.6231	-10.0	-10.7	0.7	0.000094	0.002363	-0.000178	0.001333	0.002363
13. 5	0.0125	700.1	4.6	-0.9	0.032922	0.005685	-0.000898	0.002506	
5.2	0.6260	-10.0	-10.1	0.1	0.000383	0.002331	-0.000186	0.001364	0.002345
13. 4	0.0000	701.8	6.4	-0.9	0.048973	0.008415	-0.000561	0.003599	
0.0	0.6275	-10.0	-10.2	0.2	0.001072	0.003209	-0.000929	0.001527	0.002345
5. 9	0.0000	700.1	4.0	0.0	0.028657	0.005256	0.000046	0.002381	
0.0	0.6207	-10.0	-10.0	0.0	0.000137	0.002545	-0.000059	0.001451	0.002331

RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	RHO
5.10	0.0000	700.1	4.0	0.0	0.028732	0.005195	-0.001425	0.002384	
0.0	0.6207	-10.0	-10.0	0.0	-0.000880	0.001989	-0.001213	0.001450	0.002332
8.10	0.0141	700.1	8.0	0.0	0.070327	0.011819	-0.000471	0.005181	
5.9	0.6285	-10.0	-10.0	0.0	0.002743	0.005517	-0.000233	0.001618	0.002350
8.13	0.0107	700.1	8.0	0.0	0.069632	0.011383	-0.000729	0.005260	
4.4	0.6285	-10.0	-10.0	0.0	0.002601	0.005455	-0.000705	0.001754	0.002350
8.12	0.0107	700.1	10.0	0.0	0.087874	0.015168	-0.000745	0.006955	
4.4	0.6285	-10.0	-10.0	0.0	0.001629	0.007932	-0.001621	0.001974	0.002350
8.11	0.0141	698.4	11.0	0.0	0.105418	0.017421	0.000077	0.007022	
5.9	0.6269	-10.0	-10.0	0.0	0.002184	0.009198	-0.001487	0.000488	0.002350
13. 8	0.0139	710.2	6.5	-0.9	0.050212	0.008772	-0.001199	0.003610	
5.9	0.6351	-10.0	-10.2	0.2	0.000701	0.003897	-0.000248	0.001457	0.002344
13. 7	0.0154	708.6	8.4	-0.9	0.068456	0.011913	-0.001175	0.005132	
6.5	0.6336	-10.0	-10.1	0.1	0.000920	0.005691	-0.000573	0.001706	0.002345
13. 6	0.0154	708.6	10.5	-0.8	0.089949	0.015260	-0.000386	0.006891	
6.5	0.6336	-10.0	-10.0	0.0	0.001676	0.007783	-0.001506	0.001736	0.002345

RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	RHO
5.14	0.0167	711.9	12.0	0.0	0.110504	0.019385	-0.000251	0.006812	
7.0	0.6312	-10.0	-10.0	0.0	0.001944	0.010558	-0.000561	-0.000218	0.002331
13. 9	0.0152	717.0	4.5	-0.9	0.032865	0.005708	-0.000682	0.002447	
6.5	0.6411	-10.0	-10.1	0.1	0.000300	0.002520	-0.000153	0.001307	0.002344
22.17	0.0000	717.0	4.0	-0.7	0.026816	0.004927	-0.000291	0.002276	
0.0	0.6357	-10.0	-10.3	0.3	-0.000083	0.002129	-0.001360	0.001434	0.002344
26.12	0.0123	717.0	4.0	-0.9	0.025370	0.004471	-0.000867	0.002149	
5.2	0.6333	-10.0	-10.5	0.5	-0.000008	0.002251	-0.000478	0.001376	0.002317
28. 5	0.0000	717.0	4.1	-0.5	0.024841	0.004304	-0.000563	0.002106	
0.0	0.6375	-10.0	-10.5	0.5	-0.000037	0.002471	0.000005	0.001357	0.002359
29. 6	0.0083	717.0	4.0	-0.3	0.026804	0.004555	-0.000207	0.002162	
3.5	0.6309	-10.0	-10.4	0.4	0.000633	0.002504	-0.000631	0.001323	0.002307
29. 7	0.0000	717.0	4.0	-0.3	0.027070	0.004719	-0.000296	0.002153	
0.0	0.6303	-10.0	-10.5	0.5	-0.000009	0.002570	-0.000685	0.001301	0.002303
29. 8	0.0000	715.3	4.0	-0.3	0.026010	0.004593	0.000134	0.002151	
0.0	0.6288	-10.0	-10.5	0.5	0.000411	0.002385	-0.000977	0.001348	0.002303

RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	RHO
12.13	0.CC82	717.0	6.3	-0.7	0.051922	0.008538	-0.000344	0.003638	
3.5	0.6436	-10.0	-10.3	0.3	0.001322	0.003832	-0.001306	0.001380	0.002372
22. 9	0.CC83	715.3	6.0	-0.7	0.043366	0.007878	-0.000743	0.003332	
3.5	0.6348	-10.0	-10.3	0.3	0.000630	0.003314	-0.001237	0.001601	0.002348
26.11	0.0123	715.3	6.0	-0.8	0.040482	0.007209	-0.000517	0.003051	
5.2	0.6318	-10.0	-10.4	0.4	0.000784	0.003307	-0.000566	0.001491	0.002317
28. 6	0.0000	717.0	6.1	-0.3	0.041740	0.007207	-0.000231	0.003079	
0.0	0.6375	-10.0	-10.5	0.5	0.000388	0.003470	-0.000167	0.001448	0.002359
5. 8	0.0000	717.0	4.0	0.0	0.029003	0.005245	-0.000088	0.002361	
0.0	0.6357	-10.0	-10.0	0.0	0.000320	0.002550	0.000055	0.001414	0.002332
12.12	0.0082	715.3	8.2	-0.7	0.068774	0.011601	-0.000360	0.005096	
3.5	0.6427	-10.0	-10.3	0.3	0.001146	0.005406	-0.001987	0.001650	0.002377
22. 4	0.C082	717.0	8.0	-0.7	0.062090	0.010887	-0.000507	0.004796	
3.5	0.6363	-10.0	-10.4	0.4	0.001399	0.005020	-0.002418	0.001835	0.002349
26.10	0.0083	717.0	8.0	-0.5	0.059210	0.010337	-0.000675	0.004443	
3.5	0.6339	-10.0	-10.1	0.1	0.001288	0.004847	-0.001651	0.001686	0.002322

RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	RHO
28. 7	0.0000	717.0	8.1	-0.5	0.059573	0.010441	-0.000289	0.004448	
0.0	0.6375	-10.0	-10.5	0.5	0.000011	0.005122	-0.001328	0.001666	0.002359
5.13	0.0083	717.0	8.0	0.0	0.064806	0.011857	0.000059	0.005104	
3.5	0.6357	-10.0	-10.0	0.0	0.000765	0.005445	-0.000223	0.001940	0.002332
8. 6	0.0122	717.0	8.0	0.0	0.070032	0.011792	0.000145	0.005247	
5.2	0.6442	-10.0	-10.0	0.0	0.002384	0.005527	-0.000862	0.001707	0.002355
8. 9	0.0082	717.0	8.0	0.0	0.069441	0.011677	-0.000855	0.005158	
3.5	0.6436	-10.0	-10.0	0.0	0.002218	0.005717	-0.000125	0.001662	0.002350
11.12	0.0105	715.3	8.0	-0.5	0.068216	0.012632	-0.001066	0.005299	
4.5	0.6366	-10.0	-11.0	1.0	0.001052	0.005716	-0.000160	0.001880	0.002311
11.13	0.0123	717.0	8.0	-0.9	0.069368	0.012797	-0.001046	0.005270	
5.2	0.6381	-10.0	-11.0	1.0	0.001298	0.005890	-0.000075	0.001765	0.002311
8. 8	0.0122	717.0	10.0	0.0	0.091410	0.015107	0.000392	0.006653	
5.2	0.6436	-10.0	-10.0	0.0	0.002397	0.007764	-0.001094	0.001378	0.002350
11.14	0.0139	715.3	10.0	-0.8	0.089247	0.016283	-0.001436	0.006807	
5.9	0.6366	-10.0	-11.0	1.0	0.001608	0.008084	0.000248	0.001695	0.002311

RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	RHO
11.15	0.0123	718.7	9.0	-0.8	0.078061	0.014144	-0.001760	0.006172	
5.2	0.6396	-10.0	-11.0	1.0	0.001707	0.006569	0.000023	0.001992	0.002311
11.16	0.0123	715.3	9.0	-1.0	0.077252	0.014354	-0.002488	0.006131	
5.2	0.6366	-10.0	-11.0	1.0	0.001908	0.006924	-0.000979	0.002010	0.002311
11.17	0.0105	718.7	9.0	-1.0	0.077256	0.015359	-0.001056	0.006113	
4.5	0.6396	-10.0	-11.5	1.5	-0.000842	0.007190	-0.000251	0.001979	0.002311
11.18	0.0139	717.0	9.0	-1.0	0.077927	0.015869	-0.001695	0.006210	
5.9	0.6381	-10.0	-12.0	2.0	-0.001068	0.007250	0.000455	0.002017	0.002311
11.19	0.0000	717.0	9.0	-1.0	0.078647	0.013238	-0.001725	0.006176	
0.0	0.6381	-10.0	-10.0	0.0	0.003042	0.006629	-0.000802	0.001962	0.002311
11.20	0.0083	717.0	9.0	-0.5	0.078651	0.014469	-0.000634	0.006179	
3.5	0.6381	-10.0	-11.0	1.0	0.001284	0.006427	0.000271	0.001948	0.002311
11.21	0.0083	717.0	9.0	-1.5	0.076738	0.014234	-0.002182	0.006173	
3.5	0.6381	-10.0	-11.0	1.0	0.000010	0.006420	-0.000064	0.002094	0.002311
12.11	0.0000	717.0	10.1	-0.6	0.090166	0.014879	0.000100	0.006599	
0.0	0.6442	-10.0	-10.3	0.3	0.001792	0.007335	-0.002117	0.001431	0.002377

RUN.PT VKNOTS	V/OR TIPM	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	RHO
28. 8	0.0082	717.0	10.0	-0.8	0.078426	0.014060	-0.001097	0.006172	
3.5	0.6375	-10.0	-10.8	0.8	0.000665	0.006595	-0.001384	0.001965	0.002359
8. 7	0.0165	717.0	11.0	0.0	0.102220	0.017265	0.000363	0.006663	
7.0	0.6436	-10.0	-10.0	0.0	0.004550	0.008504	-0.000444	0.000418	0.002350
5.11	0.0000	735.5	4.0	0.0	0.028601	0.005193	-0.000236	0.002348	
0.0	0.6521	-10.0	-10.0	0.0	0.000586	0.002393	0.000287	0.001421	0.002331
5.12	0.0000	737.2	4.0	0.0	0.027985	0.004975	-0.001354	0.002364	
0.0	0.6536	-10.0	-10.0	0.0	-0.001034	0.002081	-0.001392	0.001468	0.002332
21.20	0.0134	738.9	8.0	-0.9	0.065666	0.011466	-0.001629	0.004803	
5.9	0.6545	-10.0	-10.4	0.4	0.000669	0.005057	-0.000893	0.001583	0.002343
21.19	0.0160	737.2	10.0	-0.9	0.083714	0.014910	-0.001677	0.006285	
7.0	0.6530	-10.0	-10.5	0.5	0.000993	0.007049	-0.001202	0.001646	0.002343
21.18	0.0160	737.2	11.0	-0.8	0.096643	0.016629	-0.001443	0.006305	
7.0	0.6530	-10.0	-10.2	0.2	0.001861	0.008767	-0.002095	0.000560	0.002343

APPENDIX B

The following tables present bearingless main rotor performance and control position data for forward flight test conditions.

RUN.PT VKNOTS	V/OR MAT	OMEG*R ALFS	THETA ALFC	A1 B1	CL/S CMY/S	CX/S CMZ/S	CY/S CMX/S	CP/S CPO/S	FE RHO
19. 2	0.0694	715.3	6.7	-4.2	0.071579	0.000757	-0.003602	0.003680	-18.0
29.4	0.6868	-2.0	-2.9	0.9	0.000483	0.004348	-0.001544	0.001044	0.002403
19. 3	0.0695	717.0	6.7	-4.3	0.071172	0.000587	-0.003727	0.003676	-13.9
29.5	0.6885	-2.0	-2.7	0.7	0.000671	0.004332	-0.001728	0.001085	0.002403
19. 4	0.0761	717.0	8.1	-2.9	0.075364	0.011330	-0.002562	0.004685	*****
32.3	0.6927	-10.0	-11.6	1.6	0.001069	0.005642	-0.000794	0.001210	0.002403
21. 2	0.1292	717.0	5.8	-3.2	0.074330	0.001306	-0.003192	0.003098	-8.9
54.9	0.7258	-2.5	-4.3	1.8	-0.000112	0.003532	-0.000987	0.001432	0.002389
21. 3	0.1290	717.0	5.8	-3.2	0.074205	0.001315	-0.003156	0.003084	-9.0
54.8	0.7250	-2.5	-4.3	1.8	-0.000176	0.003544	-0.001077	0.001420	0.002384
21. 4	0.1296	717.0	5.8	-3.2	0.074273	0.001287	-0.003227	0.003092	-8.7
55.1	0.7254	-2.5	-4.3	1.8	0.000048	0.003536	-0.001305	0.001435	0.002384
21. 5	0.1292	715.3	5.8	-3.2	0.074270	0.001336	-0.003171	0.003092	-9.1
54.8	0.7235	-2.5	-4.3	1.8	-0.000239	0.003561	-0.001082	0.001426	0.002384
21. 6	0.1295	715.3	5.8	-3.2	0.074334	0.001368	-0.003156	0.003076	-9.3
54.9	0.7236	-2.5	-4.3	1.8	-0.000155	0.003519	-0.001111	0.001405	0.002384

RUN.PT VKNOTS	V/OR MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHO
19. 5	0.1305	715.3	6.3	-3.4	0.070994	0.003706	-0.003215	0.003320	-24.9
55.3	0.7264	-4.5	-6.2	1.7	-0.000836	0.003797	-0.001296	0.001484	0.002398
19. 6	0.1304	717.0	6.3	-2.7	0.070443	0.003702	-0.002267	0.003298	-24.9
55.4	0.7273	-4.5	-6.5	2.0	-0.000233	0.003861	0.000027	0.001484	0.002393
15. 7	0.1419	717.0	8.0	-2.9	0.096948	0.004748	-0.003158	0.004556	-26.9
60.2	0.7313	-4.0	-7.3	3.2	0.000320	0.005181	0.000878	0.001564	0.002342
15.10	0.1408	717.0	3.1	-1.5	0.038025	0.001907	-0.001291	0.002130	-11.0
59.8	0.7306	-6.0	-7.2	1.2	-0.000111	0.002616	0.000070	0.001503	0.002343
15. 9	0.1406	717.0	4.1	-1.6	0.049218	0.003033	-0.001393	0.002476	-17.5
59.7	0.7304	-6.0	-7.5	1.5	0.000121	0.002913	0.000375	0.001447	0.002344
15. 8	0.1409	717.0	6.1	-2.2	0.070452	0.005251	-0.002193	0.003420	-30.2
59.8	0.7306	-6.0	-8.3	2.3	-0.000149	0.004002	0.000490	0.001447	0.002343
15. 6	0.1409	717.0	8.0	-2.7	0.091558	0.007434	-0.002862	0.004700	-42.8
59.8	0.7306	-6.0	-9.1	3.1	0.000197	0.005324	0.000644	0.001570	0.002343
15.15	0.1415	717.0	3.1	-1.2	0.033076	0.002426	-0.001006	0.002088	-13.8
60.1	0.7296	-8.0	-9.1	1.1	-0.000013	0.002434	-0.000025	0.001474	0.002336

RUN.PT VKNOTS	V/CR MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHC
15.14	0.1402	718.7	4.1	-1.5	0.043500	0.003835	-0.001247	0.002493	-22.3
59.7	0.7312	-8.0	-9.4	1.4	0.000116	0.002793	-0.000261	0.001483	0.002340
15.12	0.1405	717.0	6.2	-2.0	0.065620	0.006911	-0.001951	0.003499	-40.0
59.7	0.7297	-8.0	-10.1	2.1	-0.000030	0.004069	0.000325	0.001455	0.002340
15.12	0.1408	717.0	8.1	-2.5	0.087180	0.009919	-0.002621	0.004831	-57.1
59.8	0.7299	-8.0	-10.9	2.9	0.000043	0.005312	0.000090	0.001545	0.002340
15.11	0.1401	717.0	9.1	-2.9	0.098314	0.011544	-0.003364	0.005669	-67.2
59.5	0.7294	-8.0	-11.5	3.5	0.000247	0.006333	0.000326	0.001637	0.002340
15. 5	0.1416	717.0	8.1	-2.2	0.081861	0.013267	-0.002166	0.004859	-75.6
60.1	0.7311	-10.0	-12.9	2.9	0.001018	0.004859	-0.000089	0.001324	0.002342
19.15	0.2680	565.2	7.9	-2.2	0.082517	0.001767	-0.003398	0.003980	-2.8
89.7	0.6371	-4.0	-9.1	5.1	-0.001077	0.004949	0.000716	0.002618	0.002331
19.21	0.2680	565.2	2.0	-1.0	0.014512	-0.002908	-0.001638	0.001874	4.6
89.7	0.6359	-6.0	-6.9	0.9	-0.000614	0.002525	-0.000374	0.002626	0.002322
19.20	0.2687	565.2	4.0	-1.4	0.034861	-0.000898	-0.001987	0.002474	1.4
90.0	0.6368	-6.0	-8.1	2.1	-0.001183	0.002912	-0.000982	0.002557	0.002327

RUN.PT VKNOTS	V/CP MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHC
28.14	0.2706	565.2	4.1	-1.1	0.029308	-0.001188	-0.001755	0.002337	1.9
90.6	0.6366	-6.0	-8.2	2.2	-0.001884	0.002765	0.000026	0.002547	0.002317
19.19	0.2682	565.2	6.0	-1.6	0.054777	0.001293	-0.002365	0.003249	-2.1
89.8	0.6366	-6.0	-9.3	3.3	-0.001401	0.003908	-0.000118	0.002511	0.002327
19.14	0.2692	565.2	7.9	-2.1	0.073959	0.003563	-0.003370	0.004217	-5.6
90.1	0.6377	-6.0	-10.7	4.7	-0.001738	0.005298	0.000440	0.002547	0.002331
19.18	0.2682	565.2	9.1	-2.3	0.085720	0.004690	-0.003724	0.004836	-7.4
89.8	0.6372	-6.0	-11.5	5.5	-0.001543	0.005905	0.000281	0.002619	0.002331
19.17	0.2685	565.2	10.0	-2.6	0.093369	0.005855	-0.004100	0.005458	-9.3
89.9	0.6373	-6.0	-12.4	6.4	-0.001624	0.006438	-0.000010	0.002750	0.002331
19.16	0.2686	565.2	10.9	-2.6	0.098779	0.006684	-0.004171	0.005998	-10.6
89.9	0.6374	-6.0	-13.2	7.2	-0.001632	0.007213	0.000681	0.002931	0.002331
19.24	0.2676	565.2	2.0	-0.9	0.002361	-0.003993	-0.001435	0.001590	6.4
89.6	0.6351	-8.0	-8.5	0.5	-0.000966	0.002325	-0.000408	0.002657	0.002318
19.23	0.2686	565.2	4.0	-1.2	0.027493	-0.000844	-0.002095	0.002446	1.3
89.9	0.6356	-8.0	-9.8	1.8	-0.000872	0.003342	-0.000401	0.002574	0.002318

RUN.PT VKNOTS	V/OR MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHO
23. 2	0.2699	563.5	4.0	-1.3	0.029549	-0.000033	-0.001381	0.002477	0.1
90.1	0.6404	-8.0	-9.8	1.8	-0.001115	0.002352	-0.000619	0.002372	0.002367
27. 3	0.2685	565.2	4.0	-1.0	0.018949	-0.001380	-0.001383	0.002154	2.2
89.9	0.6386	-8.0	-10.0	2.0	-0.002212	0.002749	0.000399	0.002477	0.002322
28.13	0.2691	565.2	4.1	-0.9	0.020958	-0.001560	-0.001665	0.002174	2.5
90.1	0.6364	-8.0	-9.8	1.8	-0.001603	0.003012	0.000167	0.002537	0.002322
19.22	0.2696	565.2	6.0	-1.5	0.045866	0.001795	-0.002584	0.003274	-2.8
90.3	0.6367	-8.0	-11.0	3.0	-0.001518	0.004256	-0.000101	0.002517	0.002322
19.13	0.2688	565.2	8.0	-1.7	0.065450	0.005072	-0.002711	0.004355	-8.0
90.0	0.6381	-8.0	-12.4	4.4	-0.000750	0.005353	0.000216	0.002434	0.002335
19.12	0.2685	565.2	8.0	-1.5	0.056892	0.006043	-0.002548	0.004383	-9.6
89.9	0.6379	-10.0	-13.9	3.9	-0.000970	0.005329	-0.000275	0.002338	0.002335
23. 3	0.2409	631.0	3.9	-1.2	0.030407	0.000797	-0.001234	0.002464	-1.6
90.1	0.7000	-8.0	-9.6	1.6	-0.001012	0.002432	-0.000435	0.002138	0.002362
27. 4	0.2401	632.6	4.0	-1.1	0.021718	-0.000431	-0.001386	0.002175	0.9
90.0	0.6988	-8.0	-9.7	1.7	-0.001587	0.002598	0.000340	0.002209	0.002322

RUN.PT VKNOTS	V/OD MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHO
27.15	0.2391	632.6	6.0	-1.4	0.042831	0.002615	-0.001788	0.003023	-5.2
89.6	0.6942	-8.0	-10.8	2.8	-0.001566	0.003664	0.000390	0.002129	0.002295
27.14	0.2401	632.6	8.0	-1.8	0.064948	0.006017	-0.002339	0.004155	-11.9
90.0	0.6948	-8.0	-12.1	4.1	-0.001841	0.004883	0.000181	0.002095	0.002295
19.28	0.2262	676.5	8.1	-2.3	0.087704	0.003653	-0.003027	0.004030	-8.2
90.6	0.7354	-4.0	-8.3	4.3	-0.000236	0.004251	0.000174	0.002014	0.002317
20. 7	0.2255	673.1	2.0	-1.0	0.014420	-0.001798	-0.000963	0.001752	4.0
89.9	0.7299	-6.0	-6.6	0.6	0.000000	0.001787	-0.000420	0.002125	0.002305
20. 6	0.2234	674.8	4.0	-1.4	0.037630	0.000536	-0.001561	0.002353	-1.2
89.3	0.7305	-6.0	-7.7	1.7	-0.000474	0.002528	-0.000143	0.002011	0.002305
28.15	0.2258	674.8	4.1	-1.0	0.030188	-0.000138	-0.001498	0.002246	0.3
90.3	0.7333	-6.0	-7.8	1.8	-0.000672	0.002618	0.000025	0.002136	0.002318
20. 5	0.2243	674.8	6.0	-1.6	0.058898	0.002840	-0.001777	0.003189	-6.4
89.7	0.7310	-6.0	-8.9	2.9	-0.000391	0.003185	-0.000171	0.002010	0.002305
19.27	0.2277	674.8	8.1	-2.0	0.079797	0.004973	-0.003022	0.004279	-11.0
91.0	0.7345	-6.0	-10.1	4.1	-0.000948	0.004954	-0.000022	0.002168	0.002317

RUN.PT VKNOTS	V/OR MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHO
20. 4	0.2247	674.8	8.0	-2.1	0.080444	0.005126	-0.002655	0.004238	-11.6
89.8	0.7319	-6.0	-10.1	4.1	-0.000688	0.004556	0.000115	0.002078	0.002309
20. 2	0.2243	674.8	10.1	-2.6	0.101253	0.007873	-0.003389	0.005628	-17.9
89.7	0.7317	-6.0	-11.6	5.6	-0.000724	0.005996	0.000491	0.002262	0.002309
20. 3	0.2247	674.8	10.1	-2.6	0.101166	0.007807	-0.003538	0.005620	-17.7
89.8	0.7319	-6.0	-11.6	5.6	-0.000744	0.006133	0.000666	0.002272	0.002309
20.12	0.2245	673.1	2.0	-0.9	0.005839	-0.002464	-0.000856	0.001618	5.6
89.5	0.7279	-8.0	-8.4	0.4	-0.000213	0.001669	-0.000152	0.002166	0.002296
20.11	0.2249	674.8	4.0	-1.1	0.028931	0.000605	-0.001218	0.002284	-1.4
89.9	0.7300	-8.0	-9.4	1.4	0.000037	0.002437	-0.000141	0.002017	0.002296
23. 4	0.2260	674.8	3.9	-1.3	0.030718	0.001144	-0.001358	0.002450	-2.6
90.3	0.7390	-8.0	-9.6	1.6	-0.000988	0.002651	-0.000336	0.002045	0.002358
27. 5	0.2253	674.8	4.0	-1.0	0.023023	0.000135	-0.001403	0.002180	-0.3
90.1	0.7358	-8.0	-9.7	1.7	-0.001083	0.002800	0.000404	0.002067	0.002318
28.12	0.2253	674.8	4.1	-0.9	0.022771	-0.000129	-0.001446	0.002161	0.3
90.1	0.7344	-8.0	-9.6	1.6	-0.001524	0.002836	0.000157	0.002110	0.002326

RUN.PT VKNOTS	V/CP MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHO
23. 5 90.3	0.2209 0.7525	690.0 -8.0	3.9 -9.5	-1.3 1.5	0.030943 -0.001001	0.001308 0.002643	-0.001439 -0.000406	0.002422 0.001981	-3.1 0.002357
27. 6 90.0	0.2196 0.7500	691.7 -8.0	4.0 -9.6	-1.0 1.6	0.024089 -0.001009	0.000301 0.002482	-0.001291 0.000120	0.002175 0.002016	-0.7 0.002313
20.10 90.3	0.2258 0.7312	674.8 -8.0	6.0 -10.5	-1.6 2.5	0.050286 -0.000539	0.003646 0.003342	-0.001816 -0.000528	0.003202 0.001987	-8.2 0.002300
27.12 90.2	0.2255 0.7331	674.8 -8.0	6.0 -10.6	-1.4 2.6	0.044929 -0.001316	0.003168 0.003626	-0.001749 0.000221	0.003027 0.001999	-7.1 0.002300
19.26 91.2	0.2282 0.7348	674.8 -8.0	8.1 -11.8	-1.8 3.8	0.072242 -0.000962	0.006471 0.005264	-0.002808 -0.000023	0.004401 0.002124	-14.2 0.002317
20. 9 89.8	0.2245 0.7311	674.8 -8.0	8.0 -11.7	-1.9 3.7	0.072545 -0.000179	0.006848 0.004490	-0.002181 -0.000470	0.004350 0.001992	-15.5 0.002305
27. 2 89.4	0.2236 0.7362	674.8 -8.0	7.9 -11.8	-1.7 3.8	0.063592 -0.001830	0.006214 0.004872	-0.002491 0.000482	0.004059 0.002037	-14.2 0.002327
27.13 90.3	0.2258 0.7326	674.8 -8.0	8.0 -11.9	-1.8 3.9	0.064535 -0.001513	0.006391 0.004973	-0.002389 0.000214	0.004114 0.002025	-14.3 0.002296

RUN.PT VKNOTS	V/OR MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHO
20. 8	0.2268	674.8	10.1	-2.3	0.093594	0.010153	-0.003028	0.005760	-22.5
90.7	0.7325	-8.0	-13.3	5.3	0.000455	0.005957	-0.000172	0.002106	0.002304
13.12	0.2188	674.8	8.4	-1.8	0.070596	0.009214	-0.002610	0.004774	-22.0
87.5	0.7360	-10.0	-13.6	3.6	-0.001140	0.005572	-0.000017	0.001960	0.002318
14. 2	0.2233	674.8	7.9	-1.8	0.069348	0.008958	-0.002409	0.004784	-20.5
89.3	0.7409	-10.0	-13.8	3.8	-0.000880	0.005132	-0.000820	0.002030	0.002327
19.25	0.2284	674.8	8.1	-1.6	0.063824	0.007683	-0.002741	0.004456	-16.8
91.3	0.7349	-10.0	-13.6	3.6	-0.000786	0.005381	-0.000272	0.002077	0.002317
23. 7	0.2121	717.0	2.0	-1.2	0.025257	-0.001212	-0.001194	0.001857	3.1
90.1	0.7748	-4.0	-4.8	0.8	-0.001651	0.001944	-0.000188	0.002009	0.002348
23. 8	0.2124	717.0	4.0	-1.6	0.047835	0.000417	-0.001662	0.002456	-1.1
90.2	0.7743	-4.0	-6.0	2.0	-0.002100	0.002643	-0.000108	0.001990	0.002344
27. 9	0.2118	717.0	4.1	-1.3	0.039982	0.000005	-0.001501	0.002200	-0.0
90.0	0.7710	-4.0	-6.0	2.0	-0.002290	0.002577	0.000599	0.001935	0.002304
23. 9	0.2130	715.3	6.0	-2.0	0.071053	0.002070	-0.002273	0.003270	-5.2
90.3	0.7721	-4.0	-7.1	3.1	-0.001597	0.003524	-0.000064	0.001999	0.002339

RUN.PT VKNOTS	V/OP MAT	OMEG*P ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHC
27.11	0.2112	717.0	6.0	-1.8	0.060064	0.001559	-0.002127	0.002893	-4.0
89.7	0.7699	-4.0	-7.0	3.0	-0.001470	0.003477	0.000487	0.001966	0.002300
14. 5	0.2126	715.3	7.9	-2.4	0.093675	0.004057	-0.002970	0.004410	-10.3
90.1	0.7778	-4.0	-8.7	4.7	-0.000701	0.004793	0.000407	0.002103	0.002321
23.10	0.2135	715.3	8.0	-2.6	0.091608	0.003903	-0.003282	0.004367	-9.8
90.5	0.7724	-4.0	-8.4	4.4	-0.001745	0.004806	-0.000056	0.002158	0.002339
27.10	0.2122	718.7	8.1	-2.2	0.083508	0.003482	-0.002750	0.003898	-8.8
90.3	0.7723	-4.0	-8.3	4.3	-0.001896	0.004595	0.000781	0.002009	0.002299
14.10	0.2123	715.3	2.9	-1.2	0.031009	0.000134	-0.001160	0.002174	-0.3
90.0	0.7761	-6.0	-7.3	1.3	0.000141	0.002329	-0.000424	0.001987	0.002312
14. 9	0.2123	715.3	4.0	-1.3	0.043961	0.001482	-0.001294	0.002569	-3.8
90.0	0.7761	-6.0	-7.9	1.9	-0.000096	0.002696	-0.000211	0.001936	0.002312
27. 8	0.2123	717.0	4.1	-1.1	0.031194	0.000449	-0.001262	0.002226	-1.1
90.2	0.7713	-6.0	-7.7	1.7	-0.002241	0.002518	0.000176	0.001970	0.002304
28.16	0.2130	715.3	4.1	-1.0	0.031435	0.000239	-0.001410	0.002217	-0.6
90.3	0.7685	-6.0	-7.6	1.6	-0.000884	0.002641	0.000089	0.002004	0.002313

RUN.PT VKNOTS	V/OR MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHC
29. 4	0.2103	717.0	4.0	-1.1	0.034160	0.000496	-0.001215	0.002281	-1.3
89.4	0.7650	-6.0	-7.8	1.8	-0.001799	0.002609	-0.000064	0.001983	0.002290
29. 5	0.2104	717.0	4.0	-1.1	0.034531	0.000574	-0.001200	0.002281	-1.5
89.4	0.7650	-6.0	-7.7	1.7	-0.001832	0.002497	-0.000212	0.001962	0.002290
14. 8	0.2119	715.3	5.9	-1.8	0.064410	0.003864	-0.002000	0.003396	-9.8
89.8	0.7766	-6.0	-9.1	3.1	-0.000524	0.003650	-0.000264	0.001892	0.002317
14. 4	0.2130	713.6	7.9	-2.1	0.086058	0.006246	-0.002464	0.004572	-15.7
90.0	0.7762	-6.0	-10.4	4.4	-0.000649	0.005003	0.000096	0.002025	0.002322
14. 7	0.2106	718.7	7.9	-2.2	0.086270	0.006231	-0.002670	0.004576	-16.0
89.7	0.7794	-6.0	-10.3	4.3	-0.000529	0.004922	0.000151	0.002027	0.002317
28.17	0.2115	717.0	8.0	-1.8	0.074366	0.005117	-0.002323	0.004043	-13.1
89.8	0.7686	-6.0	-10.0	4.0	-0.001314	0.004440	0.000153	0.002045	0.002309
14. 6	0.2123	715.3	8.8	-2.3	0.095483	0.007464	-0.002925	0.005227	-18.9
90.0	0.7776	-6.0	-11.0	5.0	-0.000357	0.005672	0.000195	0.002139	0.002321
28.18	0.2119	717.0	9.0	-2.2	0.086690	0.006446	-0.003060	0.004661	-16.4
90.0	0.7688	-6.0	-10.5	4.5	-0.001627	0.005196	-0.000137	0.002054	0.002309

RUN.PT VKNOTS	V/CR MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RFC
28.19	0.2121	717.0	10.1	-2.3	0.097241	0.007782	-0.003252	0.005414	-19.8
90.1	0.7690	-6.0	-11.3	5.3	-0.001257	0.006002	0.000083	0.002203	0.002309
28.20	0.2130	715.3	11.1	-2.6	0.108227	0.009228	-0.003875	0.006215	-23.2
90.3	0.7677	-6.0	-12.0	6.0	-0.001522	0.006915	0.000144	0.002325	0.002309
28.21	0.2129	717.0	12.2	-2.8	0.118360	0.011076	-0.004344	0.006763	-27.9
90.4	0.7695	-6.0	-13.2	7.2	-0.001760	0.008220	0.000117	0.002102	0.002308
15. 4	0.2117	717.0	3.2	-0.7	0.025854	0.000284	-0.001232	0.002120	-0.7
89.9	0.7775	-8.0	-9.3	1.3	0.000184	0.002615	0.000193	0.001950	0.002336
14.12	0.2108	717.0	4.0	-1.2	0.035249	0.001810	-0.001131	0.002523	-4.7
89.5	0.7769	-8.0	-9.7	1.7	-0.000063	0.002494	-0.000754	0.001935	0.002312
23. 6	0.2118	717.0	4.0	-1.3	0.031601	0.001663	-0.001395	0.002473	-4.2
90.0	0.7753	-8.0	-9.4	1.4	-0.000588	0.002557	-0.000756	0.001956	0.002353
27. 7	0.2115	717.0	4.1	-1.0	0.024378	0.000523	-0.001131	0.002181	-1.3
89.8	0.7715	-8.0	-9.5	1.5	-0.002081	0.002633	0.000152	0.001972	0.002309
28.11	0.2112	717.0	4.1	-0.8	0.023241	0.000176	-0.001370	0.002148	-0.5
89.7	0.7713	-8.0	-9.4	1.4	-0.001461	0.002771	0.000237	0.002021	0.002327

RUN.PT VKNOTS	V/OR MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHO
14.11	0.2126	715.3	6.1	-1.7	0.058366	0.005264	-0.001829	0.003579	-13.3
90.1	0.7763	-8.0	-11.0	3.0	-0.000304	0.003745	-0.000465	0.001898	0.002312
15. 3	0.2124	717.0	8.1	-1.7	0.079621	0.008051	-0.002685	0.004706	-20.4
90.2	0.7787	-8.0	-12.1	4.1	-0.000544	0.005371	0.000209	0.001951	0.002339
28.10	0.2124	717.0	8.0	-1.6	0.066224	0.006579	-0.002364	0.004135	-16.7
90.2	0.7721	-8.0	-11.7	3.7	-0.001758	0.004920	0.000277	0.002015	0.002327
15. 2	0.2120	718.7	9.1	-1.9	0.090108	0.009820	-0.003130	0.005470	-25.0
90.3	0.7811	-8.0	-12.9	4.9	-0.000274	0.006305	0.000603	0.002047	0.002344
14. 3	0.2108	718.7	8.0	-1.8	0.072386	0.009748	-0.002375	0.004791	-25.1
89.7	0.7803	-10.0	-13.8	3.8	-0.000002	0.005001	-0.000622	0.001866	0.002322
28. 9	0.2127	715.3	8.0	-1.4	0.058049	0.007319	-0.002195	0.004071	-18.5
90.1	0.7712	-10.0	-13.3	3.3	-0.001847	0.005021	0.000012	0.001959	0.002331
21. 7	0.2194	717.0	6.8	-2.4	0.074042	0.003525	-0.003635	0.003650	-8.4
93.2	0.7810	-5.5	-8.6	3.1	-0.000689	0.004090	-0.001442	0.002002	0.002353
21. 8	0.2186	717.0	6.8	-2.4	0.073401	0.003510	-0.003593	0.003638	-8.4
92.9	0.7806	-5.5	-8.6	3.1	-0.000725	0.004072	-0.001567	0.002008	0.002352

RUN.PT VKNOTS	V/OR MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHO
21. 9	0.2196	717.0	6.8	-2.4	0.072955	0.003459	-0.003570	0.003636	-8.2
93.3	0.7804	-5.5	-8.6	3.1	-0.000626	0.004127	-0.001668	0.002028	0.002348
21.10	0.2191	717.0	6.8	-2.4	0.073242	0.003498	-0.003585	0.003630	-8.3
93.1	0.7801	-5.5	-8.6	3.1	-0.000721	0.004103	-0.001524	0.002007	0.002348
21.11	0.2189	717.0	6.8	-2.4	0.072881	0.003476	-0.003643	0.003631	-8.3
93.0	0.7800	-5.5	-8.6	3.1	-0.000573	0.004098	-0.001556	0.002021	0.002348
20.13	0.2196	717.0	7.6	-1.1	0.075409	0.004011	-0.001078	0.003801	-9.5
93.3	0.7709	-5.5	-9.3	3.8	0.000463	0.004171	0.001419	0.002014	0.002286
20.14	0.2195	717.0	7.5	-2.0	0.076667	0.004305	-0.002499	0.003909	-10.2
93.2	0.7701	-5.5	-9.2	3.7	-0.000528	0.004156	-0.000020	0.002027	0.002282
19. 7	0.2197	717.0	9.5	-2.5	0.076055	0.011473	-0.004159	0.005532	-27.1
93.3	0.7828	-11.0	-14.9	3.9	-0.000682	0.006118	-0.001789	0.002090	0.002361
19. 8	0.2179	717.0	9.5	-1.8	0.074425	0.011346	-0.002906	0.005431	-27.3
92.5	0.7816	-11.0	-15.1	4.1	-0.000794	0.006452	-0.000469	0.002069	0.002361
21.12	0.2605	717.0	8.5	-2.4	0.075966	0.005947	-0.004192	0.004721	-10.0
110.6	0.8050	-7.5	-11.9	4.4	-0.001309	0.005197	-0.001866	0.002396	0.002327

RUN.PT VKNOTS	V/OR MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHO
21.13	0.2607	717.0	8.5	-2.4	0.076330	0.006017	-0.004288	0.004730	-10.1
110.8	0.8044	-7.5	-11.9	4.4	-0.000984	0.005244	-0.001960	0.002379	0.002322
21.14	0.2610	717.0	8.5	-2.4	0.076845	0.006029	-0.004253	0.004731	-10.1
110.9	0.8038	-7.5	-11.9	4.4	-0.000738	0.005191	-0.002170	0.002365	0.002318
21.15	0.2609	717.0	8.5	-2.4	0.076247	0.005984	-0.004178	0.004736	-10.0
110.9	0.8037	-7.5	-11.9	4.4	-0.000846	0.005152	-0.002087	0.002394	0.002318
21.16	0.2609	717.0	8.5	-2.4	0.075666	0.005937	-0.004252	0.004724	-10.0
110.8	0.8037	-7.5	-11.9	4.4	-0.000957	0.005169	-0.001937	0.002407	0.002318
21.17	0.2607	717.0	8.5	-2.4	0.075734	0.005943	-0.004238	0.004721	-10.0
110.8	0.8036	-7.5	-11.9	4.4	-0.001203	0.005148	-0.001928	0.002402	0.002318
19. 9	0.2609	717.0	12.4	-2.5	0.083693	0.016874	-0.005381	0.006753	-28.3
110.8	0.8060	-14.0	-19.8	5.8	-0.000508	0.008672	-0.002021	0.001411	0.002330
19.10	0.2603	718.7	12.2	-2.5	0.079892	0.016041	-0.004862	0.006722	-27.0
110.8	0.8075	-14.0	-19.6	5.6	-0.001528	0.008409	-0.002276	0.001688	0.002330
19.11	0.2600	718.7	12.2	-1.5	0.078335	0.015877	-0.003675	0.006735	-26.8
110.7	0.8066	-14.0	-19.8	5.8	-0.000672	0.008688	-0.000475	0.001781	0.002325

RUN.PT VKNOTS	V/OR MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHO
16. 6	0.2818	717.0	4.2	-0.9	0.029506	-0.001363	-0.001426	0.002520	2.0
119.7	0.8113	-6.0	-7.9	1.9	-0.003051	0.002574	-0.000274	0.002796	0.002261
29. 2	0.2835	717.0	4.0	-0.7	0.022646	-0.002261	-0.001455	0.002272	3.2
120.4	0.8131	-6.0	-7.7	1.7	-0.002421	0.002665	0.000026	0.002849	0.002280
29. 3	0.2830	717.0	4.0	-0.7	0.021832	-0.001945	-0.001381	0.002243	2.8
120.2	0.8128	-6.0	-7.7	1.7	-0.001527	0.002580	-0.000087	0.002734	0.002280
16. 5	0.2825	717.0	6.2	-1.1	0.052682	0.001202	-0.002160	0.003333	-1.7
120.0	0.8125	-6.0	-9.4	3.4	-0.001868	0.003750	0.000527	0.002650	0.002265
23.11	0.2814	717.0	6.0	-1.4	0.046709	0.001298	-0.001830	0.003373	-1.9
119.5	0.8171	-6.0	-9.9	3.9	-0.004147	0.003894	-0.000513	0.002737	0.002316
16. 4	0.2825	717.0	8.2	-1.3	0.072401	0.003359	-0.002726	0.004409	-4.8
120.0	0.8132	-6.0	-11.0	5.0	-0.001985	0.005005	0.000560	0.002811	0.002269
16. 9	0.2821	715.3	5.2	-0.9	0.032837	-0.000226	-0.001651	0.002809	0.3
119.6	0.8080	-8.0	-10.1	2.1	-0.001520	0.003183	-0.000347	0.002739	0.002253
16. 8	0.2818	717.0	6.2	-1.0	0.042660	0.001272	-0.001851	0.003282	-1.8
119.7	0.8105	-8.0	-10.9	2.9	-0.001577	0.003715	-0.000208	0.002698	0.002257

RUN.PT VKNOTS	V/OR MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHC
16. 3	0.2828	717.0	8.2	-1.2	0.063193	0.004493	-0.002419	0.004482	-6.4
120.1	0.8142	-8.0	-12.6	4.6	-0.002185	0.005294	0.000323	0.002718	0.002273
16. 7	0.2826	717.0	8.3	-1.3	0.063685	0.004521	-0.002599	0.004545	-6.5
120.0	0.8118	-8.0	-12.6	4.6	-0.002815	0.005036	0.000030	0.002765	0.002261
16. 2	0.2820	718.7	8.2	-1.1	0.052392	0.005240	-0.002016	0.004363	-7.5
120.1	0.8164	-10.0	-14.1	4.1	-0.001402	0.004955	-0.000439	0.002545	0.002277
23.12	0.2827	715.3	8.0	-1.0	0.050015	0.005747	-0.001847	0.004389	-8.2
119.8	0.8137	-10.0	-13.9	3.9	-0.001034	0.005069	-0.000181	0.002455	0.002303
17. 2	0.2995	717.0	8.1	-0.9	0.047831	0.003809	-0.002151	-0.004337	-4.9
127.2	0.8346	-10.0	-13.8	3.8	-0.001615	0.005176	-0.000368	-0.005745	0.002330
23.13	0.3374	715.3	10.1	-1.3	0.074908	0.002857	-0.003680	0.005689	-2.9
142.0	0.8456	-6.0	-12.8	6.8	-0.001782	0.006765	0.000125	0.004143	0.002267
17. 5	0.3392	715.3	7.1	-0.6	0.029096	-0.001091	-0.002501	-0.003375	1.1
143.3	0.8525	-10.0	-12.9	2.9	-0.001760	0.004344	-0.000314	-0.003094	0.002291
17. 4	0.3376	717.0	8.1	-0.5	0.036044	0.000543	-0.002604	-0.003972	-0.5
143.4	0.8550	-10.0	-13.4	3.4	-0.002089	0.005116	-0.000236	-0.004290	0.002295

RUN.PT VKNOTS	V/CD MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHO
17. 6	0.3392	717.0	10.0	-0.9	0.057163	0.004382	-0.003350	-0.005569	-4.4
144.1	0.8536	-10.0	-15.5	5.5	-0.001503	0.006856	-0.000193	-0.007392	0.002282
18.10	0.3369	718.7	10.2	-0.8	0.056503	0.004779	-0.002739	0.005463	-4.8
143.4	0.8446	-10.0	-15.6	5.6	-0.001629	0.006541	-0.000139	0.003521	0.002233
17. 3	0.3386	715.3	12.2	1.0	0.045095	0.002227	-0.002499	-0.004646	-2.2
143.5	0.8561	-10.0	-11.1	1.1	-0.002457	0.005658	-0.000923	-0.005610	0.002307
18. 2	0.3392	715.3	9.3	-0.6	0.041247	0.002081	-0.002651	0.004601	-2.1
143.7	0.8484	-11.0	-15.3	4.3	-0.001507	0.005649	-0.000056	0.003720	0.002266
18. 9	0.3370	718.7	10.2	-0.8	0.052063	0.004659	-0.002861	0.005341	-4.7
143.5	0.8446	-11.0	-16.2	5.2	-0.001097	0.006390	0.000032	0.003489	0.002233
18. 3	0.3379	715.3	9.3	-0.5	0.037061	0.002585	-0.002169	0.004399	-2.6
143.2	0.8460	-12.0	-16.0	4.0	-0.001079	0.005099	0.000235	0.003383	0.002258
18. 4	0.3377	717.0	10.3	-0.7	0.046412	0.004814	-0.002677	0.005206	-4.8
143.4	0.8470	-12.0	-17.0	5.0	-0.000839	0.006039	-0.000169	0.003358	0.002254
18. 8	0.3381	717.0	11.3	-0.8	0.056437	0.006956	-0.003111	0.006179	-6.9
143.6	0.8457	-12.0	-17.9	5.9	-0.001314	0.007185	-0.000005	0.003497	0.002246

RUN.PT VKNOTS	V/OR MAT	OMEG*R ALFS,U	THETA ALFC	A1 B1	CLR/S CMY/S	CXR/S CMZ/S	CYR/S CMX/S	CP/S CPO/S	FE RHC
18. 5	0.3367	718.7	10.3	-0.5	0.040359	0.003528	-0.002508	0.004914	-3.6
143.4	0.8476	-13.0	-17.6	4.6	-0.001026	0.005780	0.000252	0.003556	0.002250
18. 6	0.3372	717.0	10.3	-0.6	0.033772	0.002870	-0.002218	0.004574	-2.9
143.3	0.8459	-14.0	-18.4	4.4	-0.001564	0.005355	-0.000183	0.003488	0.002250
18. 7	0.3358	718.7	10.3	-0.4	0.030764	0.002449	-0.002133	0.004343	-2.5
143.0	0.8470	-15.0	-19.0	4.0	0.000128	0.005066	0.000195	0.003422	0.002250
18.11	0.3521	717.0	11.2	-0.5	0.044440	0.004806	-0.002844	0.005516	-4.4
149.6	0.8509	-13.0	-18.3	5.3	-0.001266	0.006605	0.000298	0.003628	0.002221
18.12	0.3532	717.0	12.4	-0.7	0.055010	0.006722	-0.003127	0.006634	-6.2
150.0	0.8508	-13.0	-19.4	6.4	-0.001253	0.007721	-0.000082	0.003961	0.002217
23.14	0.3762	717.0	10.1	-1.0	0.065773	0.000350	-0.004008	0.005543	-0.3
159.8	0.8707	-6.0	-12.4	6.4	-0.001120	0.006703	0.000354	0.005009	0.002243
23.15	0.3881	717.0	10.1	-1.0	0.062622	-0.000395	-0.004178	0.005571	0.3
164.8	0.8769	-6.0	-12.3	6.3	-0.002302	0.006836	0.000795	0.005371	0.002231

APPENDIX C

The following tables present bearingless main rotor stability data. The stability data are presented as time-to-half-amplitude, T 1/2 (sec) real part of measured damping exponent, SIGMA (1/SEC), and fixed system damping coefficient, ZETA. The damping coefficient was calculated using the experimentally determined ω_R.

Hover stability data are presented first in the same run/point number sequence as Appendix A. Forward flight stability data are presented next in the same run/point number sequence as Appendix B. At some run/point numbers, only performance data were obtained. At others, one or more stability determination were made.

RUN.PT	RPM	CLR/S	A1	B1	T 1/2	SIGMA	ZETA
6.10	350.	0.007	0.0	0.0	4.50	-0.15	0.020
6.10	350.	0.007	0.0	0.0	2.90	-0.24	0.035
6. 8	350.	0.019	0.0	0.0	2.68	-0.26	0.034
6. 9	349.	0.018	0.0	0.0	1.92	-0.36	0.048
6. 2	350.	0.033	0.0	0.0	1.68	-0.41	0.055
6. 7	350.	0.034	0.0	0.0	1.36	-0.51	0.067
6. 6	350.	0.050	0.0	0.0	0.93	-0.75	0.089
6. 5	350.	0.069	0.0	0.0	0.91	-0.76	0.112
26. 5	375.	0.019	-0.6	0.3	2.52	-0.28	0.029
12. 6	375.	0.035	-0.8	0.5	1.58	-0.44	0.047
12. 6	375.	0.035	-0.8	0.5	1.16	-0.60	0.046
22.14	374.	0.029	-0.7	0.3	1.76	-0.39	0.042
26. 4	375.	0.025	-0.6	0.2	2.15	-0.32	0.034
28. 2	375.	0.027	-0.8	0.8	1.42	-0.49	0.062

Hover Stability

RUN.PT	RPM	CLR/S	A1	B1	T 1/2	SIGMA	ZETA
12. 2	375.	0.051	-0.8	0.5	0.95	-0.73	0.078
21.21	375.	0.049	-1.0	1.5	1.09	-0.64	0.062
21.22	376.	0.048	-0.7	-0.5	0.86	-0.81	0.079
21.23	375.	0.047	0.6	0.3	1.08	-0.64	0.063
21.24	375.	0.047	-1.3	0.0	1.24	-0.56	0.055
22. 6	375.	0.046	-0.7	0.3	0.99	-0.70	0.069
26. 3	375.	0.042	-0.7	0.3	1.24	-0.56	0.055
7. 2	375.	0.035	0.0	0.0	1.38	-0.50	0.049
7. 4	375.	0.052	0.0	0.0	0.89	-0.78	0.076
7. 4	375.	0.052	0.0	0.0	1.01	-0.69	0.067
7. 4	375.	0.052	0.0	0.0	0.97	-0.71	0.070
7. 4	375.	0.052	0.0	0.0	1.02	-0.68	0.072
7. 4	375.	0.052	0.0	0.0	1.16	-0.60	0.064
7. 4	375.	0.052	0.0	0.0	1.20	-0.58	0.057

Hover Stability (cont.)

RUN. PT	RPM	CLR/S	A1	B1	T 1/2	SIGMA	ZETA
7. 4	375.	0.052	0.0	0.0	1.11	-0.62	0.061
12. 5	375.	0.068	-0.7	0.4	0.55	-1.26	0.135
12. 5	375.	0.068	-0.7	0.4	0.57	-1.22	0.118
22. 2	375.	0.064	0.0	-0.0	0.58	-1.20	0.109
26. 2	375.	0.060	-0.1	-0.3	1.00	-0.69	0.068
7. 3	375.	0.072	0.0	0.0	0.85	-0.82	0.074
22.10	390.	0.062	-0.5	0.1	0.86	-0.81	0.068
22.13	395.	0.063	-0.7	0.3	0.83	-0.84	0.068
26. 9	400.	0.018	-0.8	0.4	2.61	-0.27	0.022
22.15	400.	0.027	-0.7	0.3	1.76	-0.39	0.033
26. 8	400.	0.026	-0.8	0.4	2.15	-0.32	0.027
28. 3	400.	0.026	-0.6	0.6	1.45	-0.46	0.049
13. 3	399.	0.034	-0.9	0.2	1.50	-0.46	0.038
13. 2	400.	0.049	-0.7	0.1	1.31	-0.53	0.044

Hover Stability (cont.)

RUN.PT	RPM	CLR/S	A1	B1	T 1/2	SIGMA	ZETA
22. 7	400.	0.044	-0.7	0.3	1.05	-0.66	0.055
26. 7	399.	0.042	-0.9	0.3	1.49	-0.47	0.049
8. 5	400.	0.050	0.0	0.0	0.91	-0.76	0.063
13.11	399.	0.070	-0.9	0.2	0.61	-1.14	0.095
22. 5	400.	0.063	-0.7	0.4	0.94	-0.74	0.061
22.11	400.	0.062	-0.5	0.2	0.78	-0.89	0.073
26. 6	400.	0.061	-0.2	0.2	0.93	-0.75	0.061
8. 2	400.	0.072	0.0	0.0	0.80	-0.87	0.072
8. 3	400.	0.092	0.0	0.0	0.55	-1.26	0.097
13.10	400.	0.086	-0.8	0.1	0.38	-1.82	0.141
8. 4	400.	0.101	0.0	0.0	0.53	-1.31	0.097
12.10	404.	0.051	-0.9	0.5	1.15	-0.60	0.048
12. 9	406.	0.069	-0.8	0.5	0.56	-1.24	0.093
22.12	405.	0.062	-0.6	0.3	0.85	-0.82	0.065

Hover Stability (cont.)

RUN.PT	RPM	CLR/S	A1	B1	T 1/2	SIGMA	ZETA
12. 8	405.	0.091	-0.5	0.2	0.51	-1.36	0.102
12.17	410.	0.034	-0.7	0.3	1.54	-0.45	0.034
22.16	409.	0.027	-0.7	0.3	1.90	-0.36	0.030
12.16	410.	0.052	-0.7	0.3	1.09	-0.64	0.049
22. 8	410.	0.044	-0.7	0.3	1.29	-0.54	0.041
12.15	410.	0.070	-0.6	0.3	0.64	-1.06	0.083
22. 3	410.	0.061	-0.6	0.3	0.73	-0.95	0.073
12.14	410.	0.086	-0.6	0.3	0.55	-1.26	0.090
28. 4	415.	0.025	-0.4	0.7	1.37	-0.51	0.045
13. 5	415.	0.033	-0.9	0.1	1.47	-0.47	0.037
13. 4	416.	0.049	-0.9	0.2	1.11	-0.62	0.046
8.10	415.	0.070	0.0	0.0	0.75	-0.92	0.064
8.12	415.	0.088	0.0	0.0	0.62	-1.12	0.077
8.11	414.	0.105	0.0	0.0	0.42	-1.65	0.127

Hover Stability (cont.)

RUN.PT	RPM	CLR/S	A1	B1	T 1/2	SIGMA	ZETA
13. 8	421.	0.050	-0.9	0.2	1.05	-0.66	0.047
13. 7	420.	0.068	-0.9	0.1	0.71	-0.98	0.069
13. 6	420.	0.090	-0.8	0.0	0.66	-1.05	0.070
13. 9	425.	0.033	-0.9	0.1	1.59	-0.44	0.031
22.17	425.	0.027	-0.7	0.3	2.13	-0.33	0.023
26.12	425.	0.025	-0.9	0.5	1.93	-0.36	0.026
26.12	425.	0.025	-0.9	0.5	1.82	-0.38	0.027
26.12	425.	0.025	-0.9	0.5	2.29	-0.30	0.022
26.12	425.	0.025	-0.9	0.5	1.99	-0.35	0.025
26.12	425.	0.025	-0.9	0.5	1.97	-0.35	0.025
26.12	425.	0.025	-0.9	0.5	1.90	-0.36	0.026
26.12	425.	0.025	-0.9	0.5	1.99	-0.35	0.025
28. 5	425.	0.025	-0.5	0.5	0.95	-0.73	0.059
12.12	425.	0.052	-0.7	0.3	1.20	-0.58	0.041

Hover Stability (cont.)

RUN.PT	RPM	CLR/S	A1	B1	T 1/2	SIGMA	ZETA
22. 9	424.	0.043	-0.7	0.3	1.26	-0.55	0.040
26.11	424.	0.040	-0.8	0.4	1.37	-0.51	0.034
28. 6	425.	0.043	-0.3	0.5	0.95	-0.73	0.059
12.12	424.	0.069	-0.7	0.3	0.53	-1.31	0.085
22. 4	425.	0.062	-0.7	0.4	0.71	-0.98	0.067
26.10	425.	0.059	-0.5	0.1	0.80	-0.87	0.059
28. 7	425.	0.060	-0.5	0.5	0.53	-1.31	0.100
8. 9	425.	0.069	0.0	0.0	0.64	-1.08	0.074
8. 8	425.	0.091	0.0	0.0	0.46	-1.51	0.102
12.11	425.	0.090	-0.6	0.3	0.41	-1.69	0.110
21.20	438.	0.066	-0.9	0.4	0.64	-1.08	0.068
21.19	437.	0.084	-0.9	0.5	0.52	-1.33	0.079

Hover Stability (concl.)

RUN.PT	VKNOTS	RPM	ALFS,U	CLR/S	T 1/2	SIGMA	ZETA
15.10	59.8	425.	-6.0	0.038	2.41	-0.29	0.021
15. 9	59.7	425.	-6.0	0.049	1.73	-0.40	0.029
15. 8	59.8	425.	-6.0	0.070	1.04	-0.67	0.046
15. 6	59.8	425.	-6.0	0.092	0.61	-1.14	0.077
15.15	60.1	425.	-8.0	0.033	2.63	-0.26	0.019
15.14	59.7	426.	-8.0	0.043	1.85	-0.37	0.027
15.13	59.7	425.	-8.0	0.066	1.13	-0.61	0.044
15.12	59.8	425.	-8.0	0.087	0.72	-0.96	0.066
15.11	59.5	425.	-8.0	0.098	0.59	-1.17	0.077
19.21	89.7	335.	-6.0	0.015	2.68	-0.26	0.043
19.20	90.0	335.	-6.0	0.035	1.86	-0.37	0.062
28.14	90.6	335.	-6.0	0.029	1.06	-0.65	0.125
19.19	89.8	335.	-6.0	0.055	1.07	-0.65	0.095
19.18	89.8	335.	-6.0	0.086	0.83	-0.84	0.122

Forward Flight Stability

RUN.PT	VKNOTS	RPM	ALFS,U	CLR/S	T 1/2	SIGMA	ZETA
19.17	89.9	335.	-6.0	0.093	0.73	-0.95	0.126
19.24	89.6	335.	-8.0	0.003	3.36	-0.21	0.034
19.23	89.9	335.	-8.0	0.027	1.94	-0.36	0.060
23. 2	90.1	334.	-8.0	0.030	1.75	-0.40	0.065
27. 3	89.9	335.	-8.0	0.019	1.77	-0.39	0.065
28.13	90.1	335.	-8.0	0.021	1.02	-0.68	0.153
19.22	90.3	335.	-8.0	0.046	1.26	-0.55	0.091
19.13	90.0	335.	-8.0	0.065	0.88	-0.79	0.116
23. 3	90.1	374.	-8.0	0.030	2.15	-0.32	0.034
27. 4	90.0	375.	-8.0	0.022	2.32	-0.30	0.032
20. 7	89.9	399.	-6.0	0.014	2.76	-0.25	0.021
20. 6	89.3	400.	-6.0	0.038	2.00	-0.35	0.029
28.15	90.3	400.	-6.0	0.030	1.42	-0.49	0.047
20. 5	89.7	400.	-6.0	0.059	1.24	-0.56	0.047

Forward Flight Stability (cont.)

RUN.PT	VKNOTS	RPM	ALFS,U	CLR/S	T 1/2	SIGMA	ZETA
20. 4	89.8	400.	-6.0	0.080	0.73	-0.95	0.074
20. 3	89.8	400.	-6.0	0.101	0.52	-1.33	0.103
20.12	89.5	399.	-8.0	0.006	3.14	-0.22	0.018
20.11	89.9	400.	-8.0	0.029	2.15	-0.32	0.027
23. 4	90.3	400.	-8.0	0.031	1.92	-0.36	0.030
27. 5	90.1	400.	-8.0	0.023	2.23	-0.31	0.026
28.12	90.1	400.	-8.0	0.023	1.41	-0.49	0.047
23. 5	90.3	409.	-8.0	0.031	1.92	-0.36	0.027
27. 6	90.0	410.	-8.0	0.024	2.06	-0.34	0.027
20.10	90.3	400.	-8.0	0.050	1.43	-0.48	0.040
20. 9	89.8	400.	-8.0	0.073	0.90	-0.77	0.064
20. 8	90.7	400.	-8.0	0.094	0.68	-1.02	0.080
23. 7	90.1	425.	-4.0	0.025	2.33	-0.30	0.021
23. 8	90.2	425.	-4.0	0.048	1.69	-0.41	0.030

Forward Flight Stability (cont.)

RUN.PT	VKNOTS	RPM	ALFS,U	CLR/S	T 1/2	SIGMA	ZETA
27. 9	90.0	425.	-4.0	0.040	2.06	-0.34	0.024
23. 9	90.3	424.	-4.0	0.071	1.13	-0.61	0.042
27.11	89.7	425.	-4.0	0.060	1.33	-0.52	0.036
23.10	90.5	424.	-4.0	0.092	0.70	-0.99	0.067
27.10	90.3	426.	-4.0	0.084	0.93	-0.74	0.051
14.10	90.0	424.	-6.0	0.031	2.16	-0.32	0.023
14. 9	90.0	424.	-6.0	0.044	1.70	-0.41	0.029
28.16	90.3	424.	-6.0	0.031	1.44	-0.48	0.039
29. 4	89.4	425.	-6.0	0.034	1.28	-0.54	0.042
14. 8	89.8	424.	-6.0	0.064	1.03	-0.67	0.046
14. 7	89.7	426.	-6.0	0.086	0.69	-1.00	0.069
14. 6	90.0	424.	-6.0	0.095	0.63	-1.10	0.075
15. 4	89.9	425.	-8.0	0.026	2.67	-0.26	0.018
14.12	89.5	425.	-8.0	0.035	1.90	-0.36	0.026

Forward Flight Stability (cont.)

RUN.PT	VKNOTS	RPM	ALFS,U	CLR/S	T 1/2	SIGMA	ZETA
23. 6	90.0	425.	-8.0	0.032	1.90	-0.36	0.026
27. 7	89.8	425.	-8.0	0.024	1.81	-0.38	0.028
28.11	89.7	425.	-8.0	0.023	1.34	-0.52	0.042
14.11	90.1	424.	-8.0	0.058	1.06	-0.65	0.044
15. 3	90.2	425.	-8.0	0.080	0.78	-0.89	0.060
15. 2	90.3	426.	-8.0	0.090	0.62	-1.12	0.076
16. 6	119.7	425.	-6.0	0.030	2.38	-0.29	0.021
29. 3	120.2	425.	-6.0	0.022	1.43	-0.48	0.037
16. 5	120.0	425.	-6.0	0.053	1.59	-0.44	0.031
16. 4	120.0	425.	-6.0	0.072	1.05	-0.66	0.045
16. 9	119.6	424.	-8.0	0.033	1.97	-0.35	0.025
16. 8	119.7	425.	-8.0	0.043	1.84	-0.38	0.027
16. 7	120.0	425.	-8.0	0.064	0.98	-0.71	0.048
17. 2	127.2	425.	-10.0	0.048	1.06	-0.65	0.045

Forward Flight Stability (cont.)

RUN.PT	VKNOTS	RPM	ALFS,U	CLR/S	T 1/2	SIGMA	ZETA
17. 5	143.3	424.	-10.0	0.029	1.48	-0.47	0.034
17. 4	143.4	425.	-10.0	0.036	1.13	-0.61	0.042
17. 6	144.1	425.	-10.0	0.057	0.94	-0.74	0.050
17. 3	143.5	424.	-10.0	0.045	1.01	-0.69	0.046
18. 3	143.2	424.	-12.0	0.037	1.16	-0.60	0.041
18. 4	143.4	425.	-12.0	0.046	0.87	-0.80	0.054
18. 8	143.6	425.	-12.0	0.056	0.95	-0.73	0.050

Forward Flight Stability (concl.)

APPENDIX D

The following tables present selected bearingless main rotor loads data at forward flight run conditions. The data are presented in the same run/point number sequence as Appendix B. The channel designations and positive sign conventions used in this appendix are given in Table 11.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
19. 2								
MEAN	-491.3	-3447.3	11036.1	11323.4	6581.3	6378.2	-2327.4	-3263.4
RMS	630.0	2852.2	3347.7	3616.9	2039.3	2243.3	957.7	864.1
1/2 P-T-P	974.1	5182.8	6152.9	7093.1	3723.3	4368.3	2090.8	1523.4
1P MAG	841.16	2074.75	3691.07	4236.68	2314.78	2676.45	918.88	646.50
PHASE	-148.	-48.	87.	114.	86.	115.	138.	37.
2P MAG	93.35	79.62	851.69	887.66	532.05	533.79	26.09	47.78
PHASE	-18.	37.	90.	92.	90.	89.	-165.	-167.
3P MAG	164.99	1842.68	1668.98	1586.29	981.10	965.62	318.35	347.60
PHASE	-179.	-144.	-31.	-31.	-32.	-34.	160.	155.
4P MAG	175.39	709.39	2274.85	2195.03	1297.97	1286.42	905.99	939.49
PHASE	-149.	-147.	40.	42.	39.	39.	-139.	-140.
5P MAG	73.35	2058.87	76.47	68.85	44.26	48.29	17.44	18.87
PHASE	45.	-71.	168.	158.	159.	157.	95.	83.
19. 3								
MEAN	-494.1	-2424.5	11071.1	11377.1	6599.4	6396.2	-2331.5	-3271.9
RMS	609.8	2160.7	3720.3	4060.6	2277.7	2521.3	1003.1	868.3
1/2 P-T-P	902.4	5091.3	6948.7	7827.0	4220.2	4817.4	2175.2	1494.7
1P MAG	810.69	1166.68	4369.06	4994.21	2734.32	3142.14	1023.61	668.87
PHASE	-139.	-85.	95.	118.	94.	118.	139.	47.
2P MAG	86.65	1320.01	815.88	834.66	510.77	501.73	25.61	49.94
PHASE	-19.	12.	93.	95.	94.	92.	-141.	-172.
3P MAG	177.68	417.56	1706.01	1633.11	1004.36	992.94	330.39	365.35
PHASE	-172.	-140.	-31.	-31.	-32.	-34.	159.	154.
4P MAG	166.64	968.62	2215.17	2138.50	1263.26	1252.72	883.35	918.81
PHASE	-144.	-160.	41.	43.	39.	40.	-138.	-139.
5P MAG	85.76	1067.76	84.68	76.79	51.07	52.60	17.55	16.22
PHASE	45.	-68.	169.	162.	165.	162.	91.	100.
19. 4								
MEAN	-138.2	-5237.8	13036.5	12340.7	7783.6	7056.1	-2260.0	-2811.2
RMS	606.8	3025.2	1116.3	1712.4	647.7	1118.4	505.4	323.6
1/2 P-T-P	1068.9	5923.1	1973.3	2945.0	1129.5	1895.3	1000.4	675.5
1P MAG	770.00	2338.91	773.44	2056.72	434.57	1380.35	632.06	313.80
PHASE	154.	-29.	166.	156.	169.	155.	154.	-41.
2P MAG	117.89	1182.17	700.31	696.64	426.37	411.35	17.75	22.79
PHASE	-6.	138.	121.	122.	122.	120.	136.	146.
3P MAG	347.74	976.65	978.25	870.25	567.60	535.65	192.76	179.45
PHASE	-179.	174.	-32.	-34.	-33.	-37.	168.	159.
4P MAG	36.44	1353.90	633.96	595.86	362.36	355.40	245.72	255.64
PHASE	178.	136.	35.	40.	33.	36.	-144.	-142.
5P MAG	40.47	754.23	158.52	158.95	96.13	96.17	13.04	15.85
PHASE	-20.	-127.	66.	69.	64.	65.	-134.	-121.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
19. 2								
MEAN	5029.9	-4188.6	-655.9	262.9	1372.4	-7.2	-154.2	24.7
RMS	2404.9	1309.6	161.2	151.6	352.8	422.8	224.4	64.3
1/2 P-T-P	3764.9	2630.9	268.0	237.1	589.4	719.6	323.0	109.1
1P MAG	3178.45	682.97	118.47	211.24	482.49	582.50	316.89	88.76
PHASE	-152.	112.	74.	170.	99.	174.	-10.	-3.
2P MAG	328.23	100.09	27.02	7.19	67.27	44.99	8.01	7.48
PHASE	-41.	-137.	-123.	95.	90.	-95.	-83.	84.
3P MAG	895.78	651.88	76.36	25.66	42.49	46.74	4.06	6.66
PHASE	16.	158.	169.	-175.	-71.	138.	111.	-40.
4P MAG	381.37	1551.58	160.98	20.59	82.68	112.37	13.05	16.28
PHASE	-5.	-137.	-112.	-174.	-155.	-80.	-90.	95.
5P MAG	116.04	20.26	2.71	7.42	9.42	4.65	1.17	1.14
PHASE	-146.	74.	105.	49.	106.	13.	-48.	117.
19. 3								
MEAN	5038.8	-4197.8	-659.0	263.5	1373.9	-7.9	-155.0	24.8
RMS	2349.1	1333.1	166.1	154.5	414.4	427.8	228.6	64.9
1/2 P-T-P	3827.0	2737.0	273.8	242.7	667.7	736.9	327.9	111.3
1P MAG	3089.17	808.91	131.09	215.34	572.42	589.47	322.88	89.70
PHASE	-143.	116.	83.	173.	104.	177.	-7.	-0.
2P MAG	367.78	96.18	25.79	6.99	63.44	43.67	5.56	6.99
PHASE	-40.	-134.	-132.	105.	93.	-96.	-77.	79.
3P MAG	933.86	676.06	82.57	26.93	41.97	53.29	6.24	7.12
PHASE	19.	157.	167.	-170.	-71.	138.	114.	-40.
4P MAG	364.15	1515.56	157.72	19.97	82.52	111.24	14.10	15.75
PHASE	-3.	-136.	-110.	-171.	-154.	-78.	-85.	95.
5P MAG	118.57	16.39	2.36	7.55	10.13	4.74	1.26	1.57
PHASE	-149.	79.	-68.	50.	121.	-54.	-75.	123.
19. 4								
MEAN	5898.1	-3829.8	-628.2	174.9	1554.6	-170.9	-32.2	48.7
RMS	2133.3	458.5	54.9	107.0	133.3	325.1	161.3	48.0
1/2 P-T-P	3533.6	993.5	106.4	180.9	199.2	536.6	225.7	78.2
1P MAG	2717.68	312.78	19.01	144.27	172.14	453.04	227.75	66.83
PHASE	149.	170.	34.	154.	156.	149.	-29.	-26.
2P MAG	250.13	37.98	8.44	2.15	63.09	16.91	2.56	3.44
PHASE	-14.	-150.	-117.	75.	116.	-67.	-71.	108.
3P MAG	1225.16	349.28	32.25	44.27	29.21	40.57	8.35	6.27
PHASE	-1.	162.	132.	176.	-84.	56.	28.	-129.
4P MAG	127.99	421.86	53.76	6.05	20.66	57.94	6.44	8.81
PHASE	-33.	-141.	-90.	148.	-162.	-63.	-65.	115.
5P MAG	57.62	41.54	7.88	4.70	9.39	10.54	2.31	1.88
PHASE	-180.	-121.	-41.	11.	50.	-59.	-78.	103.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
21. 2								
MEAN	-761.5	-3740.4	10695.4	11726.4	6325.2	6644.4	-2092.1	-3445.8
RMS	463.9	2688.2	2694.1	3289.5	1642.1	2045.2	711.8	530.8
1/2 P-T-P	684.5	6786.4	4207.7	5408.8	2550.3	3333.5	1400.4	913.6
1P MAG	611.92	1626.66	3236.41	4225.96	2011.02	2654.31	835.89	429.37
PHASE	-143.	-107.	97.	117.	104.	126.	134.	28.
2P MAG	51.43	1583.93	1150.89	1137.36	700.13	689.91	37.28	64.17
PHASE	-62.	-13.	64.	66.	80.	79.	-156.	-162.
3P MAG	163.47	1141.26	1060.21	1000.41	610.52	605.80	191.18	224.56
PHASE	126.	180.	-40.	-41.	-18.	-21.	155.	149.
4P MAG	83.43	1695.69	1229.12	1193.90	681.46	677.39	473.88	517.62
PHASE	-113.	-133.	75.	77.	104.	104.	-106.	-107.
5P MAG	44.04	433.42	102.06	83.25	52.56	44.34	75.51	72.81
PHASE	41.	76.	-9.	2.	33.	38.	140.	136.
21. 3								
MEAN	-733.6	-1543.7	10614.8	11656.9	6280.7	6599.8	-2106.3	-3450.4
RMS	558.9	3289.2	3099.5	3596.5	1905.9	2230.5	732.5	580.6
1/2 P-T-P	816.5	6896.1	4844.0	5645.3	2942.4	3489.8	1369.4	997.8
1P MAG	757.94	2742.97	3911.04	4710.64	2436.63	2939.12	883.01	559.15
PHASE	-137.	-135.	89.	110.	96.	118.	129.	32.
2P MAG	38.04	1436.72	1178.79	1177.22	721.82	720.88	32.32	77.70
PHASE	-90.	-57.	55.	58.	71.	70.	-142.	-159.
3P MAG	158.62	1287.45	1027.98	965.76	595.01	588.17	178.35	214.20
PHASE	111.	179.	-42.	-41.	-20.	-21.	154.	149.
4P MAG	73.74	1752.43	1178.47	1140.17	657.48	655.05	456.60	504.70
PHASE	-109.	-151.	76.	78.	106.	106.	-104.	-105.
5P MAG	44.93	1604.21	107.56	84.17	52.14	45.69	78.55	76.01
PHASE	47.	-92.	-20.	-15.	23.	26.	146.	143.
21. 4								
MEAN	-756.2	-3593.6	10736.1	11748.5	6353.5	6659.2	-2090.5	-3431.5
RMS	481.6	2891.2	2616.8	3182.0	1597.3	1975.5	695.4	528.4
1/2 P-T-P	728.5	6546.2	4134.3	5221.7	2495.5	3210.7	1346.4	897.1
1P MAG	639.80	1742.64	3148.38	4091.53	1958.15	2563.58	813.55	435.22
PHASE	-143.	159.	94.	115.	100.	124.	134.	26.
2P MAG	53.81	627.16	1091.78	1064.68	665.72	648.19	39.95	58.87
PHASE	-67.	-97.	64.	66.	80.	79.	-149.	-169.
3P MAG	149.92	1513.63	1012.65	967.40	585.77	584.79	186.27	222.77
PHASE	113.	-123.	-40.	-41.	-18.	-20.	155.	149.
4P MAG	81.94	1641.20	1212.28	1169.16	676.29	671.09	460.82	506.07
PHASE	-106.	-154.	77.	79.	107.	107.	-103.	-104.
5P MAG	40.26	1686.36	134.44	115.48	68.55	60.75	89.26	87.99
PHASE	46.	-105.	-18.	-13.	23.	24.	141.	136.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
21. 2								
MEAN	4364.7	-4174.9	-642.4	348.8	1391.4	117.9	-250.3	4.2
RMS	1890.1	799.5	97.2	126.4	329.5	316.5	187.2	47.8
1/2 P-T-P	3541.8	1601.0	207.2	190.5	523.5	525.7	266.6	80.8
1P MAG	2464.00	527.58	63.70	176.71	453.14	433.84	264.44	65.27
PHASE	-150.	116.	41.	159.	106.	170.	-22.	-5.
2P MAG	286.94	165.76	21.83	5.36	81.08	39.69	5.55	6.24
PHASE	-47.	-144.	-127.	116.	61.	-115.	-103.	72.
3P MAG	614.22	405.85	55.05	19.21	31.10	44.39	3.00	6.57
PHASE	-24.	153.	139.	142.	-89.	121.	88.	-59.
4P MAG	127.09	847.37	76.55	8.22	43.73	58.74	6.65	9.44
PHASE	-16.	-103.	-78.	-145.	-124.	-46.	-60.	133.
5P MAG	111.67	109.55	2.22	5.63	17.22	16.83	2.77	2.98
PHASE	-157.	145.	-19.	49.	103.	-50.	-53.	99.
21. 3								
MEAN	4419.7	-4184.0	-645.0	349.1	1383.3	118.9	-251.8	3.6
RMS	2223.6	818.2	101.9	133.2	377.0	339.0	197.2	50.9
1/2 P-T-P	4049.6	1537.1	212.9	203.0	598.1	556.1	280.7	84.4
1P MAG	2996.84	614.92	85.69	186.61	521.99	468.41	278.50	69.99
PHASE	-144.	105.	47.	160.	97.	172.	-21.	-4.
2P MAG	256.16	186.33	28.94	6.40	80.89	45.31	7.29	6.96
PHASE	-54.	-143.	-126.	98.	49.	-118.	-126.	68.
3P MAG	530.85	388.09	47.84	17.96	31.25	37.07	0.89	5.72
PHASE	-35.	153.	138.	122.	-88.	122.	150.	-61.
4P MAG	106.58	827.87	69.32	7.32	44.78	46.95	6.40	7.62
PHASE	-23.	-101.	-80.	-140.	-121.	-46.	-61.	132.
5P MAG	114.00	115.64	1.29	5.79	15.72	15.07	2.41	2.68
PHASE	-153.	150.	72.	56.	115.	-38.	-61.	111.
21. 4								
MEAN	4346.2	-4158.4	-641.0	347.4	1397.0	115.4	-250.1	3.6
RMS	1934.9	785.8	98.6	124.7	319.6	311.3	185.1	46.9
1/2 P-T-P	3628.4	1534.4	201.4	189.2	513.6	531.4	262.3	81.2
1P MAG	2542.86	507.18	64.20	174.45	439.68	426.34	261.39	63.93
PHASE	-149.	114.	37.	158.	103.	171.	-23.	-5.
2P MAG	281.21	159.07	22.26	3.93	76.45	42.00	3.50	6.49
PHASE	-46.	-146.	-135.	127.	62.	-118.	-94.	65.
3P MAG	528.66	400.29	53.92	16.54	28.51	41.73	3.35	5.96
PHASE	-34.	153.	140.	131.	-90.	128.	104.	-53.
4P MAG	114.70	832.04	76.48	8.45	42.39	56.30	6.75	8.71
PHASE	-22.	-100.	-78.	-139.	-121.	-50.	-49.	126.
5P MAG	120.38	136.54	0.55	5.47	18.46	17.93	2.37	3.09
PHASE	-153.	145.	43.	54.	106.	-60.	-41.	90.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
21. 5								
MEAN	-772.7	-2215.0	10754.3	11777.5	6367.5	6678.9	-2077.6	-3423.2
RMS	412.0	1902.6	2878.9	3527.5	1761.9	2200.1	725.0	480.9
1/2 P-T-P	606.8	4108.0	4612.9	5711.6	2791.8	3529.7	1408.6	805.2
1P MAG	538.96	751.45	3531.76	4592.40	2192.61	2885.79	886.71	373.93
PHASE	-135.	-127.	108.	125.	115.	133.	139.	43.
2P MAG	64.23	955.52	1268.54	1238.09	772.24	752.99	32.00	52.71
PHASE	-79.	21.	65.	66.	80.	79.	-171.	-166.
3P MAG	147.36	1090.14	1049.08	991.55	610.40	603.18	193.13	227.49
PHASE	131.	-173.	-37.	-38.	-15.	-17.	154.	148.
4P MAG	72.55	1412.56	1139.02	1098.47	638.22	633.27	424.28	469.87
PHASE	-103.	-148.	75.	78.	105.	105.	-103.	-104.
5P MAG	40.16	647.49	135.72	117.57	72.21	64.43	75.13	70.28
PHASE	48.	-94.	-8.	1.	35.	39.	141.	140.
21. 6								
MEAN	-742.7	-2392.5	10532.3	11548.9	6230.0	6538.9	-2124.3	-3462.1
RMS	503.4	1911.2	2555.8	3079.0	1559.7	1912.6	677.2	544.1
1/2 P-T-P	734.6	3851.4	4124.8	4992.3	2488.6	3106.4	1309.6	928.1
1P MAG	678.75	1677.84	3096.28	3961.93	1925.89	2484.29	791.54	487.47
PHASE	-150.	-163.	86.	110.	92.	118.	130.	18.
2P MAG	29.78	499.94	939.91	938.64	573.27	568.29	45.31	73.25
PHASE	-26.	33.	59.	60.	74.	72.	-153.	-162.
3P MAG	140.17	802.66	1118.30	1072.46	646.52	647.26	201.81	240.60
PHASE	113.	-120.	-41.	-41.	-19.	-21.	157.	151.
4P MAG	70.72	784.69	1130.76	1089.24	627.34	623.22	446.29	489.82
PHASE	-115.	-91.	78.	79.	107.	107.	-104.	-105.
5P MAG	43.15	705.60	82.81	62.91	42.40	35.67	73.27	70.67
PHASE	36.	-144.	-17.	1.	28.	34.	148.	144.
19. 5								
MEAN	-641.9	-4712.6	10825.5	11452.0	6461.7	6430.8	-2258.0	-3344.8
RMS	519.5	3935.9	2776.9	3261.1	1707.4	2029.2	718.1	541.9
1/2 P-T-P	712.3	8236.2	4516.4	5414.1	2753.6	3377.9	1296.6	942.6
1P MAG	707.64	3153.17	3406.19	4214.68	2124.06	2638.49	850.89	493.93
PHASE	-147.	-168.	83.	105.	82.	106.	125.	20.
2P MAG	50.64	1560.38	852.41	848.73	527.52	515.24	33.93	56.24
PHASE	-46.	22.	65.	66.	65.	63.	-161.	-178.
3P MAG	146.40	2450.15	1359.36	1281.58	799.33	785.20	265.87	296.21
PHASE	110.	113.	-41.	-41.	-42.	-44.	151.	146.
4P MAG	56.26	1168.65	1086.96	1039.87	618.88	611.37	433.91	452.76
PHASE	-111.	-117.	70.	72.	69.	69.	-110.	-112.
5P MAG	46.73	1185.42	140.52	127.03	73.00	67.72	113.15	108.76
PHASE	41.	-54.	-18.	-14.	-16.	-14.	142.	139.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
21. 5								
MEAN	4318.7	-4143.8	-641.9	348.2	1402.8	116.6	-251.7	3.1
RMS	1709.7	786.5	89.2	121.8	361.8	305.6	181.0	46.3
1/2 P-T-P	3196.2	1627.0	199.5	184.1	556.1	519.4	255.6	79.6
1P MAG	2207.94	605.71	49.73	170.31	498.91	418.72	255.70	63.42
PHASE	-143.	126.	61.	163.	115.	175.	-19.	-1.
2P MAG	330.32	154.77	20.66	5.82	93.60	41.50	4.24	6.38
PHASE	-51.	-144.	-129.	138.	61.	-116.	-100.	68.
3P MAG	580.98	410.33	55.03	18.57	26.62	42.48	3.30	5.93
PHASE	-23.	153.	139.	143.	-82.	121.	106.	-60.
4P MAG	117.75	773.52	68.91	8.08	38.55	52.33	7.09	7.53
PHASE	-28.	-100.	-76.	-138.	-119.	-47.	-46.	128.
5P MAG	128.65	109.58	2.58	5.66	15.66	18.66	3.12	3.38
PHASE	-150.	148.	1.	54.	99.	-50.	-53.	105.
21. 6								
MEAN	4411.6	-4200.7	-649.3	347.6	1372.2	114.4	-249.0	3.4
RMS	2006.0	761.2	103.2	129.0	305.7	321.8	191.0	48.2
1/2 P-T-P	3632.3	1454.8	200.7	196.4	499.1	533.3	271.2	81.8
1P MAG	2667.85	465.92	78.30	180.87	421.78	441.38	269.82	65.82
PHASE	-155.	105.	30.	156.	96.	167.	-25.	-9.
2P MAG	252.16	176.07	23.38	4.17	60.82	37.37	4.78	5.49
PHASE	-31.	-147.	-139.	97.	56.	-122.	-126.	60.
3P MAG	469.77	432.75	61.04	14.03	35.64	51.52	4.45	7.84
PHASE	-24.	155.	142.	135.	-91.	129.	107.	-53.
4P MAG	137.57	799.54	71.62	7.27	43.31	52.82	5.10	9.03
PHASE	-13.	-101.	-79.	-143.	-123.	-46.	-69.	133.
5P MAG	94.78	108.19	1.97	5.91	15.69	16.39	2.59	2.48
PHASE	-154.	152.	24.	53.	116.	-43.	-64.	106.
19. 5								
MEAN	4628.8	-4211.2	-670.6	295.4	1377.5	36.9	-200.1	14.7
RMS	1948.0	778.7	95.6	128.0	330.3	307.8	198.2	47.2
1/2 P-T-P	3393.8	1388.4	187.1	197.9	533.2	514.0	284.3	80.1
1P MAG	2648.90	512.64	79.14	179.61	458.10	425.34	280.14	65.11
PHASE	-153.	101.	34.	153.	92.	165.	-28.	-11.
2P MAG	236.19	132.37	29.58	3.95	60.49	41.64	4.26	6.26
PHASE	-44.	-154.	-155.	76.	64.	-135.	-124.	50.
3P MAG	468.91	539.24	63.16	17.15	33.83	47.48	3.24	7.19
PHASE	-39.	150.	141.	126.	-88.	125.	113.	-56.
4P MAG	128.39	748.53	61.48	5.81	39.73	37.63	4.66	5.91
PHASE	-43.	-107.	-91.	-148.	-126.	-58.	-59.	115.
5P MAG	118.21	161.07	6.18	6.01	23.66	16.89	2.20	2.52
PHASE	-164.	146.	168.	45.	109.	-66.	-64.	91.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
19. 6								
MEAN	-651.4	-5642.1	10728.3	11323.7	6394.6	6356.3	-2274.4	-3367.7
RMS	424.2	3191.5	1308.4	1913.6	767.8	1221.5	547.2	434.6
1/2 P-T-P	718.5	6479.5	2232.0	3216.7	1307.8	2014.7	1159.0	932.6
1P MAG	549.88	781.47	818.90	2204.27	484.33	1441.85	605.00	347.45
PHASE	160.	-158.	163.	148.	164.	148.	147.	-55.
2P MAG	58.70	1517.98	572.78	564.43	348.92	340.17	26.11	43.76
PHASE	-17.	85.	73.	72.	72.	69.	164.	174.
3P MAG	212.37	1496.60	1248.69	1168.21	736.14	718.70	246.70	263.05
PHASE	161.	74.	-44.	-45.	-46.	-48.	152.	146.
4P MAG	42.97	3044.90	879.07	831.63	502.40	496.25	349.11	367.43
PHASE	-109.	-113.	61.	63.	60.	60.	-118.	-119.
5P MAG	39.18	947.75	214.45	207.35	120.84	112.94	123.14	118.63
PHASE	8.	24.	-11.	-4.	-8.	-7.	145.	143.
15. 7								
MEAN	-311.1	1283.0	15576.6	14669.8	9285.6	8706.7	-1067.9	-2430.9
RMS	843.8	874.6	1875.3	2318.4	1084.7	1520.4	729.0	666.8
1/2 P-T-P	1333.1	1621.6	3013.1	4274.1	1758.0	2766.4	1522.8	1462.4
1P MAG	1122.24	890.48	962.26	2334.12	524.67	1623.79	803.41	607.84
PHASE	152.	-15.	-168.	147.	-160.	146.	-41.	-62.
2P MAG	147.70	83.47	843.70	813.99	503.97	487.14	37.21	34.49
PHASE	4.	-169.	128.	130.	129.	129.	105.	123.
3P MAG	340.29	339.80	1936.25	1760.60	1127.04	1094.32	319.92	375.27
PHASE	162.	6.	-44.	-45.	-45.	-48.	-22.	146.
4P MAG	38.68	502.53	1226.08	1183.89	712.94	712.23	482.40	534.91
PHASE	-141.	-54.	52.	56.	51.	52.	-126.	-127.
5P MAG	93.11	503.10	226.63	233.05	141.93	137.29	118.04	112.82
PHASE	-2.	116.	25.	33.	28.	32.	-30.	149.
15.10								
MEAN	-820.8	1682.7	3330.8	6160.6	1731.5	3198.4	-2071.2	-4978.8
RMS	109.9	162.0	918.0	1316.9	559.1	829.0	278.3	123.9
1/2 P-T-P	192.2	289.6	1679.7	2117.4	1025.3	1322.7	489.9	224.5
1P MAG	107.46	144.57	953.98	1661.80	581.68	1049.99	379.76	114.71
PHASE	-131.	105.	123.	138.	125.	137.	-38.	-32.
2P MAG	60.81	139.10	793.80	757.41	484.14	472.76	7.37	32.17
PHASE	-157.	162.	4.	4.	4.	2.	-124.	-174.
3P MAG	88.70	99.56	313.15	296.17	190.01	181.92	55.09	61.50
PHASE	79.	-82.	-112.	-112.	-113.	-115.	-82.	78.
4P MAG	14.43	16.66	164.04	159.56	95.93	92.62	52.12	69.29
PHASE	-122.	151.	77.	77.	76.	74.	-132.	-111.
5P MAG	6.36	24.68	114.79	109.23	66.55	65.01	43.39	56.82
PHASE	-142.	-60.	-48.	-45.	-46.	-48.	-64.	116.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
19. 6								
MEAN	4609.4	-4238.7	-680.5	294.9	1361.3	28.8	-197.7	15.5
RMS	1581.4	616.1	82.9	107.2	143.8	248.0	169.2	37.3
1/2 P-T-P	2637.5	1289.1	173.5	159.7	211.1	408.8	238.4	60.9
1P MAG	2022.86	251.29	68.67	148.64	188.20	341.84	239.05	51.21
PHASE	160.	-178.	-45.	142.	150.	148.	-38.	-25.
2P MAG	255.71	101.36	21.08	1.73	43.00	22.78	3.97	3.44
PHASE	-21.	-164.	-177.	78.	75.	-159.	-165.	27.
3P MAG	804.53	481.99	57.12	27.84	35.46	39.16	4.02	6.14
PHASE	-12.	149.	144.	162.	-94.	111.	80.	-73.
4P MAG	125.63	604.57	54.92	4.80	31.65	44.13	5.07	7.11
PHASE	-53.	-115.	-86.	-164.	-135.	-56.	-68.	117.
5P MAG	119.88	181.81	6.46	5.86	22.24	22.45	2.82	2.98
PHASE	-174.	150.	-155.	21.	103.	-68.	-75.	98.
15. 7								
MEAN	4824.4	-3258.0	-567.9	216.3	1898.4	-199.9	-51.5	48.1
RMS	3363.2	860.0	127.1	137.5	154.4	415.8	217.5	62.3
1/2 P-T-P	5973.6	1727.8	273.4	198.8	266.9	715.0	306.4	110.3
1P MAG	4412.36	256.51	99.30	187.40	177.59	573.79	307.03	85.59
PHASE	147.	-172.	-33.	132.	158.	134.	-49.	-45.
2P MAG	486.72	42.06	10.67	2.17	78.68	20.06	3.45	3.38
PHASE	-4.	-175.	59.	115.	122.	5.	-7.	-159.
3P MAG	1497.01	702.15	75.19	47.56	58.88	52.70	8.15	10.20
PHASE	-15.	149.	135.	162.	-91.	80.	40.	-104.
4P MAG	291.02	873.78	97.83	8.34	48.06	93.64	10.74	14.41
PHASE	-67.	-123.	-88.	153.	-142.	-63.	-71.	113.
5P MAG	224.77	174.28	1.22	11.69	29.94	35.56	4.96	4.86
PHASE	-175.	161.	-41.	16.	96.	-65.	-72.	134.
15.10								
MEAN	3959.6	-5679.7	-842.5	553.7	586.4	485.2	-476.9	-55.1
RMS	508.5	198.9	58.1	61.2	127.5	97.1	87.4	17.0
1/2 P-T-P	885.3	411.9	106.1	94.6	204.7	150.2	125.0	28.6
1P MAG	661.21	157.03	75.45	86.01	169.62	131.08	123.49	23.17
PHASE	-126.	164.	-67.	153.	132.	-172.	-29.	26.
2P MAG	63.90	114.75	18.36	2.63	57.91	34.62	3.40	3.89
PHASE	-172.	-174.	158.	163.	-9.	154.	155.	-26.
3P MAG	243.67	107.21	15.00	9.12	10.69	8.58	0.60	0.40
PHASE	-82.	80.	95.	82.	-154.	104.	-2.	61.
4P MAG	24.53	118.14	11.11	0.89	6.22	8.08	0.93	1.80
PHASE	-77.	-104.	-63.	-133.	-128.	-21.	176.	164.
5P MAG	23.52	85.43	6.18	1.55	8.17	4.28	0.87	1.92
PHASE	147.	119.	145.	6.	73.	-133.	-150.	42.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
15. 9								
MEAN	-786.2	2478.8	5660.6	7760.4	3171.2	4235.9	-1886.7	-4472.2
RMS	179.9	1986.2	892.2	1334.9	551.8	849.1	297.6	232.1
1/2 P-T-P	346.1	4009.9	1631.1	2093.2	1009.4	1314.2	579.5	455.9
1P MAG	202.61	1557.78	923.91	1702.51	584.94	1090.17	375.72	247.62
PHASE	148.	13.	-174.	162.	-172.	161.	-26.	-76.
2P MAG	30.31	1369.51	581.35	564.25	357.73	355.86	9.64	34.39
PHASE	-154.	42.	7.	5.	6.	3.	180.	175.
3P MAG	149.80	1251.37	502.81	466.35	300.97	285.85	100.49	106.17
PHASE	110.	54.	-68.	-69.	-70.	-71.	-53.	128.
4P MAG	7.80	1019.58	299.15	281.71	174.22	167.42	119.41	121.10
PHASE	-155.	73.	68.	70.	67.	67.	-114.	-113.
5P MAG	8.40	635.44	206.60	183.99	114.62	109.65	67.54	82.47
PHASE	-83.	93.	-28.	-25.	-28.	-29.	-52.	133.
15. 8								
MEAN	-591.4	-593.3	10124.7	10773.7	5918.3	6187.7	-1556.8	-3527.1
RMS	387.7	6112.7	1225.5	1874.8	719.5	1206.5	488.9	381.6
1/2 P-T-P	661.1	16303.6	2151.6	3132.8	1261.5	1976.4	961.3	794.8
1P MAG	493.95	1870.22	961.21	2284.92	569.97	1496.25	582.91	338.55
PHASE	156.	27.	156.	143.	158.	142.	-39.	-61.
2P MAG	64.83	4342.86	532.30	501.24	322.27	306.05	19.60	29.03
PHASE	-28.	-84.	82.	83.	82.	79.	147.	167.
3P MAG	221.64	2563.18	1105.26	1022.29	649.53	629.93	203.80	231.99
PHASE	157.	87.	-47.	-47.	-48.	-50.	-27.	145.
4P MAG	25.95	3284.44	708.52	669.89	403.76	400.94	265.41	300.27
PHASE	-85.	-17.	69.	70.	67.	67.	-109.	-112.
5P MAG	34.11	3857.75	218.08	196.72	120.15	115.20	106.84	112.90
PHASE	0.	146.	-11.	-5.	-9.	-9.	-45.	139.
15. 6								
MEAN	-228.3	1164.1	14800.4	13920.7	8795.9	8240.9	-1190.8	-2556.6
RMS	747.2	896.0	1765.4	2251.0	1028.0	1473.5	651.3	573.9
1/2 P-T-P	1211.8	2024.2	2970.4	3914.6	1752.8	2535.3	1289.2	1232.4
1P MAG	985.20	968.46	1157.85	2428.07	658.76	1658.91	752.61	547.12
PHASE	149.	-30.	-172.	151.	-167.	149.	-40.	-66.
2P MAG	131.28	61.10	892.49	864.26	541.95	520.99	34.80	20.83
PHASE	-2.	28.	117.	119.	117.	117.	121.	144.
3P MAG	336.65	544.96	1732.48	1573.04	1014.52	978.45	310.07	340.88
PHASE	157.	-1.	-44.	-45.	-45.	-48.	-21.	148.
4P MAG	16.35	148.77	980.77	946.35	560.95	565.81	370.68	427.08
PHASE	-88.	-156.	66.	68.	64.	65.	-115.	-114.
5P MAG	74.41	152.44	282.66	264.41	164.89	157.82	130.24	134.97
PHASE	-7.	47.	14.	21.	17.	18.	-31.	149.

RUN.PT		CHANNEL DESIGNATION							
		I	J	K	L	M	N	O	P
15. 9									
	MEAN	4077.1	-5206.1	-794.2	478.6	832.2	335.7	-390.0	-32.0
	RMS	627.8	301.9	72.1	71.1	124.5	113.2	104.0	18.0
1/2	P-T-P	984.7	614.4	142.2	117.4	184.5	177.2	150.8	31.1
1P	MAG	742.33	237.02	91.44	98.99	168.96	152.11	146.96	23.82
	PHASE	167.	-155.	-71.	140.	168.	159.	-40.	-6.
2P	MAG	50.85	106.15	26.29	1.65	40.10	36.89	4.62	5.89
	PHASE	-8.	-176.	158.	-164.	-7.	155.	140.	-30.
3P	MAG	465.93	193.53	24.64	17.40	14.57	10.88	1.35	3.38
	PHASE	-62.	129.	126.	110.	-128.	118.	-33.	-12.
4P	MAG	73.84	207.65	15.75	1.29	10.88	14.39	0.47	3.62
	PHASE	-78.	-108.	-63.	163.	-125.	-16.	8.	146.
5P	MAG	41.95	128.57	9.25	2.65	10.40	11.54	1.31	2.78
	PHASE	158.	139.	-179.	-6.	75.	-113.	-121.	53.
15. 8									
	MEAN	4495.1	-4338.5	-703.2	341.4	1300.7	57.4	-222.4	8.8
	RMS	1486.1	520.8	74.5	104.5	147.2	228.1	157.5	33.7
1/2	P-T-P	2514.7	1109.1	152.3	157.7	209.7	366.5	222.0	55.2
1P	MAG	1891.91	225.01	72.76	144.79	197.22	316.76	222.59	46.57
	PHASE	155.	178.	-48.	137.	145.	141.	-45.	-34.
2P	MAG	247.41	80.97	22.17	0.34	40.38	21.00	1.46	3.40
	PHASE	-19.	-159.	172.	41.	83.	180.	171.	0.
3P	MAG	838.64	424.90	47.61	28.28	31.34	25.76	2.63	4.25
	PHASE	-20.	148.	143.	155.	-100.	102.	50.	-74.
4P	MAG	105.74	494.81	47.84	1.92	26.23	34.36	3.32	5.50
	PHASE	-75.	-108.	-85.	-171.	-128.	-58.	-73.	110.
5P	MAG	98.83	172.23	7.39	6.03	21.06	18.30	2.30	3.12
	PHASE	-180.	147.	177.	20.	93.	-84.	-102.	100.
15. 6									
	MEAN	5221.2	-3421.8	-594.5	213.6	1797.4	-196.1	-53.4	48.3
	RMS	2919.5	732.1	100.2	128.9	160.0	373.5	201.6	55.7
1/2	P-T-P	5307.8	1479.7	211.2	189.5	256.7	632.0	281.9	97.7
1P	MAG	3809.23	279.41	82.42	175.71	196.46	517.86	284.74	76.85
	PHASE	144.	-171.	-38.	132.	161.	133.	-49.	-46.
2P	MAG	447.34	51.61	2.51	2.00	77.64	14.96	2.17	1.28
	PHASE	-9.	-142.	118.	100.	113.	-25.	-27.	160.
3P	MAG	1407.52	634.51	59.44	45.99	52.06	39.27	7.76	9.03
	PHASE	-18.	151.	135.	158.	-95.	69.	28.	-117.
4P	MAG	206.13	690.65	80.87	4.35	36.45	75.36	7.88	11.35
	PHASE	-76.	-111.	-79.	147.	-130.	-58.	-68.	123.
5P	MAG	169.96	205.33	5.95	9.94	29.74	25.67	3.53	3.91
	PHASE	-178.	159.	-168.	14.	93.	-74.	-88.	124.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
15.15								
MEAN	-776.1	1811.9	2438.8	5354.9	1186.5	2685.8	-2219.4	-5121.7
RMS	102.6	116.0	1132.0	1454.6	697.3	915.7	247.4	106.7
1/2 P-T-P	190.2	217.9	1802.1	2167.1	1106.1	1358.6	433.7	197.9
1P MAG	69.61	105.84	1373.52	1899.84	851.46	1198.79	340.49	115.48
PHASE	1.	-166.	165.	159.	166.	158.	-22.	-116.
2P MAG	52.55	89.87	760.25	730.12	460.75	454.61	9.28	36.42
PHASE	-174.	163.	-3.	-4.	-3.	-6.	-139.	-176.
3P MAG	115.16	83.74	292.85	278.12	176.31	170.22	57.43	59.41
PHASE	105.	-64.	-115.	-115.	-115.	-117.	-93.	75.
4P MAG	3.51	10.55	61.04	48.38	31.57	28.54	24.81	21.26
PHASE	114.	-38.	87.	84.	78.	81.	-117.	-109.
5P MAG	3.63	7.71	63.89	70.05	42.04	42.73	25.46	32.91
PHASE	157.	-6.	-36.	-36.	-43.	-41.	-45.	122.
15.14								
MEAN	-728.9	2274.8	4772.7	6951.1	2616.5	3711.0	-2049.1	-4640.3
RMS	124.6	1548.6	870.5	1330.5	528.8	840.1	272.3	173.0
1/2 P-T-P	214.9	4095.2	1605.6	2023.0	965.7	1268.7	489.1	347.6
1P MAG	105.06	890.63	896.85	1707.07	556.94	1083.41	355.20	163.39
PHASE	166.	20.	155.	149.	157.	149.	-32.	-68.
2P MAG	34.84	809.70	622.46	592.22	375.26	370.44	19.12	32.97
PHASE	-151.	65.	9.	8.	9.	6.	-143.	-179.
3P MAG	132.70	742.67	460.91	423.10	269.42	258.23	79.73	96.03
PHASE	119.	87.	-71.	-71.	-72.	-74.	-46.	123.
4P MAG	16.27	765.98	281.29	254.68	158.18	152.49	96.78	115.24
PHASE	-81.	121.	95.	96.	93.	92.	-92.	-89.
5P MAG	16.51	715.65	156.60	151.55	91.17	89.95	56.58	66.54
PHASE	-97.	147.	-18.	-12.	-14.	-15.	-36.	138.
15.13								
MEAN	-532.2	-218.3	9360.9	10060.1	5447.0	5729.6	-1705.5	-3656.2
RMS	368.2	5862.3	1143.2	1726.9	683.2	1110.8	419.4	331.4
1/2 P-T-P	623.6	12958.3	2096.7	2706.2	1253.4	1718.5	768.7	656.8
1P MAG	429.72	4229.82	1059.11	2165.03	643.97	1409.26	527.34	334.65
PHASE	143.	13.	172.	150.	174.	149.	-38.	-73.
2P MAG	53.90	3912.89	523.02	492.86	317.06	302.21	15.34	24.39
PHASE	-33.	-142.	82.	82.	82.	79.	147.	177.
3P MAG	283.95	3681.58	943.68	861.83	557.37	533.51	170.84	198.11
PHASE	149.	60.	-48.	-48.	-49.	-51.	-27.	146.
4P MAG	15.07	3025.13	512.79	481.63	294.00	291.90	169.37	222.87
PHASE	-80.	-93.	83.	86.	82.	82.	-91.	-97.
5P MAG	30.85	2366.19	222.06	207.57	128.62	124.55	87.23	85.34
PHASE	-37.	104.	0.	7.	2.	3.	-26.	150.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
15.15								
MEAN	3787.5	-5866.7	-878.2	559.1	475.3	479.8	-478.7	-54.2
RMS	327.2	220.7	67.1	46.7	155.3	66.4	68.3	14.1
1/2 P-T-P	547.8	402.1	118.5	78.0	222.8	106.0	96.9	22.8
1P MAG	276.39	259.44	89.75	64.53	211.61	85.51	96.28	19.11
PHASE	-78.	-172.	-84.	149.	159.	-158.	-33.	36.
2P MAG	36.37	109.50	21.80	2.94	56.67	35.52	6.69	3.34
PHASE	-172.	-176.	155.	-180.	-18.	149.	137.	-32.
3P MAG	363.88	99.34	17.70	13.11	10.15	7.95	1.44	3.34
PHASE	-66.	73.	116.	102.	-153.	116.	21.	15.
4P MAG	16.68	37.45	5.98	0.77	2.32	9.45	0.90	1.71
PHASE	-103.	-100.	9.	-120.	-153.	30.	65.	-119.
5P MAG	26.68	48.10	4.65	1.36	5.03	5.00	0.63	1.58
PHASE	116.	123.	165.	-6.	72.	-156.	-150.	-0.
15.14								
MEAN	3994.7	-5424.9	-833.0	484.7	715.8	336.4	-394.0	-33.4
RMS	479.9	254.5	63.2	63.8	123.9	97.8	92.6	16.0
1/2 P-T-P	942.8	511.0	125.3	103.6	194.2	156.7	132.2	26.7
1P MAG	506.61	190.30	79.47	88.80	167.97	131.04	130.83	21.67
PHASE	-169.	-173.	-73.	144.	150.	169.	-38.	5.
2P MAG	27.03	101.20	26.02	1.25	44.14	35.90	4.44	3.82
PHASE	-65.	-174.	166.	175.	-4.	162.	148.	-4.
3P MAG	432.14	167.47	23.45	15.28	13.99	10.61	1.31	2.17
PHASE	-56.	125.	131.	119.	-122.	123.	46.	9.
4P MAG	26.63	191.59	13.62	1.97	9.52	7.08	0.31	1.16
PHASE	-82.	-83.	-56.	-119.	-106.	5.	-42.	-133.
5P MAG	37.49	102.92	7.43	2.11	9.96	7.69	1.29	2.25
PHASE	168.	145.	169.	-15.	80.	-114.	-135.	64.
15.13								
MEAN	4475.1	-4518.9	-738.1	340.7	1199.6	50.8	-222.2	9.7
RMS	1351.5	423.4	71.0	96.5	142.6	196.9	143.0	28.6
1/2 P-T-P	2616.5	890.6	155.2	148.1	197.2	315.5	201.2	44.3
1P MAG	1614.46	241.80	75.90	131.82	193.25	273.49	202.08	39.64
PHASE	144.	-169.	-60.	134.	156.	138.	-47.	-34.
2P MAG	212.24	73.42	20.45	0.51	39.47	20.88	1.41	3.92
PHASE	-22.	-155.	171.	83.	82.	178.	174.	7.
3P MAG	967.28	356.81	45.70	34.44	27.37	19.31	2.43	3.52
PHASE	-28.	148.	143.	147.	-102.	101.	22.	-86.
4P MAG	81.30	362.04	34.73	2.30	20.10	24.06	3.69	3.25
PHASE	-77.	-94.	-72.	-152.	-115.	-50.	-45.	120.
5P MAG	82.98	138.55	5.88	4.73	14.56	16.08	2.56	1.89
PHASE	170.	158.	-151.	-4.	87.	-84.	-84.	90.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
15.12								
MEAN	-154.3	-159.8	13996.8	13153.4	8286.4	7753.7	-1351.8	-2699.5
RMS	700.1	4246.6	1597.8	2124.4	927.2	1393.6	597.9	511.3
1/2 P-T-P	1171.3	9397.2	2777.6	3568.8	1610.0	2316.6	1116.0	1051.8
1P MAG	871.28	3653.05	1127.97	2410.02	647.34	1632.12	708.10	502.90
PHASE	145.	18.	-180.	147.	-175.	146.	-42.	-68.
2P MAG	121.64	2781.09	841.98	804.07	511.01	489.26	27.34	16.55
PHASE	-6.	-121.	116.	118.	117.	116.	101.	140.
3P MAG	441.26	2272.23	1474.55	1309.21	856.64	818.42	261.79	283.43
PHASE	152.	73.	-46.	-47.	-48.	-50.	-21.	148.
4P MAG	20.21	1934.44	914.88	871.17	519.58	526.79	341.49	398.55
PHASE	-80.	-68.	84.	87.	83.	84.	-96.	-96.
5P MAG	55.20	1114.44	290.06	272.66	166.79	159.61	116.22	112.83
PHASE	-19.	124.	11.	19.	13.	15.	-25.	152.
15.11								
MEAN	122.6	1626.7	16615.6	14920.1	9894.4	8916.9	-1106.9	-2170.9
RMS	960.5	944.1	1695.1	2098.6	978.2	1395.6	670.5	627.4
1/2 P-T-P	1598.3	1521.0	3094.7	3830.1	1864.9	2529.3	1203.5	1302.1
1P MAG	1226.11	1105.07	632.36	2079.89	315.99	1479.29	791.76	652.72
PHASE	150.	-39.	-169.	139.	-151.	138.	-47.	-60.
2P MAG	179.03	269.19	1123.14	1083.59	682.83	660.34	48.15	27.93
PHASE	1.	45.	134.	136.	135.	135.	102.	98.
3P MAG	541.11	669.60	1662.88	1456.03	958.72	915.92	279.16	314.76
PHASE	153.	-19.	-43.	-46.	-45.	-48.	-19.	149.
4P MAG	17.54	123.87	1089.67	1033.53	620.61	625.66	399.02	476.46
PHASE	-61.	-101.	79.	83.	78.	79.	-101.	-101.
5P MAG	65.54	71.65	317.47	303.46	189.82	180.02	108.20	111.94
PHASE	-17.	100.	23.	28.	25.	25.	-20.	161.
15. 5								
MEAN	-95.1	718.0	13235.3	12447.8	7817.7	7318.0	-1428.7	-2802.9
RMS	620.9	1878.2	1252.8	1850.3	727.4	1218.8	501.6	421.2
1/2 P-T-P	1035.5	4110.2	2216.0	2988.1	1275.2	1951.7	876.4	812.7
1P MAG	772.97	1591.12	950.26	2241.31	547.32	1509.08	638.85	477.28
PHASE	142.	17.	176.	144.	-180.	142.	-45.	-69.
2P MAG	112.75	1206.83	695.13	645.96	417.08	391.44	13.61	20.98
PHASE	-2.	-88.	114.	115.	114.	113.	131.	146.
3P MAG	395.87	887.58	1165.59	1027.52	675.22	642.57	192.23	221.77
PHASE	153.	110.	-49.	-50.	-50.	-53.	-21.	146.
4P MAG	3.09	1004.67	545.00	516.65	310.19	311.36	205.28	238.77
PHASE	-84.	-13.	80.	82.	78.	79.	-94.	-101.
5P MAG	43.22	771.30	281.85	263.31	165.65	159.03	85.54	95.40
PHASE	-36.	-150.	12.	16.	12.	13.	-24.	157.

RUN.PT	CHANNEL DESIGNATION							
	I	J	K	L	M	N	O	P
15.12								
MEAN	5227.1	-3618.5	-632.5	212.1	1691.3	-199.6	-50.6	47.8
RMS	2684.1	641.2	91.5	125.2	154.1	338.7	190.5	49.8
1/2 P-T-P	5176.2	1265.5	183.7	190.8	218.5	545.3	264.3	82.5
1P MAG	3363.38	259.76	77.96	167.12	194.27	470.62	269.05	69.05
PHASE	140.	-172.	-43.	131.	157.	131.	-51.	-46.
2P MAG	368.07	47.20	6.63	2.07	71.42	8.35	1.10	0.62
PHASE	-11.	-136.	158.	71.	112.	-52.	-41.	119.
3P MAG	1647.03	524.29	53.91	56.76	46.87	36.83	7.52	7.18
PHASE	-26.	151.	129.	150.	-100.	52.	10.	-130.
4P MAG	107.53	642.34	76.58	2.90	33.75	67.23	6.64	9.86
PHASE	-81.	-92.	-64.	-172.	-112.	-46.	-55.	130.
5P MAG	110.99	184.65	1.10	7.29	22.80	18.56	4.06	3.17
PHASE	174.	163.	-152.	5.	92.	-46.	-83.	146.
15.11								
MEAN	5803.4	-3090.3	-558.7	149.2	1976.1	-308.8	40.9	64.2
RMS	3726.0	714.7	112.6	141.9	128.0	441.2	219.0	66.3
1/2 P-T-P	6858.0	1320.2	227.2	212.9	218.9	742.7	303.7	112.1
1P MAG	4787.20	176.16	97.88	187.31	130.79	611.55	309.15	91.53
PHASE	144.	-173.	-29.	130.	149.	130.	-52.	-49.
2P MAG	464.97	12.99	17.10	1.75	99.61	30.97	4.10	4.84
PHASE	-6.	-117.	41.	66.	126.	4.	14.	-176.
3P MAG	2051.24	583.28	64.21	69.99	51.36	65.42	13.28	12.17
PHASE	-25.	152.	113.	152.	-97.	44.	12.	-138.
4P MAG	113.74	762.41	91.54	4.11	40.68	85.51	8.32	12.49
PHASE	-66.	-97.	-66.	-180.	-117.	-46.	-51.	135.
5P MAG	127.27	182.83	5.79	8.57	22.00	20.23	3.02	3.44
PHASE	179.	173.	-114.	5.	93.	-55.	-72.	150.
15. 5								
MEAN	5856.1	-3752.9	-653.9	209.6	1597.9	-197.3	-50.9	49.3
RMS	2399.2	450.6	74.0	117.7	134.3	302.9	178.9	44.6
1/2 P-T-P	4522.9	956.9	155.2	176.6	192.2	473.5	247.6	69.0
1P MAG	3023.20	218.33	79.75	158.40	173.14	424.79	252.77	62.39
PHASE	138.	-172.	-44.	129.	153.	129.	-53.	-49.
2P MAG	303.11	52.04	15.21	2.10	58.85	5.83	0.65	0.90
PHASE	-11.	-150.	149.	55.	111.	-162.	146.	-27.
3P MAG	1478.57	404.93	44.24	50.51	37.89	29.89	6.64	5.80
PHASE	-27.	149.	130.	150.	-102.	43.	0.	-145.
4P MAG	101.99	385.82	38.84	2.05	20.69	36.67	4.91	4.14
PHASE	-87.	-97.	-64.	165.	-120.	-44.	-52.	131.
5P MAG	94.66	157.79	4.05	5.99	16.71	17.13	2.06	2.19
PHASE	167.	167.	-117.	-5.	87.	-63.	-67.	139.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
19.15								
MEAN	-332.0	-757.0	9127.1	8869.7	5805.7	5448.2	-1640.3	-2179.0
RMS	981.5	1162.2	933.0	1767.6	624.1	1339.1	629.3	634.2
1/2 P-T-P	1667.8	2150.1	1644.6	2875.7	1069.3	2115.5	1037.2	1069.1
1P MAG	1277.43	1015.02	1012.35	2361.08	687.25	1812.75	870.75	874.17
PHASE	141.	167.	-158.	128.	-142.	128.	115.	-78.
2P MAG	80.68	975.42	707.98	686.19	479.77	468.37	45.33	63.18
PHASE	21.	26.	-157.	-156.	-157.	-155.	153.	135.
3P MAG	534.48	543.56	412.18	399.37	245.72	252.33	125.04	139.76
PHASE	-10.	26.	-81.	-70.	-82.	-74.	81.	97.
4P MAG	32.09	392.45	107.43	115.06	66.52	76.52	9.69	19.84
PHASE	93.	-142.	67.	63.	65.	57.	124.	167.
5P MAG	35.87	25.78	35.60	36.73	21.94	21.49	26.45	20.57
PHASE	93.	-4.	-3.	-13.	-3.	-26.	-150.	-162.
19.21								
MEAN	-442.2	-2416.3	-2045.3	1410.9	-1798.9	356.6	-2715.8	-4960.4
RMS	477.9	2641.6	1389.6	1490.0	889.5	996.9	353.7	192.6
1/2 P-T-P	747.7	5452.5	2348.8	2453.3	1475.2	1626.5	663.4	373.5
1P MAG	555.53	2536.35	1793.00	1950.76	1149.04	1310.80	457.13	169.72
PHASE	-59.	-45.	146.	150.	149.	150.	145.	168.
2P MAG	98.71	1088.48	538.58	543.38	358.16	366.16	29.89	24.72
PHASE	174.	169.	-43.	-47.	-43.	-47.	-51.	-61.
3P MAG	369.30	1834.33	455.66	433.43	279.50	274.06	139.74	142.67
PHASE	-31.	-61.	-148.	-146.	-152.	-149.	22.	32.
4P MAG	37.40	1113.31	372.59	377.91	229.02	238.56	125.55	137.26
PHASE	41.	33.	-123.	-122.	-123.	-125.	55.	54.
5P MAG	16.25	658.56	50.83	36.12	27.29	24.37	25.72	25.25
PHASE	94.	-151.	104.	122.	104.	120.	-67.	-54.
19.20								
MEAN	-476.4	-2107.5	1351.9	3588.4	516.3	1834.0	-2410.1	-4078.5
RMS	322.6	1787.4	1188.4	1761.4	756.2	1196.5	433.1	171.7
1/2 P-T-P	544.2	3361.5	1833.0	2553.9	1190.7	1722.7	785.9	383.4
1P MAG	253.05	1485.57	1594.84	2435.33	1016.87	1658.72	587.45	166.32
PHASE	-74.	-86.	143.	134.	146.	134.	129.	-114.
2P MAG	44.70	371.28	265.08	297.71	180.63	197.65	20.61	13.42
PHASE	157.	-128.	-86.	-83.	-84.	-83.	-148.	-149.
3P MAG	374.55	1413.96	360.73	331.67	218.66	208.41	118.77	117.67
PHASE	-27.	-31.	-129.	-121.	-133.	-125.	40.	49.
4P MAG	35.08	306.58	262.99	254.15	159.46	159.77	94.70	101.86
PHASE	42.	33.	-131.	-129.	-129.	-131.	52.	51.
5P MAG	19.61	377.13	22.17	11.75	17.50	6.91	18.89	9.47
PHASE	112.	125.	32.	-12.	-1.	-31.	-156.	-164.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
19.15								
MEAN	3157.4	-2781.2	-492.2	155.9	1568.7	-148.0	-72.6	22.3
RMS	4714.4	247.2	112.9	184.6	134.5	423.7	284.9	60.8
1/2 P-T-P	7145.6	507.2	173.5	315.2	247.4	565.9	417.0	80.9
1P MAG	6342.38	152.50	149.15	250.94	168.24	593.30	402.62	84.87
PHASE	139.	-131.	-47.	104.	147.	113.	-71.	-63.
2P MAG	615.12	106.46	38.29	2.48	83.84	44.44	6.41	6.86
PHASE	10.	140.	113.	97.	-176.	72.	83.	-100.
3P MAG	1940.13	227.35	18.40	71.41	10.74	61.58	13.10	11.02
PHASE	175.	98.	95.	-6.	3.	166.	176.	-25.
4P MAG	233.57	27.97	17.74	5.74	8.26	25.75	3.20	3.35
PHASE	-110.	-151.	170.	67.	69.	-150.	-137.	22.
5P MAG	103.99	39.01	14.16	3.37	5.29	19.59	1.83	3.35
PHASE	-99.	-138.	56.	96.	-151.	45.	67.	-155.
19.21								
MEAN	2825.1	-5539.2	-716.4	586.7	134.1	600.6	-564.9	-89.4
RMS	2217.5	360.2	59.4	46.3	225.9	95.2	39.7	21.1
1/2 P-T-P	4171.1	701.5	115.3	87.4	322.8	144.9	56.9	31.1
1P MAG	2835.02	349.81	63.78	42.83	312.04	124.65	55.62	28.42
PHASE	-73.	164.	-126.	139.	143.	-101.	-28.	82.
2P MAG	99.32	9.70	10.19	5.02	67.10	30.36	6.02	5.97
PHASE	40.	122.	50.	164.	-52.	89.	98.	-85.
3P MAG	1333.94	259.33	35.71	49.13	2.28	24.83	2.12	3.51
PHASE	142.	31.	12.	-37.	109.	75.	84.	-99.
4P MAG	66.67	239.04	36.38	2.67	3.74	28.29	3.94	5.08
PHASE	160.	56.	61.	4.	23.	66.	55.	-115.
5P MAG	40.62	52.23	10.81	0.84	5.43	15.23	2.21	2.90
PHASE	-97.	-58.	45.	102.	-81.	42.	57.	-139.
19.20								
MEAN	3027.7	-4703.1	-652.8	426.2	558.4	347.8	-396.5	-51.4
RMS	1510.3	293.2	51.4	95.0	227.2	60.0	117.5	11.8
1/2 P-T-P	2912.3	578.4	94.3	176.4	335.5	117.6	171.3	22.7
1P MAG	1596.90	285.07	56.87	124.72	318.83	64.87	165.81	13.13
PHASE	-92.	156.	-87.	115.	133.	149.	-60.	12.
2P MAG	195.77	37.89	16.50	1.25	35.64	33.49	8.23	4.51
PHASE	8.	161.	117.	119.	-102.	98.	86.	-61.
3P MAG	1398.70	208.14	24.39	49.74	4.19	30.96	4.79	7.24
PHASE	151.	47.	30.	-29.	13.	115.	134.	-53.
4P MAG	101.36	176.81	25.16	4.72	4.36	15.34	1.72	2.43
PHASE	-163.	51.	65.	21.	42.	76.	82.	-123.
5P MAG	40.90	18.98	18.01	1.83	3.66	24.28	1.93	5.15
PHASE	-83.	-134.	56.	134.	-153.	40.	55.	-134.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
28.14								
MEAN	-428.7	-3765.3	600.2	3130.3	-67.8	1538.2	-2457.9	-4180.1
RMS	369.9	4361.7	445.8	1022.1	266.7	664.5	304.8	262.4
1/2 P-T-P	734.9	9249.2	861.1	1688.2	531.1	1084.3	552.4	512.2
1P MAG	358.01	917.65	272.82	1334.21	138.25	875.52	395.05	322.32
PHASE	-143.	-143.	140.	120.	163.	123.	109.	-73.
2P MAG	43.38	4406.50	320.16	329.63	210.47	212.22	31.19	21.57
PHASE	145.	-49.	-87.	-85.	-83.	-84.	-130.	-156.
3P MAG	375.80	1638.98	299.78	273.89	176.72	165.24	105.51	108.87
PHASE	-29.	-77.	-142.	-131.	-148.	-134.	31.	45.
4P MAG	43.51	2280.37	345.70	338.80	210.93	202.11	108.23	120.42
PHASE	31.	34.	-146.	-144.	-143.	-146.	38.	38.
5P MAG	20.53	1923.36	7.03	21.54	5.62	13.75	4.36	6.19
PHASE	118.	61.	-76.	-102.	-44.	-113.	153.	71.
19.19								
MEAN	-406.2	-3252.0	4706.5	5719.3	2793.3	3288.1	-2123.2	-3224.2
RMS	439.1	2650.7	857.8	1544.1	562.8	1090.0	418.4	404.2
1/2 P-T-P	832.8	5056.1	1508.1	2179.2	1003.2	1510.4	744.9	699.1
1P MAG	462.75	2468.68	1058.05	2108.82	704.43	1497.49	568.38	546.10
PHASE	137.	179.	-174.	137.	-167.	136.	125.	-89.
2P MAG	19.71	787.34	392.16	371.74	253.81	248.12	39.51	36.15
PHASE	49.	-35.	-148.	-144.	-148.	-144.	-167.	163.
3P MAG	410.12	1335.61	389.76	374.51	235.89	236.44	109.89	116.15
PHASE	-16.	-67.	-101.	-92.	-104.	-96.	66.	77.
4P MAG	44.99	1033.97	185.76	179.53	114.89	111.68	75.40	78.96
PHASE	50.	117.	-145.	-141.	-145.	-143.	45.	49.
5P MAG	26.80	1104.33	17.06	14.33	10.65	8.84	12.83	4.76
PHASE	127.	139.	35.	-12.	27.	-33.	-112.	-130.
19.14								
MEAN	-239.9	-2141.8	8106.2	7898.9	5101.2	4782.9	-1841.2	-2370.3
RMS	396.3	2952.7	877.8	1657.2	581.3	1231.2	539.9	611.9
1/2 P-T-P	1544.9	5003.6	1531.4	2642.5	972.3	1933.2	889.9	1010.1
1P MAG	1149.18	1951.93	686.33	2123.79	480.90	1612.79	741.92	844.31
PHASE	140.	149.	-149.	123.	-130.	122.	112.	-77.
2P MAG	84.98	2947.61	872.76	833.67	577.01	561.07	59.96	56.04
PHASE	1.	29.	-170.	-168.	-169.	-169.	164.	146.
3P MAG	524.90	1332.75	526.54	509.99	317.43	325.28	133.65	151.15
PHASE	-18.	-0.	-81.	-74.	-82.	-77.	77.	92.
4P MAG	43.90	341.92	106.63	97.41	61.89	61.04	28.66	19.49
PHASE	63.	-174.	125.	120.	124.	113.	22.	12.
5P MAG	36.79	799.46	77.41	76.10	47.33	44.54	49.23	42.76
PHASE	101.	133.	-8.	-13.	-9.	-20.	-166.	-175.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
28.14								
MEAN	-34243.1	-4761.7	-624.7	440.5	457.0	390.8	-402.2	-81.5
RMS	102.4	225.0	71.3	100.5	91.9	75.6	127.0	15.2
1/2 P-T-P	0.2	464.5	111.0	183.7	149.6	135.8	186.6	23.1
1P MAG	0.03	38.38	89.59	133.84	123.06	94.47	179.38	20.57
PHASE	-12.	-80.	-59.	110.	112.	133.	-67.	-88.
2P MAG	0.03	49.98	18.00	1.22	37.40	32.64	5.23	5.14
PHASE	-25.	168.	119.	98.	-105.	102.	98.	-74.
3P MAG	0.03	190.70	24.95	47.59	8.51	26.34	5.85	1.22
PHASE	-37.	40.	25.	-31.	43.	110.	129.	-77.
4P MAG	0.04	216.76	25.10	4.99	3.61	15.25	2.24	1.73
PHASE	-50.	37.	63.	12.	43.	82.	80.	-114.
5P MAG	0.03	4.47	18.38	1.41	1.60	21.06	2.09	2.32
PHASE	-62.	36.	50.	140.	-134.	37.	54.	-124.
19.19								
MEAN	3247.4	-3895.5	-589.5	283.1	976.0	101.9	-231.6	-15.0
RMS	1854.9	251.5	85.5	136.1	148.0	186.5	190.2	24.9
1/2 P-T-P	3335.2	497.7	135.3	238.2	240.7	260.7	280.0	38.4
1P MAG	2094.04	217.53	111.79	184.40	202.32	256.74	268.85	33.24
PHASE	146.	-142.	-66.	106.	152.	110.	-69.	-59.
2P MAG	395.47	73.93	25.04	1.97	50.10	32.75	4.66	5.66
PHASE	8.	156.	130.	100.	-160.	96.	98.	-66.
3P MAG	1515.50	199.45	19.25	54.44	4.98	41.56	8.90	8.75
PHASE	166.	77.	66.	-13.	-26.	145.	161.	-42.
4P MAG	179.34	133.39	23.09	6.26	5.06	15.67	1.02	2.63
PHASE	-135.	46.	83.	34.	63.	116.	117.	-75.
5P MAG	57.73	18.06	16.89	2.16	3.64	21.23	1.94	3.80
PHASE	-83.	-101.	75.	124.	-101.	67.	80.	-132.
19.14								
MEAN	3649.6	-3054.5	-521.0	158.1	1406.0	-128.0	-72.7	20.2
RMS	4240.6	251.1	110.8	175.5	117.0	369.3	268.2	53.8
1/2 P-T-P	6601.5	471.5	168.1	304.1	216.1	486.9	391.6	73.5
1P MAG	5641.92	168.89	150.21	238.39	125.78	516.63	379.04	74.92
PHASE	139.	-108.	-50.	104.	139.	113.	-72.	-64.
2P MAG	604.95	96.67	35.07	1.41	104.23	41.37	5.87	6.23
PHASE	7.	148.	126.	163.	176.	91.	47.	-81.
3P MAG	1921.38	254.44	17.03	68.68	15.89	58.41	11.63	10.62
PHASE	167.	93.	82.	-13.	-29.	157.	170.	-30.
4P MAG	249.25	40.74	2.86	7.58	7.59	17.08	1.89	1.90
PHASE	-125.	-10.	89.	54.	62.	-140.	-126.	46.
5P MAG	98.44	74.96	13.10	3.83	8.13	19.30	1.12	3.42
PHASE	-94.	-163.	73.	99.	-165.	49.	37.	-157.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
19.18								
MEAN	-128.5	-602.1	10120.8	9176.3	6474.1	5662.8	-1681.1	-1903.3
RMS	1074.0	2006.7	1361.3	2223.6	869.6	1660.5	734.5	638.6
1/2 P-T-P	1885.1	3867.7	2315.7	3618.0	1426.4	2650.9	1097.0	1024.4
1P MAG	1410.44	1338.11	1479.25	2912.78	918.85	2209.35	1026.09	883.51
PHASE	130.	169.	-177.	131.	-163.	129.	118.	-85.
2P MAG	117.88	1456.51	1150.55	1112.21	775.90	752.26	57.97	77.21
PHASE	5.	-12.	-174.	-174.	-174.	-174.	154.	129.
3P MAG	548.35	1608.32	406.74	374.34	236.30	237.56	112.49	136.54
PHASE	-8.	-9.	-73.	-61.	-74.	-65.	90.	105.
4P MAG	43.01	589.92	80.73	72.19	49.29	47.38	15.06	13.10
PHASE	71.	79.	105.	100.	105.	92.	72.	86.
5P MAG	32.12	737.40	76.10	82.29	44.27	52.44	39.66	44.11
PHASE	88.	121.	-73.	-67.	-73.	-72.	121.	115.
19.17								
MEAN	20.7	-39.0	11755.4	10185.7	7598.9	6369.7	-1576.3	-1515.9
RMS	1366.1	1618.4	1378.1	2191.2	898.4	1693.5	842.0	760.0
1/2 P-T-P	2366.4	2560.2	2429.9	3705.1	1451.7	2784.8	1258.1	1265.1
1P MAG	1810.88	1788.01	1190.00	2725.64	753.10	2177.52	1175.84	1050.15
PHASE	132.	167.	-171.	125.	-147.	123.	114.	-78.
2P MAG	156.83	736.64	1401.01	1352.50	948.68	920.75	62.24	87.16
PHASE	7.	-34.	-172.	-173.	-172.	-172.	138.	126.
3P MAG	652.13	983.94	609.99	546.82	359.47	357.08	147.61	185.68
PHASE	-5.	-14.	-68.	-57.	-68.	-60.	98.	115.
4P MAG	41.46	52.37	173.42	168.24	105.11	109.01	7.90	15.34
PHASE	78.	77.	106.	104.	105.	98.	-10.	-81.
5P MAG	37.28	147.23	19.26	34.02	11.94	23.13	21.93	18.00
PHASE	80.	-102.	-45.	-37.	-41.	-55.	-144.	-160.
19.16								
MEAN	171.5	801.2	13094.7	11015.8	8520.9	6944.8	-1493.1	-1194.5
RMS	1641.6	1511.6	1681.2	2117.0	1172.8	1672.6	914.3	911.5
1/2 P-T-P	2796.2	2503.7	2650.6	3774.7	1956.2	2888.9	1384.8	1481.2
1P MAG	2216.59	1963.38	1511.26	2395.04	1109.24	2026.84	1278.68	1265.01
PHASE	128.	134.	-153.	132.	-129.	128.	114.	-81.
2P MAG	162.80	336.18	1728.87	1715.55	1181.48	1166.50	59.98	100.51
PHASE	4.	-3.	-172.	-172.	-172.	-171.	120.	114.
3P MAG	666.65	746.29	553.55	468.44	311.12	315.22	125.40	182.60
PHASE	-4.	-16.	-66.	-51.	-67.	-54.	99.	120.
4P MAG	55.85	145.66	210.38	194.26	131.31	127.84	22.01	31.54
PHASE	78.	18.	80.	78.	79.	73.	-139.	-134.
5P MAG	41.66	130.34	53.29	55.89	33.46	31.57	49.95	37.06
PHASE	74.	91.	18.	-12.	16.	-27.	-151.	-163.

RUN.PT	CHANNEL DESIGNATION							
	I	J	K	L	M	N	O	P
19.18								
MEAN	3645.1	-2620.4	-487.3	80.9	1659.4	-268.2	23.7	40.6
RMS	5246.8	262.3	103.4	190.5	203.1	486.8	300.6	69.8
1/2 P-T-P	7041.3	545.0	164.9	325.0	345.8	652.6	436.6	90.4
1P MAG	7105.00	241.84	137.48	259.05	254.18	683.24	424.80	97.68
PHASE	127.	-171.	-50.	105.	148.	109.	-72.	-68.
2P MAG	737.90	107.05	38.60	3.60	131.89	44.86	5.96	6.35
PHASE	5.	137.	112.	94.	171.	57.	39.	-109.
3P MAG	1987.22	215.65	14.49	73.39	10.21	67.21	13.88	11.82
PHASE	177.	109.	117.	-3.	1.	173.	-175.	-18.
4P MAG	258.05	8.68	12.22	7.09	8.24	15.80	1.69	1.38
PHASE	-114.	33.	121.	64.	77.	-154.	-140.	9.
5P MAG	101.39	62.04	16.01	4.40	5.11	10.93	1.32	1.25
PHASE	-104.	123.	109.	83.	110.	105.	129.	-131.
19.17								
MEAN	3811.5	-2257.4	-460.4	20.5	1863.4	-387.6	105.9	58.6
RMS	6782.8	274.3	117.0	209.7	179.8	613.4	336.2	89.4
1/2 P-T-P	9067.0	524.7	184.7	361.4	320.7	826.3	488.2	116.8
1P MAG	9246.89	144.70	156.08	282.88	199.42	860.79	475.05	125.13
PHASE	129.	-165.	-42.	105.	143.	110.	-73.	-68.
2P MAG	901.61	119.89	44.03	4.03	155.26	51.38	5.77	8.36
PHASE	8.	133.	109.	83.	170.	47.	46.	-117.
3P MAG	2363.68	301.70	21.52	88.56	13.65	89.88	17.34	15.00
PHASE	-180.	118.	133.	-0.	-27.	177.	-170.	-13.
4P MAG	301.31	43.31	2.78	7.22	8.99	24.52	2.87	2.70
PHASE	-114.	-71.	-150.	69.	84.	-117.	-104.	66.
5P MAG	101.62	34.89	7.23	3.76	6.31	10.58	1.39	1.78
PHASE	-104.	-135.	94.	84.	-139.	79.	124.	-150.
19.16								
MEAN	3912.9	-1950.5	-444.8	-25.0	2029.3	-498.4	173.9	75.6
RMS	8381.9	296.9	130.0	219.0	184.6	751.3	360.7	109.9
1/2 P-T-P	10961.6	612.2	229.5	376.3	325.2	1053.4	524.5	152.4
1P MAG	11555.55	205.13	170.90	295.20	183.92	1053.55	509.54	153.81
PHASE	124.	-147.	-40.	104.	167.	107.	-75.	-72.
2P MAG	1014.82	127.33	42.34	5.74	182.54	71.33	10.38	11.37
PHASE	10.	118.	87.	125.	170.	31.	22.	-136.
3P MAG	2405.55	276.84	34.86	92.80	12.27	110.68	20.84	18.07
PHASE	-178.	124.	169.	1.	-19.	-176.	-163.	-4.
4P MAG	372.87	69.43	16.92	8.89	8.21	15.23	1.32	1.63
PHASE	-111.	-122.	109.	71.	86.	-171.	-140.	-23.
5P MAG	122.46	70.48	20.49	3.49	9.26	32.68	3.59	4.79
PHASE	-105.	-147.	68.	87.	-155.	58.	76.	-143.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
19.24								
MEAN	-408.3	-2737.1	-3684.5	-58.7	-2893.8	-639.3	-3023.9	-5294.9
RMS	404.9	2709.3	993.2	981.2	616.7	647.5	239.0	139.5
1/2 P-T-P	641.1	5461.4	1820.5	1758.2	1127.4	1137.6	456.4	252.6
1P MAG	469.35	2763.65	1205.24	1192.62	734.16	791.44	292.35	98.74
PHASE	-65.	-54.	137.	146.	140.	147.	139.	155.
2P MAG	97.36	737.98	550.18	550.59	369.11	366.44	32.37	28.38
PHASE	167.	177.	-53.	-53.	-52.	-55.	-63.	-51.
3P MAG	310.71	1892.26	299.20	266.88	192.97	171.99	102.75	97.17
PHASE	-22.	-49.	-172.	-170.	-176.	-175.	22.	28.
4P MAG	36.83	1209.63	349.17	350.50	214.43	215.39	115.82	121.04
PHASE	24.	31.	-133.	-132.	-133.	-134.	49.	47.
5P MAG	11.13	220.86	32.16	19.86	19.21	12.16	10.31	10.40
PHASE	134.	-114.	93.	85.	88.	93.	-76.	-48.
19.23								
MEAN	-442.0	-4759.2	312.9	2596.5	-177.5	1155.5	-2633.2	-4272.4
RMS	342.8	2616.5	1284.2	1699.0	819.0	1148.7	406.2	166.4
1/2 P-T-P	566.8	5614.4	1949.7	2342.2	1278.4	1558.3	721.6	350.2
1P MAG	328.72	1940.47	1748.48	2355.30	1113.85	1596.17	550.83	169.24
PHASE	-54.	-61.	145.	138.	149.	137.	134.	-137.
2P MAG	25.90	1766.16	219.16	238.12	156.85	154.52	19.92	18.31
PHASE	171.	-39.	-120.	-112.	-119.	-112.	-153.	-124.
3P MAG	353.12	1474.78	353.28	317.99	223.90	204.28	115.19	108.09
PHASE	-19.	-5.	-129.	-120.	-133.	-125.	42.	51.
4P MAG	34.73	145.42	244.77	242.34	152.32	150.32	87.49	94.97
PHASE	34.	125.	-130.	-128.	-130.	-129.	51.	53.
5P MAG	15.98	719.95	33.20	27.23	19.44	17.42	19.33	14.78
PHASE	141.	36.	-6.	-17.	-10.	-32.	-179.	163.
23. 2								
MEAN	-429.5	-4856.0	774.5	3015.4	39.4	1535.3	-2433.6	-4338.1
RMS	288.6	2657.8	1112.5	1584.0	713.7	1082.0	374.8	211.9
1/2 P-T-P	493.1	5784.1	1780.4	2178.3	1161.5	1479.0	661.0	443.2
1P MAG	234.10	1954.29	1485.29	2187.09	957.87	1498.43	509.23	257.49
PHASE	-51.	85.	152.	137.	161.	142.	131.	-120.
2P MAG	22.01	2687.54	257.32	252.89	159.54	165.28	29.57	18.78
PHASE	-165.	-88.	-135.	-124.	-121.	-114.	-159.	-159.
3P MAG	329.48	910.37	382.85	345.72	235.44	221.18	104.29	106.56
PHASE	-24.	-132.	-137.	-129.	-122.	-114.	36.	48.
4P MAG	48.49	1038.69	221.92	212.76	135.91	134.10	78.92	85.36
PHASE	11.	87.	-147.	-144.	-124.	-122.	36.	36.
5P MAG	14.53	265.55	41.58	38.20	23.01	21.65	17.83	15.54
PHASE	108.	69.	-6.	-13.	22.	11.	159.	154.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
19.24								
MEAN	2799.7	-5992.5	-769.8	610.4	-116.4	612.3	-577.4	-93.4
RMS	1979.9	250.8	54.3	33.6	149.4	103.3	21.7	21.4
1/2 P-T-P	3657.5	453.8	106.1	58.5	223.0	154.8	35.1	33.6
1P MAG	2571.54	192.29	64.57	22.72	199.63	141.97	30.20	29.57
PHASE	-76.	161.	-113.	159.	137.	-96.	-3.	95.
2P MAG	133.47	8.07	10.20	5.37	66.71	23.80	4.76	4.86
PHASE	53.	21.	14.	153.	-59.	77.	97.	-85.
3P MAG	1096.13	178.57	28.44	41.23	13.26	10.60	0.31	2.61
PHASE	154.	24.	4.	-26.	87.	62.	91.	-93.
4P MAG	60.41	220.05	24.90	3.52	2.75	17.46	2.59	3.04
PHASE	151.	47.	50.	1.	22.	55.	57.	-123.
5P MAG	30.34	24.24	8.79	1.25	2.73	11.29	1.51	1.73
PHASE	-73.	-56.	58.	136.	-66.	48.	84.	-143.
19.23								
MEAN	3160.0	-4997.2	-689.0	430.3	391.7	339.6	-396.0	-51.4
RMS	1555.4	301.1	51.6	81.3	231.6	42.9	96.0	10.3
1/2 P-T-P	3063.8	549.0	97.7	154.3	336.3	83.4	141.1	18.6
1P MAG	1746.82	324.63	59.43	104.33	325.79	37.73	135.49	11.19
PHASE	-73.	162.	-106.	116.	138.	176.	-61.	33.
2P MAG	194.71	31.12	13.15	1.05	30.43	28.41	5.43	4.20
PHASE	5.	177.	122.	106.	-126.	94.	84.	-66.
3P MAG	1317.42	192.95	23.22	48.13	2.65	25.99	5.00	6.52
PHASE	157.	49.	29.	-22.	23.	117.	143.	-52.
4P MAG	93.13	161.29	25.25	4.74	3.80	18.19	2.70	2.67
PHASE	-174.	53.	71.	2.	40.	89.	96.	-101.
5P MAG	30.42	24.46	15.75	1.88	2.38	19.80	1.18	4.51
PHASE	-52.	-178.	68.	152.	180.	49.	82.	-126.
23. 2								
MEAN	3012.0	-4811.9	-632.5	445.3	459.4	353.8	-386.4	-36.3
RMS	1239.8	274.7	55.1	92.1	206.7	49.8	107.1	8.4
1/2 P-T-P	2445.5	468.1	97.0	167.3	303.9	92.1	155.0	16.5
1P MAG	1308.01	295.44	69.01	122.70	290.12	55.10	151.28	7.91
PHASE	-75.	172.	-100.	111.	139.	128.	-67.	-9.
2P MAG	220.32	41.44	14.87	2.05	33.82	30.25	4.91	4.56
PHASE	-1.	159.	109.	91.	-140.	90.	96.	-74.
3P MAG	1137.98	182.24	21.62	43.31	2.41	25.37	3.10	6.64
PHASE	155.	45.	38.	-26.	180.	114.	142.	-63.
4P MAG	124.31	142.22	19.91	6.21	3.14	12.79	1.40	1.94
PHASE	178.	36.	54.	-8.	34.	73.	47.	-98.
5P MAG	28.99	25.48	10.66	1.60	1.26	11.98	0.72	2.74
PHASE	-89.	172.	62.	100.	133.	35.	57.	-150.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
27. 3								
MEAN	-468.3	-4119.2	-597.8	1861.8	-822.5	666.3	-2687.2	-4452.2
RMS	272.7	2571.1	520.6	565.4	352.9	378.3	185.3	282.4
1/2 P-T-P	502.9	4866.2	956.5	876.8	637.8	591.4	322.2	472.9
1P MAG	251.01	444.44	474.46	591.14	349.40	402.09	221.28	371.57
PHASE	-158.	34.	-24.	91.	-34.	92.	91.	-61.
2P MAG	53.84	2493.38	414.08	405.94	266.42	273.29	27.75	11.09
PHASE	154.	-64.	-87.	-85.	-86.	-86.	-112.	-119.
3P MAG	283.66	1465.07	267.96	240.13	168.27	152.44	89.54	91.03
PHASE	-13.	-38.	-134.	-126.	-138.	-130.	45.	56.
4P MAG	46.93	629.49	261.12	250.68	160.97	158.27	90.04	98.14
PHASE	42.	-66.	-129.	-126.	-128.	-129.	55.	54.
5P MAG	7.07	1608.83	12.25	11.45	9.44	5.07	4.92	2.58
PHASE	133.	86.	63.	50.	69.	65.	-169.	158.
28.13								
MEAN	-384.2	-2691.0	-752.8	1919.2	-928.4	749.0	-2737.1	-4440.5
RMS	286.7	3156.5	412.7	684.6	272.5	435.3	217.9	251.1
1/2 P-T-P	558.2	5596.7	954.9	1074.8	608.2	695.5	387.8	457.7
1P MAG	300.89	567.45	115.35	793.20	160.35	513.58	276.43	327.57
PHASE	-136.	139.	-101.	120.	-97.	124.	103.	-74.
2P MAG	43.66	3571.71	392.49	390.72	251.57	245.15	38.78	20.56
PHASE	134.	-55.	-111.	-108.	-109.	-107.	-133.	-136.
3P MAG	263.95	1388.84	309.71	288.51	182.71	173.15	84.83	83.64
PHASE	-24.	-66.	-140.	-133.	-143.	-134.	35.	45.
4P MAG	46.57	1096.34	271.02	260.61	158.02	154.67	83.50	88.57
PHASE	27.	49.	-139.	-137.	-139.	-138.	42.	42.
5P MAG	7.09	835.44	5.65	15.19	5.49	7.14	1.62	5.00
PHASE	161.	98.	-122.	-64.	-45.	-71.	17.	11.
19.22								
MEAN	-362.1	-3342.6	3727.7	4779.8	2131.6	2643.6	-2318.1	-3399.0
RMS	310.3	2210.0	1096.9	1859.2	701.8	1282.3	466.4	294.0
1/2 P-T-P	544.2	4611.3	1652.0	2612.7	1048.0	1786.7	805.0	548.2
1P MAG	135.75	1985.71	1448.47	2574.80	932.32	1781.66	639.00	380.05
PHASE	127.	-107.	159.	135.	163.	134.	127.	-100.
2P MAG	3.08	847.51	273.31	243.33	171.34	159.37	30.31	28.60
PHASE	-85.	-50.	-156.	-147.	-156.	-148.	-168.	169.
3P MAG	414.74	1174.07	428.81	420.73	260.65	263.45	121.09	123.70
PHASE	-13.	15.	-98.	-89.	-100.	-92.	68.	79.
4P MAG	41.76	903.21	207.17	203.49	127.50	130.08	86.37	93.09
PHASE	43.	143.	-139.	-136.	-140.	-139.	49.	49.
5P MAG	17.39	962.71	9.04	4.13	5.30	3.28	8.88	3.75
PHASE	142.	81.	92.	-13.	82.	-79.	-89.	-80.

RUN.PT		CHANNEL DESIGNATION							
		I	J	K	L	M	N	O	P
27. 3									
	MEAN	2910.5	-5180.7	-667.4	477.4	252.5	390.6	-389.6	-66.3
	RMS	1293.2	233.9	78.8	86.8	53.2	46.2	97.3	6.1
1/2	P-T-P	2083.3	429.9	119.2	155.8	92.6	82.7	141.1	10.5
1P	MAG	1486.47	209.07	106.27	116.48	55.99	53.78	137.43	6.80
	PHASE	-131.	-39.	-58.	110.	40.	134.	-65.	-90.
2P	MAG	212.62	27.51	12.21	1.15	48.41	27.98	4.23	3.81
	PHASE	35.	165.	118.	150.	-97.	100.	111.	-59.
3P	MAG	1035.16	165.20	19.40	38.02	6.36	17.85	3.01	2.38
	PHASE	166.	51.	40.	-15.	74.	125.	139.	-31.
4P	MAG	123.80	176.12	20.10	6.05	4.02	9.69	1.27	1.31
	PHASE	-155.	54.	65.	23.	50.	79.	98.	-111.
5P	MAG	18.51	5.00	9.40	0.71	0.29	10.74	0.84	0.98
	PHASE	-100.	-97.	72.	66.	-169.	55.	92.	-85.
28.13									
	MEAN	1579.5	-5141.9	-665.9	451.5	257.0	393.9	-403.9	-81.5
	RMS	1603.6	191.8	70.6	82.9	53.6	46.5	103.6	11.3
1/2	P-T-P	2428.9	401.2	106.6	147.4	95.6	84.1	150.9	17.5
1P	MAG	2017.21	123.53	94.72	112.22	59.11	54.14	146.40	15.33
	PHASE	-124.	-64.	-65.	108.	109.	137.	-69.	-98.
2P	MAG	250.96	31.03	12.01	1.13	46.00	27.57	5.00	3.76
	PHASE	25.	177.	120.	58.	-121.	94.	94.	-90.
3P	MAG	994.17	155.82	18.43	33.61	1.19	19.30	3.83	0.30
	PHASE	154.	40.	30.	-27.	69.	105.	125.	-91.
4P	MAG	132.04	162.22	18.10	5.43	2.60	10.46	1.75	0.95
	PHASE	-175.	42.	51.	7.	12.	71.	59.	-149.
5P	MAG	8.04	6.95	8.31	0.66	1.91	9.48	0.83	1.59
	PHASE	-9.	-23.	60.	-160.	-53.	52.	83.	-72.
19.22									
	MEAN	3491.6	-4154.1	-625.2	281.7	820.4	97.8	-231.5	-14.9
	RMS	1223.5	280.3	64.7	126.5	208.1	138.8	168.4	18.5
1/2	P-T-P	2190.5	489.1	106.9	225.4	306.0	204.7	246.4	30.4
1P	MAG	667.06	276.51	78.90	169.82	291.71	187.18	237.90	23.36
	PHASE	164.	177.	-78.	109.	141.	112.	-68.	-54.
2P	MAG	302.64	56.46	21.97	3.01	35.99	26.90	4.96	5.45
	PHASE	-5.	162.	132.	56.	-163.	101.	112.	-56.
3P	MAG	1555.98	214.76	21.94	55.77	6.21	43.14	7.48	9.04
	PHASE	169.	80.	67.	-12.	-32.	142.	155.	-44.
4P	MAG	176.30	153.35	28.77	5.59	5.97	19.65	1.90	3.09
	PHASE	-147.	48.	71.	22.	54.	89.	66.	-98.
5P	MAG	36.27	16.92	14.65	0.97	3.04	18.08	1.84	3.36
	PHASE	-86.	-70.	84.	145.	-95.	74.	105.	-126.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
19.13								
MEAN	-190.1	-1391.0	7046.6	6869.7	4396.6	4090.8	-2073.7	-2571.2
RMS	798.4	1664.8	1222.9	1754.7	833.9	1278.2	515.2	559.9
1/2 P-T-P	1453.6	2843.3	2227.2	2783.5	1514.5	1971.1	822.0	905.9
1P MAG	1030.13	949.05	1357.43	2263.99	950.43	1676.26	710.12	772.46
PHASE	119.	159.	-158.	139.	-150.	137.	120.	-87.
2P MAG	100.82	742.66	923.10	874.61	615.89	590.50	52.27	50.49
PHASE	10.	-37.	-175.	-175.	-176.	-175.	163.	138.
3P MAG	447.49	1582.65	512.26	486.36	309.73	313.30	119.82	135.69
PHASE	-17.	-17.	-88.	-81.	-89.	-84.	76.	88.
4P MAG	52.98	431.15	138.67	127.62	84.34	76.01	61.53	58.15
PHASE	63.	-119.	-161.	-158.	-161.	-159.	39.	43.
5P MAG	17.40	687.68	73.01	77.87	43.84	50.46	30.66	34.42
PHASE	102.	55.	-48.	-49.	-48.	-55.	145.	132.
19.12								
MEAN	-126.8	-2076.1	5742.2	5637.5	3505.7	3242.5	-2318.2	-2802.6
RMS	575.8	1882.4	1093.2	1873.0	700.2	1327.0	501.0	452.7
1/2 P-T-P	1062.2	3835.0	1904.5	2817.1	1210.7	1962.7	784.0	729.7
1P MAG	730.06	760.44	1142.16	2463.55	730.59	1760.86	693.33	622.64
PHASE	114.	-177.	178.	130.	-173.	128.	120.	-93.
2P MAG	59.69	1659.99	890.75	829.33	581.94	561.48	53.79	36.73
PHASE	3.	-28.	-179.	-178.	-180.	-179.	-179.	146.
3P MAG	349.52	1415.72	514.80	484.17	313.05	311.47	106.25	118.16
PHASE	-6.	-1.	-92.	-86.	-94.	-89.	79.	90.
4P MAG	60.29	635.72	135.60	123.50	84.82	74.86	57.26	53.24
PHASE	44.	69.	-162.	-160.	-164.	-161.	39.	40.
5P MAG	26.23	864.28	56.55	64.39	34.02	40.56	31.23	35.06
PHASE	109.	97.	-48.	-50.	-47.	-53.	137.	124.
23. 3								
MEAN	-540.8	-5024.3	1901.6	4226.7	817.3	2180.9	-2638.2	-4662.1
RMS	134.1	3011.4	1027.1	1434.2	644.5	940.4	300.6	235.8
1/2 P-T-P	240.1	6078.9	1981.8	2280.5	1253.3	1483.1	574.2	504.3
1P MAG	49.47	2250.95	1211.61	1881.34	768.85	1240.86	291.12	273.54
PHASE	-47.	-98.	160.	141.	170.	147.	133.	-103.
2P MAG	34.94	858.62	308.32	322.24	193.50	208.68	18.49	5.24
PHASE	172.	-53.	-100.	-95.	-84.	-83.	-130.	147.
3P MAG	158.59	1377.34	650.87	600.89	399.42	380.41	91.84	110.20
PHASE	52.	-67.	-159.	-157.	-139.	-140.	25.	24.
4P MAG	77.24	701.05	296.35	280.13	175.11	170.40	106.07	119.90
PHASE	66.	-95.	-133.	-132.	-105.	-108.	47.	44.
5P MAG	32.96	1483.49	151.90	137.59	92.18	88.12	22.79	27.14
PHASE	116.	155.	-147.	-142.	-113.	-111.	27.	40.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
19.13								
MEAN	3932.6	-3368.9	-560.8	154.2	1233.5	-132.8	-64.4	21.4
RMS	3567.7	261.4	105.3	162.7	163.4	328.7	245.4	45.5
1/2 P-T-P	4982.6	487.9	163.4	278.7	261.1	446.8	357.6	60.1
1P MAG	4719.43	238.47	142.42	221.84	204.04	460.95	346.88	63.43
PHASE	121.	-133.	-61.	104.	166.	102.	-73.	-71.
2P MAG	622.25	76.22	31.56	2.34	106.44	29.18	6.25	4.29
PHASE	4.	143.	118.	78.	173.	55.	75.	-96.
3P MAG	1650.61	228.30	17.05	60.22	13.42	48.04	9.80	8.93
PHASE	167.	90.	79.	-14.	-55.	154.	166.	-39.
4P MAG	249.01	98.23	15.80	7.44	5.62	8.53	1.70	1.37
PHASE	-131.	38.	85.	48.	62.	163.	148.	-66.
5P MAG	64.53	49.69	13.39	2.80	3.07	13.61	1.62	1.80
PHASE	-98.	145.	94.	90.	157.	76.	86.	-132.
19.12								
MEAN	4249.6	-3705.9	-603.5	156.1	1029.9	-130.7	-67.1	21.4
RMS	2574.0	238.8	85.1	153.8	173.5	272.7	225.5	36.5
1/2 P-T-P	3701.8	424.4	132.2	254.8	283.0	371.5	324.9	49.4
1P MAG	3360.10	228.61	112.60	212.29	222.31	381.07	318.75	50.46
PHASE	115.	-164.	-68.	105.	146.	103.	-74.	-74.
2P MAG	499.64	61.03	30.12	1.40	102.06	35.00	4.17	6.30
PHASE	0.	156.	115.	112.	172.	80.	34.	-80.
3P MAG	1285.06	202.77	18.91	46.25	14.09	41.84	7.16	8.28
PHASE	176.	91.	93.	-4.	-87.	151.	170.	-34.
4P MAG	228.08	90.69	14.07	8.67	4.99	15.57	1.29	2.01
PHASE	-140.	36.	93.	31.	58.	154.	148.	-41.
5P MAG	47.40	50.71	14.65	2.35	3.08	13.38	1.12	1.21
PHASE	-88.	136.	104.	93.	120.	94.	139.	-122.
23. 3								
MEAN	3773.1	-5228.3	-740.8	459.5	502.2	343.7	-395.9	-32.7
RMS	628.0	262.9	84.1	74.4	153.2	44.4	100.0	8.7
1/2 P-T-P	1002.1	484.9	139.4	116.8	230.1	81.8	142.3	16.7
1P MAG	692.29	199.13	109.45	103.01	211.28	41.97	141.33	9.40
PHASE	-100.	-162.	-83.	111.	146.	142.	-65.	16.
2P MAG	203.33	39.92	23.42	0.75	34.31	40.62	5.76	6.40
PHASE	20.	136.	95.	143.	-109.	91.	100.	-77.
3P MAG	485.93	202.72	23.62	19.27	27.59	11.17	1.13	2.59
PHASE	-119.	21.	60.	49.	-175.	69.	44.	-92.
4P MAG	164.57	195.31	23.66	9.17	6.87	10.42	1.58	1.97
PHASE	-129.	47.	37.	51.	22.	25.	37.	-159.
5P MAG	51.31	52.68	12.28	3.12	6.33	13.58	1.80	2.74
PHASE	-50.	29.	117.	140.	-143.	116.	111.	-85.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
27. 4								
MEAN	-605.0	-3713.1	400.5	2966.8	-87.3	1255.1	-2897.8	-4751.4
RMS	170.1	2659.9	630.3	846.2	388.1	541.5	216.0	266.4
1/2 P-T-P	291.9	4727.1	1198.2	1315.3	749.6	845.5	416.9	539.0
1P MAG	163.03	2352.73	168.53	850.94	87.24	548.74	225.37	303.05
PHASE	-154.	-128.	37.	111.	7.	112.	108.	-63.
2P MAG	59.91	887.66	462.30	463.69	291.61	302.04	21.23	1.55
PHASE	170.	115.	-71.	-69.	-69.	-71.	-91.	-11.
3P MAG	141.42	1073.59	607.15	560.05	377.46	356.68	91.71	102.51
PHASE	63.	33.	-150.	-149.	-151.	-152.	34.	32.
4P MAG	84.03	567.03	381.99	375.57	229.30	230.18	132.38	144.03
PHASE	84.	79.	-120.	-119.	-120.	-123.	60.	56.
5P MAG	22.44	957.04	112.81	109.35	70.15	69.96	23.72	25.27
PHASE	160.	-19.	-109.	-105.	-113.	-107.	41.	46.
27.15								
MEAN	-497.9	-5411.3	4189.4	5488.4	2416.7	2922.9	-2617.1	-3867.6
RMS	328.2	3507.0	720.5	866.4	477.2	574.4	254.3	420.9
1/2 P-T-P	565.2	7856.4	1593.6	1369.4	1016.4	889.6	482.3	720.7
1P MAG	421.22	2597.85	567.90	920.19	422.80	626.95	314.68	565.05
PHASE	151.	166.	-76.	119.	-77.	120.	110.	-70.
2P MAG	21.25	1795.60	365.11	375.23	232.30	244.03	16.07	13.30
PHASE	119.	14.	-107.	-101.	-105.	-102.	-143.	147.
3P MAG	178.70	1557.68	662.99	615.92	413.01	393.68	84.59	91.88
PHASE	84.	15.	-118.	-117.	-119.	-120.	73.	70.
4P MAG	62.77	2464.44	300.37	294.93	181.24	181.96	97.37	105.35
PHASE	76.	67.	-132.	-133.	-132.	-136.	47.	42.
5P MAG	37.23	1282.04	165.67	150.64	105.55	102.59	22.17	25.32
PHASE	-169.	88.	-75.	-70.	-75.	-73.	81.	99.
27.14								
MEAN	-292.1	-4132.5	8246.2	8134.4	5030.4	4694.7	-2306.1	-2929.8
RMS	632.6	3917.8	898.1	1240.3	604.1	862.2	395.5	567.6
1/2 P-T-P	1049.9	6804.5	1734.5	2019.5	1128.3	1377.3	624.4	902.6
1P MAG	864.41	3576.03	653.52	1431.73	517.68	1028.15	542.56	789.07
PHASE	147.	-116.	-67.	110.	-66.	111.	108.	-68.
2P MAG	58.08	2721.65	698.55	659.51	443.90	433.71	23.31	26.68
PHASE	28.	21.	-151.	-145.	-150.	-147.	156.	119.
3P MAG	212.76	2119.03	772.20	699.69	477.03	450.81	85.37	89.68
PHASE	104.	88.	-103.	-104.	-104.	-106.	94.	91.
4P MAG	46.14	1530.16	183.33	199.18	110.40	118.66	53.92	60.76
PHASE	64.	143.	-156.	-159.	-155.	-161.	16.	4.
5P MAG	48.20	1181.85	233.37	220.89	144.20	139.76	40.77	45.08
PHASE	168.	-174.	-74.	-70.	-75.	-74.	118.	120.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
27. 4								
MEAN	3735.5	-5586.5	-772.2	497.8	296.0	384.3	-396.7	-66.0
RMS	874.8	283.8	97.2	70.3	61.1	41.5	90.6	6.3
1/2 P-T-P	1409.5	577.8	156.0	110.3	117.5	73.6	130.0	12.7
1P MAG	1127.09	137.93	126.51	97.55	62.42	32.53	127.88	4.13
PHASE	-124.	-53.	-63.	115.	95.	170.	-61.	-89.
2P MAG	205.23	36.66	20.85	0.65	47.54	39.27	5.47	6.17
PHASE	49.	141.	96.	-157.	-81.	99.	111.	-68.
3P MAG	437.66	202.38	22.82	16.93	22.71	10.48	1.11	1.47
PHASE	-106.	29.	63.	61.	-168.	69.	55.	-158.
4P MAG	142.34	250.78	33.39	8.23	8.11	20.71	2.89	2.31
PHASE	-106.	60.	53.	69.	35.	45.	46.	-135.
5P MAG	30.96	50.22	8.23	1.66	6.46	11.91	1.73	1.46
PHASE	6.	46.	146.	-154.	-72.	143.	158.	-15.
27.15								
MEAN	-34703.2	-4743.2	-726.4	356.1	741.3	116.3	-240.0	-27.1
RMS	106.1	278.3	113.5	112.8	40.1	135.9	155.1	22.6
1/2 P-T-P	0.2	597.9	185.6	163.7	74.6	226.7	221.7	38.4
1P MAG	0.03	235.76	151.02	157.96	12.54	184.76	219.17	30.35
PHASE	-8.	-67.	-56.	109.	138.	113.	-67.	-78.
2P MAG	0.03	54.19	30.09	1.20	39.26	45.10	6.23	7.72
PHASE	-15.	148.	113.	-56.	-119.	104.	109.	-63.
3P MAG	0.03	178.12	25.73	21.10	31.27	11.13	0.47	1.05
PHASE	-23.	66.	98.	81.	-138.	106.	166.	25.
4P MAG	0.04	184.32	28.16	6.95	3.94	17.23	1.92	3.12
PHASE	-30.	45.	31.	63.	1.	11.	26.	-179.
5P MAG	0.03	50.58	11.51	3.29	10.06	13.79	2.08	4.31
PHASE	-38.	96.	-174.	-136.	-73.	-179.	-166.	14.
27.14								
MEAN	-21894.5	-3873.3	-649.3	214.5	1211.2	-150.6	-73.6	15.1
RMS	2582.5	242.5	130.9	154.4	62.6	286.4	227.7	46.1
1/2 P-T-P	3650.6	415.2	218.1	210.2	122.6	447.9	319.7	74.3
1P MAG	3511.99	228.05	174.93	216.52	29.34	399.97	321.86	64.21
PHASE	145.	-57.	-47.	108.	72.	112.	-68.	-74.
2P MAG	476.96	61.20	41.03	2.73	70.89	54.24	6.75	8.68
PHASE	37.	128.	117.	-28.	-162.	98.	98.	-67.
3P MAG	825.57	173.98	23.81	27.42	40.09	3.95	2.18	2.56
PHASE	-70.	85.	110.	103.	-126.	76.	-56.	93.
4P MAG	286.35	105.89	30.31	5.32	3.52	26.94	2.98	4.17
PHASE	-115.	11.	-2.	67.	-80.	-19.	-17.	152.
5P MAG	11.20	81.14	13.66	3.13	8.71	13.71	2.40	3.22
PHASE	-57.	114.	-174.	-147.	-104.	-174.	-173.	20.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
19.28								
MEAN	-456.2	-4183.0	12816.3	12312.2	7839.1	7194.1	-1921.8	-2497.6
RMS	657.4	3104.5	1227.9	2267.4	723.3	1520.9	653.3	535.6
1/2 P-T-P	1176.5	6299.1	2363.0	3258.5	1427.1	2153.4	1141.0	1010.1
1P MAG	872.24	1881.04	1363.90	3042.28	791.99	2058.43	886.54	703.70
PHASE	146.	110.	175.	133.	-180.	133.	123.	-78.
2P MAG	86.94	1666.08	507.27	511.78	319.67	311.69	22.03	37.57
PHASE	14.	-83.	-178.	-175.	-177.	-174.	124.	108.
3P MAG	302.62	1290.31	849.57	763.73	507.50	478.35	121.51	122.80
PHASE	65.	-33.	-107.	-108.	-109.	-110.	94.	92.
4P MAG	41.86	1904.32	157.58	171.69	88.49	104.89	68.86	86.82
PHASE	64.	-46.	93.	98.	92.	97.	-91.	-90.
5P MAG	23.67	358.86	276.93	267.65	171.83	164.25	50.06	53.16
PHASE	-124.	-145.	-33.	-28.	-33.	-32.	136.	140.
20. 7								
MEAN	-661.3	-3860.9	-1192.8	2490.5	-1057.7	882.9	-3124.9	-5557.6
RMS	313.9	2273.8	1931.8	1992.9	1190.2	1271.2	373.2	293.3
1/2 P-T-P	557.9	4643.3	3378.1	3445.4	2042.3	2190.2	758.6	573.3
1P MAG	365.34	426.63	2305.10	2459.09	1435.16	1581.01	413.38	183.19
PHASE	-49.	163.	146.	149.	147.	148.	150.	161.
2P MAG	118.51	647.05	895.13	850.78	565.27	554.16	35.56	20.06
PHASE	-175.	-173.	-40.	-38.	-33.	-38.	-100.	-80.
3P MAG	192.19	1283.48	949.45	876.27	554.56	527.83	163.64	185.86
PHASE	40.	-14.	-176.	-176.	-176.	-178.	7.	5.
4P MAG	65.99	1302.97	604.46	596.56	352.98	359.01	216.55	244.67
PHASE	81.	7.	-104.	-103.	-106.	-104.	74.	72.
5P MAG	5.14	1067.57	83.97	58.60	15.85	26.00	28.44	29.16
PHASE	122.	70.	-176.	-159.	-178.	-137.	12.	18.
20. 6								
MEAN	-672.3	-4158.1	2998.9	5253.1	1595.2	2700.6	-2802.8	-4618.1
RMS	149.5	2247.6	1125.8	1590.3	693.0	1018.1	324.0	207.5
1/2 P-T-P	292.0	4103.3	1936.4	2498.6	1199.1	1593.3	620.3	449.4
1P MAG	116.89	1353.70	1257.11	2041.81	777.12	1312.81	407.98	178.29
PHASE	-100.	150.	144.	137.	146.	137.	133.	-89.
2P MAG	73.78	431.85	556.19	555.56	354.17	359.12	19.18	15.62
PHASE	177.	177.	-36.	-37.	-35.	-38.	-122.	-173.
3P MAG	153.37	1185.21	701.15	653.76	423.67	408.66	116.65	130.97
PHASE	47.	-153.	-154.	-153.	-154.	-156.	26.	24.
4P MAG	31.21	1453.11	352.91	350.63	206.51	209.82	129.47	141.82
PHASE	106.	-67.	-118.	-116.	-119.	-120.	67.	65.
5P MAG	9.77	1606.43	93.32	95.23	54.88	56.76	30.95	34.90
PHASE	159.	-100.	-101.	-97.	-99.	-98.	61.	61.

RUN.PT	CHANNEL DESIGNATION							
	I	J	K	L	M	N	O	P
19.28								
MEAN	4277.6	-3369.8	-626.2	175.7	1701.0	-225.4	-55.9	36.6
RMS	2957.0	326.2	125.6	160.1	180.6	348.8	267.3	49.2
1/2 P-T-P	4186.7	644.6	217.4	246.5	290.8	536.5	385.2	78.3
1P MAG	4005.63	195.39	159.07	223.37	242.54	487.79	377.76	68.53
PHASE	142.	-165.	-47.	112.	143.	114.	-66.	-60.
2P MAG	499.42	74.04	43.27	3.33	55.15	48.99	5.69	8.35
PHASE	5.	132.	106.	100.	169.	88.	60.	-82.
3P MAG	1047.28	225.59	33.08	34.95	37.18	9.17	3.00	0.50
PHASE	-103.	91.	90.	69.	-142.	-172.	-103.	34.
4P MAG	243.98	141.08	40.86	6.19	8.25	44.39	5.69	6.80
PHASE	-111.	-88.	-38.	82.	-111.	-49.	-58.	131.
5P MAG	65.90	100.25	10.10	3.98	8.51	17.20	2.34	3.14
PHASE	-174.	143.	-122.	-53.	-30.	-114.	-139.	93.
20. 7								
MEAN	3395.3	-6274.4	-845.2	605.2	114.3	645.1	-553.2	-72.7
RMS	1208.6	484.9	96.5	25.5	234.4	124.7	40.1	26.7
1/2 P-T-P	1995.6	920.6	184.5	45.9	336.3	208.9	73.0	44.2
1P MAG	1649.36	330.07	109.94	27.14	317.44	162.30	53.30	34.44
PHASE	-71.	169.	-99.	171.	144.	-98.	-20.	87.
2P MAG	118.21	55.06	22.40	5.78	82.08	46.27	3.10	10.66
PHASE	63.	163.	64.	161.	-49.	94.	112.	-81.
3P MAG	407.34	349.62	42.36	20.37	27.78	23.02	2.12	4.83
PHASE	-125.	4.	20.	33.	172.	18.	13.	-176.
4P MAG	53.98	408.03	54.92	6.09	16.85	40.57	4.94	6.61
PHASE	-154.	75.	87.	53.	55.	100.	97.	-87.
5P MAG	13.86	53.05	6.33	0.65	4.54	11.76	1.40	2.47
PHASE	-7.	13.	106.	-109.	-19.	126.	137.	-60.
20. 6								
MEAN	3531.2	-5426.1	-774.6	446.3	563.4	353.7	-381.5	-26.6
RMS	759.5	296.2	92.2	67.3	158.4	55.6	97.6	13.3
1/2 P-T-P	1156.7	549.8	148.9	112.4	232.8	106.8	145.5	22.8
1P MAG	988.85	158.61	116.97	93.64	215.64	53.50	137.31	15.98
PHASE	-109.	-177.	-73.	123.	136.	-170.	-54.	39.
2P MAG	124.06	79.68	26.43	3.28	50.19	47.00	5.92	7.69
PHASE	28.	164.	106.	145.	-53.	108.	116.	-65.
3P MAG	386.03	243.20	33.46	15.90	22.04	18.90	1.56	3.10
PHASE	-121.	25.	56.	43.	-168.	75.	46.	-66.
4P MAG	47.12	237.19	31.34	3.36	10.39	19.67	2.75	3.29
PHASE	-81.	67.	72.	98.	59.	78.	77.	-111.
5P MAG	13.33	57.96	7.87	1.58	4.69	8.74	1.09	3.17
PHASE	16.	60.	109.	-119.	-18.	121.	132.	-65.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
28.15								
MEAN	-585.5	-4531.1	1985.0	4728.2	896.8	2243.7	-2911.0	-4682.5
RMS	243.6	4462.0	807.1	984.2	469.8	582.4	237.9	299.8
1/2 P-T-P	396.4	9166.5	1601.9	1859.5	929.3	1102.6	452.0	571.2
1P MAG	280.01	372.52	273.83	881.88	163.36	527.06	248.80	345.90
PHASE	-165.	-147.	4.	104.	-10.	107.	103.	-61.
2P MAG	85.03	3242.65	712.48	717.78	426.64	431.30	31.29	9.60
PHASE	154.	-34.	-60.	-60.	-58.	-61.	-99.	-122.
3P MAG	171.80	1155.89	740.08	687.82	425.21	401.77	113.00	123.91
PHASE	38.	-4.	-170.	-169.	-170.	-171.	15.	14.
4P MAG	45.83	2881.49	351.70	350.80	194.58	195.53	126.10	135.08
PHASE	85.	105.	-119.	-119.	-119.	-122.	65.	61.
5P MAG	20.71	1038.17	120.23	118.60	69.82	70.04	24.23	27.24
PHASE	172.	37.	-100.	-97.	-98.	-98.	54.	58.
20. 5								
MEAN	-563.2	-4213.9	7354.7	8164.8	4358.1	4628.0	-2445.4	-3626.0
RMS	295.6	1679.3	1070.5	1684.7	666.8	1110.4	395.3	379.3
1/2 P-T-P	573.7	2840.7	2097.3	2250.3	1310.4	1477.4	721.4	631.4
1P MAG	367.02	978.91	1275.03	2251.77	801.26	1492.24	530.73	493.37
PHASE	139.	125.	-177.	144.	-174.	143.	130.	-89.
2P MAG	34.82	946.48	267.77	277.19	152.95	170.10	31.84	36.18
PHASE	150.	-98.	-104.	-96.	-100.	-95.	175.	170.
3P MAG	174.35	974.67	721.79	673.75	444.97	428.17	105.82	129.27
PHASE	68.	12.	-120.	-120.	-121.	-122.	66.	69.
4P MAG	21.74	166.64	87.72	103.33	53.62	54.55	33.23	33.64
PHASE	86.	59.	-121.	-125.	-118.	-124.	60.	66.
5P MAG	29.50	403.53	188.09	182.31	112.46	111.52	35.47	24.81
PHASE	-150.	-49.	-32.	-28.	-32.	-33.	136.	131.
19.27								
MEAN	-319.9	-3716.6	11646.1	11157.4	7091.2	6464.4	-2122.9	-2679.0
RMS	596.0	2722.7	1102.8	2050.8	659.6	1372.6	573.2	504.8
1/2 P-T-P	1066.9	5466.4	2116.5	2946.7	1292.6	1962.4	912.1	847.7
1P MAG	789.97	1385.31	1132.27	2728.74	666.06	1839.39	787.52	685.45
PHASE	144.	83.	178.	132.	-176.	131.	121.	-79.
2P MAG	70.67	1223.33	632.27	606.43	398.93	384.79	8.00	31.55
PHASE	15.	-95.	-161.	-158.	-161.	-158.	137.	98.
3P MAG	276.95	1576.21	765.01	670.24	457.00	423.14	108.87	103.89
PHASE	78.	67.	-102.	-101.	-103.	-104.	101.	102.
4P MAG	41.90	849.68	126.86	124.95	70.83	78.85	53.22	63.21
PHASE	75.	-40.	115.	123.	113.	119.	-68.	-70.
5P MAG	38.58	2035.84	341.83	314.89	206.06	198.63	82.10	81.86
PHASE	-127.	-158.	-34.	-30.	-34.	-33.	127.	130.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
28.15								
MEAN	-6648.2	-5492.4	-803.7	469.8	464.6	379.4	-411.2	-85.9
RMS	1157.1	307.7	116.7	72.6	65.0	54.4	108.4	13.3
1/2 P-T-P	1987.1	569.8	175.3	121.2	128.8	104.7	164.3	23.7
1P MAG	1562.35	157.24	154.51	100.95	55.92	50.04	152.55	16.03
PHASE	-141.	-52.	-61.	117.	78.	161.	-63.	-99.
2P MAG	174.29	62.91	29.43	1.60	61.72	51.03	8.03	7.69
PHASE	58.	153.	99.	130.	-73.	102.	108.	-85.
3P MAG	430.93	246.89	27.36	17.72	20.73	13.87	1.23	3.46
PHASE	-128.	12.	45.	34.	169.	61.	73.	173.
4P MAG	51.68	230.30	28.05	4.32	10.54	15.00	2.31	2.36
PHASE	-112.	64.	59.	74.	52.	57.	52.	-170.
5P MAG	24.15	53.21	8.28	2.02	5.09	9.93	1.22	1.56
PHASE	25.	59.	112.	-157.	-58.	117.	129.	-6.
20. 5								
MEAN	3771.2	-4503.0	-690.9	296.8	1046.9	65.3	-209.4	16.4
RMS	1068.8	283.7	107.7	112.1	150.0	153.4	167.7	20.2
1/2 P-T-P	1652.1	534.3	182.8	166.9	242.6	259.5	247.5	34.4
1P MAG	1386.84	232.46	141.26	157.26	206.51	207.49	236.23	26.15
PHASE	151.	-144.	-65.	111.	156.	113.	-65.	-48.
2P MAG	272.50	88.47	34.68	0.14	29.14	50.90	8.47	9.18
PHASE	8.	166.	124.	71.	-119.	112.	136.	-73.
3P MAG	508.44	230.64	34.74	19.00	27.48	21.90	2.05	4.85
PHASE	-99.	68.	94.	71.	-147.	125.	20.	-60.
4P MAG	117.19	50.14	12.76	3.04	1.43	10.59	2.70	0.85
PHASE	-112.	68.	19.	90.	104.	10.	30.	142.
5P MAG	20.96	46.19	4.48	2.92	8.55	5.43	2.42	0.82
PHASE	112.	136.	-166.	-86.	-31.	-136.	-164.	137.
19.27								
MEAN	4929.1	-3626.7	-663.8	169.4	1541.4	-225.0	-50.5	37.6
RMS	2615.8	253.4	122.6	153.1	153.3	310.2	251.7	42.9
1/2 P-T-P	3732.8	491.4	215.4	228.2	236.1	481.2	357.1	71.5
1P MAG	3526.57	159.61	160.77	213.75	203.16	433.14	355.68	59.24
PHASE	142.	-149.	-51.	110.	143.	112.	-67.	-62.
2P MAG	476.70	58.64	45.75	2.42	60.87	52.43	7.08	10.18
PHASE	11.	118.	116.	41.	-173.	95.	89.	-74.
3P MAG	979.31	191.99	22.68	33.84	34.02	14.63	4.26	1.53
PHASE	-96.	98.	110.	77.	-134.	-148.	-106.	46.
4P MAG	218.16	106.08	31.48	5.58	6.39	30.43	3.14	5.02
PHASE	-110.	-69.	-14.	85.	-91.	-23.	-12.	153.
5P MAG	35.09	144.73	7.76	3.49	9.81	17.55	2.97	3.28
PHASE	146.	134.	-112.	-77.	3.	-98.	-134.	99.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
20. 4								
MEAN	-328.4	-4506.1	11637.6	11022.2	7073.0	6523.8	-2104.5	-2678.4
RMS	609.6	2691.2	1087.4	1900.9	653.2	1294.5	542.2	513.5
1/2 P-T-P	1069.9	5861.9	2343.1	2654.3	1426.8	1791.3	927.2	857.6
1P MAG	812.00	1119.57	1186.75	2540.53	712.45	1743.55	734.68	687.30
PHASE	143.	139.	-172.	136.	-165.	135.	124.	-80.
2P MAG	55.96	1473.84	383.62	342.07	216.75	208.17	32.71	46.44
PHASE	44.	-116.	-167.	-161.	-164.	-158.	117.	134.
3P MAG	274.30	827.39	771.23	679.01	471.68	438.99	90.68	100.61
PHASE	79.	-178.	-104.	-106.	-107.	-109.	97.	91.
4P MAG	25.69	1330.98	121.51	130.79	68.32	78.77	52.18	64.39
PHASE	75.	-51.	132.	141.	132.	138.	-58.	-52.
5P MAG	30.02	1395.19	377.77	350.77	226.84	219.14	103.48	98.74
PHASE	-115.	-75.	-32.	-26.	-30.	-30.	124.	132.
20. 2								
MEAN	51.9	-3069.0	16098.7	13930.5	9894.5	8475.1	-1761.1	-1725.6
RMS	1115.1	2656.2	1763.5	2419.0	1062.6	1700.0	758.3	726.9
1/2 P-T-P	2039.2	4706.8	3552.2	3576.6	2197.8	2479.0	1169.9	1288.8
1P MAG	1418.92	2060.40	1603.24	2941.46	942.32	2127.21	1033.95	978.51
PHASE	138.	92.	-167.	136.	-156.	134.	121.	-79.
2P MAG	144.66	2273.00	1234.44	1208.74	778.56	770.51	41.48	58.24
PHASE	6.	-128.	176.	177.	175.	176.	85.	65.
3P MAG	661.39	926.80	1281.67	1067.70	766.11	696.22	175.05	169.68
PHASE	100.	-79.	-89.	-91.	-91.	-93.	123.	122.
4P MAG	57.02	631.70	275.68	295.26	154.12	184.06	122.43	154.16
PHASE	51.	-157.	115.	122.	113.	116.	-77.	-77.
5P MAG	79.68	1194.81	614.49	578.41	373.04	358.14	123.07	130.09
PHASE	-109.	-50.	-19.	-12.	-19.	-18.	144.	148.
20. 3								
MEAN	61.5	-4033.4	15987.2	13834.8	9823.0	8410.2	-1775.4	-1738.3
RMS	1093.0	3047.9	1655.6	2298.5	1005.2	1615.0	735.1	729.9
1/2 P-T-P	2003.4	5945.3	3212.1	3535.2	1946.2	2456.0	1166.5	1274.2
1P MAG	1409.39	1796.68	1431.36	2775.11	858.92	2012.34	1004.11	987.51
PHASE	139.	95.	-163.	134.	-149.	133.	120.	-77.
2P MAG	163.59	2419.71	1221.84	1198.97	791.06	771.39	54.46	85.83
PHASE	5.	-170.	177.	179.	180.	-179.	50.	63.
3P MAG	600.11	1391.64	1190.41	983.68	691.21	626.61	159.19	152.22
PHASE	97.	-61.	-88.	-91.	-91.	-93.	127.	126.
4P MAG	51.07	1413.03	327.76	328.55	180.92	208.45	131.78	163.99
PHASE	49.	-163.	110.	116.	106.	110.	-78.	-78.
5P MAG	76.99	1551.84	617.69	565.25	368.75	354.06	125.25	130.06
PHASE	-104.	-123.	-22.	-15.	-21.	-20.	142.	146.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
20. 4								
MEAN	4094.5	-3613.0	-600.2	165.7	1528.3	-197.2	-42.4	55.8
RMS	2497.0	296.3	120.0	149.5	145.6	306.3	232.9	42.1
1/2 P-T-P	3466.9	558.2	217.9	228.7	231.3	490.1	331.0	69.6
1P MAG	3365.49	194.85	156.60	208.50	196.03	427.24	328.93	58.36
PHASE	141.	-148.	-53.	111.	151.	114.	-66.	-60.
2P MAG	415.12	87.99	41.63	2.25	40.39	49.24	6.61	8.82
PHASE	5.	149.	126.	84.	-177.	111.	121.	-74.
3P MAG	950.63	193.84	24.13	34.22	35.21	3.34	6.14	1.06
PHASE	-91.	89.	95.	80.	-137.	-141.	-80.	163.
4P MAG	213.73	105.39	33.84	4.55	6.36	37.14	5.35	4.12
PHASE	-115.	-53.	-2.	72.	-85.	-15.	-15.	170.
5P MAG	46.23	172.70	8.45	5.12	11.04	21.29	2.75	4.65
PHASE	148.	138.	-112.	-75.	20.	-98.	-130.	97.
20. 2								
MEAN	4724.6	-2686.1	-502.0	41.4	2028.3	-455.7	134.0	96.4
RMS	4762.4	402.2	147.0	190.8	182.8	531.1	305.1	77.0
1/2 P-T-P	7625.7	778.0	266.5	296.7	313.2	848.5	422.1	127.2
1P MAG	6282.92	228.38	179.03	255.69	221.38	739.64	430.60	106.50
PHASE	132.	-153.	-46.	110.	157.	111.	-69.	-67.
2P MAG	673.18	64.62	52.71	3.76	110.99	61.08	8.18	11.17
PHASE	5.	65.	75.	114.	160.	51.	36.	-117.
3P MAG	2301.63	324.33	29.87	85.12	61.90	54.66	17.42	9.96
PHASE	-78.	119.	82.	99.	-132.	-61.	-62.	132.
4P MAG	339.15	248.34	74.82	8.42	15.81	80.87	8.68	13.16
PHASE	-123.	-74.	-37.	71.	-98.	-40.	-41.	139.
5P MAG	70.80	242.65	24.95	7.55	16.12	40.30	5.48	8.10
PHASE	140.	153.	-97.	-65.	3.	-90.	-114.	98.
20. 3								
MEAN	4644.3	-2703.9	-504.9	41.4	2016.8	-452.0	132.3	95.1
RMS	4701.8	379.6	149.8	190.1	167.7	531.9	306.6	77.1
1/2 P-T-P	7428.2	772.1	268.3	297.3	289.4	834.6	425.7	127.9
1P MAG	6238.93	192.02	184.83	256.99	195.56	739.61	432.98	106.78
PHASE	133.	-147.	-45.	110.	157.	111.	-69.	-67.
2P MAG	655.75	108.55	54.38	4.04	112.16	75.13	9.33	10.11
PHASE	8.	62.	84.	59.	161.	56.	51.	-110.
3P MAG	2175.16	287.16	21.75	77.82	57.73	57.73	14.91	9.89
PHASE	-80.	121.	79.	97.	-130.	-62.	-70.	125.
4P MAG	319.44	265.78	76.53	7.19	15.31	74.29	8.98	13.26
PHASE	-125.	-76.	-36.	71.	-100.	-39.	-43.	142.
5P MAG	70.24	243.73	24.66	8.08	14.96	41.16	5.42	8.17
PHASE	145.	151.	-102.	-63.	2.	-90.	-123.	94.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
20.12								
MEAN	-618.4	-5663.6	-2435.7	1310.5	-1834.4	115.8	-3334.2	-5748.0
RMS	274.8	2990.6	1662.6	1643.4	1025.6	1051.3	310.3	273.8
1/2 P-T-P	471.1	7129.6	3100.1	3095.4	1910.2	1971.4	585.1	535.5
1P MAG	329.48	1459.70	1989.61	1989.61	1239.68	1283.34	322.55	190.04
PHASE	-40.	-26.	156.	161.	158.	160.	162.	172.
2P MAG	94.24	1313.06	731.00	715.00	446.65	451.25	20.51	6.19
PHASE	169.	128.	-43.	-45.	-42.	-47.	-83.	9.
3P MAG	166.90	1529.95	808.78	761.56	491.84	478.72	146.96	169.39
PHASE	45.	10.	-172.	-172.	-173.	-175.	8.	7.
4P MAG	64.59	2493.28	575.71	559.86	332.10	342.84	206.75	232.24
PHASE	68.	67.	-113.	-112.	-113.	-116.	66.	63.
5P MAG	6.45	688.50	72.25	65.25	43.79	44.71	32.80	35.76
PHASE	52.	2.	-164.	-153.	-166.	-157.	15.	18.
20.11								
MEAN	-621.1	-4844.0	1658.9	4032.8	754.6	1906.2	-3009.5	-4831.7
RMS	142.0	2686.3	1163.7	1441.0	724.0	924.4	279.2	219.0
1/2 P-T-P	272.8	5893.7	2155.6	2383.3	1362.6	1517.1	563.7	424.3
1P MAG	100.81	1850.88	1358.37	1828.81	851.73	1178.36	336.11	209.07
PHASE	-36.	89.	164.	150.	166.	150.	144.	-112.
2P MAG	67.19	125.84	590.96	586.45	376.01	378.37	30.89	9.03
PHASE	-173.	-19.	-47.	-48.	-46.	-50.	-93.	-57.
3P MAG	138.71	930.97	608.79	563.08	364.49	353.73	106.79	115.96
PHASE	60.	40.	-149.	-148.	-149.	-150.	33.	32.
4P MAG	40.33	1172.36	352.64	356.67	204.68	212.46	133.81	146.77
PHASE	77.	43.	-118.	-115.	-117.	-120.	61.	60.
5P MAG	6.82	1870.38	75.58	80.14	43.03	46.68	24.09	27.73
PHASE	175.	-95.	-115.	-109.	-105.	-112.	40.	46.
23. 4								
MEAN	-619.0	-6405.9	2530.2	4891.2	1233.5	2494.1	-2805.8	-4872.7
RMS	117.4	2543.4	1118.4	1573.3	682.3	1003.7	322.3	257.8
1/2 P-T-P	280.1	5897.1	2022.1	2375.7	1238.3	1520.0	626.5	526.4
1P MAG	61.70	812.24	1329.17	2063.62	820.88	1325.13	397.07	241.86
PHASE	-80.	-107.	150.	137.	160.	144.	131.	-99.
2P MAG	18.34	1720.81	355.59	378.78	223.38	242.26	31.98	14.18
PHASE	-125.	-78.	-79.	-77.	-64.	-66.	-88.	-1.
3P MAG	119.45	449.68	650.66	604.24	385.22	370.55	103.07	128.12
PHASE	52.	-5.	-152.	-151.	-131.	-131.	29.	26.
4P MAG	33.98	1917.57	400.44	395.60	228.35	234.12	146.86	179.57
PHASE	50.	100.	-129.	-129.	-101.	-101.	50.	51.
5P MAG	15.52	1283.64	59.30	62.70	33.93	35.86	16.57	21.09
PHASE	155.	-128.	-116.	-108.	-72.	-69.	50.	36.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
20.12								
MEAN	3407.0	-6535.9	-887.9	610.1	-53.7	628.4	-550.0	-71.9
RMS	1095.9	446.0	106.3	17.7	195.1	141.9	24.4	27.4
1/2 P-T-P	1866.3	827.6	194.9	30.5	281.5	213.8	48.3	40.6
1P MAG	1493.39	295.72	132.05	14.37	263.77	191.06	30.39	37.27
PHASE	-65.	-175.	-99.	-149.	156.	-90.	-1.	99.
2P MAG	127.43	58.54	25.68	5.91	68.70	41.00	6.89	7.52
PHASE	59.	141.	61.	167.	-55.	86.	88.	-78.
3P MAG	358.89	317.49	35.89	18.22	21.12	19.94	2.66	2.38
PHASE	-120.	6.	33.	40.	173.	38.	27.	-117.
4P MAG	38.12	390.09	48.59	4.85	16.70	33.34	5.06	5.56
PHASE	-155.	67.	73.	49.	42.	81.	75.	-96.
5P MAG	12.75	61.36	7.47	0.81	5.00	11.74	1.55	1.87
PHASE	-2.	16.	93.	-114.	-25.	120.	124.	-80.
20.11								
MEAN	3678.5	-5697.6	-817.5	455.4	388.5	354.3	-386.9	-28.4
RMS	613.8	300.7	97.0	52.3	152.8	50.6	76.4	14.6
1/2 P-T-P	974.7	485.8	158.5	86.9	216.8	82.4	123.8	24.2
1P MAG	776.33	213.37	126.04	72.19	206.69	44.93	106.58	16.84
PHASE	-83.	-157.	-83.	117.	153.	-117.	-59.	62.
2P MAG	131.25	43.05	25.97	2.60	55.40	45.06	4.26	8.59
PHASE	36.	158.	99.	129.	-61.	106.	97.	-68.
3P MAG	346.86	214.75	25.31	14.37	18.23	16.41	2.22	2.80
PHASE	-112.	29.	64.	52.	-162.	88.	100.	-61.
4P MAG	64.44	244.71	34.20	3.87	11.38	23.16	3.24	3.75
PHASE	-116.	63.	71.	63.	40.	80.	75.	-106.
5P MAG	12.54	47.99	9.05	1.73	3.75	10.72	0.91	3.53
PHASE	24.	44.	112.	-129.	-43.	124.	142.	-63.
23. 4								
MEAN	4189.7	-5505.3	-809.8	470.8	508.7	334.0	-400.2	-29.8
RMS	580.9	310.3	98.3	69.4	157.6	48.6	101.0	12.1
1/2 P-T-P	923.8	565.9	160.0	112.0	228.5	103.6	156.1	23.5
1P MAG	725.26	164.98	123.96	96.91	217.33	31.33	141.66	9.93
PHASE	-105.	-165.	-77.	114.	139.	162.	-63.	30.
2P MAG	177.27	35.16	34.79	2.02	35.79	49.41	5.17	10.16
PHASE	18.	120.	97.	81.	-94.	100.	52.	-58.
3P MAG	321.78	222.63	25.77	13.05	20.10	15.82	1.29	3.49
PHASE	-122.	25.	58.	43.	-165.	83.	83.	-96.
4P MAG	57.15	280.70	38.83	3.49	12.28	26.85	4.88	5.08
PHASE	-114.	54.	65.	59.	39.	72.	28.	-93.
5P MAG	10.01	34.64	7.75	1.30	4.26	8.92	1.57	2.35
PHASE	12.	33.	100.	-114.	-46.	116.	134.	-103.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
27. 5								
MEAN	-686.8	-4510.5	1139.7	3702.7	432.2	1630.4	-3036.1	-4903.1
RMS	179.2	3841.9	738.8	738.5	461.9	461.2	187.5	295.8
1/2 P-T-P	331.9	6124.1	1322.6	1321.8	849.4	832.3	366.4	568.1
1P MAG	162.20	2018.78	370.80	453.30	271.26	277.98	152.92	340.50
PHASE	176.	-128.	-57.	118.	-64.	121.	110.	-67.
2P MAG	62.38	765.50	543.37	547.67	335.36	353.87	9.92	20.27
PHASE	144.	58.	-67.	-66.	-66.	-67.	-95.	128.
3P MAG	160.10	3502.79	705.72	650.99	429.01	407.83	118.07	133.52
PHASE	52.	17.	-157.	-156.	-155.	-159.	26.	24.
4P MAG	43.38	2138.03	349.95	349.91	211.23	208.01	129.33	142.13
PHASE	99.	107.	-99.	-99.	-96.	-102.	84.	81.
5P MAG	20.56	1596.16	126.23	132.95	63.87	75.59	31.88	33.17
PHASE	-175.	-81.	-72.	-66.	-62.	-71.	94.	97.
28.12								
MEAN	-523.0	-2764.7	547.5	3409.0	8.7	1461.1	-3170.6	-4941.5
RMS	211.2	2746.8	730.0	851.7	424.0	498.4	213.3	285.2
1/2 P-T-P	375.5	5208.3	1469.6	1442.5	818.5	851.6	424.0	542.6
1P MAG	230.74	2861.45	304.45	740.34	195.01	436.28	210.61	327.23
PHASE	-162.	-154.	-2.	97.	-17.	99.	97.	-64.
2P MAG	64.68	1718.85	608.11	604.40	357.38	359.13	47.20	24.84
PHASE	166.	-87.	-75.	-73.	-67.	-74.	-109.	-88.
3P MAG	157.61	1374.07	619.80	569.97	356.00	332.22	95.68	101.99
PHASE	39.	-31.	-172.	-170.	-171.	-172.	14.	13.
4P MAG	50.39	986.65	420.35	426.17	232.98	239.86	143.34	159.00
PHASE	80.	85.	-117.	-117.	-120.	-121.	63.	60.
5P MAG	14.46	722.51	144.47	108.50	53.93	64.89	29.76	32.44
PHASE	144.	74.	-122.	-108.	-120.	-111.	46.	48.
23. 5								
MEAN	-637.4	-7055.2	2799.1	5169.3	1407.4	2629.3	-2856.0	-4934.6
RMS	165.8	2476.6	1068.2	1546.9	643.6	974.5	305.5	212.9
1/2 P-T-P	299.4	4889.4	1822.7	2339.4	1101.4	1457.9	564.9	419.3
1P MAG	94.37	1267.84	1199.38	1998.18	727.47	1266.55	385.81	198.84
PHASE	-109.	-95.	135.	129.	145.	137.	126.	-86.
2P MAG	61.00	1397.95	514.86	535.32	320.60	334.92	21.98	17.27
PHASE	159.	-110.	-64.	-64.	-48.	-50.	-123.	170.
3P MAG	202.19	845.84	643.77	585.94	380.18	358.88	115.89	128.23
PHASE	40.	134.	-157.	-157.	-136.	-136.	22.	22.
4P MAG	28.35	517.57	383.87	383.64	216.97	221.39	133.12	159.05
PHASE	59.	-142.	-128.	-126.	-99.	-100.	55.	53.
5P MAG	13.05	1567.52	94.03	93.08	53.70	54.32	22.66	37.43
PHASE	-91.	-93.	-122.	-113.	-88.	-86.	21.	22.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
27. 5								
MEAN	4131.9	-5803.3	-839.3	511.6	327.3	371.3	-397.0	-64.2
RMS	742.6	322.1	118.4	64.6	44.2	40.5	86.5	15.6
1/2 P-T-P	1357.8	614.6	175.0	108.2	86.1	79.2	138.3	30.6
1P MAG	925.64	203.32	157.27	89.30	3.66	19.22	120.87	2.88
PHASE	-134.	-64.	-64.	114.	68.	-156.	-61.	175.
2P MAG	170.64	74.44	28.68	1.68	51.58	45.55	9.36	4.38
PHASE	50.	141.	109.	157.	-79.	104.	106.	-15.
3P MAG	446.09	256.42	27.86	17.84	20.16	11.52	0.78	2.72
PHASE	-115.	23.	55.	48.	-177.	74.	14.	-120.
4P MAG	56.75	238.61	31.28	4.06	10.48	19.79	3.01	2.60
PHASE	-94.	84.	76.	95.	70.	71.	66.	-105.
5P MAG	24.50	59.09	8.74	2.19	4.66	10.31	1.78	1.47
PHASE	51.	94.	152.	-107.	-32.	157.	161.	27.
28.12								
MEAN	2724.4	-5834.1	-841.6	477.8	284.1	380.5	-412.2	-84.1
RMS	1015.7	301.9	114.7	65.1	55.5	42.8	96.8	12.5
1/2 P-T-P	1727.8	567.6	170.5	111.1	108.3	81.6	148.5	23.0
1P MAG	1360.34	174.79	153.34	90.33	47.43	25.39	135.78	13.61
PHASE	-136.	-52.	-64.	113.	65.	180.	-67.	-112.
2P MAG	199.33	31.55	25.31	1.57	53.99	46.22	3.71	8.82
PHASE	42.	176.	89.	63.	-86.	97.	102.	-92.
3P MAG	397.38	206.00	19.88	16.17	16.42	8.75	2.23	2.69
PHASE	-135.	9.	43.	31.	172.	72.	98.	145.
4P MAG	55.38	273.04	33.69	3.91	10.29	21.29	3.53	2.86
PHASE	-113.	63.	65.	65.	44.	70.	63.	-141.
5P MAG	20.33	59.02	9.15	1.51	4.42	11.64	1.77	2.65
PHASE	21.	49.	118.	-147.	-55.	132.	119.	-12.
23. 5								
MEAN	4348.6	-5576.0	-835.0	476.7	517.0	334.8	-403.7	-29.5
RMS	761.6	269.5	97.4	68.2	147.0	51.7	97.9	11.9
1/2 P-T-P	1308.4	467.8	152.5	118.6	211.7	102.6	141.4	21.6
1P MAG	885.21	110.17	125.68	93.61	200.38	41.39	138.18	12.68
PHASE	-111.	-177.	-72.	118.	128.	180.	-59.	37.
2P MAG	149.36	72.26	30.96	1.35	48.66	49.53	7.38	7.52
PHASE	30.	153.	110.	120.	-79.	105.	110.	-64.
3P MAG	582.95	225.25	25.72	22.94	16.79	12.01	1.17	3.21
PHASE	-140.	21.	54.	31.	-171.	113.	130.	-51.
4P MAG	41.48	249.11	35.19	2.49	10.34	25.30	3.13	4.47
PHASE	-132.	56.	63.	47.	41.	75.	72.	-109.
5P MAG	18.41	62.99	10.19	0.92	3.76	11.85	2.20	4.90
PHASE	15.	26.	90.	-136.	-29.	124.	-74.	-73.

RUN.PT		CHANNEL DESIGNATION A	B	C	D	E	F	G	H
27. 6									
	MEAN	-711.9	-4908.8	1364.8	3943.2	586.6	1735.5	-3102.1	-4972.9
	RMS	161.7	3129.2	678.4	882.2	412.4	547.0	207.1	266.7
1/2	P-T-P	271.9	7309.3	1257.1	1494.4	777.2	932.9	424.1	510.5
1P	MAG	111.34	1412.02	117.99	837.18	89.85	522.02	195.51	288.21
	PHASE	-163.	-51.	-179.	129.	-153.	129.	120.	-71.
2P	MAG	60.43	482.85	549.18	560.35	341.37	353.39	22.02	11.63
	PHASE	167.	-95.	-58.	-57.	-57.	-59.	-114.	174.
3P	MAG	185.01	1581.00	627.62	577.57	378.42	357.51	118.25	126.97
	PHASE	49.	5.	-151.	-150.	-152.	-153.	30.	30.
4P	MAG	38.96	2232.31	437.51	434.77	257.36	259.07	156.72	179.88
	PHASE	82.	-152.	-103.	-102.	-103.	-104.	79.	77.
5P	MAG	8.94	1329.97	89.95	88.26	54.07	52.23	34.37	37.67
	PHASE	147.	-79.	-109.	-99.	-106.	-103.	52.	50.
20.10									
	MEAN	-504.2	-3372.5	5964.8	6932.5	3476.2	3820.9	-2660.3	-3868.5
	RMS	131.2	2483.1	1127.7	1897.3	694.9	1233.6	407.0	257.3
1/2	P-T-P	291.0	6110.8	1736.7	2480.7	1061.5	1601.3	704.4	497.3
1P	MAG	138.15	951.31	1433.99	2602.46	888.48	1695.65	556.97	326.48
	PHASE	150.	-169.	150.	133.	152.	133.	127.	-89.
2P	MAG	10.66	1255.90	199.03	212.68	122.35	136.58	8.47	18.59
	PHASE	-170.	-78.	-103.	-92.	-99.	-93.	-153.	138.
3P	MAG	104.62	855.46	628.47	575.56	379.31	361.71	94.17	102.34
	PHASE	60.	-14.	-124.	-124.	-126.	-127.	59.	58.
4P	MAG	11.49	1897.41	129.30	130.75	76.47	81.94	48.00	50.37
	PHASE	40.	83.	-131.	-131.	-131.	-134.	52.	49.
5P	MAG	16.75	1455.94	124.85	119.23	77.37	76.57	26.02	27.82
	PHASE	-151.	75.	-54.	-48.	-54.	-54.	112.	115.
27.12									
	MEAN	-553.2	-4051.4	5261.9	6479.6	3053.2	3434.0	-2738.9	-3991.5
	RMS	236.3	2648.1	629.8	1115.3	395.5	723.4	286.5	360.2
1/2	P-T-P	440.2	4988.3	1282.2	1620.2	788.0	1043.2	503.8	653.4
1P	MAG	303.26	612.12	565.86	1430.25	375.62	935.30	372.98	479.61
	PHASE	147.	140.	-149.	136.	-144.	137.	124.	-77.
2P	MAG	27.45	1305.38	349.21	363.51	216.63	233.46	13.73	16.94
	PHASE	139.	137.	-89.	-85.	-88.	-86.	-135.	140.
3P	MAG	130.26	2310.25	512.30	467.74	308.64	293.10	77.89	83.59
	PHASE	55.	22.	-122.	-120.	-124.	-123.	60.	61.
4P	MAG	27.02	776.86	229.31	231.47	133.80	137.72	83.90	91.73
	PHASE	87.	-166.	-110.	-110.	-110.	-112.	71.	69.
5P	MAG	18.16	1839.00	133.61	137.43	79.62	80.93	38.33	39.68
	PHASE	-152.	-42.	-54.	-49.	-52.	-52.	105.	107.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
27. 6								
MEAN	4220.4	-5901.9	-869.7	518.0	329.0	364.4	-397.1	-63.8
RMS	748.7	309.4	117.7	61.2	56.1	45.8	84.3	7.9
1/2 P-T-P	1356.1	571.1	179.0	108.1	101.6	81.7	122.7	17.5
1P MAG	891.60	150.80	155.33	83.84	54.88	25.57	118.86	3.72
PHASE	-124.	-79.	-65.	117.	132.	-122.	-60.	-156.
2P MAG	170.47	68.30	30.12	1.11	49.88	47.99	6.62	8.38
PHASE	45.	158.	106.	148.	-72.	106.	116.	-69.
3P MAG	527.55	235.50	27.13	20.88	14.49	9.97	1.22	0.97
PHASE	-129.	28.	59.	39.	-170.	102.	56.	-96.
4P MAG	38.16	299.05	38.74	2.74	13.02	26.29	3.86	3.81
PHASE	-113.	80.	88.	71.	61.	97.	80.	-59.
5P MAG	17.15	65.47	9.46	1.32	5.95	12.71	1.42	2.28
PHASE	40.	52.	119.	-83.	-12.	144.	145.	-14.
20.10								
MEAN	4088.6	-4802.8	-735.2	305.1	864.5	73.2	-217.9	13.9
RMS	545.1	227.4	88.9	101.7	179.3	117.1	149.7	15.6
1/2 P-T-P	1006.4	464.8	147.8	155.9	250.1	184.8	222.6	28.5
1P MAG	668.72	186.63	115.56	143.20	250.93	156.06	211.16	19.37
PHASE	-178.	179.	-67.	115.	136.	120.	-63.	-35.
2P MAG	190.54	55.00	35.28	2.95	21.99	48.38	5.83	8.88
PHASE	11.	145.	122.	36.	-116.	111.	122.	-58.
3P MAG	307.62	191.94	23.12	12.32	22.15	16.39	0.44	3.34
PHASE	-106.	58.	84.	61.	-145.	104.	-179.	-66.
4P MAG	84.30	82.92	18.94	1.70	3.33	12.22	1.50	1.69
PHASE	-126.	51.	41.	65.	52.	41.	37.	-137.
5P MAG	12.37	48.79	5.90	1.67	4.30	7.63	1.42	1.08
PHASE	111.	113.	143.	-109.	-38.	150.	-160.	-91.
27.12								
MEAN	-34703.2	-4952.3	-782.6	366.5	781.3	91.1	-234.3	-22.7
RMS	106.1	230.9	114.2	103.0	76.8	117.5	149.1	20.9
1/2 P-T-P	0.2	513.8	180.6	159.8	128.9	180.9	222.0	34.6
1P MAG	0.03	171.45	152.75	144.84	98.78	156.24	210.34	27.20
PHASE	-8.	-99.	-60.	111.	154.	113.	-65.	-84.
2P MAG	0.03	60.12	35.98	1.27	35.05	50.04	6.64	9.22
PHASE	-16.	150.	121.	25.	-104.	114.	112.	-56.
3P MAG	0.03	154.83	19.48	14.32	17.18	14.55	1.25	1.23
PHASE	-24.	58.	95.	48.	-140.	135.	155.	53.
4P MAG	0.04	151.39	24.47	2.83	6.22	14.85	2.29	2.73
PHASE	-32.	71.	73.	76.	52.	74.	83.	-99.
5P MAG	0.03	67.61	7.94	2.28	5.04	9.76	1.58	2.68
PHASE	-40.	109.	161.	-85.	-0.	176.	-175.	10.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
19.26								
MEAN	-236.7	-3975.9	10525.8	10080.3	6377.1	5783.3	-2312.2	-2858.4
RMS	433.7	3233.8	1497.6	2288.1	919.0	1501.8	557.2	448.0
1/2 P-T-P	772.0	7427.9	2801.6	2985.0	1733.1	1943.1	855.6	756.3
1P MAG	565.91	1607.95	1895.23	3118.77	1168.23	2055.82	767.92	607.07
PHASE	128.	-171.	178.	142.	-179.	141.	128.	-92.
2P MAG	41.86	2639.60	299.63	260.67	185.48	161.69	2.99	24.05
PHASE	9.	-117.	-171.	-164.	-172.	-164.	78.	121.
3P MAG	223.03	727.04	808.82	730.87	487.25	454.29	113.60	111.51
PHASE	80.	-64.	-104.	-104.	-105.	-106.	91.	89.
4P MAG	30.77	773.02	141.93	151.40	80.32	88.68	61.66	65.87
PHASE	64.	-168.	-175.	-171.	-175.	-175.	1.	-1.
5P MAG	41.03	1408.93	317.49	305.95	191.52	186.50	76.99	77.96
PHASE	-124.	-64.	-27.	-23.	-27.	-28.	134.	136.
20. 9								
MEAN	-260.6	-4668.4	10529.0	9985.2	6365.1	5853.2	-2286.9	-2871.1
RMS	505.4	3626.9	1395.7	2075.1	857.0	1387.4	503.2	467.6
1/2 P-T-P	910.7	6616.9	2674.3	3004.4	1682.4	1965.1	770.6	768.3
1P MAG	668.60	1844.13	1643.05	2753.09	1015.79	1857.39	693.04	634.09
PHASE	130.	-141.	-176.	143.	-172.	141.	128.	-89.
2P MAG	78.59	3867.08	701.99	658.94	424.53	405.46	20.59	36.42
PHASE	17.	-145.	-174.	-171.	-174.	-172.	135.	120.
3P MAG	225.89	1206.68	766.43	698.98	464.23	440.27	100.71	114.94
PHASE	83.	-20.	-102.	-101.	-104.	-105.	94.	94.
4P MAG	25.91	1601.17	154.57	168.64	86.97	96.29	56.75	66.36
PHASE	51.	-104.	164.	169.	164.	162.	-20.	-28.
5P MAG	37.20	378.91	271.70	259.14	165.94	161.91	57.21	61.16
PHASE	-124.	107.	-26.	-19.	-26.	-26.	148.	151.
27. 2								
MEAN	-358.2	-5155.3	9307.9	9212.1	5587.9	5243.0	-2387.2	-3119.9
RMS	520.2	4276.4	742.1	1451.4	461.1	968.6	415.3	495.1
1/2 P-T-P	908.5	9508.1	1394.5	2088.4	873.0	1395.4	682.0	804.2
1P MAG	703.02	3862.06	380.88	1839.89	273.02	1246.76	569.72	682.31
PHASE	145.	-39.	-132.	123.	-118.	123.	116.	-71.
2P MAG	65.16	2521.43	665.11	624.38	408.67	392.96	18.29	30.65
PHASE	28.	144.	-157.	-153.	-156.	-153.	155.	122.
3P MAG	197.70	2643.63	650.02	593.29	389.85	366.06	86.44	91.22
PHASE	73.	-92.	-101.	-101.	-103.	-103.	95.	95.
4P MAG	41.15	1383.97	167.30	169.73	93.00	102.87	61.48	70.81
PHASE	66.	41.	-172.	-171.	-172.	-173.	4.	-0.
5P MAG	26.42	1668.48	216.80	205.03	133.66	133.24	43.92	50.44
PHASE	-134.	130.	-24.	-20.	-24.	-24.	140.	144.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
19.26								
MEAN	5346.6	-3872.3	-700.2	166.3	1389.1	-225.0	-49.3	38.3
RMS	1854.8	295.6	110.7	140.8	204.7	255.8	227.9	34.2
1/2 P-T-P	2876.3	497.5	201.5	205.9	290.2	395.4	325.0	57.4
1P MAG	2452.78	282.56	143.57	197.04	285.04	357.28	322.03	47.32
PHASE	129.	-163.	-62.	110.	155.	107.	-68.	-66.
2P MAG	387.17	49.55	40.67	4.48	30.04	43.29	5.99	8.50
PHASE	1.	145.	128.	49.	-178.	112.	136.	-59.
3P MAG	816.50	211.33	26.36	27.49	33.71	6.08	3.33	1.26
PHASE	-92.	88.	95.	80.	-132.	132.	-87.	-85.
4P MAG	200.13	106.49	31.82	4.20	6.55	22.02	2.51	4.01
PHASE	-120.	-1.	26.	72.	-30.	24.	19.	-160.
5P MAG	30.69	136.99	10.21	3.10	9.15	10.38	2.22	2.07
PHASE	136.	141.	-167.	-90.	11.	-140.	-147.	81.
20. 9								
MEAN	4521.6	-3859.2	-642.9	166.8	1377.6	-195.7	-44.3	54.7
RMS	2013.2	284.0	116.2	137.5	181.6	263.1	214.3	35.1
1/2 P-T-P	3011.7	540.1	212.5	200.5	275.6	418.8	309.0	58.9
1P MAG	2706.85	263.41	149.56	192.49	244.58	365.87	302.67	48.52
PHASE	130.	-153.	-60.	110.	158.	108.	-68.	-64.
2P MAG	426.92	57.54	41.83	1.61	65.93	46.50	6.74	8.56
PHASE	4.	131.	121.	54.	178.	103.	95.	-73.
3P MAG	747.30	208.29	30.05	26.36	32.39	13.56	2.17	1.54
PHASE	-90.	92.	109.	81.	-132.	142.	-97.	-68.
4P MAG	172.33	108.71	36.05	3.89	5.71	30.08	2.04	5.08
PHASE	-116.	-26.	-6.	70.	-60.	-15.	6.	165.
5P MAG	28.16	108.99	7.54	3.13	6.16	10.72	1.57	2.03
PHASE	129.	153.	-135.	-81.	-25.	-120.	-105.	104.
27. 2								
MEAN	5011.8	-4120.1	-680.6	240.7	1232.9	-143.9	-80.9	21.1
RMS	2116.5	211.1	127.2	142.4	80.2	260.5	214.7	41.7
1/2 P-T-P	3010.3	434.0	213.5	211.2	161.4	400.7	313.5	70.2
1P MAG	2888.79	148.09	169.07	199.99	88.05	362.87	303.28	57.70
PHASE	146.	-83.	-48.	111.	133.	112.	-66.	-76.
2P MAG	401.22	57.71	43.70	2.99	63.46	54.16	6.06	8.76
PHASE	20.	131.	124.	-2.	-166.	106.	103.	-59.
3P MAG	649.00	167.63	22.20	22.77	26.07	11.78	3.77	2.75
PHASE	-102.	91.	107.	70.	-129.	176.	-141.	55.
4P MAG	165.38	114.14	31.26	3.69	5.99	23.27	1.55	3.61
PHASE	-112.	2.	25.	67.	-33.	16.	45.	-164.
5P MAG	19.50	88.59	10.10	3.17	6.33	11.61	3.05	3.31
PHASE	117.	149.	-139.	-66.	-14.	-138.	-163.	38.

RUN.PT		CHANNEL DESIGNATION						
	A	B	C	D	E	F	G	H
27.13								
MEAN	-331.8	-4109.6	9377.4	9228.7	5651.0	5238.0	-2417.6	-3078.6
RMS	559.4	2956.9	766.8	1142.4	503.1	765.0	380.2	540.1
1/2 P-T-P	949.5	6492.0	1431.9	1966.5	916.5	1274.1	608.9	845.1
1P MAG	766.66	2793.84	640.75	1392.07	474.97	952.44	515.54	744.84
PHASE	152.	-50.	-58.	108.	-58.	110.	109.	-66.
2P MAG	41.13	1699.68	455.38	433.69	283.19	278.83	13.72	21.96
PHASE	29.	101.	-142.	-135.	-141.	-136.	151.	109.
3P MAG	181.49	672.72	675.01	618.88	405.18	385.10	92.38	98.47
PHASE	74.	122.	-100.	-99.	-101.	-102.	94.	94.
4P MAG	32.91	1465.51	145.12	156.21	83.24	94.01	59.98	71.03
PHASE	69.	-77.	-163.	-158.	-163.	-163.	13.	11.
5P MAG	29.11	1497.36	249.25	240.75	150.45	147.05	59.99	63.65
PHASE	-126.	74.	-17.	-12.	-17.	-17.	143.	146.
20. 8								
MEAN	162.4	-4980.9	14663.0	12604.6	8973.6	7614.0	-1991.0	-1967.5
RMS	951.3	2910.0	1587.5	2128.3	981.7	1481.8	645.5	699.1
1/2 P-T-P	1634.7	6032.4	3122.4	3320.6	1885.7	2282.7	1019.6	1206.4
1P MAG	1271.82	2387.98	1402.33	2553.85	875.59	1826.02	884.78	956.54
PHASE	134.	117.	-157.	136.	-145.	134.	120.	-80.
2P MAG	142.46	1127.92	1199.26	1151.63	767.19	743.36	30.31	58.49
PHASE	12.	174.	-173.	-171.	-172.	-171.	62.	69.
3P MAG	407.92	1269.96	1171.64	987.43	692.40	638.85	157.40	163.82
PHASE	96.	79.	-90.	-91.	-91.	-92.	116.	116.
4P MAG	43.60	1841.66	252.39	259.66	141.26	163.64	99.47	123.18
PHASE	32.	-52.	128.	133.	126.	128.	-58.	-61.
5P MAG	48.57	400.87	422.10	390.64	256.60	248.99	82.67	89.87
PHASE	-111.	-106.	-18.	-13.	-18.	-17.	147.	152.
13.12								
MEAN	-72.9	1922.7	10412.4	9702.6	6257.8	5701.9	-1652.4	-2886.7
RMS	508.4	3843.6	1179.1	1965.9	719.6	1319.0	526.9	458.9
1/2 P-T-P	855.3	8307.4	2273.2	2840.0	1376.9	1878.6	801.3	777.2
1P MAG	673.26	2909.87	1280.61	2603.98	781.89	1760.26	732.33	628.19
PHASE	129.	-1.	-178.	138.	-173.	137.	-57.	-82.
2P MAG	76.10	2711.75	714.73	658.22	445.06	420.54	14.23	19.83
PHASE	10.	117.	177.	-180.	177.	179.	156.	100.
3P MAG	231.44	1689.71	719.32	643.70	432.12	405.39	87.55	106.75
PHASE	84.	53.	-93.	-92.	-94.	-94.	-70.	106.
4P MAG	47.91	1704.82	171.39	163.13	97.28	101.75	57.75	70.92
PHASE	45.	-168.	167.	171.	167.	168.	-16.	-22.
5P MAG	29.55	1367.02	265.62	253.07	159.92	157.59	57.70	65.44
PHASE	-145.	177.	-37.	-34.	-38.	-37.	-38.	[illegible]

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
27.13								
MEAN	-34703.2	-4107.2	-699.7	231.9	1241.2	-171.9	-67.5	18.9
RMS	106.1	250.4	137.6	144.3	45.9	262.5	217.6	42.4
1/2 P-T-P	0.2	422.9	228.2	213.1	89.6	397.9	313.3	69.8
1P MAG	0.03	219.33	183.99	202.89	33.25	365.04	307.33	58.61
PHASE	-8.	-55.	-45.	110.	64.	113.	-66.	-75.
2P MAG	0.03	53.77	42.77	3.09	43.53	52.84	6.62	9.50
PHASE	-16.	134.	127.	-13.	-154.	114.	108.	-52.
3P MAG	0.03	179.82	23.94	21.02	27.05	13.13	1.01	3.24
PHASE	-24.	92.	106.	69.	-126.	154.	-111.	65.
4P MAG	0.04	113.55	34.70	3.34	6.94	28.34	2.48	5.06
PHASE	-32.	11.	38.	76.	-19.	38.	37.	-153.
5P MAG	0.03	108.45	7.06	3.07	6.75	9.40	1.07	1.47
PHASE	-40.	152.	-153.	-60.	18.	-119.	-140.	40.
20. 8								
MEAN	5223.9	-3013.8	-556.6	39.7	1837.1	-444.9	127.2	96.6
RMS	4061.5	337.4	147.1	177.7	151.1	466.4	287.5	66.8
1/2 P-T-P	6241.9	635.1	267.9	260.2	263.8	721.5	405.2	106.7
1P MAG	5508.38	212.10	188.07	245.43	176.42	652.10	406.18	93.11
PHASE	129.	-128.	-49.	108.	164.	108.	-71.	-70.
2P MAG	608.00	84.36	53.44	3.09	105.85	63.71	8.46	10.12
PHASE	9.	69.	101.	49.	173.	71.	73.	-101.
3P MAG	1482.53	303.64	25.13	53.03	51.75	26.04	8.65	4.44
PHASE	-82.	113.	104.	94.	-126.	-80.	-76.	121.
4P MAG	267.16	198.89	60.79	5.49	11.12	60.99	5.88	10.19
PHASE	-129.	-58.	-19.	62.	-84.	-26.	-36.	153.
5P MAG	35.67	165.23	18.56	4.45	10.00	26.76	4.15	5.31
PHASE	143.	157.	-106.	-66.	-7.	-96.	-118.	95.
13.12								
MEAN	5648.6	-3940.7	-654.6	157.9	1346.9	-235.5	-15.1	60.1
RMS	2045.2	233.6	107.8	141.8	155.3	279.2	217.3	40.9
1/2 P-T-P	3070.4	381.0	190.4	210.0	233.1	421.3	308.8	63.2
1P MAG	2754.70	190.81	142.40	198.47	206.56	392.21	307.06	57.19
PHASE	129.	-151.	-54.	113.	153.	109.	-67.	-72.
2P MAG	408.78	24.47	37.30	2.40	65.85	36.52	4.05	6.60
PHASE	7.	145.	118.	38.	170.	101.	93.	-66.
3P MAG	756.93	189.85	23.88	27.48	30.46	9.99	2.68	0.89
PHASE	-88.	105.	117.	83.	-124.	-178.	-115.	-72.
4P MAG	177.55	120.23	25.54	4.38	6.42	17.40	1.72	3.00
PHASE	-118.	-20.	18.	48.	-56.	14.	6.	-164.
5P MAG	9.59	114.82	11.08	2.79	4.23	10.70	2.27	2.20
PHASE	87.	139.	-150.	-94.	-26.	-136.	-135.	82.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
14. 2								
MEAN	-90.6	-12144.6	10278.6	9662.2	6131.7	5696.8	-1628.8	-2939.1
RMS	504.5	-20.0	1121.7	1937.3	683.7	1304.9	526.0	463.0
1/2 P-T-P	874.0	39.1	2194.7	2694.3	1349.3	1785.3	796.4	745.6
1P MAG	668.52	4.16	1194.01	2571.89	729.96	1744.60	730.67	632.75
PHASE	131.	-164.	-179.	136.	-174.	135.	-58.	-82.
2P MAG	70.69	4.50	700.48	646.61	438.23	414.06	15.05	19.01
PHASE	12.	-128.	179.	-179.	178.	-180.	132.	101.
3P MAG	231.16	3.64	698.02	613.83	414.19	390.09	88.03	106.45
PHASE	73.	95.	-95.	-94.	-97.	-97.	-75.	101.
4P MAG	45.83	0.84	120.51	120.36	68.21	72.04	39.39	49.98
PHASE	52.	-94.	-173.	-170.	-177.	-175.	-2.	-9.
5P MAG	35.78	2.46	290.21	267.83	171.76	169.76	64.30	79.00
PHASE	-150.	73.	-40.	-35.	-41.	-41.	-39.	136.
19.25								
MEAN	-149.4	-4576.7	9181.9	8803.8	5526.6	4967.6	-2559.6	-3081.5
RMS	462.7	3574.6	935.8	1567.3	581.8	1032.7	426.5	472.7
1/2 P-T-P	821.1	7577.5	1913.2	2370.9	1178.0	1554.3	705.4	797.0
1P MAG	621.44	2214.38	812.50	1986.47	518.72	1325.52	581.25	646.88
PHASE	26.	23.	95.	24.	102.	23.	11.	172.
2P MAG	62.31	2808.80	739.69	702.07	462.65	445.39	13.43	17.02
PHASE	155.	38.	-22.	-18.	-22.	-20.	-4.	-131.
3P MAG	180.53	605.83	662.67	613.31	396.51	374.35	92.93	97.05
PHASE	107.	-23.	-71.	-70.	-72.	-73.	120.	120.
4P MAG	39.56	1476.61	210.27	200.81	120.90	122.36	77.88	76.54
PHASE	-21.	-168.	134.	138.	134.	134.	-51.	-50.
5P MAG	35.96	2055.47	209.26	205.76	125.70	125.93	47.89	50.13
PHASE	32.	-152.	139.	146.	138.	138.	-52.	-51.
23. 7								
MEAN	-827.0	-5674.8	1282.9	4908.8	495.0	2345.1	-2914.9	-5651.3
RMS	240.7	3252.1	1662.7	1875.7	994.0	1153.0	341.5	285.1
1/2 P-T-P	419.4	6146.7	3041.9	3296.0	1811.2	2014.0	699.7	522.8
1P MAG	203.05	2026.75	1616.91	2072.55	976.43	1287.53	353.86	85.02
PHASE	-68.	130.	144.	144.	154.	152.	142.	-132.
2P MAG	148.80	1105.25	1200.82	1174.01	734.62	727.31	25.33	31.87
PHASE	169.	-129.	-36.	-37.	-21.	-23.	-139.	168.
3P MAG	215.96	1139.60	1038.36	985.09	602.36	588.16	199.27	242.04
PHASE	46.	-149.	-175.	-176.	-153.	-155.	7.	5.
4P MAG	68.67	1818.25	614.73	614.49	340.94	350.51	235.47	282.59
PHASE	95.	-64.	-93.	-90.	-62.	-63.	88.	87.
5P MAG	6.78	1950.88	38.39	28.74	19.49	15.77	16.98	15.97
PHASE	-27.	-142.	141.	122.	165.	146.	-11.	-23.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
14. 2								
MEAN	5304.4	-3919.8	-653.8	178.4	1334.4	-209.7	-45.9	59.1
RMS	2008.2	229.3	109.9	142.9	149.4	278.1	219.7	40.2
1/2 P-T-P	2954.7	413.0	179.5	216.0	235.5	403.5	320.8	60.7
1P MAG	2709.49	176.60	145.85	200.21	198.40	390.52	310.44	56.27
PHASE	131.	-148.	-53.	112.	150.	109.	-67.	-73.
2P MAG	401.71	23.40	38.54	2.09	64.49	39.47	4.95	7.09
PHASE	8.	135.	120.	28.	171.	104.	93.	-69.
3P MAG	726.44	186.84	22.83	27.13	27.53	14.04	2.35	0.93
PHASE	-98.	99.	113.	72.	-125.	-174.	-118.	-20.
4P MAG	176.59	85.77	19.67	4.60	5.48	11.21	1.61	2.17
PHASE	-112.	-8.	33.	58.	-49.	41.	42.	-158.
5P MAG	12.28	131.91	13.51	2.41	2.63	11.10	1.92	2.12
PHASE	11.	139.	-166.	-115.	-26.	-148.	-157.	81.
19.25								
MEAN	5763.9	-4192.2	-749.6	164.0	1203.7	-236.1	-48.3	41.4
RMS	1895.5	226.5	121.9	135.9	104.0	238.4	216.2	31.3
1/2 P-T-P	2751.9	439.7	201.8	201.0	177.8	371.6	319.0	46.7
1P MAG	2567.84	171.10	162.93	190.87	125.97	331.93	305.14	43.29
PHASE	27.	141.	-164.	0.	46.	-2.	-178.	-175.
2P MAG	408.82	29.78	41.83	1.76	68.50	49.17	5.57	8.52
PHASE	157.	-112.	-102.	174.	-31.	-119.	-142.	71.
3P MAG	622.09	174.30	23.55	21.39	26.40	12.24	0.85	2.19
PHASE	-69.	117.	136.	103.	-95.	-170.	-98.	-14.
4P MAG	173.64	129.60	19.72	4.74	5.53	9.66	1.45	1.48
PHASE	166.	-50.	-35.	-33.	-86.	-16.	-4.	147.
5P MAG	12.17	87.37	12.38	2.85	5.39	13.46	1.20	1.28
PHASE	-121.	-50.	1.	79.	149.	0.	8.	-147.
23. 7								
MEAN	4148.4	-6070.6	-881.7	624.3	381.8	626.1	-565.9	-76.5
RMS	981.5	463.1	112.4	39.9	179.8	101.1	63.0	22.1
1/2 P-T-P	1527.2	832.2	186.8	76.1	277.2	170.0	91.5	35.2
1P MAG	1263.73	189.82	131.78	51.13	231.09	119.25	88.22	28.90
PHASE	-90.	-180.	-82.	139.	141.	-108.	-41.	72.
2P MAG	120.57	135.85	27.14	7.25	98.37	55.26	8.57	8.23
PHASE	83.	156.	105.	157.	-50.	107.	115.	-80.
3P MAG	534.63	411.21	54.74	21.43	21.60	27.53	4.17	2.84
PHASE	-110.	6.	22.	46.	162.	11.	-2.	156.
4P MAG	34.87	429.67	57.84	4.71	21.76	41.87	6.36	6.48
PHASE	-151.	90.	98.	71.	66.	111.	104.	-80.
5P MAG	6.44	35.39	2.62	1.43	4.70	10.63	1.73	2.54
PHASE	-18.	-18.	152.	-36.	-18.	166.	178.	-10.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
23. 8								
MEAN	-834.3	-5583.7	6268.4	8364.9	3565.9	4558.9	-2497.2	-4510.7
RMS	189.5	2332.2	1148.0	1737.6	690.2	1085.0	368.2	314.0
1/2 P-T-P	341.7	4366.8	2286.1	2726.8	1361.9	1689.8	695.5	595.9
1P MAG	181.50	1063.84	1199.01	2217.32	735.31	1395.32	458.83	335.80
PHASE	175.	81.	162.	141.	171.	148.	132.	-84.
2P MAG	52.73	1415.70	509.49	522.42	314.69	329.89	26.97	34.39
PHASE	166.	-74.	-41.	-42.	-25.	-28.	-149.	167.
3P MAG	179.68	934.03	872.74	823.13	509.17	494.24	142.46	171.17
PHASE	68.	70.	-158.	-158.	-136.	-137.	25.	23.
4P MAG	44.40	171.22	376.07	371.43	211.94	212.97	146.51	170.78
PHASE	101.	-48.	-89.	-88.	-60.	-62.	98.	95.
5P MAG	9.59	657.53	71.19	70.66	41.28	40.01	15.63	16.02
PHASE	-154.	-1.	-47.	-41.	-10.	-8.	156.	160.
27. 9								
MEAN	-900.2	-4114.7	4462.5	6880.6	2529.9	3506.9	-2750.8	-4628.4
RMS	284.0	3072.5	1047.1	936.4	638.7	567.8	232.7	380.8
1/2 P-T-P	500.5	6748.1	1822.2	1842.1	1127.7	1116.7	466.2	627.1
1P MAG	339.57	931.92	760.17	453.93	488.79	270.96	208.78	461.19
PHASE	176.	10.	-42.	99.	-45.	103.	110.	-59.
2P MAG	91.51	775.06	775.95	789.84	477.02	487.96	30.16	29.21
PHASE	159.	-142.	-50.	-50.	-50.	-52.	-151.	175.
3P MAG	181.54	450.55	913.96	868.86	540.41	525.63	160.32	176.00
PHASE	71.	178.	-155.	-155.	-156.	-157.	29.	28.
4P MAG	44.36	2217.34	372.18	367.58	214.64	214.85	134.24	146.91
PHASE	123.	-19.	-77.	-77.	-78.	-80.	107.	106.
5P MAG	20.03	2026.73	71.28	66.72	45.81	45.27	7.83	10.94
PHASE	-112.	-47.	-4.	-0.	-6.	-4.	-122.	-113.
23. 9								
MEAN	-659.1	-4610.8	10566.2	11237.7	6219.0	6411.5	-2184.8	-3525.9
RMS	412.1	2535.3	890.4	1791.1	521.8	1148.7	463.1	451.5
1/2 P-T-P	689.9	4749.1	1861.3	2448.0	1076.7	1556.2	851.3	773.0
1P MAG	548.70	1438.07	897.22	2389.42	528.29	1542.17	613.95	580.99
PHASE	157.	173.	174.	132.	-175.	140.	123.	-76.
2P MAG	21.18	1698.45	332.29	352.17	206.58	227.50	19.28	40.52
PHASE	108.	128.	-33.	-35.	-18.	-23.	-174.	152.
3P MAG	182.18	1484.66	734.95	687.72	428.52	416.49	100.93	119.39
PHASE	93.	163.	-124.	-126.	-103.	-105.	70.	63.
4P MAG	17.92	1575.69	199.14	180.29	114.44	103.66	80.09	91.30
PHASE	137.	-32.	4.	4.	31.	32.	-179.	-178.
5P MAG	19.11	517.48	199.64	185.75	116.52	111.11	58.55	61.23
PHASE	-96.	-46.	-20.	-17.	18.	18.	144.	143.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
23. 8								
MEAN	4235.3	-5079.9	-787.5	462.4	907.7	305.4	-390.2	-28.2
RMS	823.4	336.7	111.8	86.8	151.1	88.4	132.7	14.4
1/2 P-T-P	1713.8	648.4	192.5	138.7	233.3	169.5	187.4	28.6
1P MAG	958.77	168.38	141.12	120.96	205.74	106.73	187.49	17.01
PHASE	-160.	-155.	-66.	118.	143.	136.	-59.	-13.
2P MAG	166.24	110.43	34.68	2.18	41.25	52.35	7.58	8.75
PHASE	8.	164.	119.	133.	-63.	113.	116.	-56.
3P MAG	590.39	291.97	44.24	19.06	25.31	20.02	2.29	3.57
PHASE	-91.	23.	55.	73.	179.	56.	21.	-103.
4P MAG	71.24	260.53	31.49	3.70	14.06	16.16	2.65	2.64
PHASE	-109.	98.	96.	93.	92.	105.	87.	-80.
5P MAG	5.64	20.84	3.43	1.69	3.34	2.14	0.66	1.23
PHASE	166.	148.	172.	-81.	-97.	-162.	-135.	-112.
27. 9								
MEAN	3086.9	-5434.0	-825.3	520.7	687.9	365.0	-398.1	-67.5
RMS	1099.0	367.7	137.6	81.9	58.4	71.5	117.3	10.9
1/2 P-T-P	2223.3	704.4	232.3	135.5	111.8	142.0	165.1	19.2
1P MAG	1399.45	244.92	180.34	113.84	30.59	71.98	165.62	10.67
PHASE	-159.	-57.	-56.	119.	-4.	145.	-58.	-74.
2P MAG	183.92	112.62	34.64	1.62	64.53	57.18	8.37	8.54
PHASE	48.	163.	120.	168.	-67.	115.	129.	-70.
3P MAG	576.96	323.21	44.22	18.97	23.87	21.02	2.82	2.80
PHASE	-86.	27.	56.	74.	-179.	50.	34.	-168.
4P MAG	48.12	239.49	27.63	4.18	11.13	14.93	2.06	2.81
PHASE	-82.	108.	109.	112.	98.	124.	113.	-62.
5P MAG	7.47	11.17	3.37	1.64	6.61	3.75	1.06	1.80
PHASE	76.	-120.	-113.	-47.	-42.	-130.	-104.	77.
23. 9								
MEAN	4475.7	-4226.4	-707.8	325.3	1360.9	16.1	-221.9	14.6
RMS	1659.3	278.0	123.4	128.3	132.3	222.3	201.5	30.6
1/2 P-T-P	2603.4	568.0	225.1	188.9	213.6	354.5	282.1	50.9
1P MAG	2176.33	131.13	155.61	179.67	179.20	305.43	284.80	41.08
PHASE	158.	-143.	-51.	113.	138.	116.	-64.	-54.
2P MAG	270.91	113.02	51.68	1.88	23.02	62.64	8.47	11.61
PHASE	3.	164.	130.	82.	-65.	123.	123.	-53.
3P MAG	744.58	201.57	36.50	22.85	28.62	17.75	3.59	3.41
PHASE	-71.	65.	70.	100.	-156.	35.	-10.	-153.
4P MAG	121.54	143.00	5.73	3.51	7.90	10.91	0.78	1.75
PHASE	-108.	-174.	19.	110.	160.	-16.	-18.	155.
5P MAG	56.30	97.48	5.79	3.71	4.87	5.41	1.45	1.61
PHASE	172.	148.	-166.	-47.	45.	-86.	-117.	150.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
27.11								
MEAN	-812.1	-3490.8	8638.6	9741.9	5112.1	5337.2	-2463.4	-3766.3
RMS	383.6	3308.8	658.3	1248.5	402.7	795.5	357.3	420.3
1/2 P-T-P	652.6	7466.4	1190.9	2116.0	701.4	1323.5	661.0	630.4
1P MAG	500.70	2257.24	319.69	1544.75	217.95	994.85	465.13	553.05
PHASE	165.	-112.	-120.	129.	-114.	130.	122.	-66.
2P MAG	42.54	1122.34	505.88	532.31	316.51	332.79	20.36	33.67
PHASE	159.	3.	-27.	-29.	-28.	-31.	-163.	159.
3P MAG	191.14	1519.47	642.85	605.61	380.91	368.95	92.72	104.13
PHASE	97.	-41.	-129.	-130.	-130.	-133.	61.	54.
4P MAG	26.41	2242.67	162.13	151.04	96.72	88.80	70.16	75.50
PHASE	149.	35.	-28.	-27.	-30.	-32.	154.	154.
5P MAG	20.87	1851.35	174.02	163.58	106.34	102.34	45.36	47.00
PHASE	-94.	145.	10.	15.	10.	9.	-179.	-176.
14. 5								
MEAN	-375.5	-12142.9	15243.0	14356.7	9132.9	8498.9	-1130.0	-2471.7
RMS	836.2	-13.3	1237.0	1673.4	756.2	1145.3	616.7	701.2
1/2 P-T-P	1393.1	34.2	2521.4	2754.2	1476.0	1855.8	1158.5	1298.2
1P MAG	1143.32	3.37	1143.36	2028.06	728.23	1430.66	803.14	905.58
PHASE	153.	-178.	-128.	139.	-118.	138.	-58.	-70.
2P MAG	107.60	1.34	496.98	483.52	308.39	294.98	35.58	39.08
PHASE	26.	128.	-180.	-173.	-177.	-173.	103.	108.
3P MAG	268.38	6.09	998.91	888.23	584.98	561.77	121.25	151.77
PHASE	118.	110.	-81.	-84.	-83.	-86.	-47.	116.
4P MAG	15.21	19.08	566.94	541.03	335.41	337.88	224.28	258.39
PHASE	31.	-61.	76.	80.	74.	76.	-101.	-105.
5P MAG	51.05	6.38	326.35	314.71	202.26	189.40	82.50	77.70
PHASE	-37.	-5.	24.	30.	26.	26.	6.	-178.
23.10								
MEAN	-349.6	-3076.3	15102.3	14325.3	9016.7	8405.4	-1851.5	-2538.7
RMS	792.4	2652.1	972.7	1952.7	549.9	1292.9	632.1	680.8
1/2 P-T-P	1323.6	5022.6	1944.6	3278.0	1071.1	2110.1	1158.7	1265.1
1P MAG	1084.34	1906.11	475.06	2489.25	235.44	1682.48	823.28	870.26
PHASE	155.	38.	-168.	119.	-138.	128.	117.	-68.
2P MAG	80.37	552.24	223.12	205.42	133.82	122.09	22.42	38.02
PHASE	25.	156.	174.	-174.	-165.	-154.	107.	110.
3P MAG	252.62	2037.33	1075.88	980.33	623.09	597.66	161.51	181.36
PHASE	103.	-91.	-90.	-93.	-68.	-71.	112.	105.
4P MAG	13.09	208.14	534.41	513.75	303.92	304.61	205.90	252.63
PHASE	6.	-87.	59.	64.	89.	92.	-120.	-119.
5P MAG	54.53	947.47	305.86	297.16	178.51	167.51	79.10	80.02
PHASE	-43.	21.	2.	7.	42.	41.	150.	149.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
27.11								
MEAN	-19536.9	-4665.2	-758.8	386.8	1124.3	84.0	-238.6	-21.8
RMS	1567.0	250.9	130.2	118.1	72.2	176.7	179.5	29.6
1/2 P-T-P	2625.1	494.3	233.4	177.9	141.0	287.2	252.4	49.6
1P MAG	2031.55	135.35	169.97	165.30	85.80	239.01	253.70	39.85
PHASE	171.	-85.	-49.	117.	134.	122.	-60.	-70.
2P MAG	202.49	114.10	44.47	0.80	37.99	60.82	8.03	10.67
PHASE	22.	169.	136.	75.	-49.	129.	127.	-44.
3P MAG	763.12	186.70	33.47	22.16	22.02	13.65	3.12	3.27
PHASE	-67.	54.	71.	102.	-156.	31.	-14.	149.
4P MAG	131.63	120.76	9.34	4.21	8.28	1.39	0.42	1.27
PHASE	-85.	158.	107.	123.	135.	-1.	-132.	140.
5P MAG	43.16	76.67	5.33	3.21	2.62	4.63	1.13	1.52
PHASE	-159.	-173.	-122.	-20.	33.	-83.	-116.	115.
14. 5								
MEAN	4468.6	-3361.4	-569.5	200.5	1851.2	-233.6	-42.6	62.1
RMS	3485.0	453.3	153.9	165.2	101.1	424.8	271.9	64.4
1/2 P-T-P	5342.8	873.8	252.2	235.2	195.6	640.8	375.9	101.5
1P MAG	4747.32	200.01	191.83	230.43	114.15	593.07	384.30	89.32
PHASE	146.	-104.	-39.	114.	170.	116.	-64.	-66.
2P MAG	506.05	63.52	49.82	0.69	50.42	55.67	7.41	9.35
PHASE	16.	142.	116.	19.	168.	99.	89.	-71.
3P MAG	1118.77	280.74	43.73	35.91	41.42	39.74	7.60	9.61
PHASE	-50.	120.	82.	124.	-122.	22.	-16.	-154.
4P MAG	216.65	417.38	48.37	4.70	23.33	50.55	7.05	8.12
PHASE	-101.	-102.	-50.	126.	-126.	-40.	-50.	146.
5P MAG	122.60	144.53	8.72	8.21	10.13	22.43	2.83	4.50
PHASE	-158.	-170.	-86.	1.	77.	-45.	-59.	137.
23.10								
MEAN	4873.4	-3349.4	-609.5	203.0	1846.9	-245.6	-52.9	53.6
RMS	3291.5	430.0	150.3	167.3	109.0	409.7	274.8	58.4
1/2 P-T-P	4934.4	784.3	260.2	241.6	191.8	622.3	380.3	94.3
1P MAG	4475.66	71.89	187.28	233.66	135.32	571.58	388.39	80.85
PHASE	148.	-100.	-38.	111.	122.	115.	-67.	-61.
2P MAG	441.78	74.98	52.14	2.95	27.89	54.65	6.82	10.47
PHASE	8.	151.	123.	30.	162.	112.	103.	-64.
3P MAG	1063.89	315.99	45.13	33.71	41.25	33.22	6.10	7.41
PHASE	-64.	108.	78.	110.	-130.	24.	-22.	-164.
4P MAG	234.54	394.53	41.88	3.58	22.65	45.89	6.67	6.66
PHASE	-118.	-117.	-60.	110.	-137.	-51.	-58.	128.
5P MAG	128.60	135.95	5.62	8.83	13.01	20.04	1.87	4.21
PHASE	-179.	161.	-114.	-19.	55.	-68.	-80.	129.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
27.10								
MEAN	-556.8	-2323.2	13302.2	12909.8	7989.3	7372.2	-2110.2	-2768.1
RMS	727.8	2709.0	927.8	1264.8	588.5	845.9	488.2	642.0
1/2 P-T-P	1203.3	4893.7	1905.1	2241.3	1189.3	1427.5	919.6	1072.4
1P MAG	998.98	2883.95	860.31	1525.51	592.01	1051.85	627.76	851.93
PHASE	157.	-16.	-91.	125.	-85.	127.	119.	-66.
2P MAG	73.61	2033.99	337.77	356.75	216.83	227.79	20.57	38.88
PHASE	45.	162.	-124.	-116.	-122.	-115.	127.	127.
3P MAG	221.83	996.46	792.67	731.33	465.13	446.31	111.78	116.97
PHASE	113.	-43.	-89.	-92.	-91.	-94.	114.	108.
4P MAG	15.28	561.44	316.42	292.60	181.35	174.26	118.49	129.41
PHASE	119.	-12.	58.	65.	57.	62.	-123.	-121.
5P MAG	26.18	306.98	265.70	258.39	162.88	155.13	64.52	66.02
PHASE	-41.	111.	25.	30.	25.	25.	-172.	-166.
14.10								
MEAN	-734.8	-12145.3	2393.4	5277.6	1173.2	2642.8	-2240.2	-5118.1
RMS	190.4	-20.4	1176.5	1446.6	717.8	904.7	243.3	233.6
1/2 P-T-P	312.9	22.6	2316.3	2601.9	1409.2	1618.7	518.1	430.3
1P MAG	72.10	3.16	1091.04	1646.26	675.39	1036.24	263.85	188.61
PHASE	-78.	-66.	165.	152.	168.	152.	-41.	-92.
2P MAG	91.78	1.09	835.69	830.47	516.99	521.45	21.94	24.39
PHASE	172.	173.	-40.	-41.	-40.	-43.	-122.	163.
3P MAG	234.60	2.80	836.35	782.85	497.37	480.39	136.75	176.00
PHASE	73.	-15.	-156.	-156.	-157.	-159.	-150.	26.
4P MAG	45.67	15.30	404.23	396.22	234.57	235.91	141.88	170.84
PHASE	108.	-134.	-82.	-81.	-83.	-84.	104.	99.
5P MAG	8.22	4.45	47.96	47.03	27.10	29.41	16.00	23.91
PHASE	-118.	-97.	-73.	-64.	-65.	-62.	-120.	75.
14. 9								
MEAN	-697.2	-12145.8	4855.6	6926.3	2688.3	3688.1	-2053.6	-4590.0
RMS	190.2	-8.0	1116.4	1438.3	689.9	907.9	265.7	309.0
1/2 P-T-P	358.4	39.3	2308.4	2611.0	1393.1	1629.3	499.4	613.3
1P MAG	116.76	0.82	1215.62	1787.03	770.51	1136.65	318.09	357.12
PHASE	138.	12.	-169.	158.	-167.	158.	-42.	-90.
2P MAG	50.50	0.77	537.25	550.22	331.35	348.22	15.99	23.36
PHASE	170.	-56.	-46.	-46.	-45.	-48.	-133.	163.
3P MAG	229.18	4.50	719.47	666.47	428.66	408.67	103.34	134.53
PHASE	82.	-175.	-141.	-144.	-143.	-146.	-136.	39.
4P MAG	52.50	25.66	435.69	422.31	242.31	248.79	142.43	177.30
PHASE	70.	38.	-89.	-89.	-92.	-93.	87.	86.
5P MAG	3.41	5.87	61.77	73.29	42.59	44.85	16.84	31.24
PHASE	-92.	70.	-59.	-55.	-56.	-55.	-67.	81.

RUN.PT	CHANNEL DESIGNATION							
	I	J	K	L	M	N	O	P
27.10								
MEAN	2264.6	-3737.1	-656.3	251.0	1618.1	-207.8	-64.3	25.2
RMS	2988.1	347.6	158.8	155.2	56.6	345.5	249.6	55.0
1/2 P-T-P	4472.4	659.5	275.0	221.5	129.0	533.9	346.6	88.9
1P MAG	4071.84	213.71	202.60	217.24	39.35	480.61	352.76	76.29
PHASE	152.	-75.	-40.	113.	157.	116.	-64.	-70.
2P MAG	421.08	90.61	58.58	2.74	34.08	67.74	8.15	10.68
PHASE	19.	148.	129.	16.	-147.	117.	108.	-55.
3P MAG	928.30	214.89	33.36	28.21	32.40	20.02	5.49	4.75
PHASE	-56.	110.	91.	117.	-129.	22.	-15.	159.
4P MAG	173.43	216.02	22.38	4.96	11.89	33.21	5.08	5.30
PHASE	-89.	-118.	-26.	134.	-145.	-24.	-31.	157.
5P MAG	95.81	117.16	11.47	6.33	4.87	21.12	1.85	3.29
PHASE	-158.	-161.	-100.	2.	68.	-56.	-63.	115.
14.10								
MEAN	4329.6	-5912.2	-859.3	541.3	456.3	463.4	-470.1	-45.2
RMS	792.4	344.6	115.2	51.9	131.4	68.0	76.7	15.9
1/2 P-T-P	1385.6	607.6	175.5	95.0	191.9	117.2	109.8	26.0
1P MAG	864.69	163.06	148.27	68.68	169.00	69.21	108.06	19.89
PHASE	-98.	-143.	-72.	129.	154.	-109.	-49.	70.
2P MAG	123.84	105.13	37.14	3.72	69.69	58.38	7.86	8.79
PHASE	63.	160.	109.	166.	-55.	113.	120.	-67.
3P MAG	660.02	321.87	37.81	24.37	18.72	13.00	2.02	0.99
PHASE	-94.	26.	52.	70.	179.	37.	-5.	-18.
4P MAG	37.40	277.32	33.38	3.97	14.84	20.08	2.84	3.37
PHASE	-122.	101.	101.	87.	79.	111.	119.	-88.
5P MAG	16.93	40.36	7.20	1.83	5.69	9.49	1.24	2.74
PHASE	77.	72.	124.	-55.	17.	151.	177.	-37.
14. 9								
MEAN	4428.2	-5435.5	-813.4	458.4	712.2	300.0	-375.4	-20.6
RMS	653.6	334.5	119.6	76.4	130.7	59.0	112.4	9.2
1/2 P-T-P	1360.5	606.8	195.0	125.8	199.6	104.2	158.8	20.0
1P MAG	524.01	231.08	155.63	104.68	176.23	51.80	158.71	7.50
PHASE	-155.	-130.	-68.	117.	169.	130.	-59.	6.
2P MAG	176.85	94.23	39.27	1.68	45.58	57.50	8.09	8.64
PHASE	32.	163.	120.	-175.	-64.	118.	116.	-53.
3P MAG	724.32	244.66	29.14	26.16	19.41	6.03	1.05	0.95
PHASE	-87.	39.	66.	80.	-168.	20.	-59.	-152.
4P MAG	77.37	284.77	37.61	3.46	12.24	24.34	4.32	3.19
PHASE	-103.	92.	96.	71.	70.	117.	77.	-74.
5P MAG	12.45	48.49	6.48	1.81	6.43	8.86	0.73	2.44
PHASE	104.	84.	121.	-68.	10.	154.	167.	-77.

RUN.PT		CHANNEL DESIGNATION						
	A	B	C	D	E	F	G	H
27. 8								
MEAN	-809.9	-5176.3	3031.4	5550.2	1644.2	2675.3	-2976.2	-4863.4
RMS	177.8	2993.4	891.2	1122.3	538.2	690.2	246.2	284.5
1/2 P-T-P	313.8	5333.0	1527.6	2090.5	914.3	1281.0	497.5	511.1
1P MAG	145.53	2920.52	214.91	1016.68	147.77	630.36	253.95	304.16
PHASE	-173.	-100.	-173.	135.	-161.	135.	125.	-69.
2P MAG	95.08	1528.73	893.75	895.80	549.65	556.11	25.66	25.26
PHASE	167.	-39.	-40.	-40.	-39.	-42.	-127.	164.
3P MAG	170.46	592.28	725.88	687.15	429.42	416.65	133.11	147.96
PHASE	87.	-79.	-150.	-150.	-151.	-153.	34.	32.
4P MAG	43.53	2201.18	449.97	444.60	258.60	262.19	170.56	188.73
PHASE	104.	-26.	-93.	-92.	-94.	-95.	90.	89.
5P MAG	6.27	495.12	25.21	25.07	14.56	15.69	15.44	15.48
PHASE	-142.	-148.	-102.	-93.	-90.	-81.	27.	25.
28.16								
MEAN	-645.4	95.3	2499.4	5305.2	1219.3	2471.5	-3076.1	-4860.3
RMS	251.7	0.8	943.7	1109.3	534.0	636.3	240.3	293.1
1/2 P-T-P	427.5	1.6	1709.9	2099.4	960.7	1206.2	460.7	491.5
1P MAG	264.44	0.35	250.57	898.61	136.18	519.28	242.45	324.11
PHASE	-164.	-48.	16.	107.	3.	109.	106.	-60.
2P MAG	94.03	0.39	898.37	904.28	523.02	527.83	34.80	15.68
PHASE	159.	111.	-50.	-51.	-49.	-52.	-99.	-168.
3P MAG	212.03	0.38	824.00	774.05	458.53	438.17	134.81	145.90
PHASE	65.	-159.	-167.	-167.	-167.	-169.	18.	15.
4P MAG	50.28	0.50	462.88	466.22	251.67	253.55	165.97	180.19
PHASE	83.	-141.	-104.	-103.	-105.	-107.	78.	75.
5P MAG	8.84	0.23	66.95	68.69	36.96	38.39	27.18	28.74
PHASE	-153.	-110.	-103.	-96.	-99.	-97.	36.	32.
29. 4								
MEAN	-674.8	-5996.7	2950.4	5915.4	1558.3	2783.4	-3155.7	-4763.7
RMS	217.7	3305.2	938.6	1121.9	546.6	650.4	233.3	288.4
1/2 P-T-P	380.1	8023.9	1736.2	2090.4	988.8	1206.0	471.2	537.2
1P MAG	168.89	556.24	498.58	1002.28	321.18	594.01	237.54	325.23
PHASE	174.	121.	-142.	150.	-138.	151.	130.	-80.
2P MAG	95.21	487.43	845.85	874.12	497.38	507.85	26.70	11.82
PHASE	165.	3.	-40.	-40.	-39.	-42.	-104.	-164.
3P MAG	230.52	1539.59	758.76	721.97	426.11	410.84	128.16	135.38
PHASE	74.	-115.	-156.	-157.	-156.	-158.	30.	28.
4P MAG	48.08	1479.25	451.69	456.63	246.79	248.44	163.50	177.28
PHASE	90.	-43.	-94.	-93.	-94.	-96.	87.	86.
5P MAG	12.87	1167.78	54.22	57.72	29.24	30.88	23.20	20.83
PHASE	-172.	-77.	-88.	-83.	-84.	-82.	64.	51.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
27. 8								
MEAN	3363.4	-5740.2	-874.0	525.3	504.7	360.9	-399.3	-65.7
RMS	792.0	329.3	128.7	67.6	76.5	52.6	97.5	8.8
1/2 P-T-P	1655.5	562.6	212.9	111.0	142.3	111.7	137.8	15.9
1P MAG	915.64	127.61	167.55	93.22	73.11	23.89	137.54	4.19
PHASE	-132.	-84.	-62.	119.	138.	-162.	-57.	-109.
2P MAG	127.83	112.63	40.41	2.20	73.01	61.46	8.60	10.21
PHASE	61.	160.	115.	145.	-55.	115.	119.	-59.
3P MAG	579.04	271.96	33.19	19.15	16.07	12.75	1.94	2.17
PHASE	-79.	30.	64.	84.	-173.	58.	25.	-165.
4P MAG	51.68	310.88	39.33	4.04	16.85	23.46	3.33	3.67
PHASE	-100.	91.	97.	93.	73.	109.	108.	-82.
5P MAG	11.19	29.99	4.49	1.63	5.74	6.59	0.65	0.20
PHASE	41.	29.	116.	-62.	-19.	131.	177.	-49.
28.16								
MEAN	-2453.5	-5755.8	-870.3	482.8	460.2	371.9	-415.6	-88.3
RMS	1146.8	330.5	129.0	67.6	67.0	56.0	103.9	13.7
1/2 P-T-P	2177.0	595.7	202.5	113.5	131.1	115.2	148.1	24.1
1P MAG	1463.50	143.81	170.38	92.45	55.42	40.28	146.61	15.07
PHASE	-139.	-54.	-62.	120.	85.	-173.	-61.	-105.
2P MAG	163.16	95.12	38.35	1.96	70.23	60.83	8.56	10.21
PHASE	65.	157.	108.	136.	-65.	109.	114.	-78.
3P MAG	656.95	282.17	32.62	23.26	17.79	11.91	0.96	4.77
PHASE	-101.	15.	46.	63.	168.	33.	-13.	165.
4P MAG	25.99	299.33	36.55	3.30	13.79	21.88	3.85	2.58
PHASE	-106.	79.	80.	85.	65.	91.	59.	-110.
5P MAG	16.94	48.09	5.85	1.69	6.65	7.89	0.58	1.80
PHASE	29.	37.	87.	-104.	-29.	120.	126.	34.
29. 4								
MEAN	-26121.1	-5775.0	-864.1	453.7	523.9	358.0	-404.2	-76.1
RMS	873.4	321.9	128.7	66.7	73.8	50.0	101.0	14.4
1/2 P-T-P	1756.9	561.1	204.2	110.1	123.1	98.8	145.2	22.4
1P MAG	987.23	171.30	170.61	90.82	74.50	27.67	142.43	16.61
PHASE	-140.	-100.	-67.	117.	167.	-179.	-61.	-111.
2P MAG	137.84	94.98	35.70	2.34	66.28	57.26	9.16	9.68
PHASE	70.	162.	112.	148.	-55.	114.	116.	-72.
3P MAG	682.64	260.71	34.29	24.60	17.12	10.92	1.40	4.11
PHASE	-94.	26.	60.	72.	178.	55.	45.	159.
4P MAG	47.27	294.34	34.81	3.80	15.34	20.49	3.48	2.75
PHASE	-141.	88.	92.	74.	69.	109.	105.	-104.
5P MAG	9.90	36.66	5.58	1.50	5.04	7.82	1.26	1.79
PHASE	99.	52.	101.	-104.	-4.	135.	162.	46.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
29. 5								
MEAN	-570.9	-3234.5	3104.1	6013.7	1628.8	2859.0	-3140.8	-4735.3
RMS	276.0	1470.7	972.6	1244.5	566.1	738.6	252.2	262.8
1/2 P-T-P	448.3	3085.9	1921.3	2244.2	1104.6	1321.6	530.9	479.4
1P MAG	314.33	1458.07	635.88	1271.99	385.44	773.69	266.09	271.86
PHASE	-174.	150.	-174.	146.	-169.	148.	128.	-81.
2P MAG	123.05	391.36	824.52	847.97	487.40	499.07	23.09	17.12
PHASE	174.	48.	-40.	-41.	-40.	-43.	-106.	170.
3P MAG	183.59	815.16	770.79	737.37	436.90	423.28	132.28	144.15
PHASE	72.	137.	-160.	-159.	-159.	-161.	28.	27.
4P MAG	47.15	416.77	444.68	448.94	245.03	245.40	167.80	178.26
PHASE	99.	118.	-90.	-90.	-91.	-93.	89.	88.
5P MAG	21.03	364.10	30.57	34.42	18.10	20.66	10.90	11.32
PHASE	-174.	22.	-64.	-55.	-55.	-56.	70.	77.
14. 8								
MEAN	-561.3	-12140.0	9099.2	9836.4	5319.3	5575.6	-1723.8	-3697.5
RMS	370.6	-17.0	639.1	1490.4	379.1	963.1	385.6	393.7
1/2 P-T-P	672.9	23.2	1264.4	2123.0	755.2	1361.4	624.4	654.0
1P MAG	480.72	2.33	472.35	1979.97	275.37	1285.11	527.14	530.28
PHASE	161.	141.	175.	129.	-179.	129.	-62.	-69.
2P MAG	18.73	2.15	230.15	268.15	147.66	174.17	15.55	25.98
PHASE	93.	-153.	-60.	-58.	-59.	-59.	167.	152.
3P MAG	203.50	5.65	706.43	641.53	419.25	399.11	92.94	115.66
PHASE	100.	78.	-103.	-104.	-104.	-106.	-85.	85.
4P MAG	21.58	13.13	59.89	72.69	34.98	38.68	15.09	19.21
PHASE	59.	-108.	-82.	-84.	-72.	-79.	106.	116.
5P MAG	10.94	4.41	143.14	135.99	87.48	85.35	48.11	43.73
PHASE	-61.	-104.	-7.	-2.	-5.	-5.	-25.	140.
14. 4								
MEAN	-244.2	-12143.4	13827.7	12995.1	8246.8	7655.9	-1323.7	-2681.1
RMS	747.1	41.4	1281.9	1605.1	791.0	1084.2	534.7	639.8
1/2 P-T-P	1270.7	87.5	2653.2	2447.3	1595.7	1600.3	913.0	1134.8
1P MAG	1012.35	2.26	1327.88	1965.80	848.58	1364.67	713.69	866.70
PHASE	145.	-106.	-130.	145.	-124.	144.	-58.	-75.
2P MAG	92.78	4.18	507.18	483.08	315.12	300.60	33.86	40.61
PHASE	22.	137.	-171.	-165.	-169.	-164.	96.	102.
3P MAG	276.11	8.83	1019.75	920.59	600.88	575.00	130.96	161.30
PHASE	130.	-130.	-77.	-80.	-79.	-82.	-51.	117.
4P MAG	32.79	63.18	327.71	315.61	163.44	159.33	140.20	119.11
PHASE	48.	110.	79.	88.	82.	88.	-88.	-85.
5P MAG	36.93	9.75	312.16	295.56	191.75	185.24	82.74	79.08
PHASE	-26.	-160.	19.	26.	20.	20.	-5.	173.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
29. 5								
MEAN	-27760.6	-5746.5	-863.1	450.2	533.9	365.3	-402.8	-77.6
RMS	1195.0	319.4	125.6	63.1	87.0	54.9	97.7	13.0
1/2 P-T-P	2340.2	544.1	201.1	106.5	137.8	111.5	138.1	20.0
1P MAG	1536.70	133.97	165.35	86.29	99.96	43.82	137.69	14.51
PHASE	-150.	-114.	-65.	117.	153.	-161.	-60.	-105.
2P MAG	115.51	98.06	38.91	1.60	64.23	57.94	10.21	9.60
PHASE	129.	159.	116.	-180.	-55.	119.	116.	-67.
3P MAG	631.89	272.63	34.18	21.65	16.44	10.82	2.01	4.49
PHASE	-96.	24.	58.	71.	170.	50.	66.	163.
4P MAG	69.86	296.57	31.23	3.98	17.44	16.02	2.52	2.10
PHASE	-138.	92.	97.	87.	75.	121.	89.	-67.
5P MAG	25.27	20.21	4.58	1.65	3.20	6.12	1.20	1.71
PHASE	170.	68.	110.	-98.	-12.	139.	149.	70.
14. 8								
MEAN	4706.2	-4614.2	-727.7	329.6	1162.4	44.4	-219.6	19.6
RMS	1436.7	203.9	116.1	120.6	96.5	195.9	185.1	27.0
1/2 P-T-P	2245.7	360.6	206.7	179.6	147.2	296.7	257.7	44.0
1P MAG	1865.11	103.83	150.87	168.66	130.48	268.87	261.60	36.30
PHASE	165.	-109.	-48.	117.	133.	118.	-61.	-55.
2P MAG	257.34	83.78	47.93	1.54	22.46	59.73	8.14	10.69
PHASE	21.	168.	138.	-1.	-90.	129.	125.	-46.
3P MAG	733.39	202.80	28.52	24.52	23.92	4.27	1.08	1.36
PHASE	-68.	86.	97.	100.	-134.	68.	-32.	-102.
4P MAG	119.64	26.06	18.12	2.82	0.77	15.48	1.49	2.90
PHASE	-103.	114.	80.	87.	146.	100.	126.	-104.
5P MAG	38.54	71.30	2.00	2.85	8.28	5.77	1.52	1.09
PHASE	-161.	148.	154.	-27.	52.	-116.	-100.	133.
14. 4								
MEAN	5025.3	-3628.8	-614.4	195.7	1674.6	-227.9	-40.3	62.5
RMS	3042.1	349.0	144.8	157.0	106.0	378.2	255.1	57.4
1/2 P-T-P	5037.6	714.0	267.1	216.3	178.3	584.9	353.9	93.3
1P MAG	4114.23	243.22	186.31	218.92	132.26	528.27	360.54	79.62
PHASE	140.	-108.	-45.	113.	-178.	112.	-66.	-70.
2P MAG	474.63	60.67	52.33	1.13	47.28	55.78	7.98	9.77
PHASE	15.	128.	124.	-3.	176.	107.	95.	-64.
3P MAG	1091.32	292.41	42.09	35.51	38.49	22.45	7.01	6.52
PHASE	-45.	119.	105.	132.	-116.	55.	-16.	-133.
4P MAG	222.83	225.23	34.41	2.88	15.72	40.35	5.37	7.11
PHASE	-102.	-85.	1.	85.	-76.	8.	28.	148.
5P MAG	97.87	136.56	5.89	6.33	11.92	25.61	3.74	5.93
PHASE	-156.	-178.	-60.	1.	65.	-36.	-112.	143.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
14. 7								
MEAN	-251.8	-12150.0	13974.1	13167.7	8318.5	7734.4	-1356.6	-2715.6
RMS	720.9	-21.2	1218.4	1661.3	737.5	1117.9	546.5	619.2
1/2 P-T-P	1232.7	24.1	2541.1	2456.4	1509.5	1637.5	962.0	1108.3
1P MAG	983.30	3.36	1183.29	2053.79	738.83	1413.29	718.46	823.27
PHASE	149.	-14.	-136.	142.	-129.	141.	-57.	-74.
2P MAG	98.68	2.86	458.74	430.06	282.89	263.67	30.88	31.62
PHASE	22.	-73.	-179.	-172.	-177.	-172.	101.	109.
3P MAG	238.58	5.34	1061.71	954.40	618.85	596.54	153.06	174.50
PHASE	134.	34.	-69.	-71.	-71.	-73.	-39.	126.
4P MAG	42.64	7.16	366.42	341.80	208.82	207.75	174.55	160.50
PHASE	28.	-127.	99.	104.	96.	99.	-86.	-82.
5P MAG	38.87	5.64	265.15	248.47	163.86	154.67	68.20	69.44
PHASE	-14.	-151.	27.	33.	28.	29.	-9.	170.
28.17								
MEAN	-301.3	-3863.4	11716.7	11628.9	6739.1	6394.0	-2291.9	-2859.2
RMS	820.9	3555.3	1164.9	937.8	758.6	624.4	371.5	661.5
1/2 P-T-P	1389.8	7026.1	2068.1	1783.2	1324.2	1131.7	605.2	1082.9
1P MAG	1123.63	2553.79	1273.04	867.36	889.67	669.33	494.98	915.86
PHASE	149.	-91.	-69.	97.	-64.	108.	107.	-67.
2P MAG	86.30	689.61	507.30	527.95	310.09	300.58	20.31	35.26
PHASE	24.	-125.	-148.	-139.	-144.	-139.	112.	116.
3P MAG	273.56	388.06	869.63	805.85	488.29	465.48	107.88	114.11
PHASE	108.	-150.	-103.	-107.	-105.	-108.	95.	89.
4P MAG	32.57	3084.62	79.40	85.89	41.11	48.03	31.39	32.37
PHASE	18.	-74.	144.	165.	147.	154.	-43.	-41.
5P MAG	26.56	1930.80	228.82	225.60	131.55	127.04	59.66	59.43
PHASE	-57.	36.	-5.	2.	-3.	-4.	135.	138.
14. 6								
MEAN	-47.5	-12145.3	16025.7	14496.2	9593.8	8624.4	-1184.4	-2268.2
RMS	928.1	-25.9	1523.0	1774.2	935.8	1213.7	650.7	748.9
1/2 P-T-P	1514.0	14.7	2900.8	2965.2	1722.5	2005.2	1128.1	1382.5
1P MAG	1281.67	4.30	1362.76	1977.73	880.27	1421.86	847.18	986.82
PHASE	147.	-104.	-126.	141.	-116.	140.	-59.	-73.
2P MAG	145.01	4.62	924.23	892.27	576.10	558.54	44.42	51.13
PHASE	25.	-45.	-170.	-166.	-169.	-166.	91.	82.
3P MAG	223.22	1.08	1192.86	1071.45	691.42	673.34	161.08	198.32
PHASE	144.	-130.	-63.	-66.	-65.	-68.	-33.	133.
4P MAG	35.77	2.26	609.02	564.06	346.52	340.65	262.00	259.10
PHASE	21.	-93.	90.	94.	88.	90.	-91.	-89.
5P MAG	56.41	1.34	316.80	298.92	193.90	181.49	89.09	91.99
PHASE	-10.	-73.	24.	30.	25.	25.	-6.	164.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
14. 7								
MEAN	5180.7	-3695.7	-623.6	200.8	1677.9	-224.5	-45.4	61.4
RMS	2921.3	369.2	140.4	153.2	105.2	364.4	249.7	52.5
1/2 P-T-P	4756.8	713.9	268.5	210.5	176.8	564.1	350.3	85.0
1P MAG	3956.65	217.11	179.43	214.02	131.32	509.24	352.93	72.81
PHASE	143.	-111.	-44.	113.	173.	114.	-65.	-65.
2P MAG	463.73	53.23	50.48	1.37	43.48	54.99	7.19	9.39
PHASE	17.	144.	130.	13.	171.	115.	102.	-62.
3P MAG	1028.00	320.92	45.12	32.42	39.48	22.01	4.82	5.27
PHASE	-41.	129.	113.	135.	-110.	55.	5.	-131.
4P MAG	221.60	268.85	33.91	2.74	14.47	29.04	3.36	5.47
PHASE	-108.	-78.	-11.	80.	-97.	-6.	-10.	175.
5P MAG	111.29	118.46	7.62	6.54	14.05	22.13	2.29	5.06
PHASE	-154.	-179.	-28.	7.	77.	-34.	-61.	151.
28.17								
MEAN	-3956.3	-3918.3	-682.0	208.9	1388.0	-204.6	-70.9	-1.7
RMS	3483.2	312.8	163.9	154.2	57.6	343.8	240.6	56.3
1/2 P-T-P	5001.6	579.6	275.5	218.5	98.4	521.7	334.1	86.7
1P MAG	4759.54	319.73	218.24	215.25	54.69	479.26	340.07	78.74
PHASE	146.	-60.	-45.	110.	-47.	111.	-71.	-79.
2P MAG	527.68	81.19	55.59	4.14	43.85	69.09	10.20	9.12
PHASE	20.	128.	121.	-29.	-162.	106.	92.	-66.
3P MAG	1118.32	220.52	34.77	33.83	30.51	22.08	5.12	3.88
PHASE	-67.	89.	79.	107.	-136.	10.	-29.	132.
4P MAG	172.23	57.78	28.00	1.78	4.03	22.12	3.00	2.49
PHASE	-124.	-46.	31.	62.	-84.	32.	26.	-159.
5P MAG	78.53	103.68	3.39	5.07	10.46	11.58	2.21	0.91
PHASE	-178.	151.	-110.	-33.	49.	-81.	-115.	54.
14. 6								
MEAN	5331.8	-3246.1	-567.8	142.9	1903.6	-336.3	35.6	78.2
RMS	3872.9	471.2	161.4	169.8	111.2	467.6	284.8	70.6
1/2 P-T-P	6321.3	942.6	300.5	227.5	203.5	712.6	403.2	111.4
1P MAG	5329.89	235.37	202.12	237.72	118.78	653.88	402.55	98.25
PHASE	140.	-104.	-40.	113.	-175.	113.	-66.	-69.
2P MAG	569.16	64.23	60.29	2.38	79.03	65.65	9.44	11.30
PHASE	20.	97.	112.	-22.	176.	92.	82.	-78.
3P MAG	1022.00	358.04	55.75	31.71	46.59	33.22	5.51	8.45
PHASE	-32.	135.	118.	147.	-104.	78.	17.	-119.
4P MAG	245.78	435.13	47.25	3.04	24.13	47.24	5.74	8.17
PHASE	-105.	-86.	-25.	106.	-103.	-10.	-16.	165.
5P MAG	135.98	157.93	4.60	9.18	17.65	23.29	2.37	4.89
PHASE	-155.	177.	-42.	8.	84.	-31.	-53.	152.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
28.18								
MEAN	-120.3	-3879.5	14136.8	13234.8	8189.4	7442.0	-2100.9	-2381.4
RMS	862.9	3862.1	845.3	1908.9	470.6	1268.9	609.5	610.6
1/2 P-T-P	1421.1	8112.6	1646.9	3270.1	854.9	2088.5	938.5	1037.3
1P MAG	1187.03	1574.68	193.42	2474.17	76.80	1681.15	830.41	826.24
PHASE	150.	-41.	133.	109.	-26.	112.	112.	-65.
2P MAG	105.60	2455.87	533.74	515.06	316.84	296.59	31.42	51.16
PHASE	17.	-131.	-169.	-163.	-167.	-162.	111.	104.
3P MAG	256.16	420.33	961.34	862.75	529.40	504.58	126.06	135.35
PHASE	125.	-84.	-76.	-79.	-78.	-82.	129.	122.
4P MAG	15.52	2327.96	296.98	260.44	158.58	151.43	104.55	113.59
PHASE	9.	-39.	68.	72.	65.	69.	-112.	-112.
5P MAG	37.41	1215.44	263.59	249.86	153.04	142.10	83.91	79.90
PHASE	-37.	131.	5.	12.	8.	6.	140.	138.
28.19								
MEAN	90.1	-3797.7	16697.8	14991.3	9745.2	8571.9	-1906.9	-1877.6
RMS	1135.3	3398.4	1394.6	1978.2	812.5	1367.4	694.9	765.9
1/2 P-T-P	1854.0	6646.4	2424.7	3339.4	1337.0	2244.8	1137.1	1353.6
1P MAG	1562.66	1802.50	741.50	2219.60	480.44	1658.05	935.10	1028.01
PHASE	143.	0.	-145.	119.	-109.	121.	115.	-71.
2P MAG	174.43	2083.42	1224.64	1202.19	729.14	694.99	51.67	70.70
PHASE	12.	-149.	177.	-179.	179.	-179.	96.	86.
3P MAG	314.73	907.46	1241.65	1091.68	683.28	648.48	160.62	184.78
PHASE	131.	-116.	-70.	-73.	-72.	-75.	135.	127.
4P MAG	32.38	1925.68	419.80	387.54	227.40	226.03	163.64	182.25
PHASE	17.	-68.	76.	83.	75.	80.	-103.	-103.
5P MAG	57.49	1546.32	292.56	277.56	171.67	156.14	89.05	89.14
PHASE	-28.	63.	10.	17.	12.	11.	141.	137.
28.20								
MEAN	381.1	-2291.4	18720.8	16549.4	11035.2	9613.9	-1935.9	-1354.7
RMS	1409.1	4209.5	1863.2	2127.6	1145.2	1458.6	760.2	923.3
1/2 P-T-P	2295.3	8166.4	3140.5	3646.6	1923.8	2508.2	1285.4	1642.9
1P MAG	1936.23	2441.46	771.06	1865.52	742.14	1519.93	982.20	1210.81
PHASE	146.	-100.	-101.	107.	-75.	113.	111.	-68.
2P MAG	216.55	2173.97	1688.65	1666.92	1014.78	985.01	78.64	98.89
PHASE	14.	-99.	-173.	-170.	-171.	-170.	86.	75.
3P MAG	406.13	1381.47	1607.38	1414.15	876.87	848.01	209.90	246.65
PHASE	139.	7.	-68.	-71.	-69.	-72.	137.	129.
4P MAG	27.55	2402.11	843.61	775.33	455.99	445.54	317.05	348.47
PHASE	11.	-54.	70.	75.	68.	72.	-109.	-109.
5P MAG	78.60	3072.08	401.55	391.22	238.14	215.10	100.56	94.92
PHASE	-27.	64.	18.	25.	19.	19.	164.	161.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
28.18								
MEAN	-34243.1	-3459.9	-629.5	144.9	1639.2	-325.4	19.3	16.3
RMS	97.3	285.6	148.5	173.3	98.3	428.3	277.9	69.3
1/2 P-T-P	0.2	561.9	254.8	240.0	175.2	640.9	387.7	105.7
1P MAG	0.03	59.60	192.23	242.62	121.07	600.70	392.85	97.48
PHASE	-14.	-34.	-38.	113.	100.	114.	-68.	-75.
2P MAG	0.03	76.06	60.35	6.59	46.97	62.50	8.35	6.90
PHASE	-28.	126.	120.	-3.	174.	108.	95.	-68.
3P MAG	0.03	258.39	41.74	32.73	34.95	24.54	6.02	2.99
PHASE	-43.	123.	102.	124.	-118.	47.	-7.	135.
4P MAG	0.04	196.73	19.82	2.79	9.53	23.00	3.29	3.09
PHASE	-57.	-108.	-7.	124.	-125.	-5.	-2.	143.
5P MAG	0.03	132.84	1.26	5.96	17.24	14.78	2.63	1.26
PHASE	-71.	152.	-3.	-14.	65.	-55.	-82.	74.
28.19								
MEAN	431.4	-2991.8	-571.7	86.8	1906.2	-453.8	109.7	35.8
RMS	7.5	390.4	168.9	190.6	103.6	549.2	307.5	88.0
1/2 P-T-P	14.6	731.3	304.8	258.1	213.8	817.5	432.8	134.3
1P MAG	2.62	123.03	214.03	266.26	88.55	769.19	434.58	123.83
PHASE	-11.	-97.	-40.	111.	139.	111.	-71.	-77.
2P MAG	0.47	80.86	67.45	5.79	97.31	75.90	10.72	8.14
PHASE	143.	85.	94.	-6.	163.	73.	60.	-128.
3P MAG	0.50	346.08	54.69	40.22	44.45	41.61	7.97	4.22
PHASE	167.	128.	98.	130.	-112.	45.	-8.	144.
4P MAG	9.52	308.49	40.20	3.34	18.35	45.91	6.62	5.36
PHASE	20.	-100.	-20.	119.	-122.	-14.	-24.	146.
5P MAG	1.44	146.70	3.49	8.02	19.32	20.52	2.98	1.48
PHASE	-78.	153.	-23.	-15.	70.	-52.	-58.	61.
28.20								
MEAN	429.3	-2630.4	-525.2	22.7	2175.2	-562.0	187.6	52.3
RMS	6.9	582.0	202.4	206.4	109.5	668.5	338.0	106.2
1/2 P-T-P	11.9	1006.1	355.2	274.7	225.3	1014.7	478.4	162.6
1P MAG	2.89	176.07	247.96	286.74	33.60	931.94	477.52	148.81
PHASE	-33.	-60.	-35.	110.	120.	112.	-72.	-76.
2P MAG	1.01	140.09	86.25	7.07	128.23	107.09	15.24	13.19
PHASE	106.	69.	85.	-13.	170.	65.	57.	-139.
3P MAG	0.34	457.54	81.37	52.53	57.66	68.18	11.14	5.47
PHASE	85.	130.	98.	137.	-110.	54.	4.	176.
4P MAG	8.60	585.91	64.80	4.50	34.88	75.80	9.37	10.58
PHASE	19.	-106.	-36.	133.	-126.	-21.	-26.	141.
5P MAG	1.64	175.83	10.87	10.43	17.07	32.02	4.14	2.30
PHASE	-66.	175.	-65.	-17.	75.	-40.	-70.	102.

RUN.PT		CHANNEL DESIGNATION						
	A	B	C	D	E	F	G	H
28.21								
MEAN	787.5	822.2	20915.0	17918.8	12392.6	10541.1	-1841.0	-925.1
RMS	1789.7	2563.8	2519.4	2488.1	1635.0	1646.4	851.2	1129.8
1/2 P-T-P	2891.3	5945.5	4356.4	4965.6	2785.9	3041.9	1305.2	1978.6
1P MAG	2450.79	1653.54	1395.55	1758.32	1352.97	1430.77	1116.38	1514.40
PHASE	146.	153.	-53.	73.	-49.	90.	104.	-64.
2P MAG	289.39	1787.47	2538.92	2465.63	1510.46	1482.98	137.03	141.31
PHASE	13.	-100.	-175.	-171.	-173.	-173.	84.	65.
3P MAG	541.59	853.13	1892.92	1624.46	1012.24	996.13	237.46	307.69
PHASE	151.	88.	-58.	-61.	-60.	-62.	147.	138.
4P MAG	58.36	1600.00	709.48	611.35	377.85	353.87	288.12	306.29
PHASE	22.	-52.	64.	69.	62.	66.	-115.	-114.
5P MAG	90.98	815.58	400.33	383.63	239.00	214.57	87.19	78.24
PHASE	-28.	90.	26.	33.	26.	29.	165.	164.
15. 4								
MEAN	-694.1	1648.1	1367.5	4292.1	505.1	2019.8	-2433.8	-5305.3
RMS	167.3	130.0	1243.7	1412.8	769.4	881.6	232.0	255.4
1/2 P-T-P	310.0	246.4	2530.3	2726.9	1559.5	1688.7	456.5	467.1
1P MAG	94.88	21.81	1339.67	1653.18	838.74	1040.35	238.12	215.31
PHASE	-12.	-157.	175.	160.	177.	160.	-36.	-115.
2P MAG	70.42	98.80	682.89	698.30	430.73	436.66	20.55	20.96
PHASE	154.	136.	-55.	-56.	-56.	-58.	-107.	146.
3P MAG	192.23	130.05	752.10	709.14	453.01	434.58	118.49	162.81
PHASE	68.	-99.	-168.	-168.	-168.	-170.	-163.	14.
4P MAG	54.52	10.39	506.84	508.27	293.83	299.04	171.29	219.27
PHASE	69.	-6.	-109.	-107.	-110.	-111.	69.	71.
5P MAG	3.33	13.03	35.80	45.16	25.51	25.99	19.80	23.83
PHASE	59.	-103.	-111.	-99.	-103.	-98.	-157.	47.
14.12								
MEAN	-643.0	-75.9	3507.9	5733.6	1861.2	2918.5	-2268.6	-4814.8
RMS	136.7	1.2	1332.1	1721.4	820.5	1080.6	281.4	226.2
1/2 P-T-P	258.1	2.2	2459.2	2727.7	1500.9	1701.1	522.4	433.5
1P MAG	72.50	0.37	1674.73	2280.47	1038.22	1436.95	369.44	247.53
PHASE	5.	-22.	167.	151.	168.	151.	-43.	-108.
2P MAG	61.00	0.13	547.24	568.96	339.28	353.34	13.70	23.47
PHASE	164.	-46.	-45.	-46.	-45.	-47.	-153.	172.
3P MAG	161.38	0.48	573.83	534.69	341.13	326.37	85.76	116.36
PHASE	90.	-33.	-142.	-143.	-143.	-145.	-139.	39.
4P MAG	29.34	0.28	322.66	326.12	183.96	190.25	95.27	137.47
PHASE	96.	-86.	-88.	-86.	-89.	-90.	89.	92.
5P MAG	2.87	0.14	48.19	50.90	27.22	30.32	22.91	27.02
PHASE	-77.	-33.	-61.	-51.	-55.	-51.	-92.	89.

RUN.PT	CHANNEL DESIGNATION							
	I	J	K	L	M	N	O	P
28.21								
MEAN	-34243.1	-2257.1	-476.7	-32.7	2409.7	-676.1	288.5	70.1
RMS	97.3	634.0	253.8	231.9	162.9	841.1	383.9	133.7
1/2 P-T-P	0.2	1321.0	464.0	301.1	303.4	1236.1	551.3	198.2
1P MAG	0.03	323.48	310.98	320.11	99.19	1172.80	542.21	187.08
PHASE	-14.	-33.	-27.	108.	-8.	110.	-74.	-77.
2P MAG	0.03	214.42	108.37	8.40	188.51	145.58	20.96	22.04
PHASE	-28.	61.	63.	-38.	167.	50.	51.	-158.
3P MAG	0.03	550.22	117.85	68.38	65.46	80.95	10.99	1.76
PHASE	-43.	139.	119.	146.	-103.	79.	7.	-113.
4P MAG	0.04	516.91	48.51	4.39	34.85	72.59	8.61	7.82
PHASE	-57.	-112.	0.	90.	-130.	7.	4.	172.
5P MAG	0.03	154.93	15.28	13.34	17.85	42.01	4.49	3.40
PHASE	-71.	-180.	-23.	-13.	65.	-27.	-60.	142.
15. 4								
MEAN	4212.7	-6151.3	-918.6	555.7	325.3	449.7	-469.6	-46.2
RMS	667.0	375.0	123.1	42.7	137.6	75.4	62.3	15.9
1/2 P-T-P	1147.0	632.7	197.8	77.7	202.4	128.3	91.6	26.6
1P MAG	698.01	221.35	159.21	55.61	183.08	81.10	87.53	19.60
PHASE	-81.	-143.	-82.	118.	164.	-91.	-58.	78.
2P MAG	136.46	91.11	34.76	3.42	58.06	54.25	7.74	8.11
PHASE	53.	147.	95.	142.	-70.	98.	100.	-76.
3P MAG	575.56	293.95	32.42	21.73	16.12	10.85	2.31	2.28
PHASE	-99.	13.	46.	66.	168.	27.	-32.	-126.
4P MAG	45.79	354.32	46.97	3.75	18.04	34.36	5.18	4.98
PHASE	-138.	74.	84.	54.	52.	95.	87.	-94.
5P MAG	16.40	40.62	8.33	1.85	5.54	13.37	1.29	4.31
PHASE	60.	45.	115.	-78.	-1.	136.	157.	-64.
14.12								
MEAN	4691.0	-5720.2	-856.1	465.1	542.2	302.2	-380.3	-19.9
RMS	543.9	289.0	105.2	64.4	174.0	48.0	96.0	10.3
1/2 P-T-P	937.9	484.9	167.7	104.4	250.4	96.4	137.2	20.1
1P MAG	510.28	232.95	137.20	88.99	240.15	23.99	135.41	10.53
PHASE	-84.	-161.	-75.	120.	155.	-180.	-58.	48.
2P MAG	118.32	85.63	36.62	1.14	46.94	54.83	8.98	7.74
PHASE	38.	161.	120.	148.	-62.	118.	126.	-56.
3P MAG	526.55	208.35	19.20	18.46	13.64	3.63	1.28	1.88
PHASE	-78.	37.	71.	88.	-163.	39.	23.	-26.
4P MAG	47.53	222.34	32.23	2.18	11.54	24.79	3.37	4.03
PHASE	-112.	94.	101.	78.	76.	114.	114.	-76.
5P MAG	7.49	43.82	6.67	2.08	6.23	9.40	1.39	2.32
PHASE	112.	86.	130.	-63.	35.	164.	-158.	-57.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
23. 6								
MEAN	-686.5	-6203.1	3643.2	5925.5	1934.5	3024.1	-2913.7	-4965.3
RMS	141.5	4128.1	1355.4	1836.2	820.2	1138.2	346.7	222.8
1/2 P-T-P	240.0	8010.8	2311.8	2899.0	1390.3	1789.9	648.4	415.6
1P MAG	86.49	1677.46	1629.50	2396.31	995.02	1493.66	438.74	178.79
PHASE	-74.	-157.	144.	136.	154.	144.	132.	-104.
2P MAG	66.44	2440.52	646.06	666.57	397.27	410.72	23.24	23.75
PHASE	171.	-59.	-45.	-45.	-29.	-32.	-122.	152.
3P MAG	158.26	2318.13	627.83	587.97	365.37	351.78	108.79	128.48
PHASE	83.	-173.	-157.	-158.	-135.	-137.	27.	22.
4P MAG	41.39	2353.94	442.82	447.15	247.58	254.73	168.07	200.26
PHASE	79.	-81.	-112.	-110.	-82.	-83.	70.	69.
5P MAG	1.39	1529.18	38.60	42.49	18.79	21.13	21.75	23.54
PHASE	129.	-92.	-115.	-95.	-74.	-63.	54.	53.
27. 7								
MEAN	-779.8	-5858.8	1776.7	4367.4	865.5	1931.7	-3192.2	-5073.5
RMS	151.6	5222.9	860.7	1025.3	520.3	628.4	227.2	269.0
1/2 P-T-P	272.0	9614.6	1698.1	1940.1	1018.2	1185.6	448.6	516.5
1P MAG	63.38	3254.56	457.85	937.03	300.40	580.99	209.18	269.05
PHASE	174.	-71.	-162.	148.	-157.	149.	132.	-80.
2P MAG	79.49	1058.67	747.86	759.11	458.49	468.72	23.86	16.70
PHASE	160.	-45.	-51.	-52.	-51.	-53.	-117.	163.
3P MAG	176.93	3007.74	652.47	607.62	385.19	370.23	123.26	136.24
PHASE	84.	84.	-153.	-153.	-154.	-156.	32.	29.
4P MAG	46.17	2089.91	524.05	516.92	298.67	303.93	190.46	212.61
PHASE	100.	-62.	-94.	-92.	-94.	-96.	89.	88.
5P MAG	3.69	2385.73	53.43	45.67	28.25	27.89	22.80	22.40
PHASE	-151.	164.	-115.	-106.	-115.	-103.	46.	49.
28.11								
MEAN	-585.1	-4458.8	1077.4	4023.4	373.6	1726.7	-3338.1	-5124.3
RMS	175.1	2871.5	871.3	1043.3	494.7	597.7	220.7	256.4
1/2 P-T-P	314.1	6189.4	1557.8	1869.7	868.4	1074.4	439.1	470.3
1P MAG	115.83	992.81	246.74	884.72	151.45	510.74	213.98	263.03
PHASE	-152.	-115.	-177.	130.	-167.	132.	118.	-78.
2P MAG	91.91	557.37	859.70	862.77	499.31	501.03	31.31	10.23
PHASE	151.	-140.	-56.	-56.	-54.	-57.	-104.	-155.
3P MAG	189.32	1918.34	676.98	628.16	378.98	355.99	118.34	126.12
PHASE	62.	-119.	-169.	-169.	-169.	-171.	16.	14.
4P MAG	52.71	1555.51	496.24	493.70	265.37	269.50	175.42	197.46
PHASE	87.	55.	-104.	-103.	-105.	-106.	80.	77.
5P MAG	9.95	598.63	66.94	63.28	29.59	33.58	22.87	24.07
PHASE	164.	-54.	-125.	-114.	-128.	-118.	33.	37.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
23. 6								
MEAN	4655.7	-5652.1	-867.9	472.2	567.3	304.2	-392.1	-23.7
RMS	689.2	316.4	103.0	65.9	179.6	57.2	99.4	12.8
1/2 P-T-P	1192.0	594.2	173.7	107.7	263.0	120.3	143.9	24.2
1P MAG	785.19	188.80	128.86	91.18	246.29	39.61	140.19	13.39
PHASE	-100.	174.	-75.	119.	136.	-174.	-58.	40.
2P MAG	104.04	93.30	40.81	1.78	55.12	58.81	8.14	9.78
PHASE	29.	154.	116.	113.	-62.	111.	109.	-60.
3P MAG	531.15	222.21	22.74	17.67	15.37	3.85	0.76	1.33
PHASE	-88.	21.	56.	79.	-179.	51.	-48.	-58.
4P MAG	52.66	306.35	43.64	3.04	15.80	31.06	4.50	5.11
PHASE	-129.	72.	79.	57.	53.	89.	85.	-95.
5P MAG	6.20	35.73	7.26	2.16	4.66	10.37	1.00	3.29
PHASE	80.	47.	109.	-84.	1.	131.	142.	-70.
27. 7								
MEAN	4424.8	-6040.3	-915.1	529.3	340.4	356.2	-398.8	-63.2
RMS	676.0	339.6	132.8	56.0	75.2	56.9	79.7	9.1
1/2 P-T-P	1428.3	592.2	214.9	95.7	124.1	116.0	112.2	20.0
1P MAG	704.95	155.97	173.35	76.19	79.49	37.96	112.33	5.66
PHASE	-116.	-98.	-68.	116.	160.	-88.	-60.	162.
2P MAG	143.60	84.48	39.08	1.83	64.26	58.91	8.54	8.43
PHASE	55.	156.	102.	135.	-66.	107.	115.	-68.
3P MAG	563.75	251.35	25.31	19.78	13.15	3.59	1.40	1.05
PHASE	-86.	27.	69.	77.	-177.	73.	21.	139.
4P MAG	40.75	350.34	44.52	4.15	18.55	30.94	3.54	6.45
PHASE	-104.	90.	94.	88.	73.	102.	113.	-92.
5P MAG	12.93	42.13	7.70	1.14	4.90	11.93	1.63	1.45
PHASE	53.	46.	123.	-69.	-3.	159.	-171.	-20.
28.11								
MEAN	3372.9	-6094.6	-908.1	490.8	293.5	375.7	-416.2	-85.1
RMS	869.7	317.6	127.4	55.5	66.6	53.7	86.3	10.3
1/2 P-T-P	1620.6	542.8	194.2	95.1	121.2	106.0	124.6	22.0
1P MAG	1063.51	133.22	169.12	75.58	59.40	34.48	121.56	9.92
PHASE	-120.	-87.	-69.	113.	135.	-99.	-66.	-138.
2P MAG	147.25	77.81	36.96	2.24	67.88	57.12	8.57	8.78
PHASE	62.	153.	96.	116.	-70.	102.	107.	-88.
3P MAG	572.42	243.17	22.23	20.27	13.06	4.63	0.71	2.06
PHASE	-106.	11.	55.	58.	166.	88.	45.	122.
4P MAG	43.30	327.74	40.18	3.93	16.88	27.20	4.33	4.01
PHASE	-122.	80.	82.	61.	60.	87.	99.	-127.
5P MAG	19.21	42.95	6.12	1.49	4.71	12.00	2.17	2.31
PHASE	26.	36.	123.	-88.	-25.	140.	152.	-9.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
14.11								
MEAN	-433.3	-12144.3	8344.6	8970.5	4849.1	5044.3	-1884.5	-3767.2
RMS	282.2	-16.0	921.4	1768.3	555.7	1135.4	407.0	339.2
1/2 P-T-P	525.3	21.4	1585.3	2290.5	963.0	1470.1	649.9	564.9
1P MAG	336.53	1.29	1092.63	2413.44	663.76	1553.50	559.26	454.71
PHASE	146.	-32.	165.	136.	168.	135.	-58.	-79.
2P MAG	19.75	2.07	195.66	197.63	116.90	127.76	10.01	25.29
PHASE	16.	149.	-125.	-112.	-123.	-111.	177.	137.
3P MAG	209.01	4.74	642.67	583.39	381.73	361.41	88.64	104.06
PHASE	116.	171.	-106.	-108.	-107.	-110.	-87.	83.
4P MAG	31.35	13.65	135.63	139.03	76.84	80.64	42.61	52.95
PHASE	61.	25.	-111.	-107.	-114.	-115.	31.	62.
5P MAG	15.04	4.91	152.92	148.25	91.65	91.85	38.38	43.04
PHASE	-83.	54.	-11.	-5.	-10.	-10.	-37.	135.
15. 3								
MEAN	-118.5	1839.0	12713.4	11994.8	7491.8	7021.9	-1542.9	-2921.4
RMS	666.9	3200.5	1136.0	1654.7	687.3	1098.5	484.2	562.2
1/2 P-T-P	1188.1	7769.0	2319.3	2538.2	1384.2	1642.4	778.2	957.6
1P MAG	858.89	2912.33	1044.63	2057.33	643.44	1389.28	657.16	766.65
PHASE	140.	-111.	-147.	135.	-140.	134.	-64.	-79.
2P MAG	91.06	1503.67	622.49	577.01	380.94	361.39	29.65	30.05
PHASE	15.	101.	-171.	-166.	-171.	-167.	78.	86.
3P MAG	374.07	2351.31	1008.31	911.39	596.41	567.93	138.44	158.86
PHASE	119.	-30.	-95.	-97.	-96.	-99.	-66.	100.
4P MAG	37.21	772.61	132.64	130.12	78.32	81.85	77.58	70.05
PHASE	51.	153.	113.	119.	108.	113.	-77.	-77.
5P MAG	26.21	1443.60	238.82	226.70	141.35	138.40	58.19	49.72
PHASE	-78.	129.	-5.	-1.	-7.	-6.	-17.	152.
28.10								
MEAN	-205.7	-3633.0	10472.5	10506.7	5987.5	5713.1	-2526.9	-3108.3
RMS	643.8	2292.3	766.3	1308.3	457.8	854.9	405.1	529.6
1/2 P-T-P	1128.8	4538.3	1445.0	2083.6	842.3	1306.8	625.3	833.9
1P MAG	857.59	1428.73	574.61	1641.41	388.66	1105.72	557.22	736.02
PHASE	141.	-98.	-117.	120.	-104.	121.	112.	-75.
2P MAG	65.04	1296.05	469.58	451.37	273.32	257.61	12.83	25.74
PHASE	12.	-179.	-167.	-160.	-165.	-160.	152.	114.
3P MAG	296.79	953.93	765.02	699.98	426.52	401.40	99.71	104.17
PHASE	104.	-57.	-106.	-108.	-107.	-110.	91.	87.
4P MAG	24.96	1584.01	54.15	46.67	28.10	28.49	19.78	24.84
PHASE	33.	-24.	92.	110.	90.	99.	-87.	-98.
5P MAG	17.86	634.53	170.36	166.42	95.15	95.48	49.84	47.56
PHASE	-87.	121.	-14.	-8.	-11.	-12.	136.	140.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
14.11								
MEAN	5201.1	-4754.8	-757.1	308.9	1053.0	2.0	-200.2	25.3
RMS	1058.4	199.2	105.6	115.3	140.7	172.9	175.0	23.5
1/2 P-T-P	1780.4	356.1	180.9	168.1	204.4	268.7	243.3	38.6
1P MAG	1265.78	137.37	136.90	160.95	195.63	236.72	247.29	31.61
PHASE	155.	-152.	-55.	116.	142.	114.	-62.	-59.
2P MAG	233.29	62.09	45.75	2.03	22.38	54.61	6.99	9.16
PHASE	13.	156.	133.	25.	-137.	126.	121.	-48.
3P MAG	741.84	186.11	23.49	25.31	21.74	9.93	2.16	1.89
PHASE	-61.	82.	93.	112.	-140.	19.	-38.	-130.
4P MAG	104.58	82.41	18.86	1.82	2.37	12.68	2.21	2.02
PHASE	-107.	66.	76.	68.	34.	95.	73.	-81.
5P MAG	24.31	69.42	3.91	3.35	7.87	8.39	1.49	1.08
PHASE	173.	144.	-168.	-44.	37.	-124.	-144.	122.
15. 3								
MEAN	5499.4	-3926.5	-686.4	212.0	1527.8	-225.3	-52.3	55.9
RMS	2610.0	283.7	137.3	147.5	102.7	329.1	234.2	46.0
1/2 P-T-P	4406.8	540.1	240.9	204.6	172.3	511.5	324.6	75.4
1P MAG	3402.05	200.75	176.50	203.36	126.55	459.33	330.96	63.63
PHASE	136.	-111.	-50.	108.	163.	107.	-70.	-71.
2P MAG	429.82	47.51	55.14	2.69	54.52	57.83	7.41	8.79
PHASE	8.	110.	120.	4.	179.	103.	100.	-74.
3P MAG	1337.51	285.84	46.65	45.69	38.31	29.49	6.91	6.95
PHASE	-59.	100.	88.	117.	-135.	16.	-34.	-162.
4P MAG	192.94	115.18	24.73	3.04	8.88	22.27	3.21	2.80
PHASE	-130.	-76.	-4.	61.	-110.	-10.	-14.	156.
5P MAG	47.28	92.28	7.46	4.12	8.46	17.95	2.32	3.42
PHASE	168.	159.	-87.	-37.	23.	-75.	-107.	131.
28.10								
MEAN	4514.7	-4238.0	-721.7	212.2	1234.0	-191.8	-70.5	2.5
RMS	2781.8	207.8	139.2	146.3	53.0	300.1	228.5	50.5
1/2 P-T-P	4224.5	379.5	222.8	206.5	111.6	447.5	316.7	77.6
1P MAG	3736.11	177.20	186.84	203.89	55.04	419.87	322.98	70.79
PHASE	140.	-83.	-50.	109.	142.	106.	-71.	-84.
2P MAG	462.16	49.90	49.70	4.49	40.50	56.41	7.89	7.11
PHASE	12.	135.	117.	-9.	-176.	105.	97.	-71.
3P MAG	1126.00	193.63	28.85	34.61	25.26	13.84	3.67	3.70
PHASE	-73.	85.	85.	101.	-139.	-0.	-43.	102.
4P MAG	147.00	46.87	15.25	1.64	3.25	13.14	1.41	1.86
PHASE	-122.	-91.	15.	80.	-124.	7.	17.	169.
5P MAG	45.12	79.39	4.40	3.71	7.07	8.52	2.57	1.35
PHASE	-165.	149.	-149.	-51.	49.	-105.	-150.	3.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
15. 2								
MEAN	113.5	-1384.0	15333.0	13783.3	9080.0	8181.9	-1339.9	-2420.9
RMS	844.4	7125.6	1411.7	1777.4	861.0	1203.4	586.2	682.4
1/2 P-T-P	1404.4	15596.1	2701.5	2815.9	1583.4	1866.8	964.9	1227.9
1P MAG	1154.36	5797.02	1276.17	2080.22	803.69	1455.99	786.27	919.83
PHASE	138.	8.	-139.	136.	-130.	134.	-65.	-79.
2P MAG	142.49	4692.36	966.60	923.50	604.18	577.59	40.96	40.12
PHASE	13.	-125.	-179.	-176.	-178.	-176.	80.	65.
3P MAG	261.53	4413.88	1090.16	960.27	626.37	602.68	153.53	173.50
PHASE	119.	62.	-80.	-82.	-82.	-85.	-53.	115.
4P MAG	42.69	3060.35	404.90	380.89	230.88	234.20	162.29	184.40
PHASE	22.	-61.	93.	99.	91.	94.	-99.	-89.
5P MAG	31.34	2828.09	236.33	234.37	145.08	137.36	66.55	69.40
PHASE	-33.	135.	-1.	5.	-0.	-1.	-35.	129.
14. 3								
MEAN	-81.3	-12143.2	11595.4	10910.8	6821.4	6311.3	-1709.7	-3087.8
RMS	523.4	25.3	1228.3	1901.5	738.6	1241.4	478.6	483.1
1/2 P-T-P	865.3	46.1	2418.2	2692.0	1465.5	1736.8	738.6	810.3
1P MAG	668.74	0.44	1282.31	2463.45	778.83	1622.87	656.61	656.31
PHASE	134.	56.	-168.	141.	-164.	140.	-58.	-81.
2P MAG	79.52	1.53	661.76	597.14	399.17	372.48	16.33	23.32
PHASE	15.	-18.	-179.	-176.	-179.	-176.	101.	84.
3P MAG	297.42	0.30	924.67	859.01	545.25	531.74	124.34	148.12
PHASE	148.	-85.	-87.	-88.	-88.	-91.	-61.	103.
4P MAG	18.43	0.84	138.18	131.04	77.83	78.05	66.20	63.84
PHASE	39.	141.	140.	148.	138.	143.	-51.	-46.
5P MAG	32.08	5.15	228.16	216.65	138.32	136.11	49.16	54.66
PHASE	-58.	-119.	13.	18.	13.	13.	-5.	170.
28. 9								
MEAN	-168.5	-3369.7	8971.4	9148.7	5099.5	4905.6	-2756.8	-3363.2
RMS	510.9	2654.8	753.8	1378.9	433.9	871.1	373.2	452.6
1/2 P-T-P	874.7	5480.3	1479.4	2020.9	834.8	1237.9	572.5	719.3
1P MAG	663.30	2490.79	559.86	1755.88	338.07	1131.29	513.25	626.49
PHASE	135.	-174.	-148.	124.	-136.	124.	114.	-79.
2P MAG	60.69	992.31	552.41	525.70	317.52	303.88	14.37	24.19
PHASE	17.	-31.	-162.	-156.	-160.	-156.	-176.	112.
3P MAG	276.49	1010.17	677.50	621.47	379.48	357.41	84.53	89.89
PHASE	111.	38.	-110.	-111.	-110.	-114.	87.	79.
4P MAG	18.99	563.60	147.63	144.75	76.52	78.31	52.09	52.37
PHASE	61.	-11.	-160.	-157.	-162.	-162.	16.	14.
5P MAG	23.77	758.39	176.84	179.50	99.41	101.64	42.32	44.39
PHASE	-111.	-9.	-16.	-10.	-14.	-15.	134.	141.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
15. 2								
MEAN	6130.3	-3428.9	-620.8	149.2	1804.4	-341.5	32.2	72.5
RMS	3459.9	370.7	153.6	163.0	111.9	433.6	269.6	65.2
1/2 P-T-P	5671.0	765.3	273.9	221.2	200.5	670.6	374.5	104.9
1P MAG	4732.00	219.95	197.32	227.86	125.64	607.28	381.07	90.99
PHASE	132.	-111.	-46.	108.	175.	106.	-71.	-76.
2P MAG	545.78	50.81	58.40	3.69	80.10	63.25	7.32	10.21
PHASE	9.	77.	110.	-13.	169.	91.	91.	-83.
3P MAG	1060.74	313.93	46.38	33.68	41.54	24.13	6.52	6.36
PHASE	-57.	118.	97.	120.	-121.	37.	-27.	-142.
4P MAG	200.60	303.69	42.34	2.50	17.78	38.28	3.94	5.84
PHASE	-126.	-85.	-30.	71.	-102.	-27.	-23.	155.
5P MAG	89.26	115.34	4.22	5.74	14.82	16.52	1.68	3.53
PHASE	-176.	146.	-1.	-9.	52.	-50.	-85.	120.
14. 3								
MEAN	5985.8	-4171.0	-702.2	192.1	1369.4	-233.9	-41.1	65.2
RMS	1998.9	261.3	121.6	139.0	138.0	285.7	217.7	41.8
1/2 P-T-P	3712.5	440.6	216.2	183.5	214.2	439.0	306.3	63.7
1P MAG	2580.40	194.65	154.36	193.07	182.38	398.35	307.74	57.54
PHASE	132.	-134.	-51.	113.	159.	108.	-66.	-73.
2P MAG	380.30	27.33	48.84	3.01	56.47	50.28	6.30	9.81
PHASE	9.	121.	127.	12.	175.	114.	108.	-49.
3P MAG	1059.59	263.30	45.92	35.80	35.56	32.03	5.07	7.07
PHASE	-33.	105.	103.	145.	-123.	57.	16.	-124.
4P MAG	127.60	108.42	19.75	1.68	6.88	13.72	1.79	2.69
PHASE	-118.	-44.	24.	57.	-69.	35.	55.	-145.
5P MAG	42.20	93.95	6.70	4.63	8.22	10.48	2.83	3.27
PHASE	-165.	178.	-81.	-21.	45.	-73.	-98.	128.
28. 9								
MEAN	4795.7	-4551.1	-768.2	217.8	1061.6	-185.0	-76.6	2.7
RMS	2125.0	191.9	128.5	131.9	69.8	242.7	205.1	41.9
1/2 P-T-P	3504.6	405.8	211.5	182.9	131.2	365.6	284.4	65.5
1P MAG	2787.04	153.14	171.97	183.59	83.11	337.43	289.90	58.56
PHASE	137.	-98.	-55.	107.	143.	104.	-72.	-87.
2P MAG	413.23	47.12	46.21	4.87	45.96	56.07	7.90	6.63
PHASE	11.	126.	115.	-3.	-169.	102.	91.	-75.
3P MAG	1021.28	169.63	24.40	31.74	22.71	12.01	2.49	3.09
PHASE	-68.	77.	89.	106.	-136.	-2.	-54.	107.
4P MAG	118.78	85.95	18.76	1.76	4.08	9.29	0.80	1.86
PHASE	-119.	15.	34.	80.	-9.	40.	47.	-141.
5P MAG	20.51	77.26	6.43	3.72	6.48	13.29	2.31	2.40
PHASE	-178.	149.	-151.	-64.	31.	-138.	-142.	-12.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
21. 7								
MEAN	-514.4	-3364.3	10995.7	11440.5	6498.7	6477.0	-2240.6	-3311.4
RMS	362.4	2760.1	2690.3	3868.4	1648.8	2415.3	736.7	243.4
1/2 P-T-P	565.5	5630.9	4269.4	5730.9	2610.4	3572.6	1240.6	504.5
1P MAG	481.20	1136.16	3697.87	5404.85	2273.00	3377.14	1016.70	225.87
PHASE	-139.	138.	109.	116.	116.	124.	121.	-11.
2P MAG	8.32	2484.08	189.39	207.39	119.11	136.13	24.19	48.53
PHASE	143.	-8.	16.	11.	32.	20.	-141.	174.
3P MAG	169.33	372.65	794.32	746.29	464.08	451.51	118.63	137.65
PHASE	68.	16.	-95.	-94.	-73.	-74.	95.	93.
4P MAG	14.92	1423.44	320.04	291.31	178.12	173.03	131.20	144.47
PHASE	-65.	-90.	90.	90.	119.	118.	-94.	-98.
5P MAG	24.35	137.08	105.91	103.66	58.55	59.29	61.58	64.38
PHASE	37.	140.	-14.	-9.	27.	25.	150.	148.
21. 8								
MEAN	-501.7	-1802.8	10823.2	11306.9	6395.5	6387.7	-2258.4	-3329.4
RMS	440.3	3085.6	3256.9	4391.2	2003.4	2733.4	798.2	282.8
1/2 P-T-P	732.0	6202.4	5288.5	6694.9	3237.0	4155.7	1313.9	615.2
1P MAG	602.85	2612.86	4491.91	6134.20	2770.65	3820.45	1105.50	301.52
PHASE	-129.	-133.	102.	112.	109.	119.	118.	15.
2P MAG	33.12	1533.61	369.90	381.27	227.67	250.12	19.46	53.58
PHASE	-180.	-40.	2.	3.	18.	14.	-103.	177.
3P MAG	147.29	1579.21	874.68	820.15	508.85	495.76	124.19	144.24
PHASE	47.	38.	-89.	-88.	-67.	-67.	97.	97.
4P MAG	11.02	809.70	334.08	309.87	182.82	179.24	136.13	152.64
PHASE	-97.	-8.	87.	86.	114.	113.	-95.	-99.
5P MAG	21.19	1065.28	71.05	72.27	39.51	40.17	46.84	48.30
PHASE	42.	-49.	-13.	-7.	30.	30.	144.	144.
21. 9								
MEAN	-512.9	-2543.4	10867.0	11312.0	6419.9	6396.9	-2259.6	-3331.5
RMS	306.5	2369.5	2238.6	3413.4	1364.2	2138.1	676.5	246.8
1/2 P-T-P	461.1	4457.1	3612.5	5100.3	2191.9	3176.2	1132.9	467.5
1P MAG	403.67	140.55	3013.85	4737.00	1844.63	2971.48	929.95	235.28
PHASE	-152.	-124.	113.	119.	120.	126.	122.	-38.
2P MAG	12.62	2632.15	274.68	283.98	170.62	178.52	26.34	46.93
PHASE	173.	-37.	18.	11.	34.	23.	-169.	164.
3P MAG	148.70	1045.29	844.55	806.83	492.55	486.17	132.90	161.35
PHASE	55.	-37.	-93.	-93.	-71.	-72.	97.	95.
4P MAG	11.31	294.13	333.97	312.60	190.33	185.01	127.67	143.34
PHASE	-41.	12.	80.	79.	109.	108.	-103.	-105.
5P MAG	24.40	1015.36	126.22	115.99	70.28	67.86	50.14	51.07
PHASE	12.	131.	3.	7.	44.	42.	156.	154.

RUN.PT		CHANNEL DESIGNATION							
		I	J	K	L	M	N	O	P
21. 7									
	MEAN	4907.8	-4195.0	-690.3	284.8	1382.7	-36.6	-172.4	22.5
	RMS	1513.7	447.6	82.1	134.7	383.4	232.8	212.6	33.1
	1/2 P-T-P	2759.5	847.8	142.3	209.8	558.7	368.8	302.4	52.5
	1P MAG	2047.16	486.34	87.57	189.36	540.49	321.03	300.57	44.85
	PHASE	-148.	112.	-13.	129.	108.	141.	-50.	-29.
	2P MAG	225.58	106.32	58.72	7.11	7.90	62.22	6.98	11.81
	PHASE	-14.	-176.	160.	51.	-53.	152.	145.	-29.
	3P MAG	514.87	241.02	34.26	18.25	26.23	16.48	1.03	1.87
	PHASE	-87.	95.	97.	73.	-124.	113.	142.	-87.
	4P MAG	104.36	242.57	9.79	0.75	14.60	4.46	0.68	0.95
	PHASE	-104.	-94.	-53.	-137.	-119.	52.	-31.	-88.
	5P MAG	70.78	92.38	5.11	3.07	9.86	4.08	0.29	0.52
	PHASE	-145.	154.	160.	18.	116.	-103.	-55.	-114.
21. 8									
	MEAN	4982.1	-4215.4	-695.4	285.7	1367.5	-34.1	-175.8	20.7
	RMS	1764.6	520.4	83.9	140.1	448.9	246.3	220.2	35.5
	1/2 P-T-P	2889.2	903.5	150.3	215.5	663.8	385.9	313.6	55.4
	1P MAG	2452.22	608.61	90.01	197.25	632.79	340.16	311.23	48.44
	PHASE	-139.	103.	3.	131.	103.	146.	-48.	-24.
	2P MAG	183.67	109.29	61.64	9.82	23.94	63.65	7.49	12.00
	PHASE	-27.	-176.	164.	57.	-33.	155.	160.	-26.
	3P MAG	356.00	256.17	33.60	14.92	29.89	24.76	2.72	3.36
	PHASE	-104.	99.	107.	52.	-113.	126.	174.	-62.
	4P MAG	117.57	254.66	11.35	0.45	14.97	6.41	1.02	0.85
	PHASE	-110.	-94.	-36.	-79.	-111.	35.	173.	-125.
	5P MAG	74.02	65.80	6.47	3.40	8.36	2.00	1.10	1.27
	PHASE	-146.	147.	93.	23.	104.	-19.	-106.	-128.
21. 9									
	MEAN	4900.5	-4222.3	-699.1	286.2	1367.4	-39.2	-172.6	21.7
	RMS	1305.5	398.5	87.0	130.1	326.0	219.8	205.8	30.5
	1/2 P-T-P	2339.0	750.0	147.6	201.7	470.8	352.8	289.9	49.1
	1P MAG	1763.39	374.15	95.53	183.15	459.38	300.97	290.98	40.82
	PHASE	-158.	120.	-27.	126.	112.	135.	-53.	-33.
	2P MAG	240.24	110.24	58.63	4.59	11.39	63.60	7.24	12.09
	PHASE	-10.	179.	157.	54.	-8.	154.	145.	-29.
	3P MAG	404.79	278.63	39.08	14.03	26.21	21.76	2.30	3.24
	PHASE	-89.	98.	101.	66.	-126.	114.	85.	-75.
	4P MAG	121.38	241.35	11.86	0.89	12.01	5.27	1.43	0.38
	PHASE	-103.	-100.	-67.	-156.	-128.	-58.	-85.	135.
	5P MAG	72.77	77.46	3.36	3.32	8.14	5.52	0.95	0.86
	PHASE	-145.	162.	155.	4.	98.	-64.	-63.	-141.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
21.10								
MEAN	-554.4	-2593.7	11204.8	11662.4	6632.7	6608.7	-2195.3	-3269.5
RMS	251.5	2153.8	3207.1	4314.4	1971.3	2696.6	783.1	176.9
1/2 P-T-P	454.2	3988.1	4546.5	5998.9	2780.8	3732.6	1341.9	353.8
1P MAG	309.81	555.26	4425.49	6030.44	2727.59	3772.66	1085.07	26.70
PHASE	-118.	-163.	127.	128.	134.	136.	130.	39.
2P MAG	34.17	2037.56	436.45	410.55	267.24	251.65	11.36	37.49
PHASE	-88.	-19.	75.	71.	89.	82.	-168.	178.
3P MAG	163.83	1810.20	812.28	760.83	469.91	457.88	131.90	150.34
PHASE	60.	19.	-97.	-97.	-75.	-77.	87.	87.
4P MAG	12.37	157.26	300.98	276.30	165.22	159.82	105.01	116.50
PHASE	16.	-117.	91.	92.	122.	122.	-85.	-88.
5P MAG	25.77	408.37	99.24	89.75	56.06	52.81	51.34	50.86
PHASE	31.	163.	7.	11.	48.	46.	131.	126.
21.11								
MEAN	-499.4	-1908.4	10619.9	11106.4	6269.9	6258.9	-2304.7	-3371.5
RMS	463.8	1914.0	2406.8	3555.7	1476.1	2213.2	691.7	329.8
1/2 P-T-P	672.6	4220.7	4194.7	5613.9	2553.1	3483.8	1082.7	595.9
1P MAG	628.38	783.59	3286.17	4958.03	2022.52	3088.34	959.87	416.92
PHASE	-151.	-123.	88.	103.	95.	111.	113.	-18.
2P MAG	17.56	1714.39	108.15	133.49	67.41	99.72	40.32	45.49
PHASE	72.	18.	-46.	-32.	-27.	-25.	-135.	178.
3P MAG	182.58	291.83	858.92	809.22	501.50	488.26	118.85	132.39
PHASE	51.	40.	-101.	-99.	-79.	-79.	91.	90.
4P MAG	10.37	781.30	137.71	123.78	76.02	72.48	69.45	79.23
PHASE	38.	-109.	82.	83.	112.	111.	-110.	-115.
5P MAG	29.39	575.00	57.87	52.22	30.77	31.77	47.87	48.53
PHASE	18.	-108.	-7.	-3.	39.	37.	142.	144.
20.13								
MEAN	-461.0	-5071.5	11581.7	11347.0	6915.3	6478.6	-2364.0	-3095.1
RMS	787.1	4326.2	3379.4	2410.8	2134.2	1518.9	319.4	831.6
1/2 P-T-P	1188.1	7510.3	5284.2	4127.5	3274.5	2590.9	588.6	1304.7
1P MAG	1090.38	3985.18	4668.76	3260.72	2953.66	2058.58	411.66	1157.35
PHASE	115.	141.	-124.	-146.	-123.	-149.	165.	-100.
2P MAG	101.53	1215.57	624.12	661.24	398.03	409.33	16.17	39.63
PHASE	37.	-13.	-141.	-139.	-143.	-139.	4.	106.
3P MAG	192.02	2375.61	770.62	705.56	456.02	435.06	100.04	115.27
PHASE	101.	-58.	-114.	-116.	-116.	-118.	75.	74.
4P MAG	25.40	134.26	90.20	82.94	48.46	48.67	22.91	27.46
PHASE	34.	144.	-87.	-93.	-83.	-91.	104.	107.
5P MAG	19.47	1408.40	150.37	150.98	94.63	93.53	34.40	35.66
PHASE	-62.	78.	-5.	-1.	-5.	-5.	138.	139.

RUN.PT	CHANNEL DESIGNATION							
	I	J	K	L	M	N	O	P
21.10								
MEAN	4800.4	-4139.0	-684.6	286.0	1414.4	-35.7	-176.8	20.6
RMS	1115.7	515.9	62.3	124.1	444.7	200.2	197.9	28.9
1/2 P-T-P	2049.6	1027.5	111.2	196.7	626.9	326.1	279.7	44.8
1P MAG	1434.61	616.48	49.18	174.23	627.00	275.24	279.77	39.16
PHASE	-134.	133.	-28.	132.	123.	145.	-48.	-21.
2P MAG	307.43	89.72	49.13	7.01	27.10	52.65	6.39	10.05
PHASE	-30.	-167.	164.	70.	75.	160.	164.	-22.
3P MAG	506.68	263.15	39.45	18.32	23.22	21.32	0.58	3.06
PHASE	-96.	90.	88.	69.	-128.	107.	12.	-76.
4P MAG	135.71	200.90	7.41	0.30	8.92	7.69	1.13	0.79
PHASE	-113.	-83.	-4.	-53.	-93.	91.	49.	-63.
5P MAG	90.26	72.09	10.80	3.86	12.69	2.87	0.66	1.41
PHASE	-145.	133.	113.	22.	78.	45.	-56.	-97.
21.11								
MEAN	4982.4	-4277.3	-707.7	286.4	1338.3	-41.0	-173.7	21.7
RMS	1830.4	375.5	103.3	146.0	344.1	259.2	227.0	36.3
1/2 P-T-P	3098.5	625.9	169.5	225.7	526.0	410.1	323.1	58.8
1P MAG	2530.17	415.64	127.42	205.41	484.30	359.88	320.93	49.53
PHASE	-158.	85.	-12.	126.	92.	135.	-53.	-36.
2P MAG	231.77	103.14	58.34	7.77	17.57	60.42	6.80	11.97
PHASE	5.	-174.	157.	33.	-114.	149.	150.	-30.
3P MAG	451.06	235.02	33.79	18.17	32.53	18.78	2.37	2.49
PHASE	-104.	92.	95.	55.	-126.	113.	143.	-80.
4P MAG	112.84	135.27	4.34	1.28	12.29	4.95	0.98	1.52
PHASE	-99.	-107.	37.	105.	-136.	72.	1.	-91.
5P MAG	51.41	65.95	5.12	3.59	8.53	4.92	0.68	1.05
PHASE	-144.	151.	111.	17.	109.	-59.	-69.	-150.
20.13								
MEAN	4238.5	-4118.8	-700.2	218.0	1406.4	-181.7	-89.6	51.4
RMS	2907.6	599.4	191.0	130.5	341.8	287.0	208.6	37.6
1/2 P-T-P	4921.8	1090.8	329.0	169.0	501.5	439.5	294.9	61.1
1P MAG	3986.66	790.81	258.33	182.53	478.14	398.27	294.76	51.58
PHASE	113.	-113.	-71.	97.	-134.	88.	-79.	-86.
2P MAG	534.48	74.68	60.24	4.31	54.84	72.32	10.70	11.43
PHASE	9.	114.	105.	159.	-153.	86.	78.	-86.
3P MAG	800.80	207.68	25.58	25.81	29.46	7.16	2.88	2.28
PHASE	-68.	72.	95.	105.	-142.	-43.	-49.	-166.
4P MAG	179.02	40.45	19.17	4.35	3.03	11.79	0.21	2.40
PHASE	-118.	120.	24.	70.	135.	2.	-62.	-170.
5P MAG	72.74	59.26	3.28	4.57	8.01	10.91	1.86	3.44
PHASE	-167.	150.	-90.	-33.	32.	-105.	-121.	95.

RUN.PT		CHANNEL DESIGNATION						
	A	B	C	D	E	F	G	H
20.14								
MEAN	-472.3	-4570.1	11682.8	11406.0	6962.5	6530.1	-2325.6	-3090.3
RMS	444.4	3810.7	1148.6	2092.8	681.4	1354.5	524.2	462.6
1/2 P-T-P	782.5	8341.7	2204.7	2824.3	1320.7	1812.8	913.2	820.5
1P MAG	604.90	3427.78	1284.50	2814.32	762.97	1829.79	710.58	613.11
PHASE	147.	119.	174.	135.	177.	134.	125.	-80.
2P MAG	47.88	355.36	223.69	205.87	138.33	133.54	10.88	26.88
PHASE	24.	136.	-146.	-134.	-146.	-132.	168.	135.
3P MAG	149.89	1566.86	919.30	848.50	543.18	522.78	134.63	147.73
PHASE	109.	16.	-103.	-103.	-104.	-106.	91.	88.
4P MAG	14.07	2557.16	139.56	118.13	83.69	80.13	64.60	70.90
PHASE	-31.	-45.	63.	64.	60.	61.	-115.	-119.
5P MAG	29.26	694.01	212.48	199.07	129.25	125.62	53.53	53.75
PHASE	-59.	-137.	5.	9.	5.	5.	155.	160.
19. 7								
MEAN	214.2	-2097.3	13472.2	11972.6	8020.8	6842.5	-2448.4	-2617.3
RMS	325.6	2643.5	2692.4	4089.6	1628.5	2587.6	853.4	259.2
1/2 P-T-P	602.5	5473.0	4380.3	6226.0	2637.5	3910.0	1208.9	514.1
1P MAG	363.88	2052.68	3632.87	5690.19	2203.17	3604.27	1192.56	308.70
PHASE	174.	-172.	112.	114.	111.	114.	115.	-56.
2P MAG	70.68	1684.39	515.15	431.19	310.65	263.06	5.08	26.07
PHASE	3.	-23.	151.	149.	149.	150.	-138.	131.
3P MAG	268.26	673.07	973.52	900.74	569.11	549.59	143.58	148.25
PHASE	143.	27.	-82.	-84.	-84.	-86.	119.	110.
4P MAG	17.78	374.52	180.20	164.12	102.70	98.67	76.44	80.90
PHASE	49.	158.	137.	140.	135.	135.	-45.	-49.
5P MAG	35.59	896.10	212.32	196.91	123.48	120.93	59.42	61.99
PHASE	-41.	117.	13.	17.	14.	12.	138.	136.
19. 8								
MEAN	219.1	-3337.5	13015.9	11569.9	7751.4	6593.5	-2529.9	-2689.4
RMS	656.5	3831.3	1338.8	1929.2	807.5	1255.2	524.5	562.3
1/2 P-T-P	1074.9	9011.3	2670.9	2910.0	1603.0	1857.3	801.4	932.0
1P MAG	844.31	1068.28	1347.76	2437.88	824.09	1606.67	717.86	771.40
PHASE	128.	178.	-160.	137.	-154.	136.	119.	-84.
2P MAG	99.53	1827.03	803.29	747.51	491.41	464.85	11.44	33.44
PHASE	17.	-84.	-173.	-169.	-173.	-170.	37.	72.
3P MAG	369.52	1839.38	1011.77	921.02	590.93	564.96	145.38	147.73
PHASE	130.	51.	-96.	-98.	-97.	-101.	102.	93.
4P MAG	33.82	2890.33	177.27	175.96	96.03	101.72	62.69	62.76
PHASE	54.	55.	-168.	-166.	-169.	-168.	7.	5.
5P MAG	30.08	492.98	243.33	232.94	146.17	144.49	60.26	59.81
PHASE	-84.	58.	-2.	4.	-0.	-1.	139.	143.

RUN.PT	CHANNEL DESIGNATION							
	I	J	K	L	M	N	O	P
20.14								
MEAN	4378.0	-4090.5	-687.2	212.8	1422.3	-153.5	-87.9	45.7
RMS	1807.0	284.7	127.1	140.2	158.9	263.5	223.7	35.5
1/2 P-T-P	2875.7	551.0	235.9	200.2	248.9	397.2	313.1	57.9
1P MAG	2422.10	178.37	161.06	197.09	218.67	365.72	316.20	48.32
PHASE	146.	-153.	-52.	112.	144.	112.	-66.	-59.
2P MAG	365.21	68.14	55.52	3.78	25.10	60.11	6.60	11.89
PHASE	4.	152.	134.	39.	-158.	122.	130.	-52.
3P MAG	654.66	267.53	38.57	19.81	33.15	16.00	2.00	3.33
PHASE	-59.	88.	99.	112.	-134.	76.	6.	-109.
4P MAG	139.43	123.49	15.19	1.56	8.06	12.25	1.26	2.31
PHASE	-116.	-113.	-9.	112.	-141.	-1.	-42.	-179.
5P MAG	78.20	90.26	3.21	4.96	8.20	12.18	2.23	2.50
PHASE	-174.	169.	-109.	-28.	53.	-80.	-97.	133.
19. 7								
MEAN	7328.2	-3838.7	-702.4	84.7	1560.6	-393.2	81.9	81.5
RMS	1495.9	405.2	87.9	164.8	371.6	315.5	263.6	44.4
1/2 P-T-P	2404.0	651.8	143.6	226.0	557.9	504.2	367.1	74.7
1P MAG	1748.45	466.21	98.38	230.22	521.64	440.65	372.73	61.47
PHASE	166.	111.	-21.	117.	108.	118.	-62.	-58.
2P MAG	295.31	44.03	54.25	11.71	45.44	49.10	7.67	9.67
PHASE	-15.	-180.	144.	32.	153.	139.	142.	-42.
3P MAG	1127.74	266.02	46.30	33.73	37.34	34.59	4.23	6.83
PHASE	-38.	112.	104.	137.	-118.	57.	6.	-127.
4P MAG	172.47	138.27	17.22	2.52	8.59	9.54	1.39	1.73
PHASE	-125.	-46.	10.	45.	-64.	31.	72.	-147.
5P MAG	54.99	95.63	2.15	4.91	15.37	8.46	2.27	2.20
PHASE	-170.	152.	26.	-13.	58.	-65.	-85.	155.
19. 8								
MEAN	7223.2	-3937.4	-724.8	91.0	1501.8	-407.7	79.7	84.7
RMS	2674.6	269.2	136.8	153.6	131.7	338.6	253.8	46.7
1/2 P-T-P	4803.3	491.4	233.8	200.1	215.0	521.2	352.2	76.9
1P MAG	3467.09	201.98	176.83	212.18	167.90	472.65	358.78	64.58
PHASE	125.	-125.	-53.	106.	164.	101.	-72.	-76.
2P MAG	451.72	41.89	55.32	3.85	66.97	59.58	7.43	10.15
PHASE	6.	93.	116.	23.	178.	102.	98.	-72.
3P MAG	1423.94	264.61	44.43	45.74	38.92	34.61	7.25	7.07
PHASE	-52.	94.	87.	125.	-129.	20.	-15.	-157.
4P MAG	198.25	104.24	25.05	4.04	5.19	13.94	2.27	2.58
PHASE	-133.	5.	28.	50.	-22.	33.	68.	-150.
5P MAG	35.20	101.87	6.69	4.06	11.74	14.04	2.77	3.42
PHASE	164.	154.	-71.	-45.	39.	-81.	-121.	113.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
21.12								
MEAN	-96.8	-706.0	12204.3	11579.4	7214.1	6598.4	-2368.7	-2949.3
RMS	412.4	1959.1	2938.5	4478.7	1788.2	2797.9	870.9	315.0
1/2 P-T-P	564.7	4767.7	4896.4	6916.1	2973.6	4309.2	1279.0	501.4
1P MAG	562.50	1165.06	3928.07	6202.45	2401.00	3879.13	1213.68	376.52
PHASE	-152.	65.	102.	109.	108.	116.	112.	-38.
2P MAG	57.45	1535.73	794.14	751.00	472.56	470.27	19.55	60.10
PHASE	60.	-18.	-122.	-118.	-107.	-102.	-161.	135.
3P MAG	128.48	382.78	1080.51	1020.25	628.40	612.33	165.56	188.07
PHASE	71.	-105.	-99.	-98.	-77.	-78.	92.	89.
4P MAG	22.82	534.59	123.60	121.60	65.20	65.29	39.26	36.56
PHASE	48.	-153.	-134.	-123.	-103.	-98.	52.	59.
5P MAG	15.76	776.05	74.87	79.60	45.29	45.50	27.86	26.71
PHASE	-8.	76.	12.	14.	56.	51.	138.	136.
21.13								
MEAN	-105.1	935.0	12211.9	11606.0	7222.8	6611.3	-2358.0	-2938.5
RMS	382.8	632.9	4059.4	5618.7	2489.5	3506.9	1024.3	236.1
1/2 P-T-P	679.8	1172.0	6396.5	8450.0	3903.1	5267.8	1495.3	434.5
1P MAG	525.59	816.05	5624.23	7872.66	3456.15	4916.08	1435.12	246.71
PHASE	-129.	-92.	107.	112.	114.	119.	115.	-6.
2P MAG	43.86	210.31	621.68	579.54	367.38	362.72	9.97	61.86
PHASE	77.	24.	-118.	-114.	-103.	-98.	-155.	148.
3P MAG	104.13	133.49	947.07	888.50	551.04	535.05	140.50	161.39
PHASE	20.	139.	-93.	-91.	-72.	-71.	91.	94.
4P MAG	18.87	97.80	128.35	104.79	66.35	59.37	43.76	37.64
PHASE	40.	79.	173.	180.	-160.	-158.	-7.	-14.
5P MAG	17.36	132.75	53.00	60.21	32.01	33.84	28.55	30.84
PHASE	39.	-119.	0.	1.	44.	37.	139.	137.
21.14								
MEAN	-96.8	103.8	12104.3	11485.7	7152.5	6538.2	-2381.9	-2965.5
RMS	377.0	718.9	3054.0	4613.5	1861.1	2881.7	889.6	291.9
1/2 P-T-P	588.9	1563.1	4907.2	6962.8	2988.0	4341.5	1309.6	493.3
1P MAG	511.75	407.16	4138.21	6419.47	2531.94	4013.84	1240.97	340.62
PHASE	-148.	27.	104.	110.	111.	118.	113.	-37.
2P MAG	49.53	612.23	695.76	654.21	412.87	409.25	16.09	60.10
PHASE	48.	-73.	-126.	-121.	-111.	-105.	-166.	137.
3P MAG	114.88	273.34	998.92	941.63	576.93	563.45	149.29	171.88
PHASE	57.	-137.	-104.	-103.	-82.	-82.	86.	84.
4P MAG	18.01	391.70	75.03	68.13	43.50	40.05	24.78	20.88
PHASE	40.	89.	176.	-168.	-152.	-149.	-1.	-11.
5P MAG	13.75	231.37	122.51	126.16	66.72	69.67	57.81	57.50
PHASE	17.	-34.	-10.	-8.	30.	26.	141.	136.

RUN.PT	CHANNEL DESIGNATION							
	I	J	K	L	M	N	O	P
21.12								
MEAN	6026.3	-4036.7	-716.3	177.0	1461.8	-270.6	-34.1	53.1
RMS	1713.4	433.2	121.8	177.8	413.2	311.0	276.7	41.4
1/2 P-T-P	3095.7	799.4	205.1	264.0	617.9	481.8	391.7	68.2
1P MAG	2319.24	482.46	138.19	250.35	577.81	427.64	391.10	55.62
PHASE	-161.	96.	-19.	118.	100.	122.	-60.	-51.
2P MAG	302.16	109.02	84.84	14.26	76.23	92.22	10.19	16.31
PHASE	4.	131.	143.	34.	-138.	131.	126.	-47.
3P MAG	534.68	322.19	45.30	16.35	33.99	27.95	1.81	5.00
PHASE	-86.	89.	100.	77.	-126.	109.	121.	-85.
4P MAG	174.89	57.70	22.36	2.98	0.92	18.73	2.07	3.22
PHASE	-125.	50.	92.	34.	23.	119.	134.	-80.
5P MAG	50.04	33.13	7.83	3.14	6.29	3.50	0.95	0.74
PHASE	-120.	160.	110.	4.	57.	138.	-171.	-136.
21.13								
MEAN	6074.0	-4021.4	-714.4	174.8	1468.0	-267.3	-35.7	51.6
RMS	1575.9	583.0	105.9	183.3	554.6	313.1	282.6	42.4
1/2 P-T-P	2662.4	955.8	195.4	273.9	817.3	476.4	404.5	69.2
1P MAG	2173.33	747.44	110.42	258.08	780.66	430.07	399.48	56.95
PHASE	-142.	104.	-3.	122.	104.	127.	-57.	-45.
2P MAG	233.61	101.73	85.22	19.26	64.42	91.18	9.33	16.65
PHASE	-7.	139.	147.	42.	-134.	133.	142.	-45.
3P MAG	265.82	274.06	34.18	12.16	29.71	34.72	5.03	5.88
PHASE	-117.	92.	120.	31.	-114.	137.	165.	-57.
4P MAG	148.29	74.71	17.57	2.04	2.76	17.43	1.13	3.05
PHASE	-130.	-14.	83.	13.	-35.	118.	170.	-82.
5P MAG	42.69	35.82	11.35	2.36	5.49	7.52	0.29	2.03
PHASE	-118.	153.	110.	28.	86.	103.	171.	-110.
21.14								
MEAN	6068.4	-4058.0	-721.7	176.7	1449.8	-271.0	-32.1	52.3
RMS	1603.3	446.4	118.0	178.3	431.0	308.6	276.7	41.0
1/2 P-T-P	3047.9	749.8	199.8	267.9	645.2	484.6	394.1	68.2
1P MAG	2149.77	516.86	130.75	251.00	604.16	424.06	391.15	54.93
PHASE	-158.	99.	-19.	118.	102.	122.	-60.	-50.
2P MAG	277.84	106.06	84.98	14.93	68.77	88.89	10.85	16.34
PHASE	-2.	133.	146.	33.	-143.	134.	130.	-45.
3P MAG	472.55	292.88	41.06	13.96	31.49	27.23	1.45	4.90
PHASE	-91.	84.	97.	71.	-133.	108.	122.	-85.
4P MAG	137.16	46.29	14.78	1.59	2.62	12.63	1.62	1.80
PHASE	-125.	-17.	86.	26.	-76.	103.	85.	-94.
5P MAG	51.15	78.69	13.49	3.01	8.81	6.62	1.56	0.94
PHASE	-119.	150.	135.	6.	86.	145.	155.	-89.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
21.15								
MEAN	-107.5	1085.8	12107.5	11476.9	7154.4	6536.4	-2385.0	-2968.9
RMS	284.9	297.4	2746.5	4303.2	1662.2	2695.0	849.1	293.5
1/2 P-T-P	415.6	608.1	4203.9	6293.9	2531.9	3924.8	1258.3	507.7
1P MAG	377.77	128.08	3672.29	5966.88	2232.16	3742.07	1183.88	344.60
PHASE	-165.	150.	113.	115.	120.	122.	116.	-59.
2P MAG	69.18	334.18	808.71	766.04	481.27	473.50	18.33	58.76
PHASE	30.	-36.	-139.	-134.	-124.	-119.	-180.	127.
3P MAG	108.06	105.29	951.39	895.13	546.30	534.63	143.23	167.86
PHASE	50.	147.	-105.	-104.	-83.	-84.	84.	83.
4P MAG	27.95	61.74	82.67	97.93	50.78	54.31	41.34	48.20
PHASE	53.	53.	-107.	-101.	-79.	-75.	86.	93.
5P MAG	13.47	41.29	102.60	105.69	58.07	59.95	49.25	52.26
PHASE	14.	126.	-12.	-11.	27.	23.	129.	125.
21.16								
MEAN	-116.6	596.3	12251.3	11631.1	7245.7	6631.5	-2353.1	-2940.6
RMS	338.3	708.9	3113.4	4644.7	1897.1	2902.3	889.3	259.0
1/2 P-T-P	543.3	1587.8	4833.3	6854.9	2939.8	4266.9	1340.8	486.0
1P MAG	462.85	558.35	4239.45	6474.15	2593.42	4049.43	1238.88	272.18
PHASE	-143.	137.	112.	115.	119.	122.	116.	-44.
2P MAG	30.31	437.38	587.48	545.16	346.16	338.43	9.81	55.34
PHASE	24.	-12.	-134.	-129.	-119.	-113.	151.	130.
3P MAG	102.22	22.74	1005.89	940.14	579.66	563.80	159.43	181.77
PHASE	44.	106.	-103.	-102.	-81.	-81.	84.	82.
4P MAG	17.57	224.06	63.03	53.26	36.36	32.08	32.82	28.28
PHASE	33.	-71.	172.	-172.	-163.	-156.	10.	9.
5P MAG	11.38	410.10	133.03	133.15	74.68	74.73	51.33	54.98
PHASE	6.	-170.	-6.	-3.	36.	33.	136.	131.
21.17								
MEAN	-73.9	572.7	11849.2	11254.5	6997.4	6392.1	-2431.9	-3009.7
RMS	493.8	760.3	3015.9	4524.3	1838.2	2821.8	878.2	388.3
1/2 P-T-P	706.2	1679.8	5138.8	7143.6	3121.3	4431.1	1339.4	568.6
1P MAG	675.72	709.07	3979.45	6232.11	2439.67	3892.09	1219.72	483.22
PHASE	-155.	-173.	89.	101.	96.	109.	107.	-32.
2P MAG	79.24	484.96	988.16	923.16	587.23	579.85	33.01	63.49
PHASE	56.	12.	-122.	-118.	-107.	-103.	-155.	140.
3P MAG	138.78	206.29	1127.27	1068.58	653.12	637.09	159.00	180.91
PHASE	46.	-140.	-102.	-101.	-80.	-80.	89.	89.
4P MAG	37.16	293.28	278.97	279.45	161.09	161.23	93.50	98.32
PHASE	56.	-95.	-139.	-132.	-107.	-105.	46.	49.
5P MAG	15.37	273.51	63.90	68.77	37.14	39.01	25.57	26.11
PHASE	-1.	-141.	33.	33.	70.	65.	148.	151.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
21.15								
MEAN	6013.1	-4063.2	-724.2	177.3	1448.3	-275.0	-32.4	52.9
RMS	1278.5	395.1	116.7	173.6	392.3	300.8	271.9	39.1
1/2 P-T-P	2225.7	729.3	193.9	255.4	571.1	445.8	382.5	62.5
1P MAG	1701.13	431.55	132.34	244.78	547.89	413.73	384.32	52.57
PHASE	-172.	111.	-29.	116.	109.	117.	-62.	-56.
2P MAG	353.28	103.59	82.85	12.42	77.87	89.35	11.36	15.64
PHASE	1.	125.	139.	32.	-152.	127.	115.	-50.
3P MAG	408.83	282.35	36.44	12.20	28.96	23.46	1.14	4.04
PHASE	-95.	82.	100.	64.	-134.	127.	90.	-68.
4P MAG	141.24	62.99	20.95	2.01	4.55	15.59	2.05	2.29
PHASE	-115.	86.	109.	57.	84.	135.	101.	-59.
5P MAG	40.03	69.06	11.75	2.08	9.14	5.13	0.94	0.52
PHASE	-118.	135.	125.	-4.	71.	154.	175.	-116.
21.16								
MEAN	6007.7	-4024.2	-716.0	178.0	1469.7	-269.6	-35.4	51.7
RMS	1461.2	458.0	108.4	172.4	437.8	291.3	268.1	38.3
1/2 P-T-P	2639.0	833.8	188.2	258.7	643.1	449.6	382.1	62.5
1P MAG	1959.20	522.71	117.25	242.75	615.16	399.67	379.02	51.21
PHASE	-154.	109.	-22.	119.	108.	123.	-60.	-48.
2P MAG	304.05	99.65	81.82	14.35	58.52	87.68	9.80	15.96
PHASE	-15.	127.	145.	41.	-150.	135.	130.	-44.
3P MAG	472.95	311.00	39.62	14.94	27.65	26.34	2.17	4.55
PHASE	-101.	82.	96.	58.	-131.	119.	160.	-71.
4P MAG	186.86	54.46	18.93	2.16	3.92	16.98	2.14	2.67
PHASE	-128.	-5.	94.	35.	1.	129.	100.	-67.
5P MAG	82.10	72.07	12.68	3.05	10.38	4.98	1.11	1.04
PHASE	-131.	143.	119.	10.	71.	146.	-176.	-102.
21.17								
MEAN	6153.8	-4123.5	-734.3	176.9	1417.4	-277.0	-34.3	52.6
RMS	2003.3	457.2	139.8	185.9	416.8	331.8	287.6	44.3
1/2 P-T-P	3469.0	824.1	244.9	275.9	646.0	510.6	408.0	72.3
1P MAG	2750.20	501.19	164.05	261.88	579.79	456.58	406.55	59.51
PHASE	-163.	80.	-15.	117.	90.	121.	-61.	-52.
2P MAG	309.27	110.89	89.30	15.71	93.92	94.13	11.60	17.37
PHASE	20.	136.	142.	21.	-138.	131.	130.	-48.
3P MAG	462.56	308.81	41.59	14.96	39.56	31.91	2.91	5.45
PHASE	-104.	88.	106.	56.	-128.	128.	137.	-73.
4P MAG	156.58	161.08	32.11	3.43	5.26	25.23	2.96	3.50
PHASE	-129.	46.	80.	35.	11.	104.	102.	-90.
5P MAG	24.77	32.77	7.39	2.46	4.86	1.80	0.97	0.86
PHASE	-116.	175.	108.	10.	70.	86.	-142.	-167.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
19. 9								
MEAN	1158.7	536.2	16448.3	12832.5	9774.3	7500.2	-2510.2	-1859.8
RMS	574.8	878.4	3171.4	4853.0	1871.0	3114.3	1071.4	477.8
1/2 P-T-P	1056.0	1729.5	5096.9	7325.9	3021.8	4675.7	1529.2	816.7
1P MAG	685.36	355.76	3726.69	6479.87	2194.97	4171.31	1495.22	620.37
PHASE	148.	-31.	112.	110.	111.	110.	109.	-71.
2P MAG	164.32	773.02	1991.65	1810.52	1198.09	1144.32	19.05	83.38
PHASE	11.	-102.	-171.	-170.	-172.	-171.	79.	59.
3P MAG	400.06	381.53	1444.36	1295.39	833.31	795.38	205.86	216.65
PHASE	129.	127.	-99.	-101.	-101.	-103.	95.	88.
4P MAG	48.86	250.52	330.12	316.38	176.85	180.41	107.68	107.74
PHASE	36.	-136.	-159.	-157.	-159.	-161.	23.	18.
5P MAG	34.47	331.42	250.12	240.46	149.16	147.05	53.23	55.59
PHASE	-93.	-108.	-2.	3.	-1.	-2.	138.	141.
19.10								
MEAN	1038.2	796.4	15458.6	12164.6	9176.4	7051.7	-2628.5	-2051.4
RMS	546.6	1097.1	2954.0	4639.1	1757.5	2960.9	1017.0	473.9
1/2 P-T-P	998.8	2655.1	4824.8	7307.8	2872.0	4635.3	1398.4	825.7
1P MAG	668.55	332.96	3467.96	6208.33	2066.99	3972.36	1420.95	620.01
PHASE	159.	-154.	100.	104.	98.	104.	106.	-63.
2P MAG	146.45	776.24	1857.31	1682.80	1115.40	1063.34	21.24	77.80
PHASE	15.	-36.	-167.	-165.	-167.	-166.	97.	68.
3P MAG	354.61	734.71	1367.37	1252.53	791.52	766.72	202.52	223.77
PHASE	140.	121.	-93.	-95.	-95.	-97.	100.	94.
4P MAG	38.89	336.24	222.38	215.90	118.00	122.65	73.25	75.81
PHASE	39.	15.	-177.	-173.	-178.	-178.	-3.	-7.
5P MAG	34.90	739.02	234.89	226.35	143.28	139.57	30.89	34.46
PHASE	-83.	179.	14.	18.	14.	13.	170.	176.
19.11								
MEAN	1026.4	139.0	15217.9	12000.8	9043.0	6945.6	-2694.5	-2112.6
RMS	929.1	2676.3	2296.4	2785.8	1387.2	1817.1	715.6	788.8
1/2 P-T-P	1339.0	5923.6	3978.6	4954.6	2347.7	3183.4	1070.8	1323.9
1P MAG	1242.50	1644.13	1771.47	3023.56	1089.83	2024.40	980.67	1075.38
PHASE	118.	-116.	-160.	132.	-153.	129.	112.	-88.
2P MAG	179.59	2520.86	2319.40	2170.82	1412.08	1369.61	42.64	109.44
PHASE	15.	6.	-167.	-165.	-167.	-166.	35.	47.
3P MAG	382.14	1811.96	1342.92	1201.44	770.69	743.37	187.60	219.93
PHASE	135.	82.	-99.	-100.	-100.	-102.	93.	89.
4P MAG	51.30	711.60	407.50	408.40	229.03	235.27	149.34	154.94
PHASE	36.	175.	-147.	-147.	-149.	-150.	33.	31.
5P MAG	27.37	635.43	240.39	236.36	140.87	143.30	34.87	41.51
PHASE	-100.	-108.	8.	12.	8.	6.	168.	177.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
19. 9								
MEAN	9965.3	-3332.2	-701.1	-94.9	1832.5	-742.2	353.3	128.3
RMS	2580.6	440.1	143.2	224.9	385.5	487.2	361.2	68.7
1/2 P-T-P	4337.6	795.9	220.2	299.8	579.7	730.1	502.1	107.5
1P MAG	3204.16	424.29	165.02	313.41	517.11	681.64	510.65	95.56
PHASE	140.	103.	-30.	109.	106.	106.	-70.	-72.
2P MAG	487.39	120.88	85.79	15.31	164.32	87.24	9.52	14.62
PHASE	2.	56.	106.	20.	178.	93.	100.	-78.
3P MAG	1645.22	382.85	71.23	51.03	49.32	39.86	6.64	8.06
PHASE	-59.	88.	93.	120.	-129.	48.	-27.	-134.
4P MAG	314.25	177.98	33.40	6.93	8.20	14.42	1.51	3.22
PHASE	-148.	21.	24.	31.	10.	5.	35.	-169.
5P MAG	6.95	99.53	3.01	4.07	10.77	12.86	2.58	2.46
PHASE	-142.	156.	-106.	-39.	25.	-115.	-125.	109.
19.10								
MEAN	9750.8	-3546.9	-734.0	-75.1	1716.7	-723.8	322.0	125.4
RMS	2403.2	422.3	148.8	221.2	367.7	456.7	351.5	64.4
1/2 P-T-P	3780.2	731.8	228.4	285.3	540.1	674.2	492.8	100.3
1P MAG	3030.36	411.50	172.62	309.14	493.83	637.28	496.90	89.17
PHASE	152.	87.	-27.	109.	96.	107.	-70.	-71.
2P MAG	431.86	120.98	87.94	16.32	155.36	88.14	9.86	15.06
PHASE	9.	63.	113.	14.	-178.	101.	106.	-74.
3P MAG	1443.22	388.01	75.43	44.38	45.83	43.59	5.18	8.75
PHASE	-50.	95.	107.	130.	-125.	77.	13.	-112.
4P MAG	275.76	122.81	25.32	4.91	5.96	13.06	2.68	2.77
PHASE	-144.	-4.	15.	31.	-29.	8.	8.	-168.
5P MAG	14.76	72.96	9.90	4.49	9.27	13.12	2.83	3.29
PHASE	-157.	-175.	-67.	-39.	6.	-92.	-119.	124.
19.11								
MEAN	9489.3	-3630.8	-756.4	-64.5	1676.8	-746.3	315.9	128.6
RMS	3932.9	382.3	194.9	204.6	189.1	506.8	347.4	70.9
1/2 P-T-P	6840.2	663.8	325.6	257.1	330.7	729.0	488.0	105.6
1P MAG	5307.47	223.67	243.70	285.24	193.56	706.81	491.07	98.38
PHASE	113.	-116.	-53.	101.	169.	93.	-79.	-86.
2P MAG	685.76	182.70	101.01	4.66	177.90	111.24	12.85	17.11
PHASE	8.	46.	91.	13.	-178.	77.	75.	-97.
3P MAG	1475.38	370.88	65.39	47.50	44.65	26.49	5.05	6.71
PHASE	-53.	88.	106.	127.	-129.	66.	-19.	-134.
4P MAG	314.60	250.39	42.20	7.26	12.73	22.80	2.16	3.93
PHASE	-144.	34.	34.	35.	16.	30.	33.	-151.
5P MAG	7.43	79.07	9.62	4.33	7.68	14.84	3.01	3.73
PHASE	-40.	-175.	-93.	-35.	-4.	-109.	-140.	90.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
16. 6								
MEAN	-665.0	1453.8	2817.9	5101.6	1456.3	2449.7	-2442.8	-4933.3
RMS	188.4	214.8	1950.4	2108.3	1163.5	1289.1	400.3	522.3
1/2 P-T-P	356.8	425.6	4196.1	4347.3	2499.8	2658.9	754.6	1006.5
1P MAG	81.57	168.01	1341.01	1838.60	832.70	1137.06	257.73	356.21
PHASE	-53.	-3.	178.	148.	-179.	149.	-73.	-102.
2P MAG	110.62	104.91	1674.77	1652.65	1006.83	1022.98	28.39	49.44
PHASE	123.	-153.	-96.	-94.	-95.	-96.	177.	101.
3P MAG	179.59	164.34	1120.07	1045.87	658.61	635.45	189.83	241.60
PHASE	57.	-26.	-167.	-168.	-168.	-171.	-158.	13.
4P MAG	106.37	26.92	1306.27	1284.27	744.53	754.87	421.37	568.56
PHASE	85.	66.	-99.	-97.	-100.	-101.	86.	80.
5P MAG	8.91	121.42	12.82	10.76	5.05	6.95	16.43	11.57
PHASE	-111.	94.	163.	-3.	161.	-5.	175.	36.
29. 2								
MEAN	-576.3	-6035.6	1217.3	4296.8	490.0	1826.1	-3452.3	-5098.1
RMS	264.7	3346.4	1925.9	1974.4	1096.9	1128.9	456.6	546.5
1/2 P-T-P	484.7	7436.1	3653.2	3700.5	2071.3	2123.4	763.5	1062.7
1P MAG	167.94	1874.63	360.56	680.48	267.58	391.29	207.45	362.64
PHASE	-141.	-110.	-125.	131.	-121.	132.	101.	-87.
2P MAG	164.82	872.30	1923.48	1950.49	1114.76	1134.07	42.25	18.59
PHASE	125.	-120.	-90.	-89.	-88.	-90.	-119.	99.
3P MAG	249.32	2889.35	1160.10	1106.30	654.82	632.62	214.61	228.49
PHASE	69.	-19.	-173.	-174.	-174.	-176.	15.	10.
4P MAG	133.29	1433.54	1483.47	1507.17	807.93	836.95	546.94	619.58
PHASE	83.	148.	-106.	-105.	-107.	-108.	75.	73.
5P MAG	7.85	1330.55	45.08	20.65	19.42	9.85	22.80	18.93
PHASE	-154.	-155.	158.	156.	154.	153.	19.	17.
29. 3								
MEAN	-564.9	-4570.6	1315.6	4392.7	532.6	1865.0	-3421.4	-5050.8
RMS	311.6	2129.6	2052.4	2098.1	1165.0	1205.7	502.9	575.2
1/2 P-T-P	523.5	3514.6	3952.6	3809.5	2244.9	2189.9	844.6	1060.3
1P MAG	372.57	1613.49	167.54	675.27	152.39	373.32	237.44	340.47
PHASE	-121.	-176.	-84.	110.	-87.	112.	93.	-80.
2P MAG	106.68	1484.40	1971.62	1984.74	1135.52	1169.03	47.77	27.08
PHASE	138.	179.	-101.	-99.	-99.	-100.	-136.	103.
3P MAG	148.63	1532.21	1314.33	1250.06	758.88	721.86	235.43	242.16
PHASE	75.	14.	-174.	-174.	-175.	-176.	15.	9.
4P MAG	117.28	166.78	1655.29	1676.79	903.54	933.46	604.08	676.04
PHASE	87.	9.	-109.	-108.	-110.	-111.	72.	70.
5P MAG	30.30	728.72	32.82	13.01	11.13	3.09	15.74	13.11
PHASE	-141.	47.	133.	68.	156.	67.	-11.	-45.

RUN.PT		CHANNEL DESIGNATION							
		I	J	K	L	M	N	O	P
16. 6									
	MEAN	4566.1	-5908.3	-909.1	459.3	449.5	285.3	-378.6	-25.7
	RMS	1057.5	757.3	190.3	75.0	168.8	118.3	109.9	21.2
	1/2 P-T-P	2034.1	1312.8	321.4	121.2	274.7	238.1	152.0	41.0
	1P MAG	1243.54	206.71	220.08	102.85	183.03	78.39	154.28	18.84
	PHASE	-90.	-119.	-73.	101.	156.	-44.	-73.	105.
	2P MAG	371.79	168.11	82.69	5.08	137.94	122.01	15.28	18.55
	PHASE	44.	102.	93.	61.	-107.	87.	101.	-84.
	3P MAG	588.27	438.52	37.97	22.14	22.01	13.06	2.83	2.55
	PHASE	-109.	13.	27.	59.	160.	-13.	-52.	-158.
	4P MAG	63.00	911.80	111.38	8.21	50.16	70.41	9.55	11.92
	PHASE	-148.	83.	92.	59.	64.	102.	101.	-83.
	5P MAG	20.35	26.64	18.81	2.04	5.63	24.25	3.13	2.72
	PHASE	18.	7.	164.	-80.	-5.	173.	155.	-16.
29. 2									
	MEAN	-1022.1	-6222.7	-932.5	464.6	309.0	353.8	-412.0	-72.5
	RMS	1425.6	815.2	208.0	65.6	118.6	139.9	98.0	20.7
	1/2 P-T-P	2513.7	1480.4	355.8	106.6	198.3	287.4	139.5	48.4
	1P MAG	1737.80	237.04	242.45	86.37	35.87	108.95	136.54	16.22
	PHASE	-111.	-73.	-69.	99.	154.	-54.	-76.	178.
	2P MAG	427.16	150.84	81.81	6.54	149.47	124.42	17.61	18.85
	PHASE	54.	102.	88.	85.	-100.	85.	94.	-105.
	3P MAG	834.34	438.34	27.81	30.93	21.96	14.48	2.83	3.49
	PHASE	-101.	9.	29.	67.	148.	-74.	-53.	77.
	4P MAG	43.17	1006.40	135.62	7.84	54.39	95.19	14.60	12.58
	PHASE	175.	76.	87.	59.	58.	95.	91.	-96.
	5P MAG	19.08	44.22	13.46	1.01	6.09	19.11	3.73	4.53
	PHASE	-25.	2.	144.	-86.	-1.	170.	161.	-16.
29. 3									
	MEAN	-8183.1	-6186.0	-930.0	461.6	316.0	345.4	-411.1	-72.6
	RMS	17.0	885.0	213.5	65.0	122.1	147.2	98.7	21.5
	1/2 P-T-P	7.3	1611.7	376.4	104.5	215.2	298.4	141.6	48.9
	1P MAG	1.71	233.86	241.92	87.37	34.17	125.16	137.79	16.30
	PHASE	103.	-62.	-67.	100.	96.	-62.	-76.	167.
	2P MAG	1.73	158.02	91.88	7.01	152.14	126.11	15.91	19.59
	PHASE	64.	95.	89.	57.	-111.	86.	92.	-105.
	3P MAG	0.93	472.27	25.01	25.27	25.81	14.52	0.35	4.25
	PHASE	-96.	7.	34.	68.	152.	-95.	168.	72.
	4P MAG	3.26	1104.63	147.35	9.11	61.11	99.43	14.46	14.50
	PHASE	-102.	74.	83.	59.	59.	92.	84.	-98.
	5P MAG	1.76	34.10	11.73	1.38	5.41	15.68	2.96	3.90
	PHASE	116.	-32.	141.	-71.	-31.	177.	175.	-11.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
16. 5								
MEAN	-507.0	1645.9	7042.8	7887.7	4048.6	4248.9	-2125.9	-4027.6
RMS	276.0	525.2	1674.4	2001.3	1008.9	1240.4	426.7	575.0
1/2 P-T-P	564.3	860.8	3308.2	3556.0	1967.0	2204.1	873.0	1134.3
1P MAG	312.20	694.05	1120.81	1974.98	709.49	1241.02	488.07	667.53
PHASE	141.	-59.	-154.	135.	-151.	136.	-74.	-88.
2P MAG	82.88	207.28	1605.07	1587.50	969.10	983.74	19.44	58.81
PHASE	96.	98.	-108.	-106.	-108.	-108.	165.	97.
3P MAG	185.09	109.03	1035.48	962.01	605.54	583.16	165.24	204.35
PHASE	76.	-122.	-150.	-151.	-151.	-154.	-142.	31.
4P MAG	58.97	92.93	801.43	785.26	456.87	462.29	243.75	351.01
PHASE	77.	97.	-99.	-98.	-100.	-101.	79.	80.
5P MAG	17.61	12.79	68.54	66.99	42.11	41.31	22.72	23.27
PHASE	-169.	82.	-94.	-74.	-91.	-81.	-120.	58.
23.11								
MEAN	-407.9	-2228.4	6461.6	7525.8	3677.4	4043.7	-2874.5	-4291.2
RMS	631.3	2752.9	2942.9	2760.5	1794.3	1685.6	579.6	835.5
1/2 P-T-P	984.8	6886.6	5725.8	4840.1	3414.5	2925.4	954.6	1464.0
1P MAG	872.88	2514.96	3282.70	2999.91	2043.14	1844.28	625.64	1004.08
PHASE	172.	-156.	-11.	32.	-5.	39.	59.	-55.
2P MAG	119.30	934.12	2017.74	1977.04	1213.12	1224.16	28.26	81.54
PHASE	90.	-101.	-112.	-108.	-96.	-95.	153.	90.
3P MAG	73.82	635.51	979.33	930.69	572.60	550.32	177.33	191.47
PHASE	34.	12.	-149.	-147.	-127.	-128.	38.	32.
4P MAG	83.24	1081.55	1213.61	1196.71	674.33	686.23	467.81	556.22
PHASE	73.	16.	-114.	-113.	-84.	-85.	67.	65.
5P MAG	30.86	501.17	26.17	41.57	20.57	25.54	29.29	26.29
PHASE	-146.	42.	-66.	-43.	-21.	-6.	21.	16.
16. 4								
MEAN	-234.2	1529.1	11418.5	10790.7	6736.7	6138.0	-1803.8	-3093.3
RMS	536.6	704.4	1908.8	2391.9	1161.8	1526.1	598.5	715.6
1/2 P-T-P	865.4	1043.8	3660.1	4064.6	2221.2	2564.5	1133.7	1288.8
1P MAG	739.99	965.29	1625.97	2656.42	1012.78	1727.72	783.17	939.64
PHASE	134.	-56.	-152.	135.	-148.	135.	-70.	-88.
2P MAG	117.32	186.79	1799.62	1769.99	1096.24	1104.29	31.15	82.28
PHASE	46.	71.	-126.	-123.	-126.	-125.	115.	95.
3P MAG	65.74	100.30	996.56	931.28	584.72	566.00	142.97	173.36
PHASE	63.	21.	-128.	-128.	-130.	-130.	-123.	58.
4P MAG	61.58	58.81	604.13	588.11	341.04	345.31	214.30	255.18
PHASE	40.	71.	-122.	-120.	-124.	-123.	61.	59.
5P MAG	16.59	37.45	63.06	76.48	37.56	47.40	26.51	40.51
PHASE	-166.	28.	-42.	-37.	-35.	-39.	-141.	66.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
16. 5								
MEAN	4914.7	-5099.8	-832.1	314.5	886.4	-4.4	-207.9	19.4
RMS	1030.2	551.9	191.7	136.7	143.8	175.7	204.9	21.6
1/2 P-T-P	2160.5	1035.5	317.0	196.1	251.0	294.4	283.7	36.4
1P MAG	1052.25	251.25	233.82	191.25	142.88	203.66	289.20	20.03
PHASE	172.	-98.	-61.	100.	158.	83.	-76.	-94.
2P MAG	433.70	172.23	95.78	4.12	132.29	127.94	15.43	20.50
PHASE	28.	97.	105.	34.	-121.	95.	96.	-76.
3P MAG	742.16	368.86	32.40	25.00	23.55	9.99	2.41	2.63
PHASE	-99.	30.	49.	77.	176.	-28.	-64.	-176.
4P MAG	117.72	559.26	69.04	6.07	32.01	41.60	5.24	7.08
PHASE	-144.	83.	91.	56.	68.	105.	98.	-82.
5P MAG	19.78	36.95	12.50	1.19	4.92	15.49	2.59	2.44
PHASE	-48.	56.	145.	-74.	-14.	-177.	-171.	15.
23.11								
MEAN	5322.3	-5212.9	-877.2	336.8	833.4	-8.8	-231.8	17.2
RMS	2243.9	828.4	241.3	164.5	289.7	238.2	240.0	30.6
1/2 P-T-P	3564.0	1720.7	442.4	233.4	446.9	369.9	334.6	52.0
1P MAG	3084.65	681.44	297.46	231.91	370.71	292.34	338.77	33.73
PHASE	180.	-21.	-43.	98.	3.	91.	-78.	-85.
2P MAG	476.79	204.85	111.75	8.02	162.74	144.51	17.64	23.42
PHASE	43.	95.	107.	-24.	-124.	99.	102.	-73.
3P MAG	350.40	334.94	17.09	11.90	22.97	5.23	0.46	0.12
PHASE	-119.	31.	56.	53.	-175.	-133.	-167.	160.
4P MAG	130.38	840.80	113.06	7.19	45.68	74.50	9.16	11.85
PHASE	-138.	68.	78.	52.	53.	89.	83.	-95.
5P MAG	18.58	38.88	7.55	2.04	10.65	16.68	3.21	2.30
PHASE	42.	10.	122.	-112.	-25.	-172.	176.	15.
16. 4								
MEAN	5380.2	-4232.7	-735.1	181.2	1354.8	-272.7	-35.7	61.3
RMS	2167.3	457.6	206.9	183.2	172.2	345.4	291.3	46.7
1/2 P-T-P	3548.5	823.3	327.3	249.2	288.8	530.3	409.3	73.2
1P MAG	2937.71	270.32	255.41	258.52	185.75	465.31	411.49	61.51
PHASE	134.	-106.	-55.	100.	164.	92.	-77.	-89.
2P MAG	602.71	196.30	117.28	5.28	148.26	139.75	17.59	22.45
PHASE	19.	95.	112.	14.	-140.	99.	90.	-75.
3P MAG	432.06	302.30	34.24	11.61	27.67	17.62	0.40	2.39
PHASE	-98.	53.	102.	81.	-154.	140.	164.	-91.
4P MAG	198.66	407.43	50.02	5.96	21.84	29.39	4.27	4.90
PHASE	-143.	60.	83.	32.	47.	115.	100.	-73.
5P MAG	33.50	47.61	13.63	1.36	11.51	19.83	2.11	3.08
PHASE	-78.	67.	134.	-32.	9.	169.	153.	1.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
16. 9								
MEAN	-550.7	1719.4	3314.9	5003.5	1758.7	2406.5	-2523.6	-4714.3
RMS	174.1	267.7	1966.7	2248.8	1187.1	1386.2	417.8	463.0
1/2 P-T-P	355.9	416.0	4170.5	4320.1	2491.0	2659.5	860.1	947.3
1P MAG	132.56	346.92	1910.67	2499.68	1181.98	1553.34	404.53	385.81
PHASE	2.	-63.	170.	146.	172.	146.	-59.	-112.
2P MAG	71.00	48.35	1446.00	1423.70	870.97	882.04	22.91	44.23
PHASE	109.	126.	-109.	-107.	-109.	-108.	-164.	88.
3P MAG	154.50	120.08	880.51	801.58	516.12	488.32	151.81	180.25
PHASE	70.	-29.	-155.	-156.	-157.	-159.	-151.	24.
4P MAG	91.41	33.21	1092.17	1084.52	623.59	638.30	378.44	476.29
PHASE	73.	101.	-104.	-103.	-105.	-106.	75.	74.
5P MAG	8.55	37.13	6.65	33.10	9.77	19.00	9.90	6.98
PHASE	-144.	72.	14.	-4.	15.	-9.	155.	96.
16. 8								
MEAN	-439.6	1697.6	5423.8	6377.9	3050.5	3293.8	-2400.5	-4272.4
RMS	203.4	433.0	1669.2	1931.0	1004.0	1193.8	366.4	514.3
1/2 P-T-P	411.4	639.2	3227.8	3500.7	1928.4	2170.4	739.7	1030.4
1P MAG	207.37	589.84	1245.35	1921.22	781.47	1199.78	374.37	583.14
PHASE	126.	-58.	-163.	140.	-160.	140.	-78.	-93.
2P MAG	71.25	55.51	1560.36	1524.83	936.64	947.04	23.32	49.81
PHASE	93.	81.	-117.	-114.	-117.	-116.	166.	89.
3P MAG	154.62	119.73	923.51	850.57	539.65	514.79	152.84	176.16
PHASE	77.	-32.	-141.	-141.	-142.	-144.	-140.	40.
4P MAG	64.33	48.05	839.73	834.13	478.07	491.94	287.63	366.36
PHASE	78.	107.	-100.	-98.	-101.	-101.	75.	80.
5P MAG	13.26	34.21	36.73	45.40	22.32	27.16	16.39	11.28
PHASE	-165.	64.	-87.	-52.	-81.	-59.	-121.	76.
16. 3								
MEAN	-138.7	1675.4	9882.1	9369.8	5784.9	5241.8	-2048.0	-3337.5
RMS	541.2	726.4	1906.9	1929.7	1171.7	1216.6	484.1	723.7
1/2 P-T-P	953.4	1047.6	3921.6	3346.6	2373.9	2114.7	938.7	1290.5
1P MAG	726.43	993.92	1502.00	1689.21	970.69	1101.20	611.62	950.87
PHASE	130.	-57.	-120.	133.	-118.	133.	-78.	-86.
2P MAG	113.97	199.88	1878.01	1820.85	1140.67	1132.67	30.62	69.11
PHASE	45.	60.	-130.	-127.	-130.	-129.	111.	87.
3P MAG	181.02	110.53	1006.91	910.50	588.46	554.03	148.08	169.33
PHASE	71.	-47.	-129.	-130.	-131.	-132.	-118.	56.
4P MAG	66.20	89.32	651.39	636.04	373.33	376.36	210.89	287.11
PHASE	58.	54.	-116.	-114.	-116.	-117.	60.	66.
5P MAG	30.46	21.07	129.24	144.29	80.22	88.63	20.51	32.08
PHASE	-163.	-40.	-38.	-29.	-38.	-35.	-97.	113.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
16. 9								
MEAN	4987.2	-5823.3	-918.2	389.4	467.1	131.9	-295.6	-4.0
RMS	861.1	629.1	173.3	84.9	204.3	103.7	125.3	17.6
1/2 P-T-P	1733.1	1147.2	291.2	133.0	327.0	224.2	174.3	34.3
1P MAG	935.26	240.48	202.28	117.62	257.88	50.51	176.23	11.63
PHASE	-70.	-146.	-76.	101.	153.	-4.	-74.	107.
2P MAG	363.30	142.53	79.80	4.95	120.05	111.18	13.69	17.71
PHASE	30.	92.	96.	45.	-119.	89.	95.	-81.
3P MAG	535.26	329.89	20.88	20.69	16.57	4.19	2.02	1.27
PHASE	-105.	22.	49.	64.	175.	-114.	-123.	-98.
4P MAG	87.41	760.80	102.56	6.46	39.13	72.14	9.97	11.75
PHASE	-142.	78.	87.	50.	59.	97.	87.	-85.
5P MAG	17.43	8.24	13.43	1.98	4.21	19.91	3.37	2.15
PHASE	15.	26.	164.	-80.	3.	173.	162.	-15.
16. 8								
MEAN	5303.6	-5429.1	-883.5	316.9	682.5	-9.5	-209.2	18.3
RMS	725.1	526.9	180.4	118.3	147.3	135.8	174.6	16.6
1/2 P-T-P	1627.3	1008.0	302.4	168.8	255.8	222.8	241.7	29.0
1P MAG	587.42	247.96	221.05	165.53	156.81	139.55	246.40	9.51
PHASE	-168.	-105.	-66.	99.	161.	72.	-77.	-108.
2P MAG	430.95	150.28	87.04	4.64	128.49	113.50	14.01	18.41
PHASE	29.	89.	103.	8.	-128.	92.	100.	-78.
3P MAG	569.13	320.57	22.51	21.20	20.64	6.32	1.39	2.11
PHASE	-98.	38.	54.	78.	-169.	-64.	-77.	-147.
4P MAG	123.66	581.95	78.83	5.77	31.71	56.92	7.57	9.72
PHASE	-138.	84.	97.	51.	68.	110.	106.	-75.
5P MAG	11.27	19.06	10.32	1.41	3.93	17.25	3.37	2.08
PHASE	-30.	52.	153.	-66.	-18.	176.	-171.	8.
16. 3								
MEAN	5853.3	-4567.7	-786.0	180.5	1156.4	-280.4	-37.7	64.0
RMS	2016.6	495.7	207.9	175.8	136.2	310.5	270.5	41.1
1/2 P-T-P	3223.2	968.9	357.4	246.4	232.7	489.8	374.4	65.4
1P MAG	2641.63	347.53	263.05	246.82	106.24	415.72	382.11	53.71
PHASE	132.	-86.	-56.	98.	-165.	88.	-78.	-94.
2P MAG	567.53	177.50	104.08	5.63	152.52	130.04	15.32	20.33
PHASE	21.	84.	109.	11.	-142.	95.	96.	-78.
3P MAG	769.77	307.47	18.61	25.85	26.78	17.24	3.80	2.10
PHASE	-106.	52.	80.	72.	-160.	-112.	-95.	96.
4P MAG	188.61	453.07	57.61	7.60	26.93	33.89	5.01	5.29
PHASE	-145.	68.	80.	38.	51.	102.	100.	-81.
5P MAG	24.23	45.11	12.27	1.46	8.01	21.81	3.88	3.83
PHASE	-37.	119.	175.	-64.	-9.	-167.	-175.	29.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
16. 7								
MEAN	-133.5	1800.6	10008.6	9417.8	5862.7	5268.4	-2060.9	-3301.0
RMS	481.7	786.0	1765.8	2130.1	1072.7	1344.0	506.4	674.1
1/2 P-T-P	845.1	1198.1	3549.4	3592.0	2145.5	2254.8	945.7	1211.6
1P MAG	633.08	1074.61	1310.50	2216.89	827.93	1424.10	653.01	881.36
PHASE	133.	-53.	-141.	131.	-137.	131.	-77.	-86.
2P MAG	100.77	139.63	1748.81	1699.87	1061.73	1059.95	31.01	72.06
PHASE	49.	71.	-128.	-125.	-128.	-127.	110.	91.
3P MAG	209.04	212.95	1002.97	920.21	587.86	560.86	149.80	176.62
PHASE	94.	-42.	-125.	-126.	-127.	-128.	-115.	60.
4P MAG	58.98	64.58	641.94	621.94	360.42	364.77	194.44	269.93
PHASE	56.	52.	-116.	-115.	-117.	-117.	65.	65.
5P MAG	30.41	41.16	110.73	121.72	68.91	75.23	29.59	27.05
PHASE	-151.	53.	-35.	-28.	-32.	-32.	-101.	98.
16. 2								
MEAN	-86.5	1400.5	8287.4	7884.2	4797.4	4299.6	-2312.4	-3592.3
RMS	402.4	436.6	1733.2	2091.9	1046.2	1310.6	455.1	607.1
1/2 P-T-P	661.2	733.3	3364.6	3641.9	2039.1	2264.6	833.4	1105.1
1P MAG	510.13	549.92	1113.27	2096.05	708.11	1331.51	583.94	777.70
PHASE	125.	-44.	-148.	129.	-144.	129.	-77.	-88.
2P MAG	91.63	160.42	1833.48	1761.53	1102.77	1098.62	25.23	72.95
PHASE	43.	35.	-136.	-133.	-136.	-135.	142.	77.
3P MAG	212.87	210.02	986.73	912.20	573.39	554.55	142.49	179.92
PHASE	118.	-22.	-120.	-122.	-122.	-125.	-114.	63.
4P MAG	56.96	69.02	634.12	627.05	363.10	370.12	200.49	278.83
PHASE	66.	56.	-107.	-104.	-107.	-108.	66.	74.
5P MAG	21.37	34.90	102.59	118.97	64.65	72.87	15.44	26.01
PHASE	-152.	29.	-32.	-27.	-37.	-33.	-56.	112.
23.12								
MEAN	-56.9	-2323.4	8196.0	7932.8	4720.9	4352.2	-2964.7	-3752.1
RMS	408.6	1953.7	1901.7	2087.3	1148.6	1305.4	463.7	664.1
1/2 P-T-P	640.6	4184.7	3541.3	3602.5	2114.7	2254.2	831.8	1231.6
1P MAG	533.76	1811.02	1636.51	2141.72	1029.56	1365.21	568.37	856.78
PHASE	112.	-125.	-150.	138.	-140.	145.	113.	-95.
2P MAG	98.41	693.92	1795.95	1718.78	1074.30	1066.45	2.98	61.72
PHASE	46.	39.	-139.	-136.	-123.	-122.	14.	71.
3P MAG	182.74	1543.18	900.51	819.56	516.29	490.53	153.32	166.92
PHASE	95.	125.	-134.	-135.	-113.	-115.	49.	47.
4P MAG	54.28	549.17	704.37	692.15	389.46	400.40	265.21	318.57
PHASE	52.	-21.	-118.	-115.	-87.	-88.	65.	64.
5P MAG	19.11	170.01	86.15	97.93	48.62	55.09	37.88	41.82
PHASE	178.	58.	-77.	-61.	-35.	-28.	86.	88.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
16. 7								
MEAN	5959.9	-4537.0	-793.9	173.9	1170.4	-293.6	-30.9	62.1
RMS	1820.2	457.0	195.9	175.8	143.3	300.4	270.6	39.4
1/2 P-T-P	3005.7	880.7	321.4	239.8	240.6	449.8	377.2	59.3
1P MAG	2317.38	264.61	244.85	246.55	134.68	403.00	382.29	51.48
PHASE	136.	-94.	-56.	100.	167.	90.	-77.	-90.
2P MAG	540.32	173.36	104.24	6.41	143.72	126.75	16.03	19.85
PHASE	21.	89.	111.	2.	-141.	98.	96.	-77.
3P MAG	886.07	308.98	29.85	29.08	26.83	7.22	2.81	1.50
PHASE	-88.	57.	85.	90.	-155.	-64.	-74.	163.
4P MAG	196.24	433.14	55.92	6.78	24.42	31.36	4.05	5.83
PHASE	-143.	68.	79.	39.	54.	103.	104.	-79.
5P MAG	18.00	40.08	9.32	1.78	9.09	17.72	2.67	2.77
PHASE	-38.	108.	160.	-65.	-4.	-171.	-176.	33.
16. 2								
MEAN	6213.8	-4916.6	-837.2	178.3	951.4	-291.0	-35.4	69.6
RMS	1372.8	451.8	189.4	160.3	141.7	248.5	240.3	32.0
1/2 P-T-P	2545.6	912.5	307.1	209.1	244.2	406.7	335.9	50.9
1P MAG	1634.56	244.37	235.18	224.62	126.43	324.54	339.49	40.09
PHASE	134.	-94.	-59.	99.	162.	86.	-78.	-96.
2P MAG	509.58	172.70	103.25	4.39	148.98	125.23	14.58	19.07
PHASE	18.	77.	101.	6.	-148.	91.	84.	-81.
3P MAG	802.70	313.68	34.45	28.11	25.56	4.60	2.55	2.37
PHASE	-71.	61.	93.	109.	-151.	59.	-39.	-158.
4P MAG	176.93	440.82	53.78	6.99	25.64	32.99	4.75	6.06
PHASE	-142.	78.	84.	46.	60.	105.	100.	-81.
5P MAG	14.79	36.91	9.85	1.81	6.99	20.28	3.12	2.56
PHASE	13.	121.	-168.	-52.	-9.	-156.	-155.	34.
23.12								
MEAN	6310.3	-4921.4	-879.6	201.7	961.9	-286.1	-60.2	63.9
RMS	1278.7	467.1	191.2	160.4	161.7	251.7	240.8	30.8
1/2 P-T-P	2318.2	919.0	310.3	213.4	263.0	394.1	334.0	47.1
1P MAG	1568.71	287.93	240.15	225.13	170.53	330.09	340.16	38.19
PHASE	119.	-108.	-65.	95.	174.	79.	-82.	-97.
2P MAG	488.32	150.37	99.71	6.14	146.51	121.35	13.77	19.05
PHASE	14.	71.	97.	8.	-149.	86.	86.	-88.
3P MAG	693.25	281.26	21.85	24.84	22.65	8.87	1.76	0.63
PHASE	-90.	43.	89.	87.	-158.	-119.	-97.	-111.
4P MAG	156.78	479.82	63.13	6.85	27.42	44.81	6.64	7.40
PHASE	-156.	67.	78.	29.	48.	97.	100.	-91.
5P MAG	14.44	55.82	11.90	1.49	6.06	19.60	3.48	2.93
PHASE	15.	93.	142.	-73.	15.	168.	171.	13.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
17. 2								
MEAN	-33.4	3197.8	8216.3	7550.4	4803.6	4102.5	-2366.0	-3552.7
RMS	349.2	4330.5	2529.3	2808.7	1536.8	1765.6	498.7	643.2
1/2 P-T-P	611.7	8402.1	4429.8	4843.2	2666.1	3043.7	955.2	1217.3
1P MAG	418.61	4419.56	2313.72	3005.31	1443.32	1906.10	611.38	786.71
PHASE	93.	-17.	-170.	142.	-169.	141.	-73.	-104.
2P MAG	120.98	2067.88	2351.43	2258.01	1418.85	1414.34	27.00	81.35
PHASE	28.	140.	-141.	-139.	-142.	-141.	139.	72.
3P MAG	203.72	1765.52	1058.00	949.68	611.54	581.66	160.86	195.35
PHASE	91.	91.	-135.	-135.	-137.	-138.	-133.	50.
4P MAG	68.96	1184.12	877.12	848.73	494.58	504.15	267.82	379.27
PHASE	43.	-49.	-124.	-123.	-125.	-126.	57.	56.
5P MAG	13.64	2450.44	56.90	76.09	33.38	45.37	13.80	17.20
PHASE	-168.	-132.	-37.	-32.	-39.	-39.	-95.	132.
23.13								
MEAN	277.3	-918.4	13486.3	11667.3	7964.5	6760.1	-2531.7	-2675.4
RMS	831.5	2258.2	3602.5	3666.4	2180.7	2295.1	816.8	1154.8
1/2 P-T-P	1441.8	3776.3	7218.9	6363.2	4327.4	4010.9	1550.1	2107.7
1P MAG	1099.88	2599.11	1809.75	2424.57	1193.08	1619.76	950.21	1444.07
PHASE	135.	-122.	-124.	119.	-111.	127.	103.	-89.
2P MAG	255.47	1046.37	4269.17	4146.35	2584.83	2568.04	58.28	184.13
PHASE	28.	-92.	-141.	-139.	-126.	-126.	60.	63.
3P MAG	293.27	431.36	1532.09	1388.96	877.46	827.99	272.44	292.00
PHASE	112.	22.	-129.	-129.	-108.	-109.	57.	60.
4P MAG	107.23	821.57	1417.24	1343.95	781.66	777.94	540.02	623.78
PHASE	18.	-119.	-145.	-145.	-116.	-117.	36.	34.
5P MAG	46.05	137.57	115.38	132.86	63.43	80.01	40.01	42.27
PHASE	163.	48.	-22.	-18.	13.	15.	99.	120.
17. 5								
MEAN	-233.4	-247.9	4082.5	4403.0	2273.0	2056.5	-2823.0	-4316.0
RMS	163.9	4362.6	2921.7	3091.5	1740.5	1910.2	581.3	706.7
1/2 P-T-P	377.1	10059.0	5436.4	5573.5	3225.3	3446.1	1103.3	1388.9
1P MAG	20.47	2799.95	1345.13	2233.07	829.38	1380.53	481.73	579.05
PHASE	6.	88.	176.	127.	179.	127.	-90.	-102.
2P MAG	141.49	2837.79	3378.40	3243.43	2030.84	2027.50	39.09	102.77
PHASE	56.	6.	-131.	-130.	-132.	-131.	166.	66.
3P MAG	103.28	2797.63	865.18	755.37	501.89	465.16	161.89	173.89
PHASE	74.	-92.	-168.	-169.	-170.	-173.	-162.	9.
4P MAG	120.14	2433.66	1747.69	1732.11	990.75	1025.92	611.70	767.37
PHASE	58.	166.	-123.	-122.	-124.	-125.	55.	55.
5P MAG	22.18	2200.97	21.42	19.08	9.47	6.47	17.22	16.10
PHASE	180.	83.	179.	-91.	168.	-75.	-175.	12.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
17. 2								
MEAN	6638.4	-4969.0	-872.5	142.8	927.6	-349.1	-2.4	79.0
RMS	1075.3	574.7	203.8	160.4	241.7	241.2	240.9	30.5
1/2 P-T-P	2146.7	1060.5	341.0	216.6	404.7	404.0	335.9	52.2
1P MAG	1027.52	323.30	244.16	224.53	277.57	300.26	340.04	36.15
PHASE	98.	-133.	-70.	94.	164.	73.	-83.	-112.
2P MAG	601.91	208.39	120.92	6.38	192.69	148.72	18.13	21.26
PHASE	11.	69.	90.	5.	-153.	78.	79.	-99.
3P MAG	830.71	337.14	33.46	29.09	25.14	12.97	3.56	0.41
PHASE	-98.	46.	97.	83.	-166.	176.	-147.	15.
4P MAG	208.75	608.36	77.75	7.14	34.54	47.49	5.95	7.50
PHASE	-160.	59.	65.	27.	42.	79.	72.	-107.
5P MAG	16.47	20.09	15.93	2.03	2.63	20.89	3.51	3.69
PHASE	-64.	146.	160.	-79.	-44.	170.	162.	7.
23.13								
MEAN	6420.7	-3956.0	-809.0	79.6	1551.9	-580.4	108.5	98.2
RMS	3298.4	902.0	321.1	248.0	258.1	504.0	400.6	67.0
1/2 P-T-P	5150.2	1606.0	528.8	323.4	431.9	819.7	562.9	110.5
1P MAG	4342.45	405.40	384.37	347.22	119.38	662.36	565.57	86.02
PHASE	132.	-87.	-57.	92.	-171.	85.	-84.	-95.
2P MAG	969.85	432.41	199.40	8.11	334.86	250.69	29.04	37.58
PHASE	18.	64.	81.	-41.	-154.	70.	74.	-106.
3P MAG	1233.13	490.26	62.54	44.79	35.34	27.32	4.60	2.04
PHASE	-94.	56.	107.	96.	-161.	179.	-108.	-8.
4P MAG	460.58	967.88	101.41	14.04	55.39	36.36	4.21	5.68
PHASE	-173.	38.	43.	7.	24.	55.	93.	-133.
5P MAG	83.04	58.79	18.87	2.41	6.48	37.38	3.22	6.35
PHASE	-29.	122.	168.	-131.	19.	-169.	176.	19.
17. 5								
MEAN	6065.7	-5809.4	-1001.9	219.4	462.9	-244.8	-98.3	51.8
RMS	1054.8	953.0	266.8	129.4	236.6	200.6	184.2	30.4
1/2 P-T-P	2036.7	1665.6	464.1	175.3	388.8	441.2	253.4	66.7
1P MAG	1176.04	222.40	291.85	181.24	179.62	127.27	258.84	17.15
PHASE	-92.	-106.	-72.	89.	145.	16.	-86.	150.
2P MAG	633.95	310.33	155.80	7.90	271.90	204.47	22.50	31.33
PHASE	26.	66.	79.	1.	-142.	72.	75.	-104.
3P MAG	485.22	320.46	9.22	20.08	12.81	35.88	5.63	4.80
PHASE	-121.	7.	-176.	64.	156.	-154.	-146.	32.
4P MAG	153.05	1230.89	173.37	9.09	65.79	133.33	17.05	21.33
PHASE	-154.	59.	70.	20.	39.	79.	74.	-104.
5P MAG	21.49	34.95	21.21	2.59	6.20	30.02	4.06	3.88
PHASE	3.	6.	141.	-101.	-29.	153.	142.	-13.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
17. 4								
MEAN	-61.0	2446.0	5994.1	5635.8	3436.4	2857.8	-2714.2	-3926.1
RMS	204.4	3815.8	3037.4	3236.9	1829.3	2014.5	535.2	683.4
1/2 P-T-P	475.1	8761.4	5411.0	5686.3	3271.3	3553.1	1009.8	1340.3
1P MAG	191.83	2750.01	1886.83	2682.24	1173.53	1674.66	547.15	736.69
PHASE	80.	-109.	-175.	133.	-173.	133.	-87.	-105.
2P MAG	149.88	2776.82	3545.03	3408.43	2132.36	2131.04	27.92	116.15
PHASE	47.	134.	-135.	-133.	-135.	-135.	135.	65.
3P MAG	50.87	2200.59	835.48	741.89	489.17	451.30	166.60	159.73
PHASE	46.	27.	-155.	-154.	-157.	-157.	-152.	27.
4P MAG	96.53	1501.71	1252.82	1242.62	716.61	743.07	444.03	558.35
PHASE	55.	-92.	-125.	-123.	-126.	-126.	55.	53.
5P MAG	25.11	1804.20	22.17	58.04	22.32	30.99	11.06	21.05
PHASE	155.	160.	-98.	-54.	-87.	-62.	-44.	142.
17. 6								
MEAN	392.0	1814.3	10482.3	8539.0	6186.1	4761.1	-2394.2	-2990.0
RMS	530.8	1587.4	3563.1	3717.1	2145.3	2341.0	686.9	902.4
1/2 P-T-P	853.4	4208.6	6487.9	6649.6	3893.8	4199.9	1335.2	1709.6
1P MAG	639.79	1090.72	1958.83	2851.62	1219.74	1837.57	804.73	1079.93
PHASE	117.	-104.	-156.	129.	-152.	128.	-85.	-96.
2P MAG	230.80	1049.60	4265.78	4070.28	2574.79	2552.39	53.86	153.05
PHASE	23.	95.	-145.	-143.	-146.	-145.	125.	62.
3P MAG	123.51	804.68	1205.37	1075.89	690.20	655.83	187.72	216.08
PHASE	135.	13.	-126.	-125.	-128.	-128.	-125.	60.
4P MAG	100.28	300.78	1354.98	1313.48	770.13	789.23	466.19	590.70
PHASE	37.	-153.	-139.	-138.	-141.	-141.	37.	40.
5P MAG	33.69	746.99	54.23	78.05	31.53	49.18	9.76	28.22
PHASE	162.	90.	-45.	-42.	-44.	-44.	-94.	113.
18.10								
MEAN	291.7	2047.0	9967.0	8520.8	5777.3	4607.6	-2412.1	-3127.3
RMS	450.3	678.4	3535.8	3983.2	2111.9	2451.1	718.4	845.5
1/2 P-T-P	671.2	1116.9	6077.0	6910.4	3610.4	4258.3	1391.3	1616.3
1P MAG	587.95	824.08	2028.09	3505.72	1241.01	2187.04	869.86	999.25
PHASE	106.	-68.	-174.	127.	-171.	126.	-79.	-99.
2P MAG	208.01	395.96	4251.72	4110.02	2546.53	2519.63	44.69	143.72
PHASE	32.	32.	-142.	-140.	-142.	-141.	127.	64.
3P MAG	16.32	239.34	999.16	894.25	570.64	535.11	162.16	183.48
PHASE	160.	33.	-140.	-139.	-142.	-142.	-135.	48.
4P MAG	80.02	102.12	1323.26	1303.05	742.90	761.96	438.78	574.91
PHASE	41.	5.	-136.	-134.	-137.	-138.	44.	43.
5P MAG	36.44	29.02	45.41	74.54	31.25	44.00	12.88	30.90
PHASE	153.	-17.	-86.	-66.	-93.	-72.	-82.	127.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
17. 4								
MEAN	6584.8	-5459.1	-972.5	154.0	660.5	-371.0	-18.4	73.7
RMS	698.8	750.3	263.3	156.3	263.2	223.8	228.4	30.3
1/2 P-T-P	1490.8	1369.8	457.1	215.2	461.2	433.1	318.2	65.6
1P MAG	290.33	284.77	301.32	220.10	228.89	200.21	321.57	19.47
PHASE	-85.	-120.	-72.	89.	156.	47.	-87.	-151.
2P MAG	682.63	319.47	167.64	7.49	286.36	212.59	25.38	32.44
PHASE	22.	65.	81.	-19.	-146.	72.	72.	-103.
3P MAG	308.45	292.49	20.08	12.69	11.80	40.55	6.72	4.68
PHASE	-150.	23.	153.	50.	171.	-177.	-169.	-6.
4P MAG	164.62	891.10	125.85	8.30	49.20	96.59	12.63	16.70
PHASE	-163.	57.	66.	15.	38.	75.	74.	-105.
5P MAG	17.55	19.08	17.09	1.87	1.14	25.38	5.13	4.21
PHASE	-3.	128.	151.	-106.	-156.	163.	152.	-24.
17. 6								
MEAN	7767.1	-4591.2	-897.9	16.0	1144.0	-637.0	158.4	109.8
RMS	1840.7	827.9	298.6	211.4	283.9	369.2	326.6	49.2
1/2 P-T-P	3304.4	1465.0	508.6	284.9	469.2	606.3	459.0	78.8
1P MAG	2313.54	348.61	342.31	297.59	201.10	448.26	460.78	56.85
PHASE	120.	-104.	-65.	91.	170.	74.	-86.	-112.
2P MAG	899.65	382.53	197.70	10.16	339.34	241.64	27.76	35.65
PHASE	17.	61.	81.	-42.	-157.	71.	70.	-102.
3P MAG	520.14	371.54	55.80	21.26	28.81	43.76	6.04	5.91
PHASE	-94.	57.	127.	101.	-150.	161.	-169.	-31.
4P MAG	325.00	947.09	122.70	11.38	54.92	89.17	10.58	14.33
PHASE	-163.	43.	58.	12.	25.	73.	69.	-117.
5P MAG	63.05	30.21	19.66	1.11	3.63	33.63	4.16	5.56
PHASE	-34.	112.	162.	-123.	-22.	169.	155.	4.
18.10								
MEAN	7188.8	-4670.3	-897.6	61.4	1096.8	4628.5	113.7	97.6
RMS	1430.1	784.1	283.0	211.5	301.4	5407.3	324.4	48.8
1/2 P-T-P	2564.2	1436.4	492.0	289.3	521.2	7230.2	456.3	80.9
1P MAG	1765.30	274.35	316.60	298.46	249.81	4015.76	457.64	55.42
PHASE	108.	-121.	-65.	93.	154.	-54.	-85.	-109.
2P MAG	765.94	372.31	197.80	10.47	337.96	4515.12	27.62	36.19
PHASE	17.	63.	86.	-29.	-153.	65.	74.	-101.
3P MAG	302.31	313.92	38.73	9.96	19.76	4041.32	6.89	7.14
PHASE	-150.	42.	149.	70.	-166.	2.	-178.	-12.
4P MAG	214.08	919.91	122.52	8.46	52.24	491.59	10.92	14.33
PHASE	-168.	47.	57.	12.	28.	-88.	70.	-113.
5P MAG	51.08	35.10	25.07	2.43	1.75	917.67	5.08	6.20
PHASE	-5.	121.	152.	-129.	-172.	-120.	155.	-11.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
17. 3								
MEAN	154.1	-36.3	7965.0	6888.4	4642.7	3689.0	-2556.6	-3499.5
RMS	350.5	6398.9	3069.0	3155.9	1848.2	1971.3	603.8	827.1
1/2 P-T-P	616.8	16143.6	5853.8	5332.5	3519.2	3320.5	1128.2	1624.7
1P MAG	441.66	1684.73	1277.51	2027.00	825.24	1281.84	643.77	929.48
PHASE	122.	-66.	-138.	120.	-135.	120.	-93.	-93.
2P MAG	173.33	4553.89	3759.65	3605.76	2270.07	2262.79	41.32	130.75
PHASE	39.	164.	-137.	-135.	-137.	-136.	152.	68.
3P MAG	47.69	1280.82	914.67	824.98	531.22	500.68	163.56	181.69
PHASE	95.	75.	-144.	-142.	-146.	-146.	-137.	40.
4P MAG	99.66	444.28	1479.14	1446.58	838.58	864.20	500.54	651.22
PHASE	48.	123.	-127.	-126.	-128.	-129.	53.	52.
5P MAG	39.48	3931.92	33.00	68.88	21.00	34.94	22.57	31.54
PHASE	161.	-160.	-55.	-40.	-63.	-49.	-73.	137.
18. 2								
MEAN	110.0	1748.4	7068.0	6316.3	4016.9	3221.0	-2725.1	-3653.8
RMS	293.4	664.8	3284.9	3625.4	1973.8	2223.7	588.9	736.4
1/2 P-T-P	537.1	1065.8	5959.1	6432.8	3573.1	3940.0	1147.8	1451.7
1P MAG	322.53	811.24	2516.98	3467.01	1555.23	2139.48	665.85	797.78
PHASE	69.	-79.	-180.	136.	-179.	136.	-81.	-108.
2P MAG	151.34	301.01	3515.04	3402.97	2106.13	2091.89	36.95	118.62
PHASE	29.	-12.	-142.	-140.	-142.	-141.	144.	68.
3P MAG	169.51	169.08	967.14	856.86	554.82	517.77	164.38	178.82
PHASE	108.	-14.	-138.	-137.	-140.	-140.	-137.	48.
4P MAG	101.42	238.40	1385.32	1387.34	787.23	811.79	446.31	618.52
PHASE	47.	42.	-129.	-128.	-130.	-131.	47.	49.
5P MAG	26.27	134.15	60.47	73.85	33.26	42.83	16.61	27.53
PHASE	171.	-14.	18.	2.	5.	-5.	8.	-169.
18. 9								
MEAN	291.8	2098.9	8958.9	7583.4	5161.7	4018.2	-2582.9	-3274.8
RMS	388.5	696.2	3160.6	3508.7	1889.9	2154.9	626.3	792.6
1/2 P-T-P	581.0	1059.2	5587.4	6173.9	3325.1	3801.0	1199.0	1507.8
1P MAG	496.16	902.42	1851.23	3029.69	1143.29	1881.01	753.17	949.77
PHASE	106.	-67.	-166.	128.	-163.	128.	-84.	-98.
2P MAG	168.10	258.79	3756.43	3633.89	2249.26	2230.44	40.32	136.73
PHASE	30.	28.	-143.	-140.	-143.	-142.	131.	64.
3P MAG	110.59	263.67	991.08	904.91	566.82	541.35	158.09	189.40
PHASE	145.	19.	-129.	-128.	-131.	-131.	-125.	58.
4P MAG	86.07	69.76	1191.79	1177.91	666.86	686.04	402.74	523.67
PHASE	41.	13.	-135.	-133.	-136.	-137.	42.	43.
5P MAG	30.91	50.55	55.23	80.29	32.67	46.00	20.18	32.08
PHASE	167.	14.	-37.	-39.	-39.	-41.	-58.	128.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
17. 3								
MEAN	7079.5	-5064.7	-930.7	88.4	870.2	-490.8	62.7	96.6
RMS	1071.0	860.3	287.8	185.5	232.0	283.0	275.9	36.8
1/2 P-T-P	2189.6	1596.1	492.7	253.6	361.6	480.7	389.1	68.2
1P MAG	1146.65	335.31	331.95	261.43	107.88	309.27	388.98	34.66
PHASE	144.	-87.	-66.	90.	171.	66.	-86.	-124.
2P MAG	750.05	344.65	178.79	9.33	301.49	221.93	25.82	33.50
PHASE	22.	67.	83.	-30.	-148.	73.	74.	-103.
3P MAG	391.83	318.47	36.78	14.04	14.73	38.22	6.46	4.75
PHASE	-127.	35.	128.	68.	-173.	170.	168.	-31.
4P MAG	240.14	1050.36	139.33	10.40	61.57	102.22	12.38	15.90
PHASE	-160.	55.	65.	20.	37.	78.	78.	-111.
5P MAG	41.44	35.41	23.21	2.03	2.37	30.35	4.15	4.33
PHASE	-12.	134.	157.	-159.	110.	172.	164.	-10.
18. 2								
MEAN	6631.9	-5223.7	-934.0	107.6	765.6	-475.5	44.9	93.1
RMS	782.4	804.8	258.1	176.0	300.6	254.7	256.0	33.2
1/2 P-T-P	1550.1	1450.8	447.6	231.3	514.5	420.6	356.5	62.3
1P MAG	425.23	305.16	284.26	246.89	308.72	268.44	360.88	28.70
PHASE	31.	-140.	-73.	91.	156.	61.	-86.	-129.
2P MAG	651.97	309.93	167.60	9.01	284.96	205.02	24.99	31.37
PHASE	14.	64.	82.	-23.	-153.	73.	76.	-103.
3P MAG	641.83	311.67	37.57	26.61	18.71	35.69	6.60	4.73
PHASE	-97.	43.	126.	88.	-171.	175.	-157.	-19.
4P MAG	237.00	989.40	143.98	10.07	55.45	109.82	12.42	17.35
PHASE	-160.	53.	61.	15.	35.	67.	65.	-114.
5P MAG	42.39	35.13	20.32	2.20	3.73	21.87	3.70	3.68
PHASE	-4.	-152.	152.	-110.	-128.	152.	155.	-10.
18. 9								
MEAN	7273.9	-4878.3	-925.1	60.0	970.6	4434.1	114.0	100.6
RMS	1125.2	719.6	268.6	201.1	264.0	5348.6	301.9	42.1
1/2 P-T-P	2173.9	1293.6	461.1	275.6	447.3	7107.3	426.2	68.9
1P MAG	1267.51	273.40	306.06	283.38	214.23	3977.91	425.92	46.63
PHASE	111.	-113.	-67.	92.	160.	-54.	-85.	-111.
2P MAG	706.66	340.55	180.30	9.32	299.71	4378.57	26.28	32.97
PHASE	16.	62.	85.	-35.	-154.	67.	75.	-101.
3P MAG	392.66	324.31	44.17	18.00	20.01	4185.62	5.09	5.18
PHASE	-84.	54.	130.	110.	-154.	7.	176.	-35.
4P MAG	266.01	836.89	115.20	9.79	48.62	476.93	9.74	13.71
PHASE	-162.	47.	56.	14.	28.	-69.	67.	-115.
5P MAG	40.09	41.83	21.14	1.49	1.37	594.19	3.43	4.49
PHASE	-28.	133.	155.	-108.	61.	-117.	149.	-5.

RUN.PT		CHANNEL DESIGNATION						
	A	B	C	D	E	F	G	H
18. 3								
MEAN	46.1	1888.9	5900.2	5294.6	3304.6	2571.6	-2880.1	-3845.8
RMS	284.8	667.4	3211.3	3247.6	1927.2	1983.4	521.5	752.9
1/2 P-T-P	536.3	992.5	5747.8	5873.7	3415.1	3581.2	985.6	1469.9
1P MAG	317.92	854.97	2104.61	2427.94	1314.51	1491.53	526.62	827.57
PHASE	74.	-79.	-159.	140.	-157.	140.	-85.	-105.
2P MAG	155.14	232.67	3661.19	3544.14	2192.02	2175.16	45.54	115.55
PHASE	33.	11.	-142.	-140.	-142.	-142.	140.	63.
MAG	143.02	227.80	878.11	790.48	503.92	476.32	153.43	171.66
PHASE	100.	-14.	-147.	-146.	-149.	-150.	-140.	36.
4P MAG	93.49	189.29	1409.06	1409.56	795.11	822.85	460.82	619.93
PHASE	46.	44.	-132.	-130.	-133.	-133.	49.	47.
5P MAG	28.87	61.26	19.75	54.52	11.71	27.65	8.46	14.20
PHASE	162.	13.	-60.	-45.	-68.	-53.	103.	134.
18. 4								
MEAN	300.1	2079.9	8131.2	6790.2	4656.4	3529.1	-2699.9	-3397.9
RMS	371.9	745.9	2930.2	3235.1	1751.4	1982.1	619.5	780.9
1/2 P-T-P	561.5	1226.6	5360.2	5514.2	3198.3	3397.4	1170.5	1501.6
1P MAG	463.79	923.42	1395.21	2599.61	876.31	1605.52	730.23	928.87
PHASE	107.	-67.	-156.	121.	-153.	121.	-87.	-96.
2P MAG	151.47	382.71	3568.51	3440.74	2137.00	2113.93	41.51	123.66
PHASE	32.	21.	-142.	-139.	-142.	-141.	140.	63.
3P MAG	159.22	240.70	998.23	921.69	571.27	551.33	165.35	196.49
PHASE	124.	0.	-125.	-123.	-127.	-126.	-120.	64.
4P MAG	90.73	175.14	1211.51	1207.97	682.44	706.35	424.94	536.16
PHASE	42.	55.	-134.	-132.	-135.	-135.	45.	46.
5P MAG	30.59	77.53	82.49	104.95	47.40	60.39	21.06	43.47
PHASE	163.	6.	-17.	-19.	-18.	-22.	-6.	173.
18. 8								
MEAN	577.4	2201.8	10177.7	8067.6	5894.5	4360.3	-2571.4	-2963.6
RMS	533.5	833.7	3272.0	3625.5	1958.2	2241.4	697.8	864.2
1/2 P-T-P	739.9	1351.6	5826.8	6414.1	3477.1	3974.7	1258.0	1620.0
1P MAG	697.85	1037.14	1775.35	3095.63	1103.77	1942.97	877.49	1068.22
PHASE	107.	-68.	-160.	124.	-156.	124.	-83.	-96.
2P MAG	203.17	448.27	3920.35	3756.93	2351.52	2315.91	46.21	145.65
PHASE	22.	23.	-148.	-146.	-149.	-148.	119.	58.
3P MAG	172.99	306.33	1199.88	1093.97	683.39	657.87	181.68	224.82
PHASE	133.	8.	-119.	-118.	-122.	-121.	-113.	69.
4P MAG	78.79	94.44	1192.66	1168.97	667.62	683.51	390.20	514.62
PHASE	38.	30.	-138.	-136.	-139.	-140.	41.	42.
5P MAG	38.15	33.61	76.60	99.30	45.56	58.86	20.67	33.94
PHASE	163.	-2.	-8.	-15.	-11.	-19.	-52.	152.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
18. 3								
MEAN	6474.4	-5471.8	-973.6	116.7	623.4	-481.1	35.1	93.4
RMS	711.1	809.1	267.3	168.0	264.7	239.0	240.9	31.9
1/2 P-T-P	1363.6	1462.7	460.6	221.5	437.6	424.0	337.0	65.4
1P MAG	324.81	333.29	306.21	235.89	222.16	243.19	339.47	25.85
PHASE	23.	-117.	-73.	89.	173.	52.	-89.	-142.
2P MAG	632.95	315.26	167.40	9.11	294.36	203.29	24.41	31.39
PHASE	15.	60.	80.	-25.	-153.	71.	74.	-104.
3P MAG	539.48	297.87	32.93	22.72	14.34	37.60	4.84	4.99
PHASE	-106.	32.	130.	83.	-177.	175.	-171.	-19.
4P MAG	205.54	987.89	131.50	9.25	55.10	96.20	13.23	16.28
PHASE	-160.	51.	58.	7.	31.	67.	71.	-113.
5P MAG	33.32	9.25	22.42	2.42	2.68	31.97	4.76	5.56
PHASE	-10.	145.	159.	-92.	-74.	161.	151.	-14.
18. 4								
MEAN	7164.2	-5050.2	-937.0	50.3	863.5	-601.5	118.8	109.4
RMS	1029.9	716.8	268.4	198.9	232.5	306.6	293.2	40.2
1/2 P-T-P	2065.2	1258.0	461.4	264.9	398.9	476.4	414.0	65.8
1P MAG	1066.65	265.06	308.83	279.90	153.93	366.09	413.78	43.93
PHASE	113.	-100.	-66.	91.	160.	70.	-86.	-115.
2P MAG	682.94	317.20	172.80	9.67	284.66	206.86	23.41	31.78
PHASE	17.	62.	84.	-30.	-153.	75.	77.	-101.
3P MAG	583.83	326.00	56.99	23.38	20.50	45.91	5.37	6.79
PHASE	-88.	59.	128.	101.	-157.	156.	159.	-37.
4P MAG	286.84	853.10	119.51	9.75	49.14	87.73	11.06	14.30
PHASE	-160.	50.	57.	15.	32.	67.	68.	-114.
5P MAG	32.50	57.94	17.00	2.07	3.87	23.33	4.51	4.21
PHASE	-33.	-177.	166.	-100.	-152.	178.	162.	2.
18. 8								
MEAN	7881.8	-4655.5	-906.0	-15.7	1085.9	-724.9	208.8	124.3
RMS	1711.0	721.9	276.6	223.8	262.9	386.4	338.7	52.0
1/2 P-T-P	2984.5	1293.9	464.6	299.3	447.2	618.1	476.7	83.8
1P MAG	2164.88	278.46	320.37	314.98	194.74	494.33	478.30	63.91
PHASE	108.	-108.	-64.	92.	164.	76.	-86.	-107.
2P MAG	753.59	342.40	184.39	9.78	310.58	213.94	24.01	33.10
PHASE	13.	58.	84.	-37.	-160.	74.	73.	-102.
3P MAG	631.71	374.96	61.98	26.08	28.84	39.71	5.04	6.13
PHASE	-82.	65.	126.	108.	-147.	154.	174.	-45.
4P MAG	309.61	826.75	104.73	10.37	49.24	71.32	9.45	11.83
PHASE	-165.	46.	55.	14.	29.	71.	75.	-113.
5P MAG	53.59	45.76	19.71	1.54	0.55	30.72	4.73	4.76
PHASE	-13.	163.	161.	-117.	-48.	162.	158.	-7.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
18. 5								
MEAN	242.3	2024.4	7064.7	5827.1	4005.7	2914.1	-2878.4	-3561.1
RMS	331.8	654.3	3087.6	3232.0	1851.2	1978.9	563.1	761.9
1/2 P-T-P	561.0	1104.4	5399.3	5670.3	3216.2	3475.4	1053.4	1496.9
1P MAG	419.00	824.10	1986.74	2622.39	1238.44	1614.34	641.38	886.70
PHASE	82.	-72.	-159.	134.	-158.	134.	-84.	-102.
2P MAG	154.95	244.89	3573.61	3440.16	2138.21	2113.85	44.03	117.51
PHASE	29.	9.	-145.	-143.	-145.	-145.	138.	60.
3P MAG	84.12	251.01	824.18	737.48	471.23	447.13	141.26	160.21
PHASE	126.	18.	-136.	-134.	-138.	-137.	-134.	51.
4P MAG	84.31	149.54	1279.26	1268.41	718.91	741.68	430.73	560.46
PHASE	50.	48.	-128.	-126.	-129.	-129.	52.	51.
5P MAG	27.13	122.97	38.97	71.59	23.17	38.12	18.90	34.31
PHASE	174.	24.	-57.	-49.	-57.	-57.	-60.	126.
18. 6								
MEAN	190.2	2011.5	6082.1	4920.4	3408.7	2348.8	-3043.7	-3697.3
RMS	251.3	671.4	2748.9	3088.2	1637.8	1883.0	594.5	731.0
1/2 P-T-P	435.2	1026.6	4853.0	5312.9	2881.7	3251.4	1075.3	1463.8
1P MAG	254.11	864.12	1479.74	2644.35	920.93	1615.41	651.04	791.00
PHASE	87.	-71.	-169.	123.	-167.	123.	-92.	-100.
2P MAG	120.44	170.55	3181.82	3067.27	1902.26	1886.03	47.64	104.00
PHASE	33.	6.	-143.	-141.	-144.	-143.	139.	64.
3P MAG	189.00	316.14	821.52	754.57	470.60	452.81	136.91	153.21
PHASE	122.	-1.	-127.	-125.	-128.	-128.	-127.	58.
4P MAG	93.95	129.06	1452.93	1446.56	820.22	845.94	502.37	633.06
PHASE	50.	34.	-128.	-127.	-129.	-130.	51.	50.
5P MAG	29.51	73.06	20.03	45.39	13.54	26.44	18.18	20.51
PHASE	171.	-10.	5.	-24.	-5.	-32.	-22.	129.
18. 7								
MEAN	104.7	1812.9	5142.4	4086.5	2834.0	1816.2	-3197.5	-3852.0
RMS	221.9	519.5	3021.9	3346.1	1808.2	2041.1	534.7	646.7
1/2 P-T-P	458.4	924.5	5261.0	5764.8	3149.5	3524.2	996.4	1269.6
1P MAG	258.48	591.23	1990.97	3017.78	1227.02	1843.31	609.13	719.50
PHASE	48.	-81.	178.	128.	179.	128.	-86.	-108.
2P MAG	123.47	287.52	3524.81	3388.47	2105.64	2077.15	39.97	107.44
PHASE	26.	15.	-149.	-146.	-149.	-148.	131.	58.
3P MAG	72.98	289.53	688.85	609.69	394.37	366.73	120.06	131.48
PHASE	142.	-10.	-143.	-138.	-145.	-142.	-138.	46.
4P MAG	77.43	66.86	1173.15	1187.24	661.64	692.10	406.38	524.66
PHASE	48.	53.	-127.	-126.	-128.	-129.	52.	50.
5P MAG	18.92	101.88	49.12	86.63	28.26	45.27	27.18	40.91
PHASE	156.	5.	-68.	-54.	-77.	-65.	-35.	128.

RUN.PT	CHANNEL DESIGNATION							
	I	J	K	L	M	N	O	P
18. 5								
MEAN	7068.1	-5274.8	-970.1	52.4	731.1	-614.5	116.9	112.6
RMS	800.7	736.7	264.8	186.3	256.0	271.6	271.3	35.6
1/2 P-T-P	1654.5	1347.6	453.0	253.8	431.5	452.7	380.9	62.9
1P MAG	732.23	302.14	305.88	262.56	214.02	312.55	382.71	35.70
PHASE	71.	-118.	-71.	90.	170.	63.	-88.	-124.
2P MAG	636.60	302.31	168.07	9.72	285.61	195.41	24.08	30.39
PHASE	14.	58.	82.	-31.	-156.	73.	76.	-102.
3P MAG	334.99	270.05	43.51	15.50	14.56	42.94	6.18	6.60
PHASE	-97.	44.	140.	92.	-163.	165.	170.	-28.
4P MAG	220.74	892.57	117.51	9.23	51.26	84.15	10.94	14.66
PHASE	-155.	55.	63.	16.	36.	73.	77.	-109.
5P MAG	36.79	38.06	22.74	1.98	2.20	30.19	4.54	5.08
PHASE	-6.	131.	155.	-101.	91.	160.	145.	-15.
18. 6								
MEAN	6968.5	-5463.9	-994.2	51.7	614.3	-621.9	116.3	113.7
RMS	646.0	778.3	258.2	184.3	226.5	244.7	259.9	31.9
1/2 P-T-P	1338.6	1360.1	446.2	243.4	386.2	402.0	366.1	57.3
1P MAG	66.18	212.74	294.26	258.77	180.49	270.92	366.60	29.52
PHASE	5.	-115.	-70.	90.	153.	62.	-87.	-126.
2P MAG	558.62	266.85	156.32	9.76	257.60	181.21	21.99	28.25
PHASE	15.	63.	82.	-29.	-154.	75.	77.	-101.
3P MAG	641.39	255.72	55.48	26.81	16.48	47.00	5.34	6.92
PHASE	-80.	54.	134.	102.	-152.	156.	163.	-40.
4P MAG	251.44	1009.23	135.57	9.63	55.69	100.55	12.22	16.77
PHASE	-148.	54.	63.	20.	34.	72.	72.	-108.
5P MAG	45.00	17.01	18.58	1.60	0.47	23.39	4.23	4.14
PHASE	-10.	152.	149.	-120.	67.	148.	136.	-16.
18. 7								
MEAN	6795.4	-5676.6	-1025.8	55.1	496.8	-637.9	110.5	117.8
RMS	707.1	668.8	253.9	171.9	269.4	223.9	240.7	30.5
1/2 P-T-P	1428.8	1238.8	441.9	235.9	468.3	403.6	338.9	63.6
1P MAG	698.78	236.31	289.15	242.32	249.76	223.19	339.24	23.88
PHASE	-28.	-141.	-75.	90.	151.	52.	-89.	-142.
2P MAG	567.67	285.52	160.03	10.42	282.84	186.14	22.06	29.13
PHASE	14.	54.	79.	-31.	-159.	71.	74.	-105.
3P MAG	152.54	224.98	51.15	10.82	10.99	60.72	8.46	9.52
PHASE	-97.	37.	153.	92.	-176.	163.	164.	-27.
4P MAG	161.71	827.66	123.31	6.82	46.15	97.09	12.01	16.69
PHASE	-154.	55.	59.	15.	34.	64.	67.	-117.
5P MAG	29.43	44.67	25.92	2.28	3.18	31.81	5.06	5.56
PHASE	17.	138.	158.	-92.	141.	157.	147.	-16.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
18.11								
MEAN	430.8	2205.8	8123.4	6322.6	4643.9	3234.5	-2879.6	-3284.3
RMS	389.6	631.7	3524.5	3814.8	2106.0	2339.2	651.8	834.6
1/2 P-T-P	597.6	1025.0	5978.7	6634.7	3560.6	4088.4	1188.9	1597.3
1P MAG	495.16	782.85	1981.38	3127.34	1224.91	1929.53	789.23	989.34
PHASE	90.	-76.	-166.	126.	-164.	126.	-86.	-101.
2P MAG	173.76	336.56	4274.20	4102.71	2555.19	2521.95	43.82	144.85
PHASE	27.	24.	-145.	-143.	-146.	-145.	136.	59.
3P MAG	132.47	241.34	918.76	835.52	523.35	499.33	151.24	181.91
PHASE	146.	24.	-120.	-116.	-121.	-120.	-120.	69.
4P MAG	80.76	82.92	1335.40	1332.02	748.87	778.28	434.85	588.43
PHASE	44.	23.	-133.	-132.	-135.	-136.	45.	45.
5P MAG	33.90	9.10	41.60	66.82	21.78	34.51	20.47	38.85
PHASE	161.	-135.	4.	-15.	-5.	-21.	-14.	177.
18.12								
MEAN	768.8	2282.6	10267.9	7617.0	5938.2	4078.7	-2756.9	-2831.7
RMS	611.5	915.2	3710.7	3847.5	2221.8	2375.2	731.5	982.1
1/2 P-T-P	863.0	1376.4	6752.6	6650.7	4028.9	4130.6	1275.8	1821.0
1P MAG	815.03	1182.14	1581.06	2592.57	1014.24	1630.96	895.53	1213.10
PHASE	113.	-66.	-133.	115.	-130.	115.	-91.	-93.
2P MAG	205.19	401.94	4650.84	4451.71	2787.66	2748.09	59.31	171.08
PHASE	21.	11.	-148.	-146.	-149.	-148.	116.	58.
3P MAG	176.12	305.59	1187.29	1069.96	673.45	642.67	187.80	228.72
PHASE	140.	25.	-117.	-115.	-119.	-118.	-114.	74.
4P MAG	80.54	99.88	1406.50	1380.13	783.71	807.65	468.35	604.08
PHASE	32.	4.	-136.	-135.	-137.	-138.	42.	43.
5P MAG	44.74	15.29	40.68	67.75	22.19	43.45	11.41	26.47
PHASE	158.	84.	-12.	-24.	-21.	-30.	-32.	158.
23.14								
MEAN	286.4	-1763.5	12107.0	10442.4	7103.0	5968.2	-2743.9	-2922.2
RMS	617.5	2954.2	4470.5	4624.2	2707.3	2889.3	783.7	1109.6
1/2 P-T-P	1160.9	5460.2	8181.3	7916.7	4955.0	4966.3	1414.3	1963.5
1P MAG	788.45	2080.67	1555.34	2801.62	1009.92	1800.81	920.57	1384.89
PHASE	142.	-160.	-136.	115.	-130.	116.	101.	-92.
2P MAG	305.16	684.16	5895.77	5703.61	3570.56	3549.80	44.70	236.99
PHASE	27.	153.	-139.	-137.	-139.	-139.	93.	66.
3P MAG	135.89	1298.44	1248.47	1151.01	716.81	688.39	253.62	278.78
PHASE	134.	-19.	-132.	-130.	-134.	-133.	56.	61.
4P MAG	72.20	1124.20	995.73	940.68	556.24	562.99	396.79	473.65
PHASE	15.	-1.	-141.	-140.	-143.	-143.	39.	39.
5P MAG	50.72	1346.77	121.03	136.68	69.89	82.71	50.35	68.61
PHASE	148.	171.	-35.	-23.	-42.	-23.	138.	167.

RUN.PT	CHANNEL DESIGNATION I	J	K	L	M	N	O	P
18.11								
MEAN	7752.3	-5085.5	-986.9	0.5	843.0	8659.6	186.1	121.2
RMS	1006.9	773.7	294.6	215.1	289.9	3420.6	315.6	44.7
1/2 P-T-P	1955.0	1340.9	517.1	295.0	501.8	6679.3	446.5	75.0
1P MAG	1098.76	285.83	332.18	303.25	221.55	2698.63	445.30	48.16
PHASE	85.	-115.	-69.	90.	162.	-36.	-88.	-120.
2P MAG	734.42	362.35	198.33	10.10	339.59	2372.09	25.90	35.36
PHASE	16.	57.	81.	-42.	-156.	116.	73.	-104.
3P MAG	340.58	294.99	70.48	18.24	16.89	1847.04	8.60	9.57
PHASE	-81.	63.	145.	109.	-140.	-139.	168.	-29.
4P MAG	267.83	935.97	130.57	8.91	53.55	1235.48	13.10	16.44
PHASE	-160.	49.	56.	9.	30.	44.	66.	-117.
5P MAG	49.53	47.64	24.03	1.32	5.87	1784.77	4.29	5.16
PHASE	-3.	-166.	168.	-124.	-158.	174.	154.	-8.
18.12								
MEAN	8552.1	-4683.4	-954.6	-72.0	1073.3	8938.0	289.0	141.3
RMS	2018.2	827.5	320.9	246.2	276.4	3321.3	371.8	59.3
1/2 P-T-P	3340.7	1466.1	550.0	332.6	441.1	6948.5	524.5	94.4
1P MAG	2621.72	345.81	368.20	346.76	122.27	2513.15	524.82	71.91
PHASE	112.	-89.	-64.	90.	-174.	-54.	-87.	-108.
2P MAG	865.82	398.72	217.99	12.48	365.61	2335.23	28.58	38.60
PHASE	15.	57.	81.	-65.	-160.	103.	73.	-104.
3P MAG	575.45	375.67	75.57	25.82	25.49	1832.32	8.00	8.35
PHASE	-83.	68.	141.	108.	-144.	-138.	-180.	-26.
4P MAG	355.37	966.01	125.19	10.98	56.32	702.45	11.33	15.02
PHASE	-163.	47.	55.	7.	30.	50.	67.	-114.
5P MAG	69.16	27.48	22.14	0.86	3.23	1650.84	5.12	6.38
PHASE	-14.	179.	173.	-139.	-116.	-172.	154.	-2.
23.14								
MEAN	6484.0	-4293.1	-886.4	78.8	1382.8	-605.3	100.7	99.3
RMS	2320.1	864.5	383.6	246.3	348.7	434.6	394.8	56.7
1/2 P-T-P	4090.7	1596.8	619.2	327.0	576.3	780.2	573.2	102.9
1P MAG	2897.89	429.19	443.35	346.99	129.67	489.91	556.66	56.92
PHASE	144.	-86.	-65.	90.	169.	76.	-85.	-104.
2P MAG	1102.88	588.94	261.98	12.09	466.19	330.25	38.94	49.26
PHASE	20.	65.	76.	-48.	-152.	67.	67.	-110.
3P MAG	649.21	435.24	80.50	22.39	19.73	64.86	7.95	9.81
PHASE	-131.	56.	110.	86.	-170.	139.	139.	-51.
4P MAG	348.60	725.09	93.55	10.55	46.66	53.33	6.46	8.47
PHASE	171.	41.	51.	-12.	27.	70.	102.	-111.
5P MAG	116.72	76.94	34.41	4.02	5.98	59.05	5.05	9.97
PHASE	-44.	155.	-168.	172.	150.	-141.	-144.	37.

RUN.PT	CHANNEL DESIGNATION A	B	C	D	E	F	G	H
23.15								
MEAN	322.7	-1050.5	11165.4	9609.6	6521.6	5432.0	-2893.3	-3082.9
RMS	707.7	2651.5	4549.1	4472.0	2759.7	2777.5	703.8	1145.6
1/2 P-T-P	1263.0	5047.2	8234.2	7021.8	4989.5	4392.3	1278.0	1964.6
1P MAG	917.37	2430.61	1707.53	2032.73	1146.69	1282.88	819.90	1470.45
PHASE	153.	-137.	-77.	83.	-76.	85.	88.	-85.
2P MAG	314.47	948.41	5989.92	5788.50	3615.86	3599.66	65.61	234.95
PHASE	28.	-5.	-138.	-136.	-138.	-138.	100.	65.
3P MAG	207.70	1438.80	1236.27	1193.43	718.32	706.82	252.66	287.65
PHASE	150.	124.	-125.	-124.	-128.	-126.	58.	65.
4P MAG	74.36	1217.46	947.31	898.69	529.28	532.53	368.67	439.07
PHASE	4.	-143.	-145.	-142.	-146.	-145.	36.	37.
5P MAG	45.48	849.76	108.73	104.63	64.49	60.44	58.68	49.58
PHASE	145.	-150.	-63.	-45.	-69.	-45.	102.	133.

RUN.PT	CHANNEL DESIGNATION							
	I	J	K	L	M	N	O	P
23.15								
MEAN	6611.0	-4509.6	-929.0	80.0	1267.2	-617.6	98.2	102.1
RMS	2560.6	876.0	407.6	249.1	342.1	408.9	393.5	53.4
1/2 P-T-P	4232.1	1529.8	636.5	339.4	551.6	735.6	575.4	98.6
1P MAG	3327.32	601.28	487.88	350.85	73.04	443.29	554.74	49.32
PHASE	157.	-65.	-63.	89.	-53.	76.	-86.	-106.
2P MAG	1165.16	587.52	264.76	15.27	471.07	332.91	39.22	50.31
PHASE	25.	66.	75.	-57.	-151.	68.	73.	-109.
3P MAG	486.91	444.60	95.29	24.11	19.74	76.93	7.27	12.42
PHASE	-108.	61.	103.	110.	-149.	116.	109.	-73.
4P MAG	366.88	672.41	87.85	11.05	43.11	55.08	8.92	9.25
PHASE	170.	38.	56.	-23.	23.	87.	115.	-97.
5P MAG	119.98	71.41	24.03	4.39	6.18	56.07	5.83	9.40
PHASE	-47.	113.	-170.	148.	91.	-133.	-114.	50.

APPENDIX E

The fourth harmonic magnitude and phase angle data from accelerometers mounted on the rotor test apparatus are presented for all forward flight run conditions. The accelerometer locations on the test apparatus are shown in Figure 4. The channel designations given in Table 12 are used in this appendix. The data are presented in the same run/point sequence of Appendices B and C.

RUN.PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
19. 2									
4P	MAG	0.10E 00	0.73E-01	0.48E-01	0.46E-01	0.11E-01	0.10E 00	0.63E-01	0.75E-01
	PHASE	-158.	140.	-178.	-35.	121.	-164.	45.	-150.
19. 3									
4P	MAG	0.69E-01	0.74E-01	0.49E-01	0.45E 00	0.19E-01	0.10E 00	0.62E-01	0.75E-01
	PHASE	-173.	142.	-176.	54.	106.	-162.	51.	-146.
19. 4									
4P	MAG	0.11E 00	0.56E-01	0.25E-01	0.48E 00	0.12E-01	0.20E 00	0.12E 00	0.12E 00
	PHASE	-142.	-144.	-158.	-28.	-63.	-64.	-8.	172.
21. 2									
4P	MAG	0.12E 00	0.89E-01	0.30E-01	0.68E-01	0.22E-01	0.12E 00	0.51E-01	0.62E-01
	PHASE	-178.	149.	-180.	-20.	25.	-175.	8.	-175.
21. 3									
4P	MAG	0.12E 00	0.95E-01	0.30E-01	0.17E 00	0.77E-02	0.12E 00	0.46E-01	0.57E-01
	PHASE	174.	145.	-179.	-1.	6.	179.	10.	-174.
21. 4									
4P	MAG	0.12E 00	0.93E-01	0.31E-01	0.96E-01	0.76E-02	0.12E 00	0.46E-01	0.59E-01
	PHASE	174.	151.	-177.	-17.	4.	-174.	2.	-178.
21. 5									
4P	MAG	0.11E 00	0.97E-01	0.31E-01	0.36E-01	0.51E-02	0.12E 00	0.45E-01	0.57E-01
	PHASE	179.	153.	-174.	-42.	-46.	-175.	4.	-176.
21. 6									
4P	MAG	0.14E 00	0.86E-01	0.30E-01	0.66E-01	0.31E-02	0.11E 00	0.48E-01	0.61E-01
	PHASE	-179.	147.	178.	-41.	127.	-174.	6.	-178.
19. 5									
4P	MAG	0.17E 00	0.11E 00	0.40E-01	0.19E 00	0.13E-01	0.20E 00	0.38E-01	0.52E-01
	PHASE	177.	140.	154.	28.	12.	-159.	-12.	164.

RUN. PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
19. 6									
4P	MAG	0.17E 00	0.91E-01	0.38E-01	0.20E 00	0.10E-01	0.24E 00	0.49E-01	0.62E-01
	PHASE	-177.	165.	176.	89.	-14.	-166.	-20.	165.
15. 7									
4P	MAG	0.29E 00	0.11E 00	0.59E-01	0.31E-01	0.10E-01	0.30E 00	0.13E 00	0.14E 00
	PHASE	177.	165.	176.	94.	19.	-162.	-5.	173.
15.10									
4P	MAG	0.61E-01	0.35E-01	0.12E-01	0.12E 00	0.36E-02	0.11E 00	0.44E-01	0.43E-01
	PHASE	139.	147.	140.	-83.	-6.	-131.	-82.	101.
15. 9									
4P	MAG	0.97E-01	0.58E-01	0.17E-01	0.34E 00	0.12E-01	0.27E 00	0.76E-01	0.70E-01
	PHASE	176.	165.	162.	-170.	-139.	-140.	-90.	95.
15. 8									
4P	MAG	0.18E 00	0.92E-01	0.29E-01	0.16E-01	0.23E-02	0.37E 00	0.58E-01	0.63E-01
	PHASE	176.	159.	161.	-118.	47.	-156.	-60.	129.
15. 6									
4P	MAG	0.26E 00	0.12E 00	0.41E-01	0.17E-02	0.16E-01	0.43E 00	0.11E 00	0.12E 00
	PHASE	172.	167.	170.	-135.	79.	-153.	-26.	156.
15.15									
4P	MAG	0.59E-01	0.35E-01	0.12E-01	0.43E-01	0.28E-02	0.62E-01	0.21E-01	0.22E-01
	PHASE	135.	145.	133.	52.	40.	173.	-74.	109.
15.14									
4P	MAG	0.74E-01	0.33E-01	0.11E-01	0.18E 00	0.21E-02	0.13E 00	0.56E-01	0.52E-01
	PHASE	172.	161.	164.	13.	78.	-129.	-61.	120.
15.13									
4P	MAG	0.13E 00	0.74E-01	0.29E-01	0.60E-05	0.17E-02	0.23E 00	0.11E 00	0.11E 00
	PHASE	-176.	-176.	-168.	-57.	45.	-99.	-39.	145.

RUN.PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
15.12									
4P	MAG	0.21E 00	0.12E 00	0.43E-01	0.36E 00	0.45E-02	0.32E 00	0.19E 00	0.19E 00
	PHASE	-172.	-174.	-171.	84.	67.	-82.	-26.	155.
15.11									
4P	MAG	0.23E 00	0.14E 00	0.49E-01	0.11E 00	0.13E-01	0.47E 00	0.22E 00	0.21E 00
	PHASE	-173.	-178.	-175.	-159.	162.	-100.	-32.	150.
15. 5									
4P	MAG	0.16E 00	0.98E-01	0.37E-01	0.83E-01	0.70E-02	0.27E 00	0.15E 00	0.15E 00
	PHASE	-180.	-177.	-170.	-148.	33.	-102.	-35.	147.
19.15									
4P	MAG	0.77E-01	0.56E-01	0.37E-01	0.34E-01	0.10E-01	0.74E-01	0.30E-01	0.29E-01
	PHASE	-3.	-63.	-92.	-105.	104.	-1.	-162.	-7.
19.21									
4P	MAG	0.88E-01	0.37E-01	0.29E-01	0.43E 00	0.83E-02	0.53E-01	0.16E-01	0.18E-01
	PHASE	-46.	-105.	-124.	72.	-28.	-30.	154.	-53.
19.20									
4P	MAG	0.95E-01	0.37E-01	0.29E-01	0.14E 00	0.68E-02	0.55E-01	0.17E-01	0.18E-01
	PHASE	-28.	-93.	-117.	13.	-35.	-21.	169.	-40.
28.14									
4P	MAG	0.96E-01	0.36E-01	0.31E-01	0.28E-02	0.26E-01	0.63E-01	0.17E-01	0.19E-01
	PHASE	-29.	-103.	-121.	-130.	99.	-21.	165.	-43.
19.19									
4P	MAG	0.70E-01	0.40E-01	0.31E-01	0.13E-01	0.19E-01	0.59E-01	0.19E-01	0.20E-01
	PHASE	-15.	-78.	-103.	-109.	139.	-3.	-171.	-22.
19.14									
4P	MAG	0.87E-01	0.48E-01	0.38E-01	0.25E 00	0.52E-02	0.74E-01	0.23E-01	0.22E-01
	PHASE	-19.	-74.	-103.	-101.	147.	-6.	-170.	-22.

RUN.PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
19.18									
4P	MAG	0.56E-01	0.55E-01	0.38E-01	0.29E 00	0.86E-02	0.76E-01	0.24E-01	0.23E-01
	PHASE	-20.	-64.	-92.	-87.	-169.	4.	-161.	-13.
19.17									
4P	MAG	0.84E-01	0.63E-01	0.44E-01	0.27E-01	0.47E-01	0.90E-01	0.31E-01	0.31E-01
	PHASE	5.	-58.	-91.	-5.	162.	8.	-158.	-7.
19.16									
4P	MAG	0.92E-01	0.66E-01	0.44E-01	0.10E-01	0.10E-01	0.89E-01	0.31E-01	0.31E-01
	PHASE	4.	-53.	-89.	124.	167.	10.	-157.	-4.
19.24									
4P	MAG	0.76E-01	0.27E-01	0.29E-01	0.11E 01	0.22E-01	0.42E-01	0.12E-01	0.14E-01
	PHASE	-26.	-98.	-114.	-109.	-139.	-8.	169.	-53.
19.23									
4P	MAG	0.83E-01	0.34E-01	0.32E-01	0.23E 00	0.13E-01	0.53E-01	0.13E-01	0.16E-01
	PHASE	-21.	-87.	-112.	-113.	54.	-7.	175.	-45.
23. 2									
4P	MAG	0.60E-01	0.29E-01	0.30E-01	0.22E 00	0.16E-01	0.42E-01	0.12E-01	0.16E-01
	PHASE	-18.	-98.	-112.	-60.	-109.	-4.	168.	-49.
27. 3									
4P	MAG	0.46E-01	0.29E-01	0.26E-01	0.76E-01	0.38E-02	0.36E-01	0.13E-01	0.16E-01
	PHASE	-4.	-87.	-95.	126.	-90.	9.	175.	-32.
28.13									
4P	MAG	0.52E-01	0.26E-01	0.25E-01	0.31E-02	0.16E-01	0.37E-01	0.11E-01	0.12E-01
	PHASE	-34.	-101.	-121.	-10.	94.	-5.	169.	-48.
19.22									
4P	MAG	0.73E-01	0.38E-01	0.36E-01	0.20E-01	0.12E-01	0.62E-01	0.15E-01	0.17E-01
	PHASE	-12.	-75.	-101.	-144.	-6.	4.	-171.	-33.

RUN.PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
19.13									
4P	MAG	0.63E-01	0.42E-01	0.39E-01	0.60E-01	0.52E-02	0.52E-01	0.18E-01	0.18E-01
	PHASE	-8.	-79.	-103.	-92.	58.	4.	-174.	-31.
19.12									
4P	MAG	0.51E-01	0.33E-01	0.47E-01	0.39E-01	0.63E-02	0.30E-01	0.17E-01	0.17E-01
	PHASE	6.	-24.	-108.	-50.	19.	-3.	-152.	-7.
23. 3									
4P	MAG	0.51E-01	0.54E-01	0.28E-01	0.11E 01	0.11E-01	0.71E-01	0.85E-02	0.15E-01
	PHASE	-4.	20.	17.	0.	-141.	34.	-164.	13.
27. 4									
4P	MAG	0.20E-01	0.25E-01	0.18E-01	0.27E 00	0.57E-02	0.65E-01	0.12E-01	0.17E-01
	PHASE	38.	45.	29.	-76.	69.	77.	-145.	36.
27.15									
4P	MAG	0.65E-01	0.51E-01	0.24E-01	0.64E-01	0.90E-02	0.12E 00	0.18E-01	0.22E-01
	PHASE	53.	80.	67.	-48.	81.	90.	-112.	70.
27.14									
4P	MAG	0.78E-01	0.11E 00	0.45E-01	0.40E 00	0.17E-01	0.14E 00	0.18E-01	0.26E-01
	PHASE	46.	79.	71.	34.	-67.	97.	-105.	73.
19.28									
4P	MAG	0.19E 00	0.11E 00	0.33E-01	0.28E 00	0.25E-01	0.26E 00	0.11E 00	0.11E 00
	PHASE	125.	118.	104.	49.	-59.	174.	-103.	74.
20. 7									
4P	MAG	0.76E-01	0.64E-01	0.25E-01	0.11E 00	0.37E-02	0.10E 00	0.85E-02	0.13E-01
	PHASE	59.	19.	7.	74.	22.	99.	-179.	-5.
20. 6									
4P	MAG	0.87E-01	0.61E-01	0.20E-01	0.73E 00	0.94E-03	0.15E 00	0.12E-01	0.17E-01
	PHASE	95.	64.	44.	75.	-38.	107.	-162.	19.

RUN.PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
28.15									
4P	MAG	0.91E-01	0.52E-01	0.17E-01	0.64E-03	0.18E-02	0.14E 00	0.33E-01	0.34E-01
	PHASE	86.	69.	61.	-77.	4.	111.	-167.	10.
20. 5									
4P	MAG	0.99E-01	0.49E-01	0.13E-01	0.33E 00	0.24E-02	0.19E 00	0.40E-01	0.39E-01
	PHASE	115.	114.	103.	-9.	-101.	122.	-86.	90.
19.27									
4P	MAG	0.18E 00	0.11E 00	0.38E-01	0.47E-01	0.68E-02	0.16E 00	0.97E-01	0.99E-01
	PHASE	129.	136.	111.	-23.	-48.	161.	-85.	93.
20. 4									
4P	MAG	0.16E 00	0.94E-01	0.32E-01	0.23E 00	0.96E-02	0.19E 00	0.91E-01	0.93E-01
	PHASE	125.	135.	124.	-49.	-121.	139.	-78.	100.
20. 2									
4P	MAG	0.36E 00	0.25E 00	0.71E-01	0.11E 01	0.20E-01	0.23E 00	0.20E 00	0.21E 00
	PHASE	144.	154.	126.	96.	-38.	170.	-66.	112.
20. 3									
4P	MAG	0.33E 00	0.24E 00	0.67E-01	0.39E 00	0.49E-02	0.22E 00	0.19E 00	0.19E 00
	PHASE	145.	153.	125.	82.	-11.	169.	-69.	107.
20.12									
4P	MAG	0.70E-01	0.56E-01	0.22E-01	0.41E 00	0.87E-02	0.83E-01	0.10E-01	0.13E-01
	PHASE	68.	23.	7.	102.	-128.	100.	164.	-18.
20.11									
4P	MAG	0.88E-01	0.62E-01	0.21E-01	0.52E 00	0.47E-02	0.15E 00	0.17E-01	0.19E-01
	PHASE	89.	62.	37.	54.	-117.	108.	164.	-9.
23. 4									
4P	MAG	0.84E-01	0.54E-01	0.17E-01	0.51E 00	0.42E-02	0.15E 00	0.18E-01	0.20E-01
	PHASE	91.	66.	38.	61.	-77.	111.	171.	-13.

RUN.PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
27. 5									
4P	MAG	0.77E-01	0.34E-01	0.16E-01	0.22E 00	0.55E-02	0.13E 00	0.25E-01	0.26E-01
	PHASE	103.	96.	58.	103.	-64.	117.	-142.	33.
28.12									
4P	MAG	0.76E-01	0.40E-01	0.14E-01	0.59E-05	0.25E-03	0.14E 00	0.16E-01	0.20E-01
	PHASE	68.	64.	35.	-55.	160.	86.	158.	-18.
23. 5									
4P	MAG	0.67E-01	0.46E-01	0.21E-01	0.18E 00	0.11E-01	0.17E 00	0.36E-01	0.44E-01
	PHASE	118.	92.	43.	150.	104.	146.	-169.	9.
27. 6									
4P	MAG	0.56E-01	0.33E-01	0.16E-01	0.11E 00	0.22E-01	0.12E 00	0.22E-01	0.29E-01
	PHASE	131.	113.	61.	-33.	-69.	143.	-149.	28.
20.10									
4P	MAG	0.96E-01	0.53E-01	0.16E-01	0.39E 00	0.10E-01	0.25E 00	0.31E-01	0.32E-01
	PHASE	116.	96.	70.	89.	-104.	131.	-166.	16.
27.12									
4P	MAG	0.69E-01	0.42E-01	0.14E-01	0.68E-01	0.61E-02	0.19E 00	0.21E-01	0.23E-01
	PHASE	130.	113.	78.	161.	-30.	131.	-152.	28.
19.26									
4P	MAG	0.16E 00	0.88E-01	0.26E-01	0.59E-05	0.28E-01	0.28E 00	0.57E-01	0.61E-01
	PHASE	125.	129.	108.	-32.	-7.	143.	-99.	79.
20. 9									
4P	MAG	0.17E 00	0.82E-01	0.22E-01	0.20E 00	0.18E-01	0.38E 00	0.43E-01	0.45E-01
	PHASE	127.	130.	106.	152.	7.	140.	-123.	59.
27. 2									
4P	MAG	0.91E-01	0.57E-01	0.26E-01	0.39E-01	0.81E-02	0.20E 00	0.57E-01	0.59E-01
	PHASE	146.	146.	107.	-74.	-75.	163.	-99.	79.

RUN.PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
27.13									
4P	MAG	0.14E 00	0.68E-01	0.19E-01	0.30E-02	0.14E-02	0.28E 00	0.37E-01	0.41E-01
	PHASE	134.	133.	103.	-100.	-103.	149.	-99.	77.
20. 8									
4P	MAG	0.27E 00	0.16E 00	0.47E-01	0.13E 01	0.15E-01	0.44E 00	0.90E-01	0.98E-01
	PHASE	136.	142.	125.	91.	-11.	149.	-87.	91.
13.12									
4P	MAG	0.17E 00	0.12E 00	0.37E-01	0.12E 00	0.53E-02	0.36E 00	0.79E-01	0.81E-01
	PHASE	139.	128.	103.	-178.	100.	167.	-122.	58.
14. 2									
4P	MAG	0.14E 00	0.12E 00	0.36E-01	0.63E-01	0.48E-02	0.35E 00	0.94E-01	0.96E-01
	PHASE	146.	132.	102.	166.	-144.	175.	-128.	51.
19.25									
4P	MAG	0.12E 00	0.81E-01	0.23E-01	0.59E-05	0.44E-02	0.27E 00	0.48E-01	0.49E-01
	PHASE	49.	49.	19.	-100.	-125.	75.	156.	-25.
23. 7									
4P	MAG	0.76E-01	0.60E-01	0.28E-01	0.59E-01	0.72E-03	0.17E-01	0.24E-01	0.35E-01
	PHASE	88.	66.	61.	-63.	37.	94.	-67.	87.
23. 8									
4P	MAG	0.11E 00	0.57E-01	0.20E-01	0.11E 00	0.33E-02	0.76E-01	0.45E-01	0.52E-01
	PHASE	131.	120.	119.	-52.	33.	138.	-90.	90.
27. 9									
4P	MAG	0.72E-01	0.24E-01	0.80E-02	0.13E 00	0.22E-04	0.64E-01	0.60E-01	0.61E-01
	PHASE	127.	124.	113.	-133.	-96.	-177.	-79.	99.
23. 9									
4P	MAG	0.11E 00	0.59E-01	0.18E-01	0.26E 00	0.11E-01	0.15E 00	0.76E-01	0.80E-01
	PHASE	140.	137.	159.	-19.	35.	168.	-75.	104.

RUN. PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
27.11									
4P	MAG	0.10E 00	0.35E-01	0.13E-01	0.18E 00	0.19E-02	0.89E-01	0.70E-01	0.73E-01
	PHASE	154.	153.	156.	115.	-7.	-175.	-55.	124.
14. 5									
4P	MAG	0.21E 00	0.86E-01	0.34E-01	0.17E 00	0.21E-02	0.33E 00	0.12E 00	0.12E 00
	PHASE	162.	-176.	149.	-136.	22.	-169.	-43.	140.
23.10									
4P	MAG	0.19E 00	0.63E-01	0.23E-01	0.61E-02	0.59E-02	0.20E 00	0.13E 00	0.13E 00
	PHASE	149.	142.	-171.	-152.	-97.	-178.	-50.	130.
27.10									
4P	MAG	0.14E 00	0.48E-01	0.16E-01	0.51E 00	0.31E-02	0.15E 00	0.11E 00	0.11E 00
	PHASE	169.	179.	-146.	68.	-49.	-160.	-40.	140.
14.10									
4P	MAG	0.92E-01	0.57E-01	0.27E-01	0.15E-01	0.29E-02	0.10E 00	0.47E-01	0.55E-01
	PHASE	114.	102.	91.	152.	85.	-149.	-93.	85.
14. 9									
4P	MAG	0.11E 00	0.63E-01	0.23E-01	0.54E-01	0.17E-02	0.16E 00	0.66E-01	0.69E-01
	PHASE	150.	131.	112.	-122.	-22.	-144.	-91.	89.
27. 8									
4P	MAG	0.81E-01	0.43E-01	0.17E-01	0.65E-01	0.13E-02	0.78E-01	0.21E-01	0.29E-01
	PHASE	128.	130.	108.	172.	97.	139.	-87.	95.
28.16									
4P	MAG	0.83E-01	0.42E-01	0.13E-01	0.29E-03	0.21E-02	0.67E-01	0.33E-01	0.38E-01
	PHASE	103.	106.	85.	10.	11.	129.	-104.	71.
29. 4									
4P	MAG	0.93E-01	0.59E-01	0.20E-01	0.00	0.39E-02	0.96E-01	0.46E-01	0.51E-01
	PHASE	137.	131.	113.	0.	67.	-160.	-101.	80.

RUN.PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
29. 5									
4P	MAG	0.76E-01	0.51E-01	0.18E-01	0.11E 01	0.10E-02	0.83E-01	0.44E-01	0.48E-01
	PHASE	142.	120.	106.	168.	-37.	-165.	-102.	81.
14. 8									
4P	MAG	0.15E 00	0.72E-01	0.25E-01	0.14E 00	0.39E-02	0.41E 00	0.85E-01	0.87E-01
	PHASE	159.	146.	123.	-170.	61.	-159.	-93.	89.
14. 4									
4P	MAG	0.18E 00	0.76E-01	0.70E-02	0.21E 00	0.81E-02	0.39E 00	0.90E-01	0.86E-01
	PHASE	154.	171.	152.	135.	-11.	178.	-43.	135.
14. 7									
4P	MAG	0.23E 00	0.88E-01	0.20E-01	0.30E 00	0.30E-01	0.52E 00	0.94E-01	0.95E-01
	PHASE	167.	167.	155.	158.	98.	-160.	-58.	124.
28.17									
4P	MAG	0.15E 00	0.48E-01	0.73E-02	0.52E-01	0.85E-02	0.33E 00	0.64E-01	0.65E-01
	PHASE	147.	140.	96.	-96.	66.	164.	-68.	110.
14. 6									
4P	MAG	0.21E 00	0.88E-01	0.19E-01	0.30E 00	0.27E-02	0.49E 00	0.89E-01	0.94E-01
	PHASE	166.	172.	172.	144.	80.	-172.	-38.	144.
28.18									
4P	MAG	0.16E 00	0.58E-01	0.10E-01	0.34E-01	0.32E-01	0.35E 00	0.69E-01	0.73E-01
	PHASE	157.	147.	129.	-78.	95.	175.	-48.	131.
28.19									
4P	MAG	0.19E 00	0.69E-01	0.11E-01	0.13E-01	0.23E-02	0.39E 00	0.91E-01	0.93E-01
	PHASE	163.	164.	173.	-98.	148.	178.	-38.	143.
28.20									
4P	MAG	0.20E 00	0.89E-01	0.19E-01	0.98E 00	0.11E-01	0.43E 00	0.12E 00	0.12E 00
	PHASE	156.	166.	-173.	-84.	125.	175.	-35.	146.

RUN.PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
28.21									
4P	MAG	0.19E 00	0.85E-01	0.16E-01	0.55E-01	0.21E-01	0.44E 00	0.14E 00	0.14E 00
	PHASE	163.	176.	-158.	-95.	100.	178.	-27.	153.
15. 4									
4P	MAG	0.59E-01	0.45E-01	0.22E-01	0.18E 00	0.29E-02	0.48E-01	0.30E-01	0.38E-01
	PHASE	111.	87.	70.	-114.	-85.	180.	-100.	72.
14.12									
4P	MAG	0.70E-01	0.45E-01	0.19E-01	0.42E-01	0.23E-02	0.77E-01	0.23E-01	0.30E-01
	PHASE	135.	110.	94.	-7.	-101.	165.	-78.	97.
23. 6									
4P	MAG	0.69E-01	0.52E-01	0.22E-01	0.11E 00	0.61E-03	0.45E-01	0.30E-01	0.37E-01
	PHASE	126.	117.	101.	82.	-81.	-160.	-89.	87.
27. 7									
4P	MAG	0.55E-01	0.39E-01	0.18E-01	0.68E-01	0.22E-02	0.40E-01	0.26E-01	0.32E-01
	PHASE	163.	132.	110.	-80.	130.	-172.	-93.	92.
28.11									
4P	MAG	0.62E-01	0.41E-01	0.20E-01	0.59E-05	0.13E-02	0.60E-01	0.27E-01	0.34E-01
	PHASE	117.	106.	88.	-57.	55.	165.	-132.	57.
14.11									
4P	MAG	0.12E 00	0.58E-01	0.15E-01	0.76E-01	0.55E-02	0.25E 00	0.88E-01	0.83E-01
	PHASE	162.	156.	141.	52.	-11.	-141.	-76.	104.
15. 3									
4P	MAG	0.16E 00	0.99E-01	0.31E-01	0.52E 00	0.85E-02	0.40E 00	0.18E 00	0.17E 00
	PHASE	175.	174.	168.	-34.	22.	-118.	-68.	113.
28.10									
4P	MAG	0.15E 00	0.61E-01	0.19E-01	0.13E 00	0.75E-02	0.35E 00	0.87E-01	0.84E-01
	PHASE	163.	142.	132.	-106.	105.	-163.	-94.	86.

RUN.PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
15. 2									
4P	MAG	0.19E 00	0.99E-01	0.27E-01	0.11E 01	0.13E-01	0.53E 00	0.15E 00	0.15E 00
	PHASE	170.	166.	157.	-129.	15.	-143.	-72.	108.
14. 3									
4P	MAG	0.13E 00	0.66E-01	0.19E-01	0.51E-01	0.19E-02	0.17E 00	0.13E 00	0.13E 00
	PHASE	169.	-165.	-169.	73.	18.	-106.	-42.	139.
28. 9									
4P	MAG	0.91E-01	0.43E-01	0.12E-01	0.82E-02	0.42E-02	0.12E 00	0.86E-01	0.81E-01
	PHASE	169.	166.	160.	87.	-98.	-135.	-68.	112.
21. 7									
4P	MAG	0.16E 00	0.98E-01	0.35E-01	0.49E-01	0.26E-02	0.29E 00	0.41E-01	0.47E-01
	PHASE	165.	138.	138.	136.	-153.	-169.	-88.	103.
21. 8									
4P	MAG	0.16E 00	0.94E-01	0.35E-01	0.19E 00	0.32E-02	0.27E 00	0.36E-01	0.45E-01
	PHASE	169.	132.	133.	-1.	152.	-166.	-82.	106.
21. 9									
4P	MAG	0.17E 00	0.90E-01	0.33E-01	0.11E 00	0.21E-02	0.30E 00	0.40E-01	0.48E-01
	PHASE	165.	139.	138.	-40.	9.	-176.	-79.	107.
21.10									
4P	MAG	0.16E 00	0.98E-01	0.35E-01	0.13E 00	0.11E-01	0.28E 00	0.35E-01	0.46E-01
	PHASE	153.	127.	121.	77.	-60.	-171.	-70.	109.
21.11									
4P	MAG	0.16E 00	0.79E-01	0.30E-01	0.12E 00	0.12E-02	0.27E 00	0.39E-01	0.46E-01
	PHASE	164.	121.	123.	87.	-86.	-172.	-74.	108.
20.13									
4P	MAG	0.15E 00	0.62E-01	0.18E-01	0.00	0.33E-02	0.30E 00	0.54E-01	0.60E-01
	PHASE	145.	149.	141.	0.	-60.	154.	-72.	113.

RUN.PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
20.14									
4P	MAG	0.15E 00	0.48E-01	0.17E-01	0.00	0.86E-02	0.29E 00	0.65E-01	0.68E-01
	PHASE	150.	145.	142.	0.	-19.	158.	-58.	122.
19. 7									
4P	MAG	0.13E 00	0.46E-01	0.16E-01	0.14E 00	0.44E-02	0.13E 00	0.14E 00	0.13E 00
	PHASE	172.	167.	148.	-44.	-3.	-70.	-28.	149.
19. 8									
4P	MAG	0.14E 00	0.80E-01	0.23E-01	0.27E 00	0.19E-02	0.17E 00	0.15E 00	0.14E 00
	PHASE	163.	180.	165.	-66.	34.	-99.	-49.	130.
21.12									
4P	MAG	0.19E 00	0.87E-01	0.30E-01	0.26E 00	0.37E-02	0.35E 00	0.67E-01	0.73E-01
	PHASE	166.	127.	108.	-11.	-35.	-160.	-83.	97.
21.13									
4P	MAG	0.17E 00	0.92E-01	0.32E-01	0.13E 00	0.58E-02	0.29E 00	0.50E-01	0.56E-01
	PHASE	167.	131.	118.	168.	67.	-159.	-88.	97.
21.14									
4P	MAG	0.18E 00	0.90E-01	0.29E-01	0.67E-02	0.56E-02	0.34E 00	0.67E-01	0.73E-01
	PHASE	164.	130.	109.	126.	-134.	-163.	-89.	91.
21.15									
4P	MAG	0.19E 00	0.89E-01	0.30E-01	0.12E 00	0.73E-03	0.33E 00	0.65E-01	0.72E-01
	PHASE	162.	133.	112.	-170.	27.	-164.	-94.	88.
21.16									
4P	MAG	0.20E 00	0.93E-01	0.31E-01	0.49E-01	0.77E-02	0.34E 00	0.65E-01	0.71E-01
	PHASE	164.	126.	107.	11.	-113.	-164.	-91.	91.
21.17									
4P	MAG	0.19E 00	0.72E-01	0.31E-01	0.22E 00	0.47E-02	0.34E 00	0.67E-01	0.74E-01
	PHASE	164.	121.	97.	108.	-65.	-159.	-81.	97.

RUN.PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
19. 9									
4P	MAG	0.13E 00	0.63E-01	0.17E-01	0.90E-01	0.62E-02	0.16E 00	0.16E 00	0.15E 00
	PHASE	159.	172.	125.	-3.	4.	-119.	-54.	124.
19.10									
4P	MAG	0.11E 00	0.51E-01	0.12E-01	0.75E-01	0.27E-02	0.15E 00	0.15E 00	0.14E 00
	PHASE	152.	-177.	139.	14.	-9.	-113.	-50.	128.
19.11									
4P	MAG	0.11E 00	0.66E-01	0.13E-01	0.80E-01	0.41E-02	0.13E 00	0.14E 00	0.13E 00
	PHASE	163.	-176.	145.	50.	-54.	-120.	-54.	124.
16. 6									
4P	MAG	0.67E-01	0.50E-01	0.30E-01	0.32E 00	0.45E-02	0.70E-01	0.46E-01	0.59E-01
	PHASE	105.	71.	66.	-102.	-48.	-157.	-106.	70.
29. 2									
4P	MAG	0.65E-01	0.49E-01	0.29E-01	0.00	0.44E-02	0.18E-01	0.26E-01	0.42E-01
	PHASE	119.	91.	76.	0.	8.	113.	-91.	74.
29. 3									
4P	MAG	0.66E-01	0.41E-01	0.25E-01	0.00	0.89E-02	0.58E-01	0.36E-01	0.48E-01
	PHASE	127.	80.	65.	0.	-15.	162.	-111.	63.
16. 5									
4P	MAG	0.16E 00	0.78E-01	0.29E-01	0.90E-01	0.50E-02	0.20E 00	0.70E-01	0.77E-01
	PHASE	120.	109.	92.	-82.	0.	172.	-130.	56.
23.11									
4P	MAG	0.77E-01	0.28E-01	0.24E-01	0.27E 00	0.57E-04	0.25E 00	0.46E-01	0.56E-01
	PHASE	112.	38.	40.	101.	-78.	138.	-135.	43.
16. 4									
4P	MAG	0.19E 00	0.75E-01	0.25E-01	0.19E 00	0.50E-02	0.34E 00	0.73E-01	0.78E-01
	PHASE	134.	117.	79.	124.	5.	172.	-118.	65.

RUN.PT		CHANNEL DESIGNATION							
		2	3	4	5	6	7	8
16. 9								
4P	MAG	0.85E-01	0.42E-01	0.27E-01	0.28E 00	0.41E-02	0.71E-01	0.28E-01	0.39E-01
	PHASE	97.	64.	56.	-132.	18.	162.	-102.	66.
16. 8									
4P	MAG	0.12E 00	0.57E-01	0.28E-01	0.25E 00	0.73E-02	0.13E 00	0.39E-01	0.49E-01
	PHASE	120.	103.	88.	-60.	60.	155.	-119.	64.
16. 3									
4P	MAG	0.13E 00	0.61E-01	0.24E-01	0.30E 00	0.41E-02	0.27E 00	0.12E 00	0.12E 00
	PHASE	138.	140.	108.	-95.	31.	-145.	-102.	77.
16. 7									
4P	MAG	0.15E 00	0.59E-01	0.23E-01	0.29E 00	0.34E-02	0.24E 00	0.99E-01	0.99E-01
	PHASE	137.	132.	109.	-139.	73.	-160.	-102.	78.
16. 2									
4P	MAG	0.82E-01	0.44E-01	0.19E-01	0.15E 00	0.96E-03	0.14E 00	0.74E-01	0.77E-01
	PHASE	135.	140.	106.	149.	-53.	-162.	-94.	84.
23.12									
4P	MAG	0.86E-01	0.56E-01	0.25E-01	0.15E-01	0.54E-03	0.13E 00	0.53E-01	0.61E-01
	PHASE	129.	115.	88.	19.	79.	179.	-112.	69.
17. 2									
4P	MAG	0.98E-01	0.54E-01	0.26E-01	0.12E 00	0.24E-02	0.10E 00	0.53E-01	0.62E-01
	PHASE	105.	93.	68.	-135.	-60.	163.	-111.	64.
23.13									
4P	MAG	0.18E 00	0.63E-01	0.37E-01	0.14E-01	0.18E-02	0.24E 00	0.66E-01	0.75E-01
	PHASE	107.	83.	57.	-172.	21.	133.	-115.	56.
17. 5									
4P	MAG	0.52E-01	0.51E-01	0.32E-01	0.36E-02	0.62E-02	0.34E-01	0.18E-01	0.34E-01
	PHASE	29.	9.	20.	80.	-170.	75.	-139.	30.

RUN.PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
17. 4									
4P	MAG	0.62E-01	0.50E-01	0.29E-01	0.98E-02	0.22E-02	0.65E-01	0.29E-01	0.42E-01
	PHASE	61.	23.	26.	-1.	-101.	104.	-160.	19.
17. 6									
4P	MAG	0.70E-01	0.39E-01	0.28E-01	0.59E-02	0.29E-02	0.88E-01	0.47E-01	0.58E-01
	PHASE	99.	66.	47.	23.	-135.	169.	-110.	58.
18.10									
4P	MAG	0.85E-01	0.51E-01	0.30E-01	0.39E-02	0.85E-02	0.72E-01	0.45E-01	0.59E-01
	PHASE	75.	41.	40.	36.	155.	132.	-154.	27.
17. 3									
4P	MAG	0.58E-01	0.43E-01	0.31E-01	0.27E 00	0.47E-02	0.75E-01	0.26E-01	0.39E-01
	PHASE	61.	45.	46.	-126.	163.	108.	-163.	27.
18. 2									
4P	MAG	0.56E-01	0.39E-01	0.30E-01	0.64E-02	0.45E-02	0.64E-01	0.33E-01	0.46E-01
	PHASE	82.	41.	32.	30.	-151.	146.	-129.	38.
18. 9									
4P	MAG	0.81E-01	0.36E-01	0.25E-01	0.10E-02	0.23E-01	0.52E-01	0.31E-01	0.39E-01
	PHASE	94.	55.	45.	-136.	-138.	135.	-116.	51.
18. 3									
4P	MAG	0.34E-01	0.38E-01	0.27E-01	0.29E-02	0.12E-01	0.39E-01	0.26E-01	0.39E-01
	PHASE	65.	21.	20.	-29.	-63.	117.	-138.	31.
18. 4									
4P	MAG	0.61E-01	0.34E-01	0.26E-01	0.23E 00	0.15E-01	0.70E-01	0.40E-01	0.50E-01
	PHASE	95.	66.	44.	96.	16.	152.	-126.	46.
18. 8									
4P	MAG	0.75E-01	0.27E-01	0.23E-01	0.10E-01	0.10E-01	0.67E-01	0.47E-01	0.54E-01
	PHASE	122.	86.	50.	-112.	18.	-173.	-102.	68.

RUN.PT		CHANNEL DESIGNATION							
		1	2	3	4	5	6	7	8
18. 5									
4P	MAG	0.32E-01	0.30E-01	0.24E-01	0.19E-01	0.97E-02	0.33E-01	0.20E-01	0.30E-01
	PHASE	75.	41.	29.	103.	52.	114.	-131.	39.
18. 6									
4P	MAG	0.17E-01	0.19E-01	0.23E-01	0.12E-02	0.13E-02	0.11E-01	0.17E-01	0.23E-01
	PHASE	108.	42.	26.	-154.	-81.	112.	-84.	63.
18. 7									
4P	MAG	0.22E-01	0.31E-01	0.24E-01	0.59E-02	0.94E-02	0.38E-01	0.20E-01	0.30E-01
	PHASE	-10.	16.	9.	74.	-150.	95.	179.	5.
18.11									
4P	MAG	0.36E-01	0.33E-01	0.22E-01	0.79E-02	0.17E-01	0.40E-01	0.23E-01	0.34E-01
	PHASE	55.	18.	22.	-12.	9.	132.	-157.	20.
18.12									
4P	MAG	0.43E-01	0.29E-01	0.26E-01	0.31E-02	0.38E-02	0.51E-01	0.34E-01	0.44E-01
	PHASE	102.	32.	30.	-102.	-163.	143.	-125.	43.
23.14									
4P	MAG	0.17E 00	0.85E-01	0.34E-01	0.13E 00	0.72E-02	0.25E 00	0.62E-01	0.70E-01
	PHASE	63.	34.	39.	44.	-31.	95.	-176.	5.
23.15									
4P	MAG	0.17E 00	0.73E-01	0.31E-01	0.11E 00	0.15E-02	0.23E 00	0.50E-01	0.58E-01
	PHASE	71.	39.	43.	29.	116.	100.	173.	-0.

1. Report No.	2. Government Accession No.	3. Recipient's Catalog No.
NASA TM-81321		

4. Title and Subtitle	5. Report Date
A Full-Scale Wind Tunnel Investigation of a Helicopter Bearingless Main Rotor	August 1981
	6. Performing Organization Code
7. Author(s)	8. Performing Organization Report No.
William Warmbrodt and John L. McCloud III	A-8696
	10. Work Unit No.
9. Performing Organization Name and Address	505-42-21
Ames Research Center, NASA Moffett Field, CA 94035	11. Contract or Grant No.
	13. Type of Report and Period Covered
12. Sponsoring Agency Name and Address	Technical Memorandum
National Aeronautics and Space Administration Washington, D.C. 20546	14. Sponsoring Agency Code

15. Supplementary Notes

16. Abstract

A helicopter bearingless main rotor was tested in the NASA Ames 40- by 80-Foot Wind Tunnel on the Ames rotor test apparatus. Areas of investigation included aeroelastic stability, aerodynamic performance, and rotor loads as a function of collective pitch setting, RPM, airspeed and shaft angle. The rotor/support system was tested with the wind tunnel balance dampers installed and, subsequently, removed. Modifications to the rotor hub were tested. These included a reduction in the rotor control system stiffness and increased flexbeam structural damping. The primary objective of the test was to determine aeroelastic stability of the fundamental flexbeam/blade chordwise bending mode. The rotor was stable for all conditions. Damping of the rotor chordwise bending mode increases with increased collective pitch angle at constant operating conditions. No significant decrease in rotor damping occured due to frequency coalescence between the blade chordwise fundamental bending mode and the support system.

17. Key Words (Suggested by Author(s))	18. Distribution Statement
Helicopter rotor Wind tunnel test Aeroelastic stability Rotor performance data Rotor loads data	Unlimited STAR Category: 05

19. Security Classif. (of this report)	20. Security Classif. (of this page)	21. No. of Pages	22. Price*
Unclassified	Unclassified	277	$22.50

*For sale by the National Technical Information Service, Springfield, Virginia 22161

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