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**VORTEX SHEDDING BY BLUNT/BLUFF BODIES AT
HIGH REYNOLDS NUMBERS****Volume III of IV
Cubes****B. R. Merrill****March 1993****DTIC
SELECTE
MAY 05 1993
S B D****Final Report**

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**PHILLIPS LABORATORY
Directorate of Plans and Programs
AIR FORCE MATERIEL COMMAND
KIRTLAND AIR FORCE BASE, NM 87117-5776**

This final report was prepared by the Phillips Laboratory, Kirtland Air Force Base, New Mexico, under Job Order 9993XX21. The Laboratory Project Officer-in-Charge was Bruce R. Merrill (XPXS).

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This report has been reviewed and is approved for publication.



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13. ABSTRACT (Maximum 200 words) This report documents the analysis of vortex shedding data collected by the Phillips Laboratory at the U.S. Air Force Academy Subsonic Wind Tunnel facility. The analysis is primarily of the power spectrum of the vortex shedding as seen in the force and moment coefficient power spectra. The shedding frequencies as seen in the power spectra are used to analyze for the Strouhal number. The analysis suggests that shape and orientation in the wind field have an effect on the shedding of vortices.				
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CONTENTS

	<u>Page</u>
CUBE AT 0-DEGREE DECLINATION (735.5 gm)	1
CUBE AT 0-DEGREE DECLINATION (1009.5 gm)	52
CUBE AT 30-DEGREE DECLINATION (951.1 gm)	66
CUBE AT 45-DEGREE DECLINATION (1029.5 gm)	115
CUBE (ROUNDED) AT 0-DEGREE DECLINATION (1700.0 gm)	164
CUBE (ROUNDED) AT 30-DEGREE DECLINATION (1575.4 gm)	192

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DATA REPORT

SHAPE:	CUBE
DECLINATION [THETA (degrees)]:	0
DIMENSIONS [LxWxH (in)]:	7.64 x 7.9 x 6.03
WEIGHT (gm):	735.5
TORSION FREQUENCY (Hz):	45
LATERAL (SIDE BEND) FREQUENCY (Hz):	89
NORMAL (AFT BEND) FREQUENCY (Hz):	83
AZIMUTHS (degrees):	0, 30, 45, 60, 90

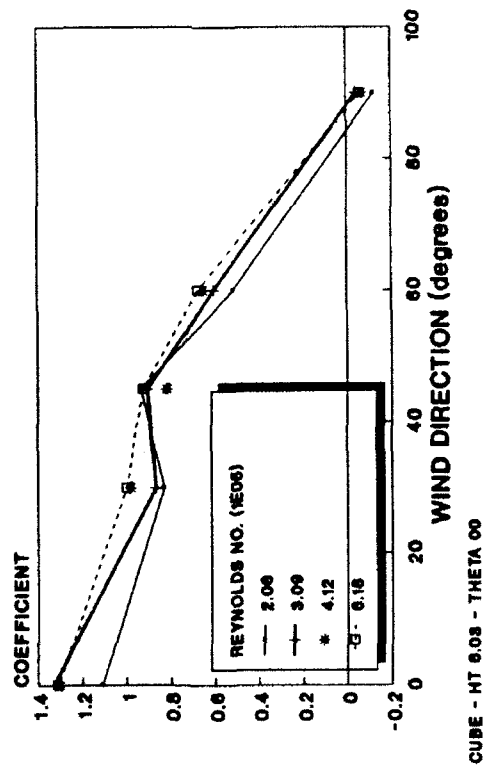
GRAPH CORRECTIONS:

- The mean value of the **ROLL** moment coefficients should be divided by 12.
- The PSD and PSD Integral values of the **ROLL** moment coefficients should be divided by 144.

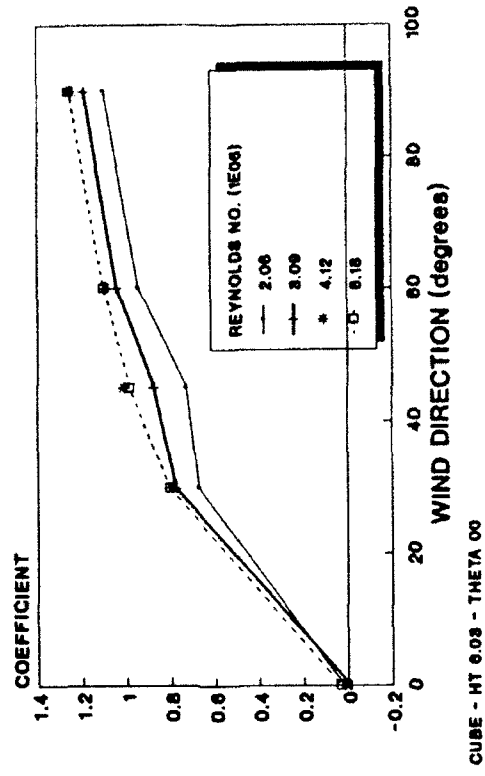
OBSERVATIONS:

- A very good shed is observed in the lateral data at 0 degrees azimuth. The shed is largely single frequency in nature.
- A very good shed is observed in the normal data at 90 degrees azimuth. This shed is partially seen in the roll data as well. This shed is more multifrequency in nature.
- 15.176 Hz spike is seen in the normal force data. The spike is not always as prominent in the normal moment data which suggests a lack of coherence in the 15.176 Hz spike.

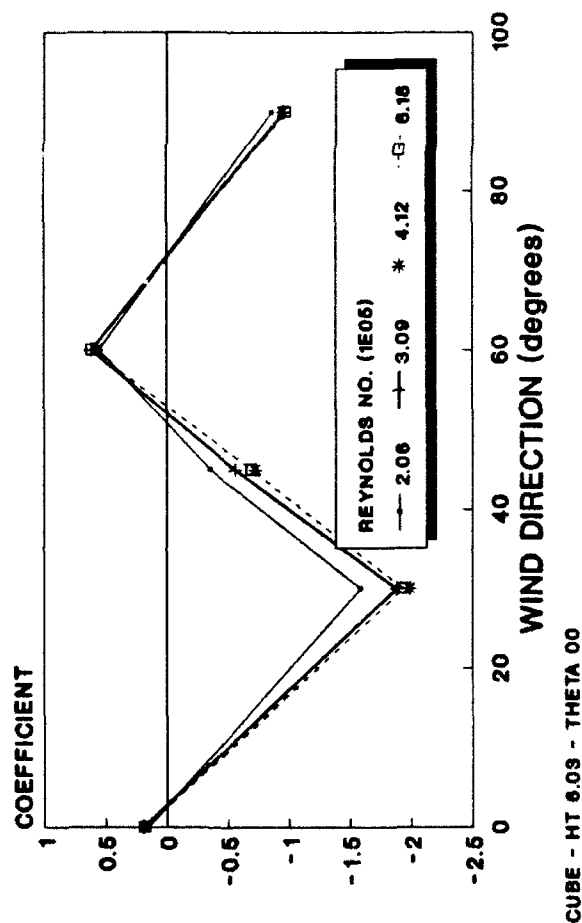
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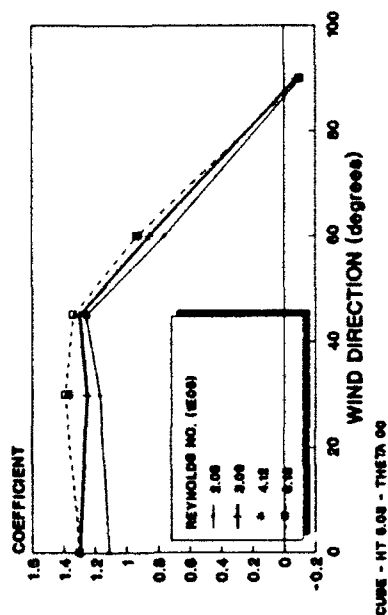
MEAN FORCE COEFFICIENT LATERAL DIRECTION



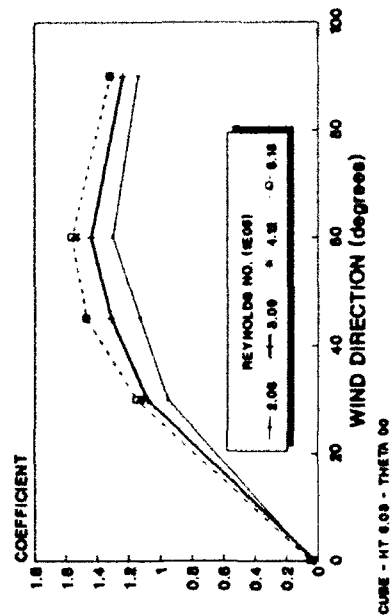
MEAN MOMENT COEFFICIENT ROLL DIRECTION



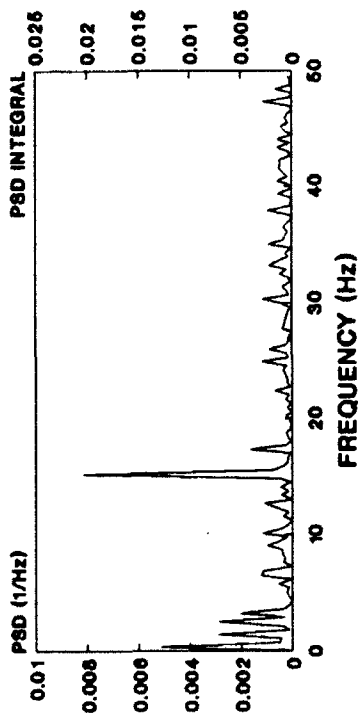
MEAN MOMENT COEFFICIENT NORMAL DIRECTION



MEAN MOMENT COEFFICIENT LATERAL DIRECTION



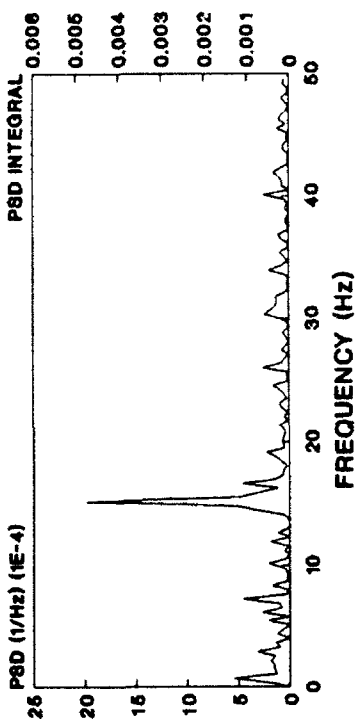
FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



PSD PSD INTEGRAL

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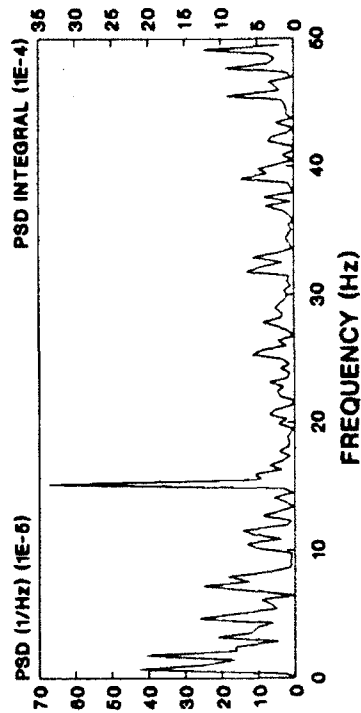
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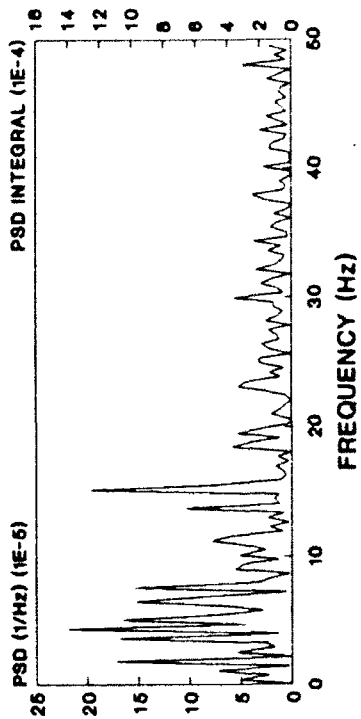
FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



PSD PSD INTEGRAL

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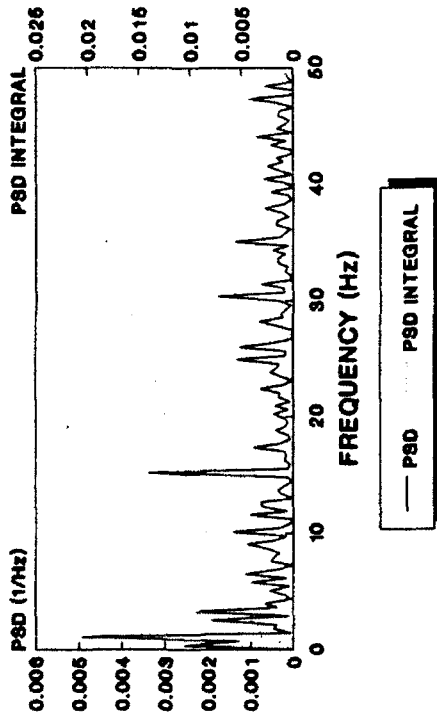
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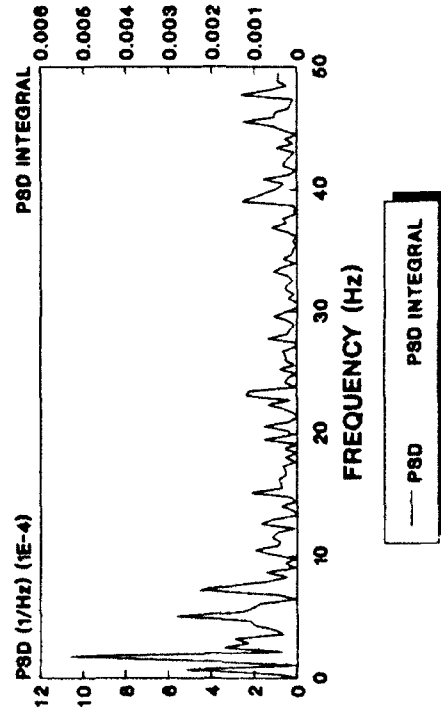
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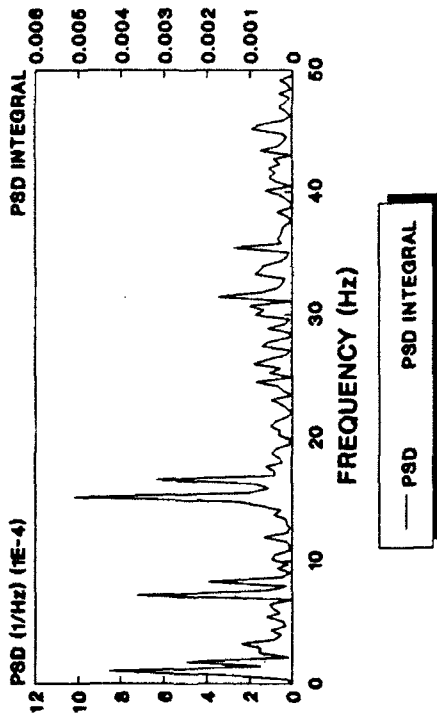
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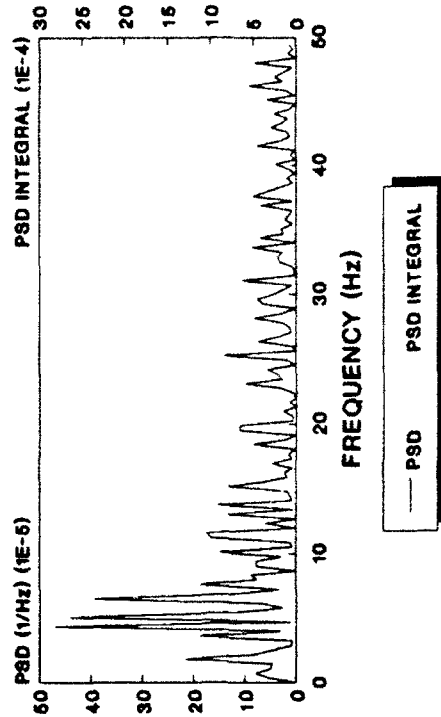
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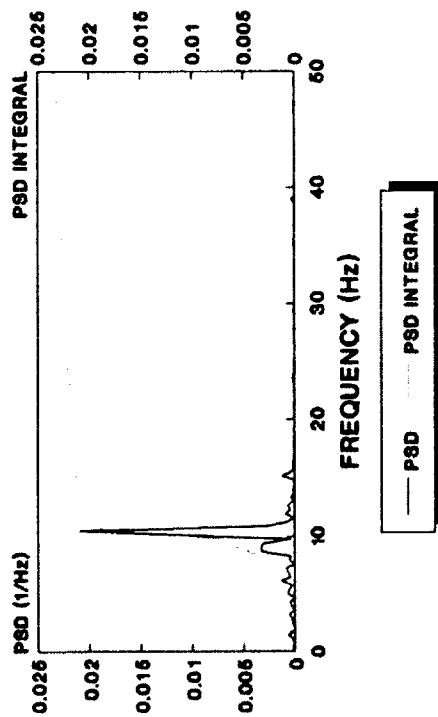
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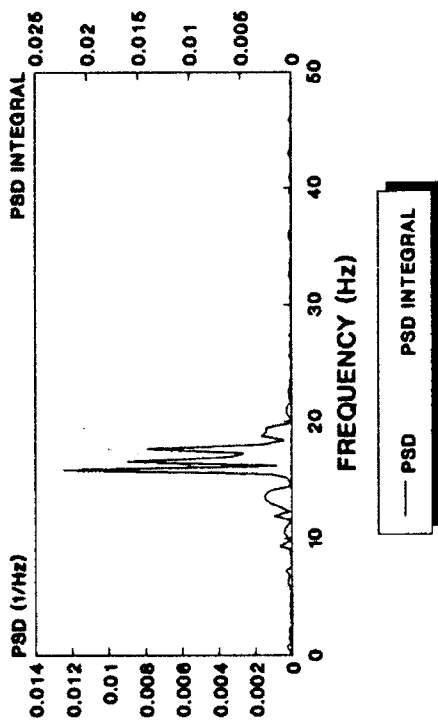
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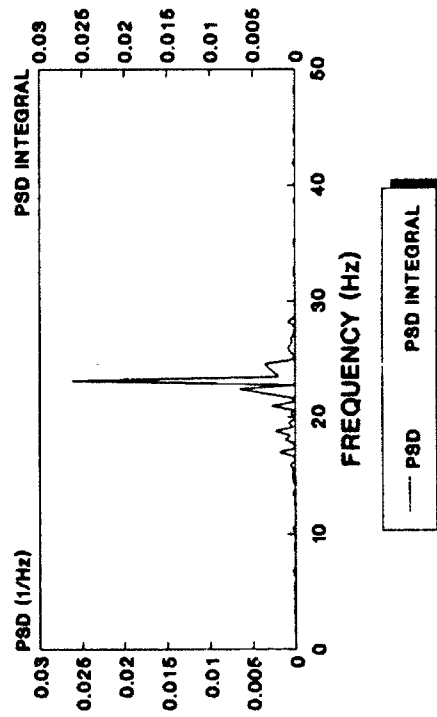
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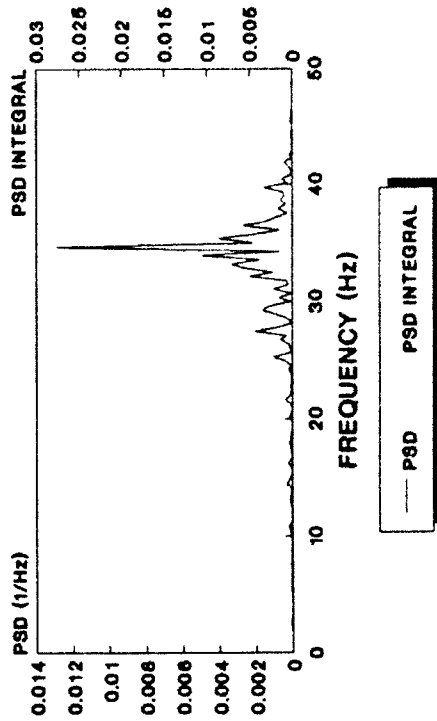
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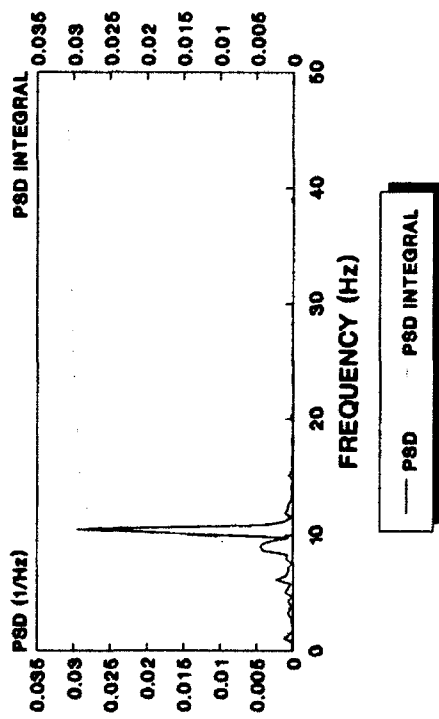
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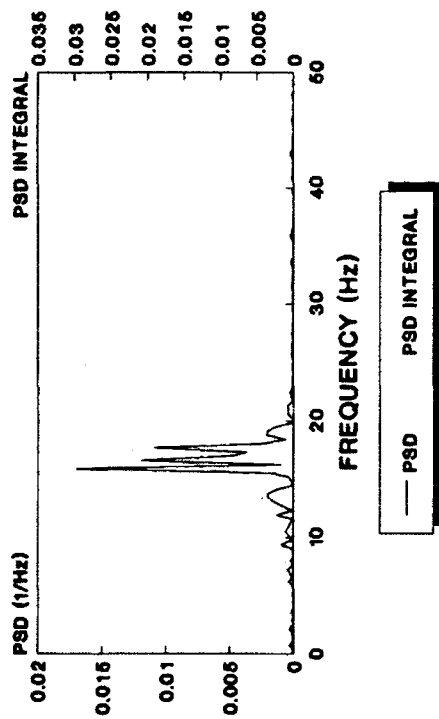
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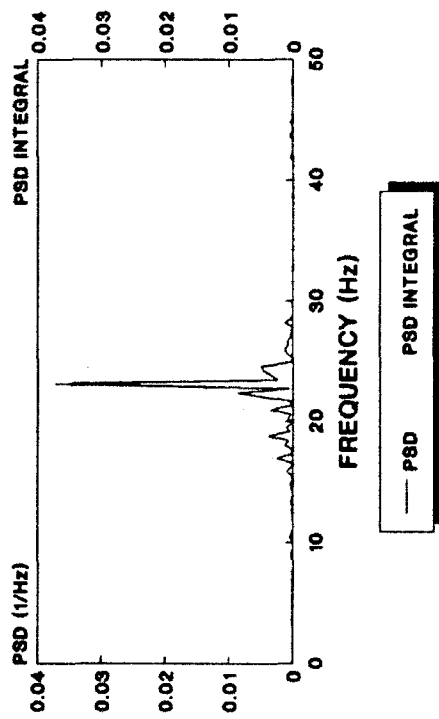
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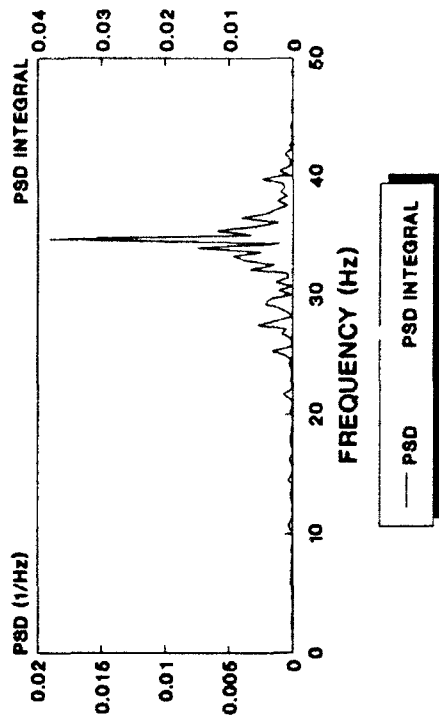
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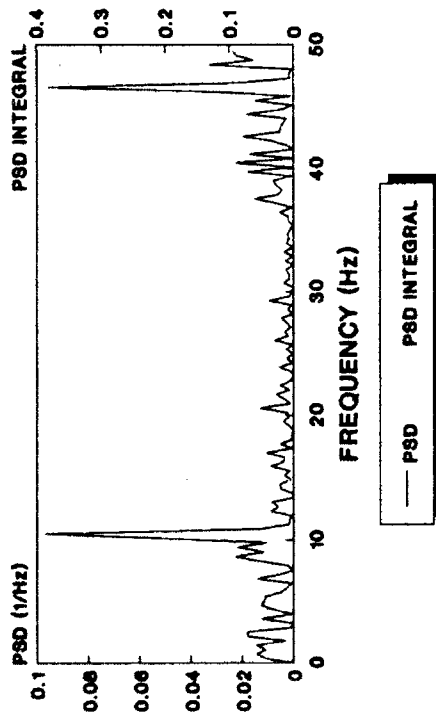
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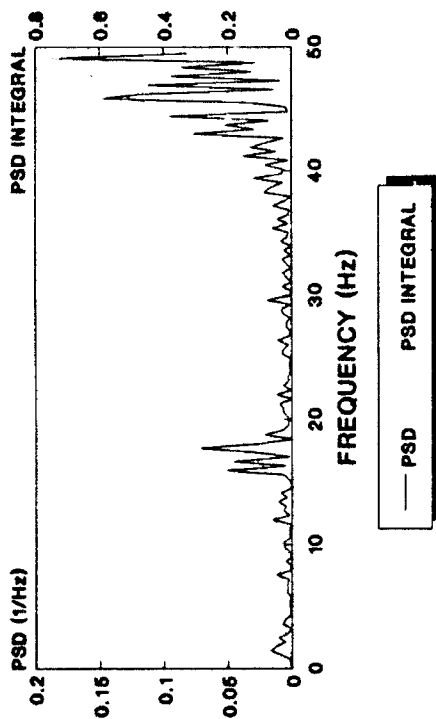
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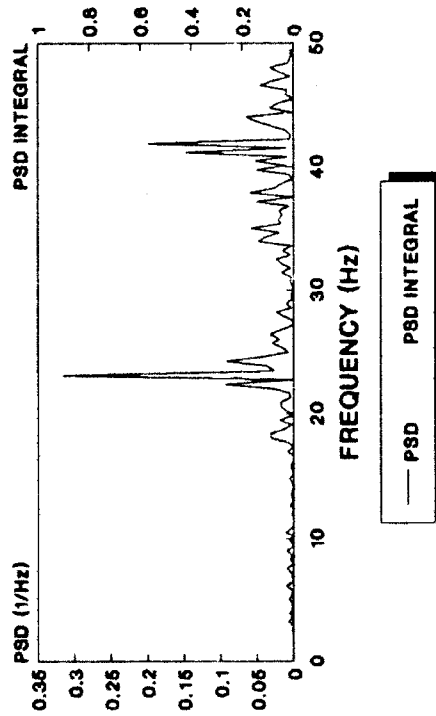
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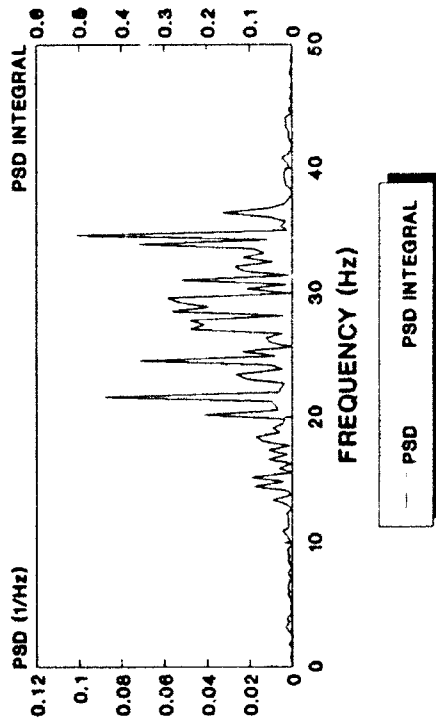
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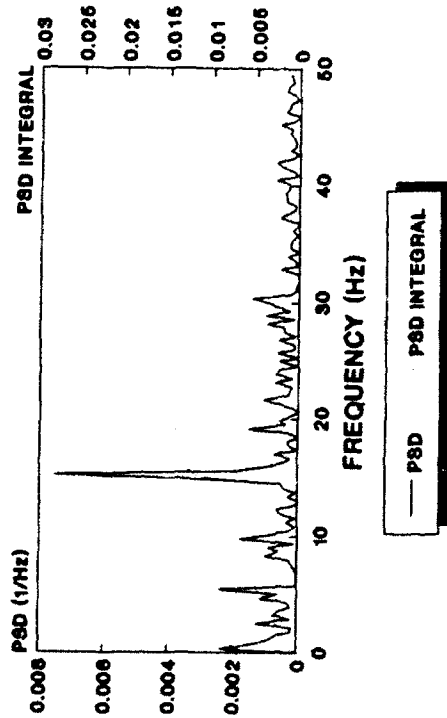
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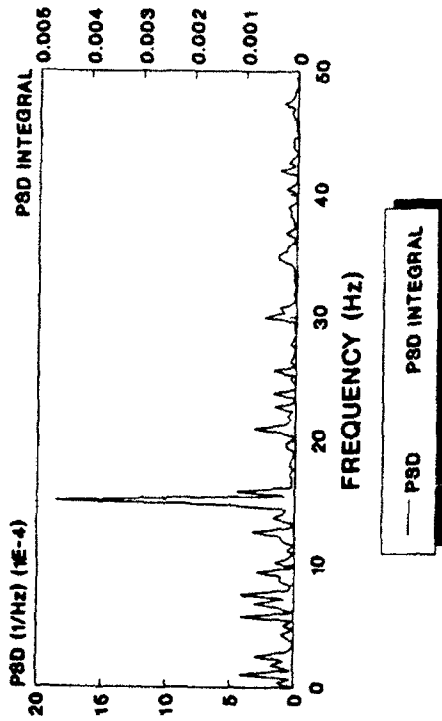
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FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



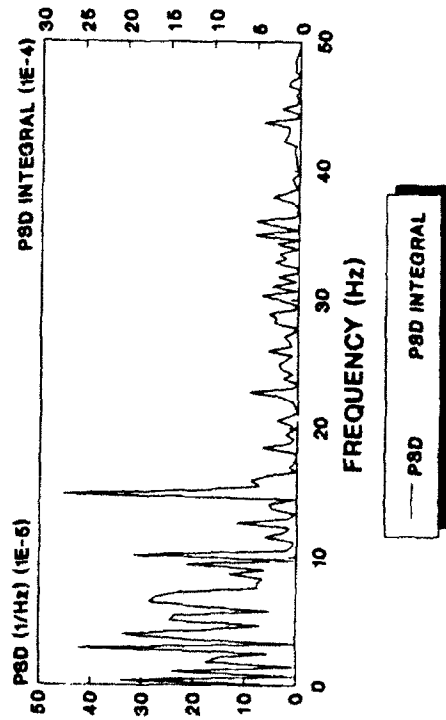
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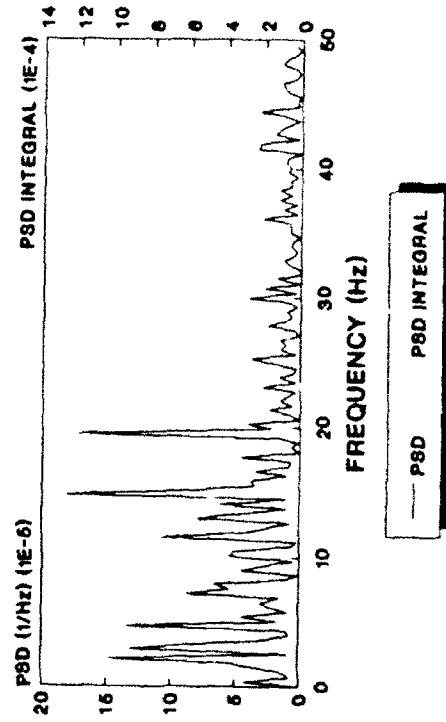
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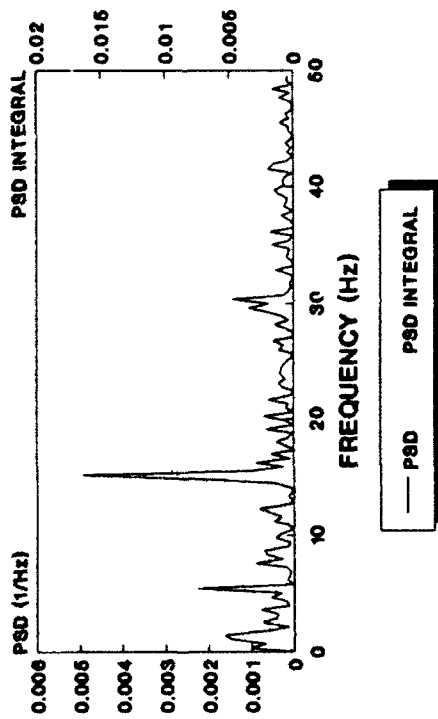
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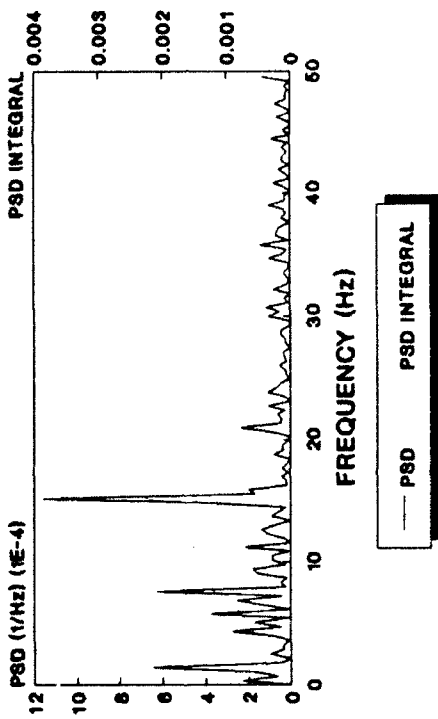
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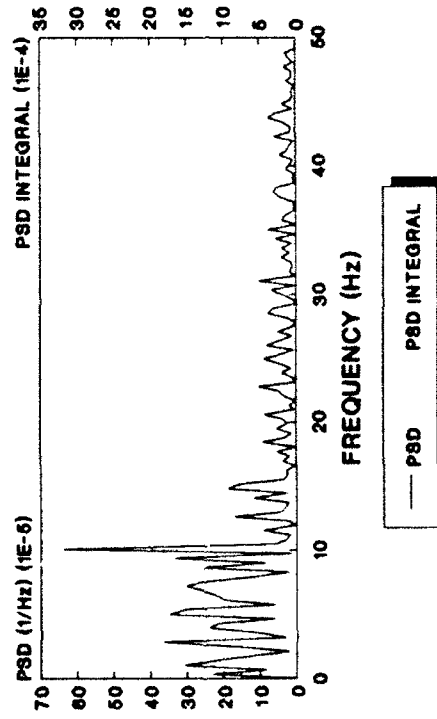
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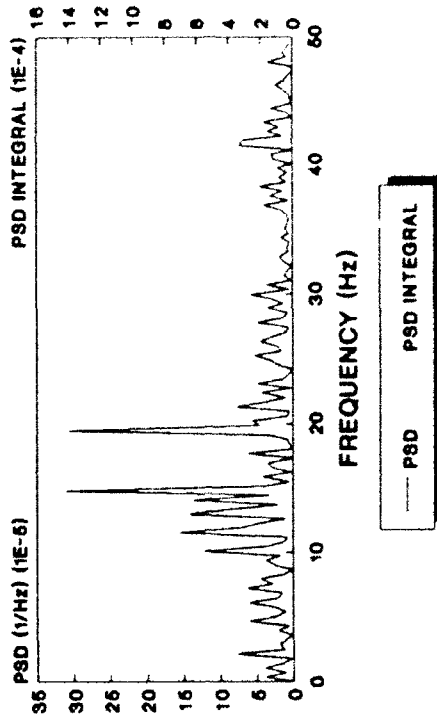
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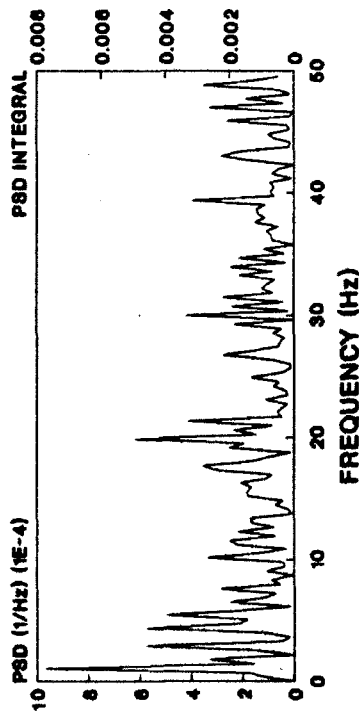
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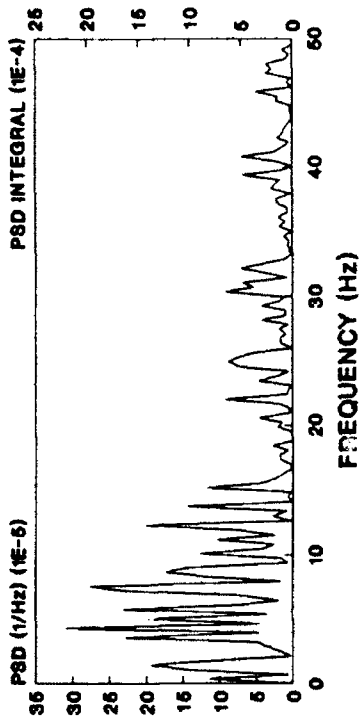
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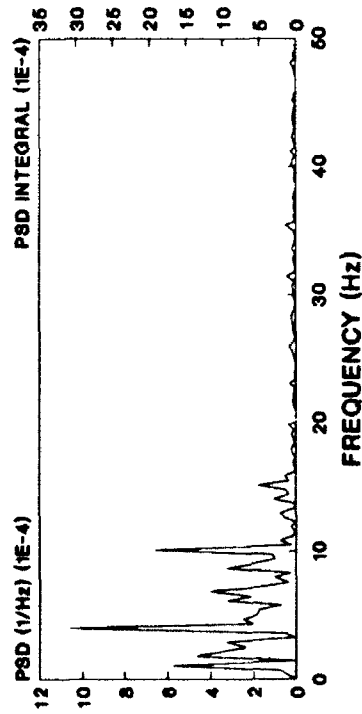
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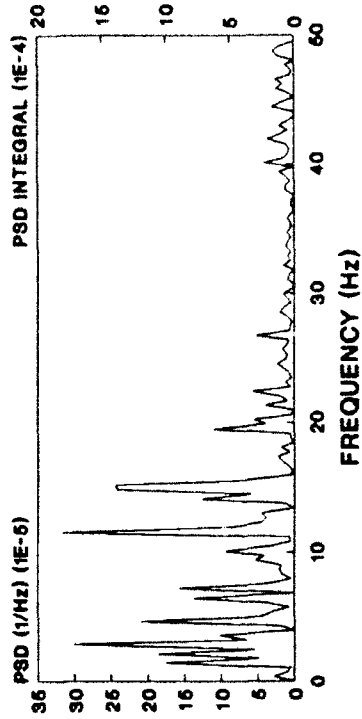
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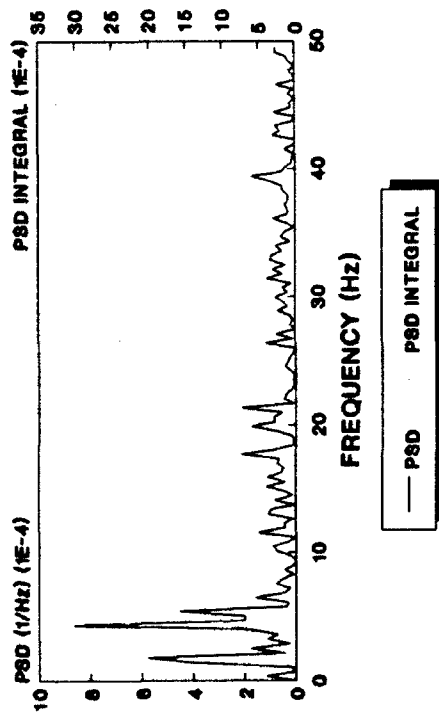
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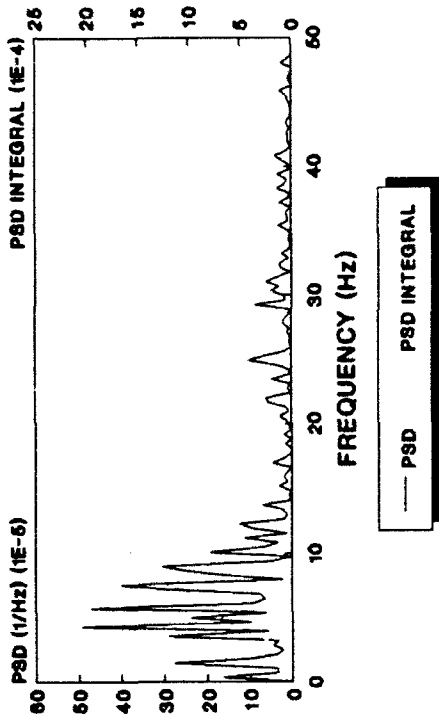
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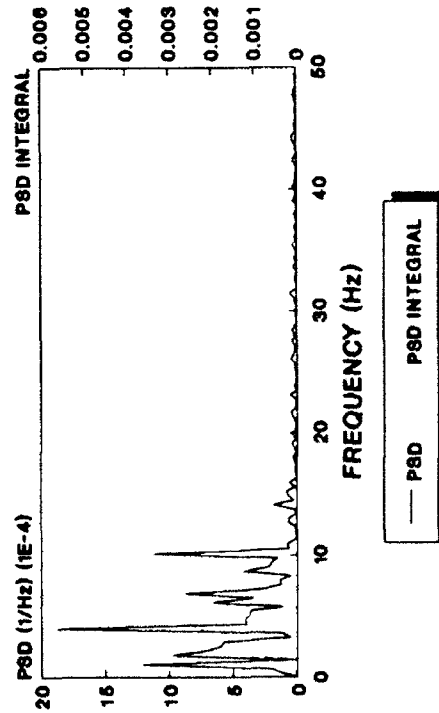
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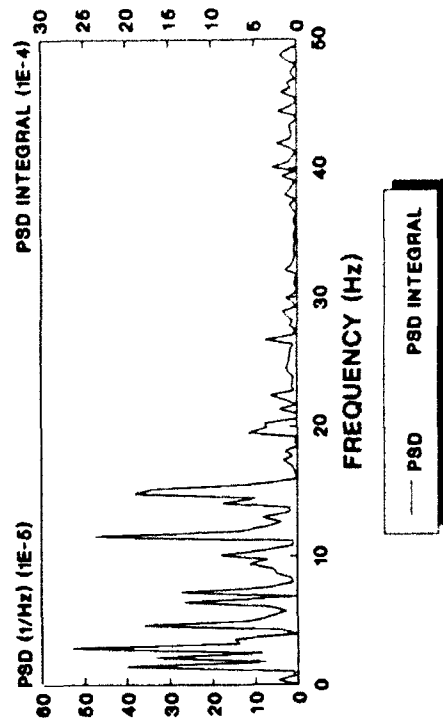
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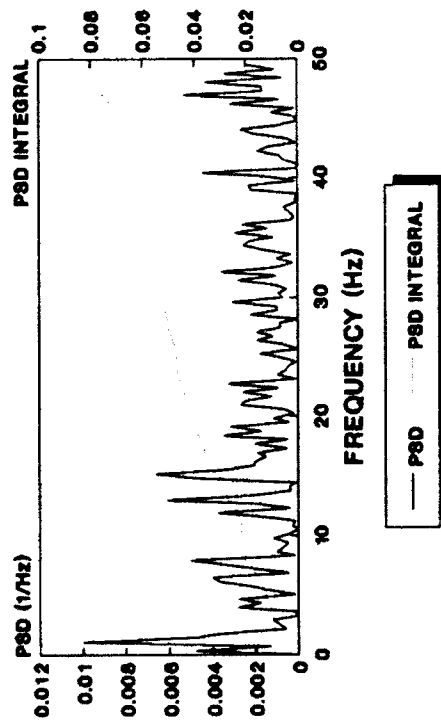
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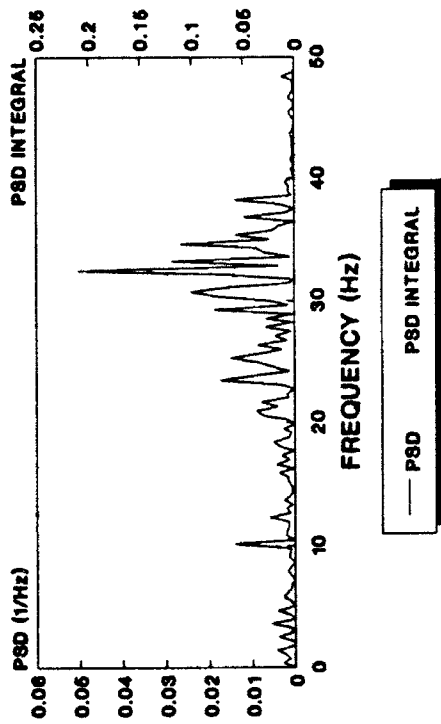
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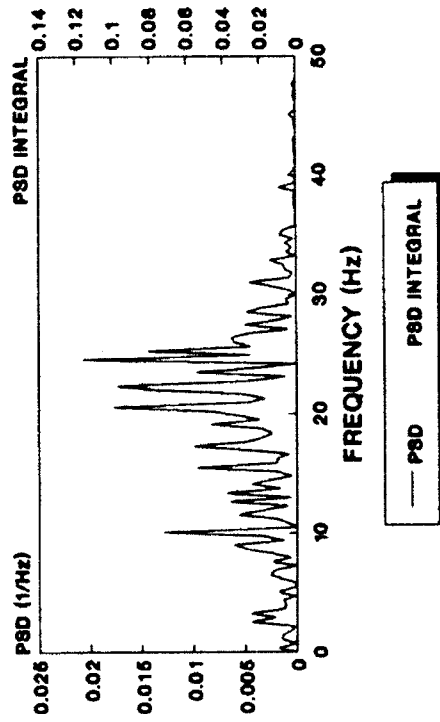
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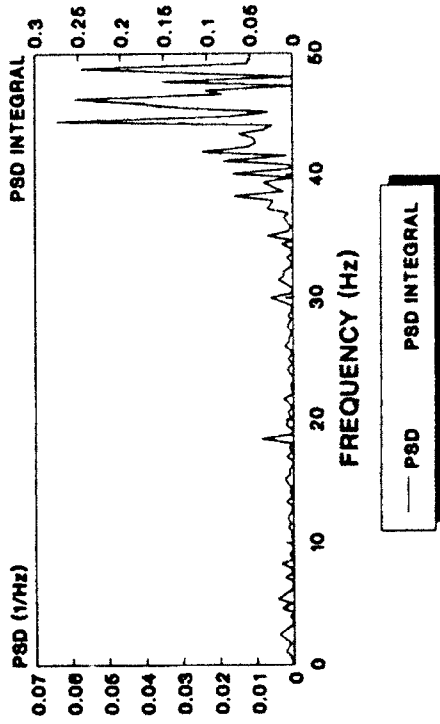
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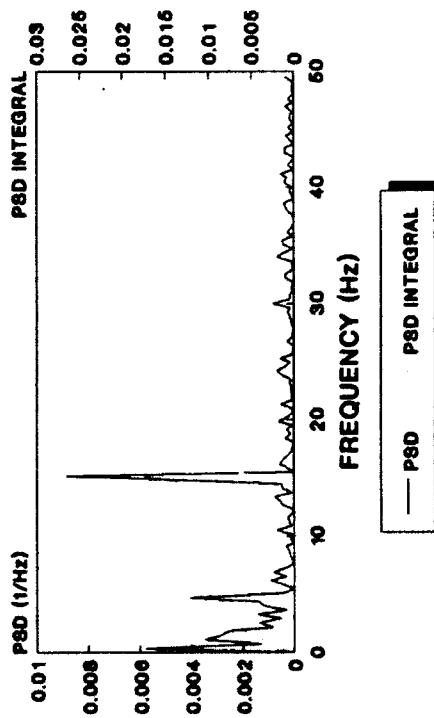
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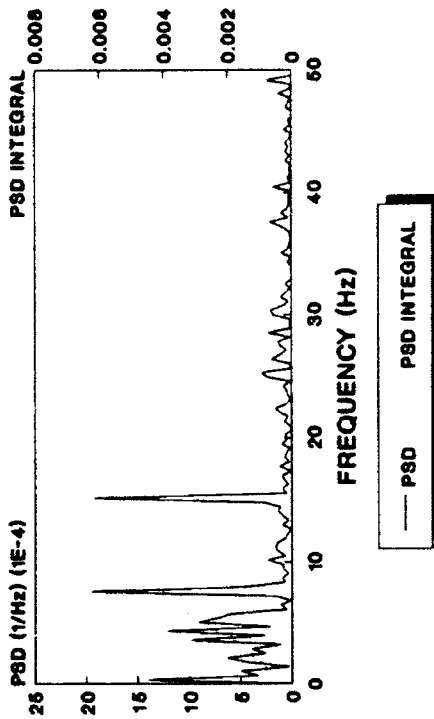
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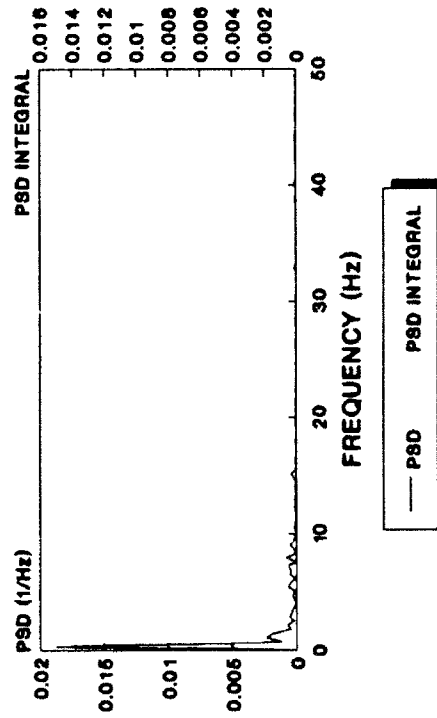
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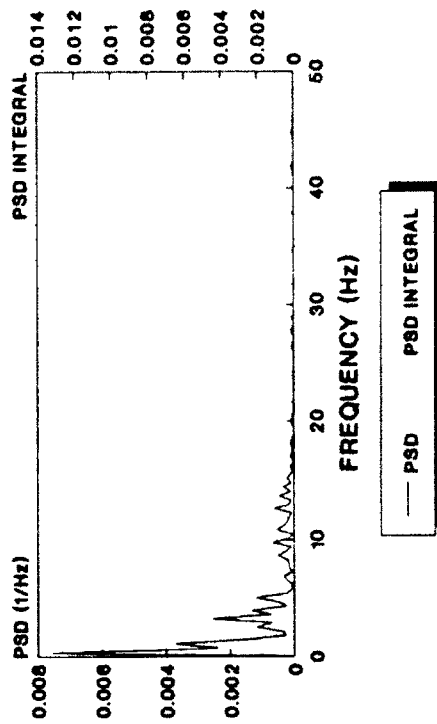
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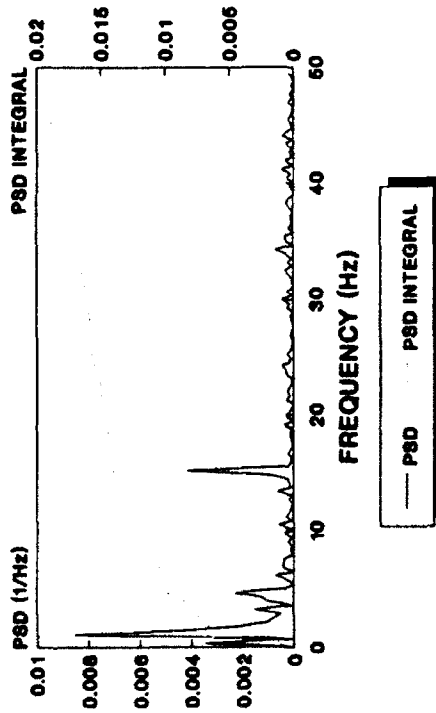
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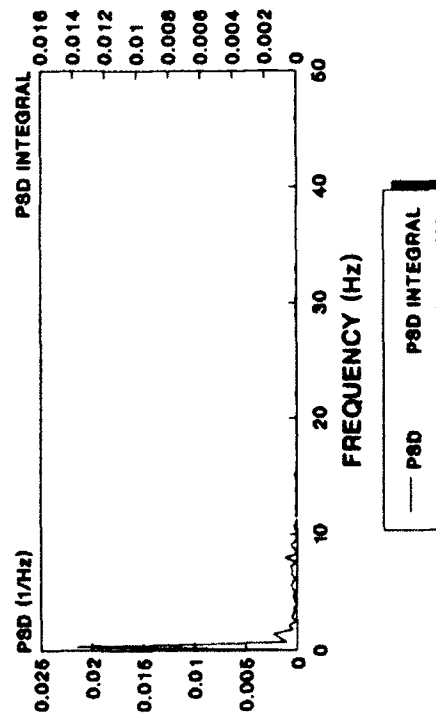
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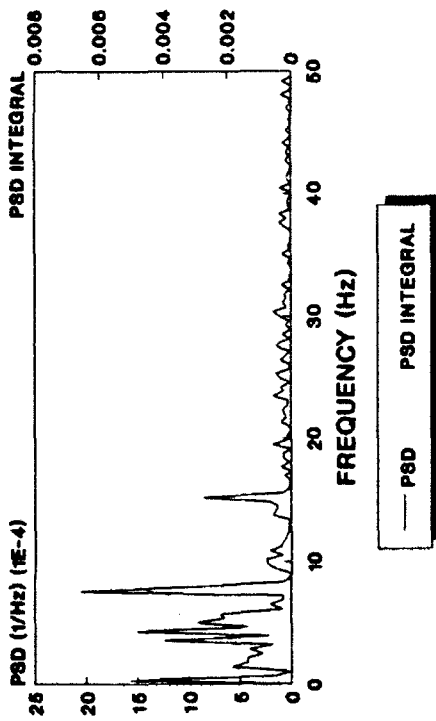
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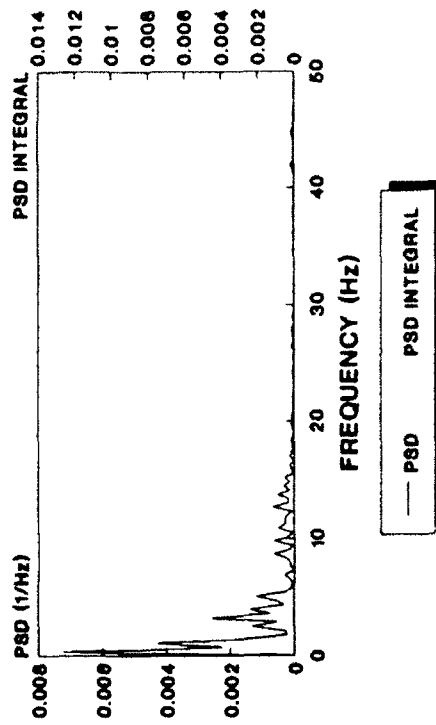
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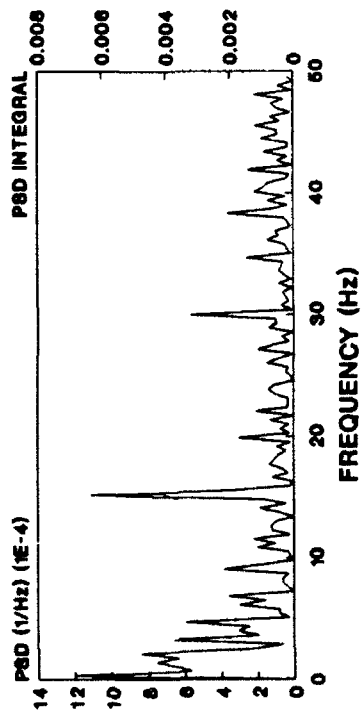
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MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



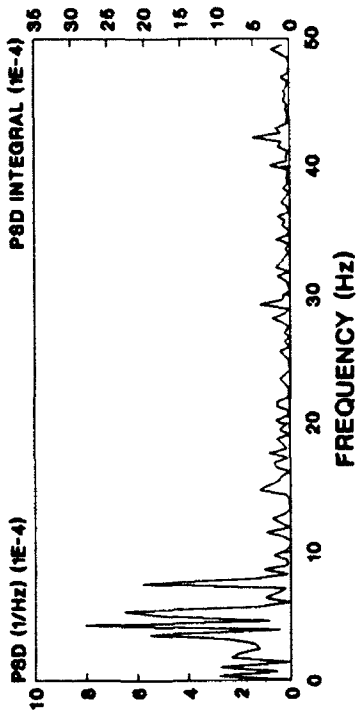
CUBE - HT 6.03 - THETA 00 - AZ - 046

FORCE COEFF - LATERAL **60 FT/SEC NOMINAL**



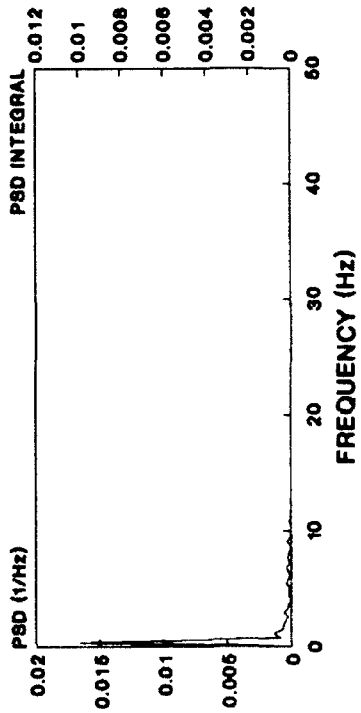
CUBE - HT 6.03 - THETA 00 - AZ 045

FORCE COEFF - LATERAL **90 FT/SEC NOMINAL**



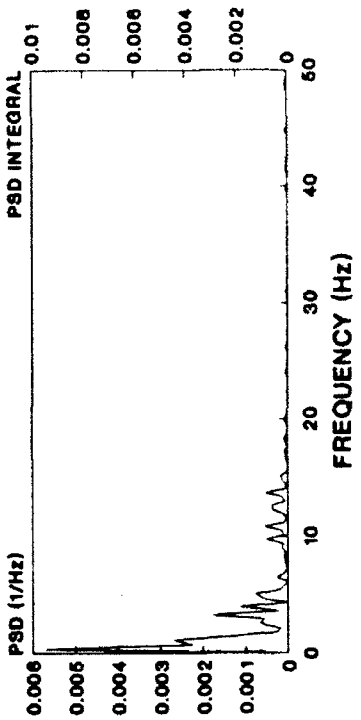
CUBE - HT 6.03 - THETA 00 - AZ 045

FORCE COEFF - LATERAL **120 FT/SEC NOMINAL**



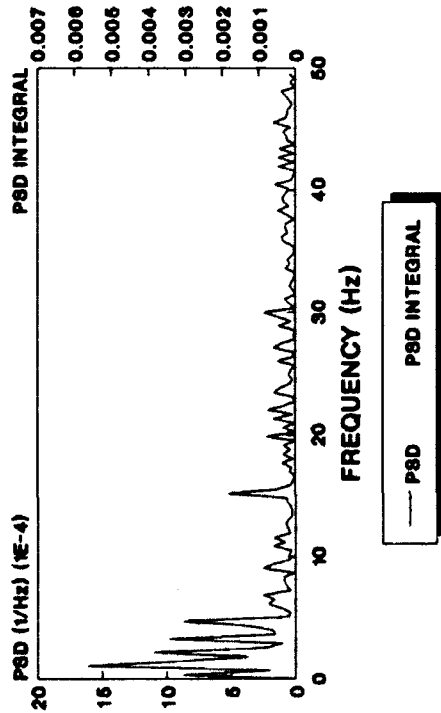
CUBE - HT 6.03 - THETA 00 - AZ 045

FORCE COEFF - LATERAL **180 FT/SEC NOMINAL**



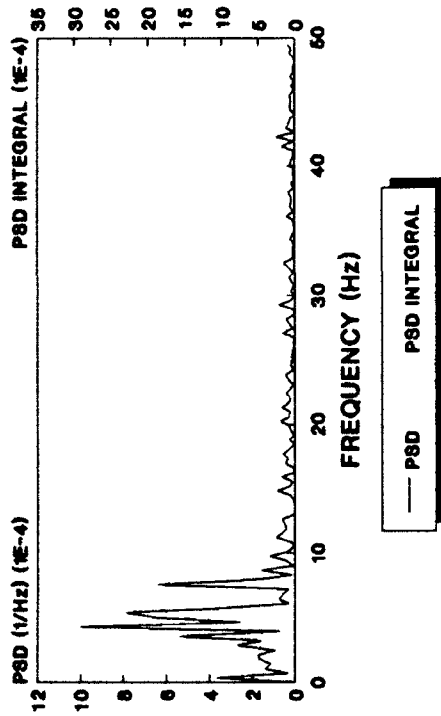
CUBE - HT 6.03 - THETA 00 - AZ 045

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



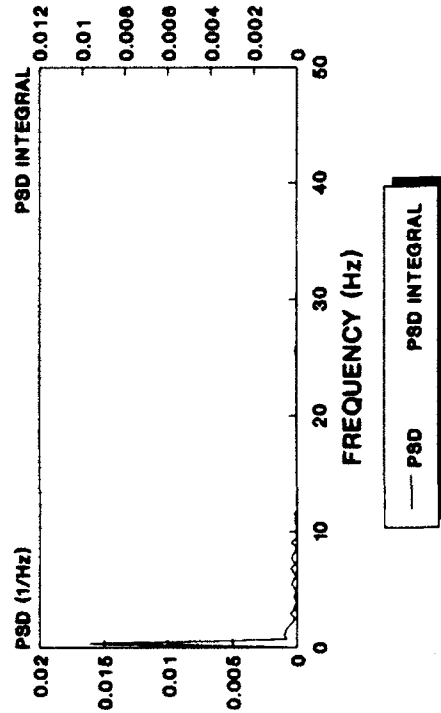
CUBE - HT 6.03 - THETA 00 - AZ 046

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



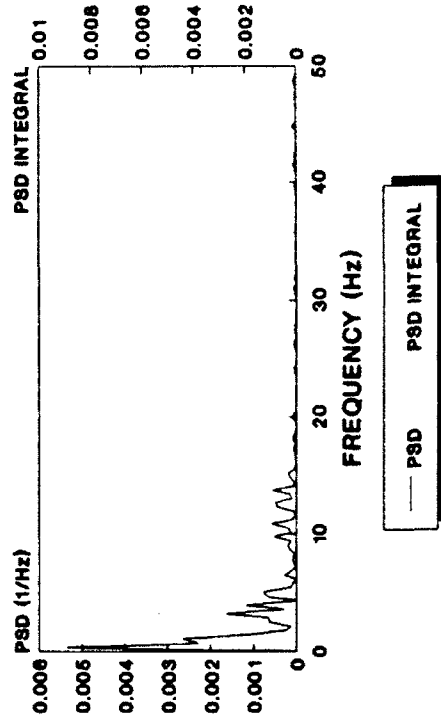
CUBE - HT 6.03 - THETA 00 - AZ 046

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



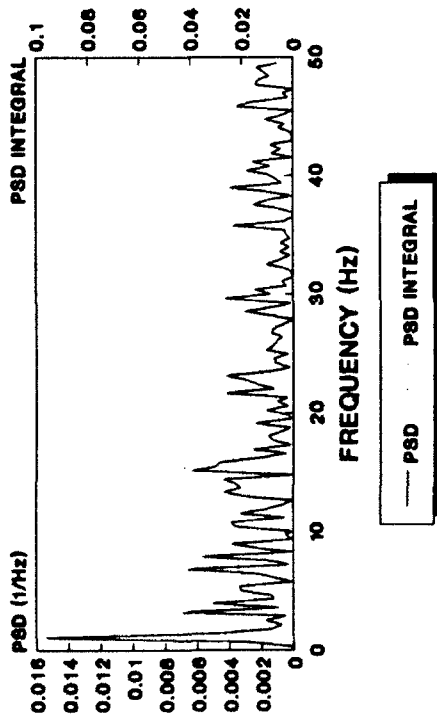
CUBE - HT 6.03 - THETA 00 - AZ 046

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



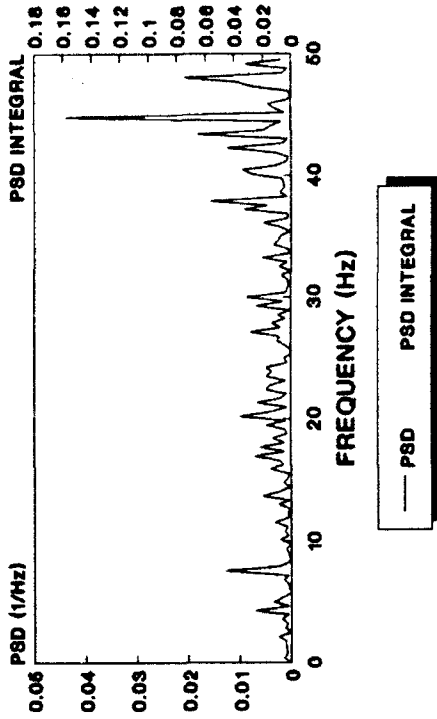
CUBE - HT 6.03 - THETA 00 - AZ 046

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



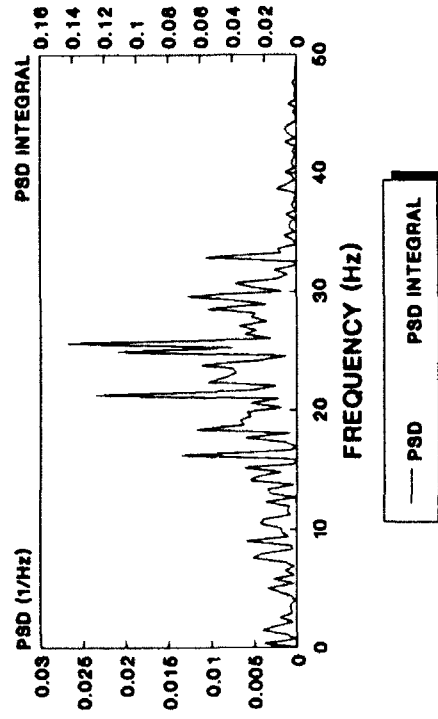
CUBE - HT 6.03 - THETA 00 - AZ - 046

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



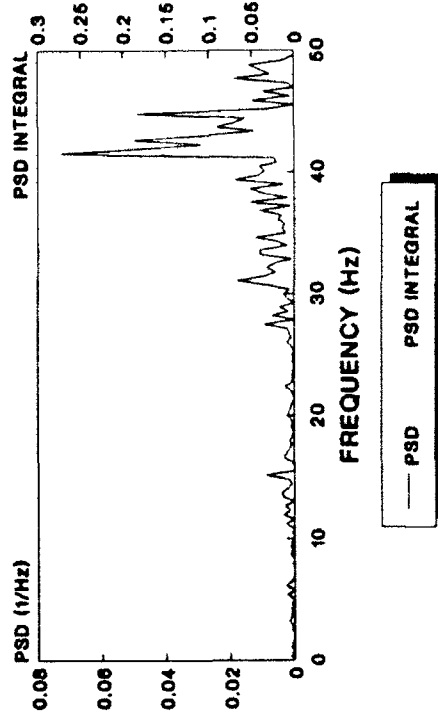
CUBE - HT 6.03 - THETA 00 - AZ - 045

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



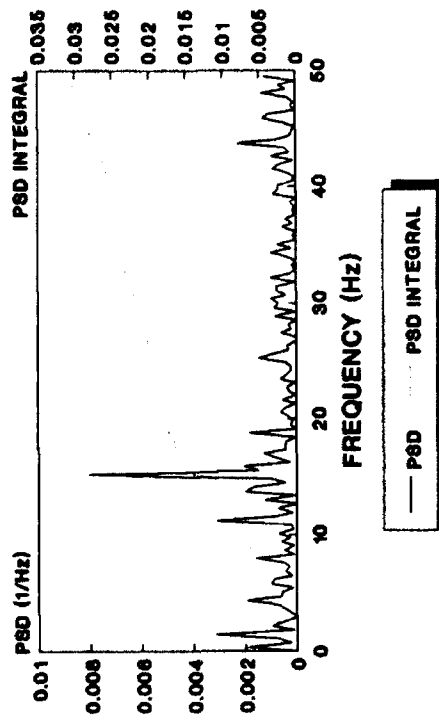
CUBE - HT 6.03 - THETA 00 - AZ - 046

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



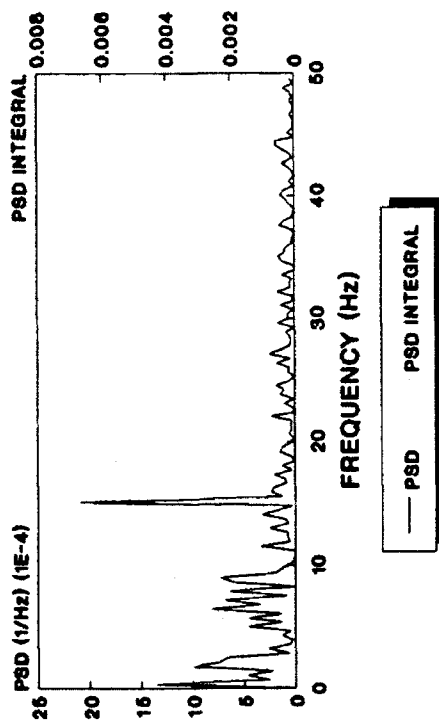
CUBE - HT 6.03 - THETA 00 - AZ - 045

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



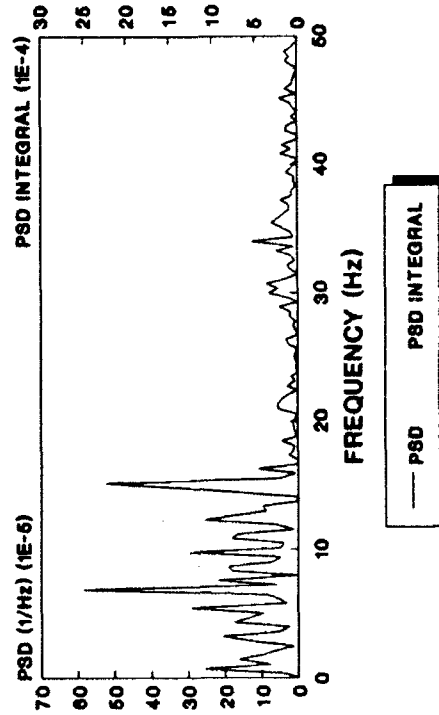
CUBE - HT 6.03 - THETA 00 - AZ - 040

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



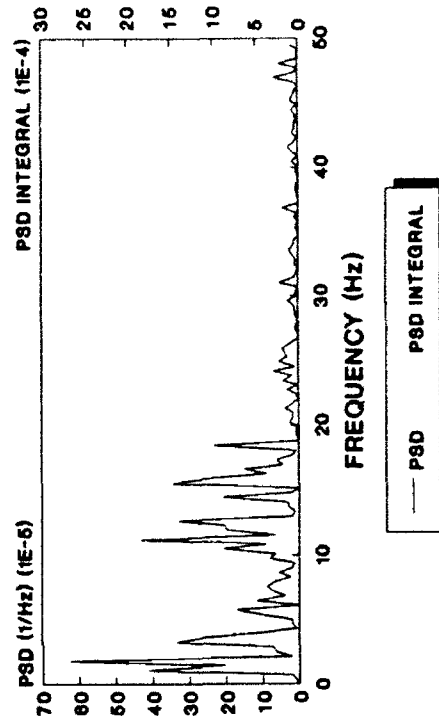
CUBE - HT 6.03 - THETA 00 - AZ - 080

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



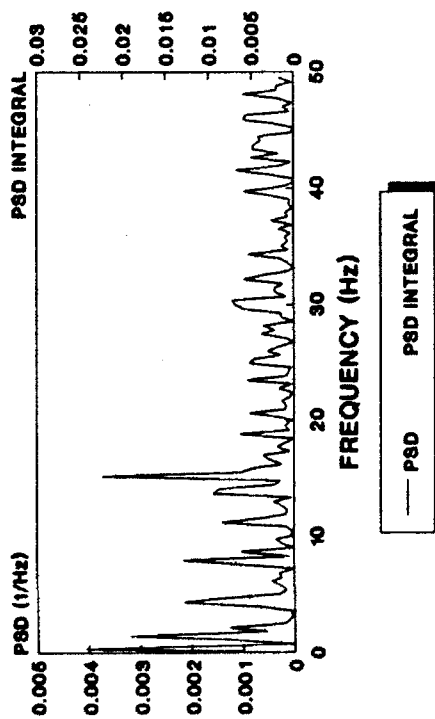
CUBE - HT 6.03 - THETA 00 - AZ - 040

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



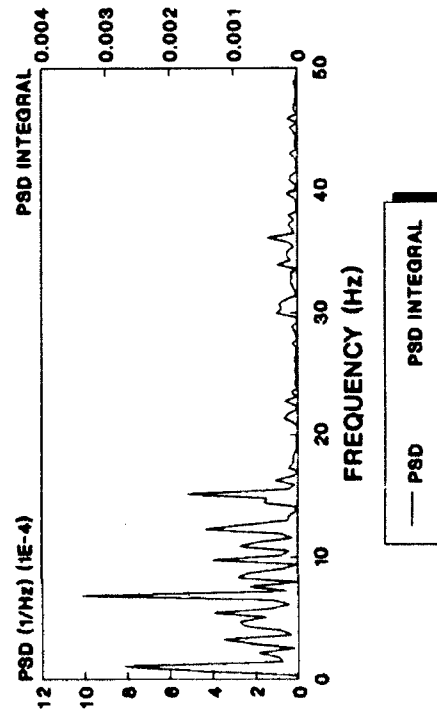
CUBE - HT 6.03 - THETA 00 - AZ - 080

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



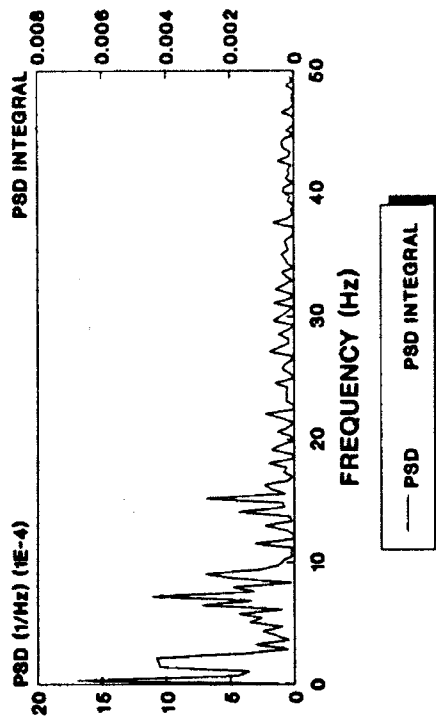
CUBE - HT 6.03 - THETA 00 - AZ - 060

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



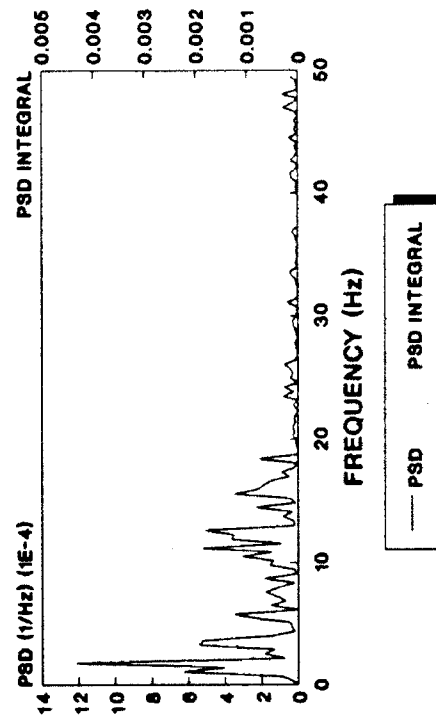
CUBE - HT 6.03 - THETA 00 - AZ - 060

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



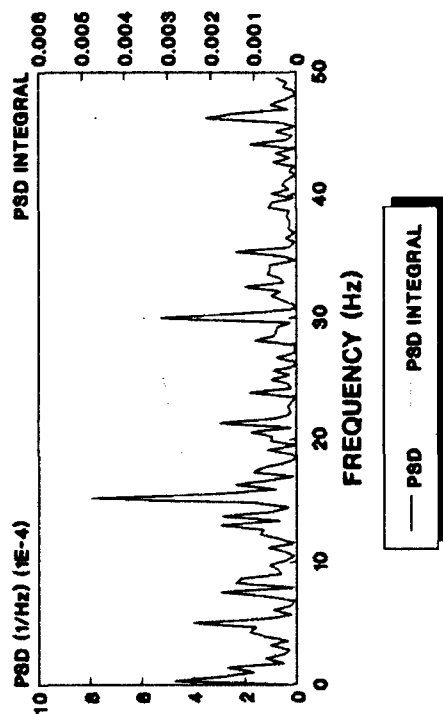
CUBE - HT 6.03 - THETA 00 - AZ - 060

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



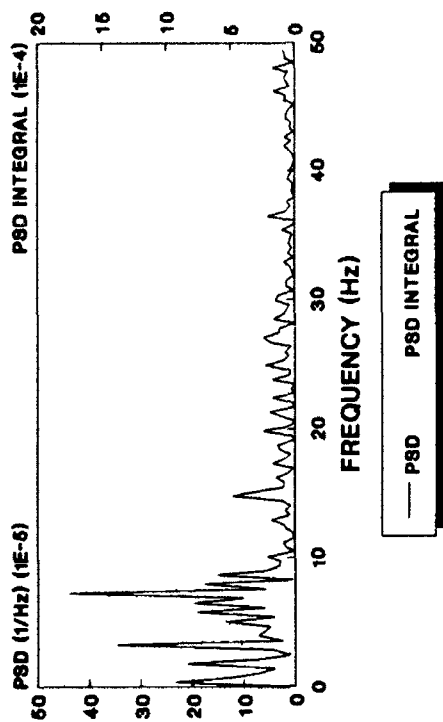
CUBE - HT 6.03 - THETA 00 - AZ - 060

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



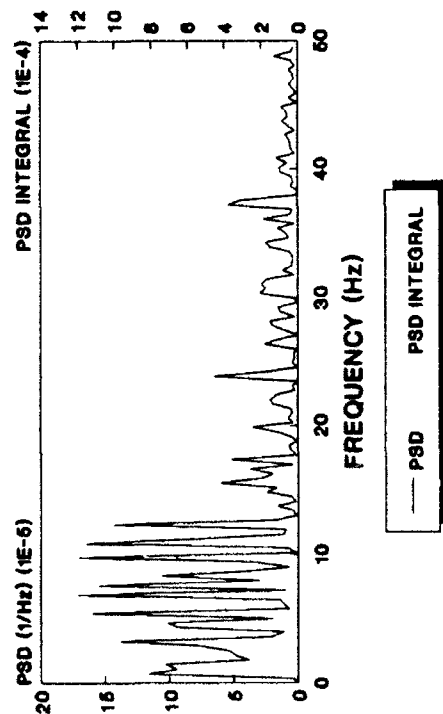
CUBE - HT 6.03 - THETA 00 - AZ 060

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



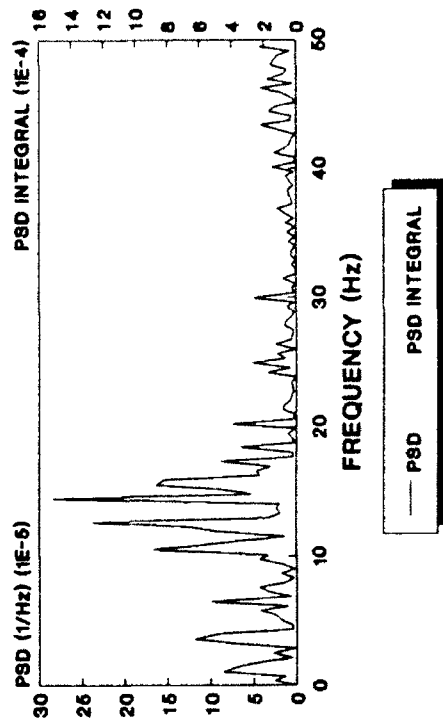
CUBE - HT 6.03 - THETA 00 - AZ 060

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



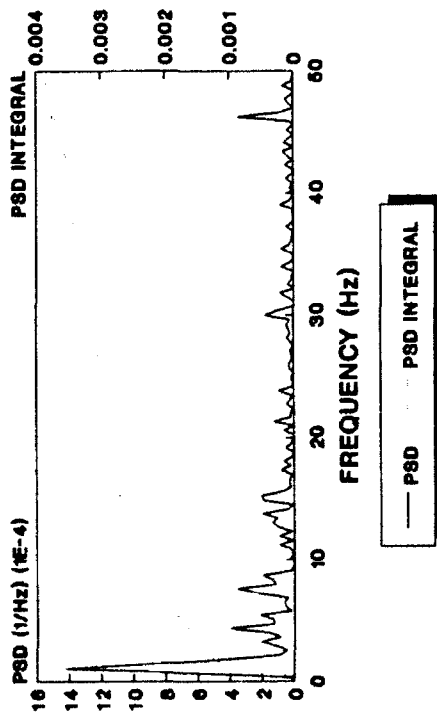
CUBE - HT 6.03 - THETA 00 - AZ 060

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



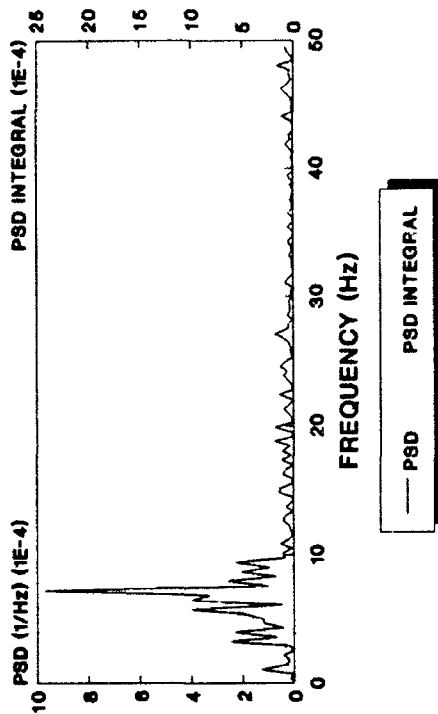
CUBE - HT 6.03 - THETA 00 - AZ 060

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



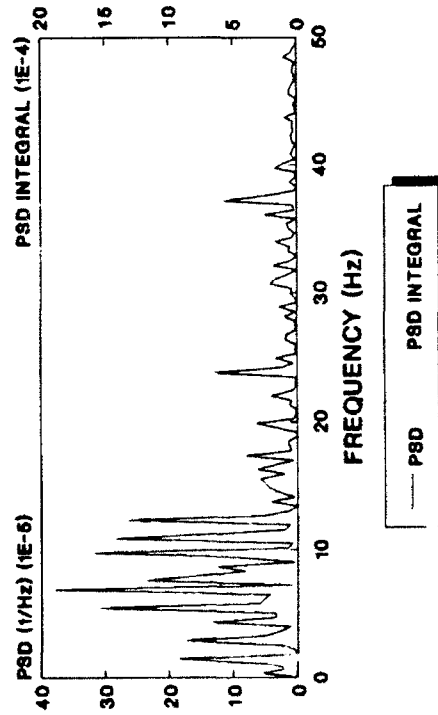
CUBE - HT 6.03 - THETA 00 - AZ 060

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



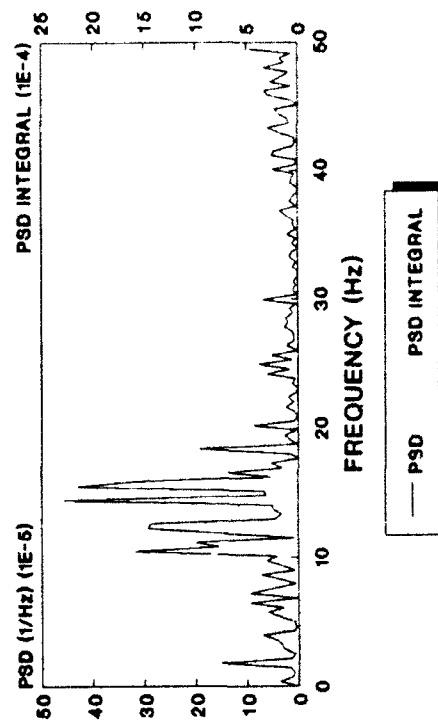
CUBE - HT 6.03 - THETA 00 - AZ 060

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



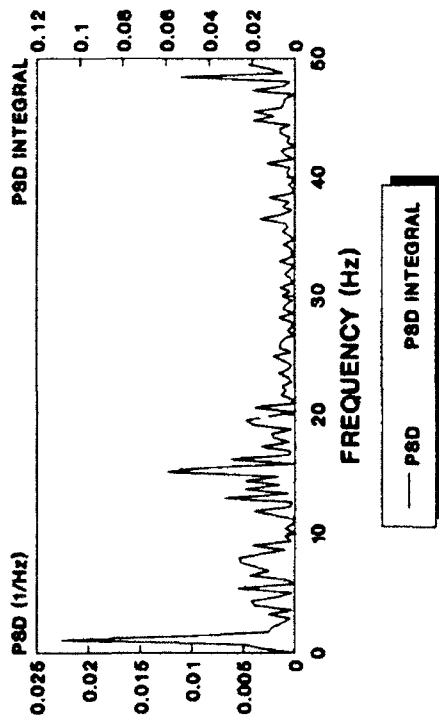
CUBE - HT 6.03 - THETA 00 - AZ 060

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



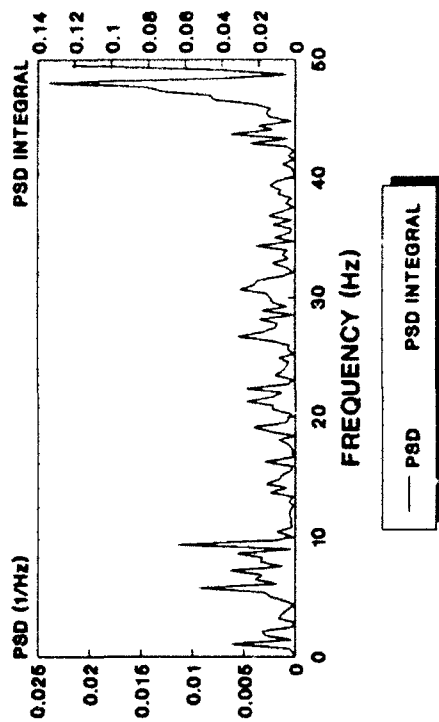
CUBE - HT 6.03 - THETA 00 - AZ 060

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



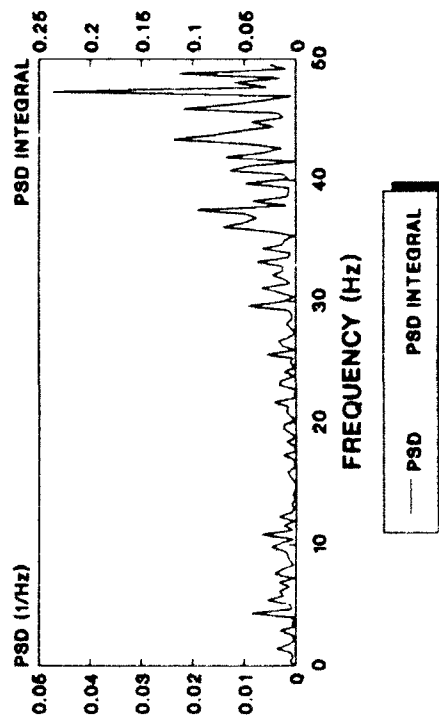
CUBE - HT 6.03 - THETA 00 - AZ - 060

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



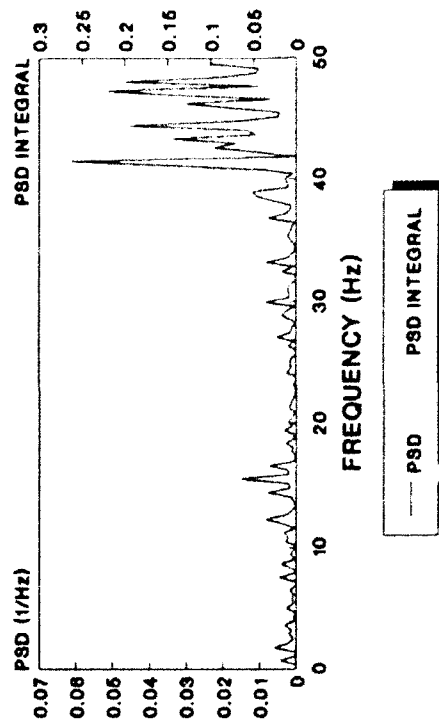
CUBE - HT 6.03 - THETA 00 - AZ - 090

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



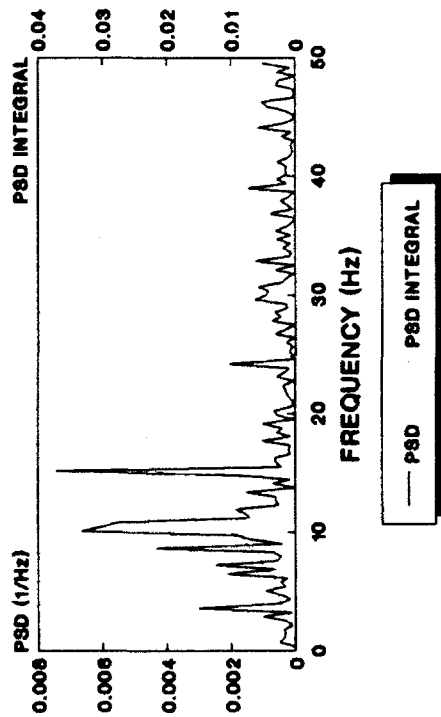
CUBE - HT 6.03 - THETA 00 - AZ - 060

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



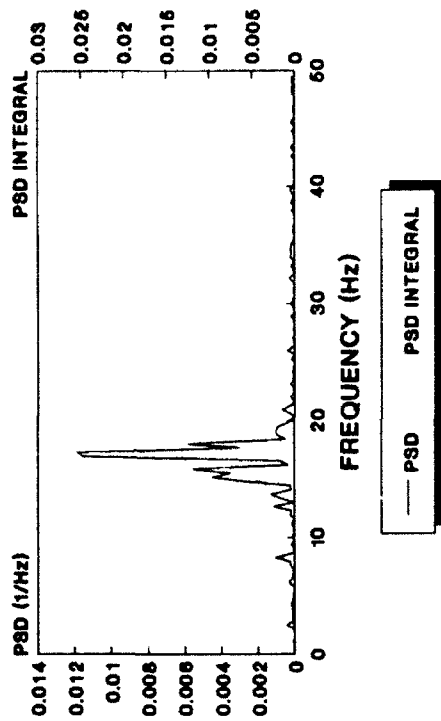
CUBE - HT 6.03 - THETA 00 - AZ - 090

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



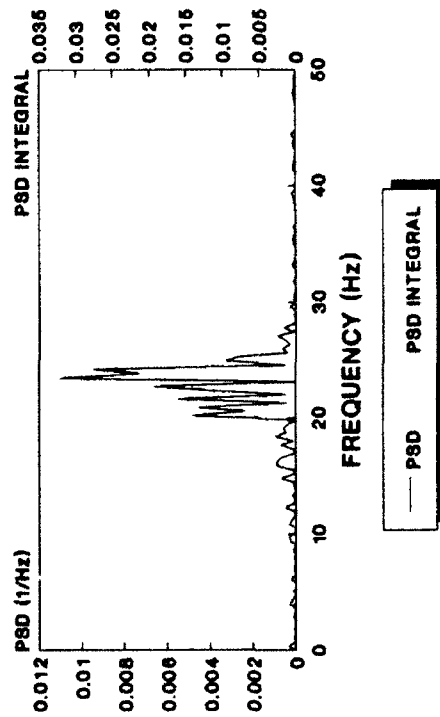
CUBE - HT 6.03 - THETA 00 - AZ - 090

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



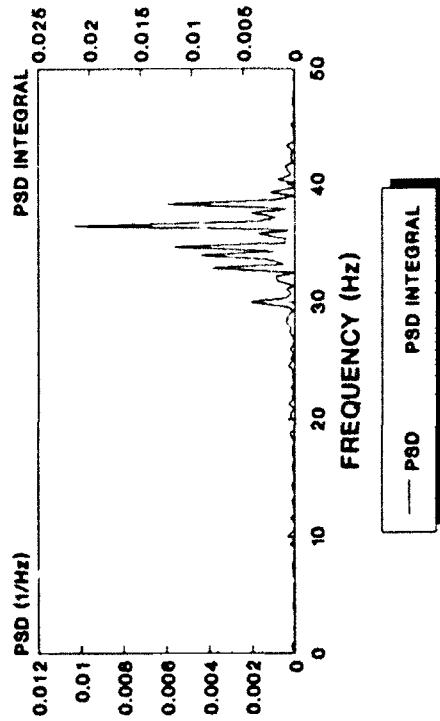
CUBE - HT 6.03 - THETA 00 - AZ - 090

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



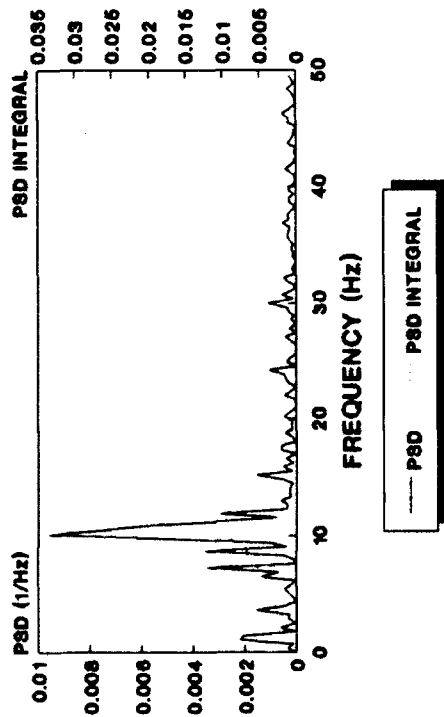
CUBE - HT 6.03 - THETA 00 - AZ - 090

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



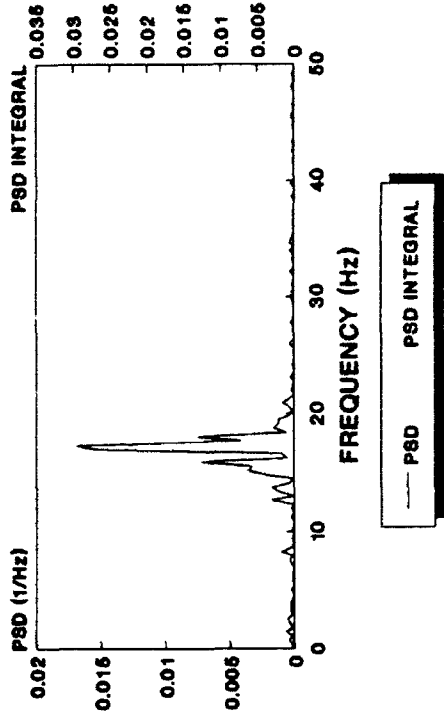
CUBE - HT 6.03 - THETA 00 - AZ - 090

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



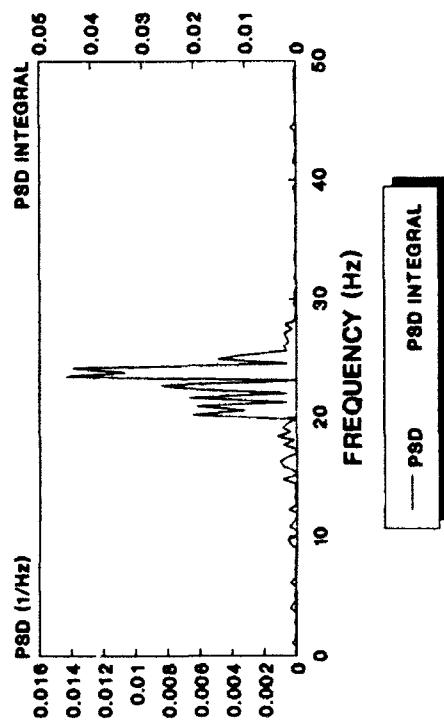
CUBE - HT 6.03 - THETA 00 - AZ - 090

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



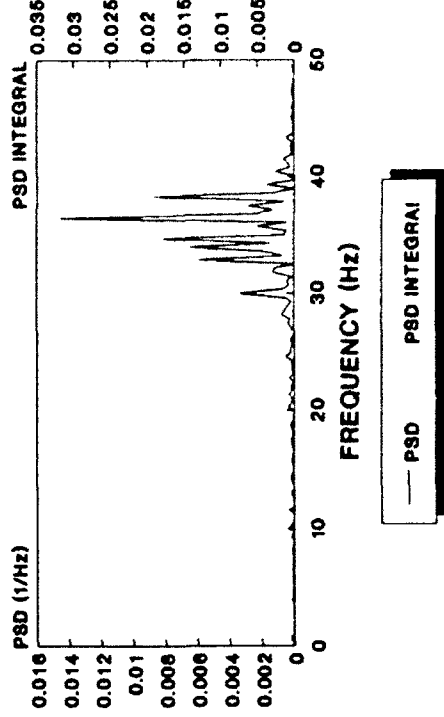
CUBE - HT 6.03 - THETA 00 - AZ - 090

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



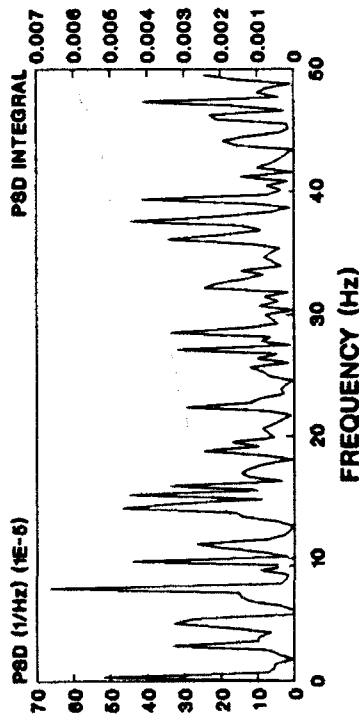
CUBE - HT 6.03 - THETA 00 - AZ - 090

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



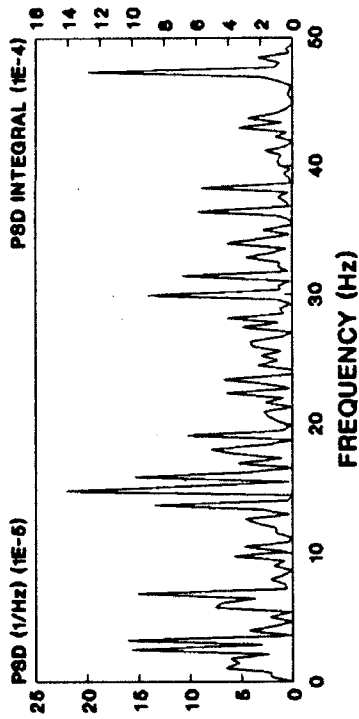
CUBE - HT 6.03 - THETA 00 - AZ - 090

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



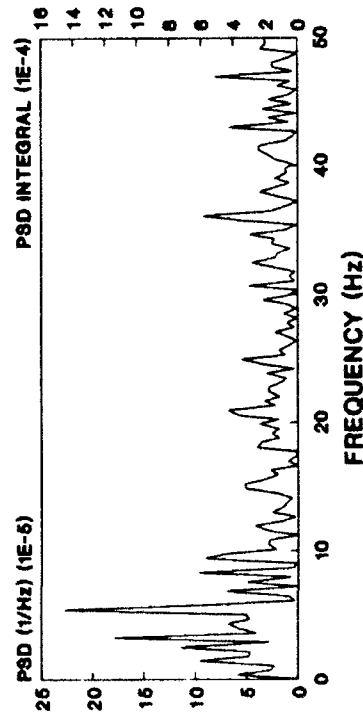
CUBE - HT 8.03 - THETA 00 - AZ 090

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



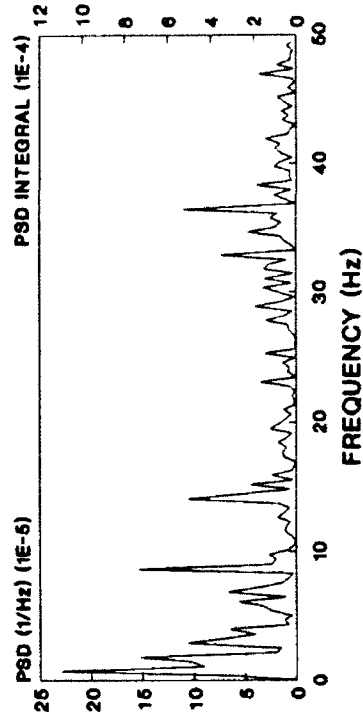
CUBE - HT 8.03 - THETA 00 - AZ 090

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



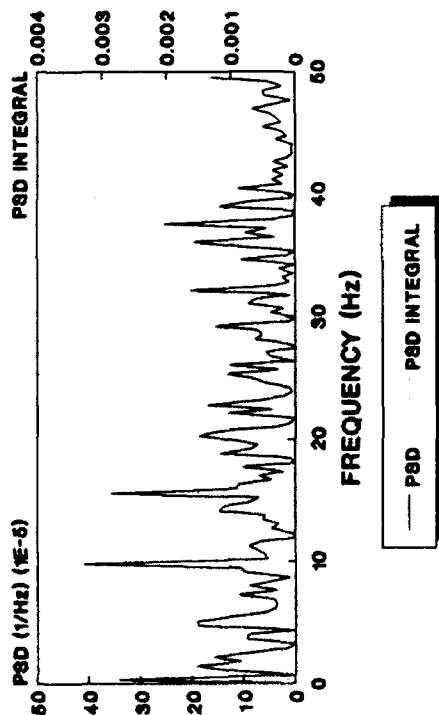
CUBE - HT 8.03 - THETA 00 - AZ 090

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



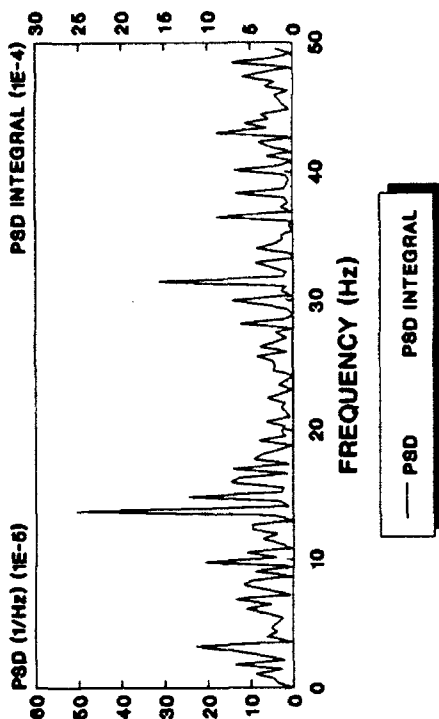
CUBE - HT 8.03 - THETA 00 - AZ 090

MOMENT COEFF - LATERAL **60 FT/SEC NOMINAL**



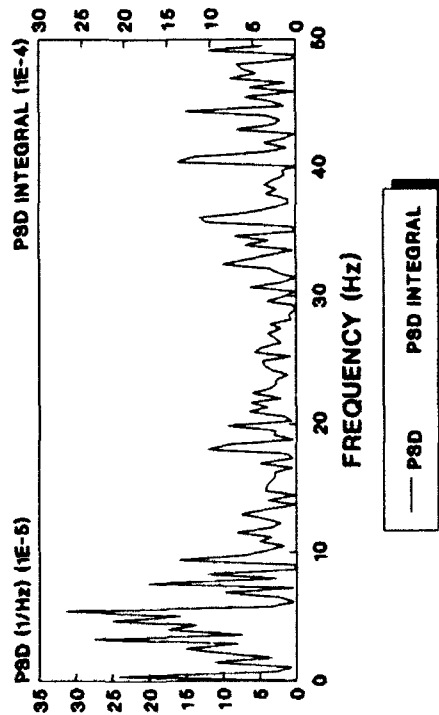
CUBE - HT 6.03 - THETA 00 - AZ 090

MOMENT COEFF - LATERAL **90 FT/SEC NOMINAL**



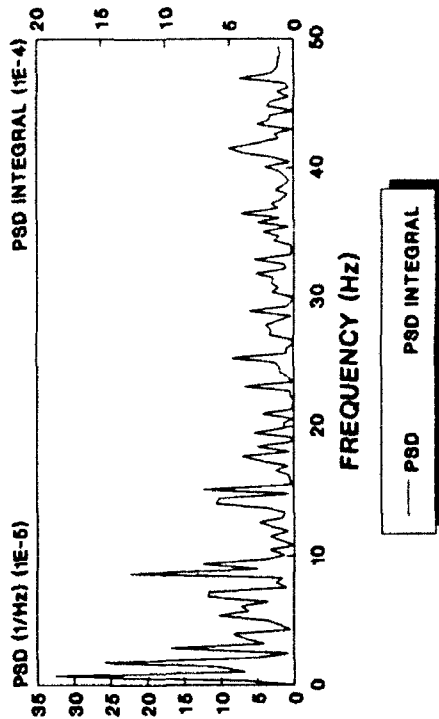
CUBE - HT 6.03 - THETA 00 - AZ 090

MOMENT COEFF - LATERAL **120 FT/SEC NOMINAL**



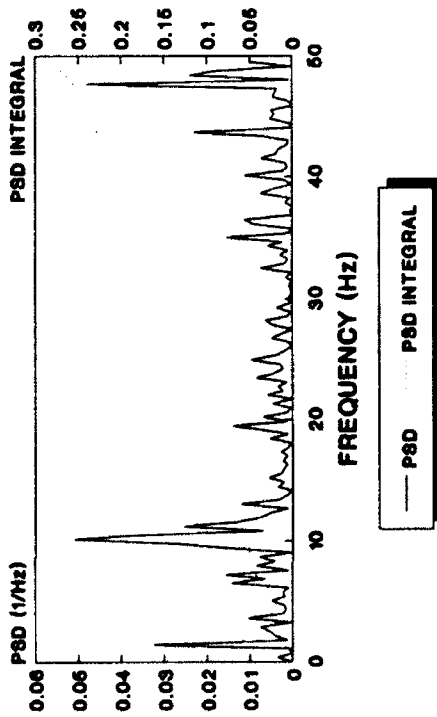
CUBE - HT 6.03 - THETA 00 - AZ 090

MOMENT COEFF - LATERAL **180 FT/SEC NOMINAL**



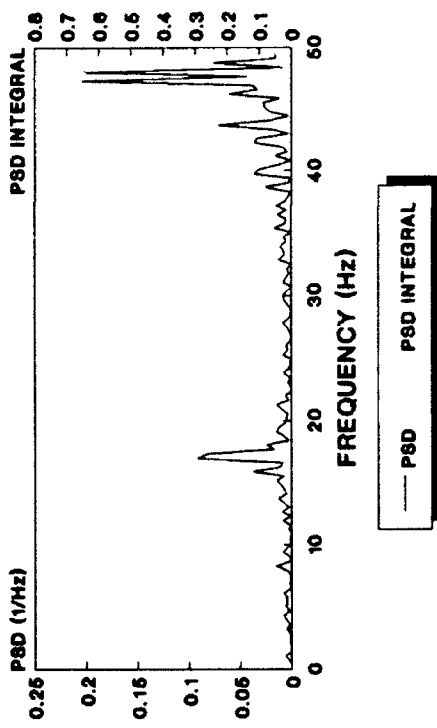
CUBE - HT 6.03 - THETA 00 - AZ 090

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



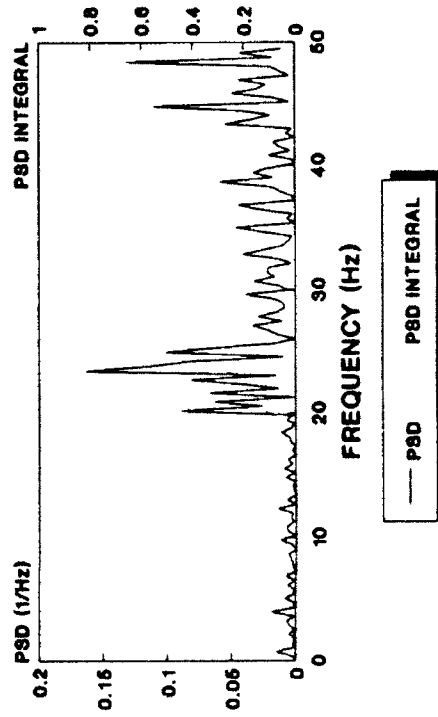
CUBE - HT 6.03 - THETA 00 - AZ - 090

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



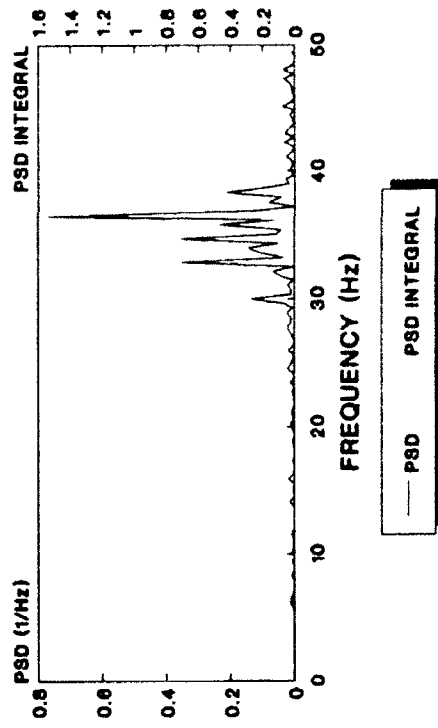
CUBE - HT 6.03 - THETA 00 - AZ - 090

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



CUBE - HT 6.03 - THETA 00 - AZ - 090

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



CUBE - HT 6.03 - THETA 00 - AZ - 090

DATA REPORT

SHAPE:	CUBE
DECLINATION [THETA (degrees)]:	0
DIMENSIONS [LxWxH (in)]:	7.66 x 7.91 x 7.91
WEIGHT (gm):	873.8
TORSION FREQUENCY (Hz):	40
LATERAL (SIDE BEND) FREQUENCY (Hz):	69
NORMAL (AFT BEND) FREQUENCY (Hz):	69
AZIMUTHS (degrees):	0, 30, 45, 60

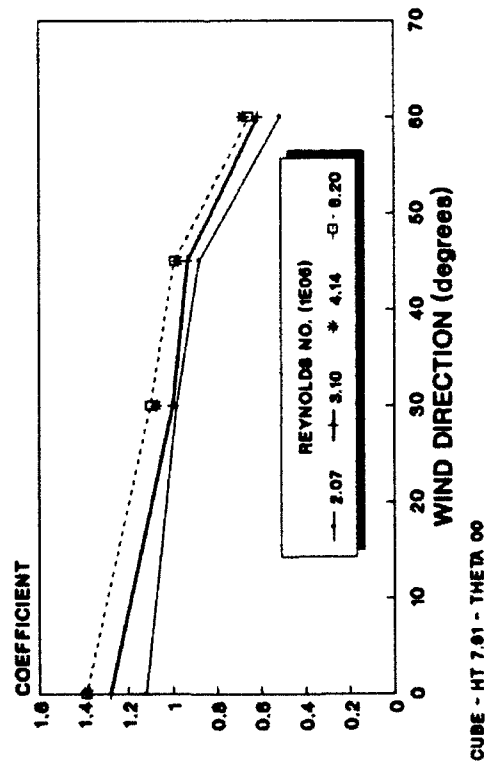
GRAPH CORRECTIONS:

- The mean value of the **ROLL** moment coefficients should be divided by 12.
- The PSD and PSD Integral values of the **ROLL** moment coefficients should be divided by 144.

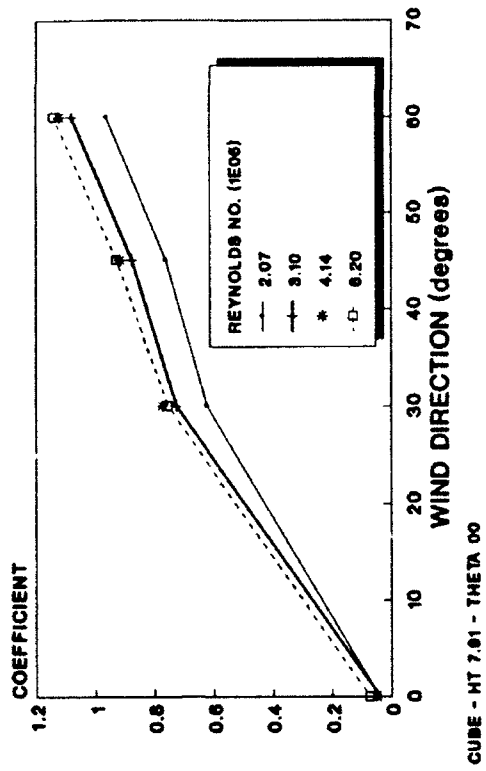
OBSERVATIONS:

- Very good shedding seen in the lateral and roll data at 0 degrees azimuth. One of the best examples of a near single frequency shed.
- 15.176 Hz spike observed in the data.

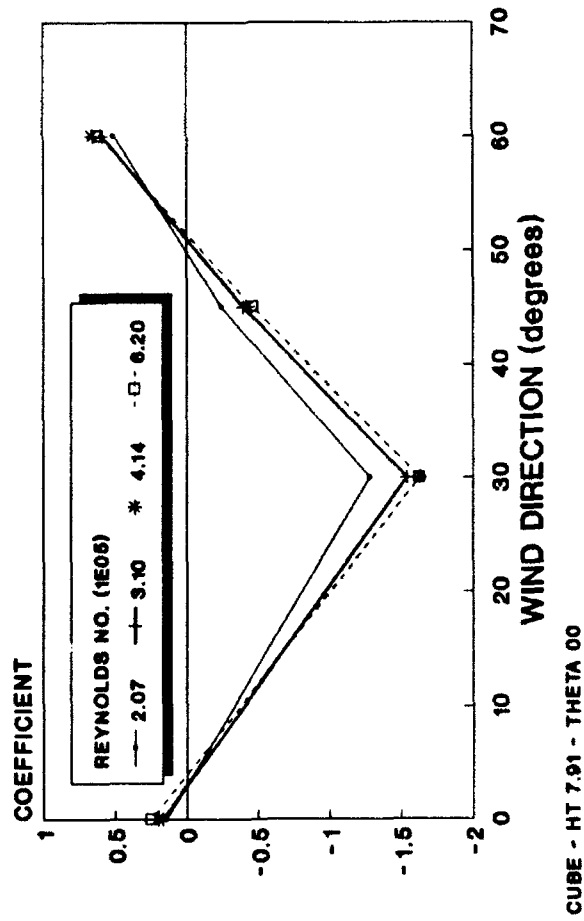
MEAN FORCE COEFFICIENT NORMAL DIRECTION



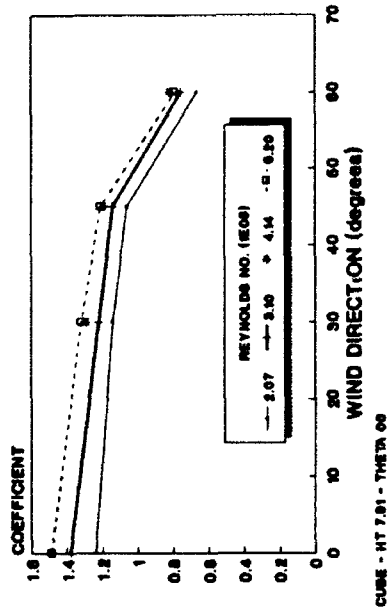
MEAN FORCE COEFFICIENT LATERAL DIRECTION



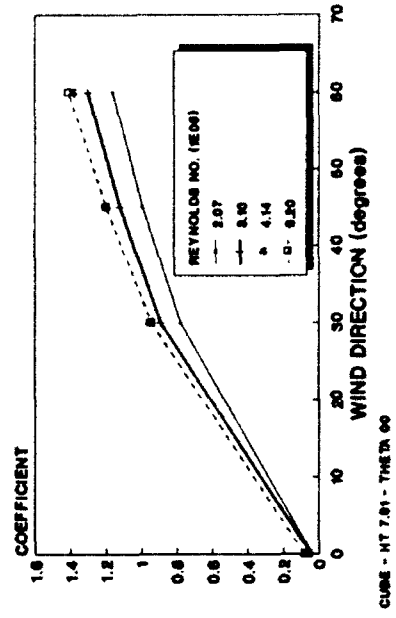
MEAN MOMENT COEFFICIENT ROLL DIRECTION



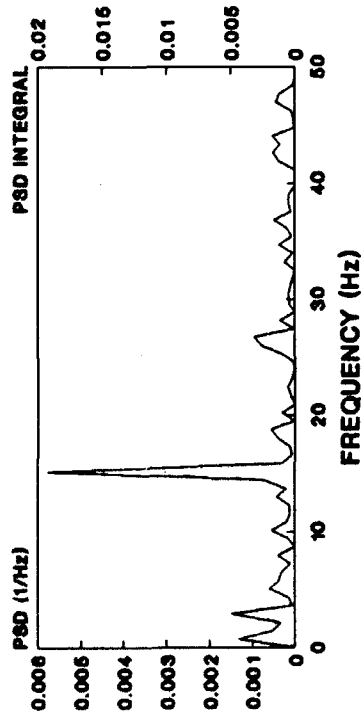
MEAN MOMENT COEFFICIENT NORMAL DIRECTION



MEAN MOMENT COEFFICIENT LATERAL DIRECTION

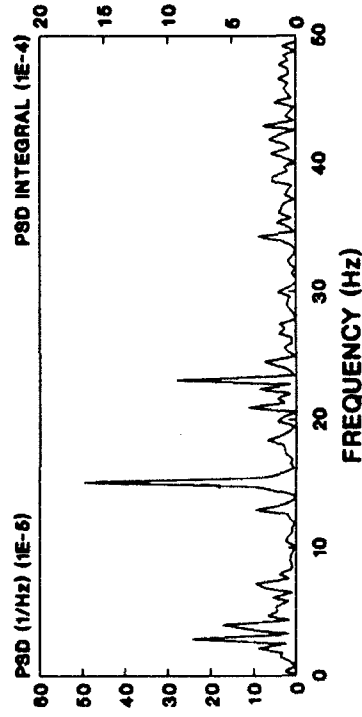


FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



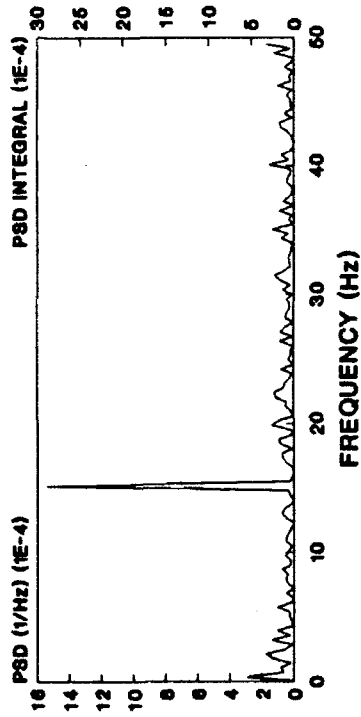
CUBE - HT 7.91 - THETA 00 - AZ 000

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



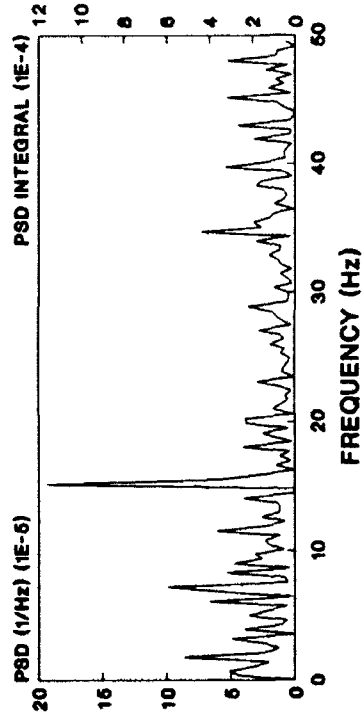
CUBE - HT 7.91 - THETA 00 - AZ 000

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



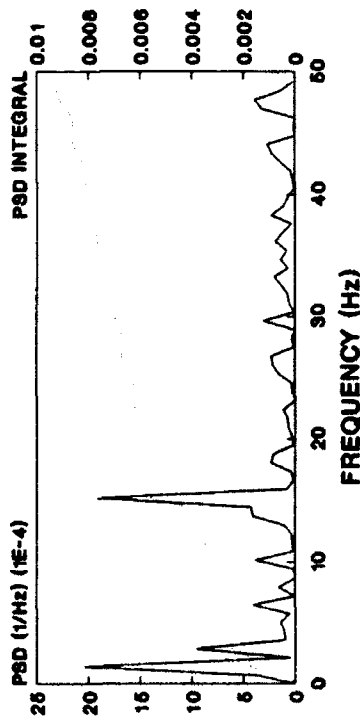
CUBE - HT 7.91 - THETA 00 - AZ 000

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



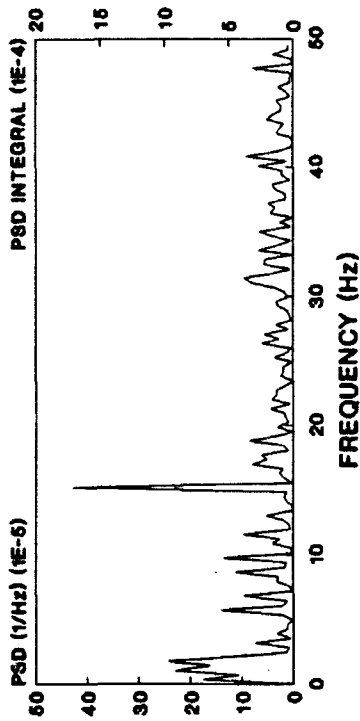
CUBE - HT 7.91 - THETA 00 - AZ 000

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



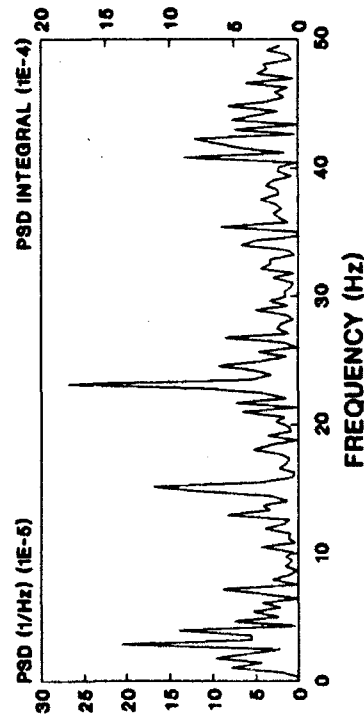
CUBE - HT 7.91 - THETA 00 - AZ 000

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



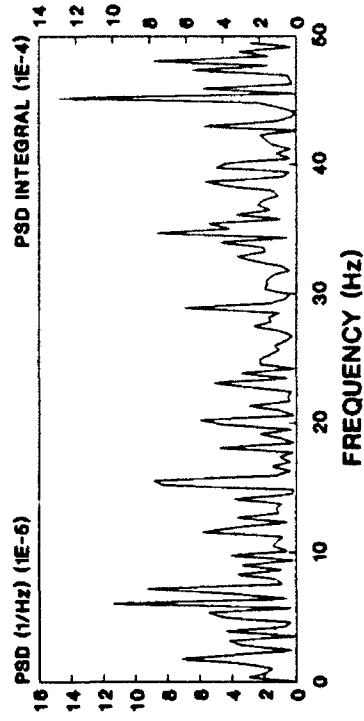
CUBE - HT 7.91 - THETA 00 - AZ 000

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



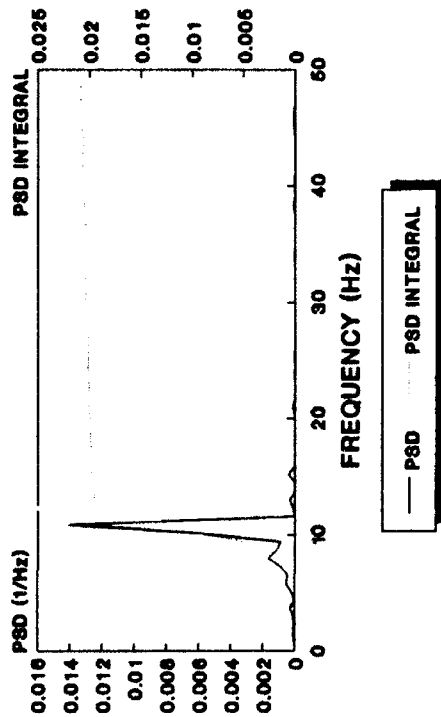
CUBE - HT 7.91 - THETA 00 - AZ 000

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



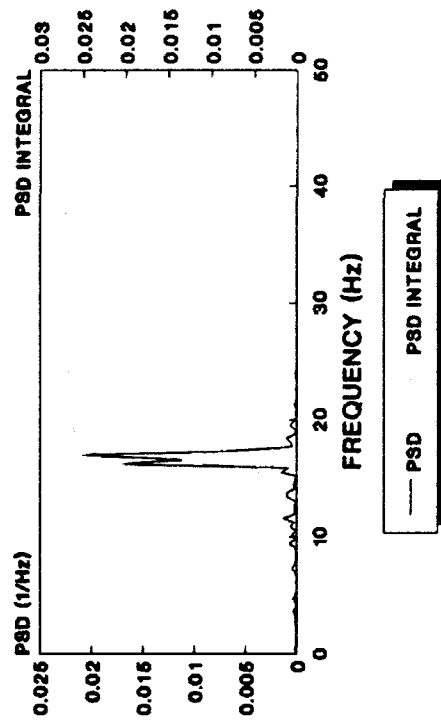
CUBE - HT 7.91 - THETA 00 - AZ 000

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



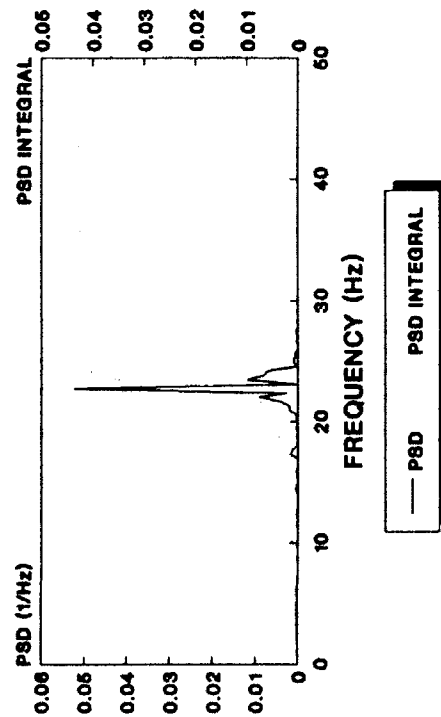
CUBE - HT 7.91 - THETA 00 - AZ 000

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



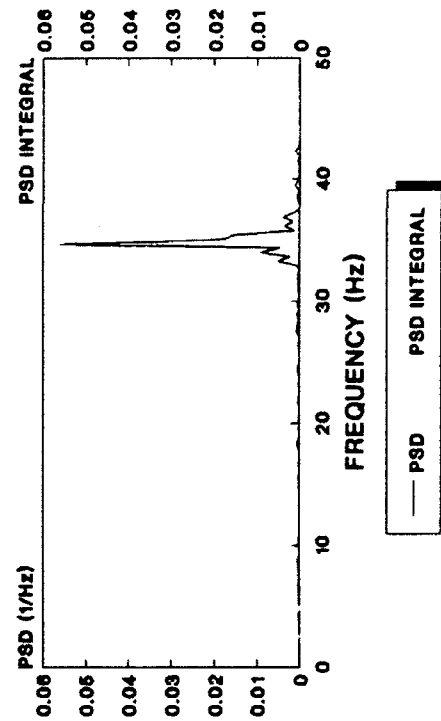
CUBE - HT 7.91 - THETA 00 - AZ 000

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



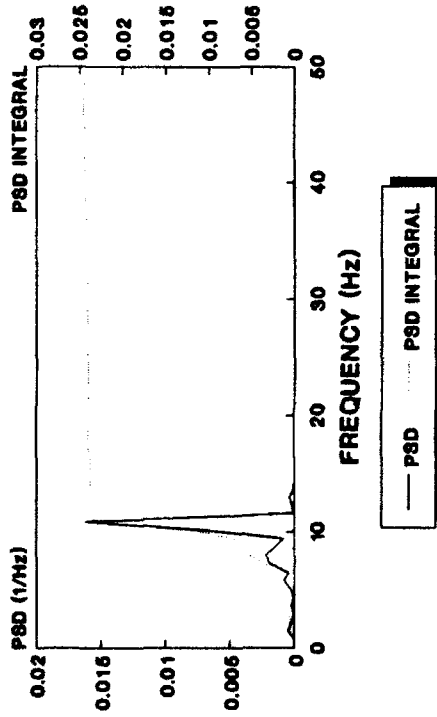
CUBE - HT 7.91 - THETA 00 - AZ 000

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



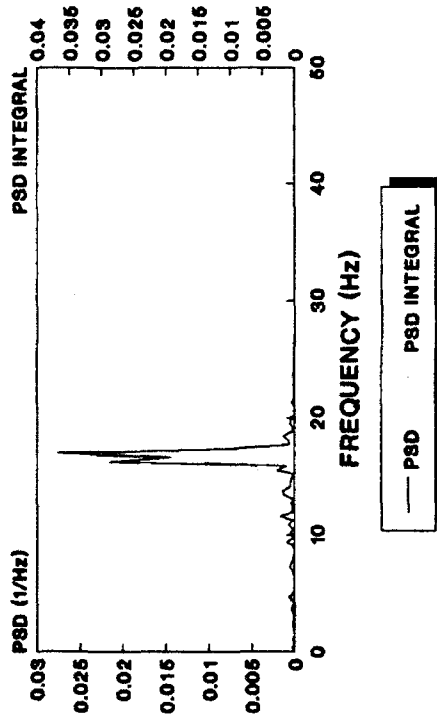
CUBE - HT 7.91 - THETA 00 - AZ 000

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



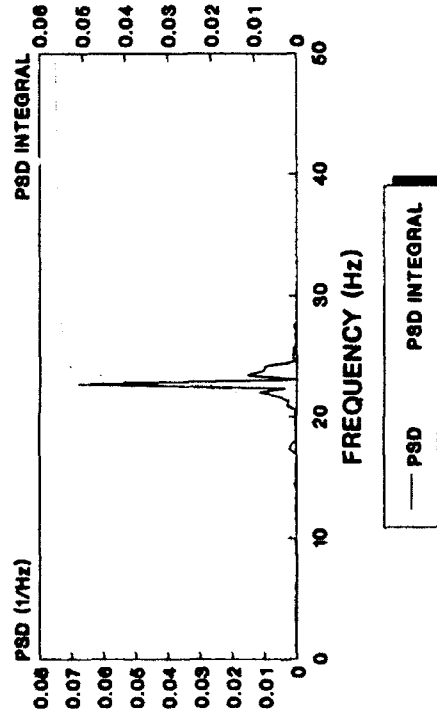
CUBE - HT 7.91 - THETA 00 - AZ 000

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



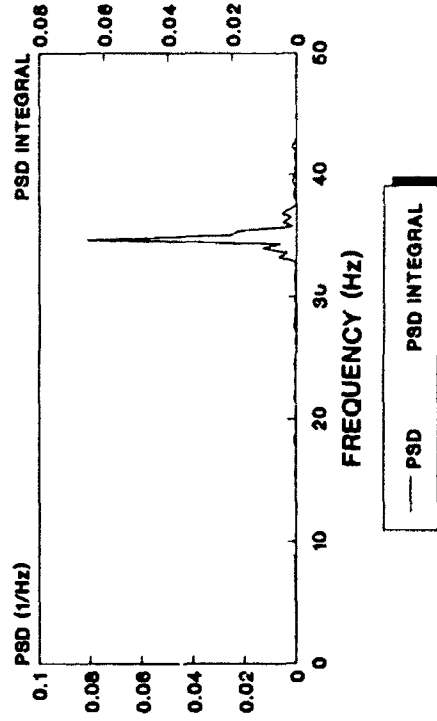
CUBE - HT 7.91 - THETA 00 - AZ 000

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



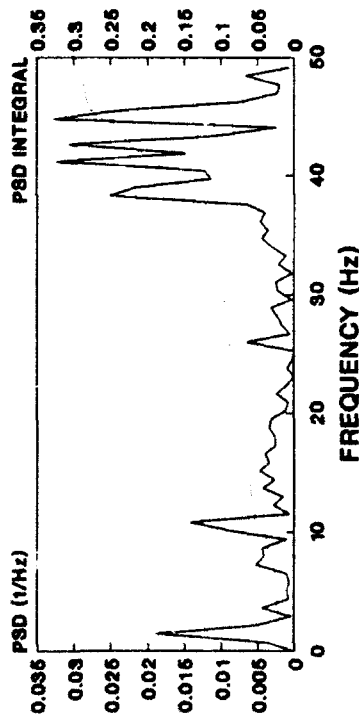
CUBE - HT 7.91 - THETA 00 - AZ 000

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



CUBE - HT 7.91 - THETA 00 - AZ 000

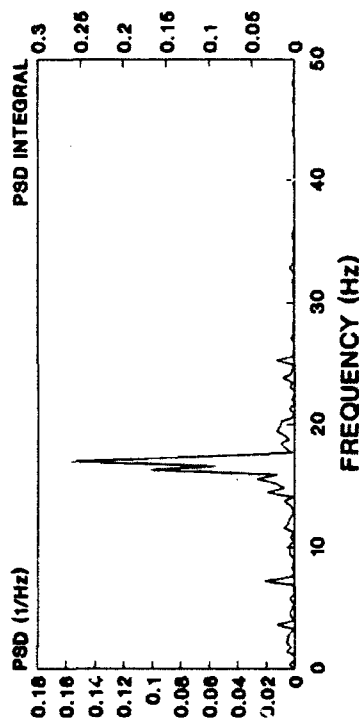
MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



— PSD - - - PSD INTEGRAL

CUBE - HT 7.91 - THETA 00 - AZ 000

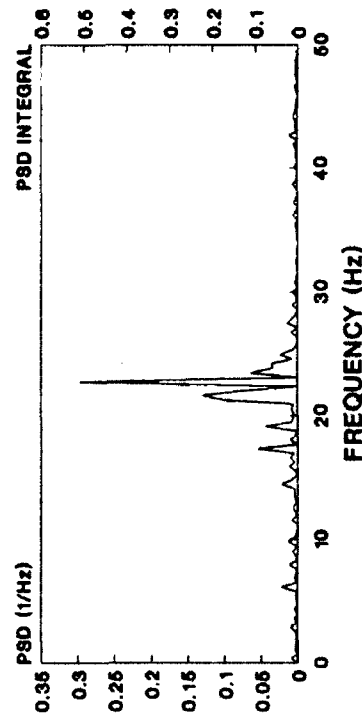
MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



— PSD - - - PSD INTEGRAL

CUBE - HT 7.91 - THETA 00 - AZ 000

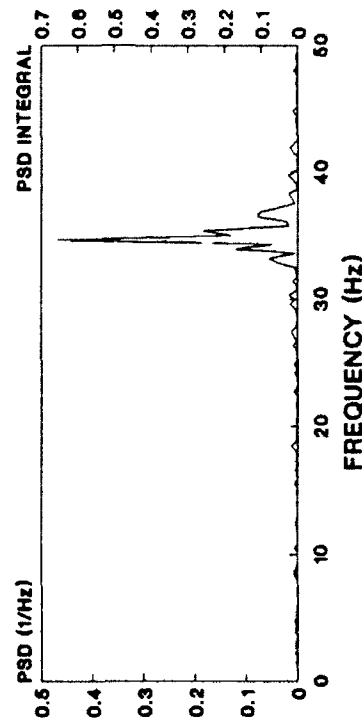
MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



— PSD - - - PSD INTEGRAL

CUBE - HT 7.91 - THETA 00 - AZ 000

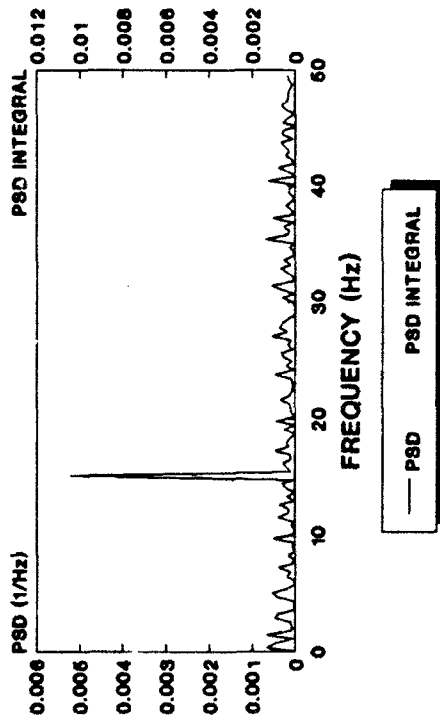
MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



— PSD - - - PSD INTEGRAL

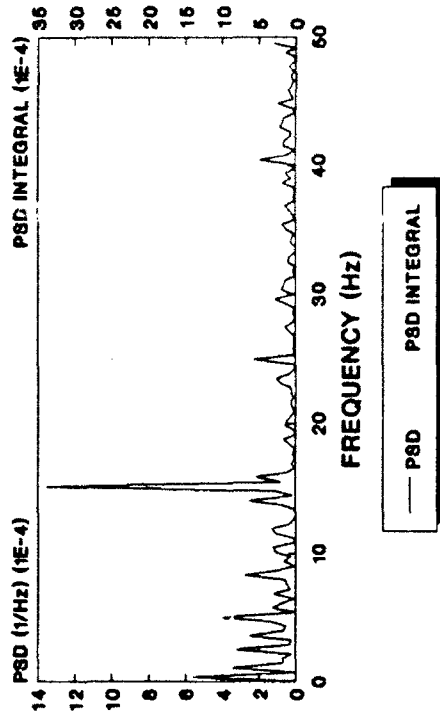
CUBE - HT 7.91 - THETA 00 - AZ 000

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



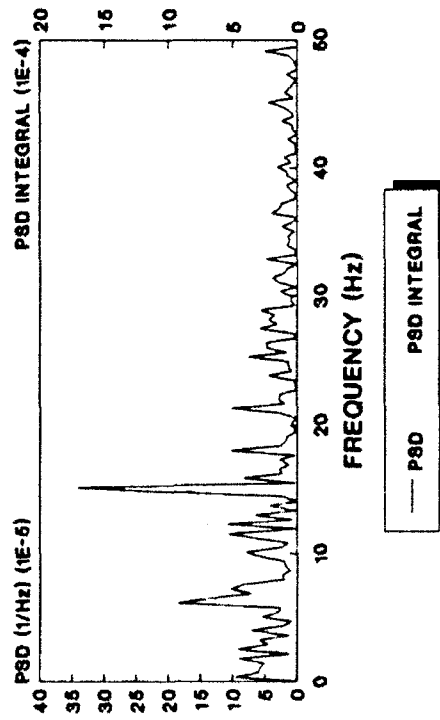
CUBE - HT 7.91 - THETA 00 - AZ 030

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



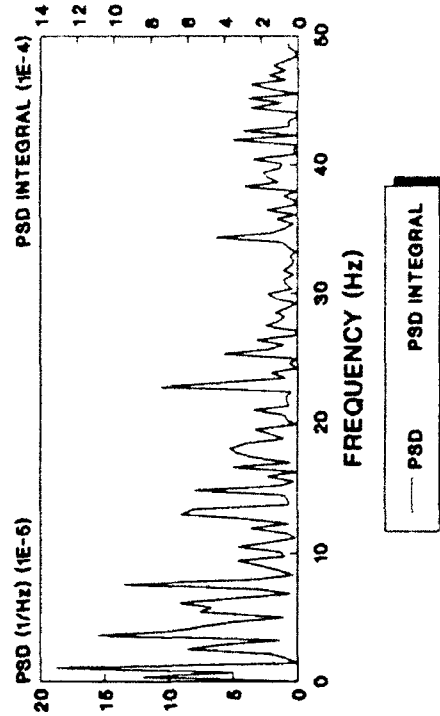
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FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



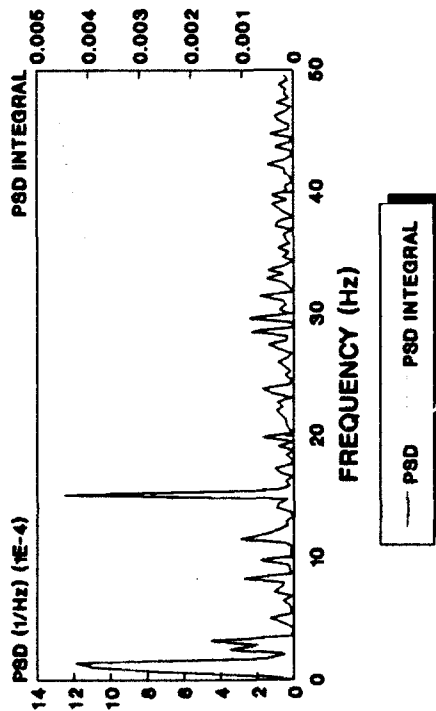
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FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



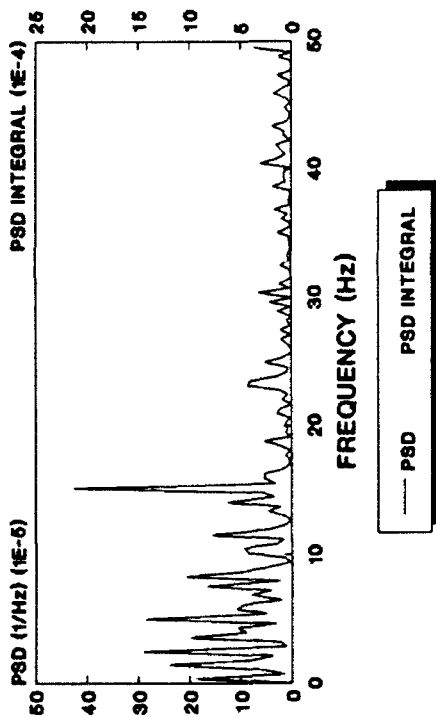
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MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



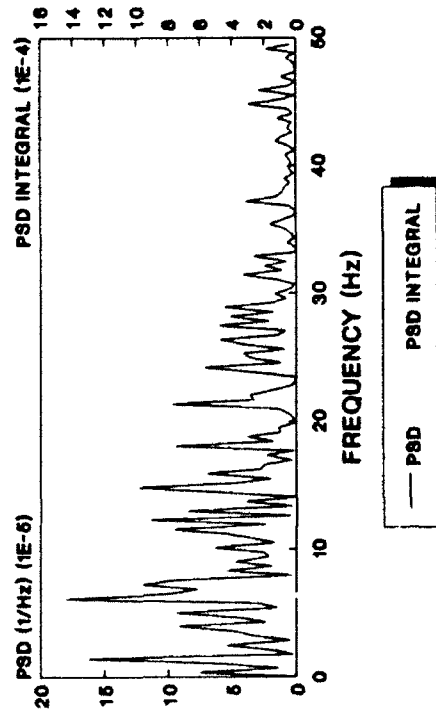
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MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



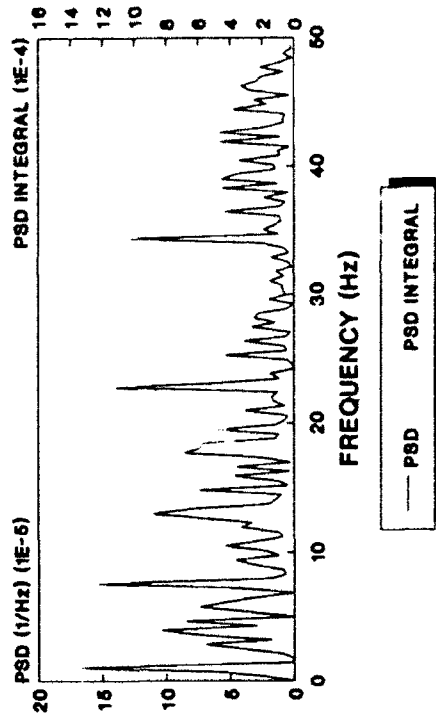
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MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



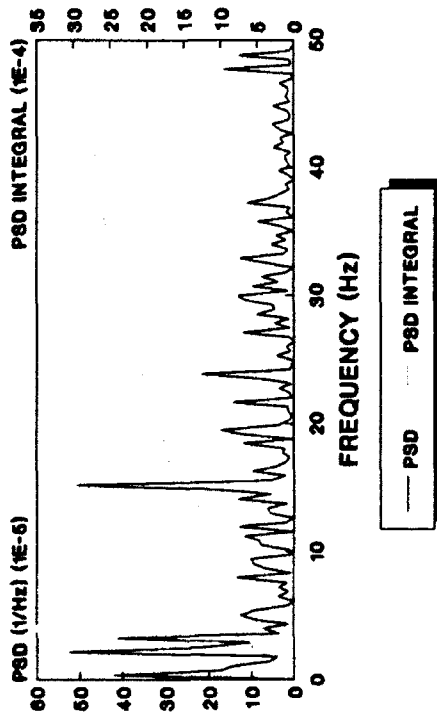
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MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



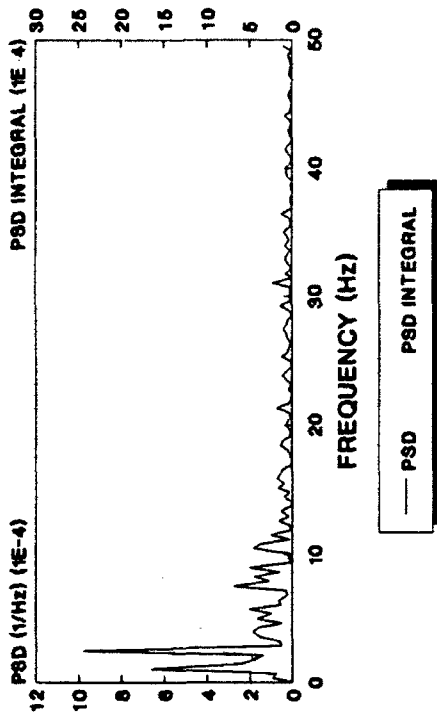
CUBE - HT 7.91 - THETA 00 - AZ 030

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



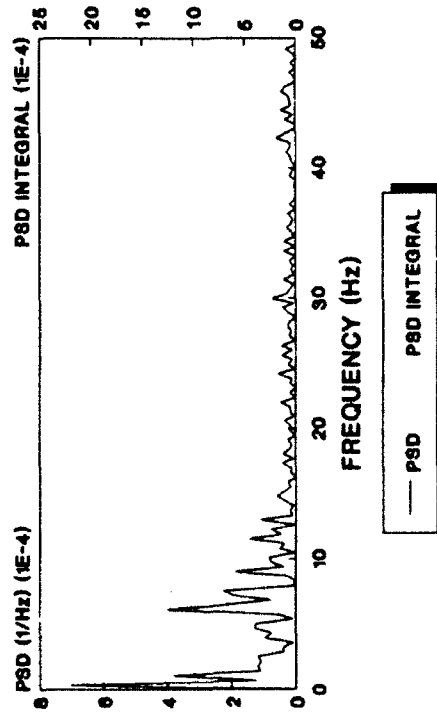
CUBE - MT 7.91 - THETA 00 - AZ 030

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



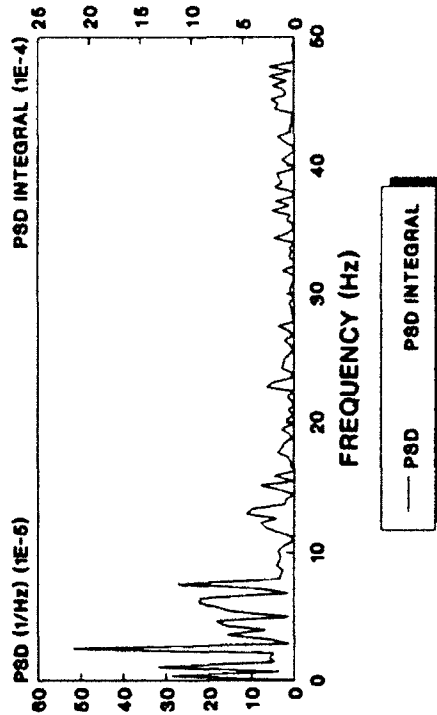
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FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



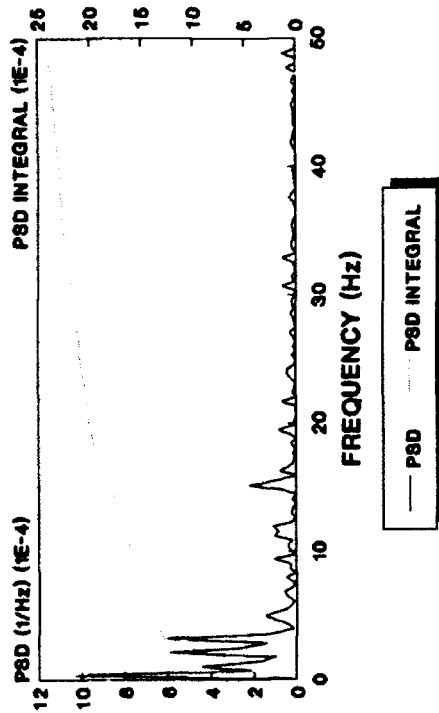
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FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



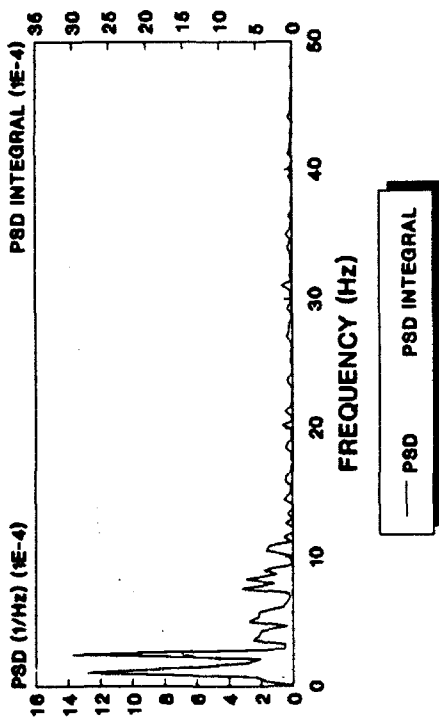
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MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



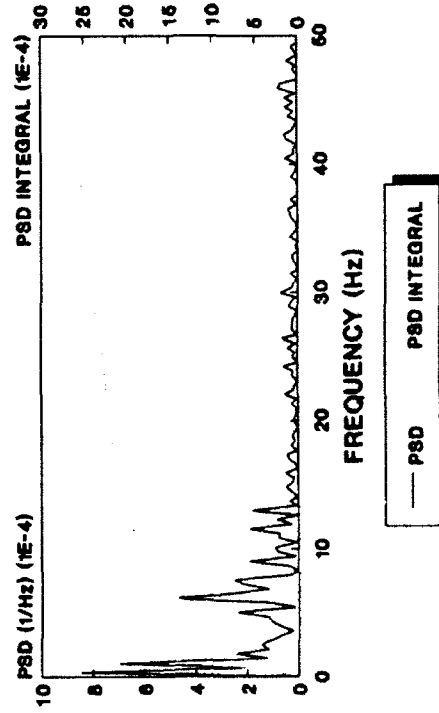
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MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



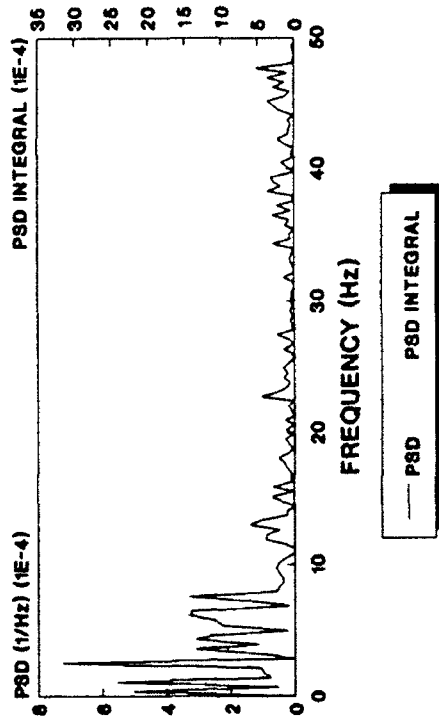
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MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



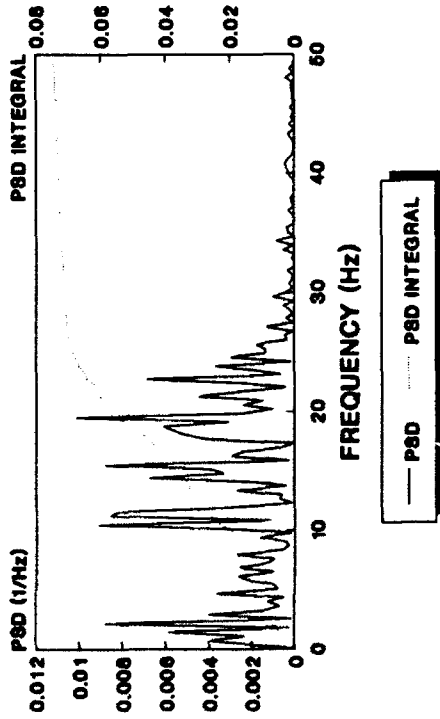
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MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



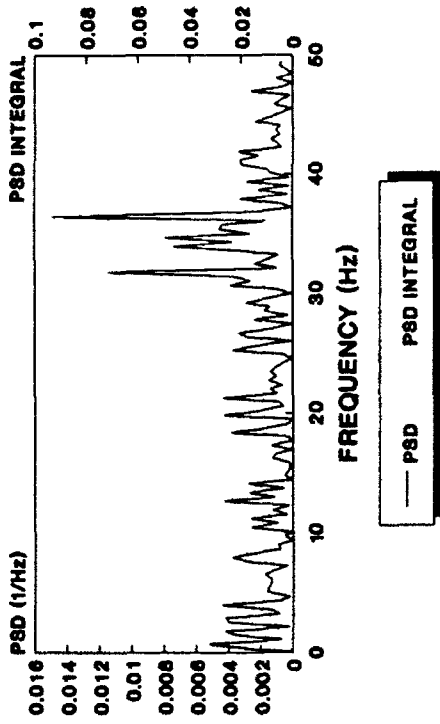
CUBE - HT 7.91 - THETA 00 - AZ 030

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



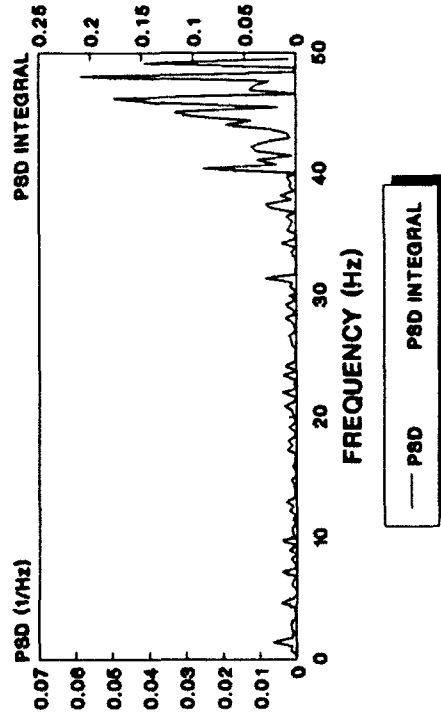
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MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



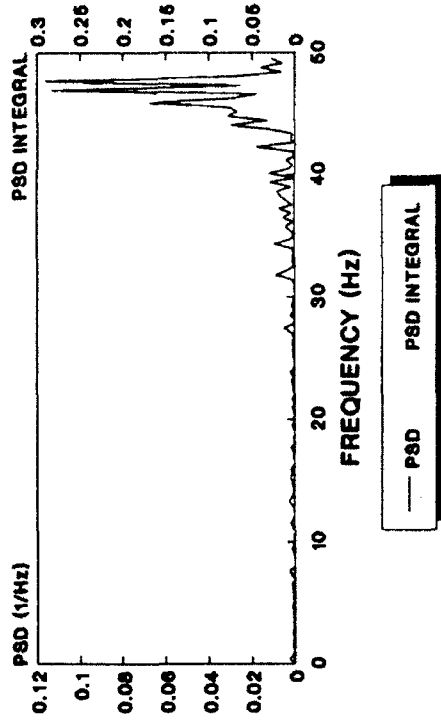
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MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



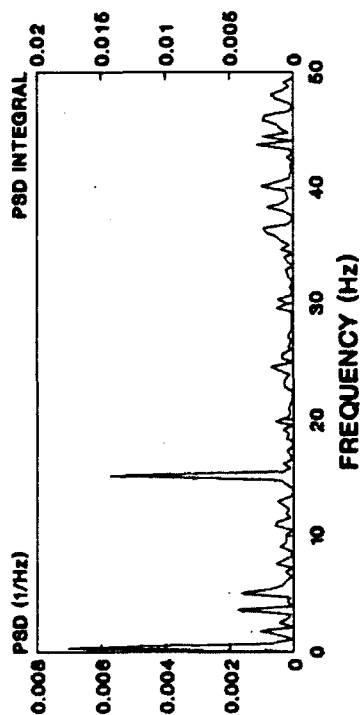
CUBE - HT 7.91 - THETA 00 - AZ 030

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



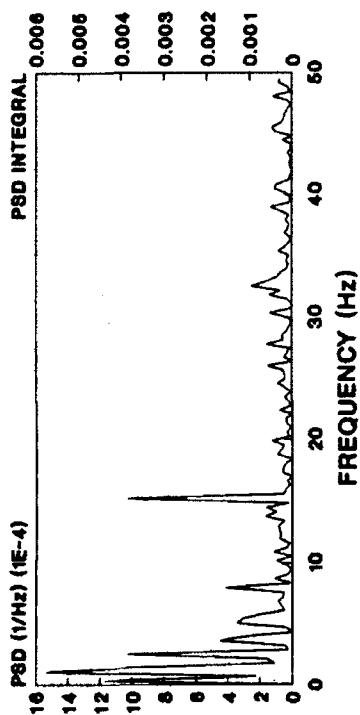
CUBE - HT 7.91 - THETA 00 - AZ 030

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



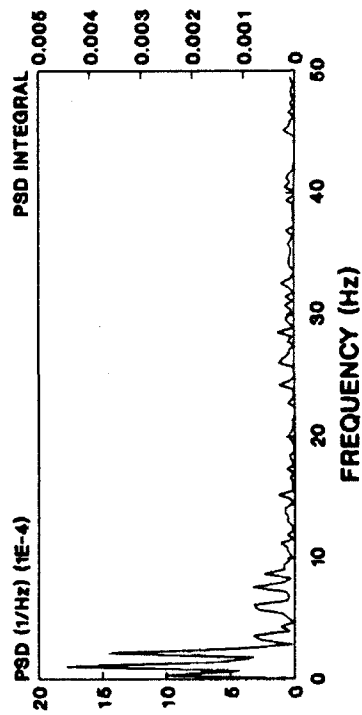
CUBE - HT 7.91 - THETA 00 - AZ 045

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



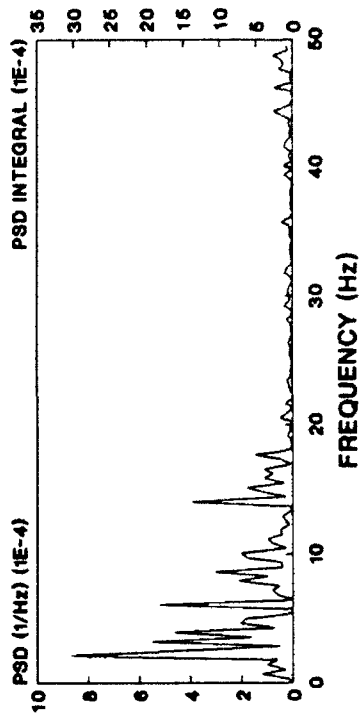
CUBE - HT 7.91 - THETA 00 - AZ 045

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



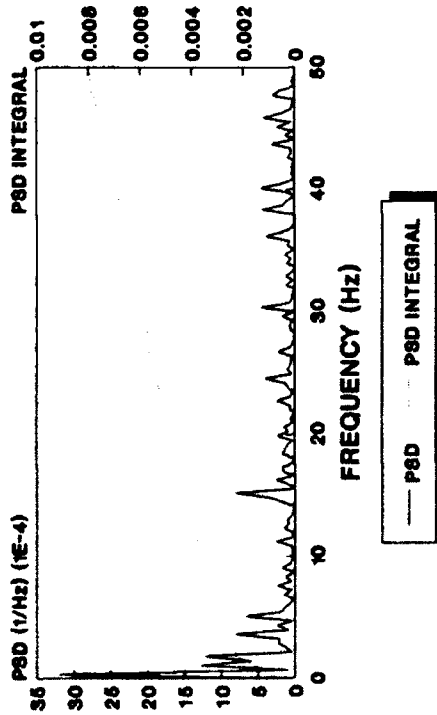
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FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



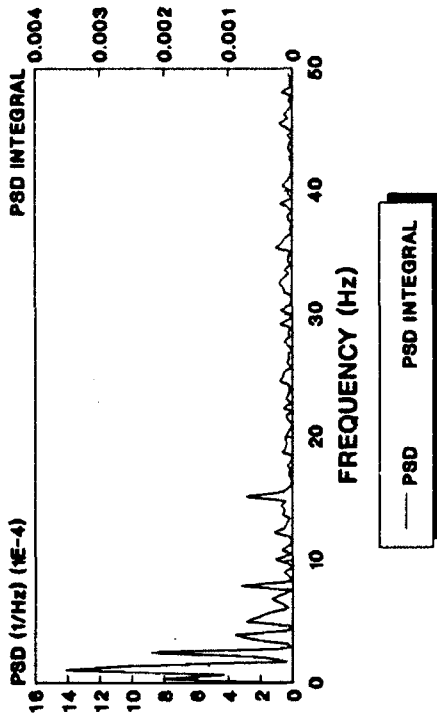
CUBE - HT 7.91 - THETA 00 - AZ 045

MOMENT COEFF - NORMAL **60 FT/SEC NOMINAL**



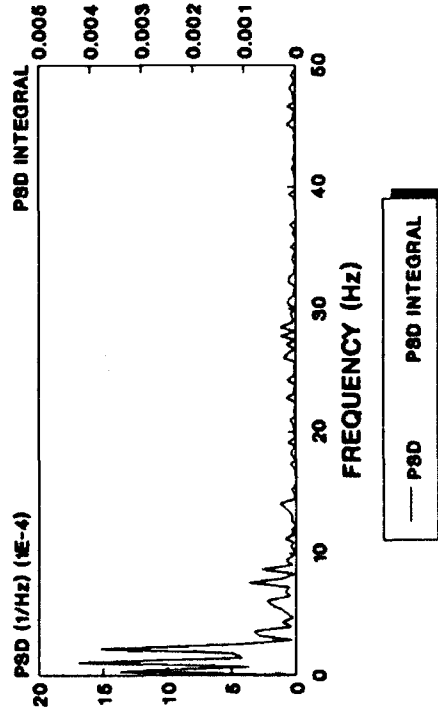
CUBE - HT 7.91 - THETA 00 - AZ 045

MOMENT COEFF - NORMAL **90 FT/SEC NOMINAL**



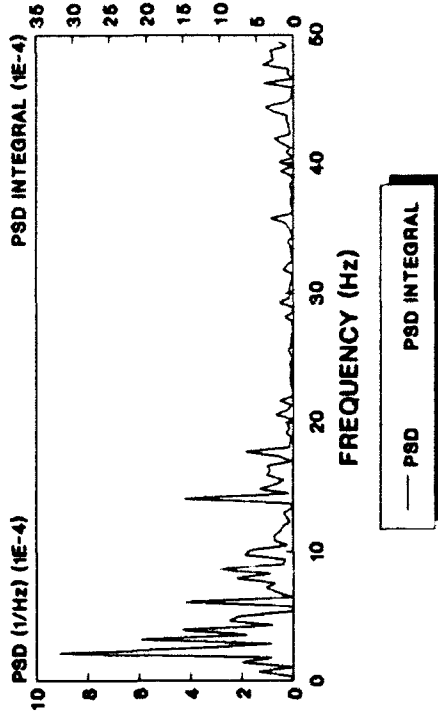
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MOMENT COEFF - NORMAL **120 FT/SEC NOMINAL**



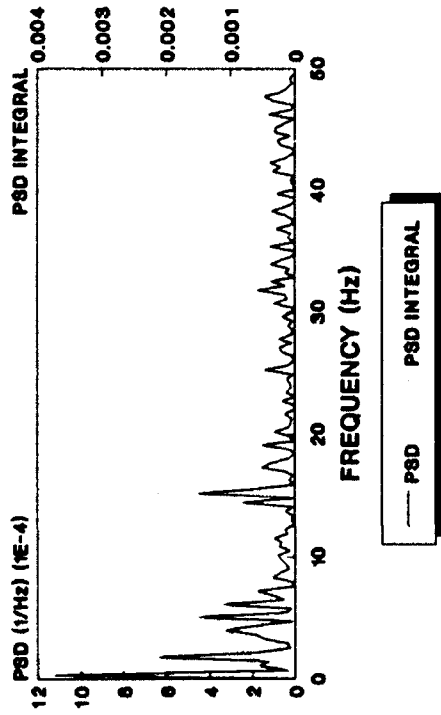
CUBE - HT 7.91 - THETA 00 - AZ 045

MOMENT COEFF - NORMAL **180 FT/SEC NOMINAL**



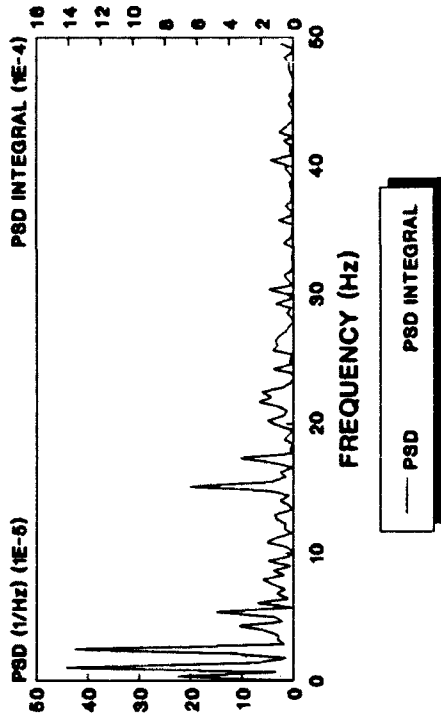
CUBE - HT 7.91 - THETA 00 - AZ 045

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



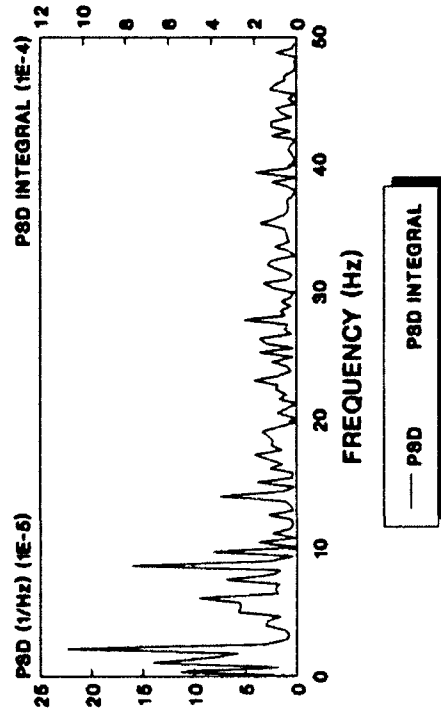
CUBE - HT 7.91 - THETA 00 - AZ 046

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



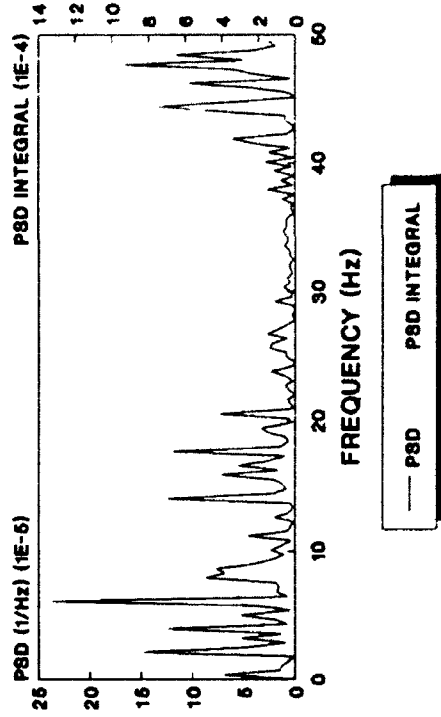
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FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



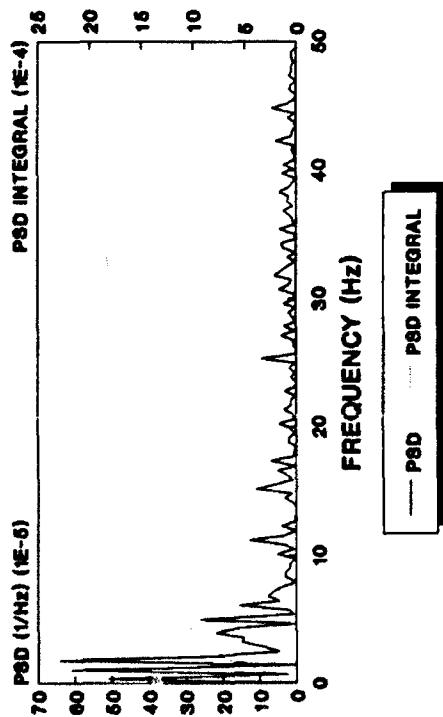
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FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



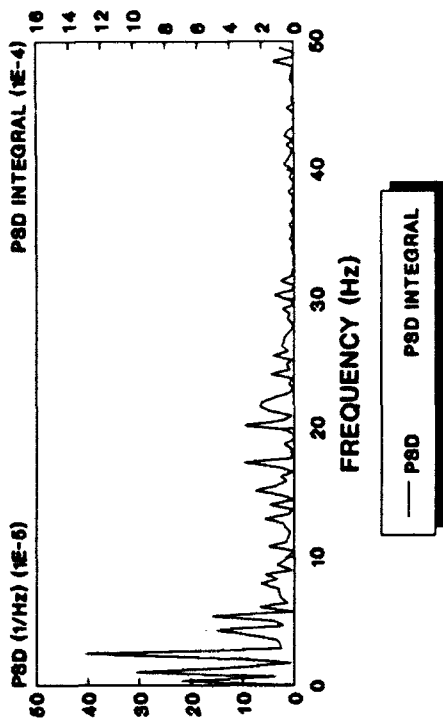
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MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



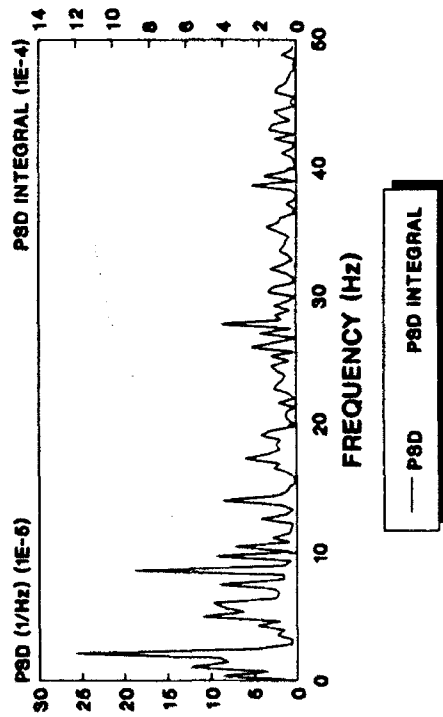
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MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



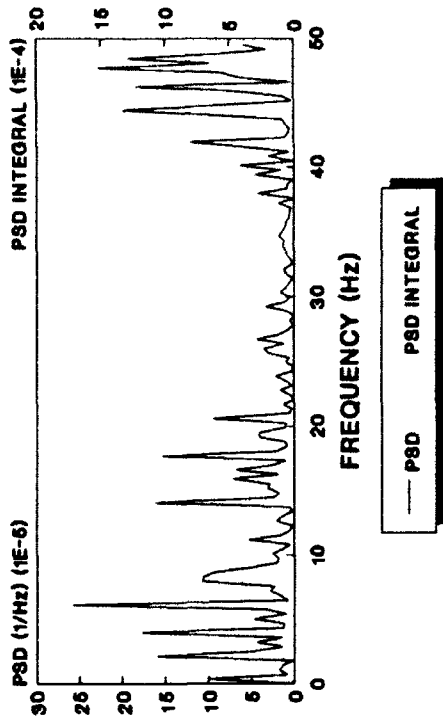
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MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



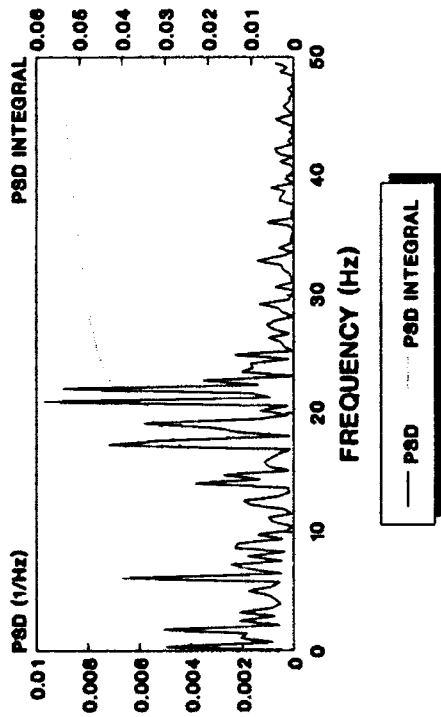
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MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



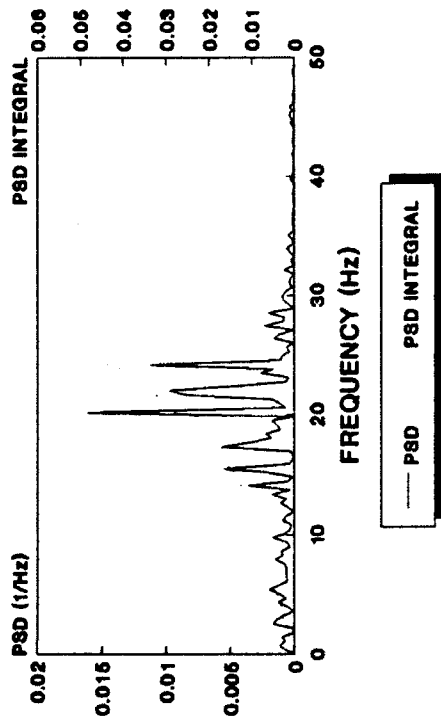
CUBE - HT 7.91 - THETA 00 - AZ 046

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



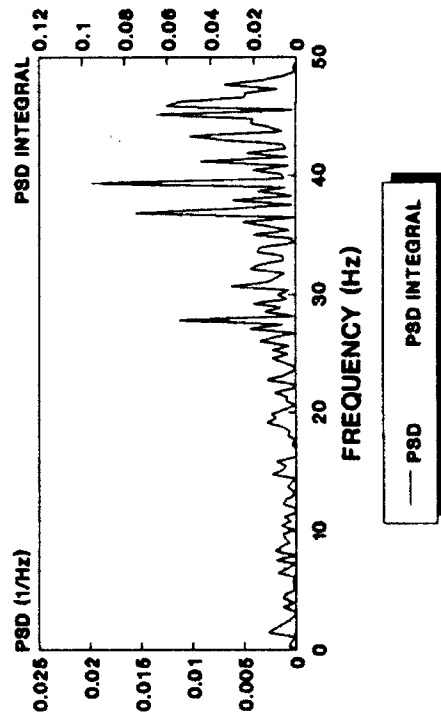
CUBE - HT 7.91 - THETA 00 - AZ 045

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



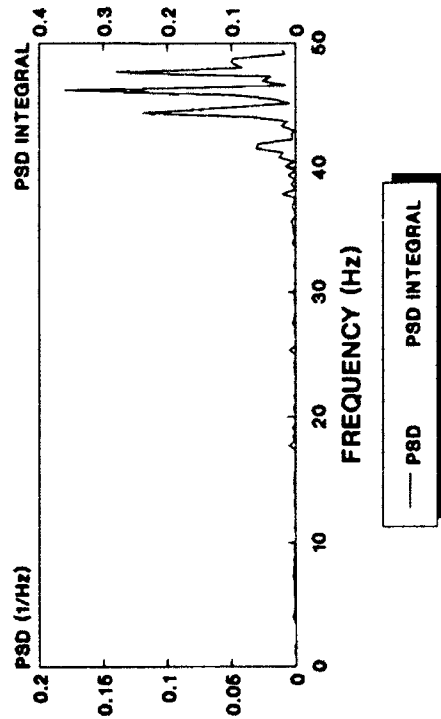
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MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



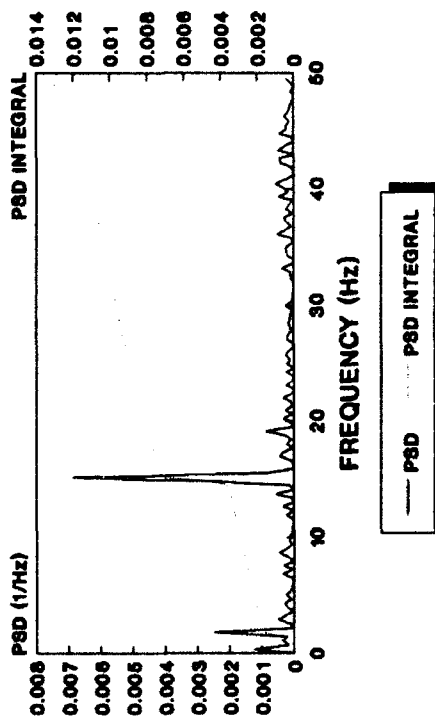
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MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



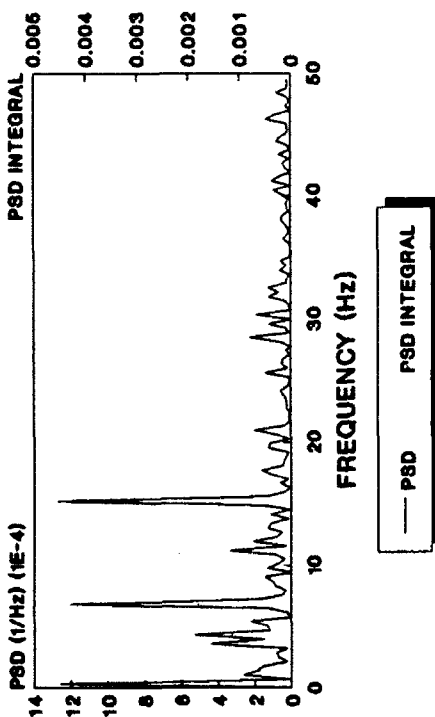
CUBE - HT 7.91 - THETA 00 - AZ 045

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



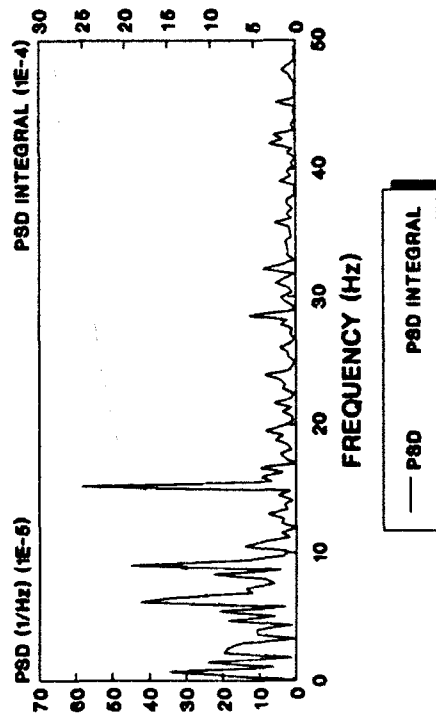
CUBE - HT 7.91 - THETA 00 - AZ 060

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



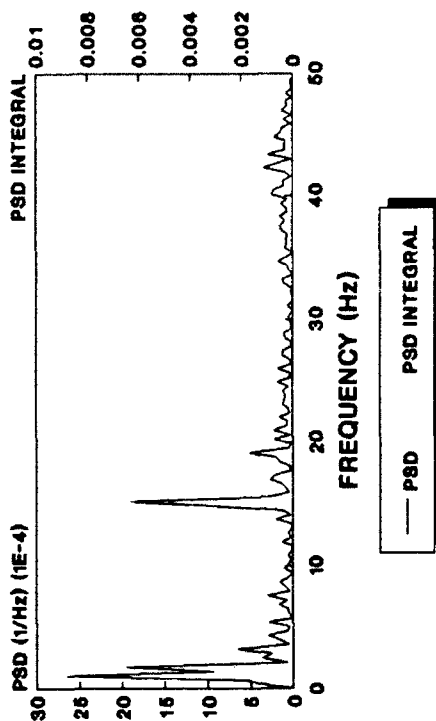
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FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



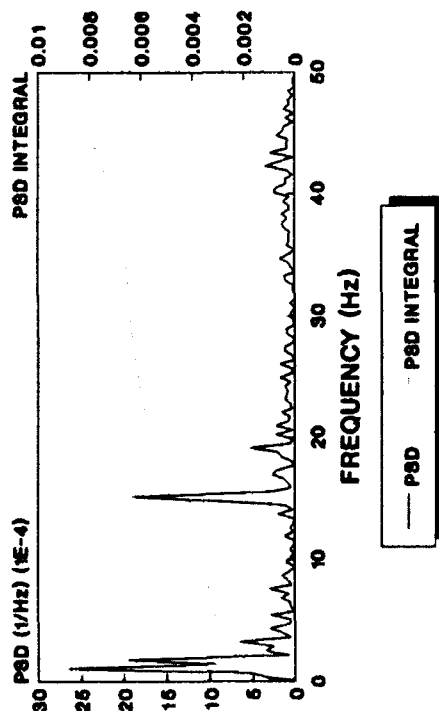
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MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



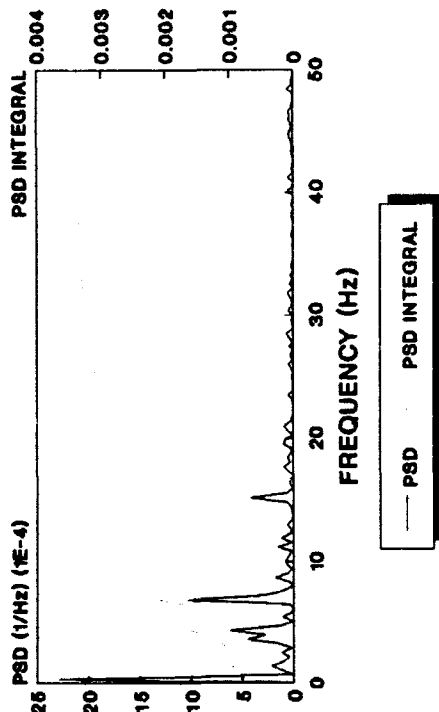
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MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



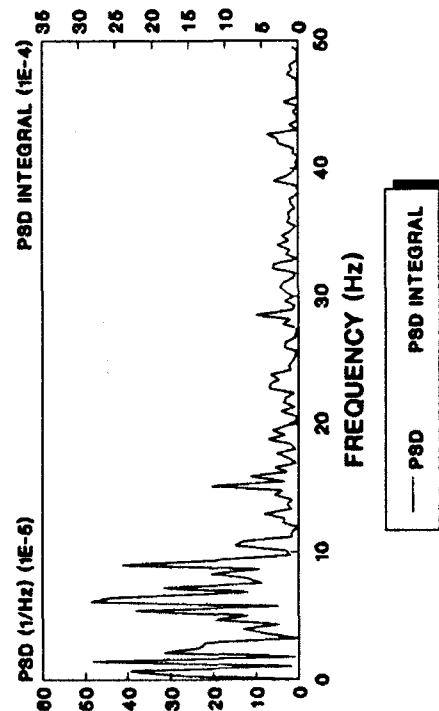
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MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



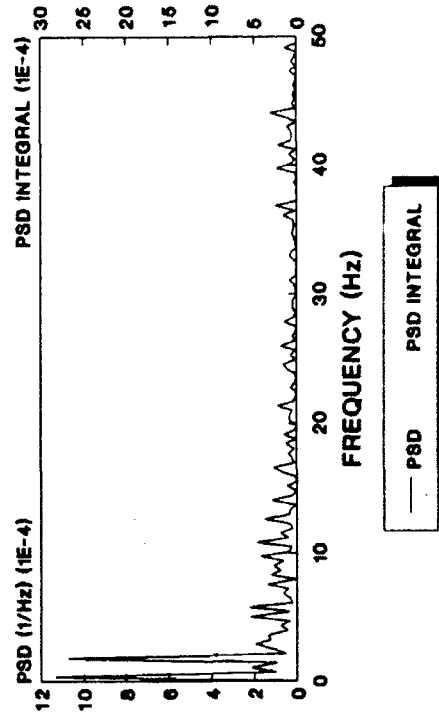
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MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



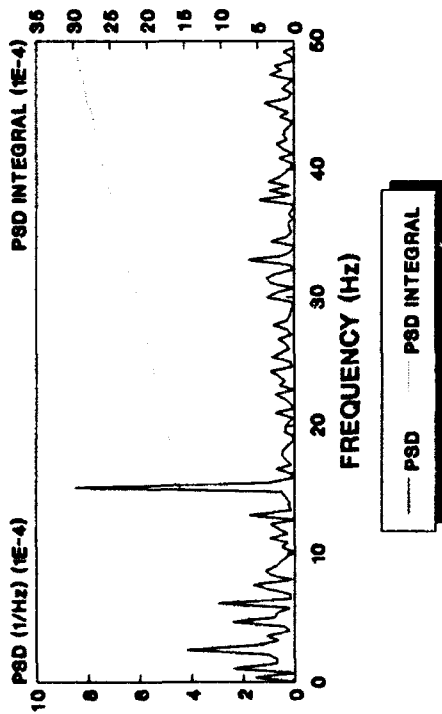
CUBE - HT 7.91 - THETA 00 - AZ 060

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



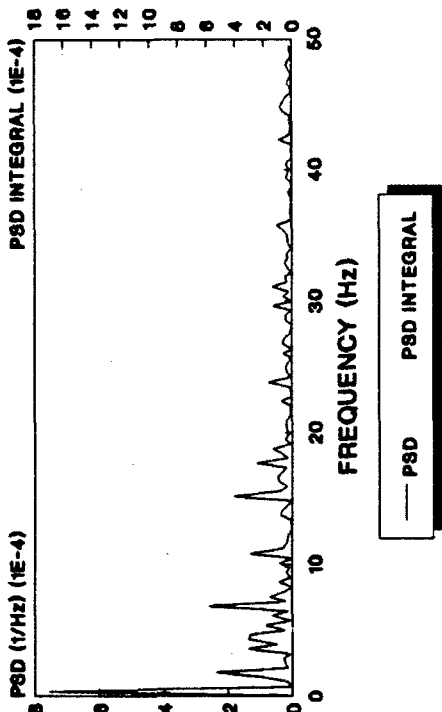
CUBE - HT 7.91 - THETA 00 - AZ 060

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



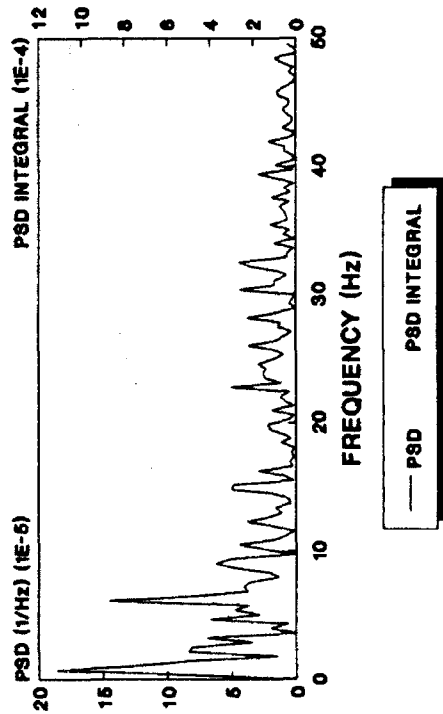
CUBE - HT 7.91 - THETA 00 - AZ 060

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



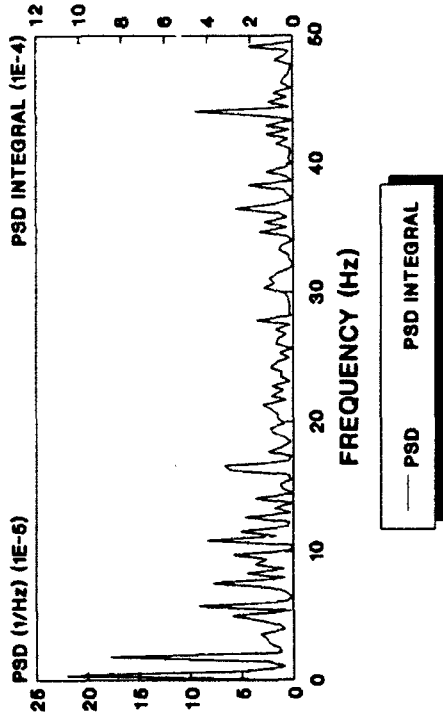
CUBE - HT 7.91 - THETA 00 - AZ 060

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



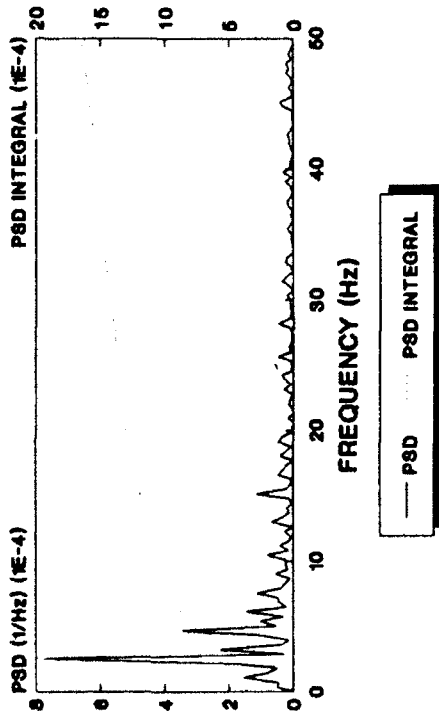
CUBE - HT 7.91 - THETA 00 - AZ 060

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



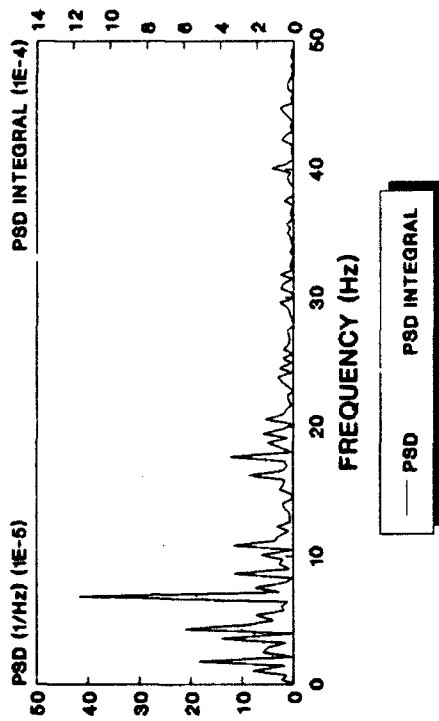
CUBE - HT 7.91 - THETA 00 - AZ 060

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



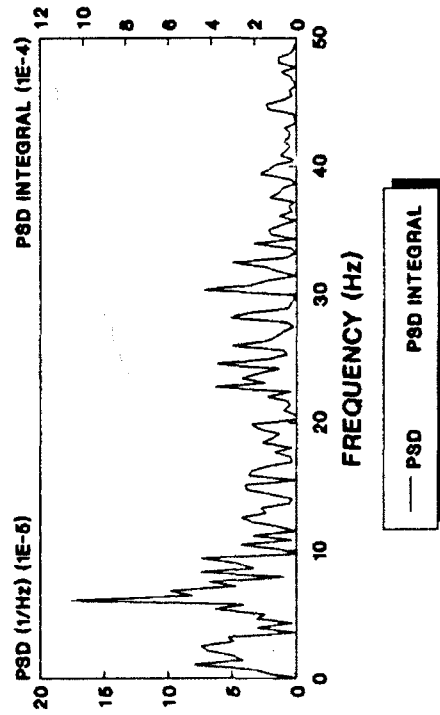
CUBE - HT 7.91 - THETA 00 - AZ 060

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



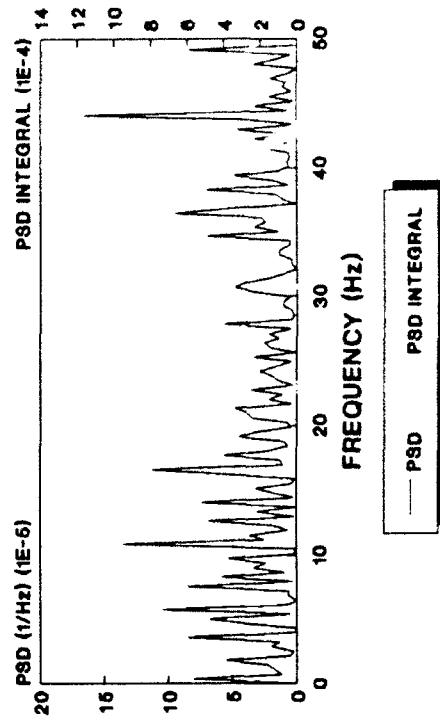
CUBE - HT 7.91 - THETA 00 - AZ 060

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



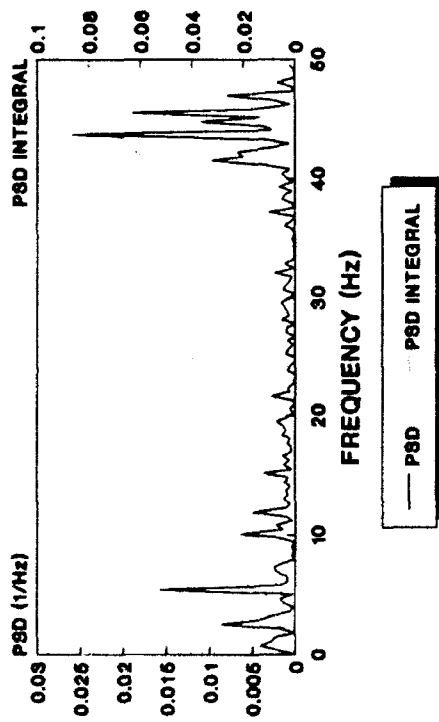
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MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



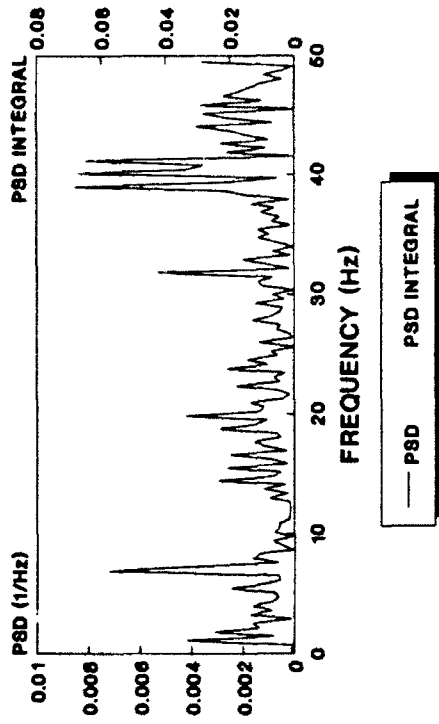
CUBE - HT 7.91 - THETA 00 - AZ 060

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



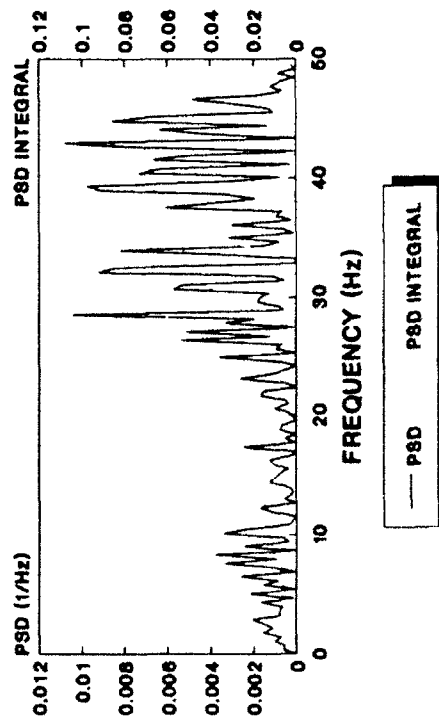
CUBE - HT 7.91 - THETA 00 - AZ 060

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



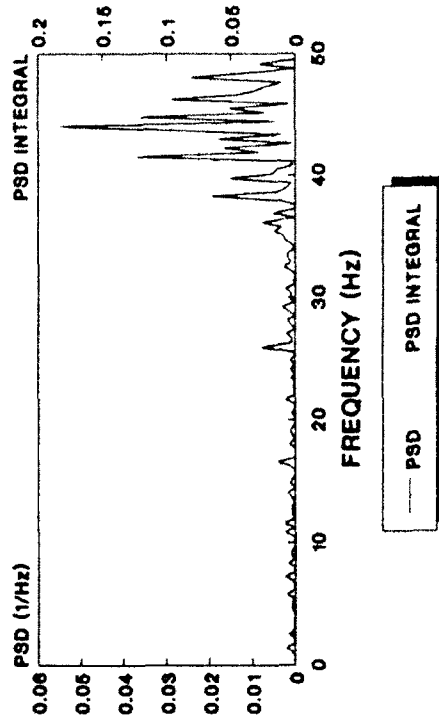
CUBE - HT 7.91 - THETA 00 - AZ 060

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



CUBE - HT 7.91 - THETA 00 - AZ 060

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



CUBE - HT 7.91 - THETA 00 - AZ 060

DATA REPORT

SHAPE:	CUBE
DECLINATION [THETA (degrees)]:	0
DIMENSIONS [LxWxH (in)]:	7.62 x 7.88 x 9.56
WEIGHT (gm):	1009.5
TORSION FREQUENCY (Hz):	30
LATERAL (SIDE BEND) FREQUENCY (Hz):	43
NORMAL (AFT BEND) FREQUENCY (Hz):	46
AZIMUTHS (degrees):	0, 30, 45

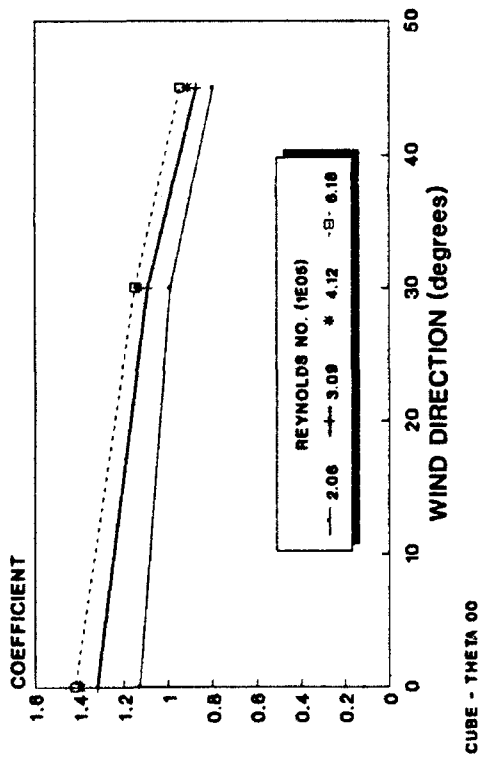
GRAPH CORRECTIONS:

- The mean value of the **ROLL** moment coefficients should be divided by 12.
- The PSD and PSD Integral values of the **ROLL** moment coefficients should be divided by 144.

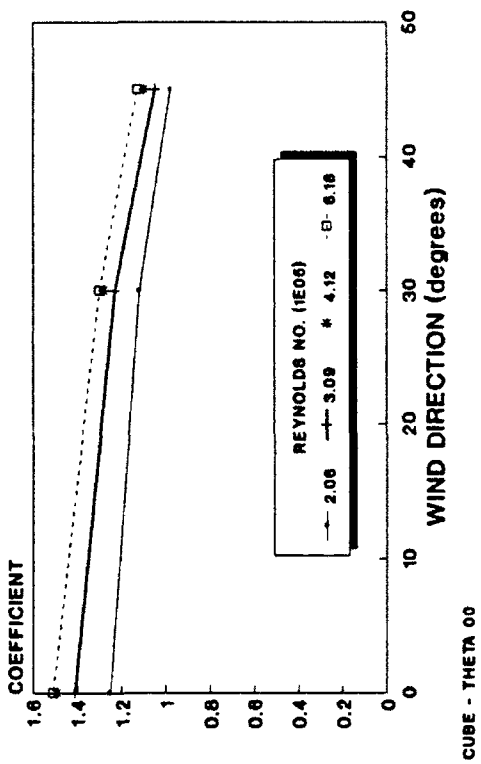
OBSERVATIONS:

- Very good shedding is seen in the lateral data at 0 degrees azimuth. This shedding is nearly single frequency in nature.
- 15.176 Hz spike occasionally observed in the data.

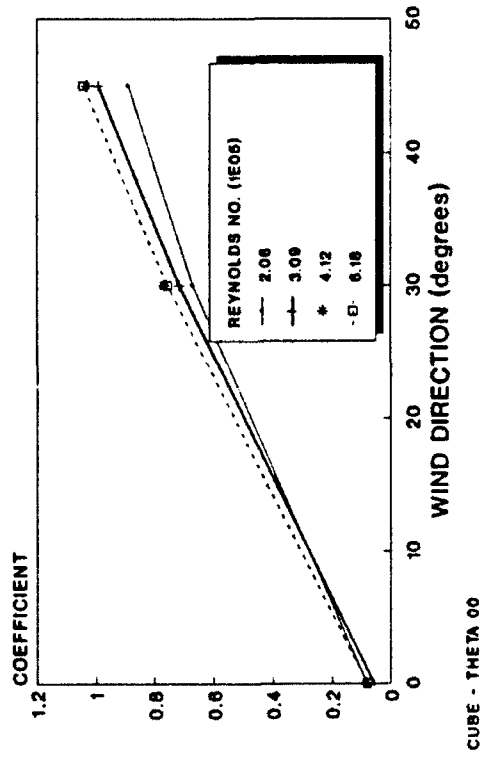
MEAN FORCE COEFFICIENT NORMAL DIRECTION



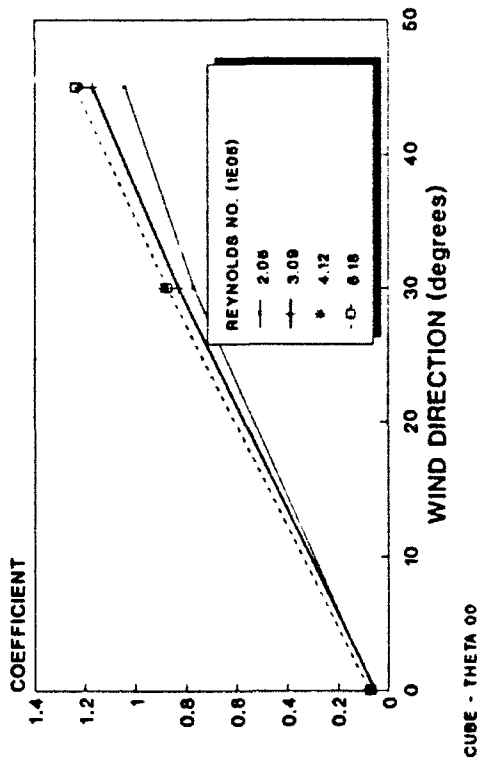
MEAN MOMENT COEFFICIENT NORMAL DIRECTION



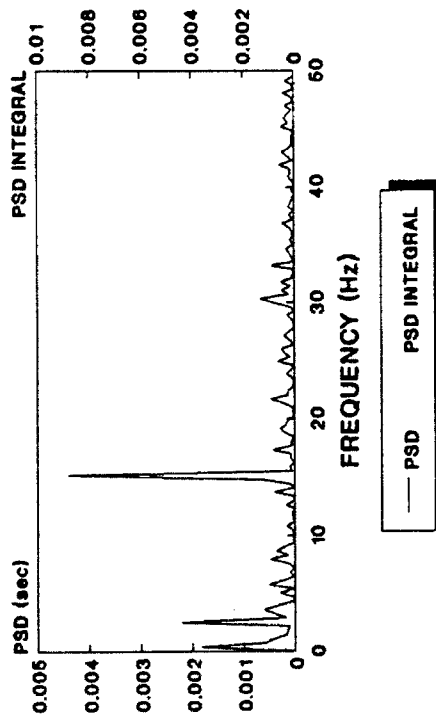
MEAN FORCE COEFFICIENT LATERAL DIRECTION



MEAN MOMENT COEFFICIENT LATERAL DIRECTION

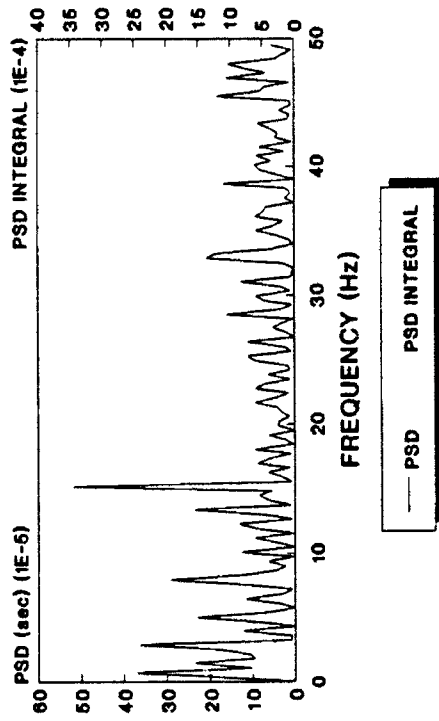


FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



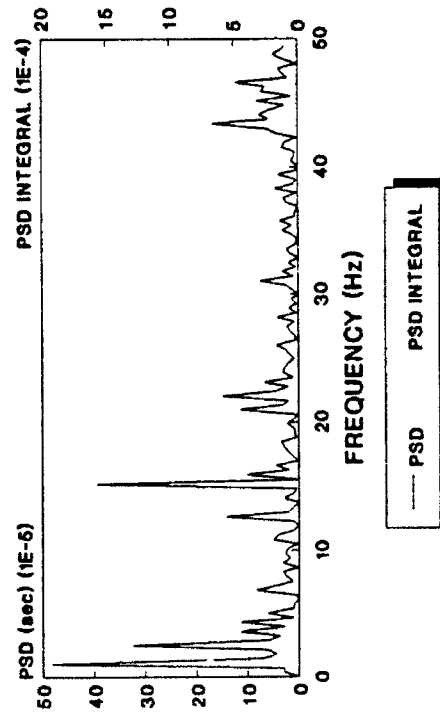
CUBE - THETA 00 - AZIMUTH - 000

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



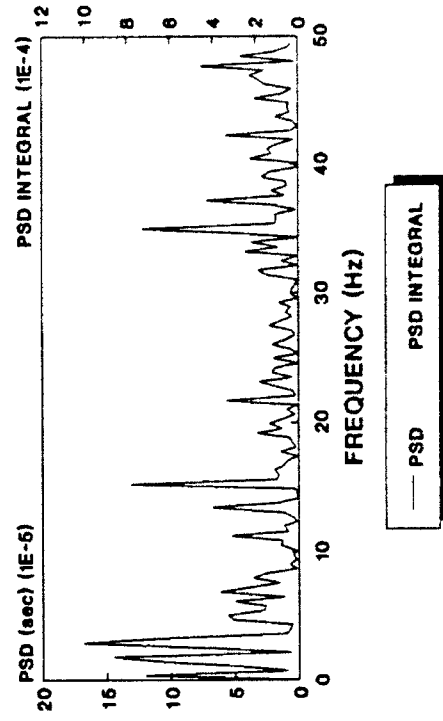
CUBE - THETA 00 - AZIMUTH - 000

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



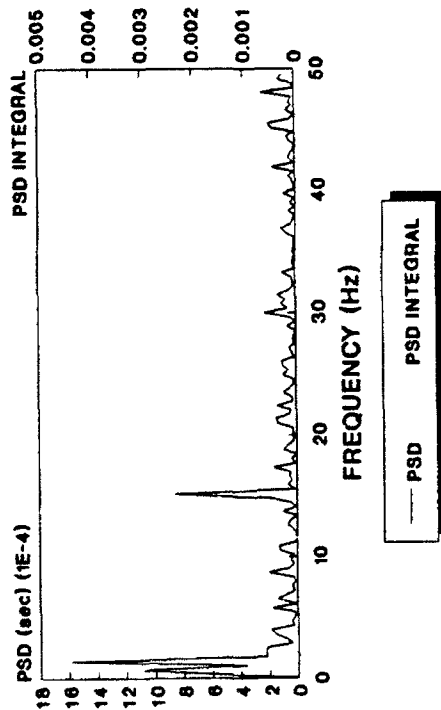
CUBE - THETA 00 - AZIMUTH - 000

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



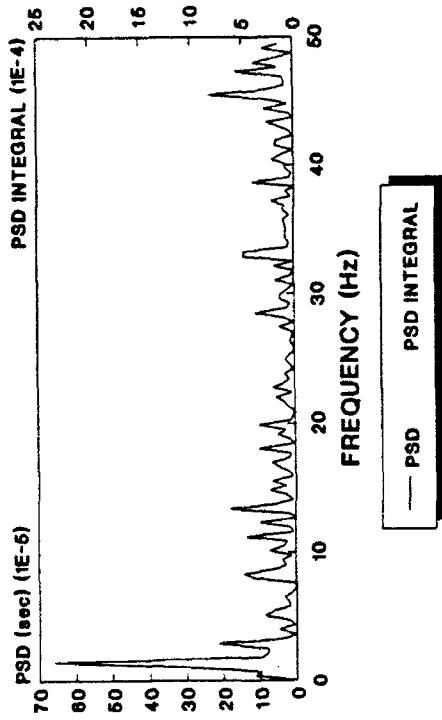
CUBE - THETA 00 - AZIMUTH - 000

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



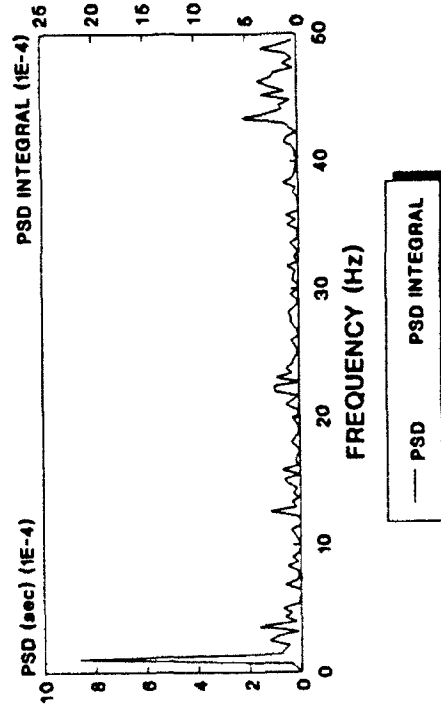
CUBE - THETA 00 - AZIMUTH - 000

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



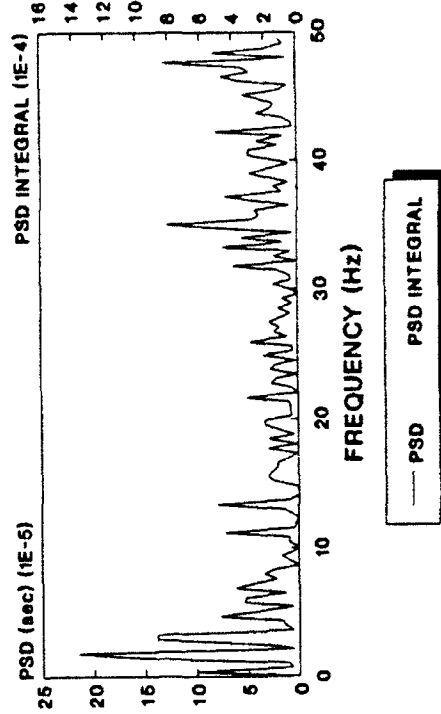
CUBE - THETA 00 - AZIMUTH - 000

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



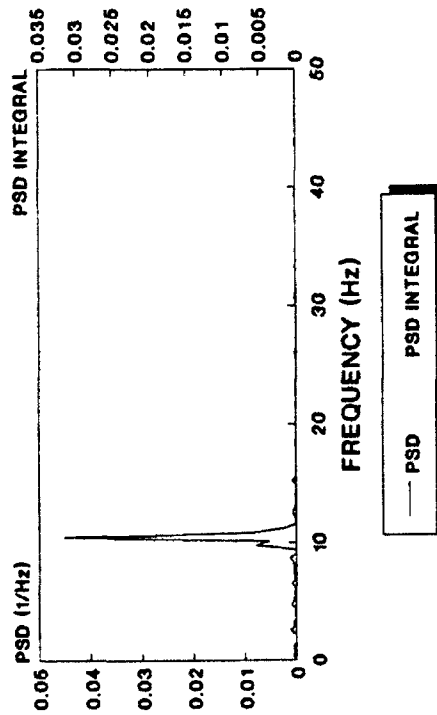
CUBE - THETA 00 - AZIMUTH - 000

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



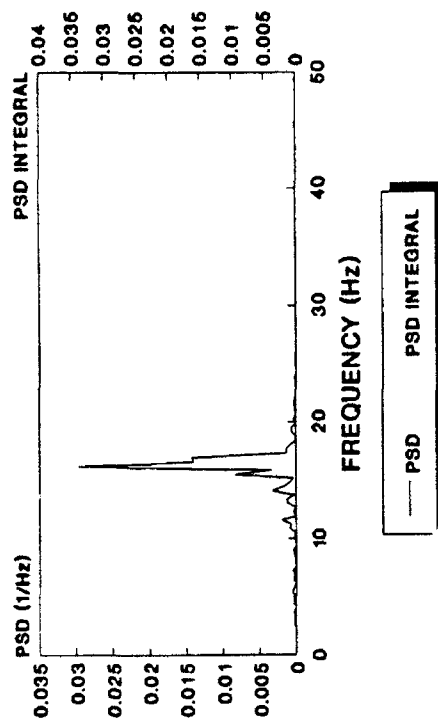
CUBE - THETA 00 - AZIMUTH - 000

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



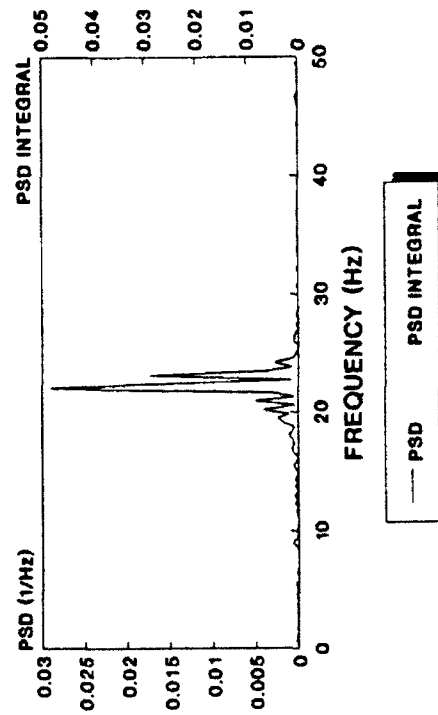
CUBE - THETA 00 - AZIMUTH - 000

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



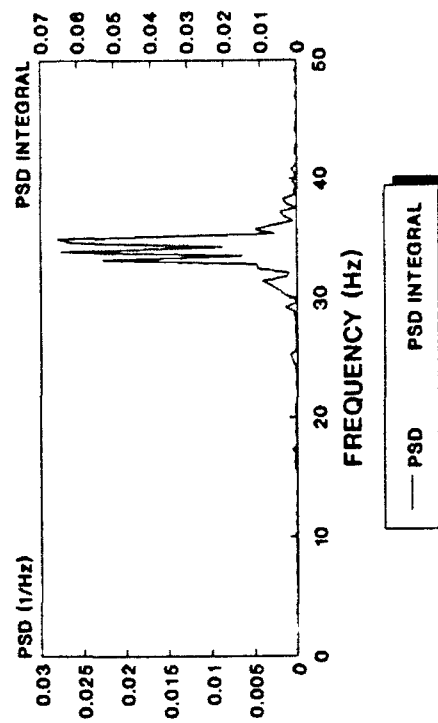
CUBE - THETA 00 - AZIMUTH - 000

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



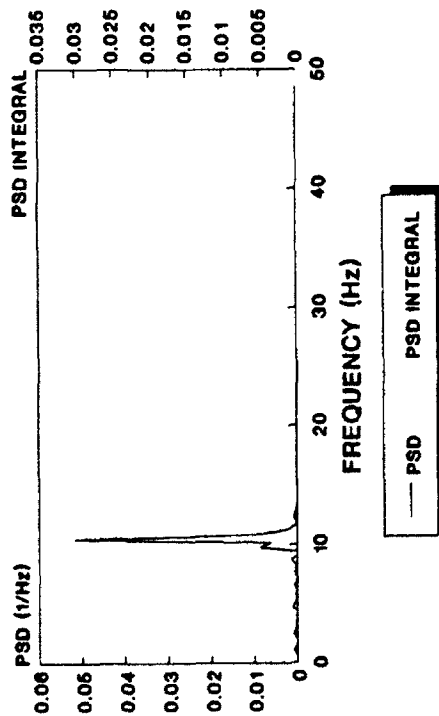
CUBE - THETA 00 - AZIMUTH - 000

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



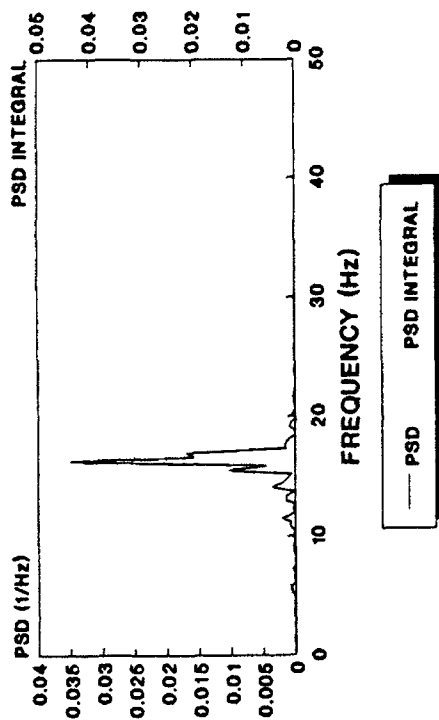
CUBE - THETA 00 - AZIMUTH - 000

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



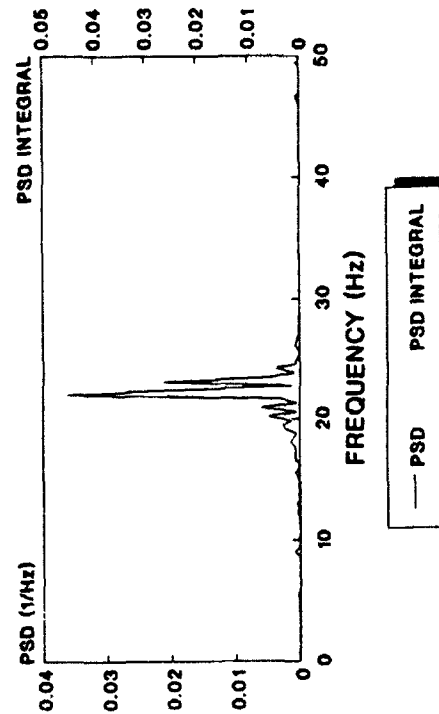
CUBE - THETA 00 - AZIMUTH - 000

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



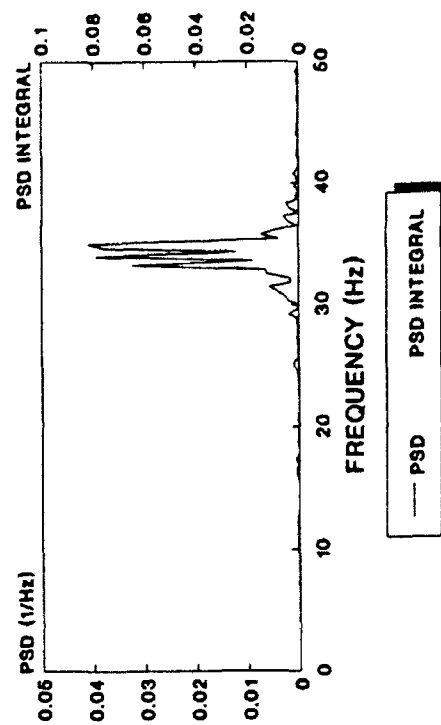
CUBE - THETA 00 - AZIMUTH - 000

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



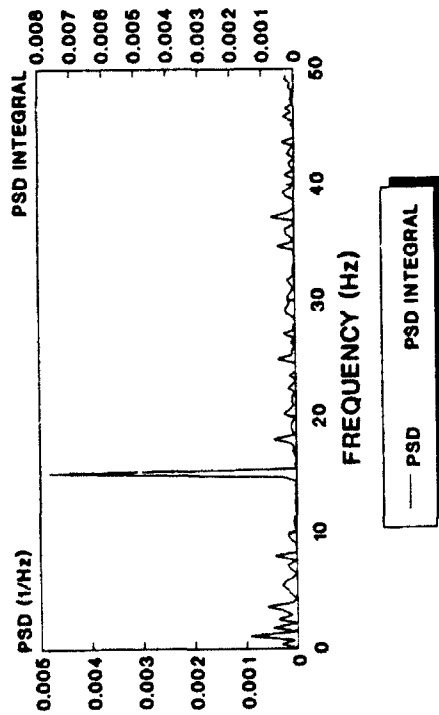
CUBE - THETA 00 - AZIMUTH - 000

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



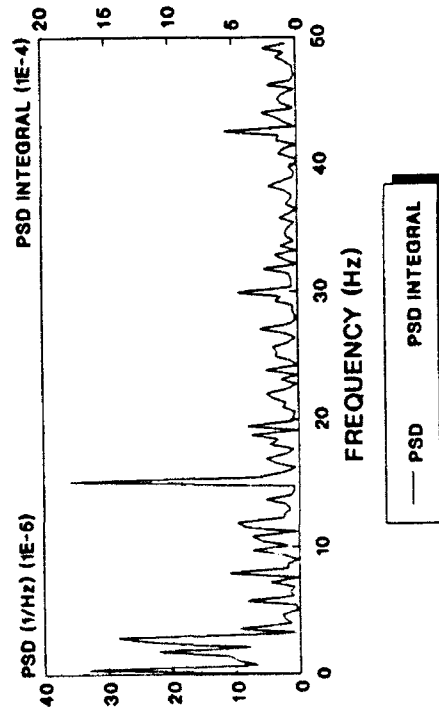
CUBE - THETA 00 - AZIMUTH - 000

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



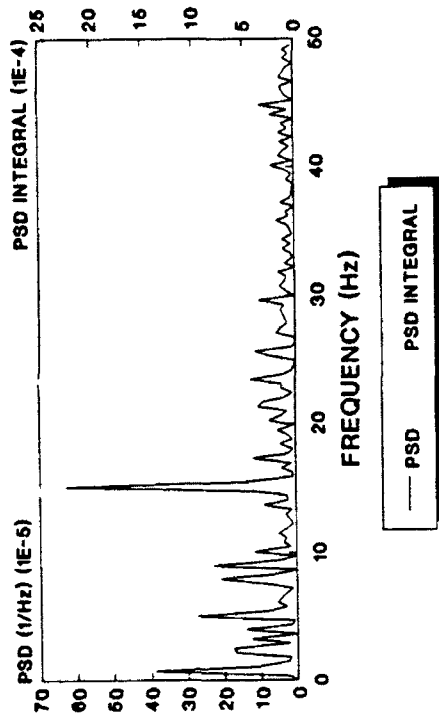
CUBE - THETA 00 - AZIMUTH - 030

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



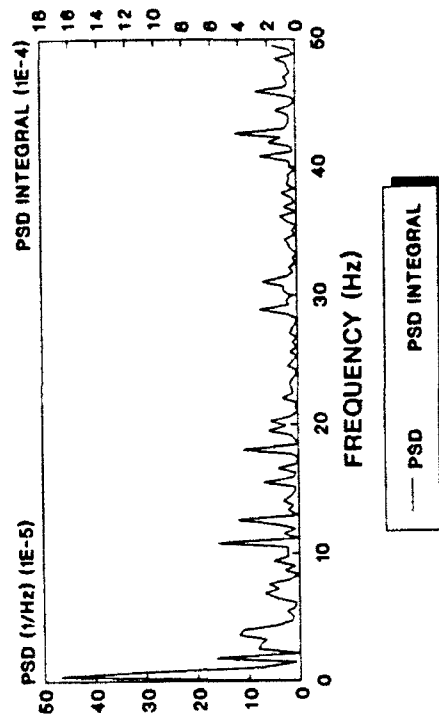
CUBE - THETA 00 - AZIMUTH - 030

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



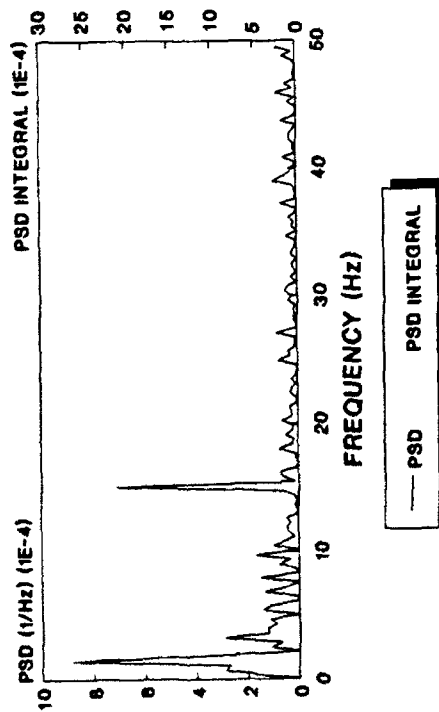
CUBE - THETA 00 - AZIMUTH - 030

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



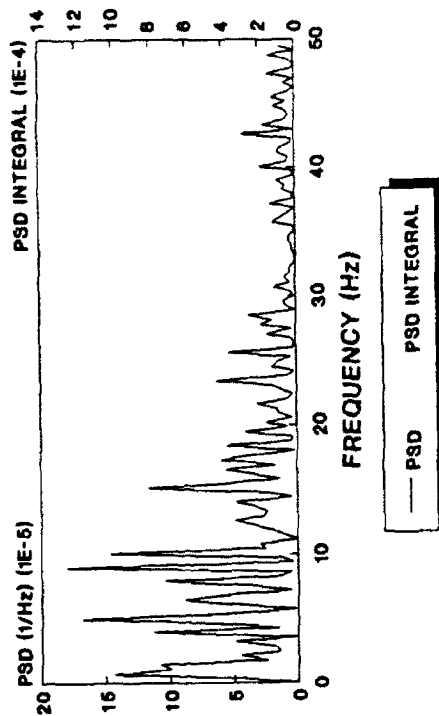
CUBE - THETA 00 - AZIMUTH - 030

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



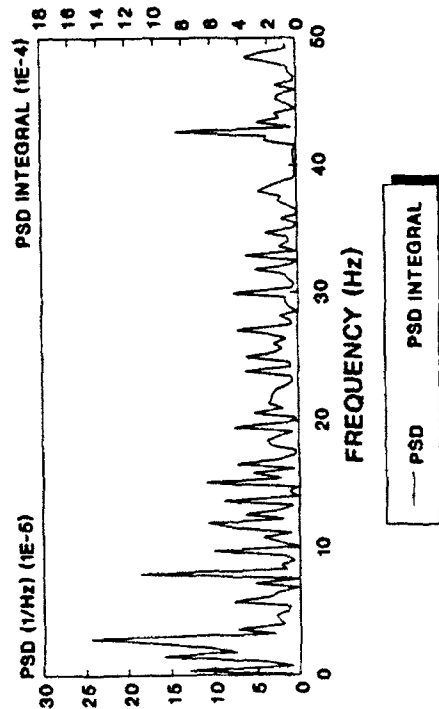
CUBE - THETA 00 - AZIMUTH - 030

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



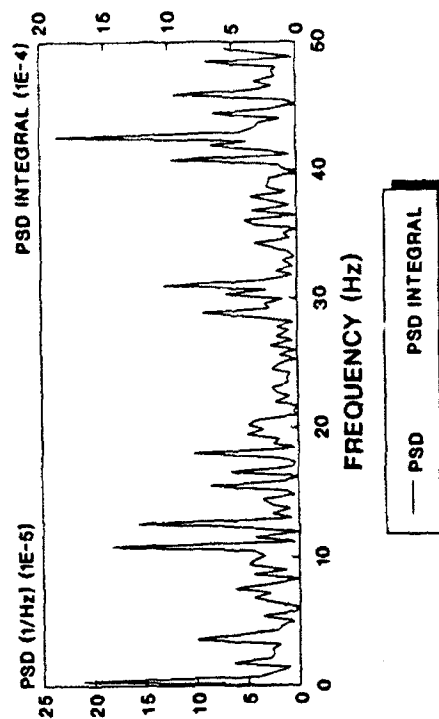
CUBE - THETA 00 - AZIMUTH - 030

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



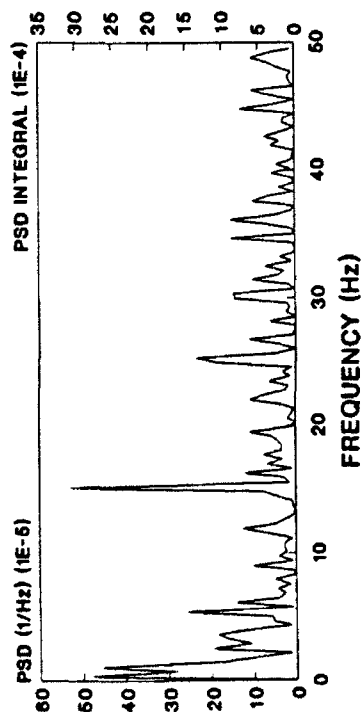
CUBE - THETA 00 - AZIMUTH - 030

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



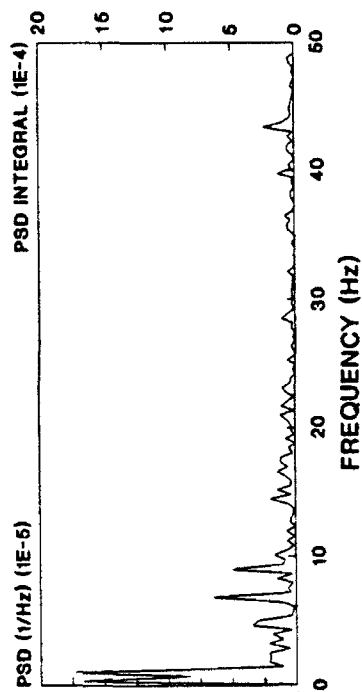
CUBE - THETA 00 - AZIMUTH - 030

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



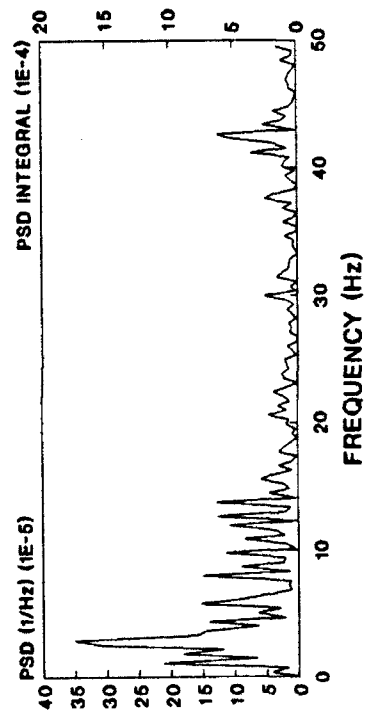
CUBE - THETA 00 - AZIMUTH - 030

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



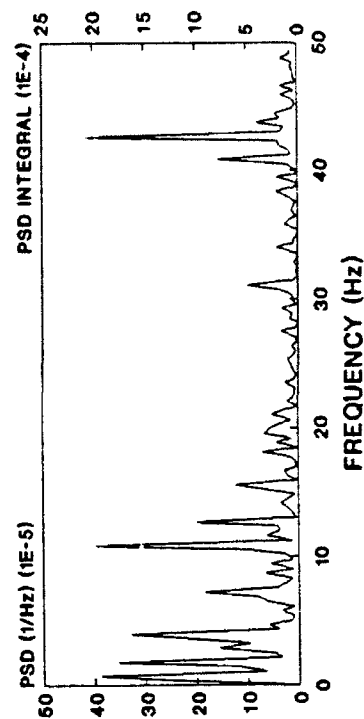
CUBE - THETA 00 - AZIMUTH - 030

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



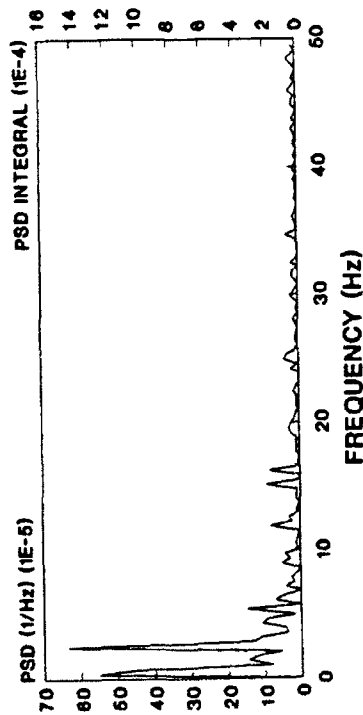
CUBE - THETA 00 - AZIMUTH - 030

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



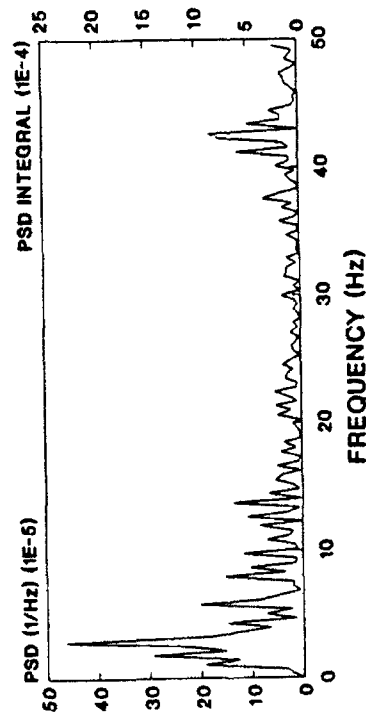
CUBE - THETA 00 - AZIMUTH - 030

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



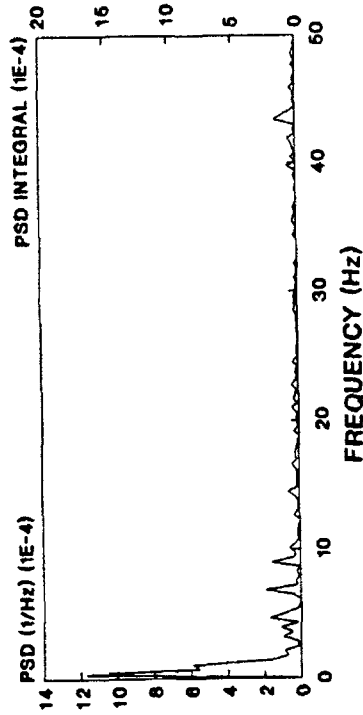
CUBE - THETA 00 - AZIMUTH - 030

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



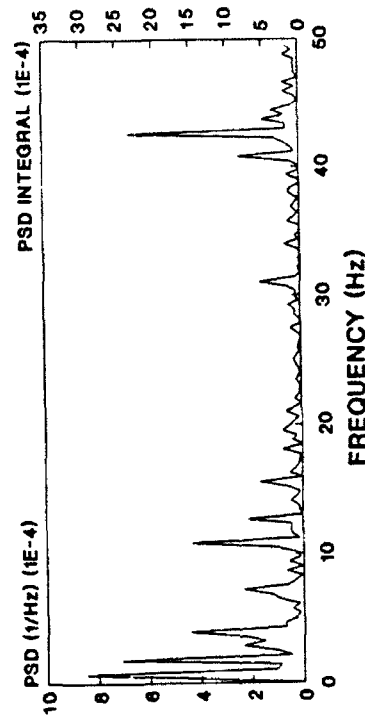
CUBE - THETA 00 - AZIMUTH - 030

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



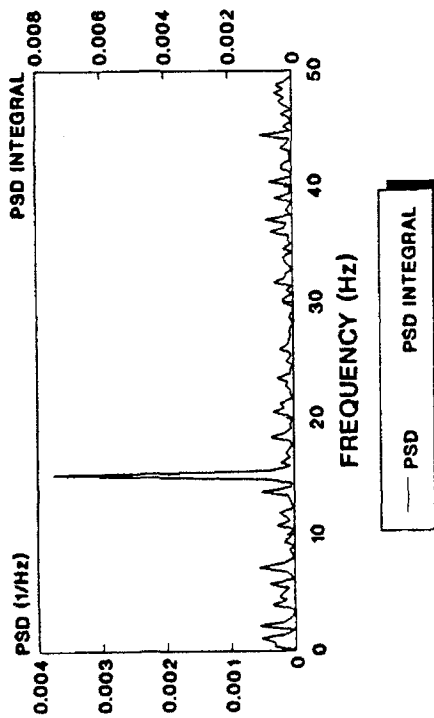
CUBE - THETA 00 - AZIMUTH - 030

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



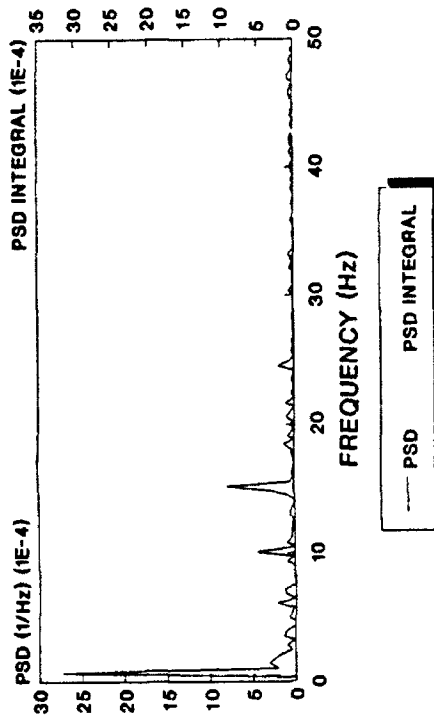
CUBE - THETA 00 - AZIMUTH - 030

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



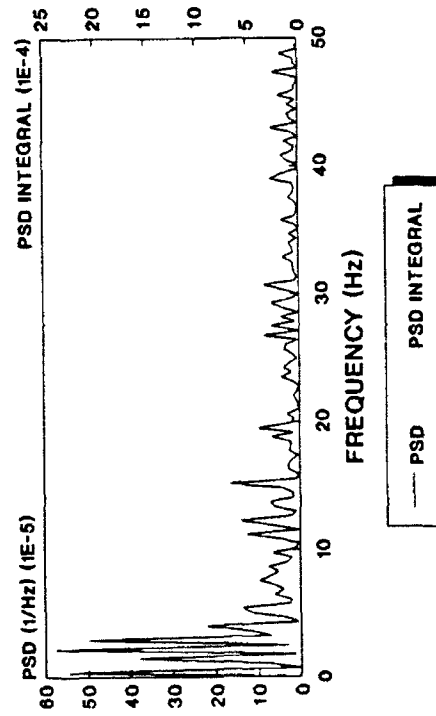
CUBE - THETA 00 - AZIMUTH - 045

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



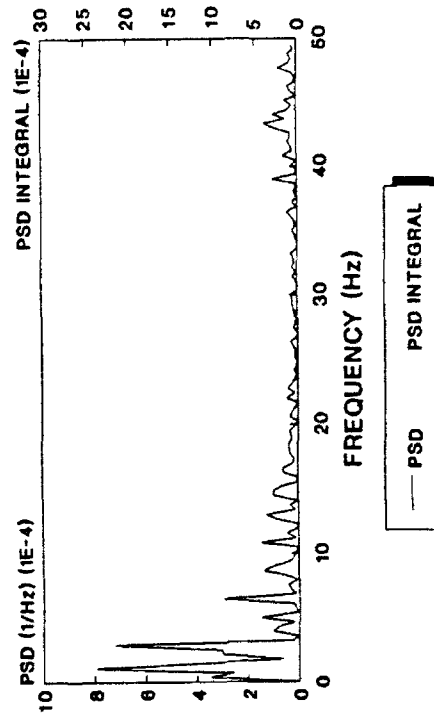
CUBE - THETA 00 - AZIMUTH - 045

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



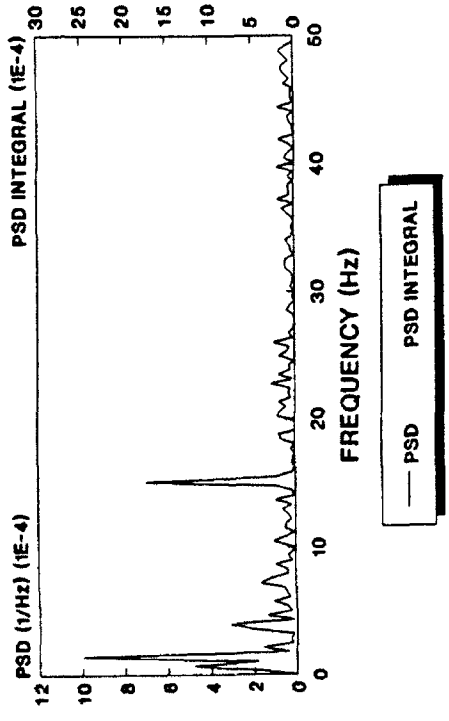
CUBE - THETA 00 - AZIMUTH - 045

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



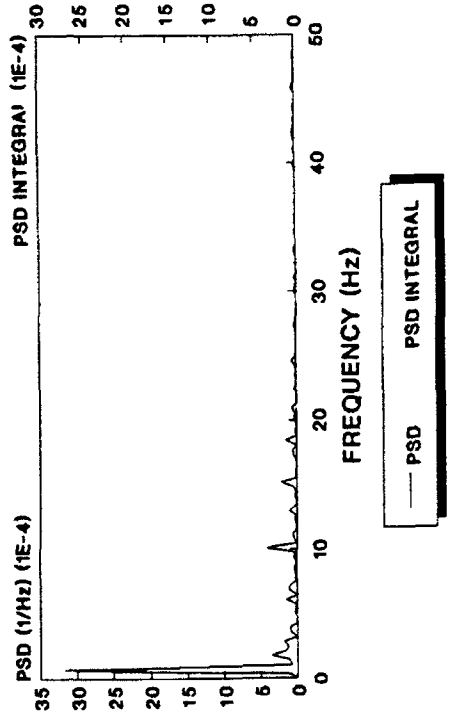
CUBE - THETA 00 - AZIMUTH - 045

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



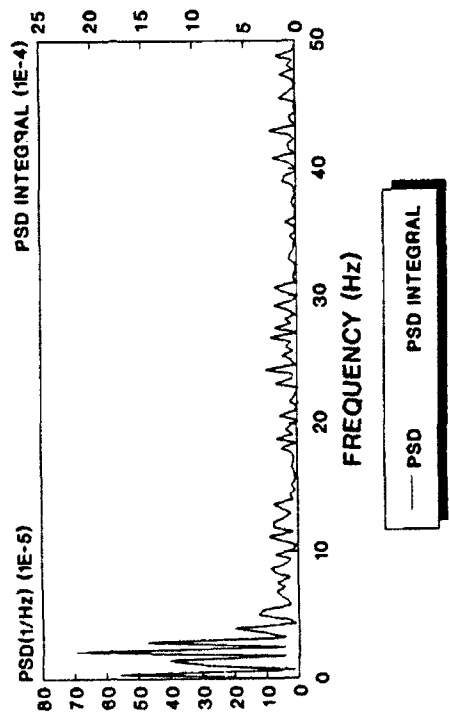
CUBE - THETA 00 - AZIMUTH - 045

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



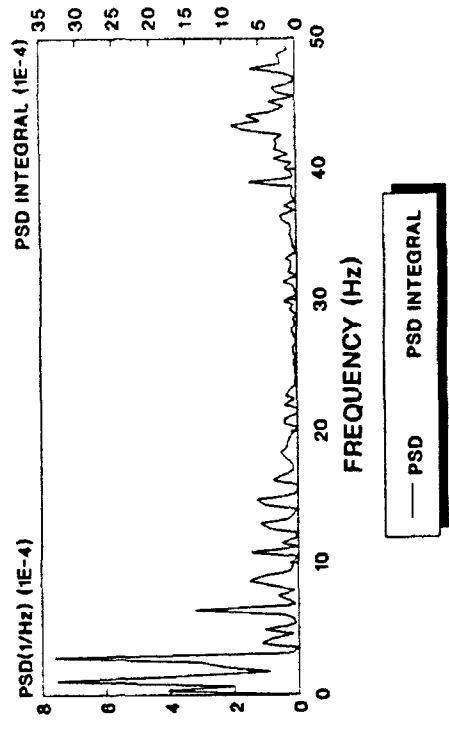
CUBE - THETA 00 - AZIMUTH - 045

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



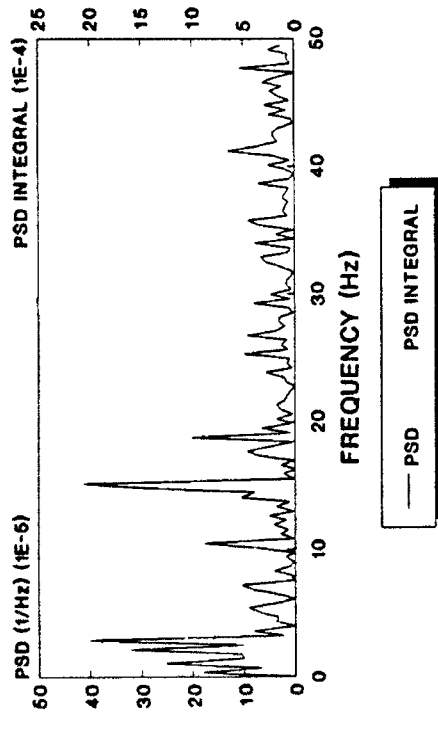
CUBE - THETA 00 - AZIMUTH - 045

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



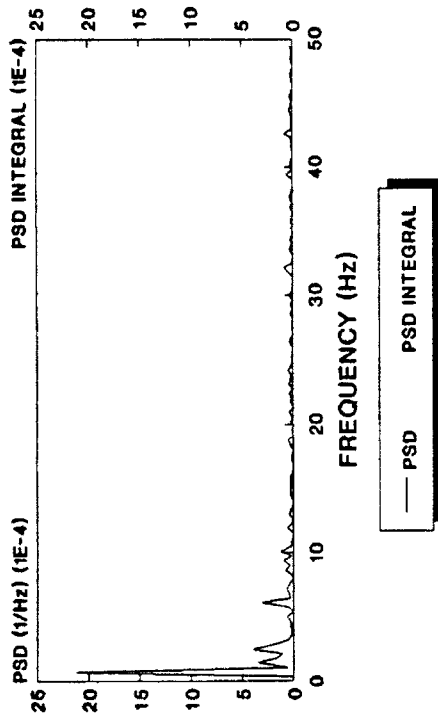
CUBE - THETA 00 - AZIMUTH - 045

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



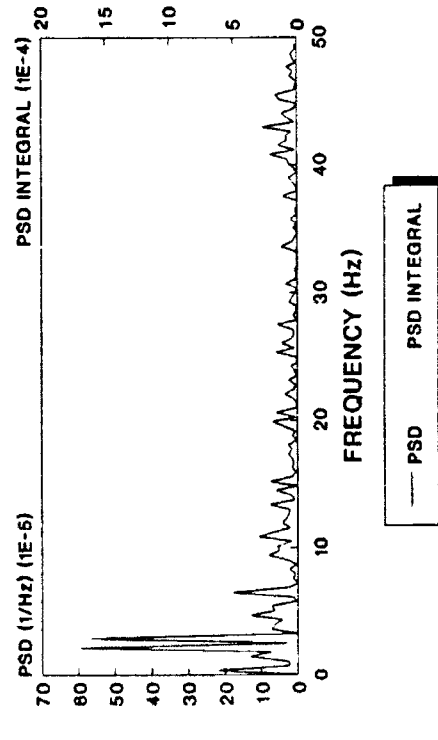
CUBE - THETA 00 - AZIMUTH - 045

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



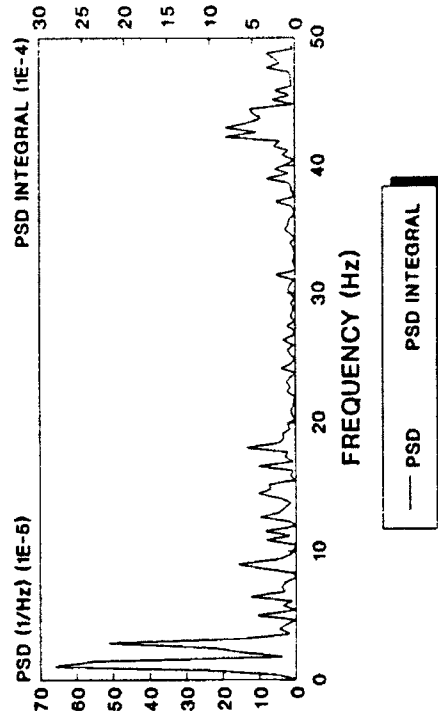
CUBE - THETA 00 - AZIMUTH - 045

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



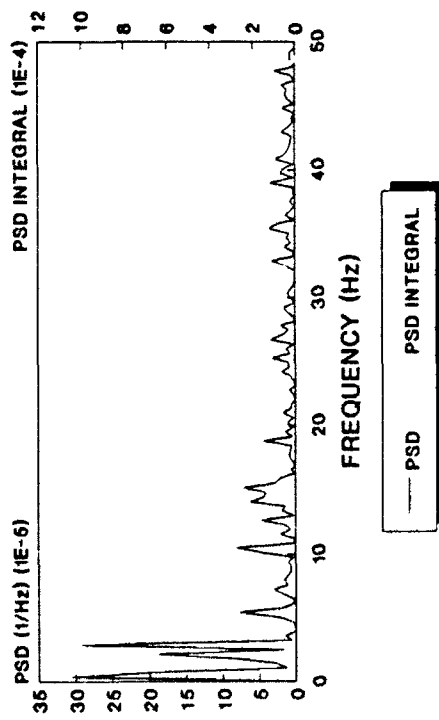
CUBE - THETA 00 - AZIMUTH - 045

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



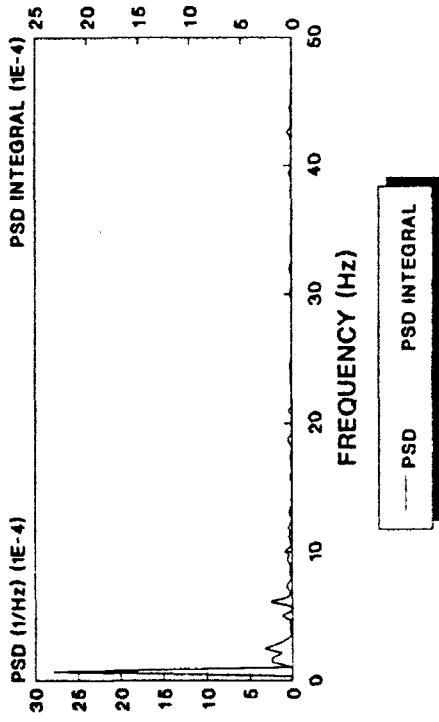
CUBE - THETA 00 - AZIMUTH - 045

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



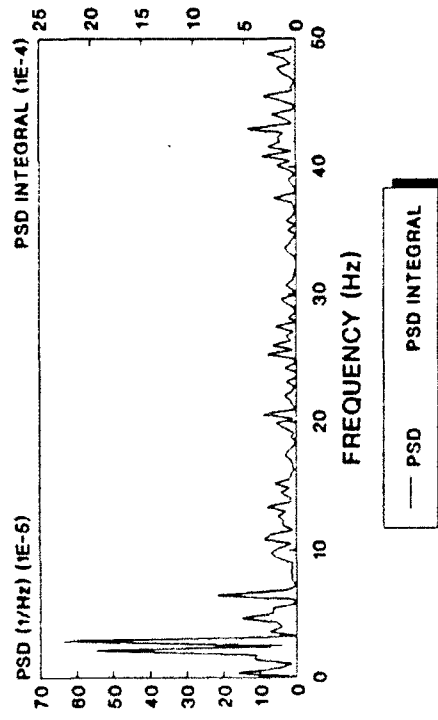
CUBE - THETA 00 - AZIMUTH - 046

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



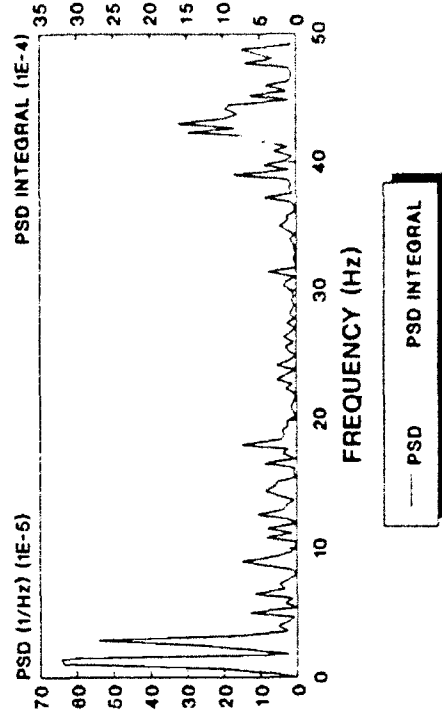
CUBE - THETA 00 - AZIMUTH - 046

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



CUBE - THETA 00 - AZIMUTH - 046

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



CUBE - THETA 00 - AZIMUTH - 046

DATA REPORT

SHAPE:	CUBE
DECLINATION [THETA (degrees)]:	30
DIMENSIONS [LxWxH (in)]:	9.0 x 7.7 x 8.5
WEIGHT (gm):	951.1
TORSION FREQUENCY (Hz):	34
LATERAL (SIDE BEND) FREQUENCY (Hz):	65
NORMAL (AFT BEND) FREQUENCY (Hz):	81
AZIMUTHS (degrees):	0, 30, 45, 60, 90 120, 135, 150, 180

GRAPH CORRECTIONS:

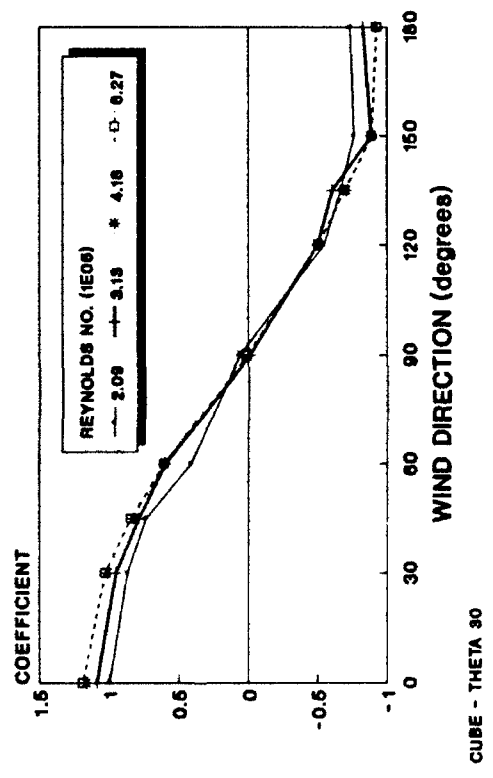
- The mean value of the **ROLL** moment coefficients should be divided by 12.
- The PSD and PSD Integral values of the **ROLL** moment coefficients should be divided by 144.

OBSERVATIONS:

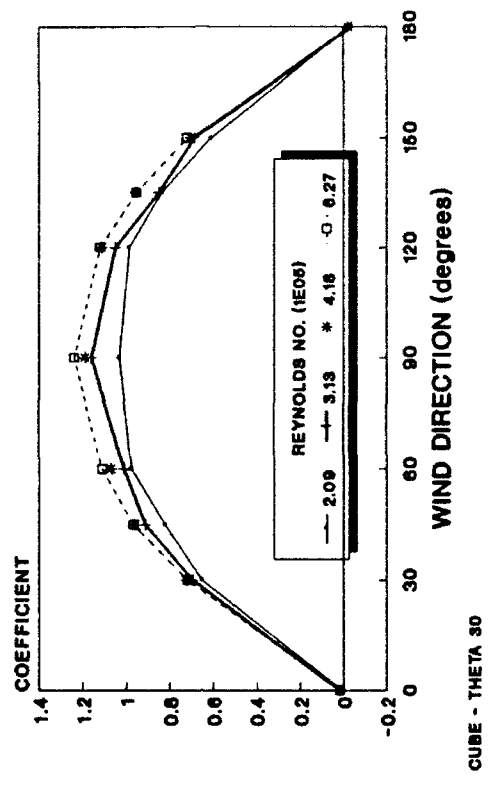
- Very good shedding is seen in the normal data at 90 degrees azimuth. This shedding is nearly single frequency in nature. This shed can be seen in the roll data as well but a dominating frequency near 39 Hz makes it difficult to see.
- A large frequency spike near 39 - 40 Hz is seen in much of the data.
- Good multifrequency shed can be seen in the lateral data at 30 degrees azimuth. However it is over shadowed by the system resonance at 39 - 40 Hz. Good multifrequency shedding can be seen in much of the data at 120, 135, and 150 degrees azimuth.

- A poor shed is seen in the lateral data at an azimuth of 0 degrees and in the lateral and roll data at 180 degrees. The shed at 0 degrees is more noticeable in spite of the noisy signal.

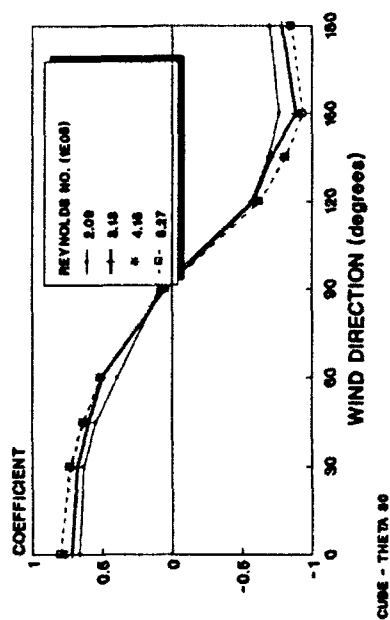
MEAN FORCE COEFFICIENT NORMAL DIRECTION



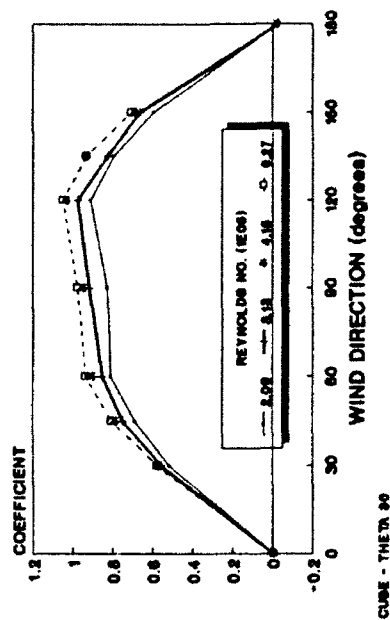
MEAN FORCE COEFFICIENT LATERAL DIRECTION



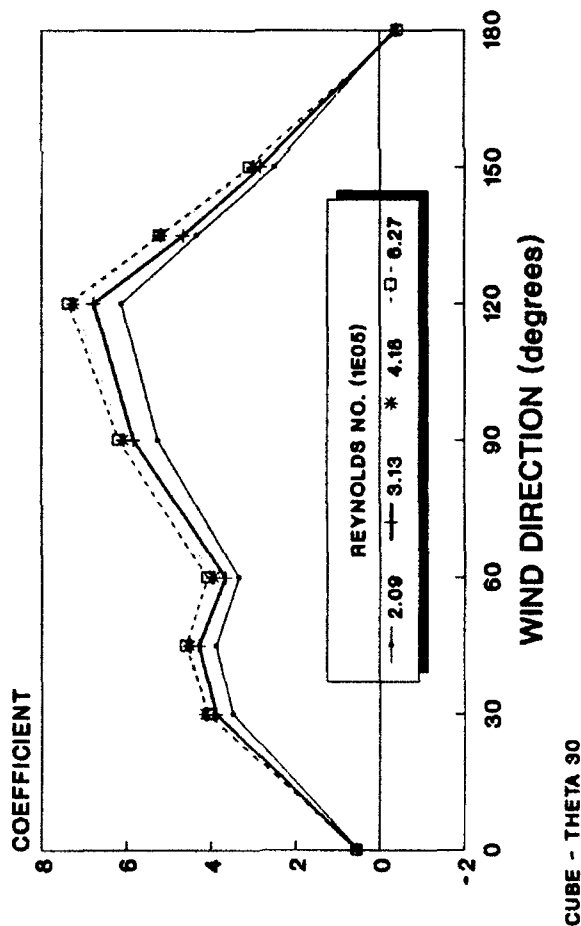
MEAN MOMENT COEFFICIENT NORMAL DIRECTION



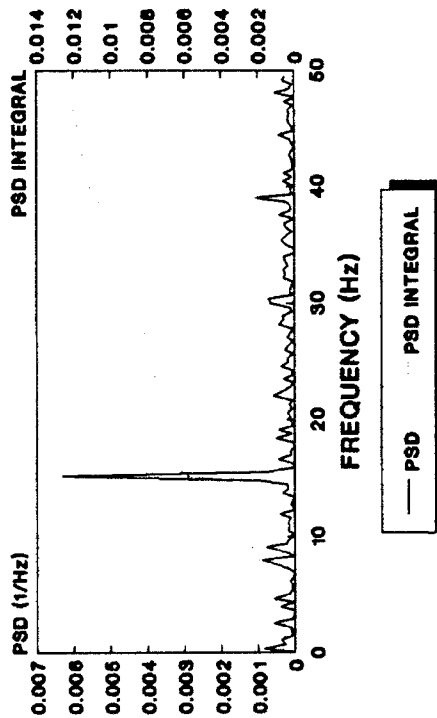
MEAN MOMENT COEFFICIENT LATERAL DIRECTION



MEAN MOMENT COEFFICIENT ROLL DIRECTION

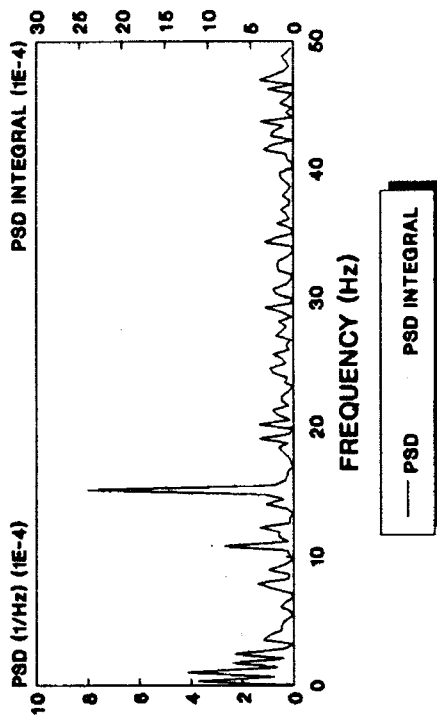


FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



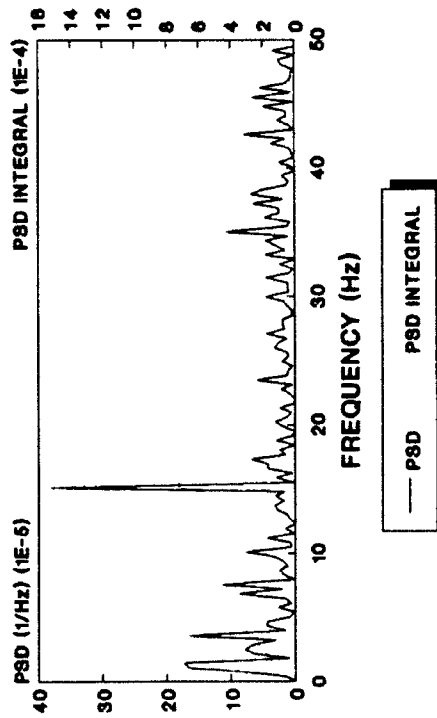
CUBE - HT 8.6 - THETA 30 - AZ 000

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



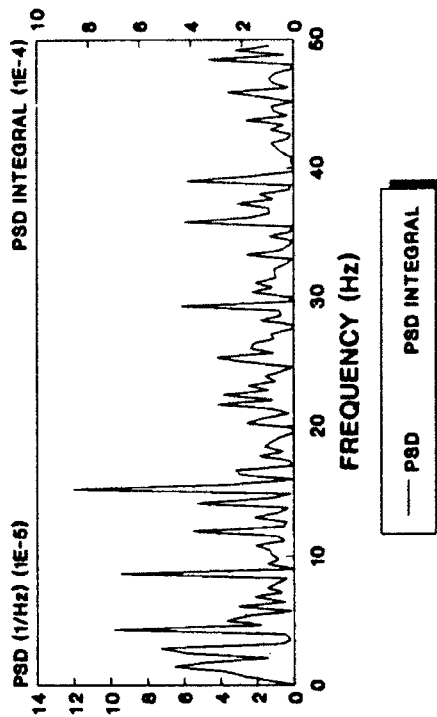
CUBE - HT 8.6 - THETA 30 - AZ 000

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



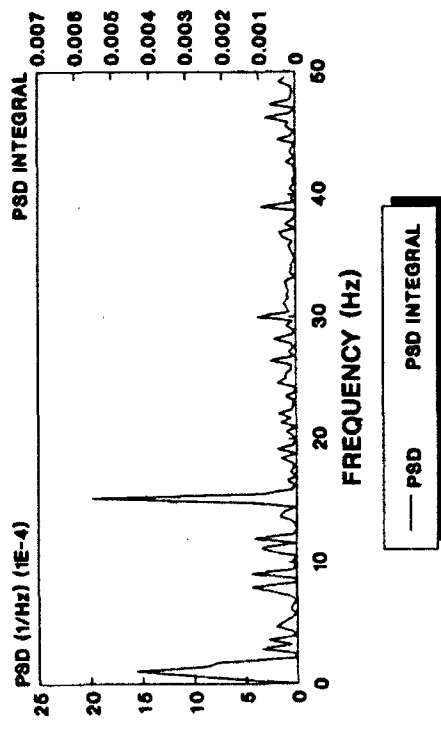
CUBE - HT 8.6 - THETA 30 - AZ 000

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



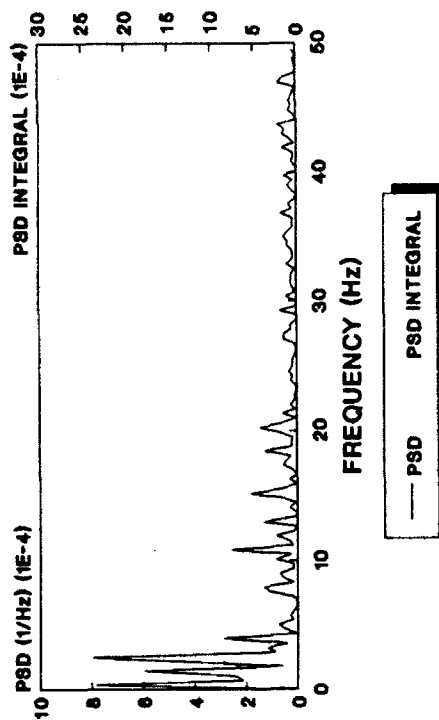
CUBE - HT 8.6 - THETA 30 - AZ 000

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



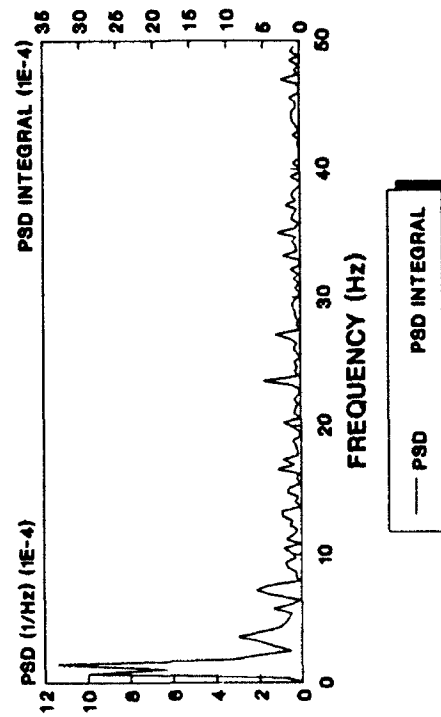
CUBE - MT 8.6 - THETA 30 - AZ 000

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



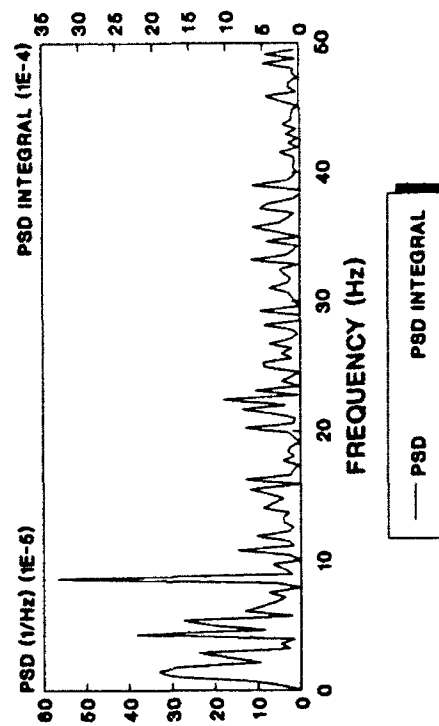
CUBE - MT 8.6 - THETA 30 - AZ 000

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



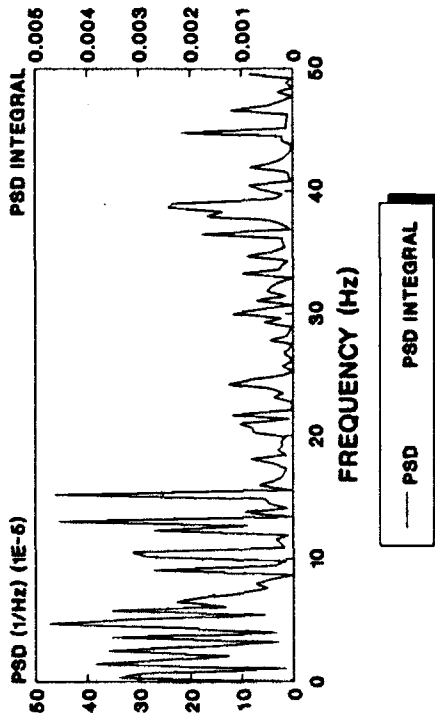
CUBE - MT 8.6 - THETA 30 - AZ 000

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



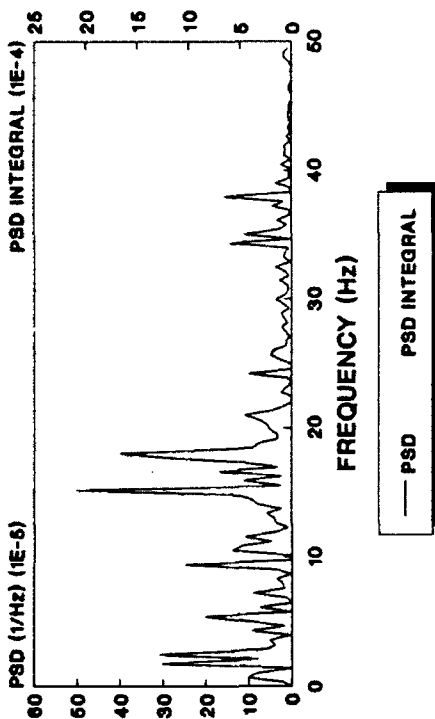
CUBE - MT 8.6 - THETA 30 - AZ 000

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



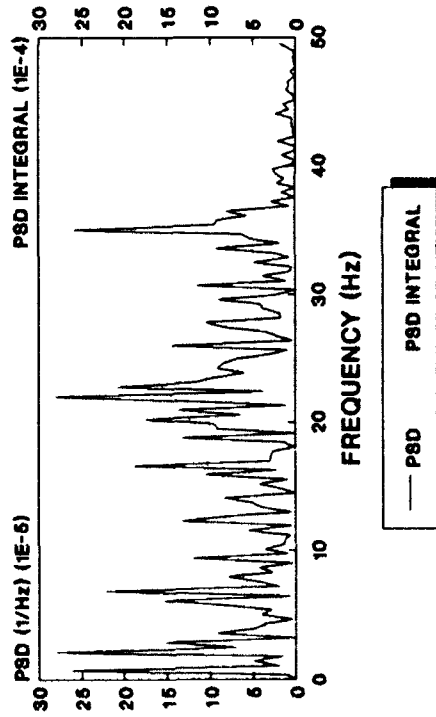
CUBE - HT 8.6 - THETA 30 - AZ 000

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



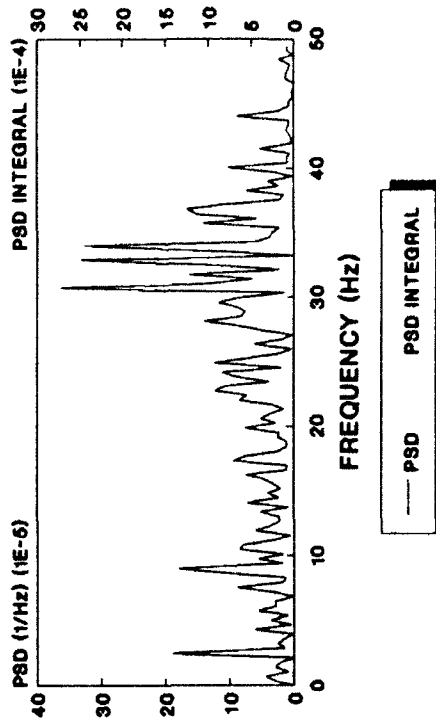
CUBE - HT 8.6 - THETA 30 - AZ 000

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



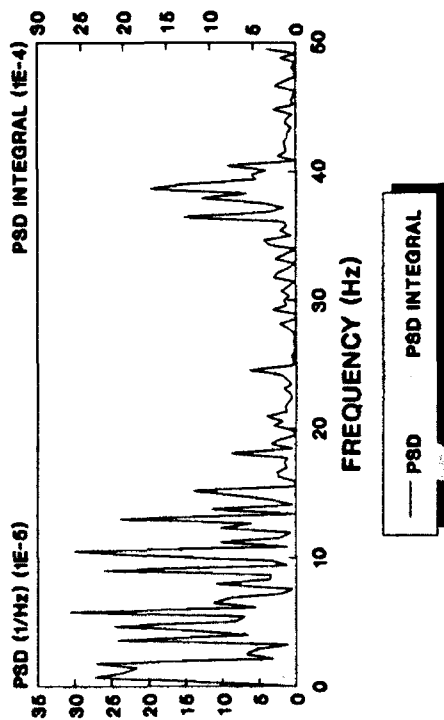
CUBE - HT 8.6 - THETA 30 - AZ 000

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



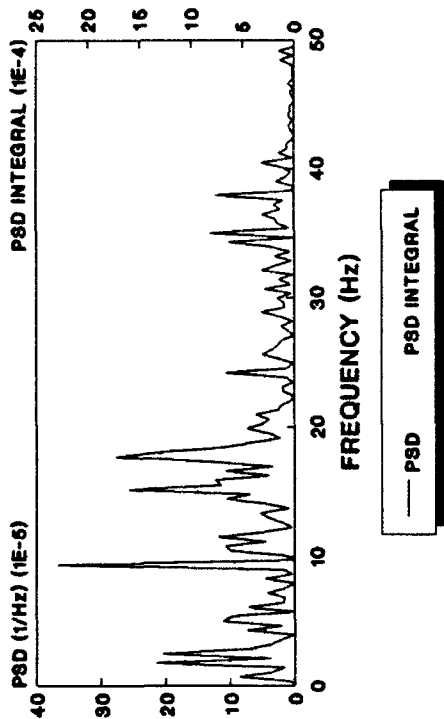
CUBE - HT 8.6 - THETA 30 - AZ 000

MOMENT COEFF - LATERAL **60 FT/SEC NOMINAL**



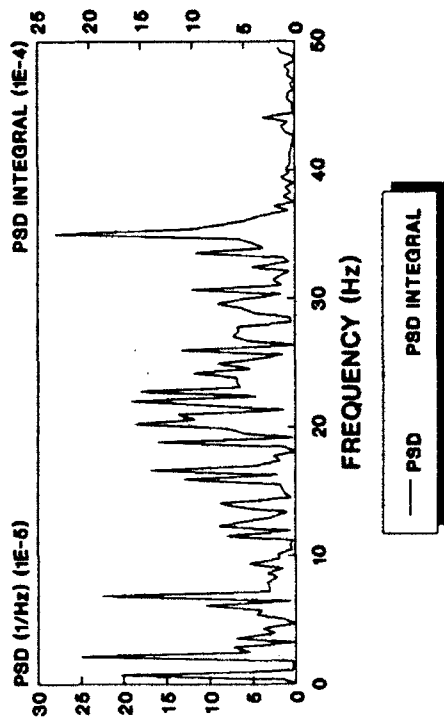
CUBE - HT 8.6 - THETA 30 - AZ 000

MOMENT COEFF - LATERAL **90 FT/SEC NOMINAL**



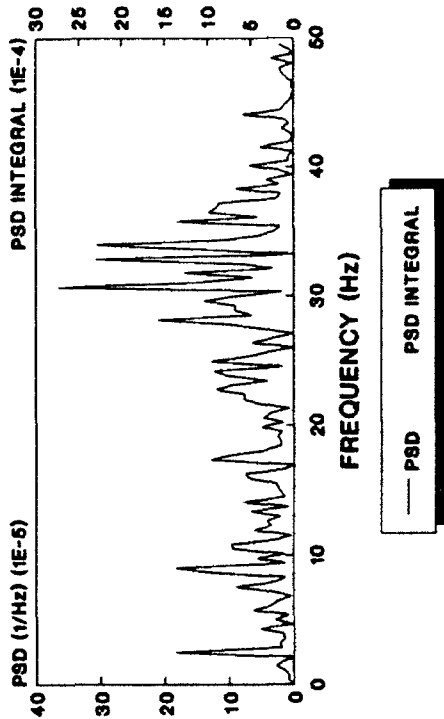
CUBE - HT 8.6 - THETA 30 - AZ 000

MOMENT COEFF - LATERAL **120 FT/SEC NOMINAL**



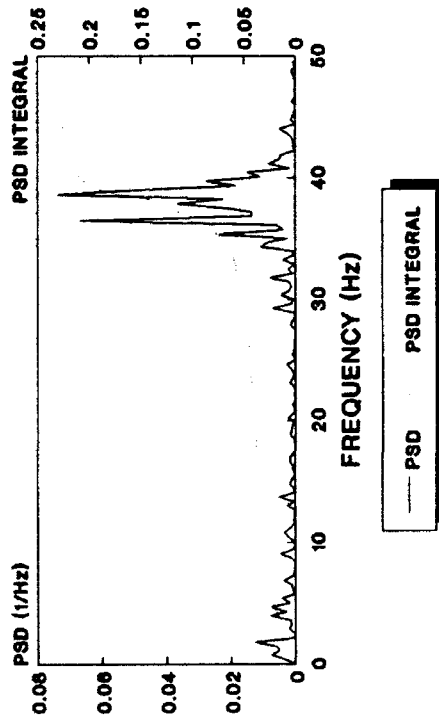
CUBE - HT 8.6 - THETA 30 - AZ 000

MOMENT COEFF - LATERAL **180 FT/SEC NOMINAL**



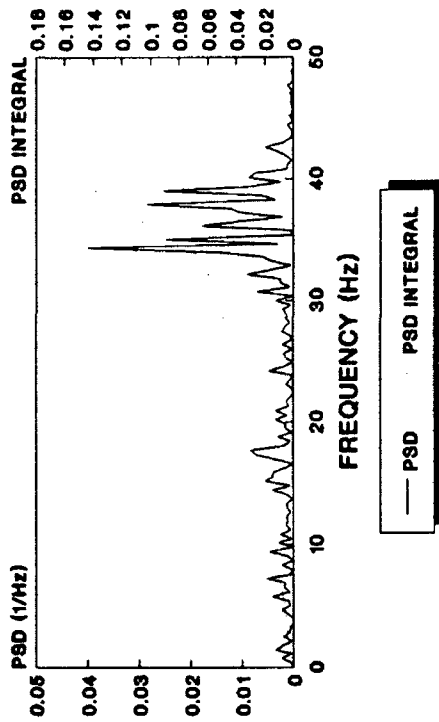
CUBE - HT 8.6 - THETA 30 - AZ 000

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



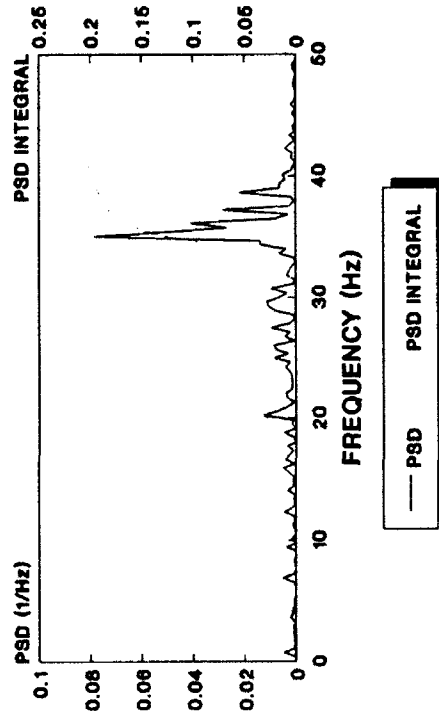
CUBE - HT 8.6 - THETA 30 - AZ 000

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



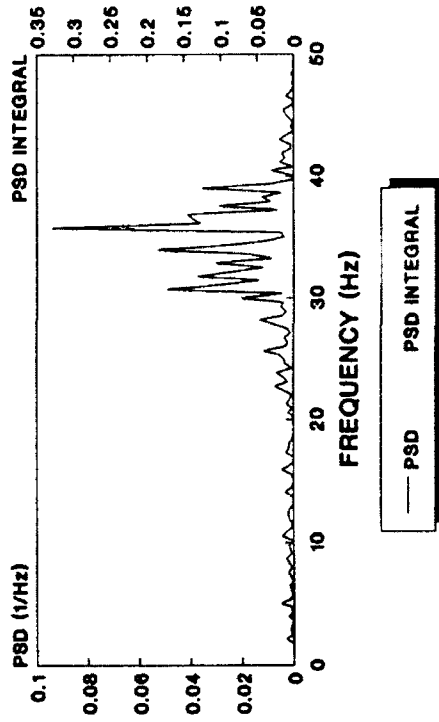
CUBE - HT 8.6 - THETA 30 - AZ 000

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



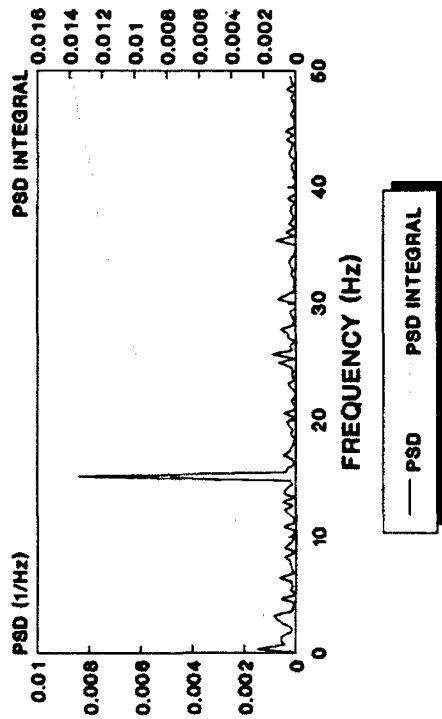
CUBE - HT 8.6 - THETA 30 - AZ 000

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



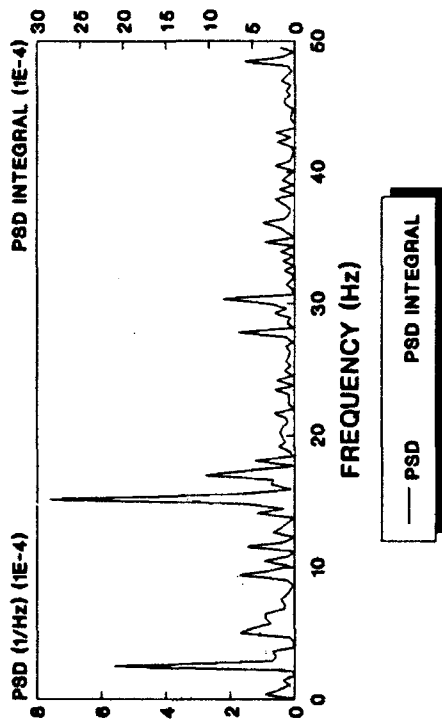
CUBE - HT 8.6 - THETA 30 - AZ 000

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



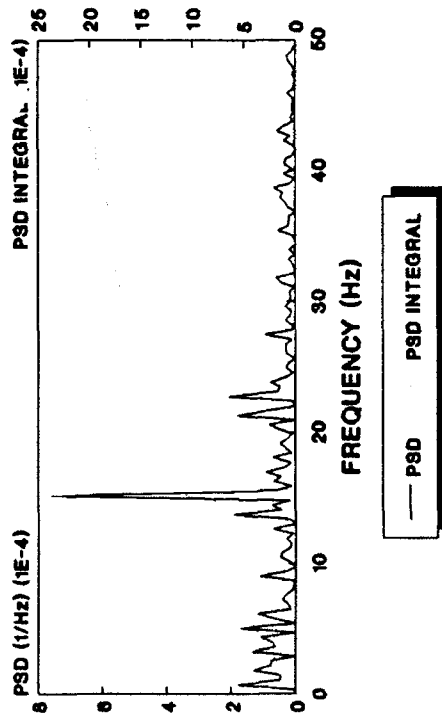
CUBE - HT 8.6 - THETA 30 - AZ 030

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



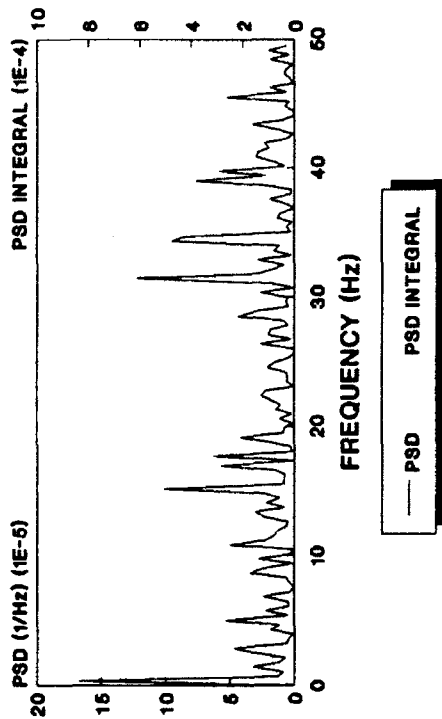
CUBE - HT 8.6 - THETA 30 - AZ 030

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



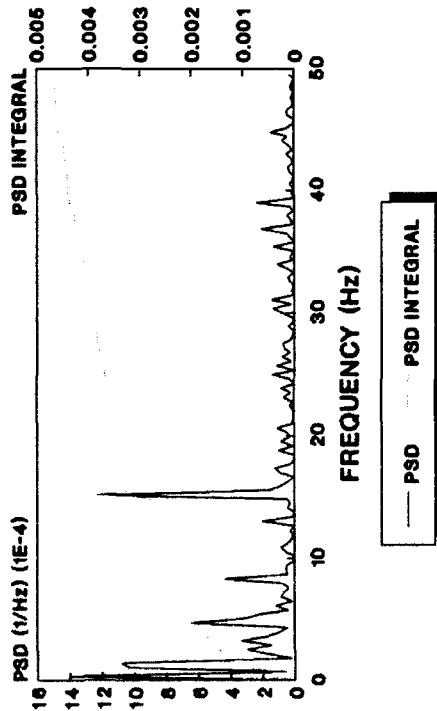
CUBE - HT 8.6 - THETA 30 - AZ 030

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



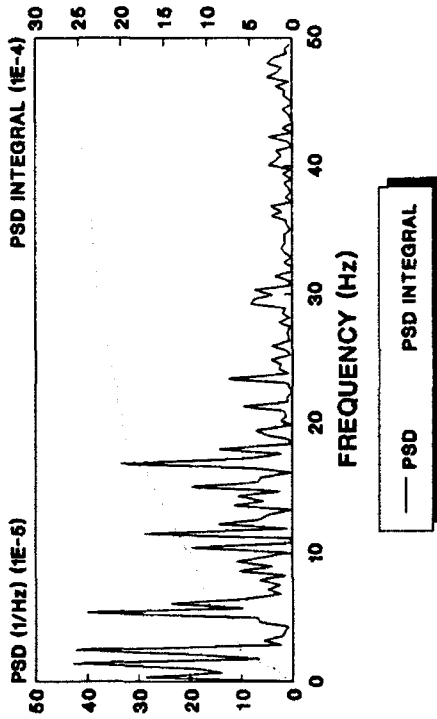
CUBE - HT 8.6 - THETA 30 - AZ 030

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



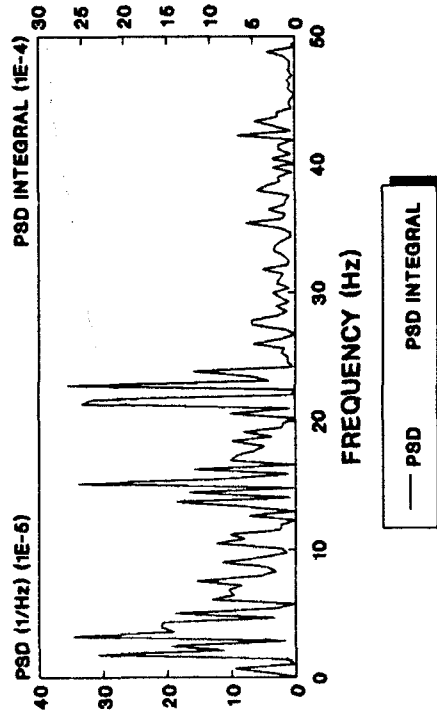
CUBE - HT 8.6 - THETA 30 - AZ 030

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



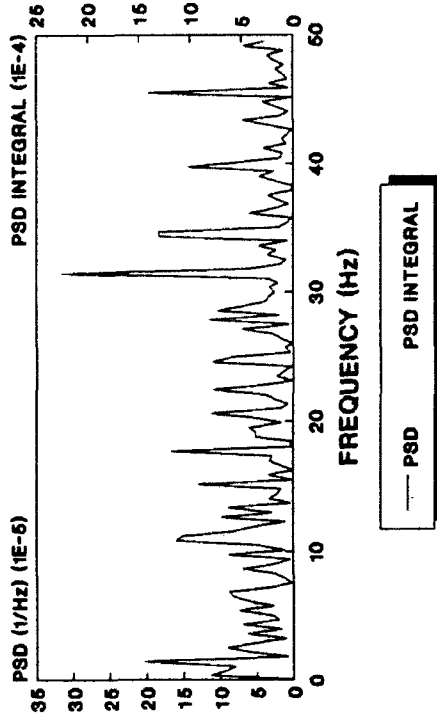
CUBE - HT 8.6 - THETA 30 - AZ 030

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



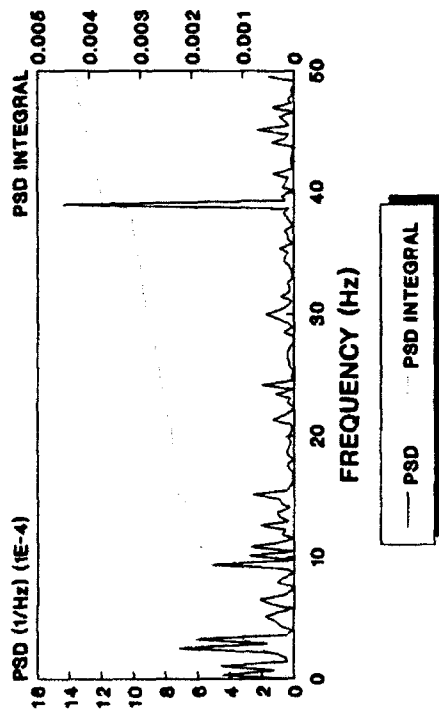
CUBE - HT 8.6 - THETA 30 - AZ 030

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



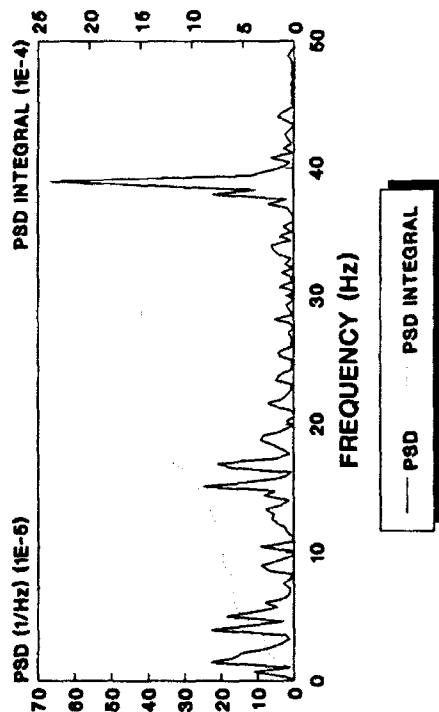
CUBE - HT 8.6 - THETA 30 - AZ 030

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



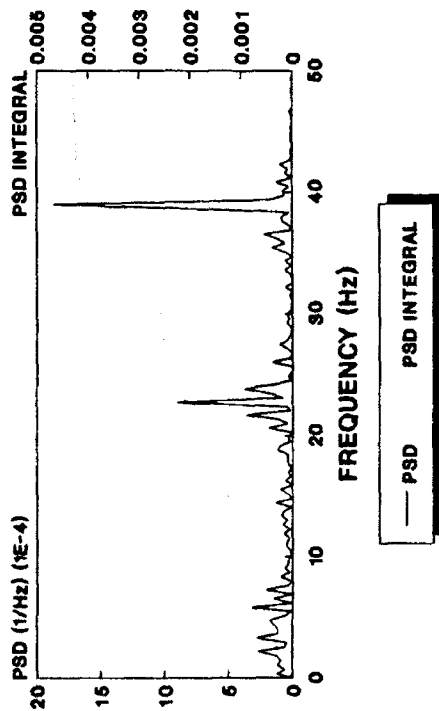
CUBE - HT 8.5 - THETA 30 - AZ 030

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



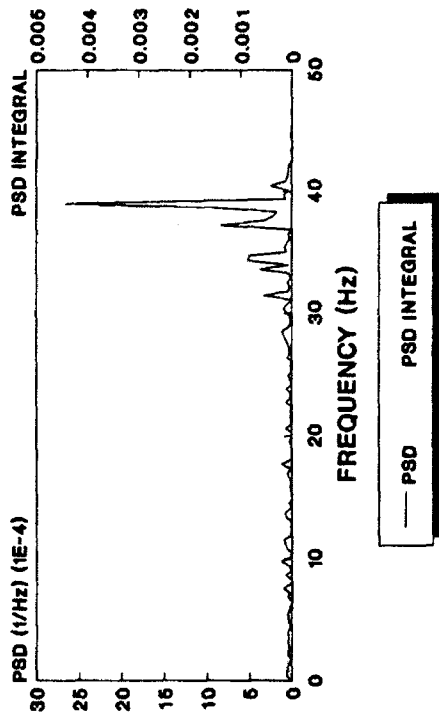
CUBE - HT 8.5 - THETA 30 - AZ 030

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



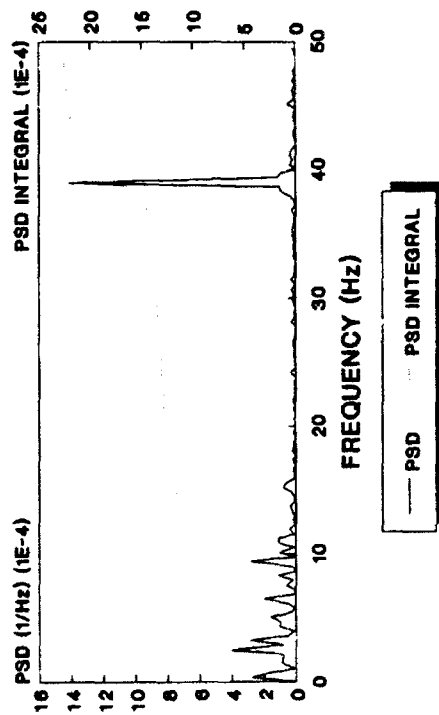
CUBE - HT 8.5 - THETA 30 - AZ 030

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



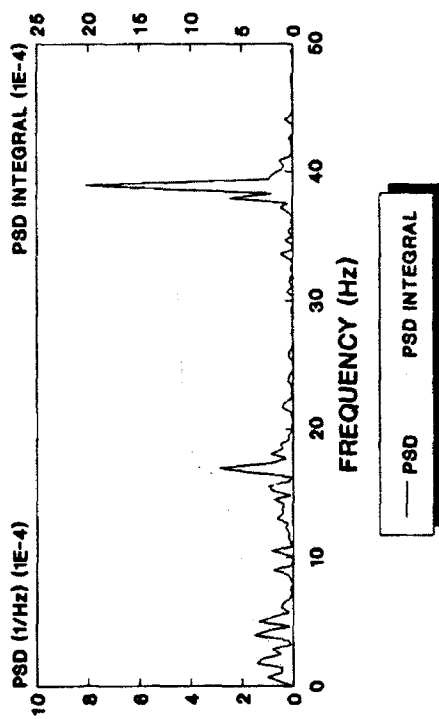
CUBE - HT 8.5 - THETA 30 - AZ 030

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



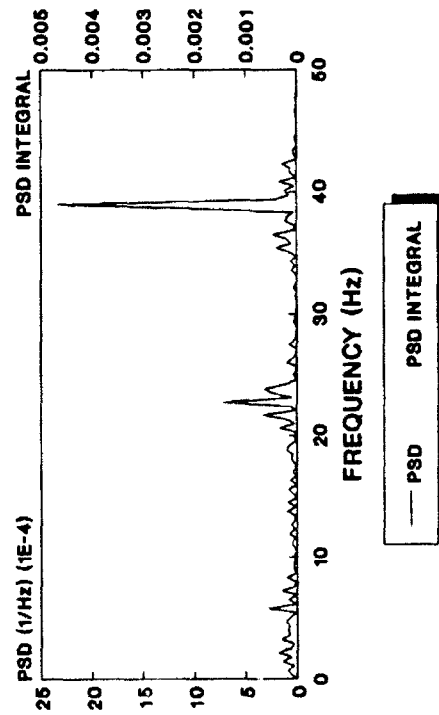
CUBE - HT 8.6 - THETA 30 - AZ 030

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



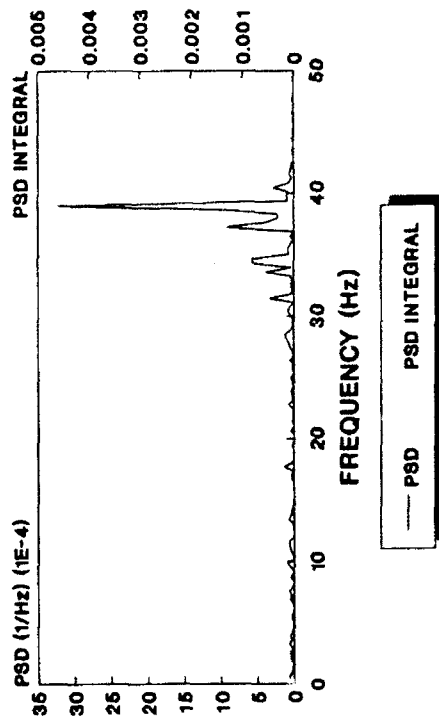
CUBE - HT 8.6 - THETA 30 - AZ 030

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



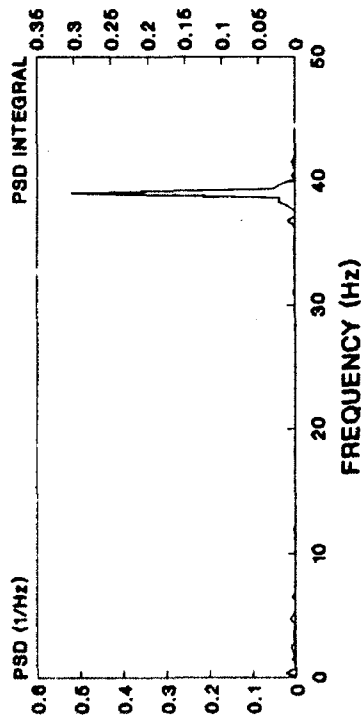
CUBE - HT 8.6 - THETA 30 - AZ 030

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



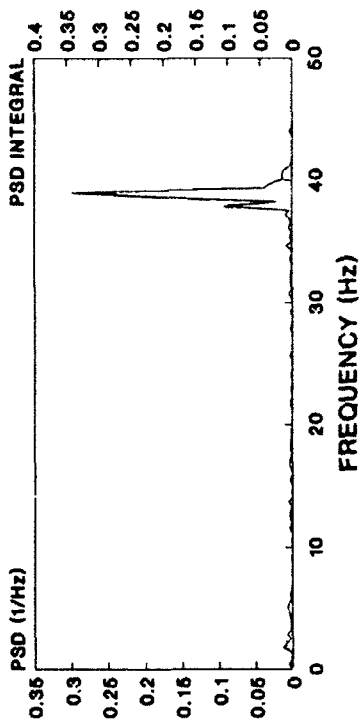
CUBE - HT 8.6 - THETA 30 - AZ 030

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



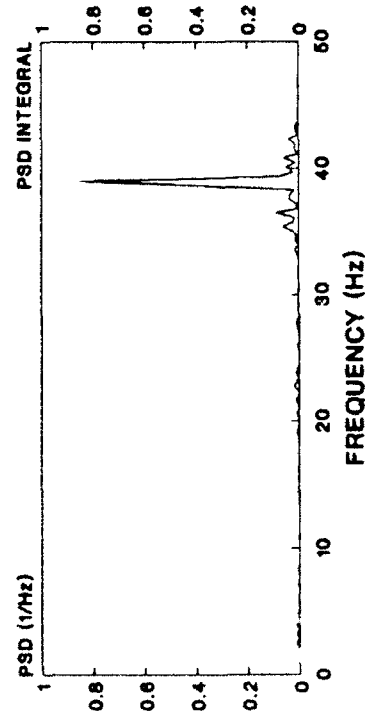
CUBE - HT 8.6 - THETA 30 - AZ 030

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



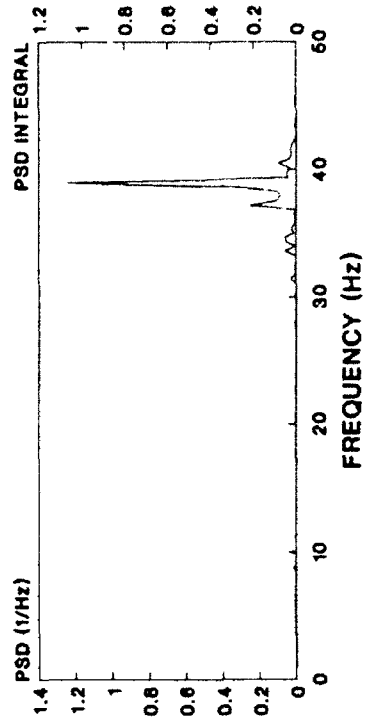
CUBE - HT 8.6 - THETA 30 - AZ 030

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



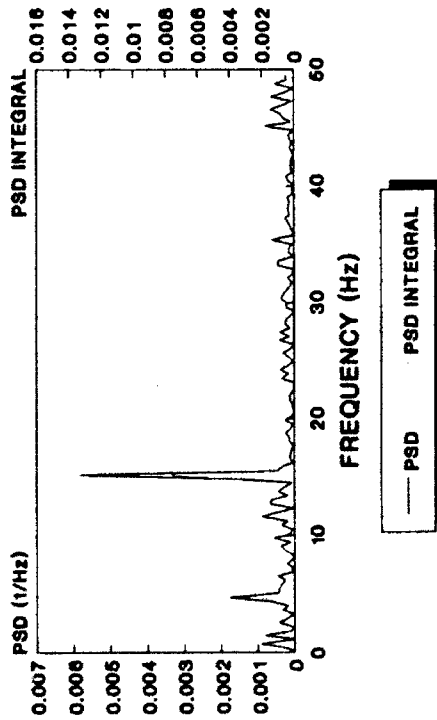
CUBE - HT 8.6 - THETA 30 - AZ 030

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



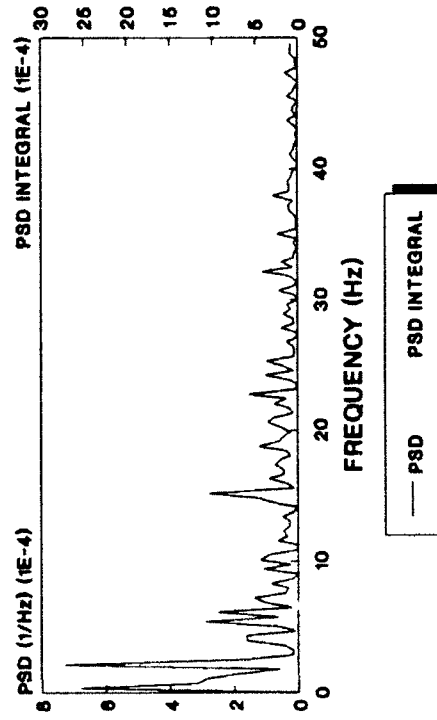
CUBE - HT 8.6 - THETA 30 - AZ 030

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



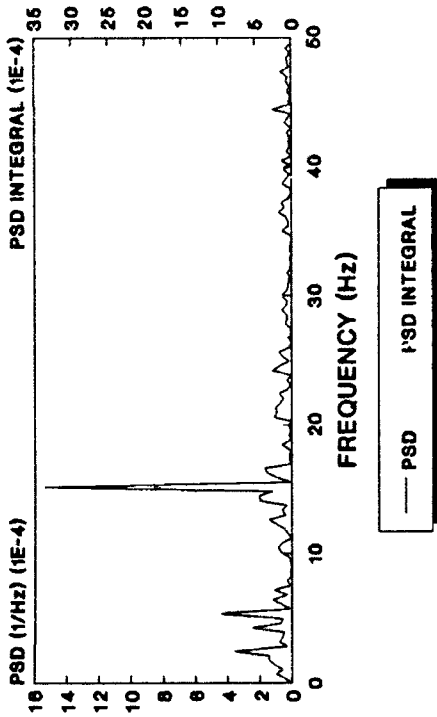
CUBE - HT 8.6 - THETA 30 - AZ 045

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



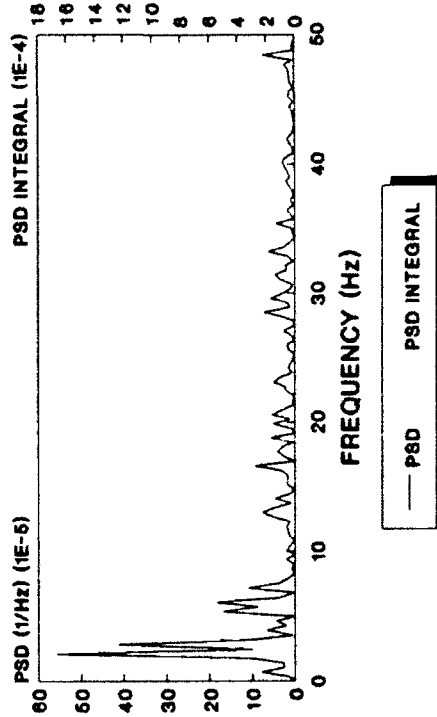
CUBE - HT 8.6 - THETA 30 - AZ 045

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



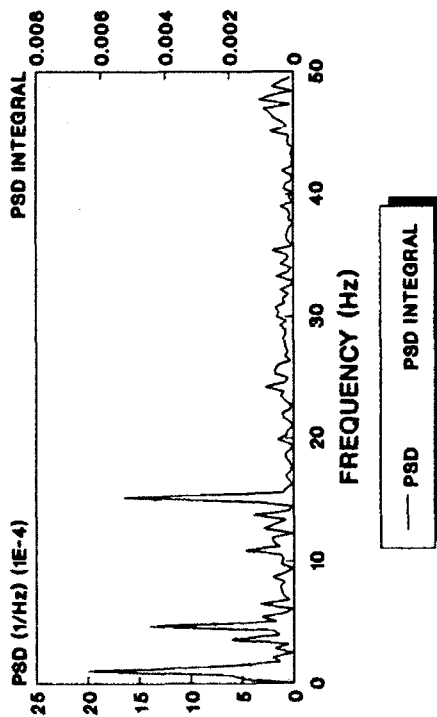
CUBE - HT 8.6 - THETA 30 - AZ 046

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



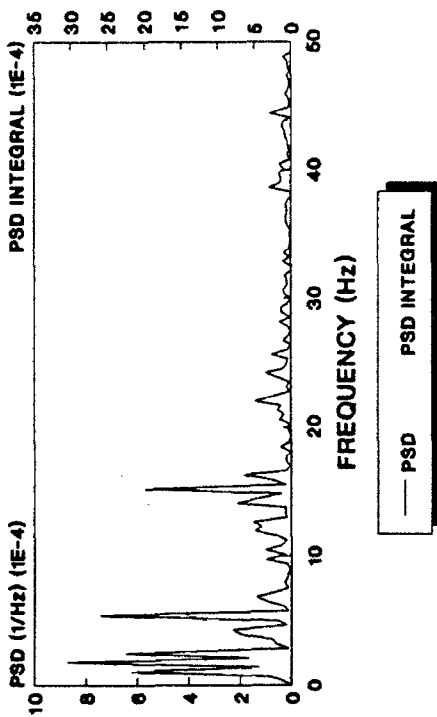
CUBE - HT 8.6 - THETA 30 - AZ 046

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



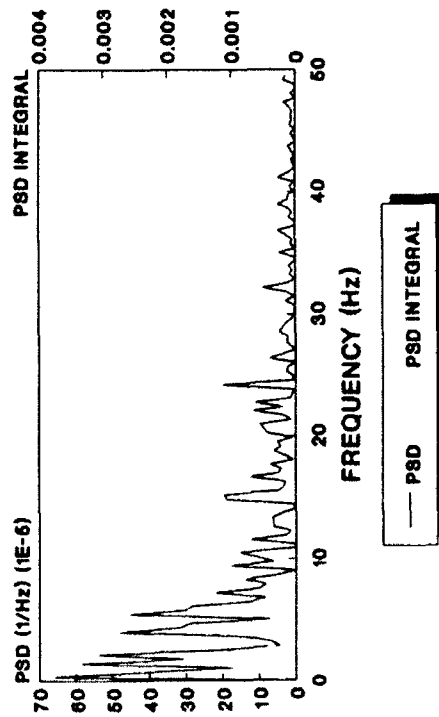
CUBE - HT 8.6 - THETA 30 - AZ 046

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



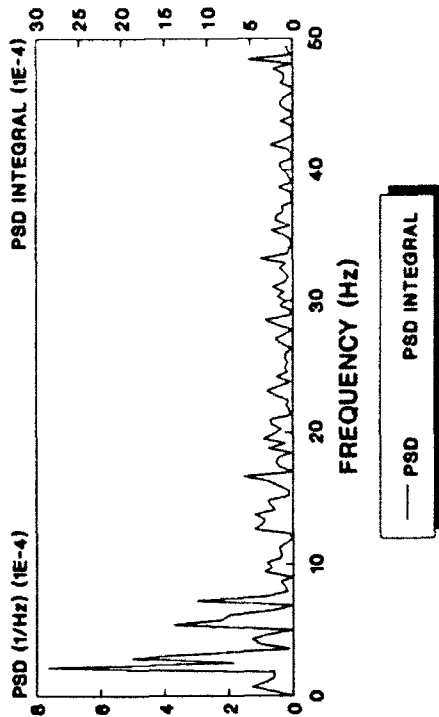
CUBE - HT 8.6 - THETA 30 - AZ 046

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



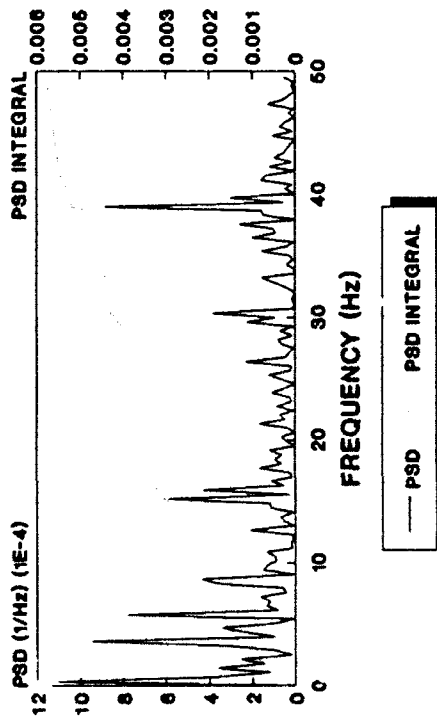
CUBE - HT 8.6 - THETA 30 - AZ 046

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



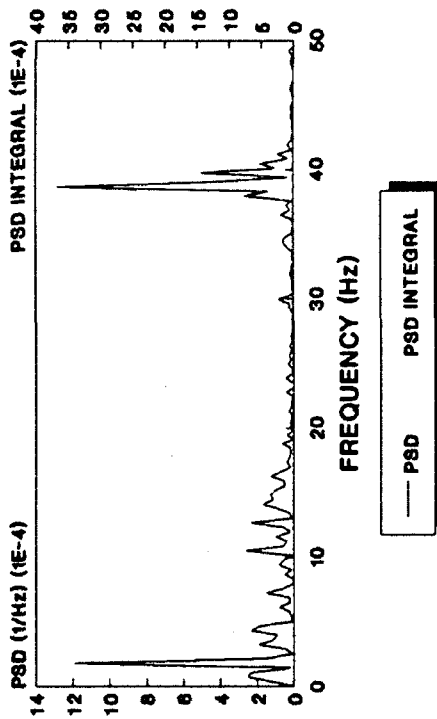
CUBE - HT 8.6 - THETA 30 - AZ 046

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



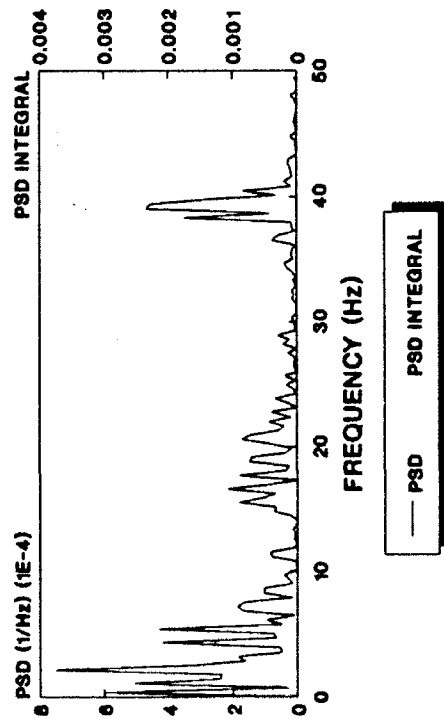
CUBE - HT 8.5 - THETA 30 - AZ 045

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



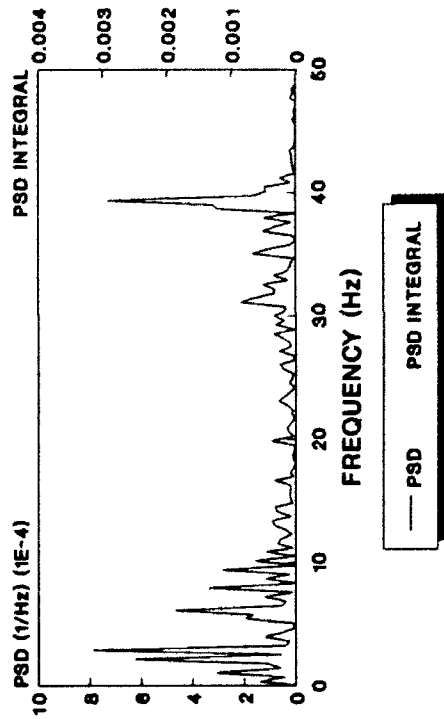
CUBE - HT 8.5 - THETA 30 - AZ 045

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



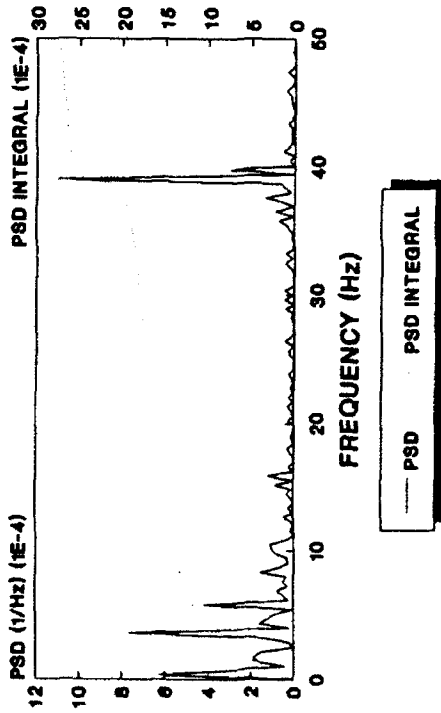
CUBE - HT 8.5 - THETA 30 - AZ 045

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



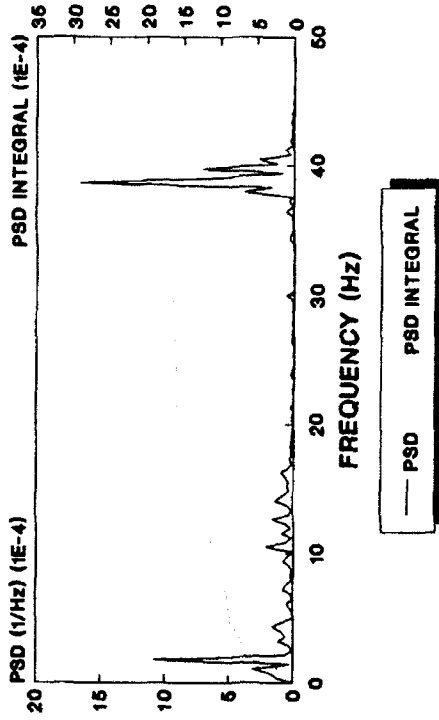
CUBE - HT 8.5 - THETA 30 - AZ 045

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



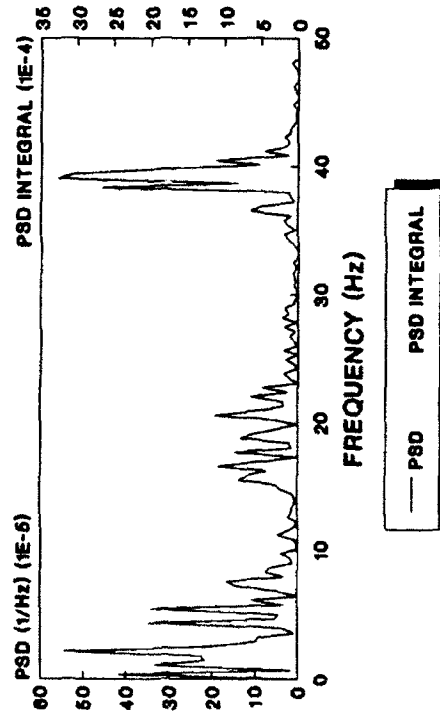
CUBE - HT 8.8 - THETA 30 - AZ 046

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



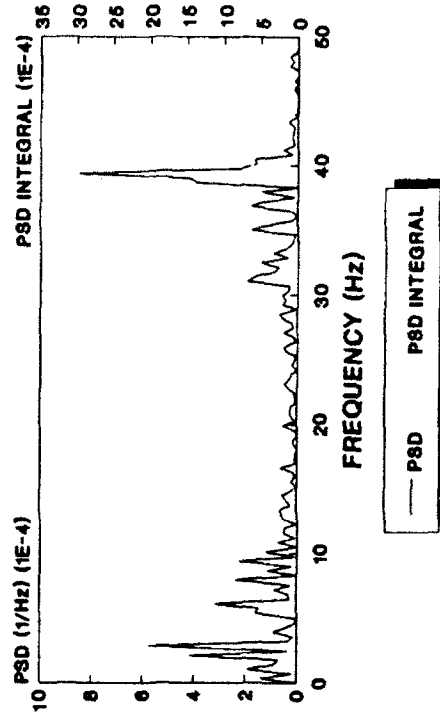
CUBE - HT 8.6 - THETA 30 - AZ 046

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



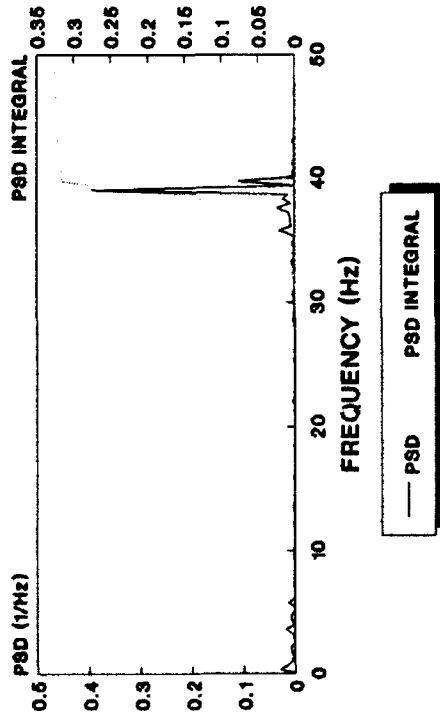
CUBE - HT 8.6 - THETA 30 - AZ 046

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



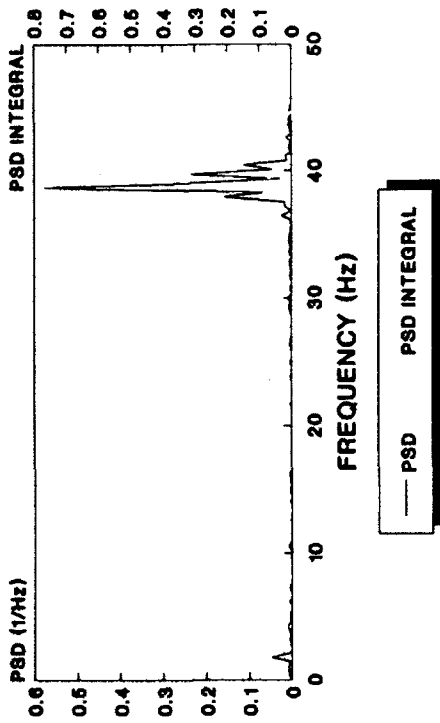
CUBE - HT 8.6 - THETA 30 - AZ 046

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



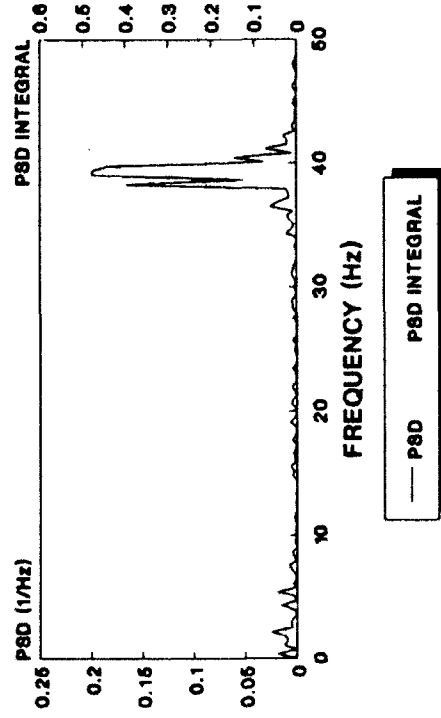
CUBE - HT 8.6 - THETA 30 - AZ 045

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



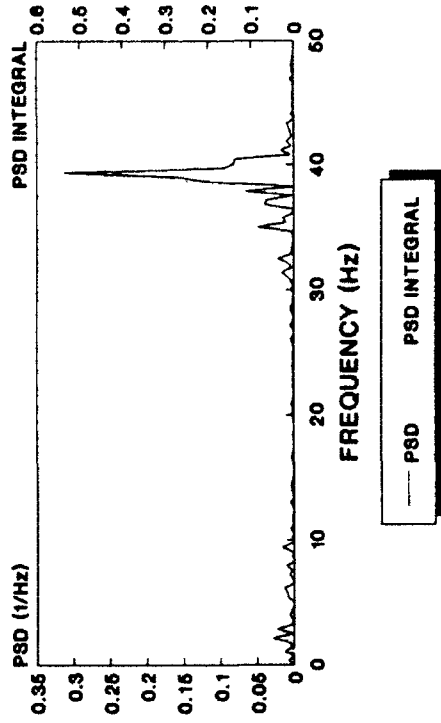
CUBE - HT 8.6 - THETA 30 - AZ 045

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



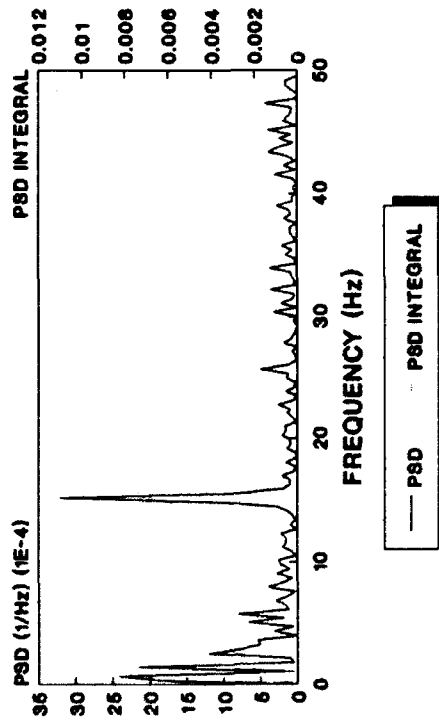
CUBE - HT 8.6 - THETA 30 - AZ 045

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



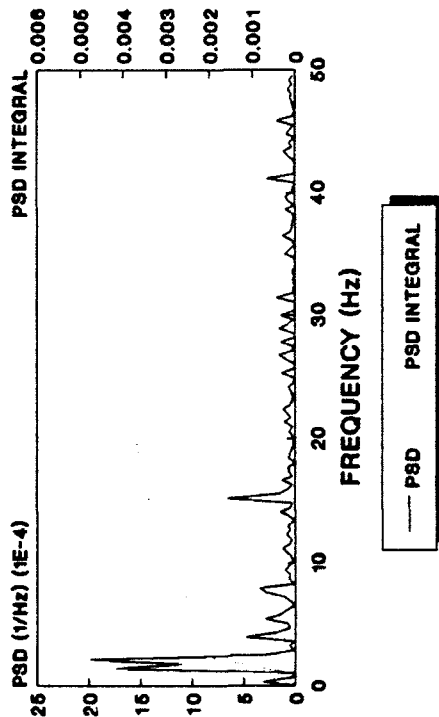
CUBE - HT 8.6 - THETA 30 - AZ 045

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



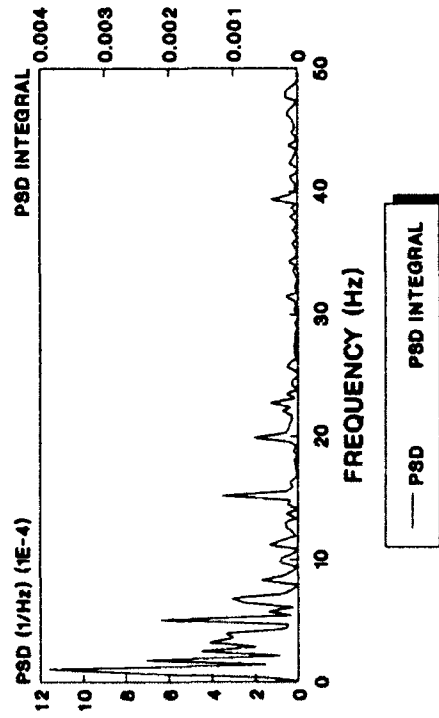
CUBE - HT 8.6 - THETA 30 - AZ 060

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



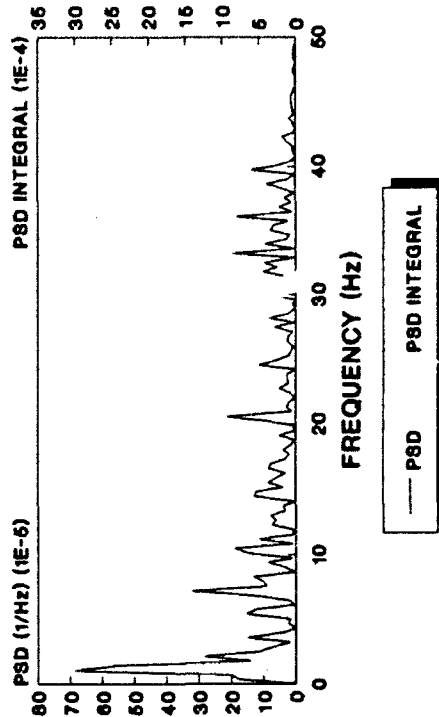
CUBE - HT 8.6 - THETA 30 - AZ 060

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



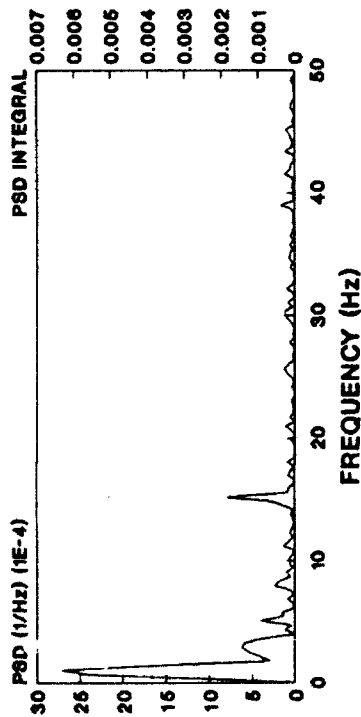
CUBE - HT 8.6 - THETA 30 - AZ 060

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



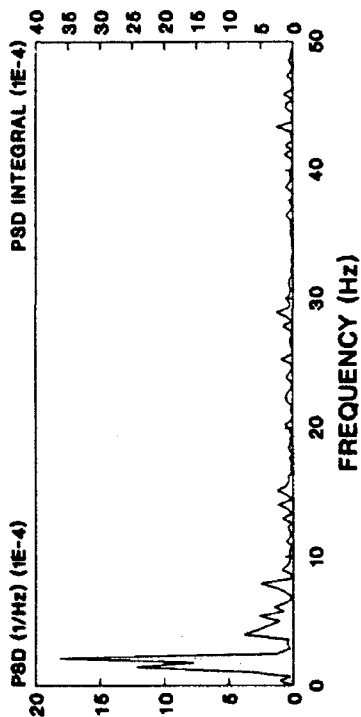
CUBE - HT 8.6 - THETA 30 - AZ 060

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



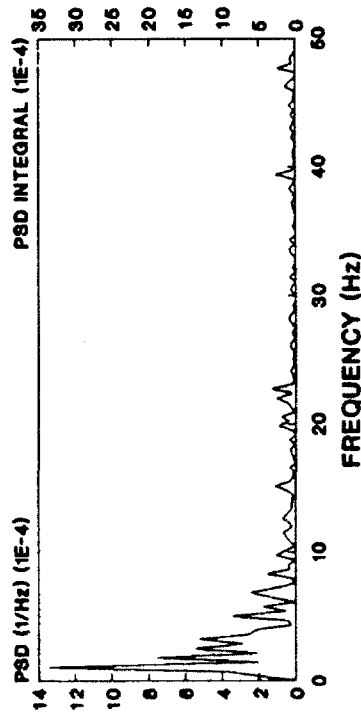
CUBE - HT 8.6 - THETA 30 - AZ 060

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



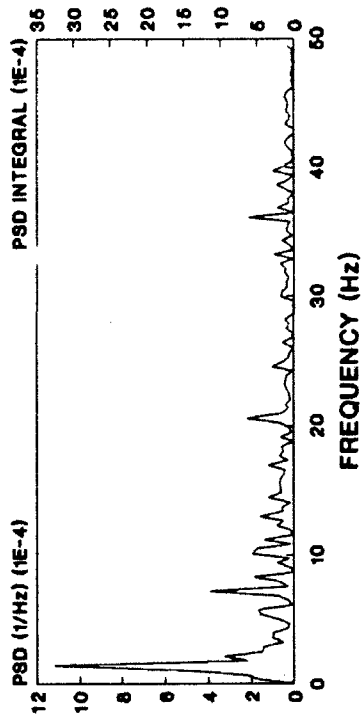
CUBE - HT 8.6 - THETA 30 - AZ 060

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



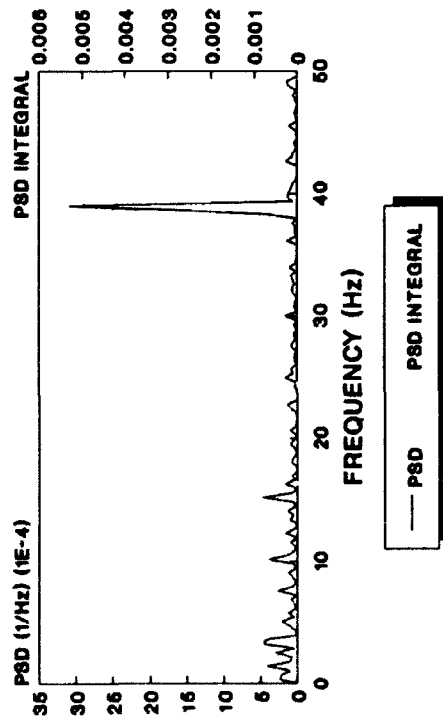
CUBE - HT 8.6 - THETA 30 - AZ 060

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



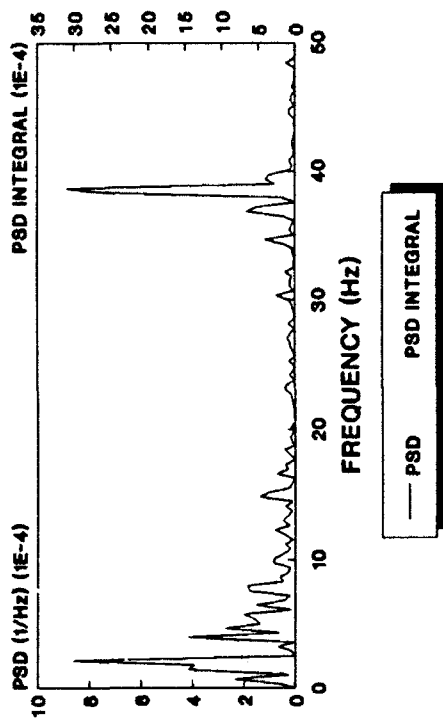
CUBE - HT 8.6 - THETA 30 - AZ 060

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



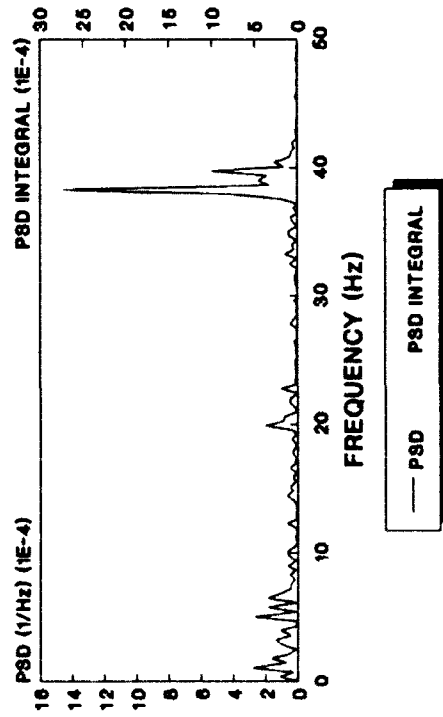
CUBE - HT 8.6 - THETA 30 - AZ 060

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



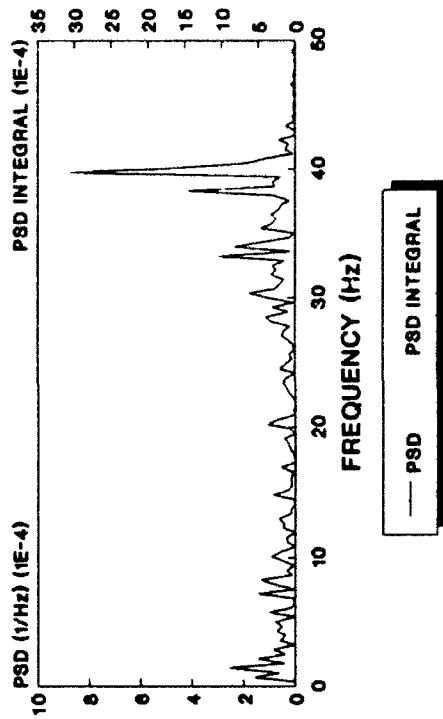
CUBE - HT 8.6 - THETA 30 - AZ 060

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



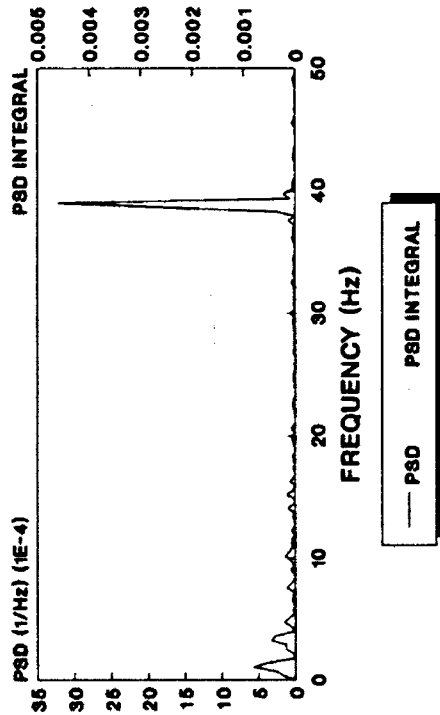
CUBE - HT 8.6 - THETA 30 - AZ 060

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



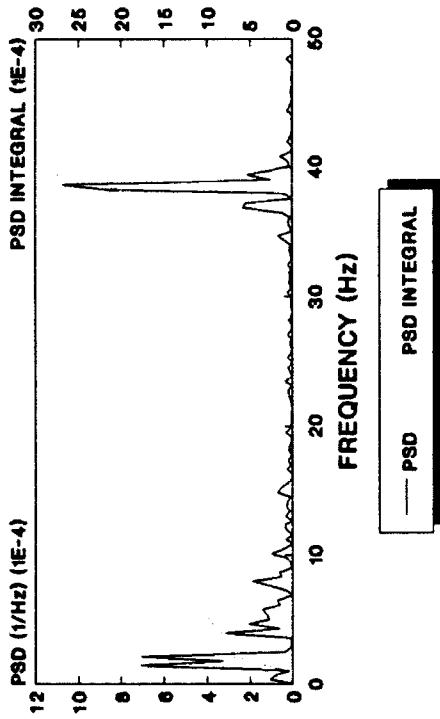
CUBE - HT 8.6 - THETA 30 - AZ 060

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



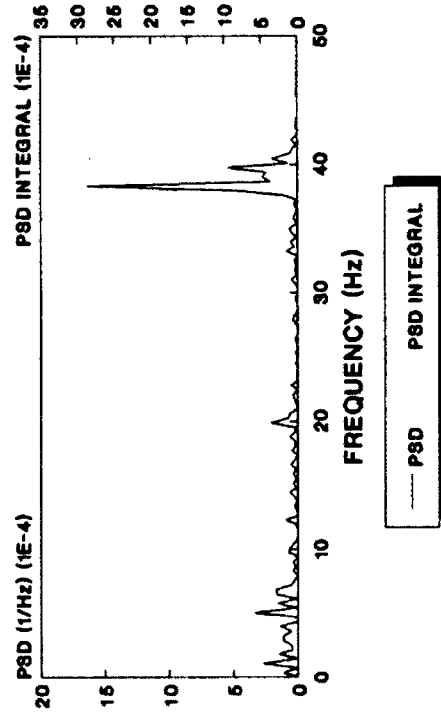
CUBE - HT 8.6 - THETA 30 - AZ 060

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



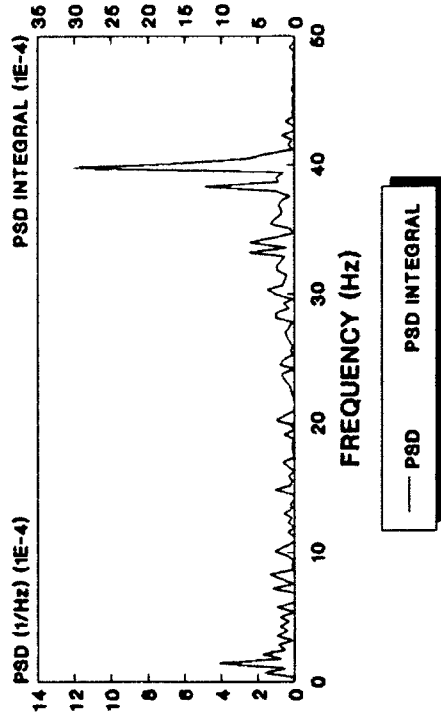
CUBE - HT 8.6 - THETA 30 - AZ 060

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



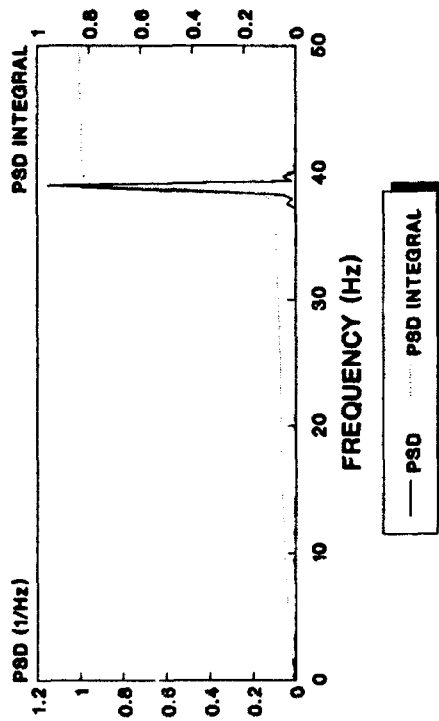
CUBE - HT 8.6 - THETA 30 - AZ 060

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



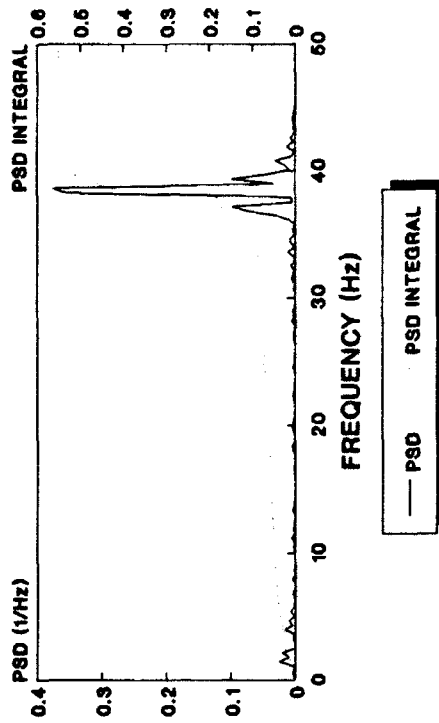
CUBE - HT 8.6 - THETA 30 - AZ 060

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



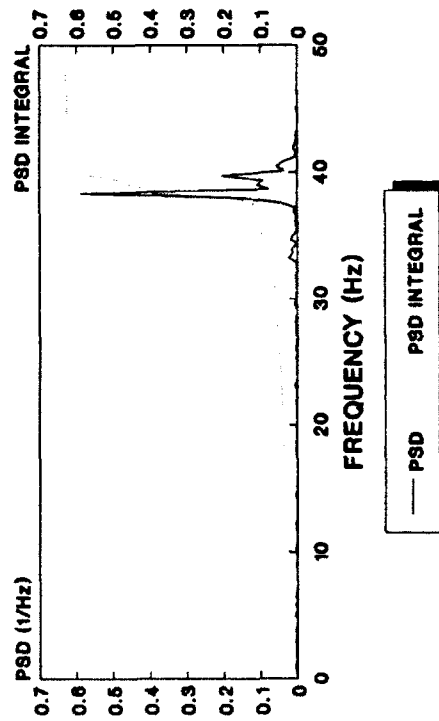
CUBE - HT 8.6 - THETA 30 - AZ 060

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



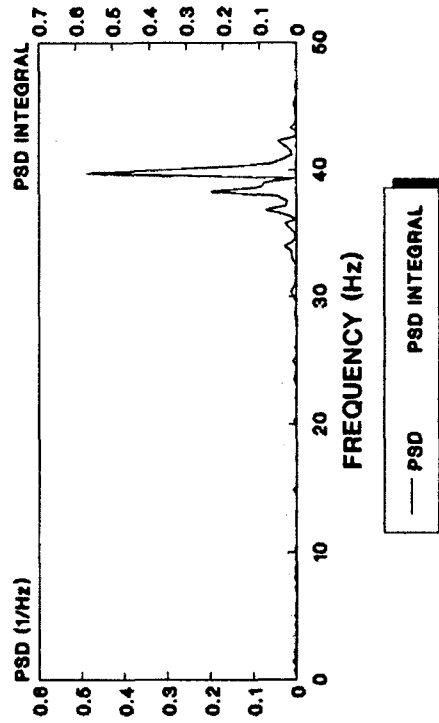
CUBE - HT 8.6 - THETA 30 - AZ 060

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



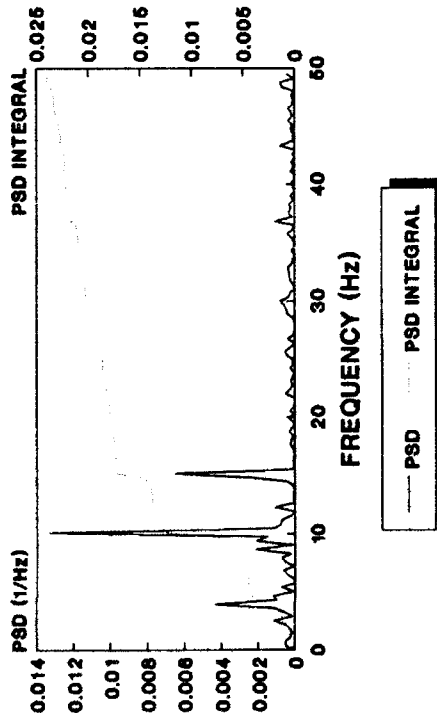
CUBE - HT 8.6 - THETA 30 - AZ 060

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



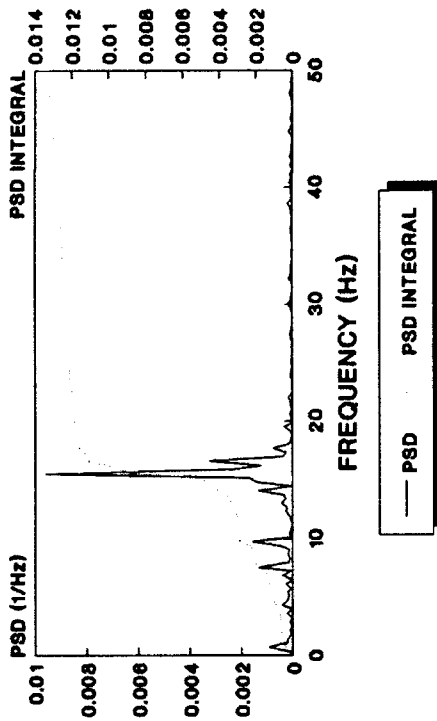
CUBE - HT 8.6 - THETA 30 - AZ 060

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



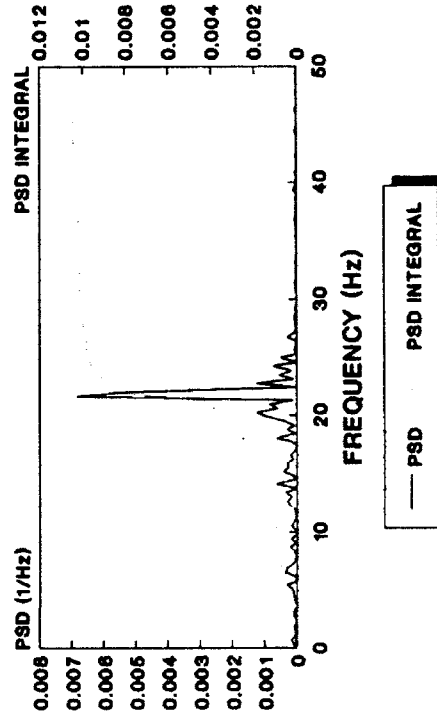
CUBE - HT 8.6 - THETA 30 - AZ 090

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



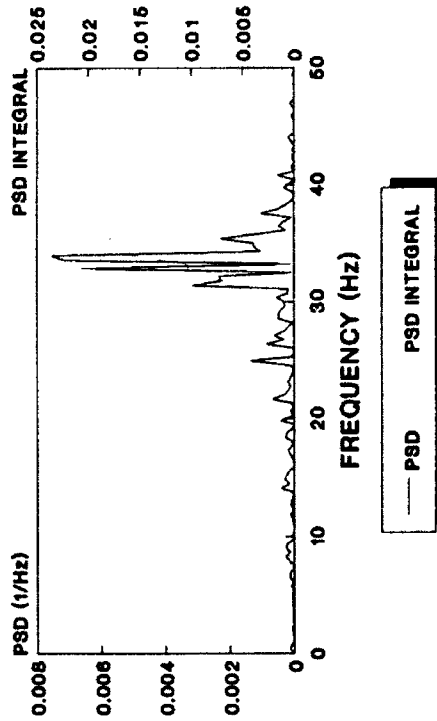
CUBE - HT 8.6 - THETA 30 - AZ 090

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



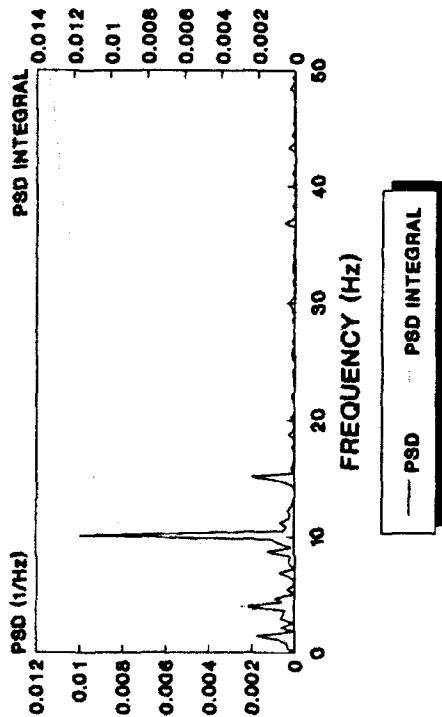
CUBE - HT 8.6 - THETA 30 - AZ 090

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



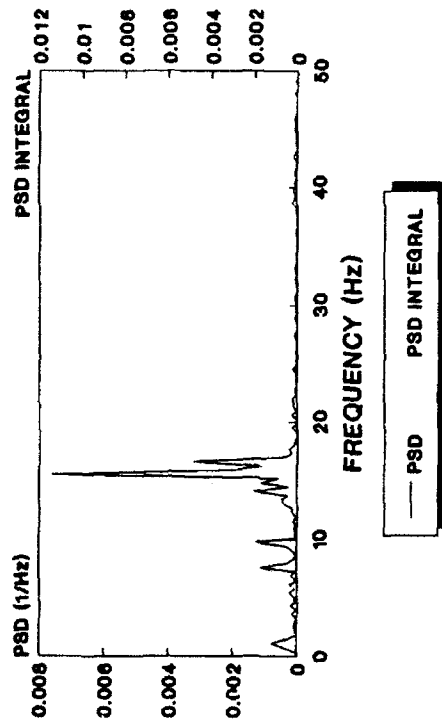
CUBE - HT 8.6 - THETA 30 - AZ 090

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



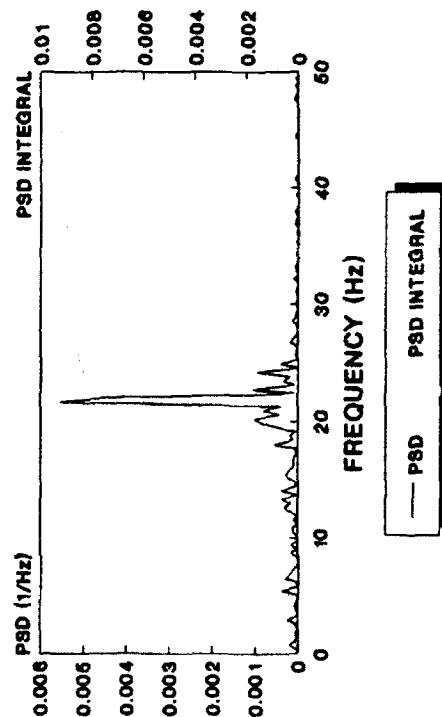
CUBE - HT 8.6 - THETA 30 - AZ 090

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



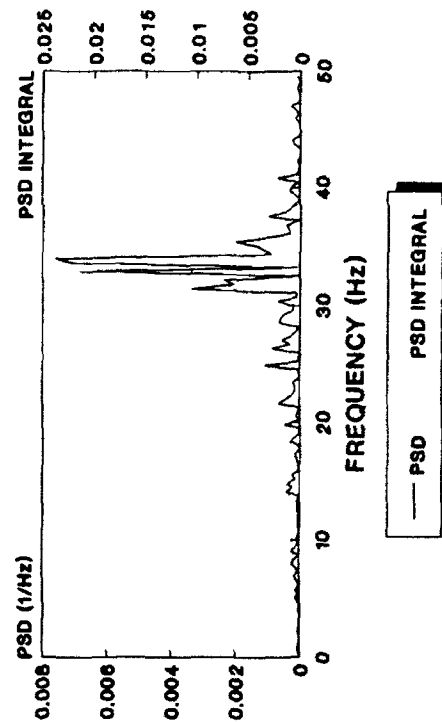
CUBE - HT 8.6 - THETA 30 - AZ 090

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



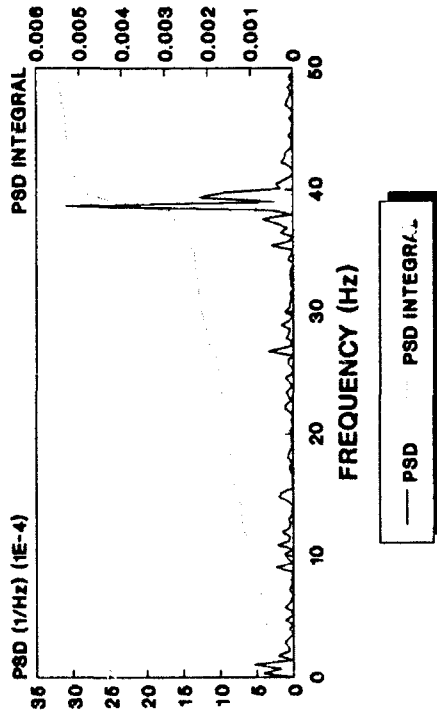
CUBE - HT 8.6 - THETA 30 - AZ 090

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



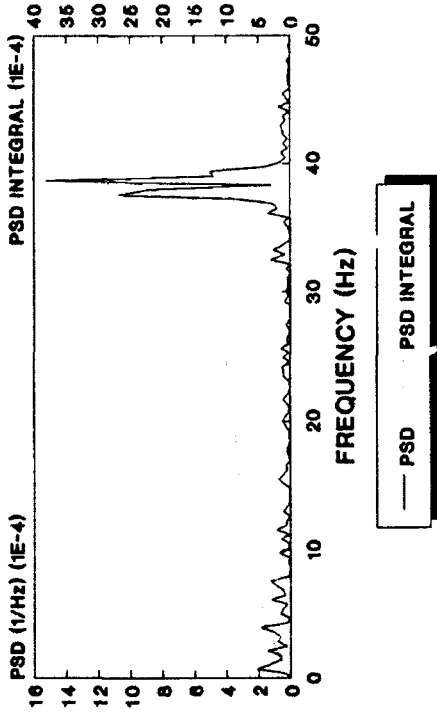
CUBE - HT 8.6 - THETA 30 - AZ 090

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



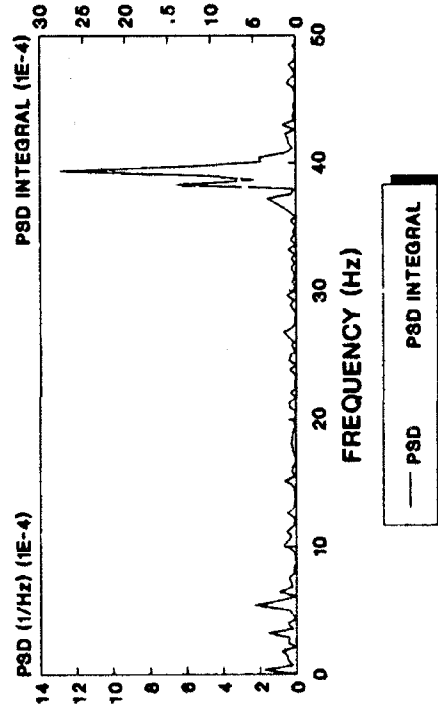
CUBE - HT 8.6 - THETA 30 - AZ 090

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



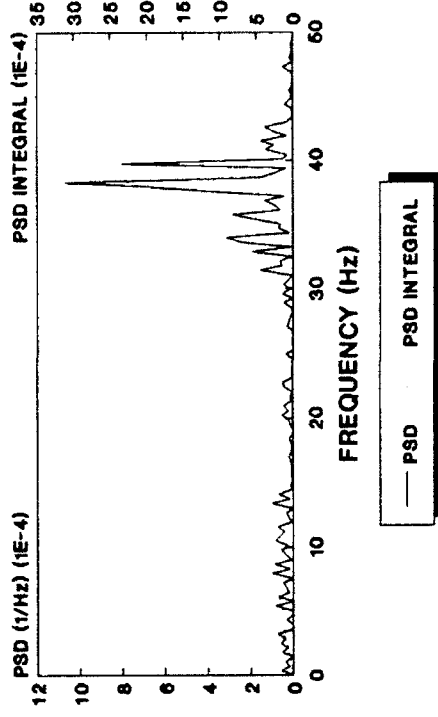
CUBE - HT 8.6 - THETA 30 - AZ 090

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



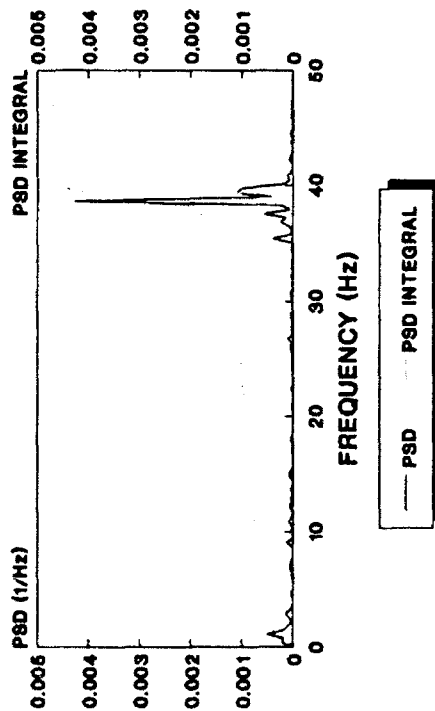
CUBE - HT 8.6 - THETA 30 - AZ 090

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



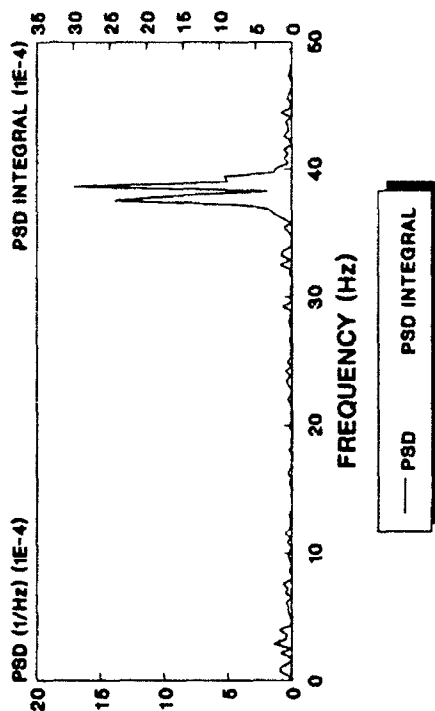
CUBE - HT 8.6 - THETA 30 - AZ 090

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



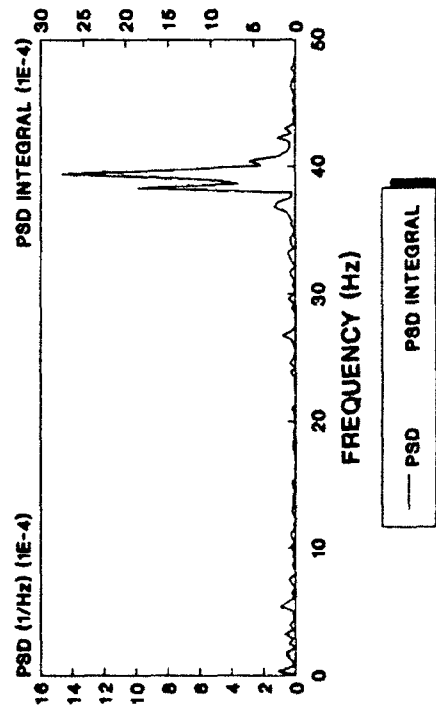
CUBE - HT 8.5 - THETA 30 - AZ 090

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



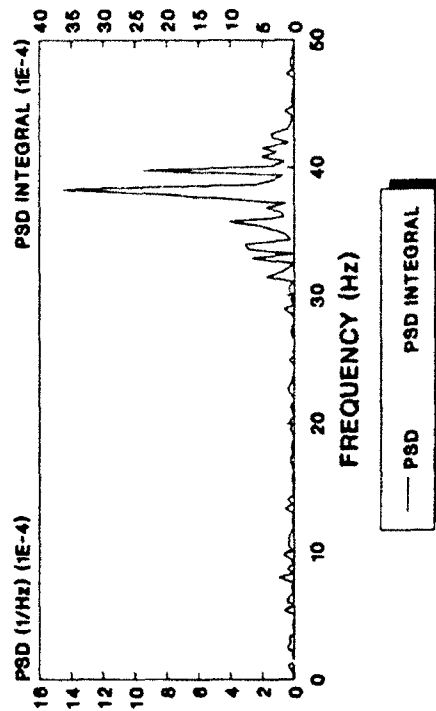
CUBE - HT 8.5 - THETA 30 - AZ 090

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



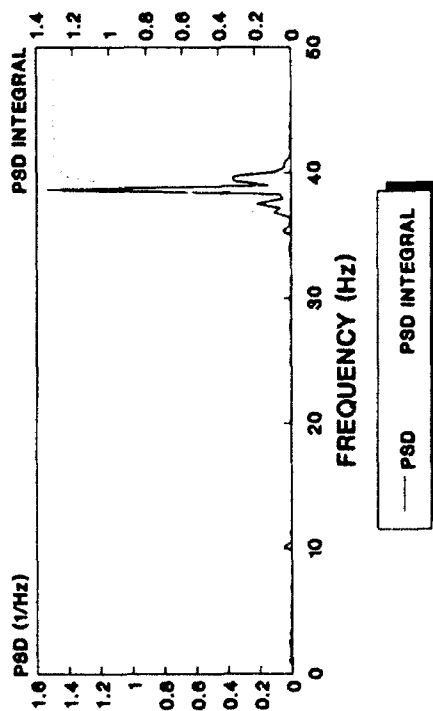
CUBE - HT 8.5 - THETA 30 - AZ 090

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



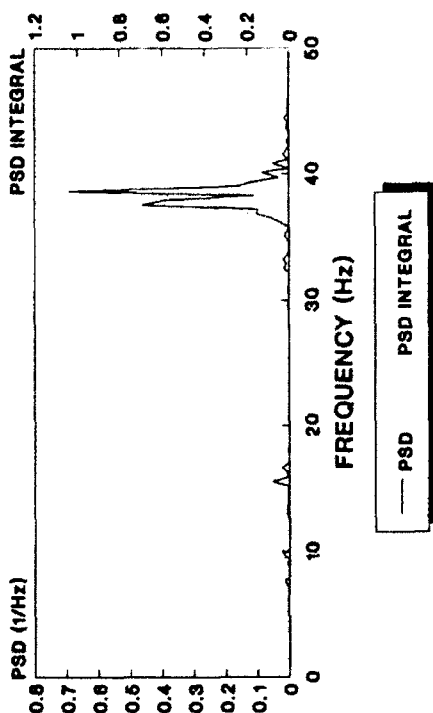
CUBE - HT 8.5 - THETA 30 - AZ 090

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



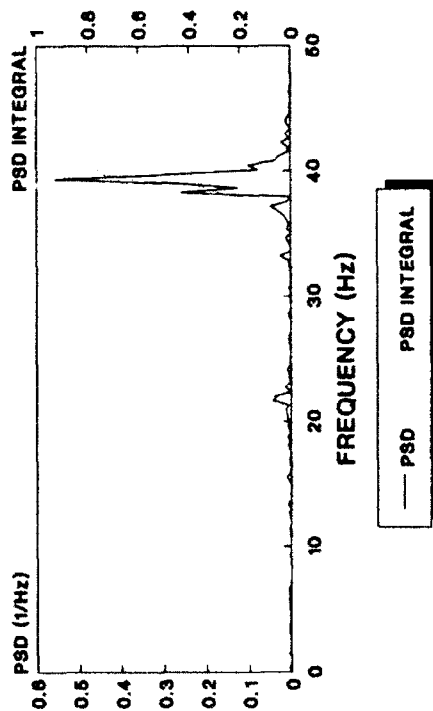
CUBE - HT 8.6 - THETA 30 - AZ 090

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



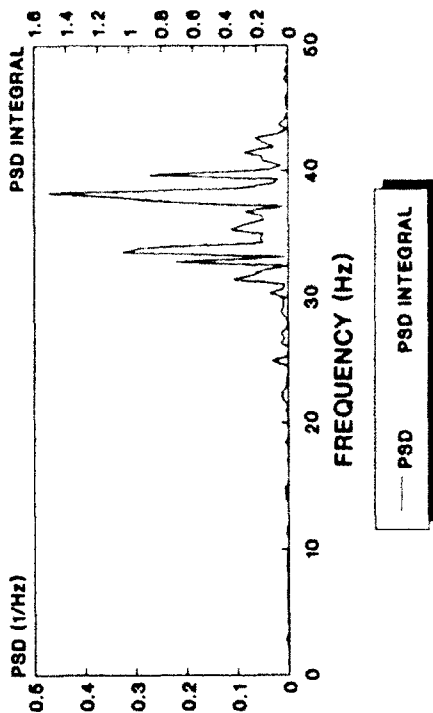
CUBE - HT 8.6 - THETA 30 - AZ 090

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



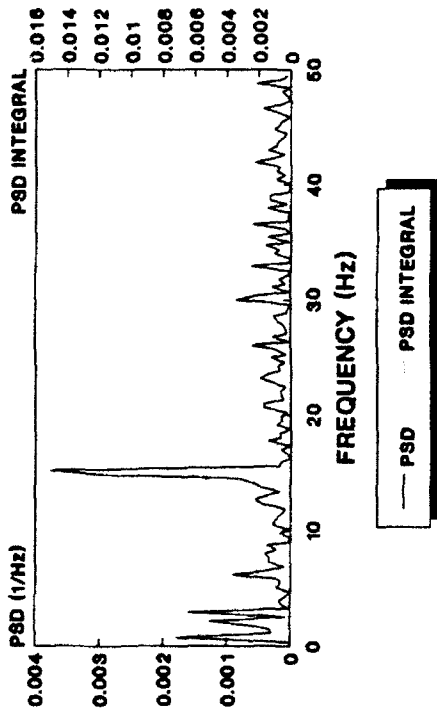
CUBE - HT 8.6 - THETA 30 - AZ 090

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



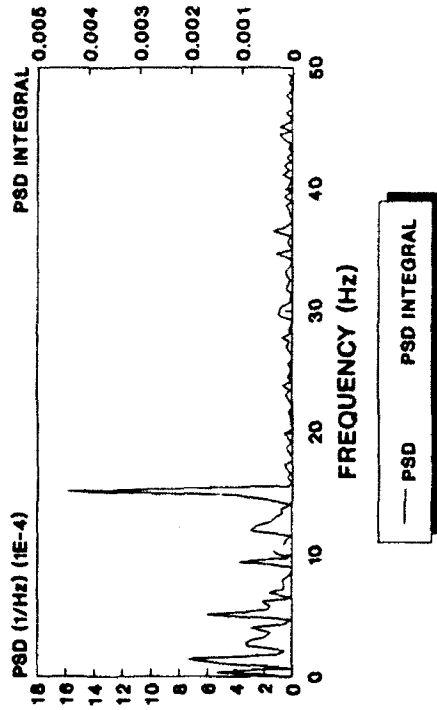
CUBE - HT 8.6 - THETA 30 - AZ 090

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



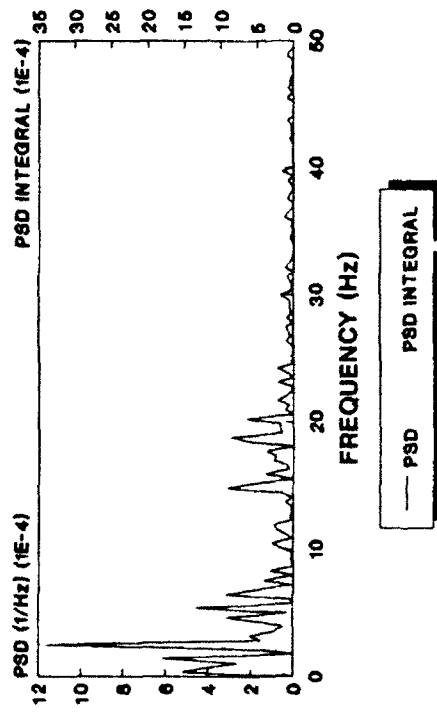
CUBE - HT 8.8 - THETA 30 - AZ 120

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



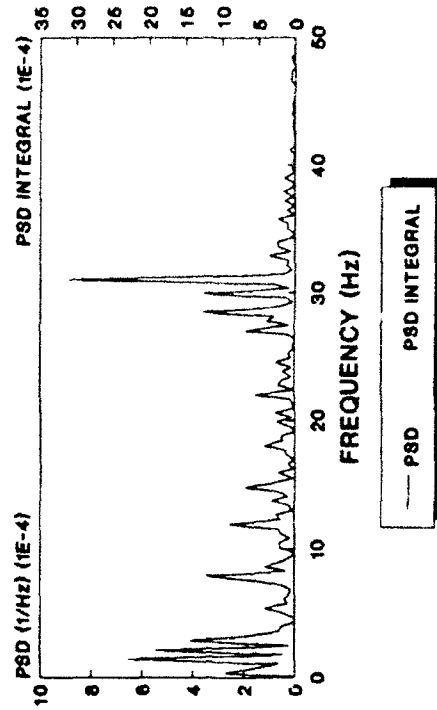
CUBE - HT 8.8 - THETA 30 - AZ 120

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



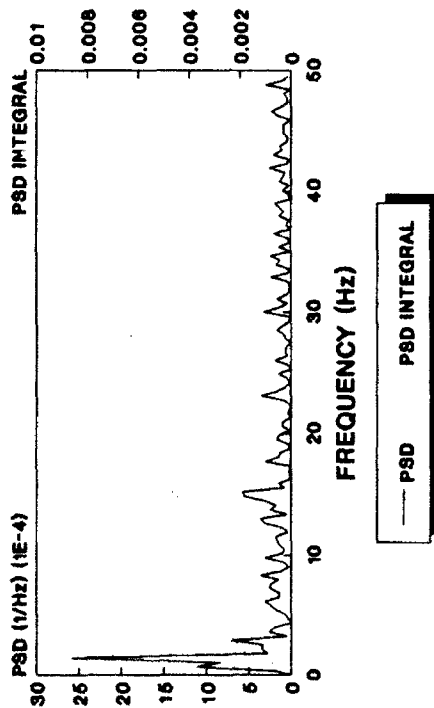
CUBE - HT 8.8 - THETA 30 - AZ 120

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



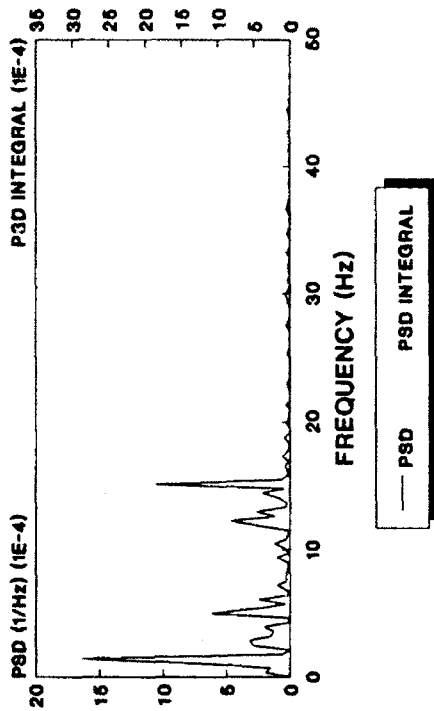
CUBE - HT 8.8 - THETA 30 - AZ 120

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



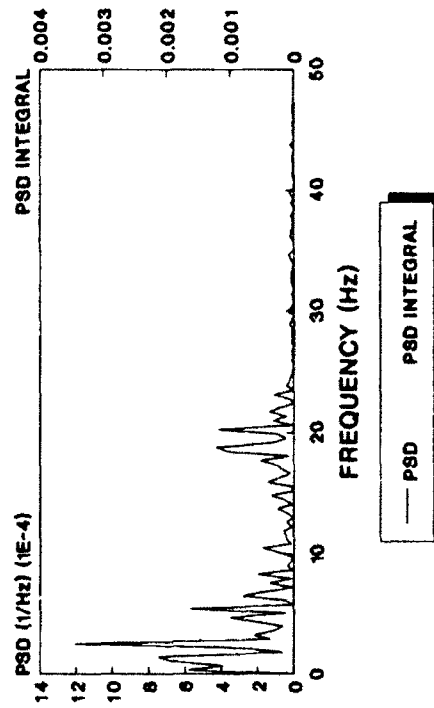
CUBE - HT 8.6 - THETA 30 - AZ 120

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



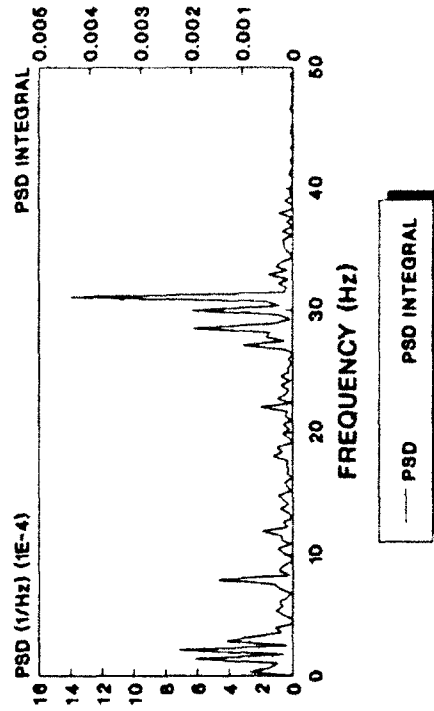
CUBE - HT 8.6 - THETA 30 - AZ 120

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



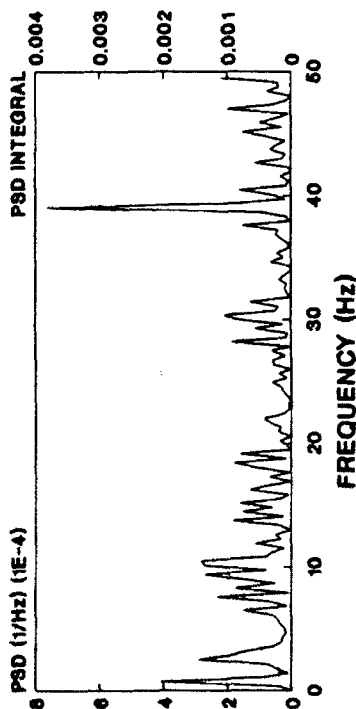
CUBE - HT 8.6 - THETA 30 - AZ 120

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



CUBE - HT 8.6 - THETA 30 - AZ 120

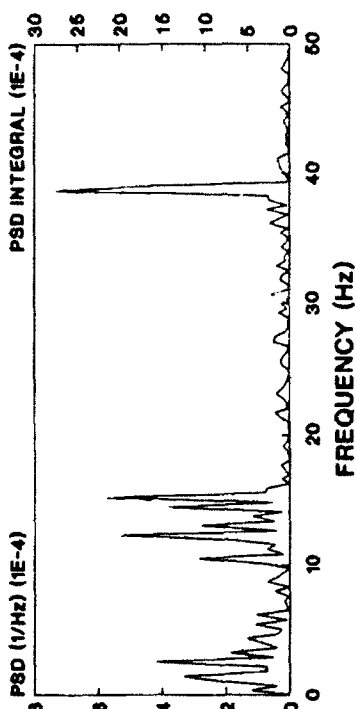
FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



— PSD PSD INTEGRAL

CUBE - HT 8.5 - THETA 30 - AZ 120

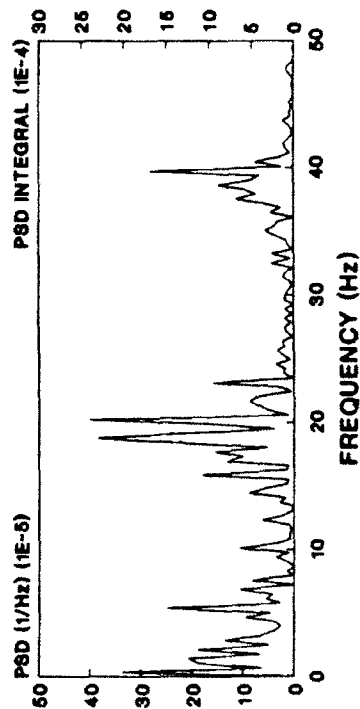
FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



— PSD PSD INTEGRAL

CUBE - HT 8.5 - THETA 30 - AZ 120

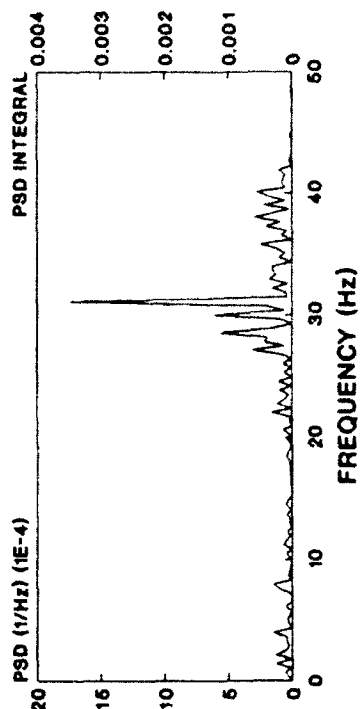
FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



— PSD PSD INTEGRAL

CUBE - HT 8.5 - THETA 30 - AZ 120

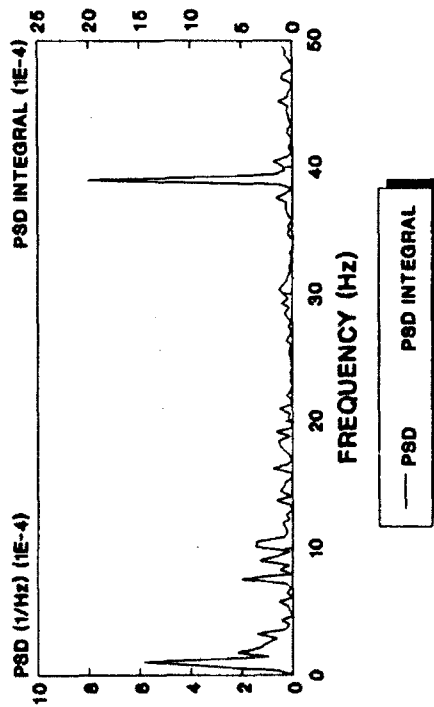
FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



— PSD PSD INTEGRAL

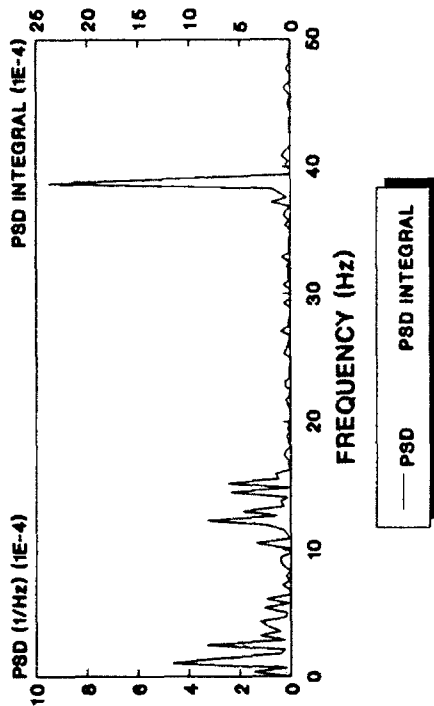
CUBE - HT 8.5 - THETA 30 - AZ 120

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



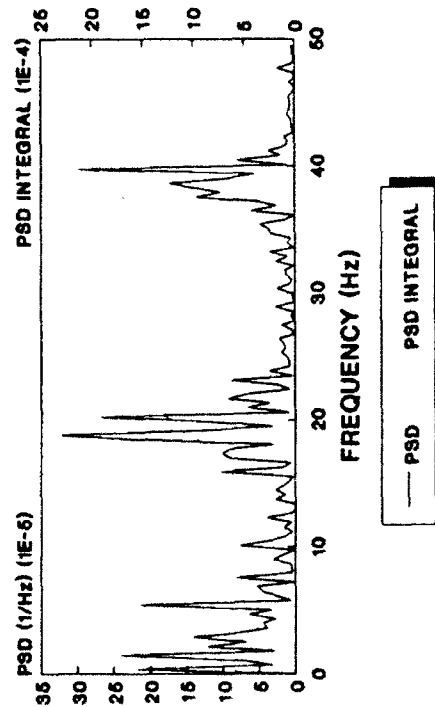
CUBE - HT 8.6 - THETA 30 - AZ 120

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



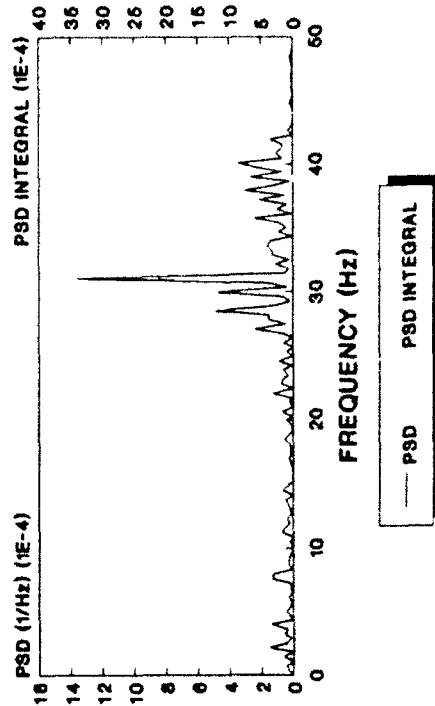
CUBE - HT 8.6 - THETA 30 - AZ 120

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



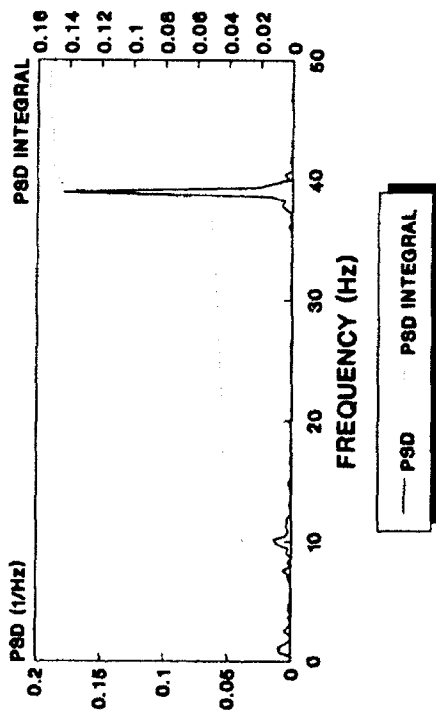
CUBE - HT 8.6 - THETA 30 - AZ 120

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



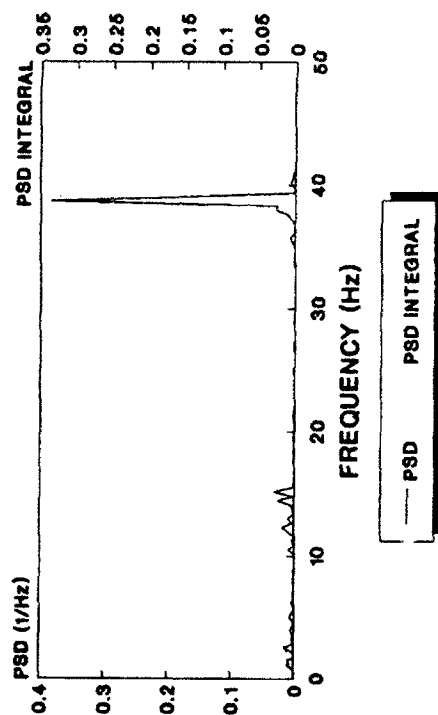
CUBE - HT 8.6 - THETA 30 - AZ 120

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



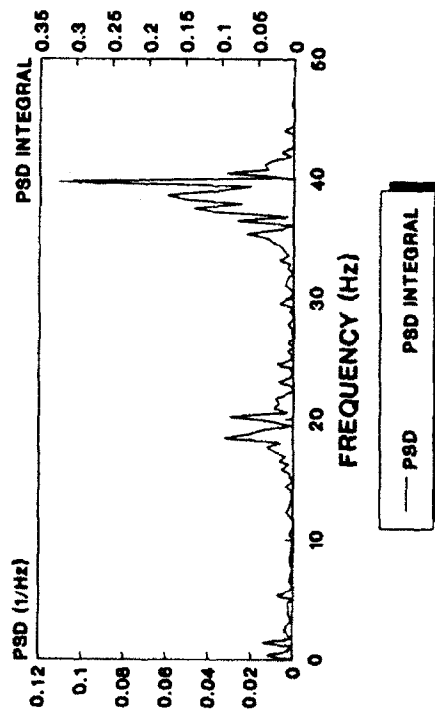
CUBE - HT 8.6 - THETA 30 - AZ 120

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



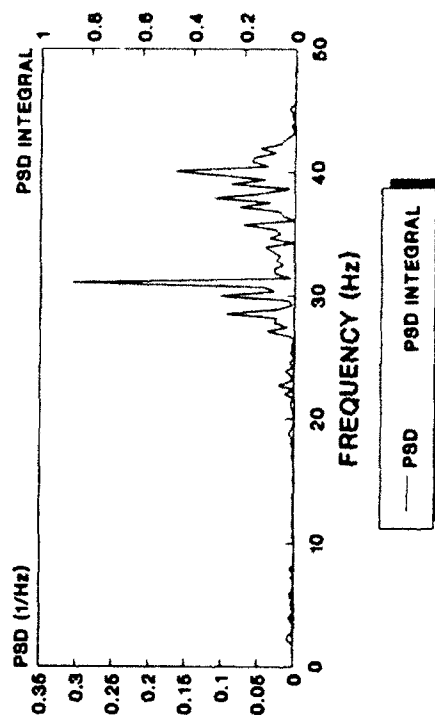
CUBE - HT 8.6 - THETA 30 - AZ 120

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



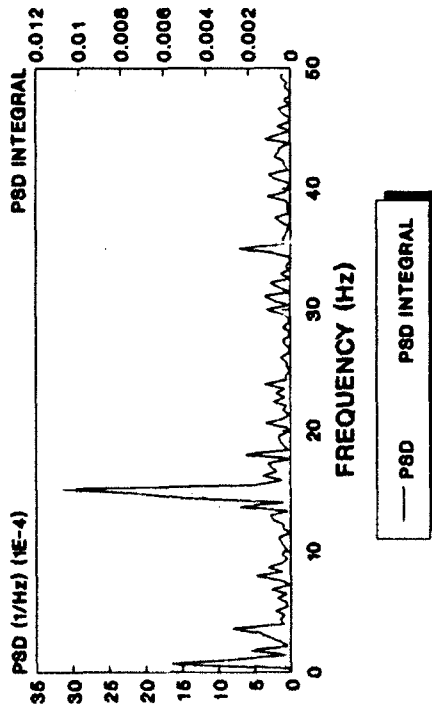
CUBE - HT 8.6 - THETA 30 - AZ 120

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



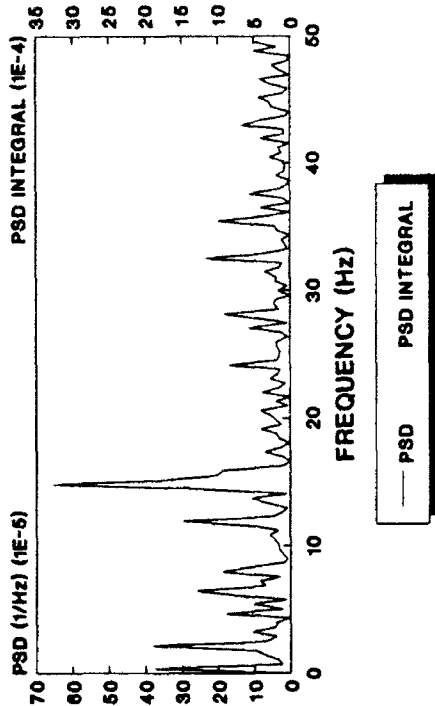
CUBE - HT 8.6 - THETA 30 - AZ 120

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



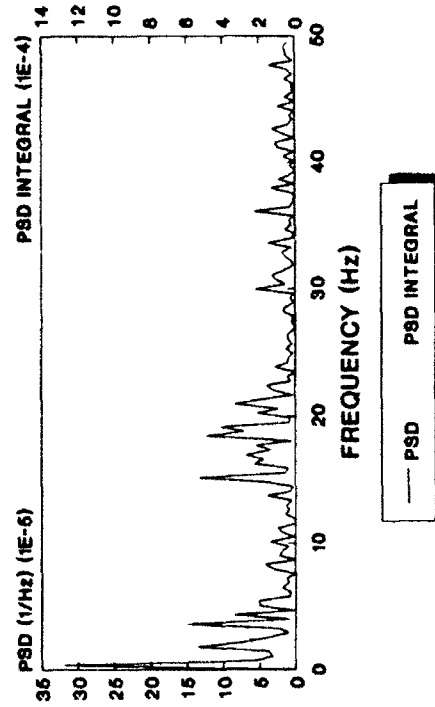
CUBE - HT 8.6 - THETA 30 - AZ 136

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



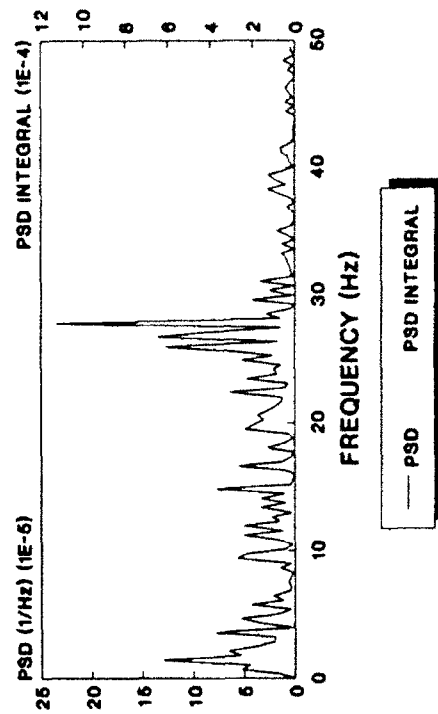
CUBE - HT 8.6 - THETA 30 - AZ 136

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



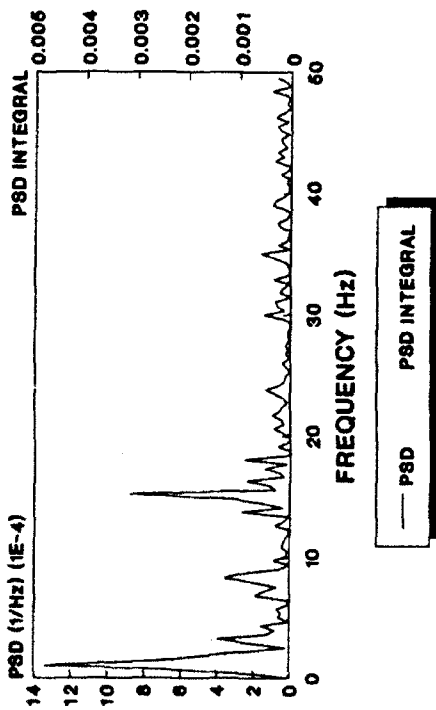
CUBE - HT 8.6 - THETA 30 - AZ 136

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



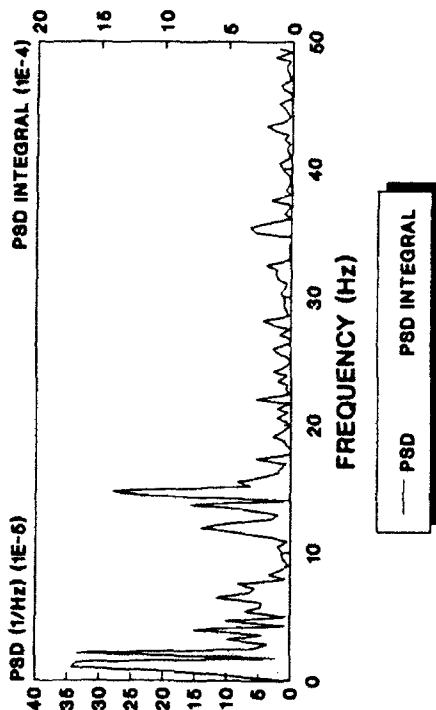
CUBE - HT 8.6 - THETA 30 - AZ 136

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



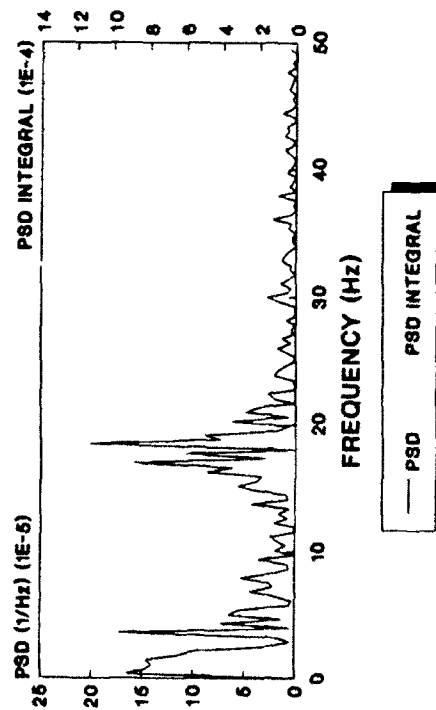
CUBE - HT 8.5 - THETA 30 - AZ 135

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



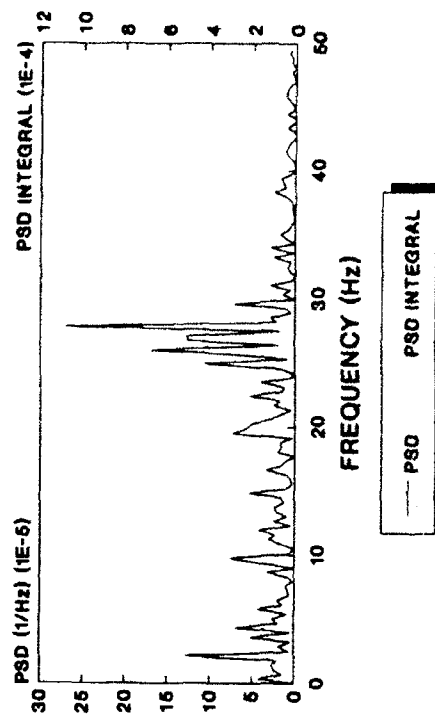
CUBE - HT 8.5 - THETA 30 - AZ 135

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



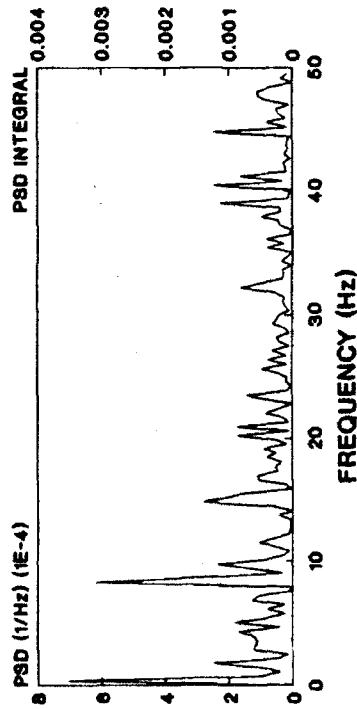
CUBE - HT 8.5 - THETA 30 - AZ 135

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



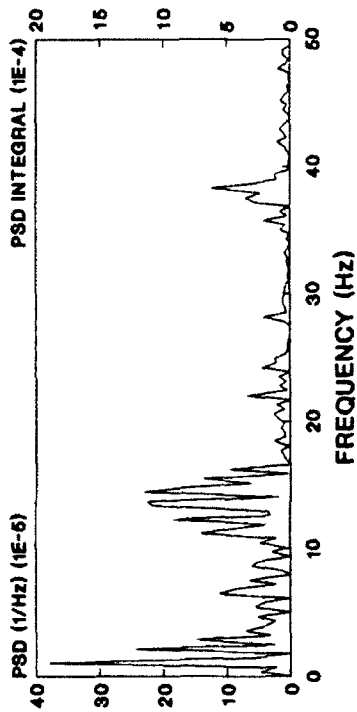
CUBE - HT 8.5 - THETA 30 - AZ 135

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



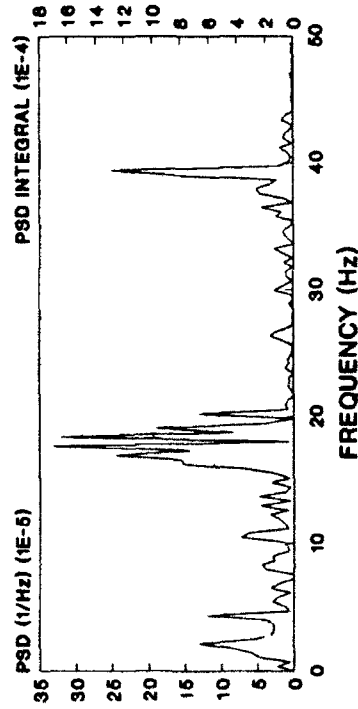
CUBE - HT 8.6 - THETA 30 - AZ 136

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



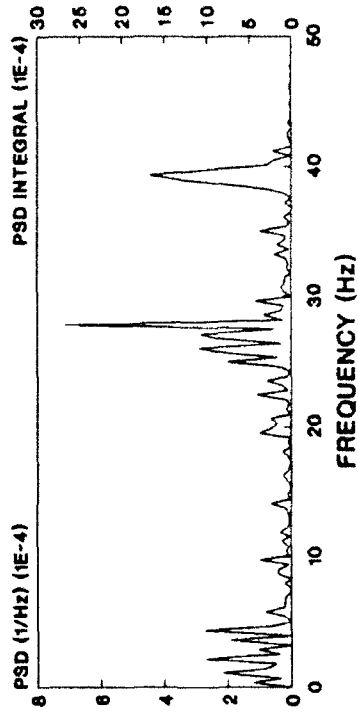
CUBE - HT 8.6 - THETA 30 - AZ 136

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



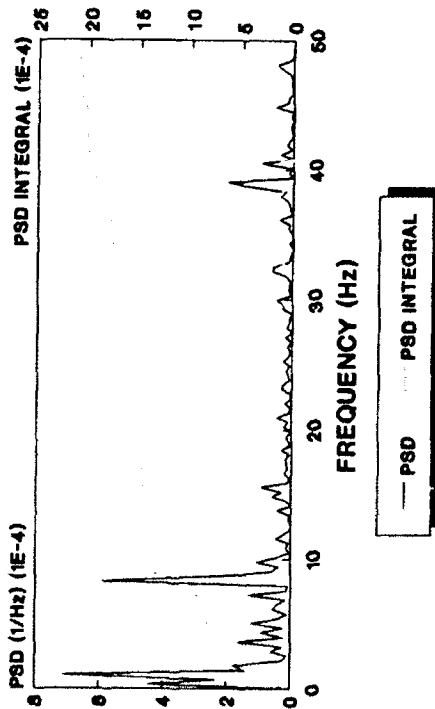
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FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



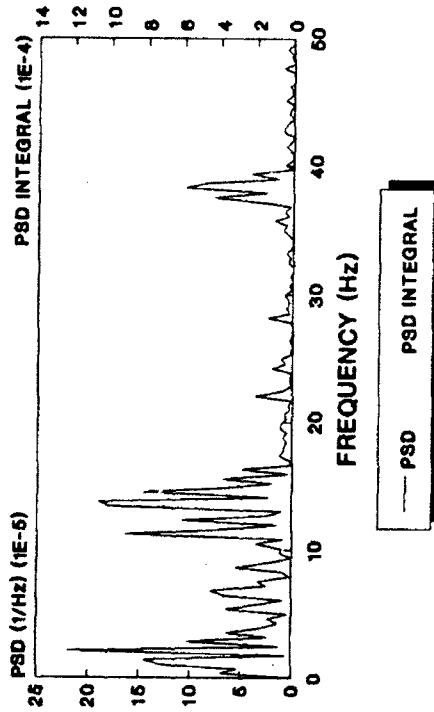
CUBE - HT 8.6 - THETA 30 - AZ 136

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



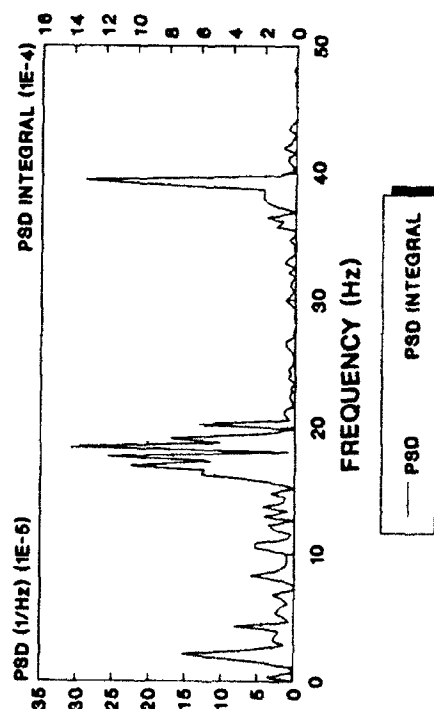
CUBE - HT 8.5 - THETA 30 - AZ 135

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



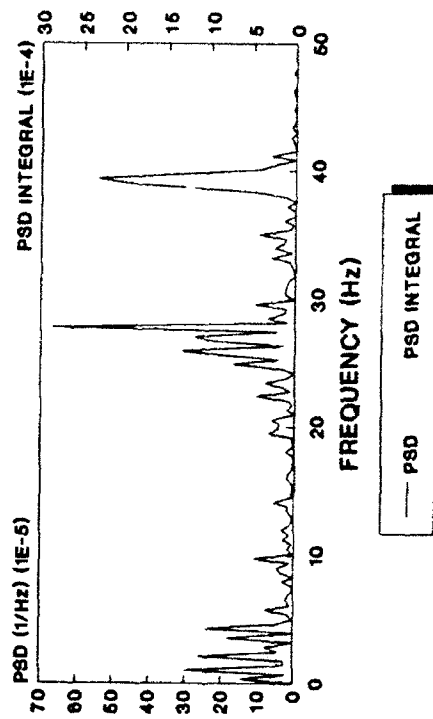
CUBE - HT 8.5 - THETA 30 - AZ 135

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



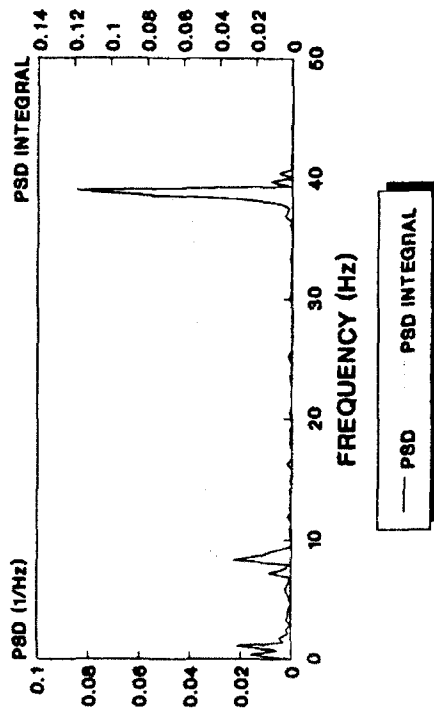
CUBE - HT 8.5 - THETA 30 - AZ 135

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



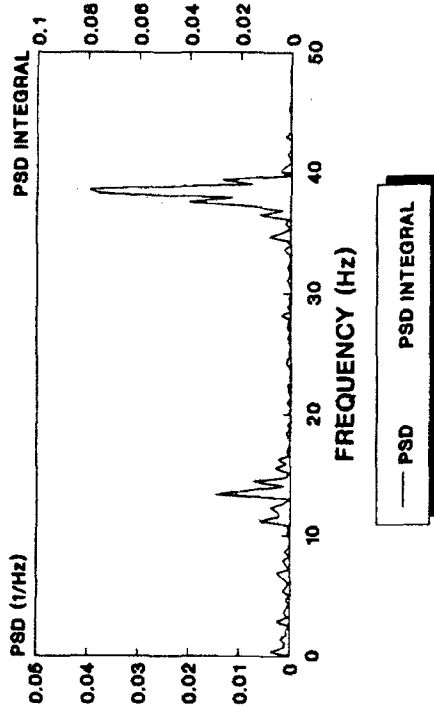
CUBE - HT 8.5 - THETA 30 - AZ 135

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



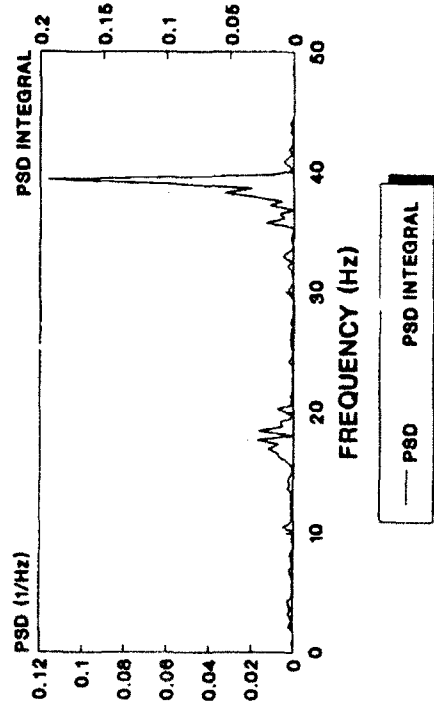
CUBE - HT 8.6 - THETA 30 - AZ 136

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



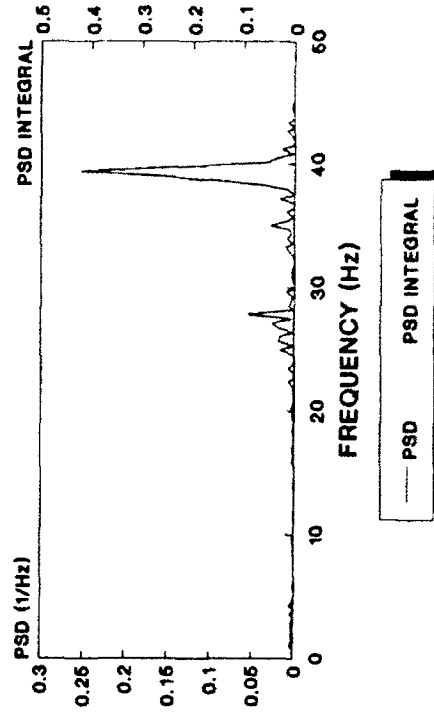
CUBE - HT 8.6 - THETA 30 - AZ 136

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



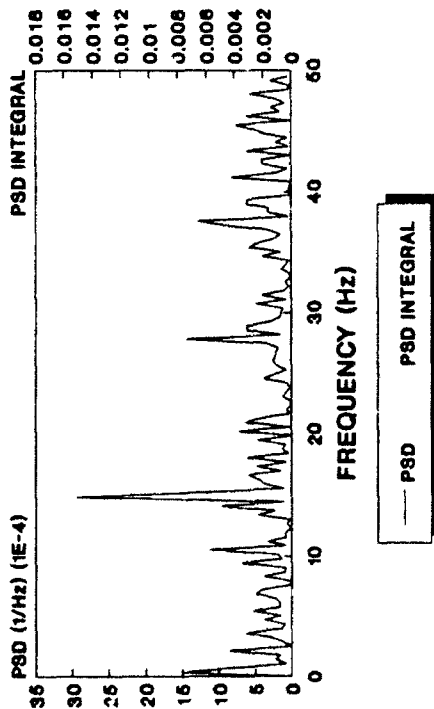
CUBE - HT 8.6 - THETA 30 - AZ 136

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



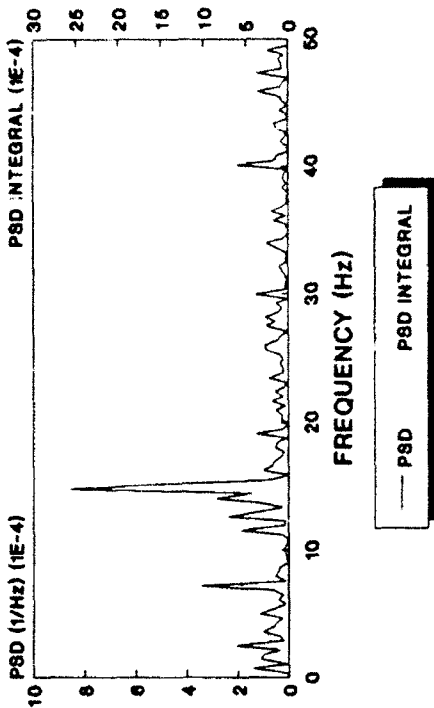
CUBE - HT 8.6 - THETA 30 - AZ 136

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



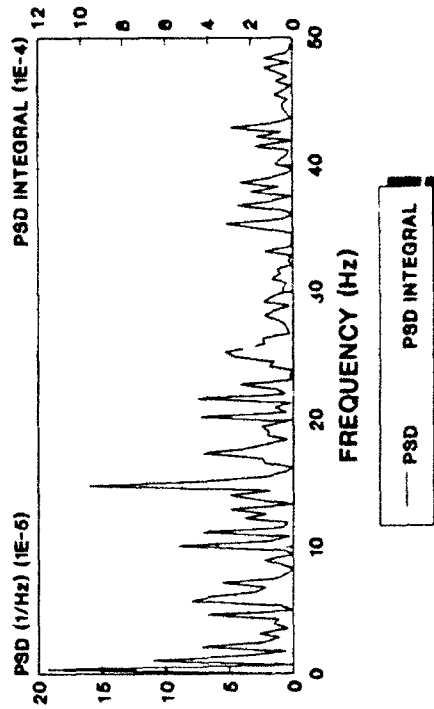
CUBE - HT 6.6 - THETA 30 - AZ 160

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



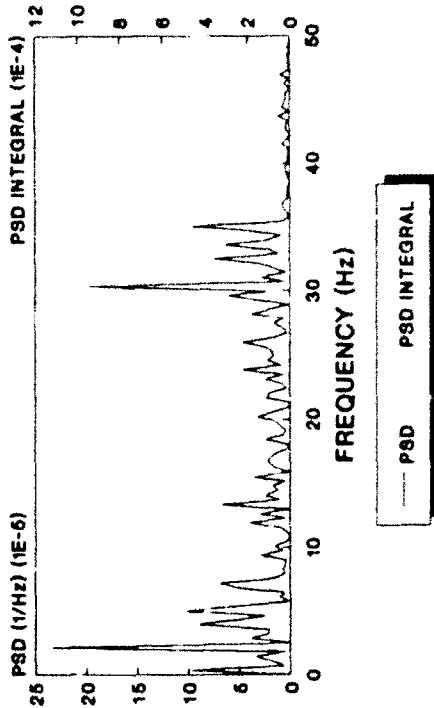
CUBE - HT 6.6 - THETA 30 - AZ 160

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



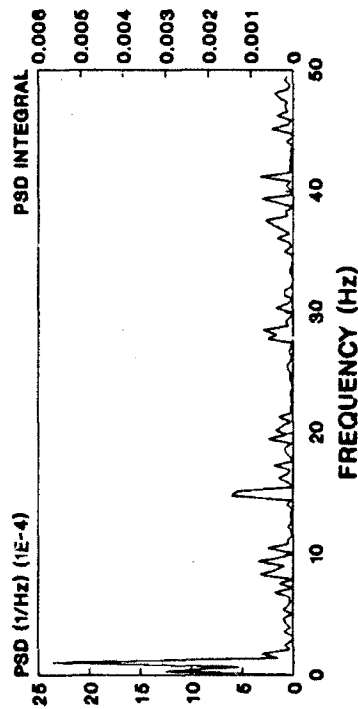
CUBE - HT 6.6 - THETA 30 - AZ 160

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



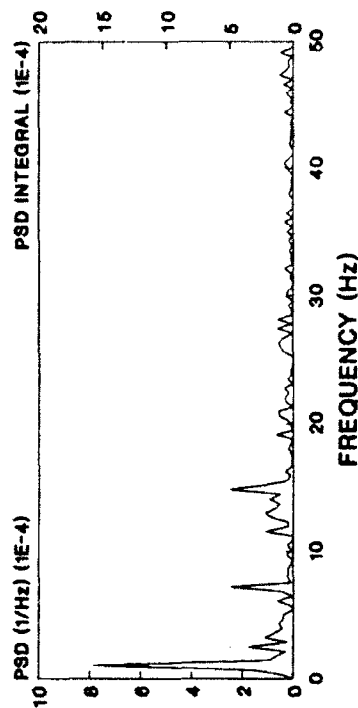
CUBE - HT 6.6 - THETA 30 - AZ 160

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



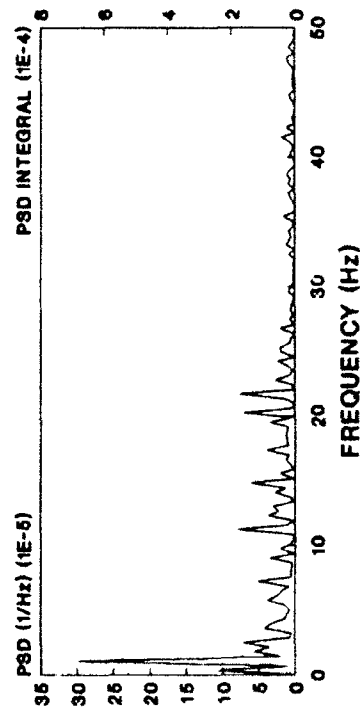
CUBE - HT 8.6 - THETA 30 - AZ 160

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



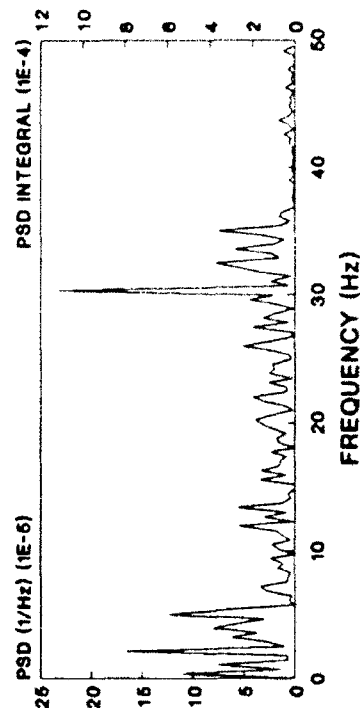
CUBE - HT 8.6 - THETA 30 - AZ 160

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



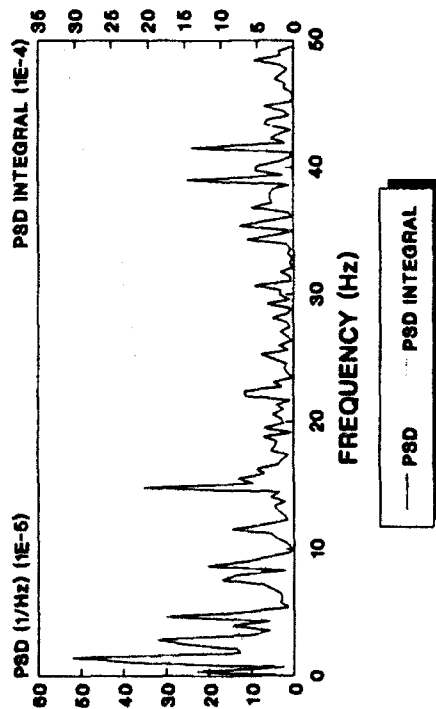
CUBE - HT 8.6 - THETA 30 - AZ 160

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



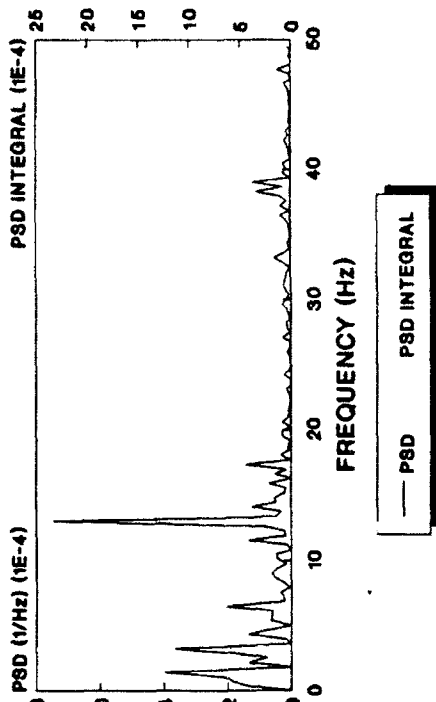
CUBE - HT 8.6 - THETA 30 - AZ 160

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



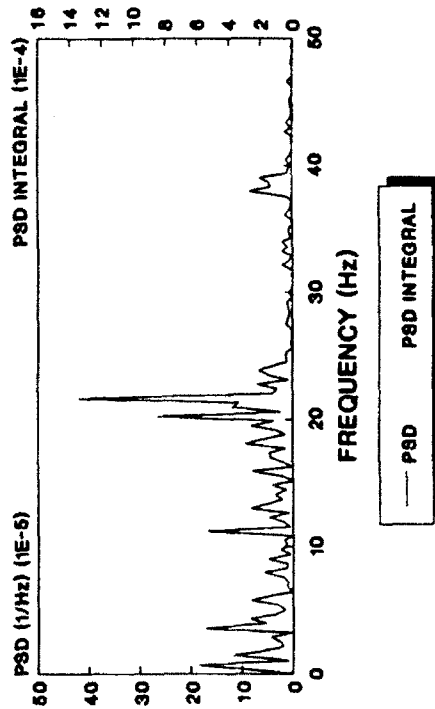
CUBE - HT 6.6 - THETA 30 - AZ 180

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



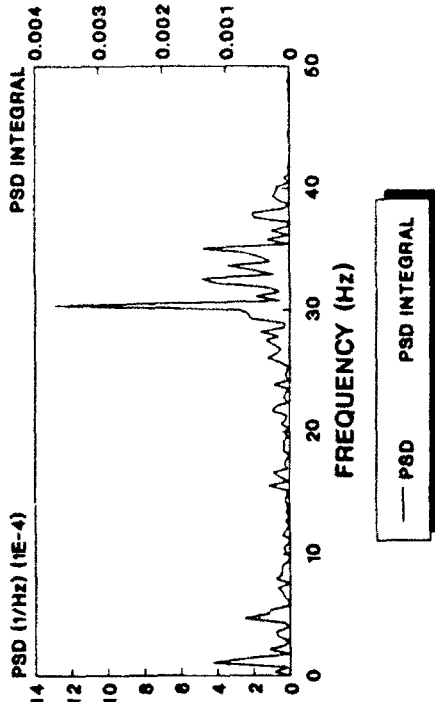
CUBE - HT 6.6 - THETA 30 - AZ 180

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



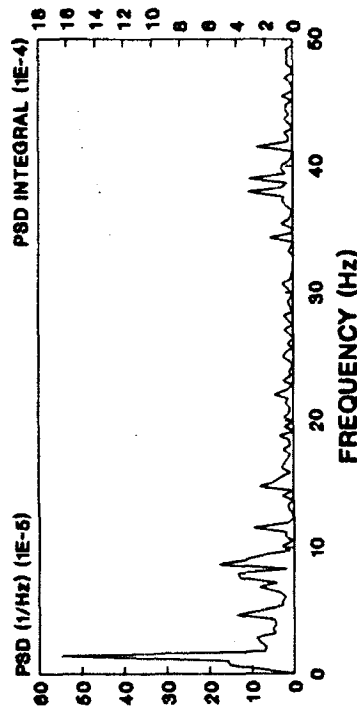
CUBE - HT 6.6 - THETA 30 - AZ 180

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



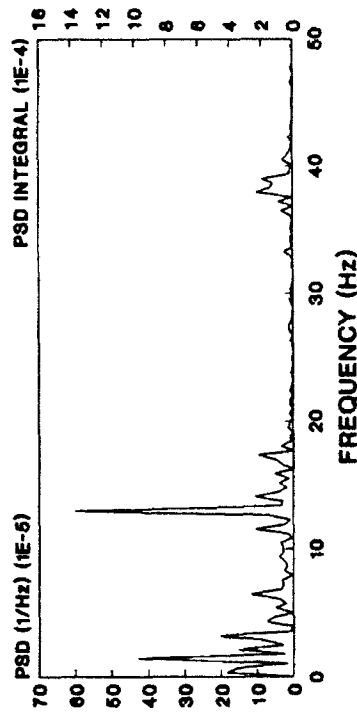
CUBE - HT 6.6 - THETA 30 - AZ 180

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



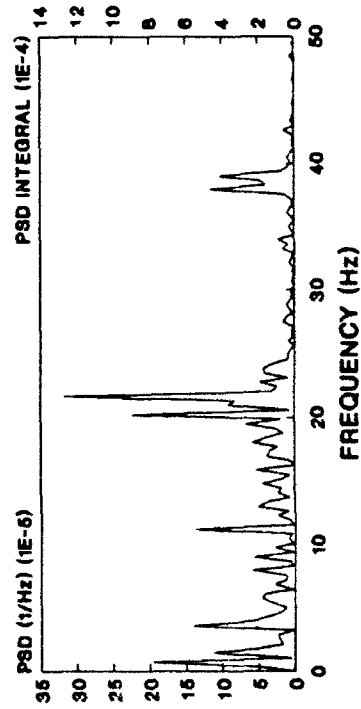
CUBE - HT 8.6 - THETA 30 - AZ 160

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



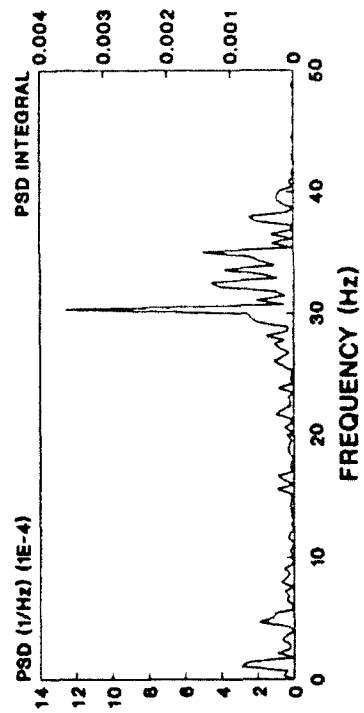
CUBE - HT 8.6 - THETA 30 - AZ 160

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



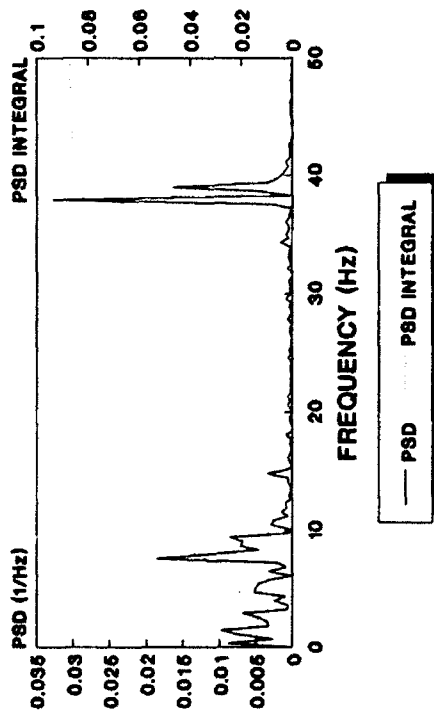
CUBE - HT 8.6 - THETA 30 - AZ 160

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



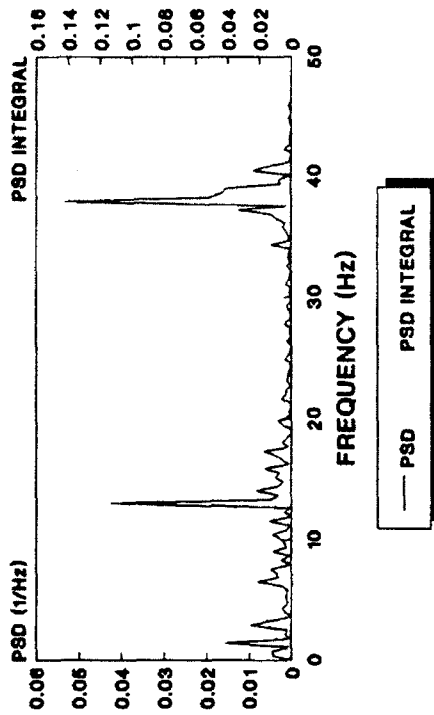
CUBE - HT 8.6 - THETA 30 - AZ 160

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



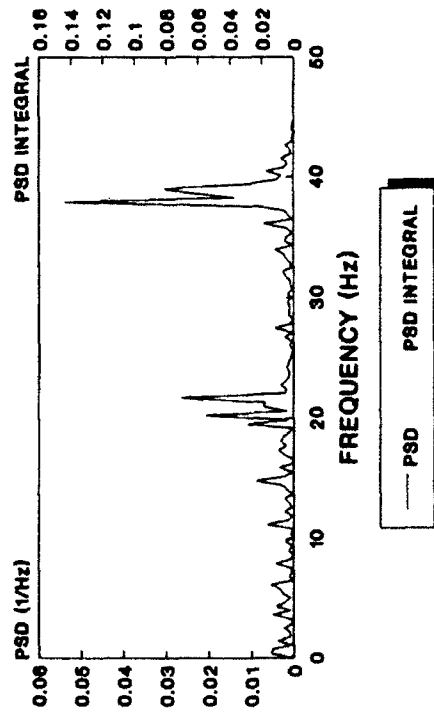
CUBE - HT 8.6 - THETA 30 - AZ 160

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



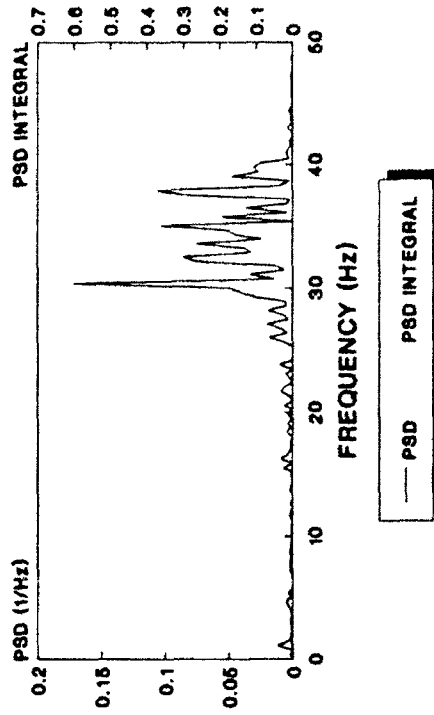
CUBE - HT 8.6 - THETA 30 - AZ 160

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



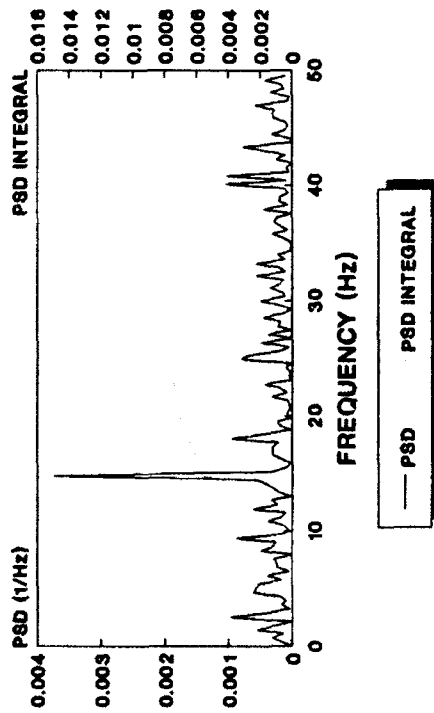
CUBE - HT 8.6 - THETA 30 - AZ 160

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



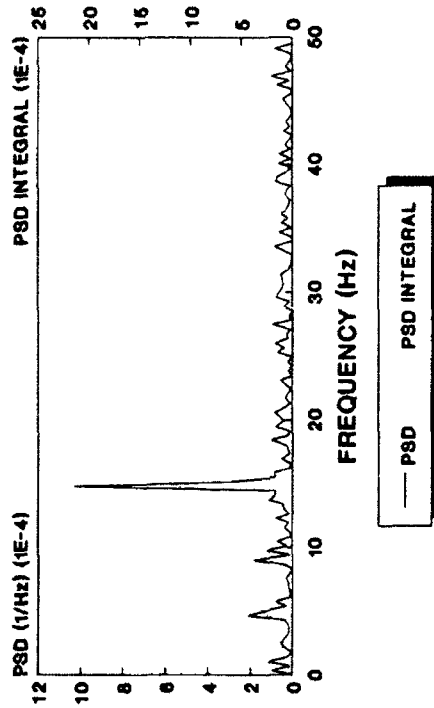
CUBE - HT 8.6 - THETA 30 - AZ 160

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



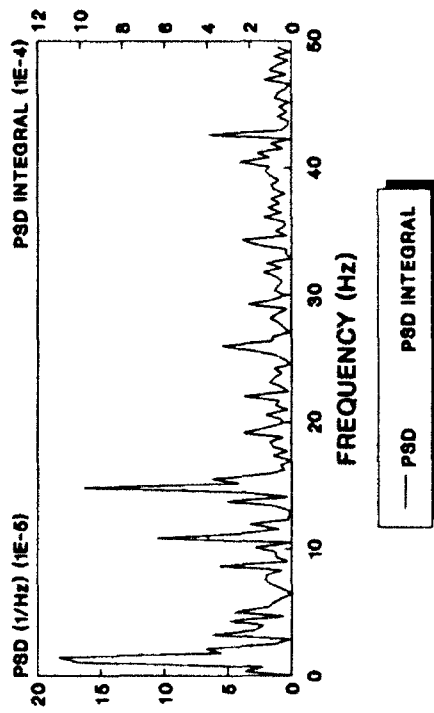
CUBE - HT 8.6 - THETA 30 - AZ 180

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



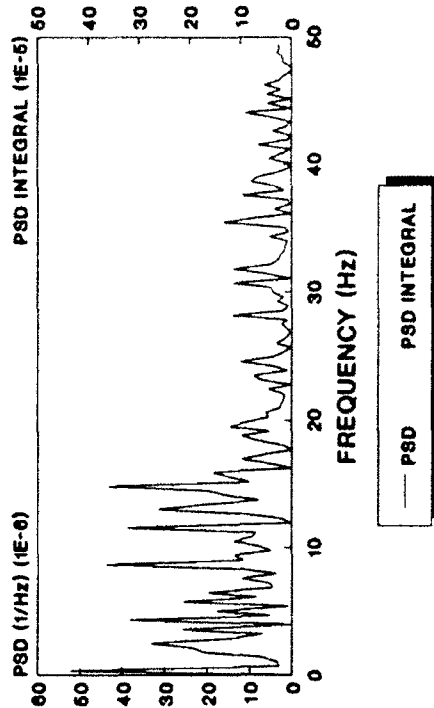
CUBE - HT 8.6 - THETA 30 - AZ 180

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



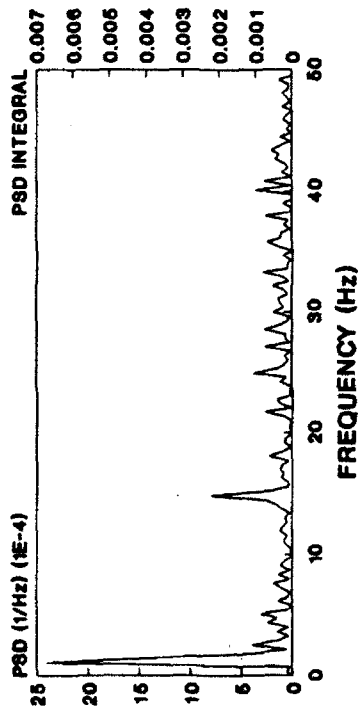
CUBE - HT 8.6 - THETA 30 - AZ 180

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



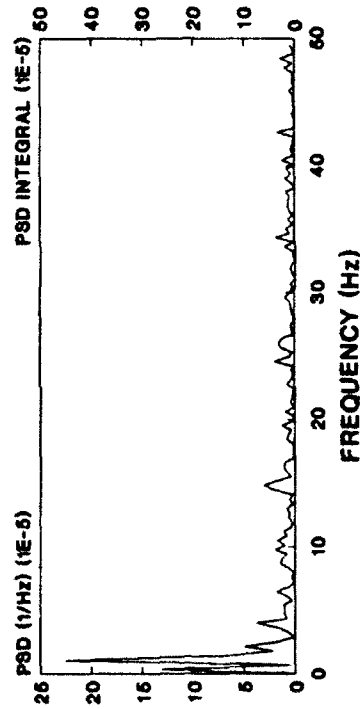
CUBE - HT 8.6 - THETA 30 - AZ 180

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



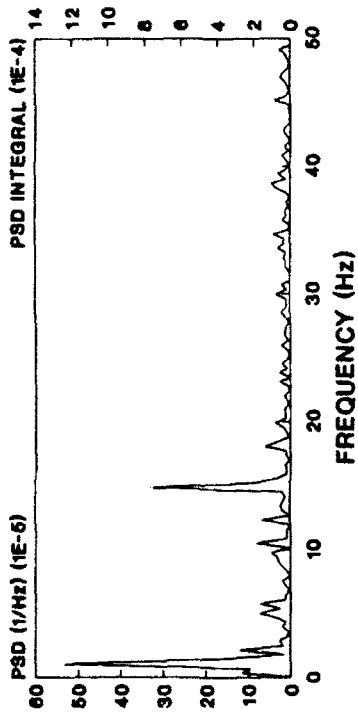
CUBE - HT 8.5 - THETA 30 - AZ 180

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



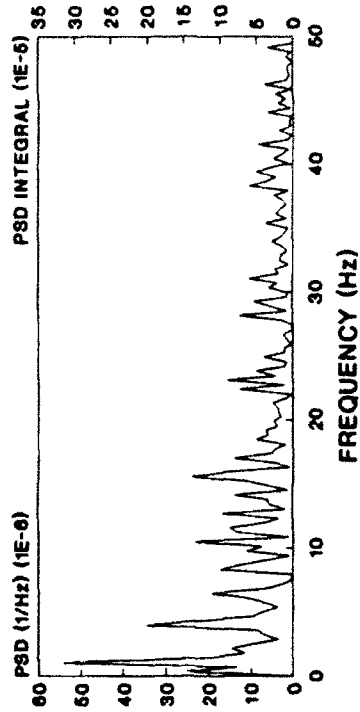
CUBE - HT 8.5 - THETA 30 - AZ 180

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



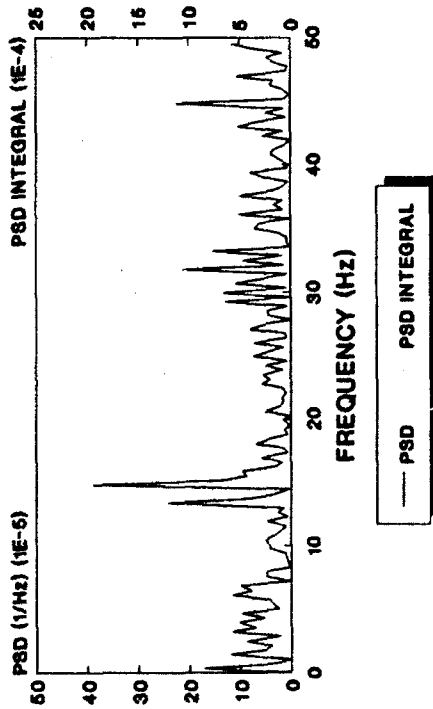
CUBE - HT 8.5 - THETA 30 - AZ 180

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



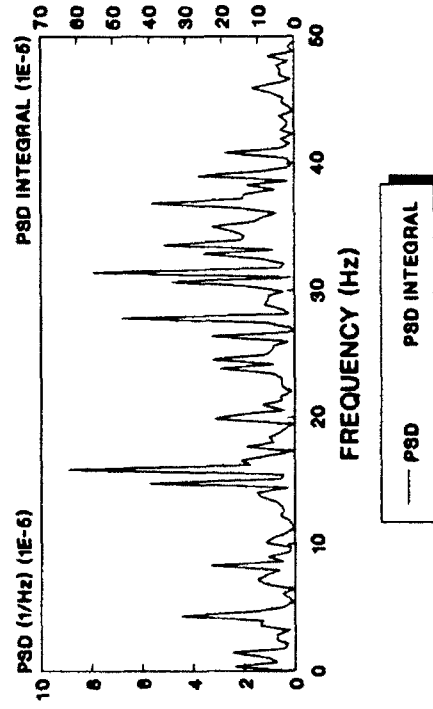
CUBE - HT 8.5 - THETA 30 - AZ 180

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



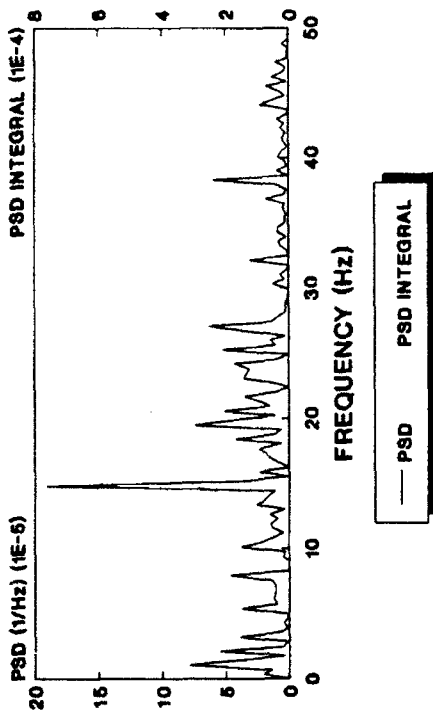
CUBE - HT 8.6 - THETA 30 - AZ 180

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



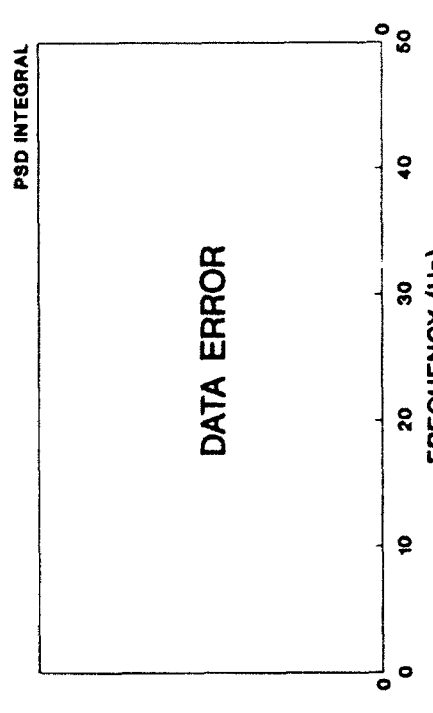
CUBE - HT 8.6 - THETA 30 - AZ 180

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



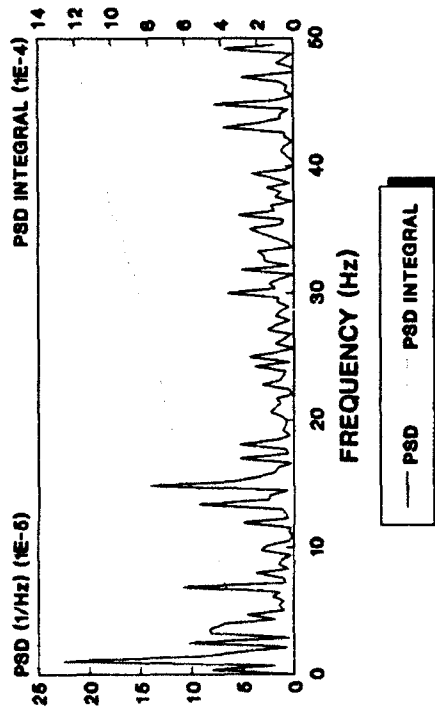
CUBE - HT 8.6 - THETA 30 - AZ 180

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



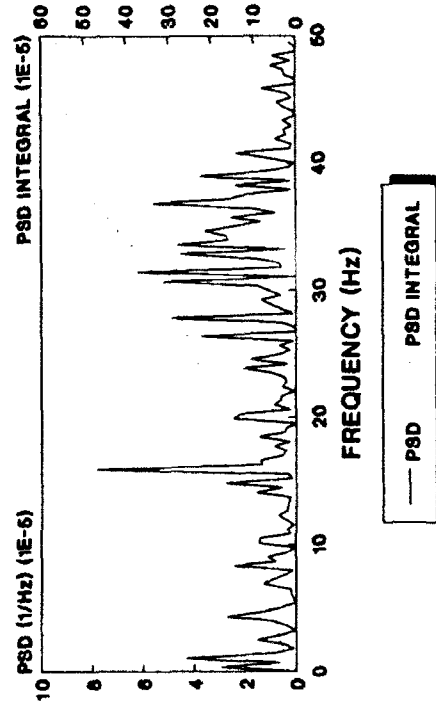
CUBE - HT 8.6 - THETA 30 - AZ 180

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



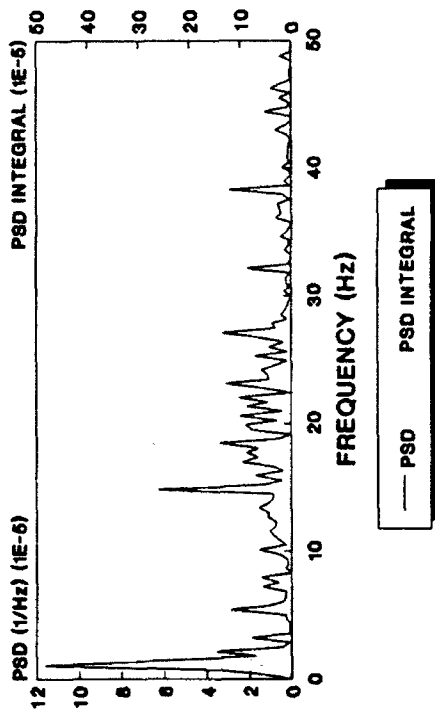
CUBE - HT 8.5 - THETA 30 - AZ 180

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



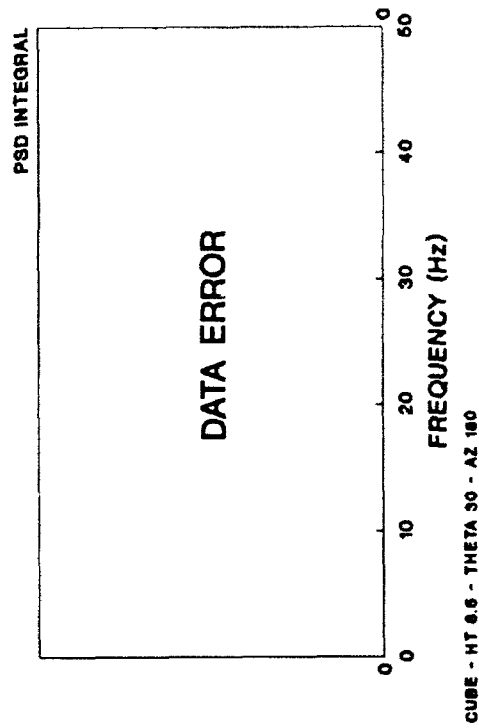
CUBE - HT 8.5 - THETA 30 - AZ 180

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



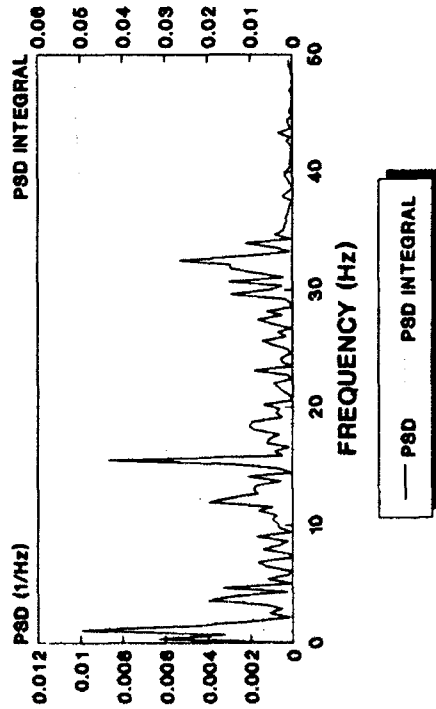
CUBE - HT 8.6 - THETA 30 - AZ 180

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



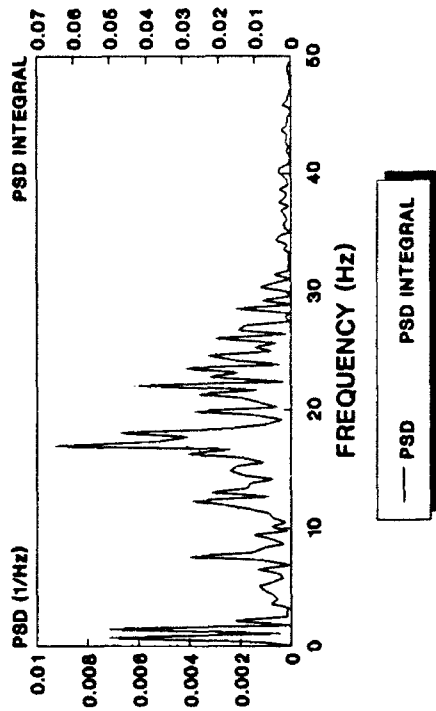
CUBE - HT 8.6 - THETA 30 - AZ 180

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



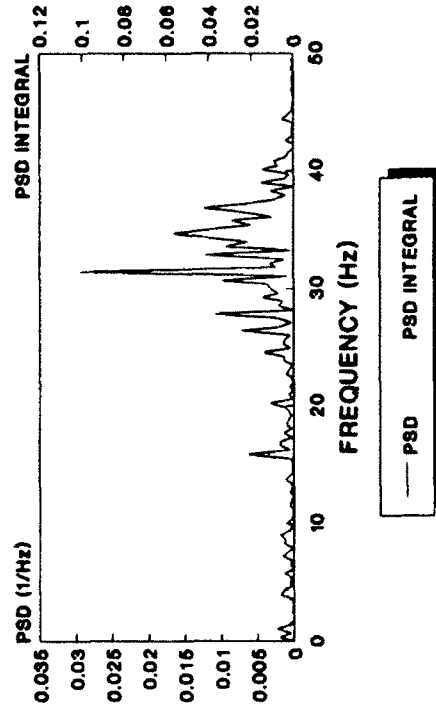
CUBE - HT 8.6 - THETA 30 - AZ 180

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



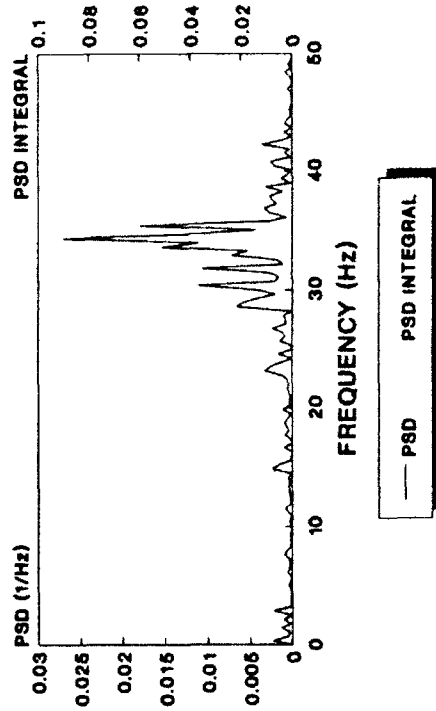
CUBE - HT 8.6 - THETA 30 - AZ 180

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



CUBE - HT 8.6 - THETA 30 - AZ 180

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



CUBE - HT 8.6 - THETA 30 - AZ 180

DATA REPORT

SHAPE:	CUBE
DECLINATION [THETA (degrees)]:	45
DIMENSIONS [LxWxH (in)]:	11.1 x 7.88 x 8.31
WEIGHT (gm):	1029.5
TORSION FREQUENCY (Hz):	30
LATERAL (SIDE BEND) FREQUENCY (Hz):	61
NORMAL (AFT BEND) FREQUENCY (Hz):	81
AZIMUTHS (degrees):	0, 30, 45, 60, 90, 120, 135, 150, 180

GRAPH CORRECTIONS:

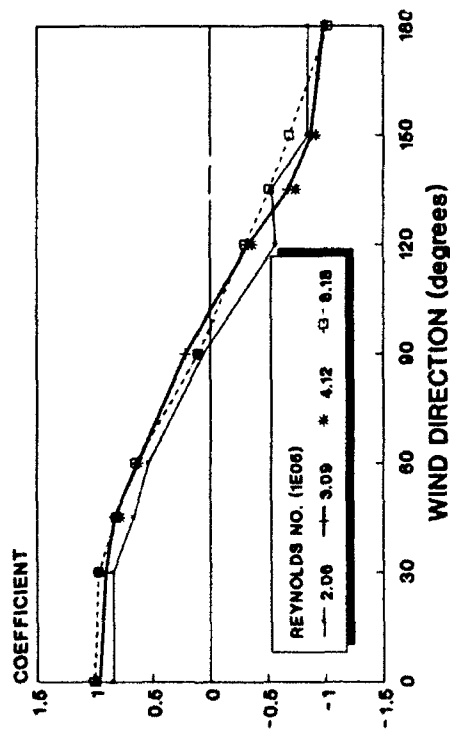
- The mean value of the **ROLL** moment coefficients should be divided by 12.
- The PSD and PSD Integral values of the **ROLL** moment coefficients should be divided by 144.

OBSERVATIONS:

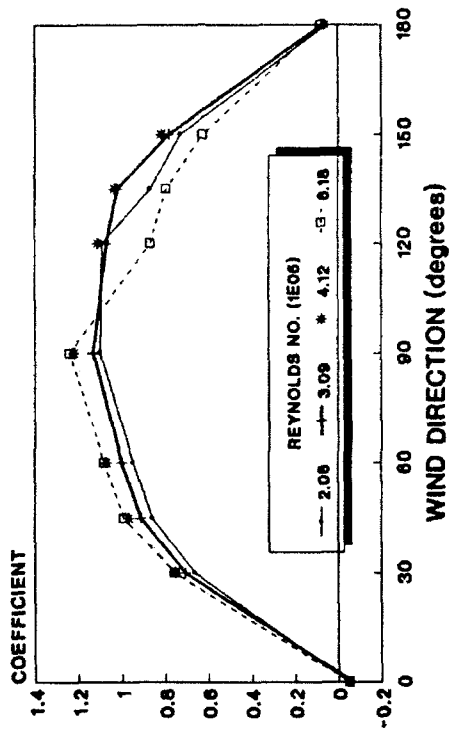
- Very good shedding is seen in the normal data at 90 degrees azimuth. The shed tends to be single frequency with the exception of 120 ft/sec tunnel speed which seems to be multifrequency. Two frequency spikes are seen in the 90 ft/sec data but one of the spikes is the 15.176 Hz spike that shows up in much of the data and is probably not a true shed.
- Very good shedding is seen in the lateral data at 150 degrees azimuth. The shed may be contaminated at 180 ft/sec by the 30 Hz torsional frequency which is present in most of the data. Evidence of the shedding can also be seen in the normal data.

- Good shedding can be seen in the lateral and roll data at 30 and 135 degrees azimuth. The shed merges with the torsional frequency at wind speeds of 180 ft/sec making analysis difficult. Evidence of the shedding can also be seen in the normal data but it is not as strong.
- Poor shedding can be seen in the data at 120 degrees azimuth.

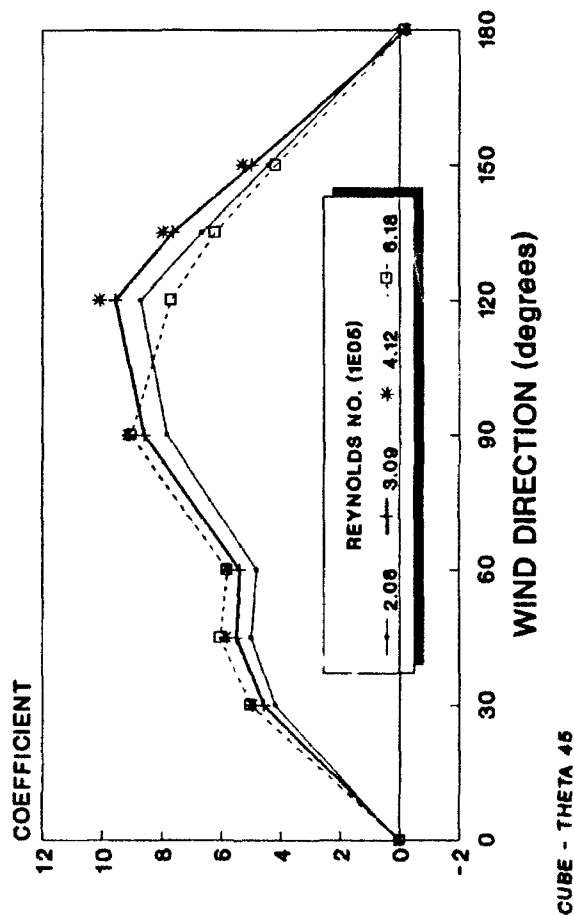
MEAN FORCE COEFFICIENT NORMAL DIRECTION



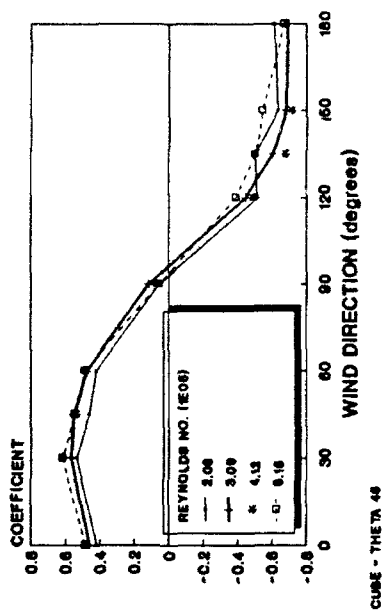
MEAN FORCE COEFFICIENT LATERAL DIRECTION



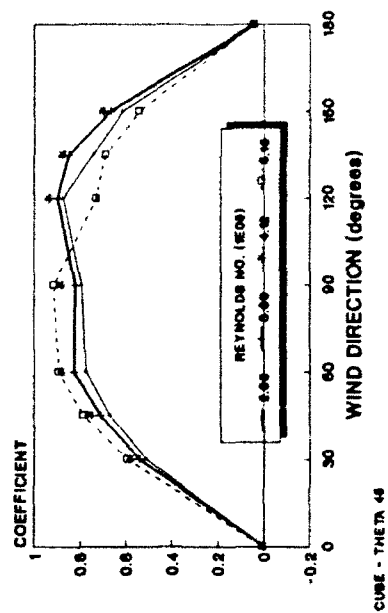
MEAN MOMENT COEFFICIENT ROLL DIRECTION



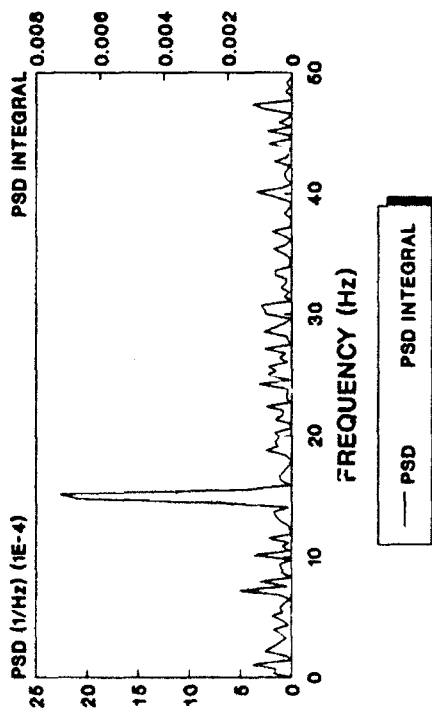
MEAN MOMENT COEFFICIENT NORMAL DIRECTION



MEAN MOMENT COEFFICIENT LATERAL DIRECTION

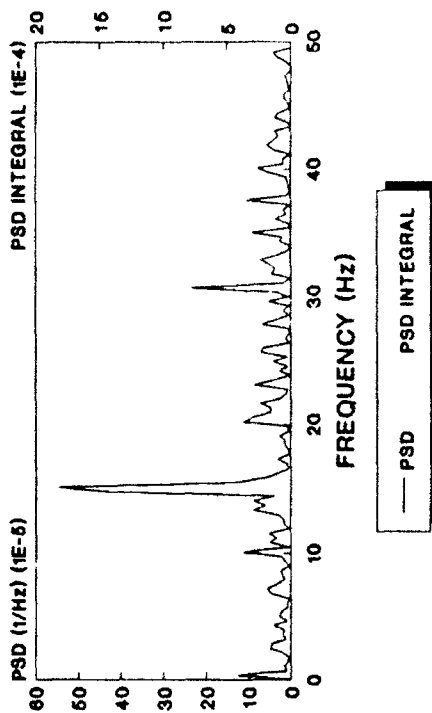


FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



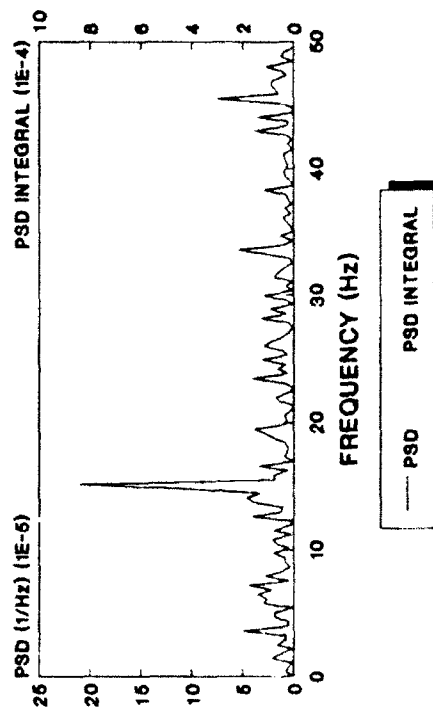
CUBE - HT 8.31 - THETA 45 - AZ 000

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



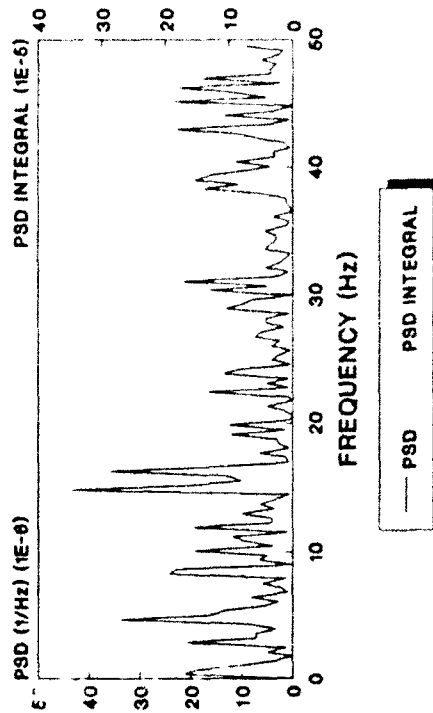
CUBE - HT 8.31 - THETA 45 - AZ 000

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



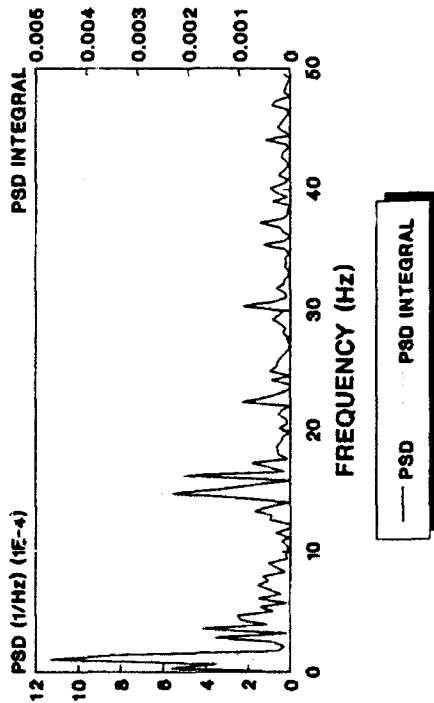
CUBE - HT 8.31 - THETA 45 - AZ 000

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



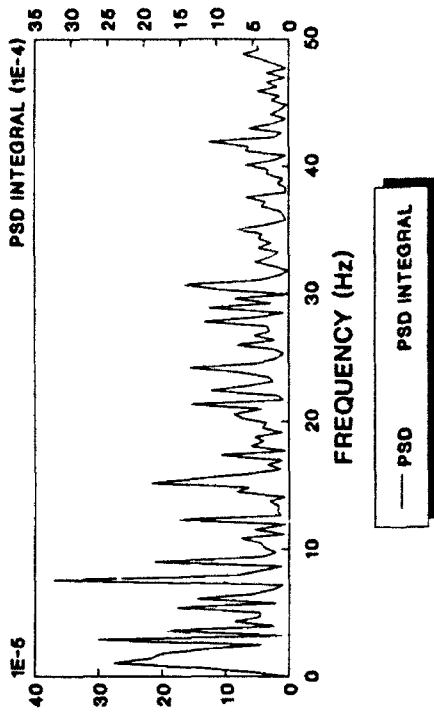
CUBE - HT 8.31 - THETA 45 - AZ 000

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



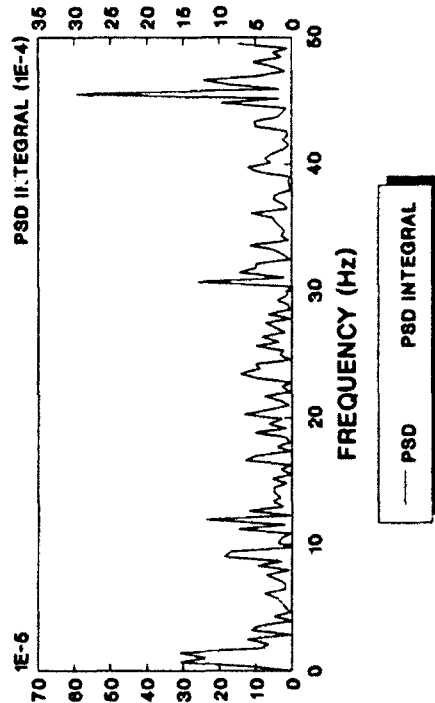
CUBE - HT 8.31 - THETA 45 - AZ 000

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



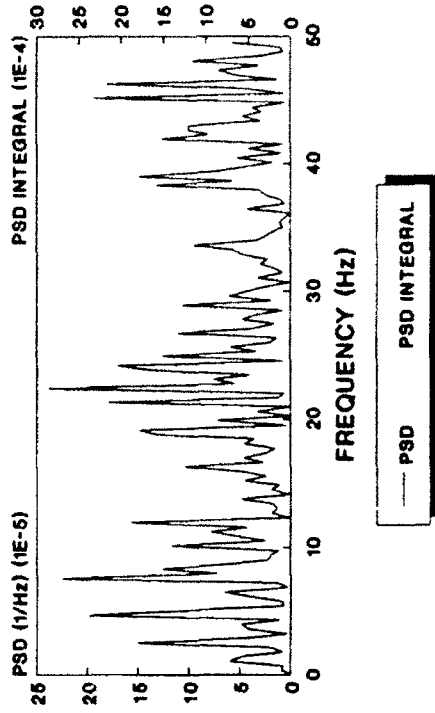
CUBE - HT 8.31 - THETA 45 - AZ 000

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



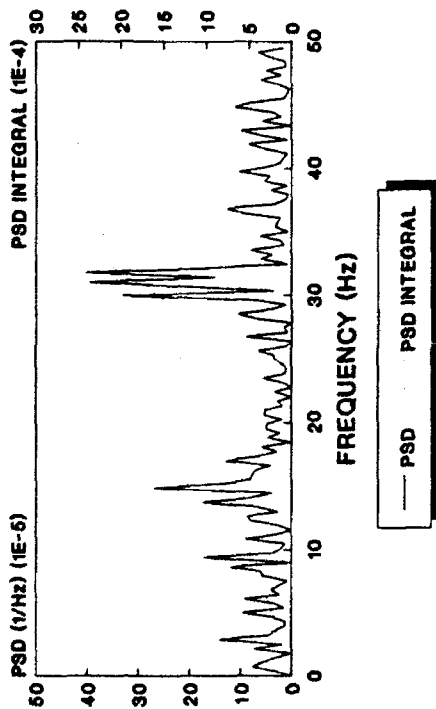
CUBE - HT 8.31 - THETA 45 - AZ 000

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



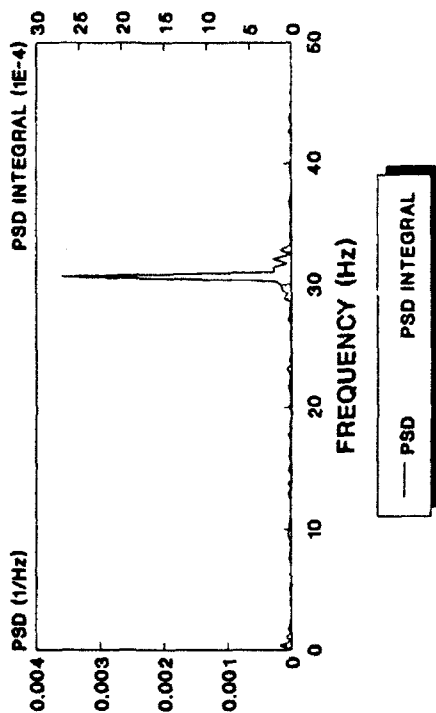
CUBE - HT 8.31 - THETA 45 - AZ 000

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



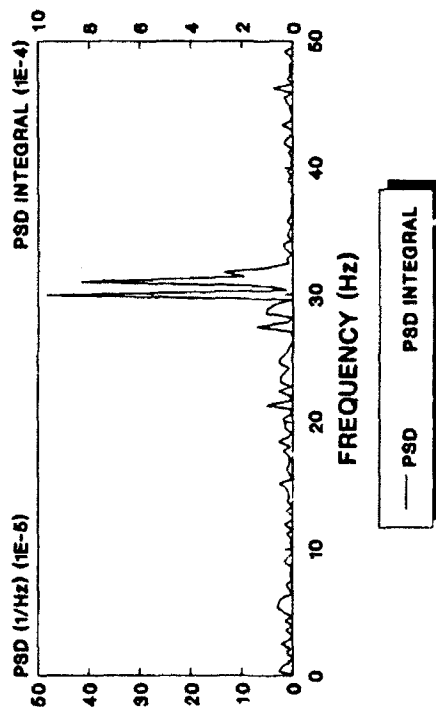
CUBE - HT 8.31 - THETA 46 - AZ 000

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



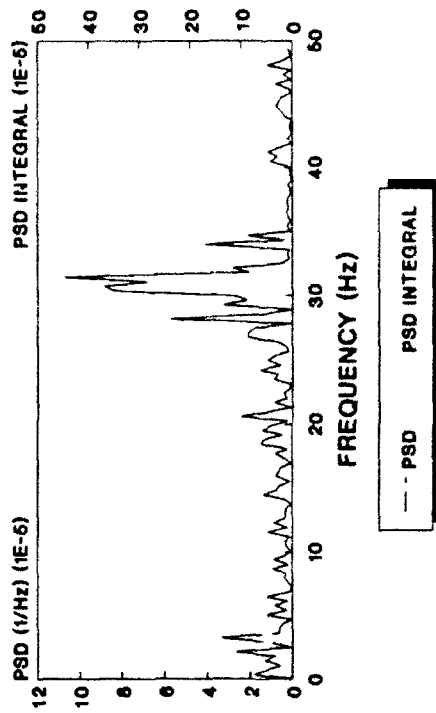
CUBE - HT 8.31 - THETA 46 - AZ 000

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



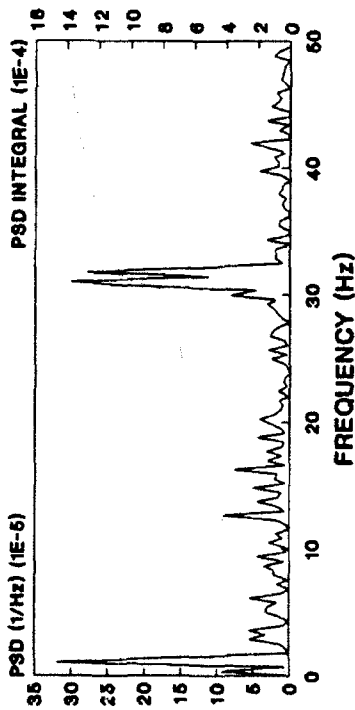
CUBE - HT 8.31 - THETA 46 - AZ 000

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



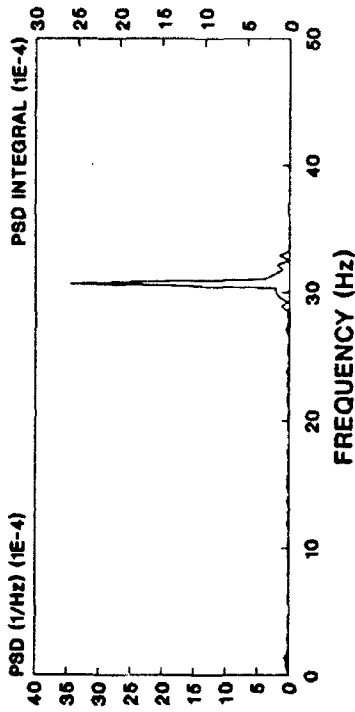
CUBE - HT 8.31 - THETA 46 - AZ 000

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



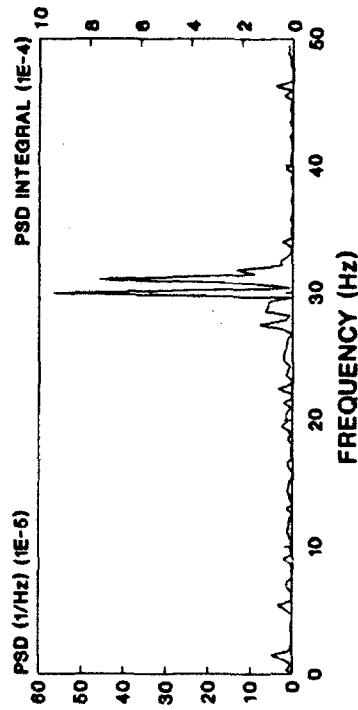
CUBE - HT 8.31 - THETA 45 - AZ 000

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



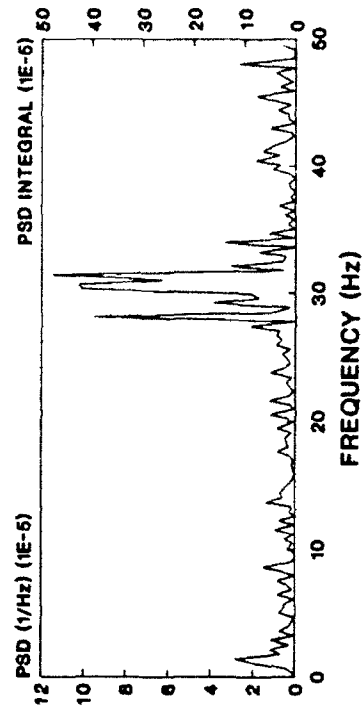
CUBE - HT 8.31 - THETA 45 - AZ 000

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



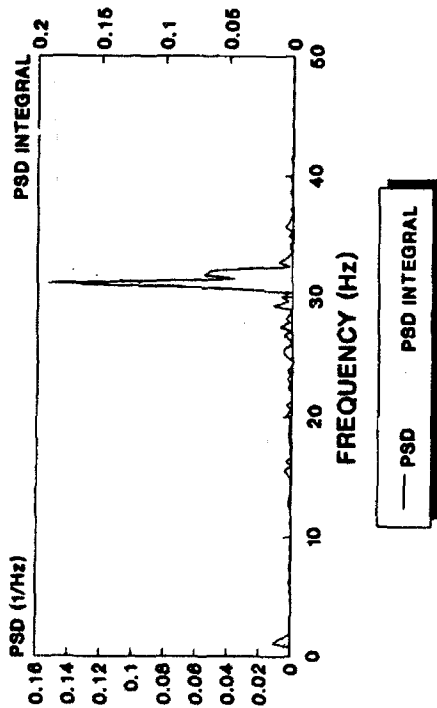
CUBE - HT 8.31 - THETA 45 - AZ 000

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



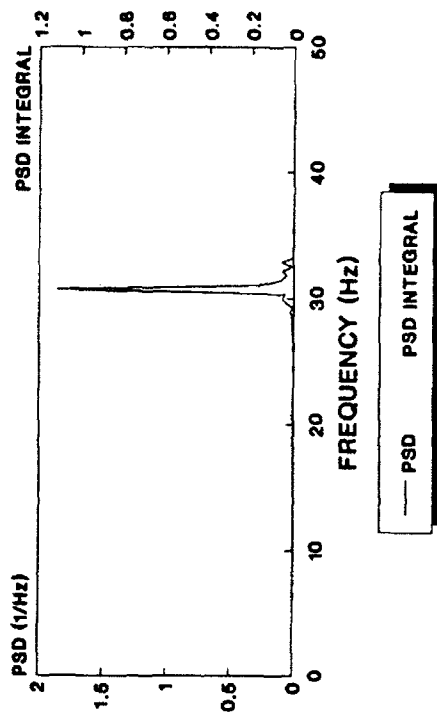
CUBE - HT 8.31 - THETA 45 - AZ 000

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



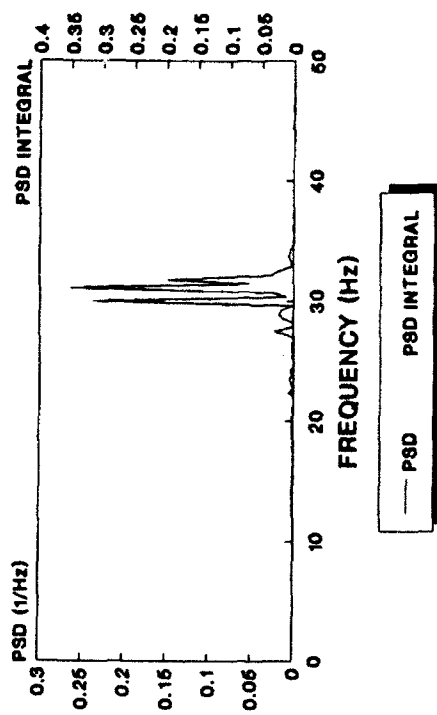
CUBE - HT 8.31 - THETA 45 - AZ 000

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



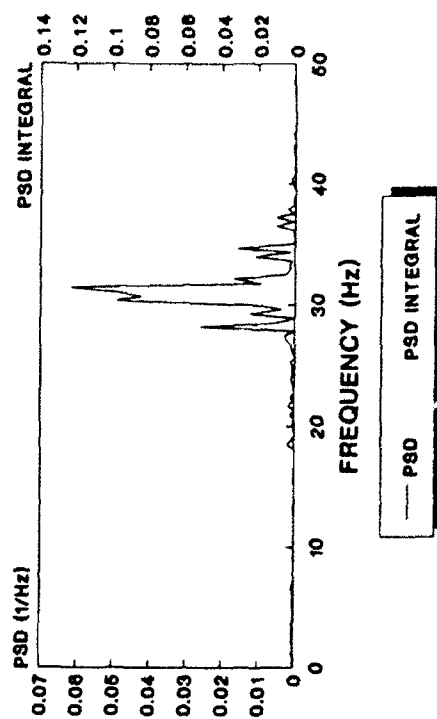
CUBE - HT 8.31 - THETA 45 - AZ 000

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



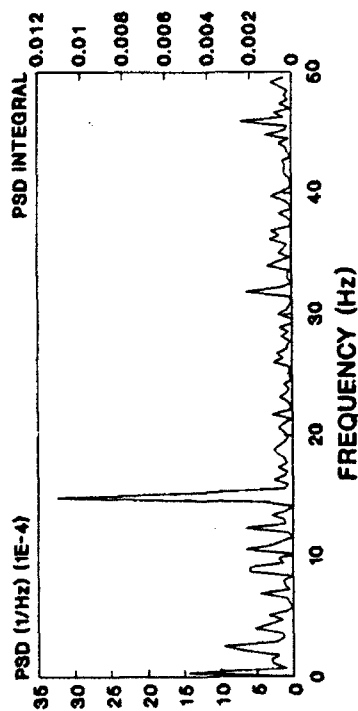
CUBE - HT 8.31 - THETA 45 - AZ 000

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



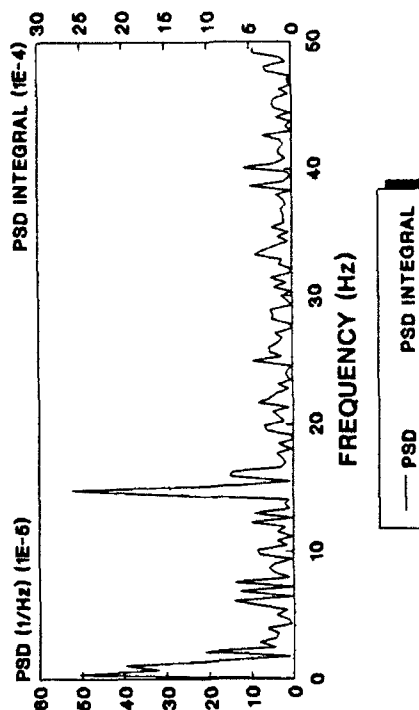
CUBE - HT 8.31 - THETA 45 - AZ 000

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



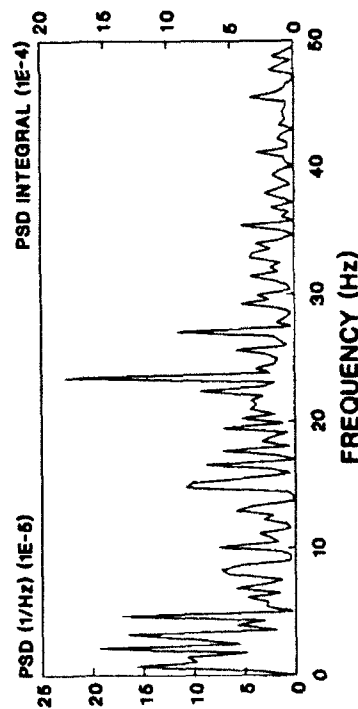
CUBE - HT 8.31 - THETA 45 - AZ 030

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



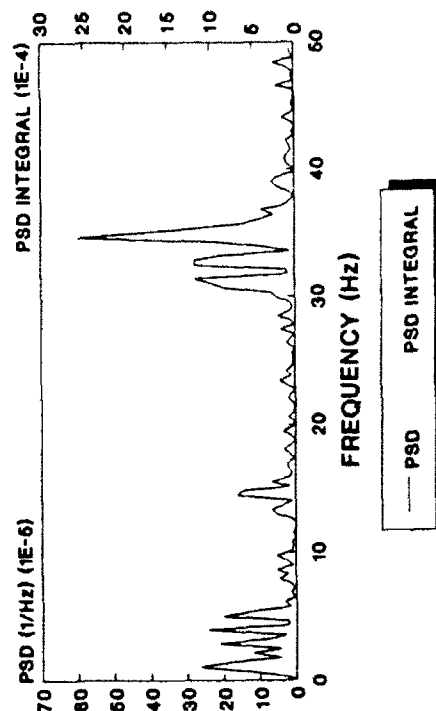
CUBE - HT 8.31 - THETA 45 - AZ 030

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



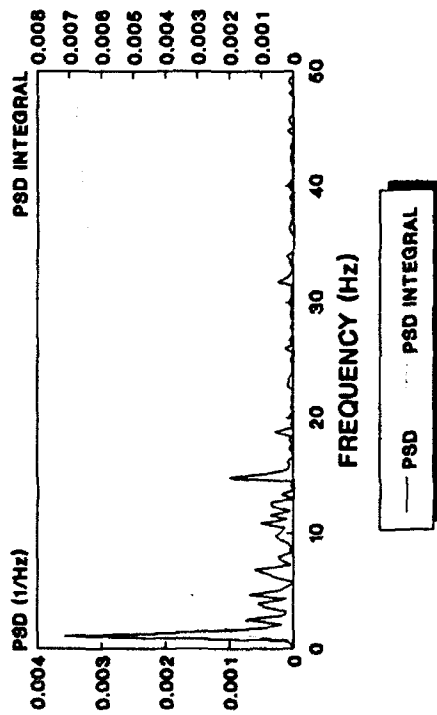
CUBE - HT 8.31 - THETA 45 - AZ 030

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



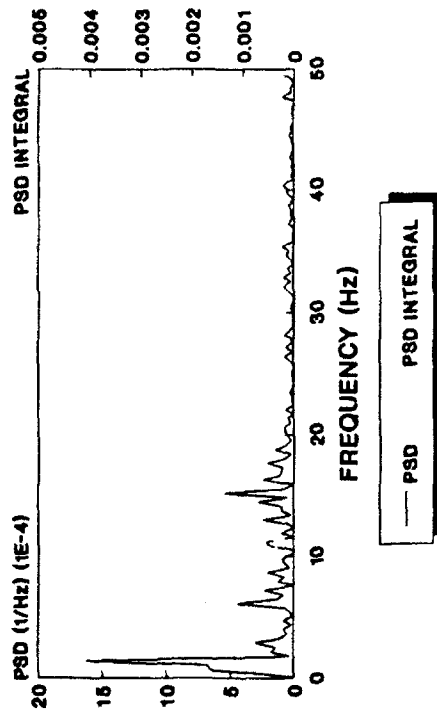
CUBE - HT 8.31 - THETA 45 - AZ 030

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



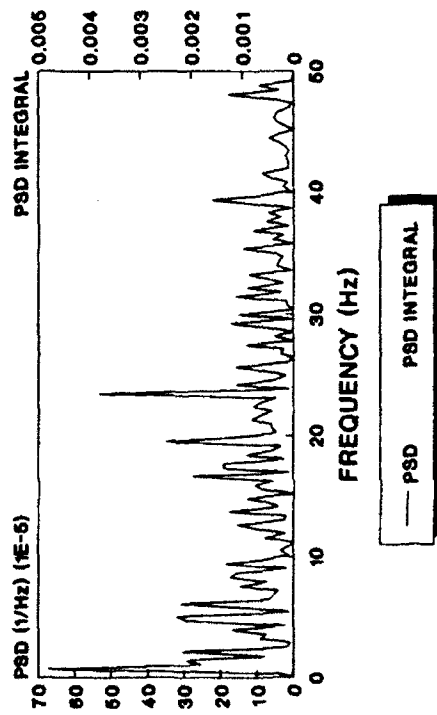
CUBE - HT 8.31 - THETA 46 - AZ 030

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



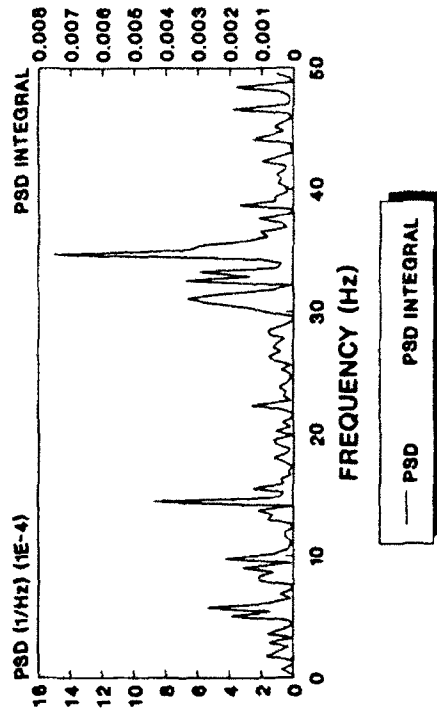
CUBE - HT 8.31 - THETA 46 - AZ 030

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



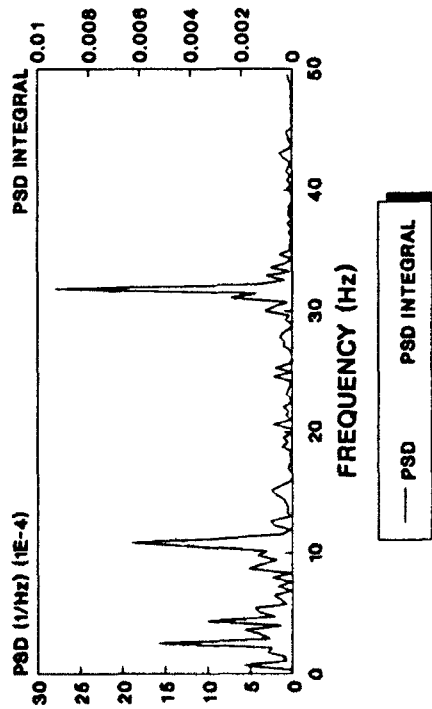
CUBE - HT 8.31 - THETA 46 - AZ 030

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



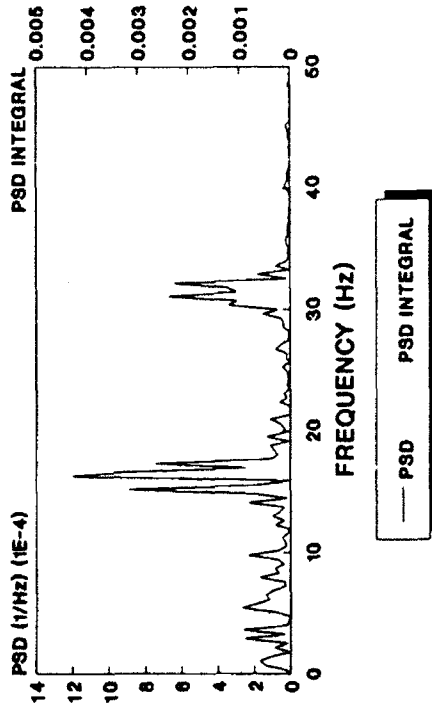
CUBE - HT 8.31 - THETA 46 - AZ 030

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



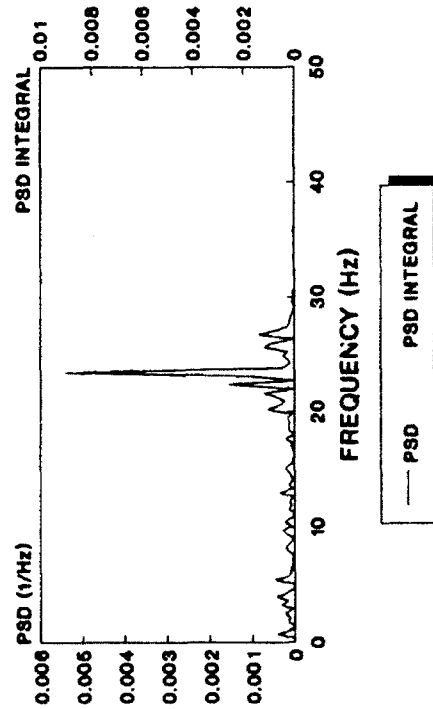
CUBE - HT 8.31 - THETA 46 - AZ 030

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



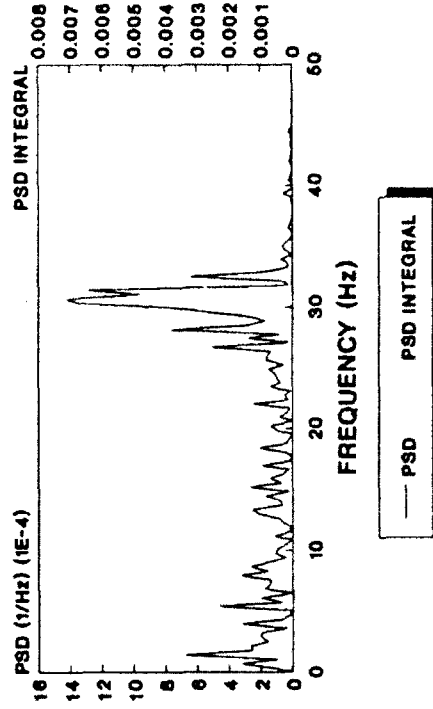
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FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



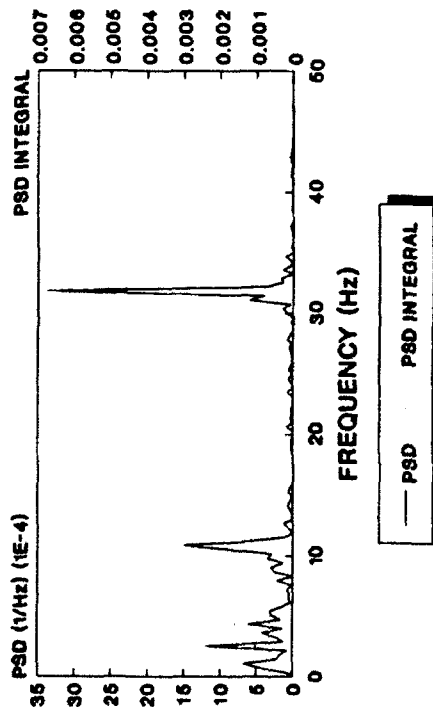
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FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



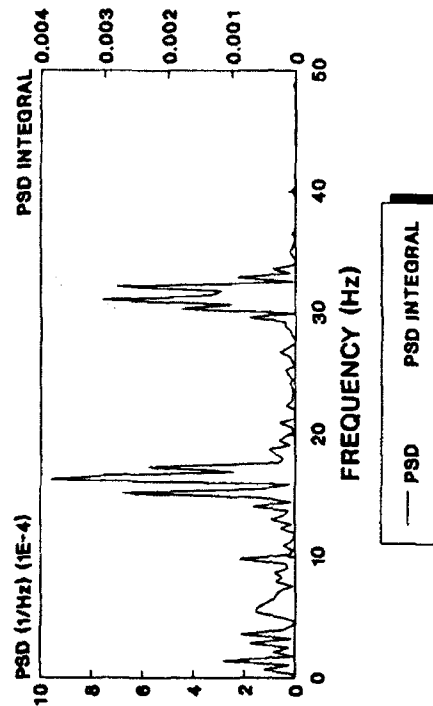
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MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



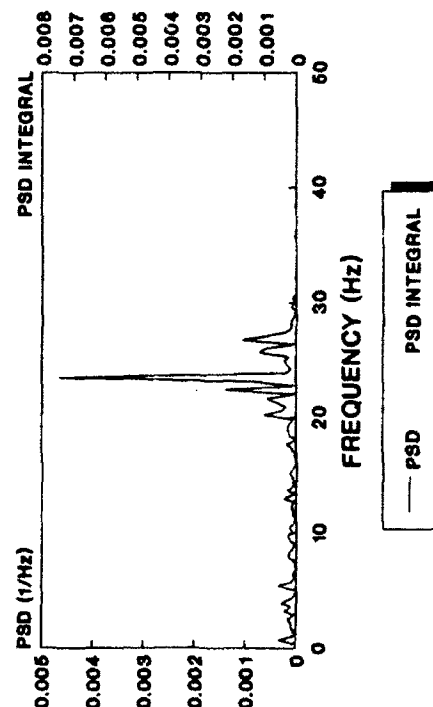
CUBE - HT 8.31 - THETA 45 - AZ 030

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



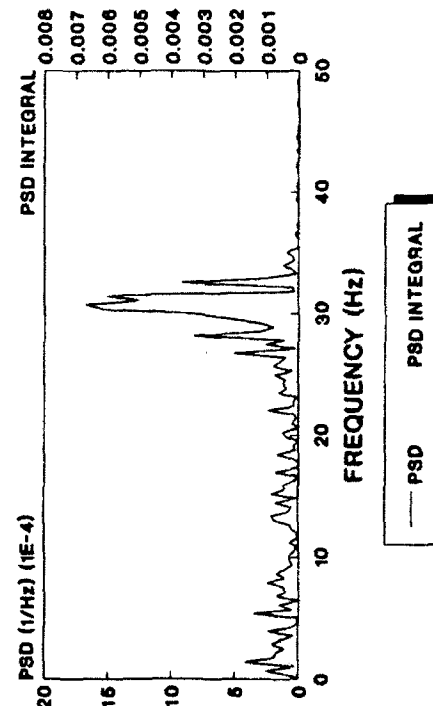
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MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



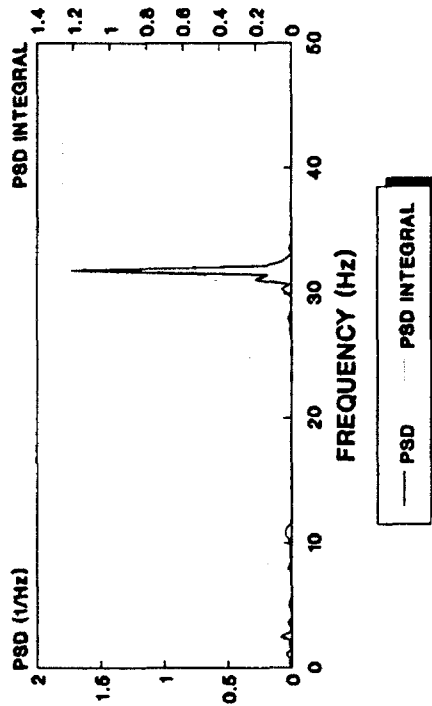
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MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



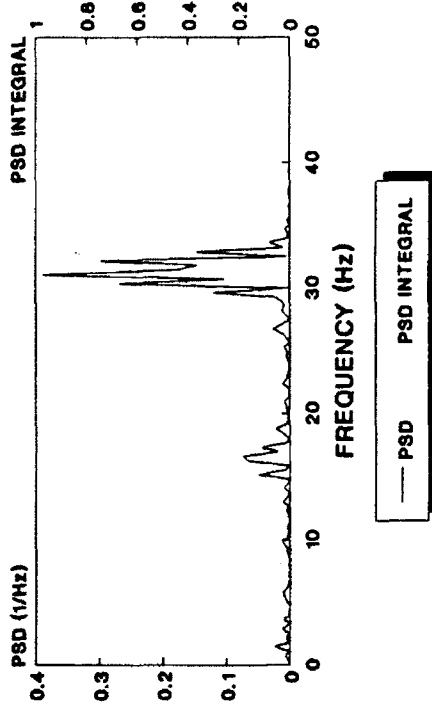
CUBE - HT 8.31 - THETA 45 - AZ 030

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



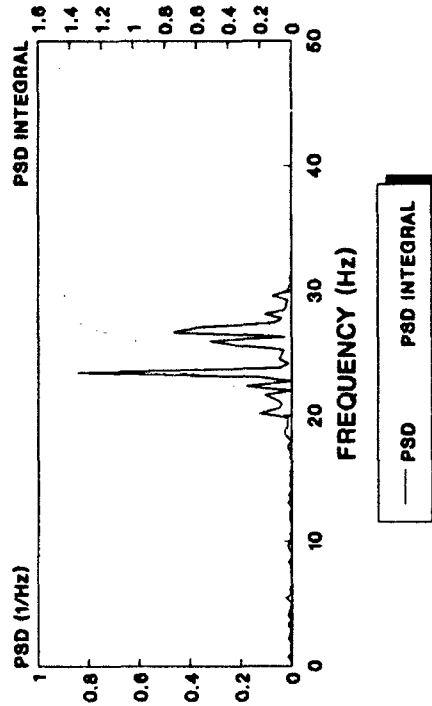
CUBE - HT 8.31 - THETA 46 - AZ 030

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



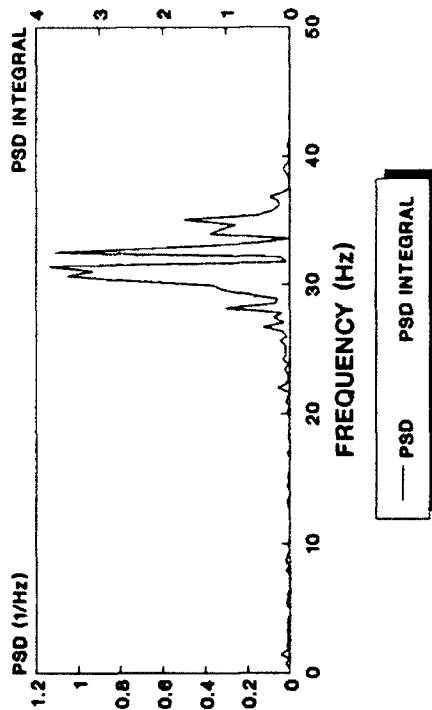
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MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



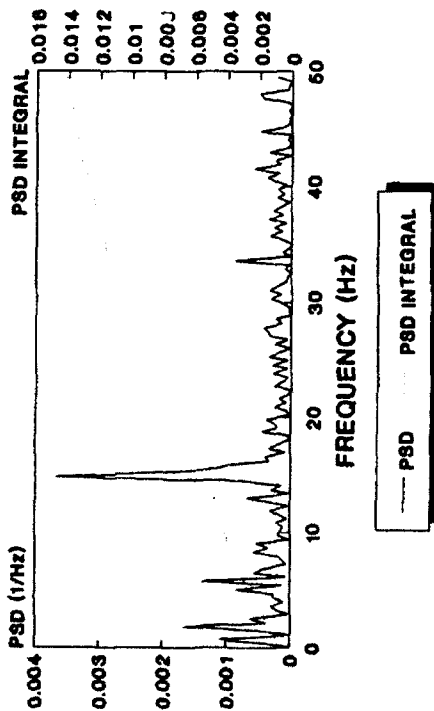
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MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



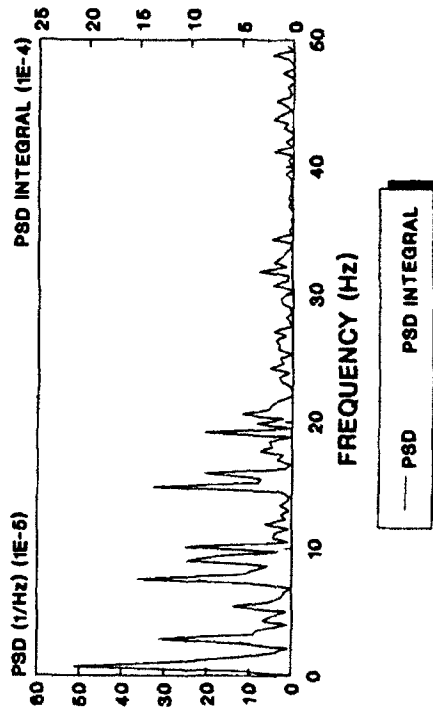
CUBE - HT 8.31 - THETA 46 - AZ 030

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



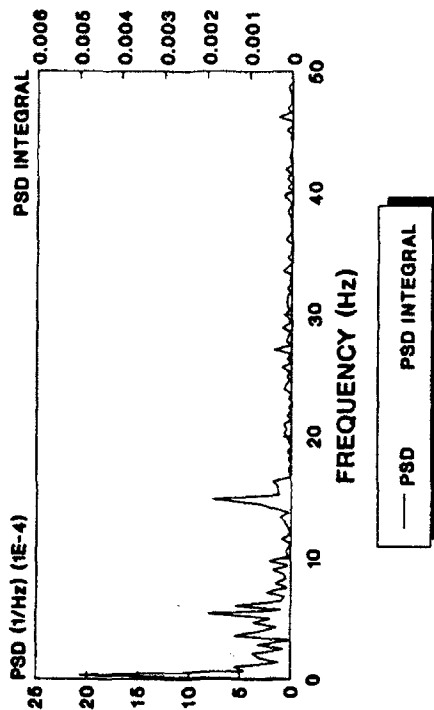
CUBE - HT 8.31 - THETA 45 - AZ 045

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



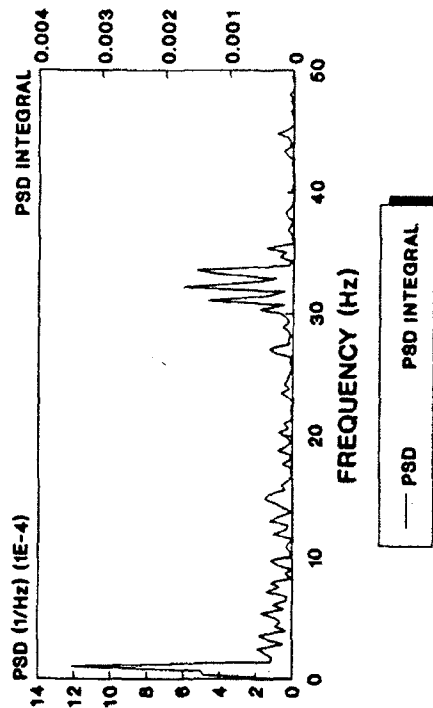
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FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



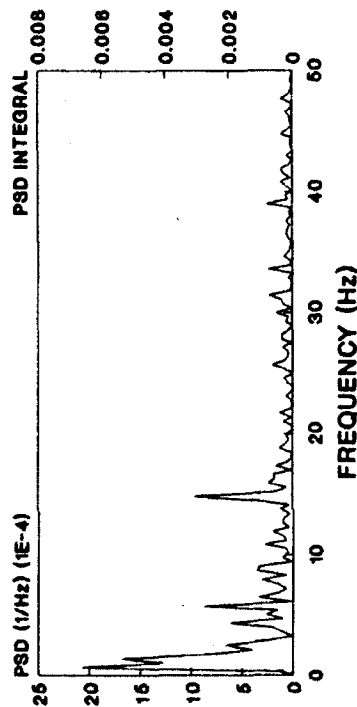
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FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



CUBE - HT 8.31 - THETA 45 - AZ 045

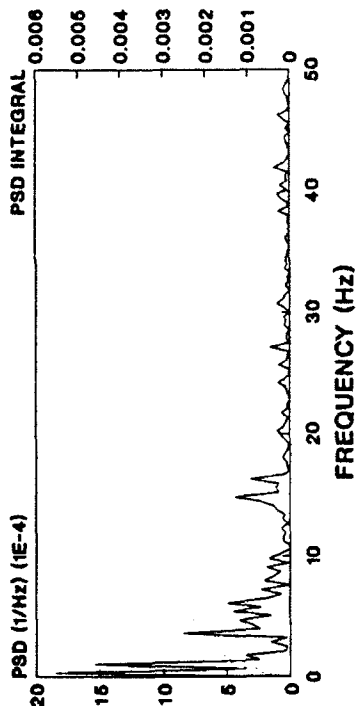
MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



— PSD PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 045

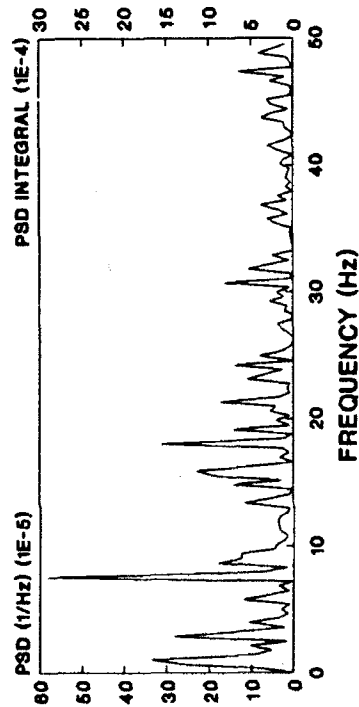
MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



— PSD PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 045

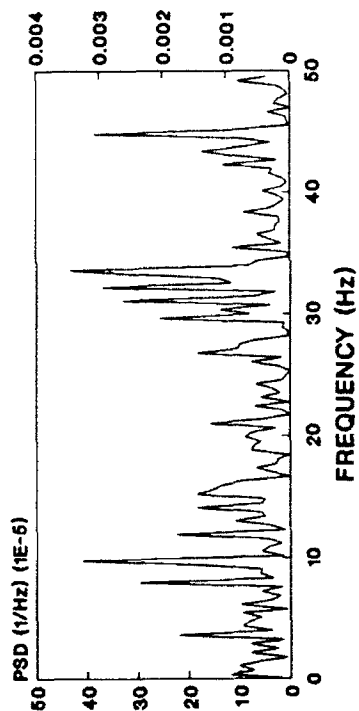
MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



— PSD PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 045

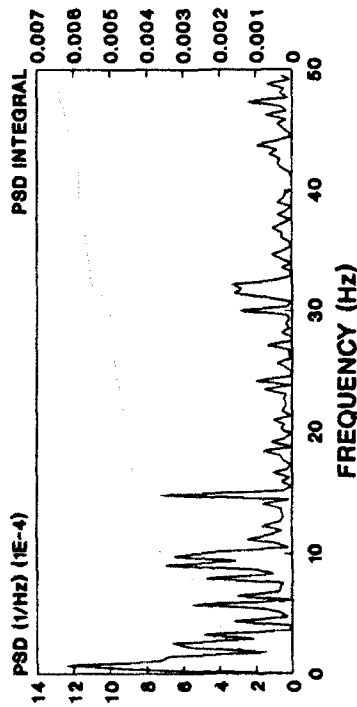
MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



— PSD PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 045

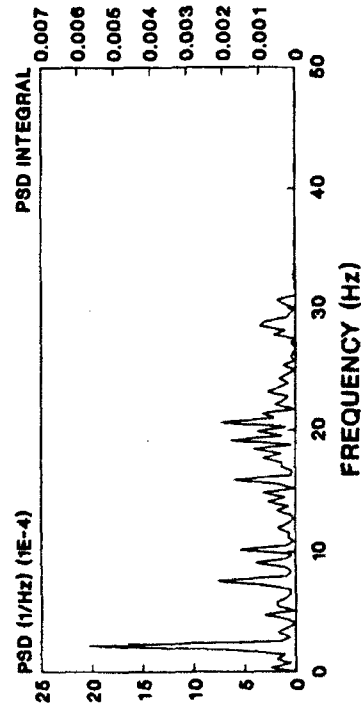
FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



— PSD PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 045

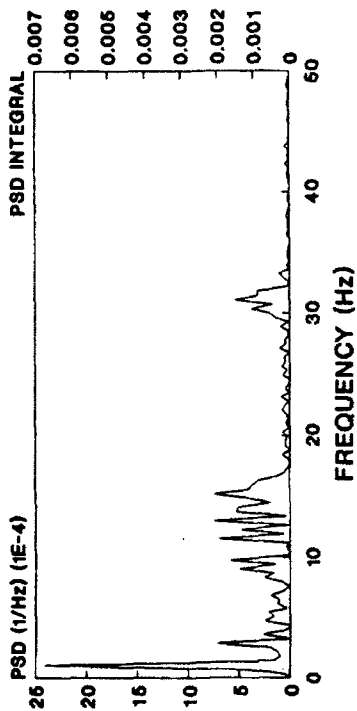
FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



— PSD PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 045

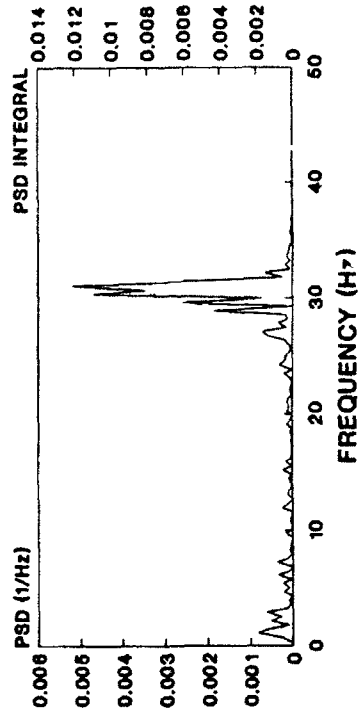
FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



— PSD PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 045

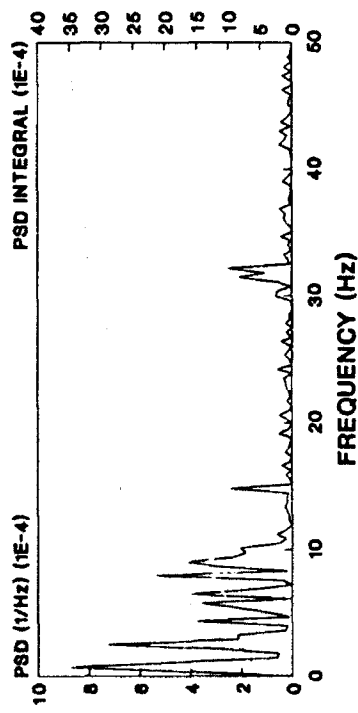
FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



— PSD PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 045

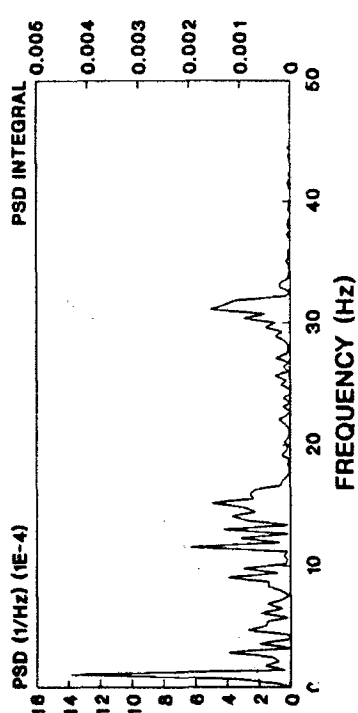
MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



— PSD
- - - PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 045

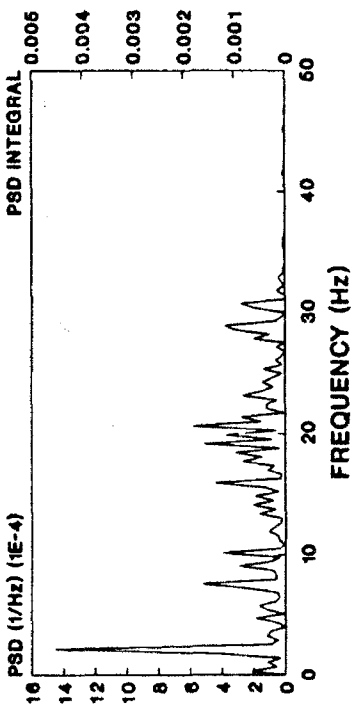
MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



— PSD
- - - PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 045

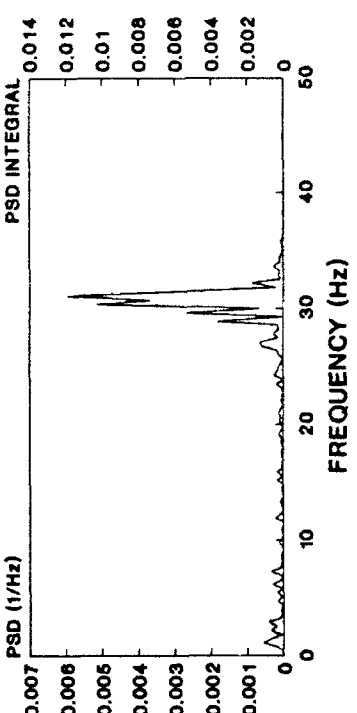
MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



— PSD
- - - PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 045

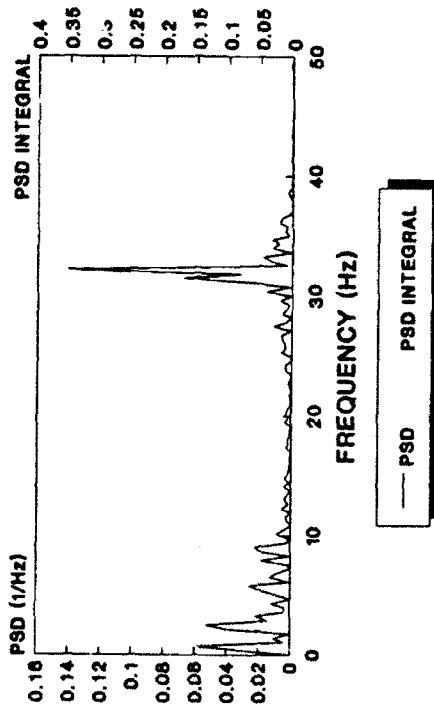
MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



— PSD
- - - PSD INTEGRAL

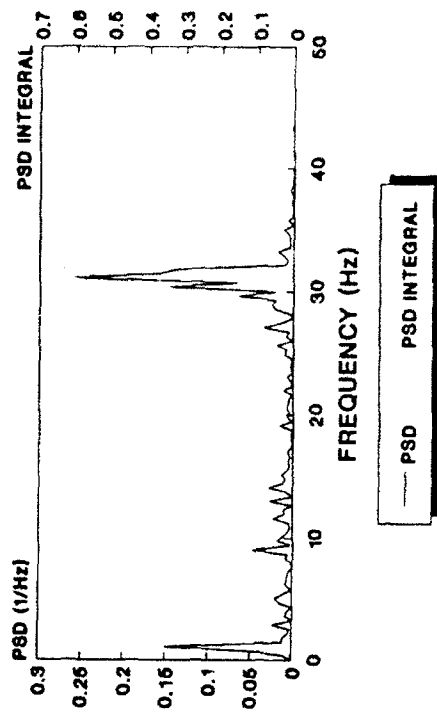
CUBE - HT 8.31 - THETA 45 - AZ 045

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



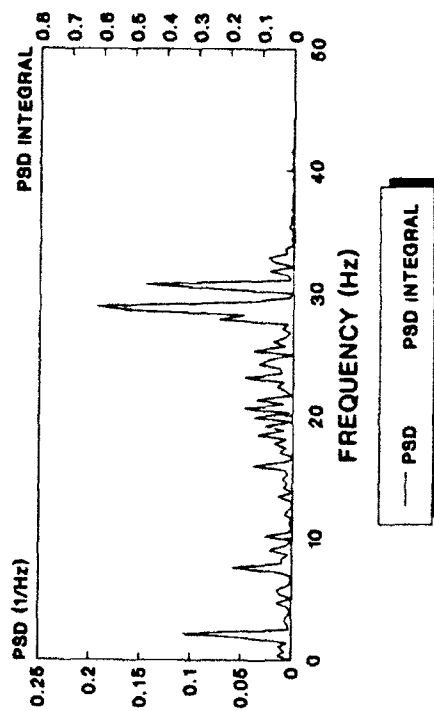
CUBE - HT 8.31 - THETA 45 - AZ 046

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



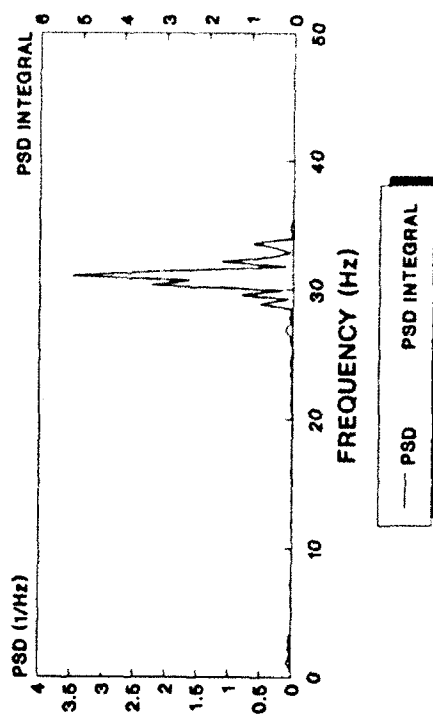
CUBE - HT 8.31 - THETA 45 - AZ 046

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



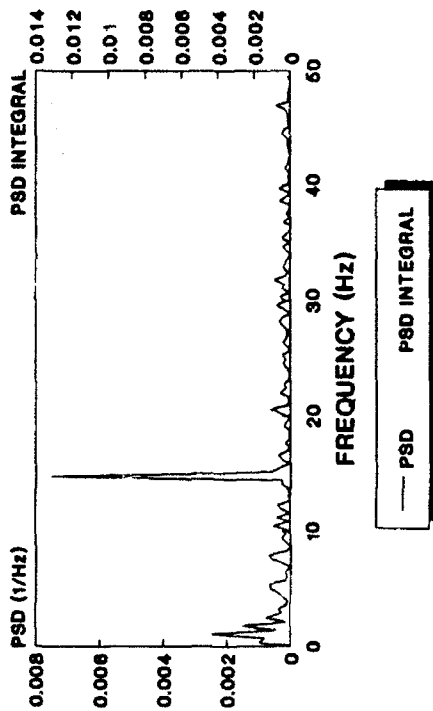
CUBE - HT 8.31 - THETA 45 - AZ 046

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



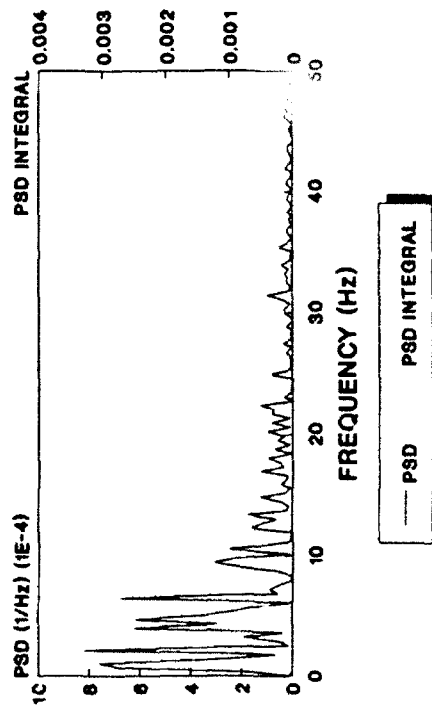
CUBE - HT 8.31 - THETA 45 - AZ 046

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



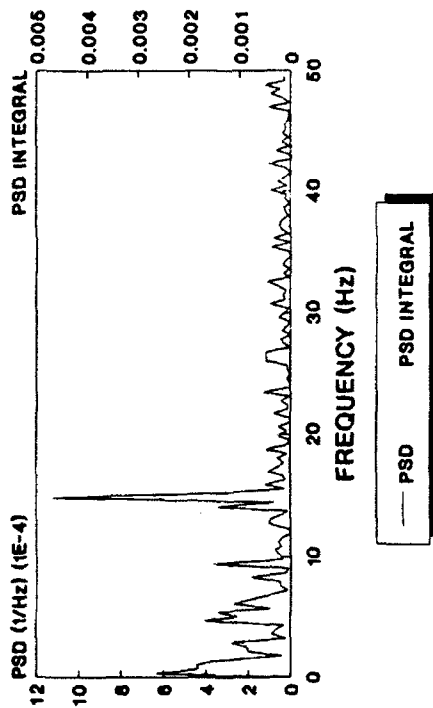
CUBE - HT 8.31 - THETA 46 - AZ 060

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



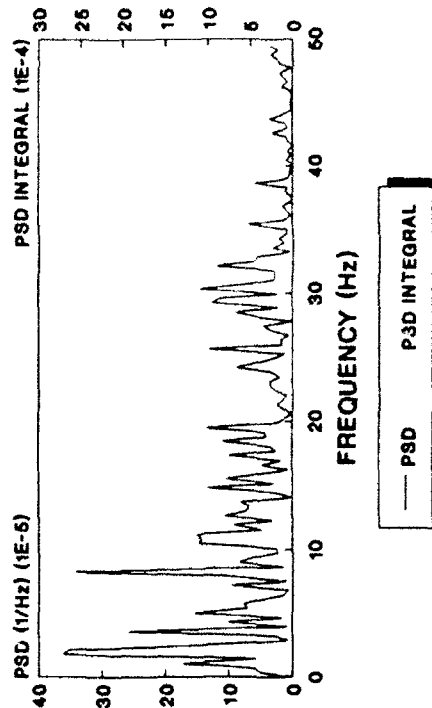
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FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



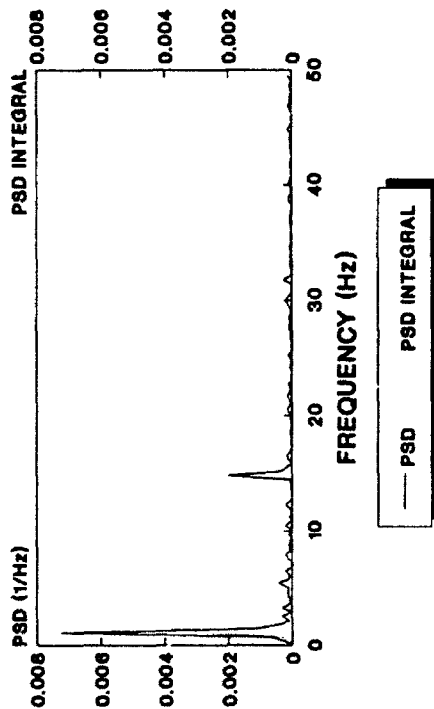
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FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



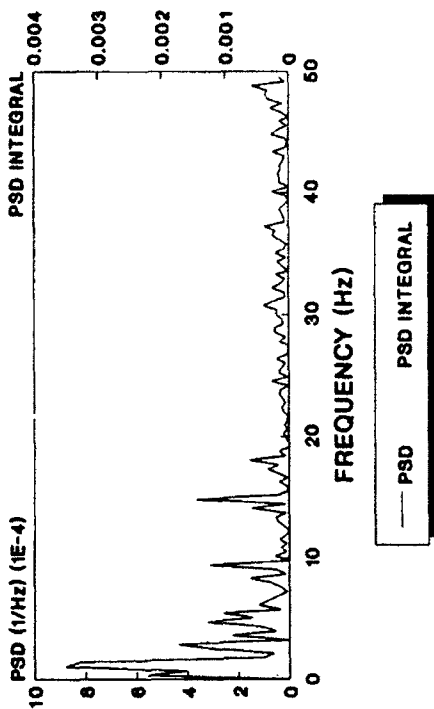
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MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



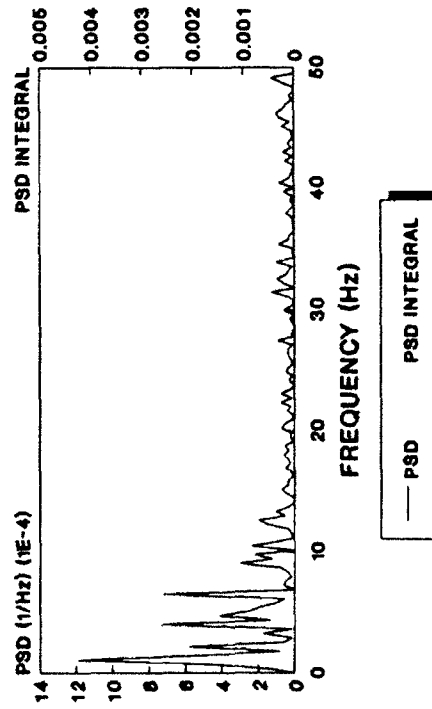
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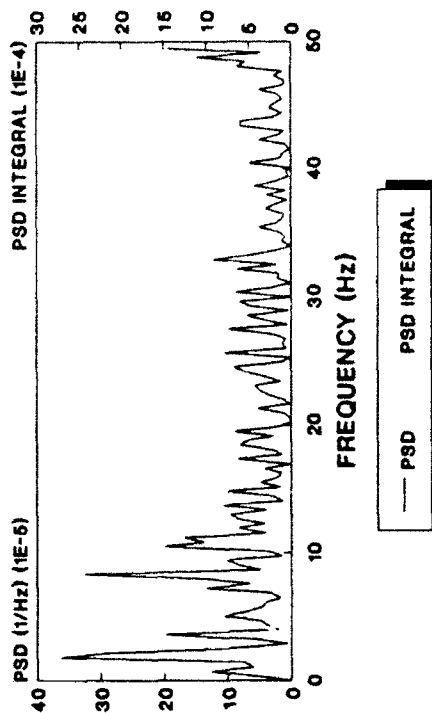
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MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



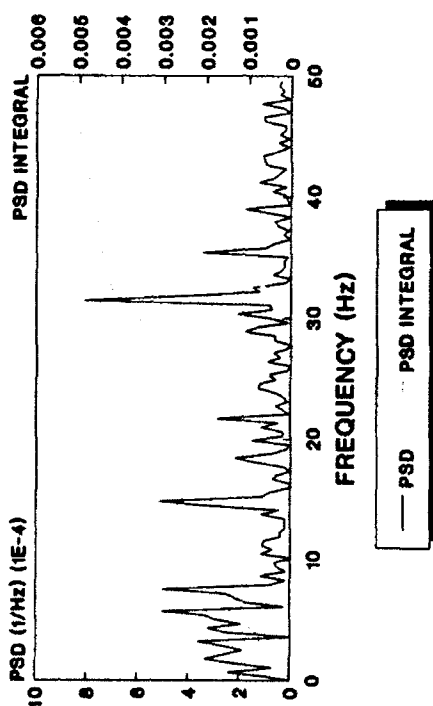
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MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



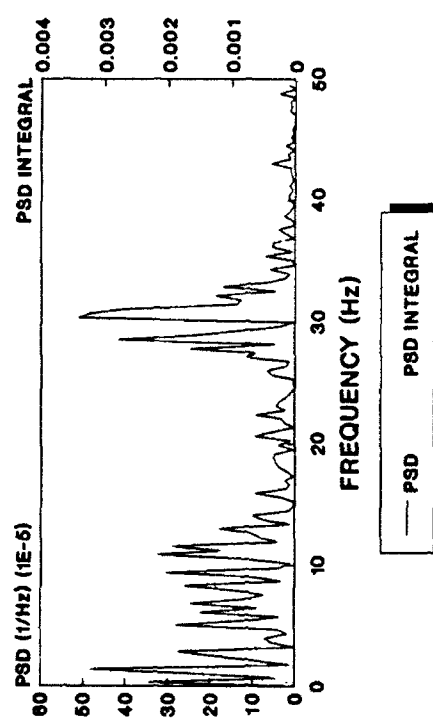
CUBE - HT 8.31 - THETA 45 - AZ 060

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



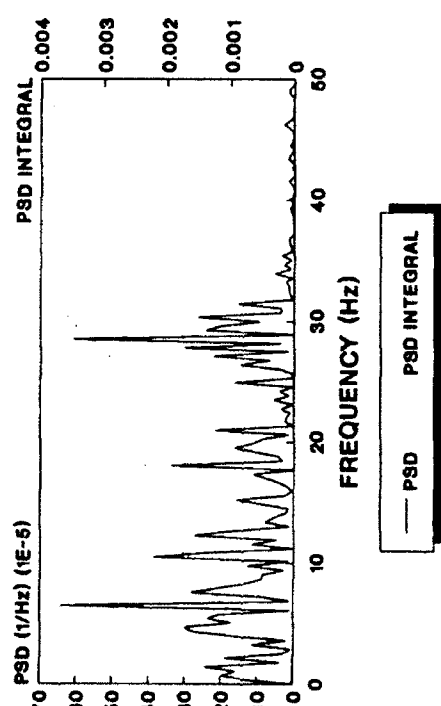
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FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



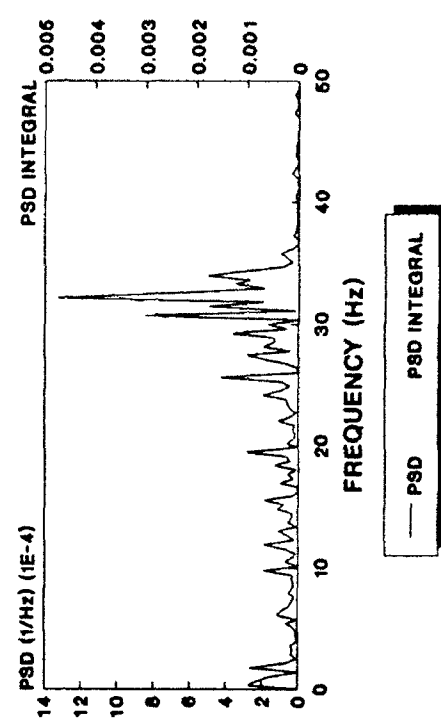
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FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



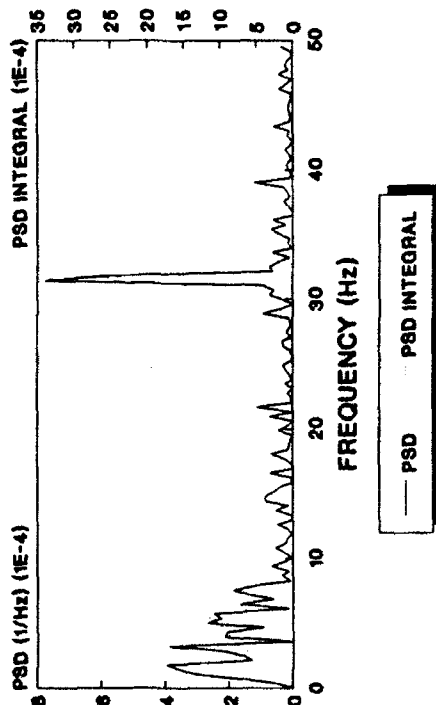
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FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



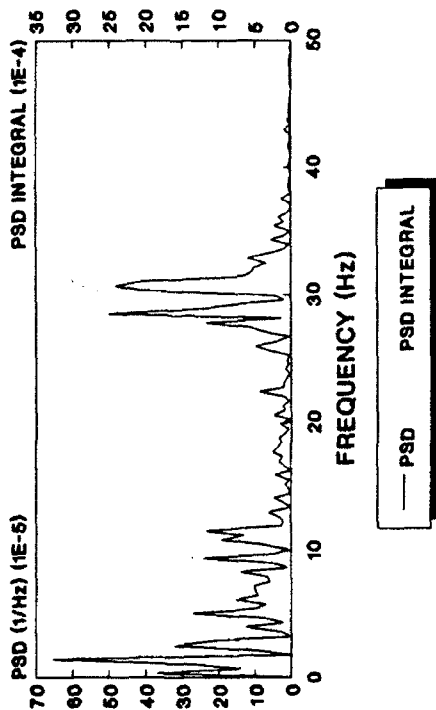
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MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



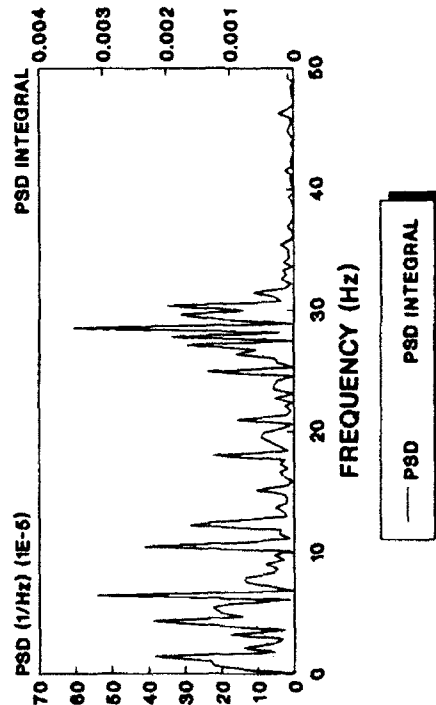
CUBE - HT 8.31 - THETA 48 - AZ 060

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



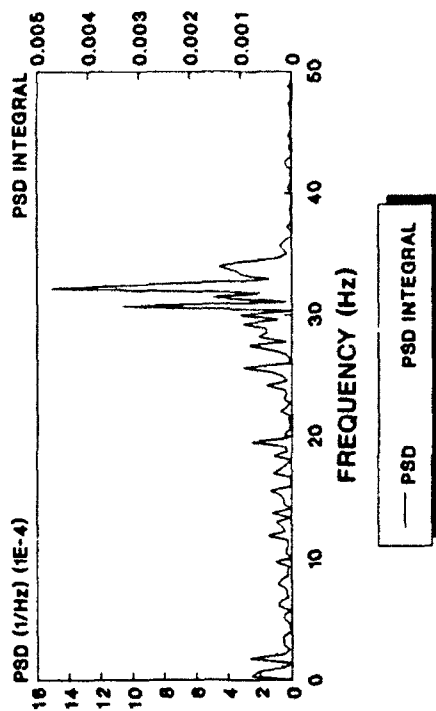
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MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



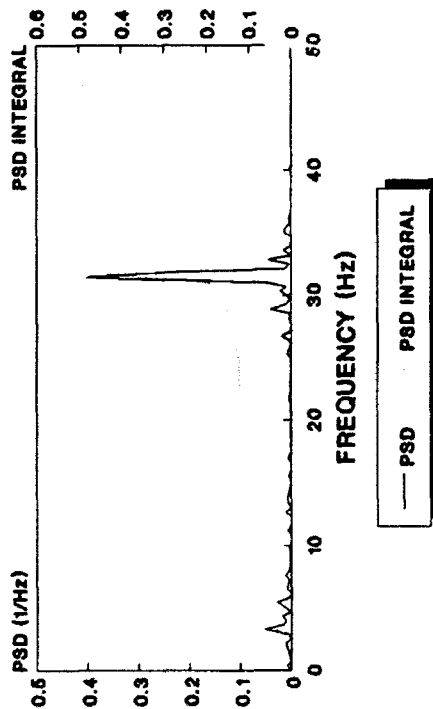
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MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



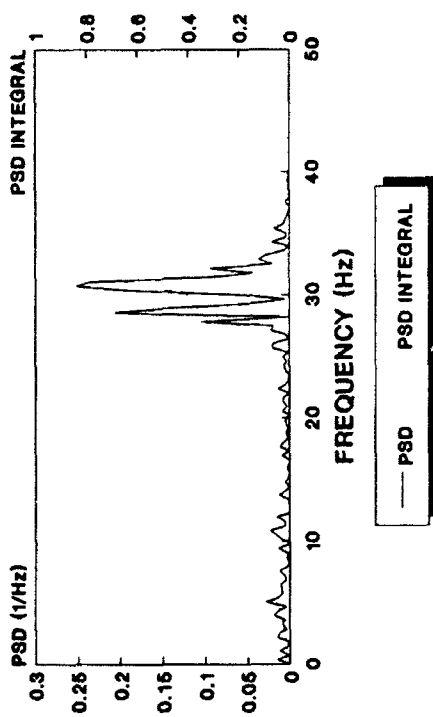
CUBE - HT 8.31 - THETA 48 - AZ 060

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



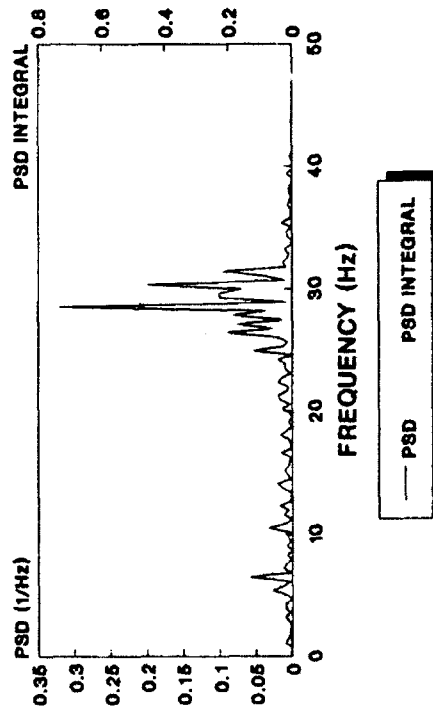
CUBE - HT 8.31 - THETA 45 - AZ 060

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



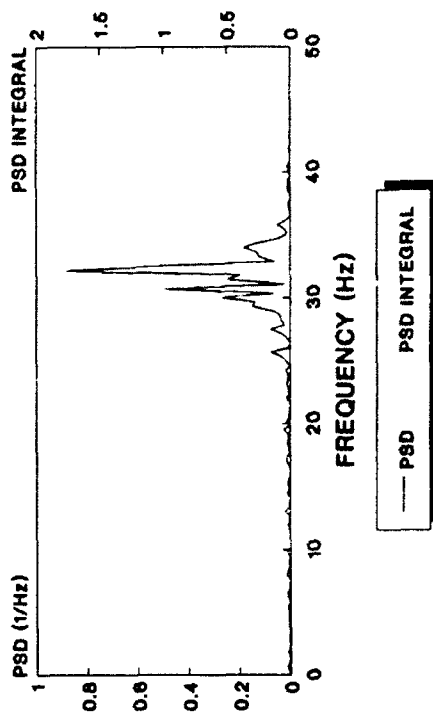
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MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



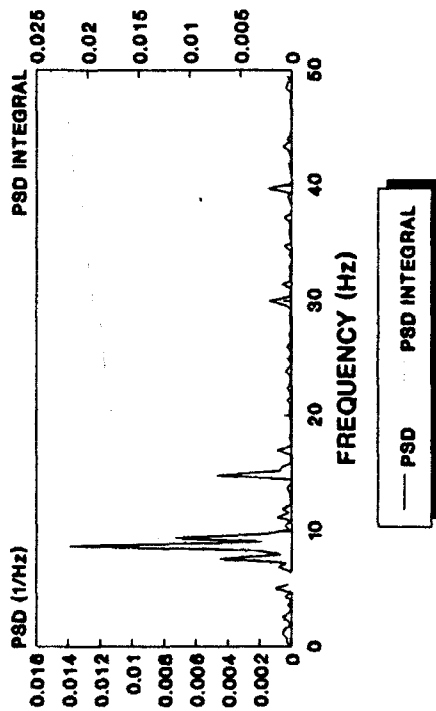
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MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



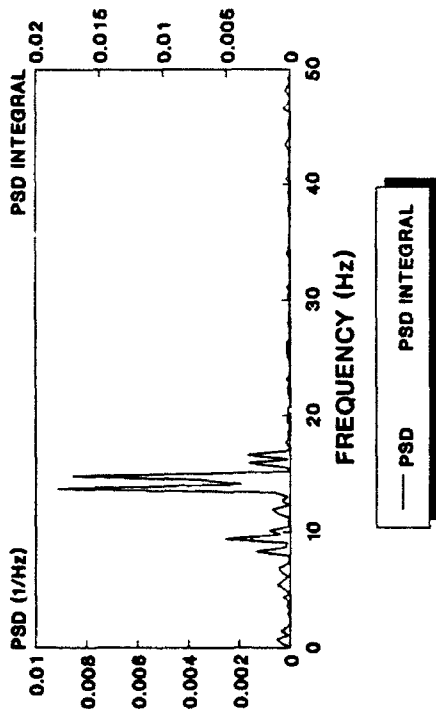
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FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



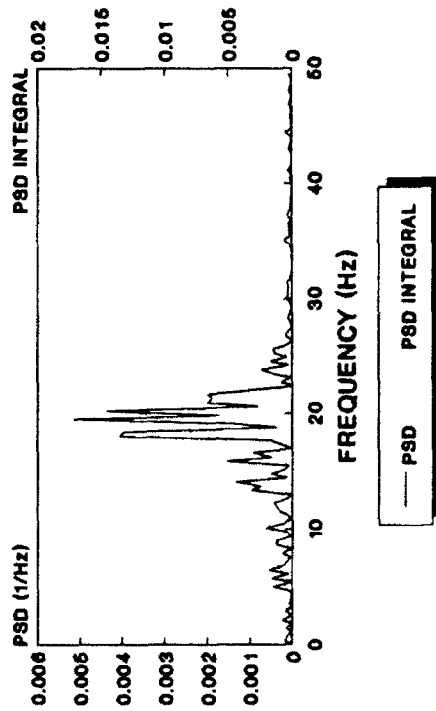
CUBE - HT 8.31 - THETA 46 - AZ 090

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



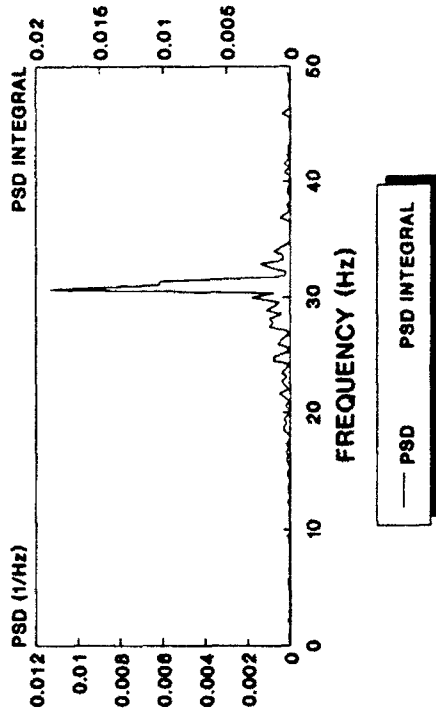
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FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



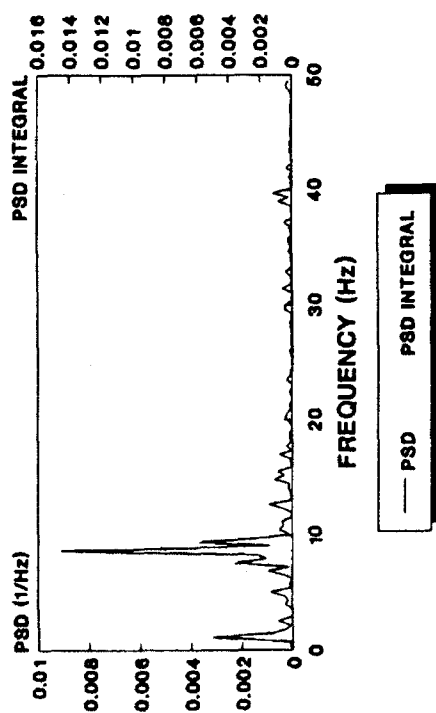
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FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



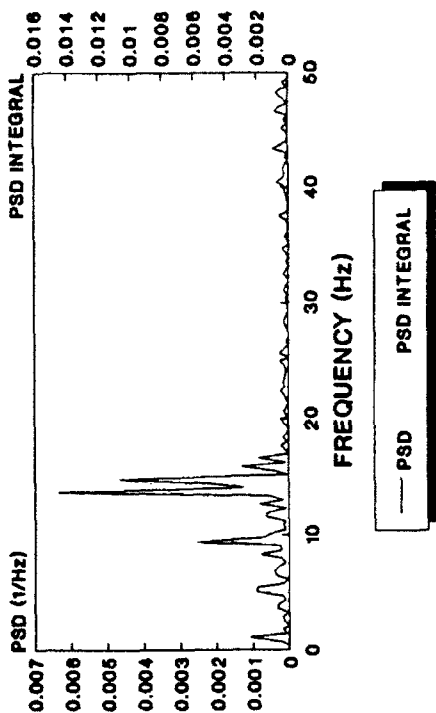
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MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



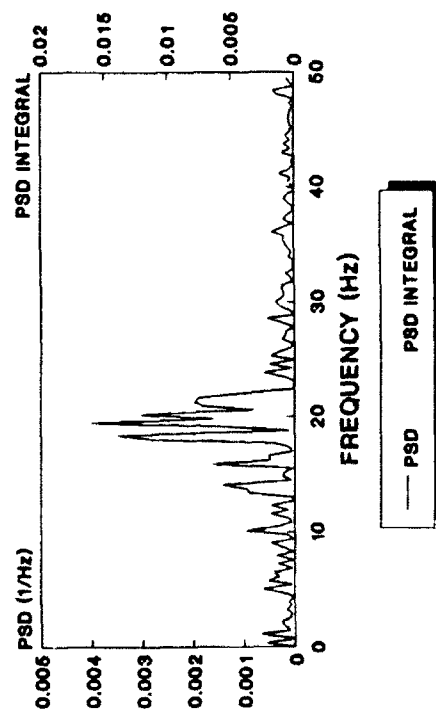
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MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



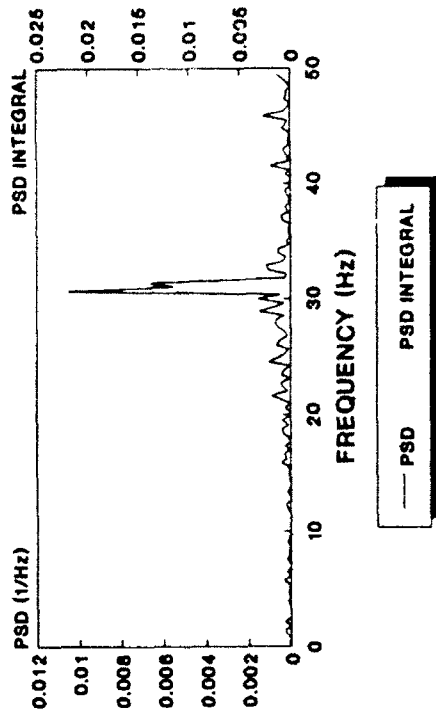
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MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



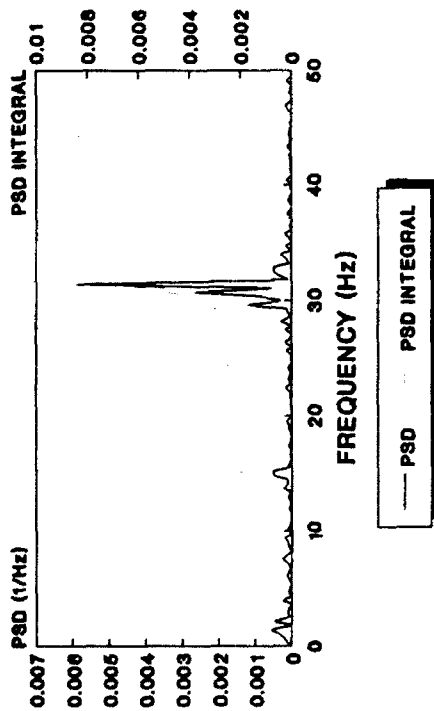
CUBE - HT 8.31 - THETA 45 - AZ 090

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



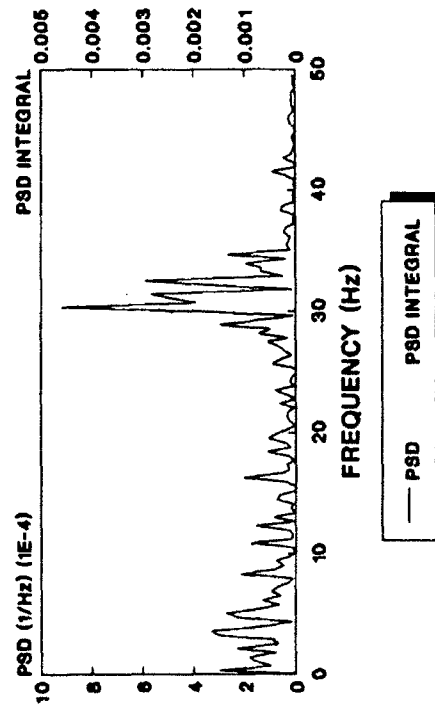
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FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



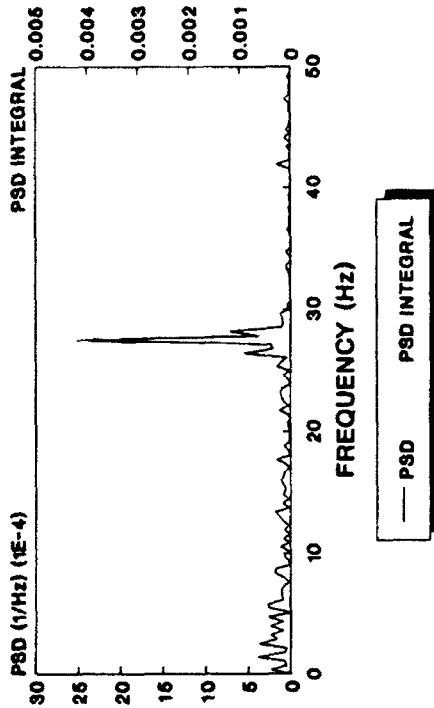
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FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



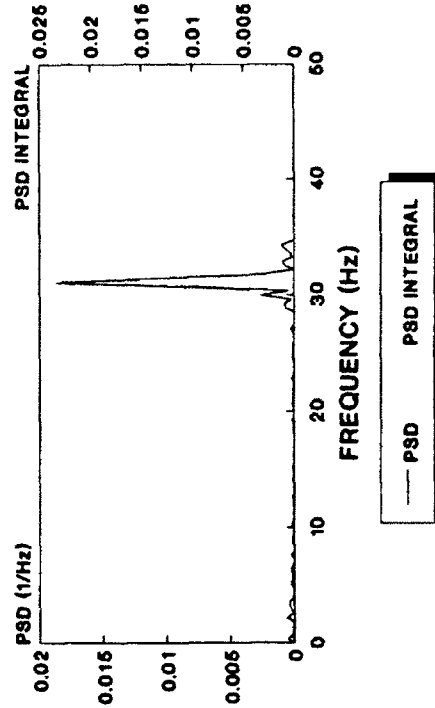
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FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



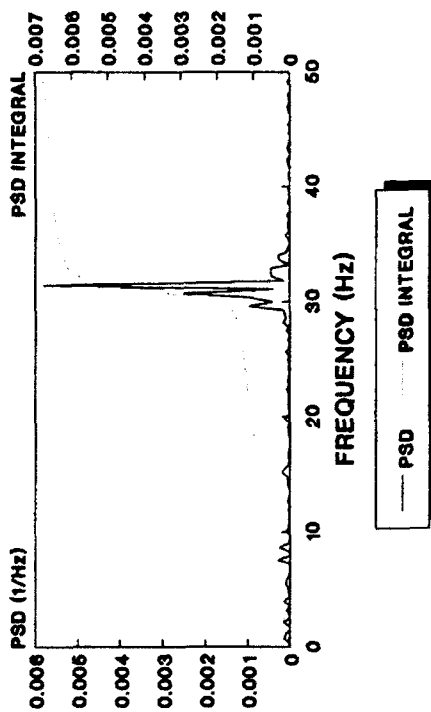
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FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



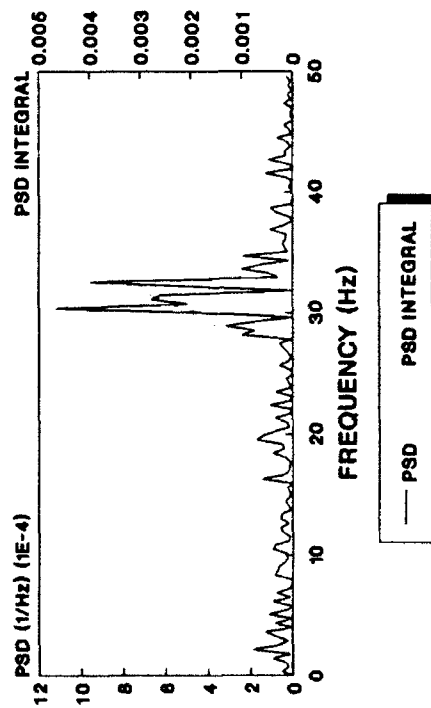
CUBE - HT 8.31 - THETA 45 - AZ 090

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



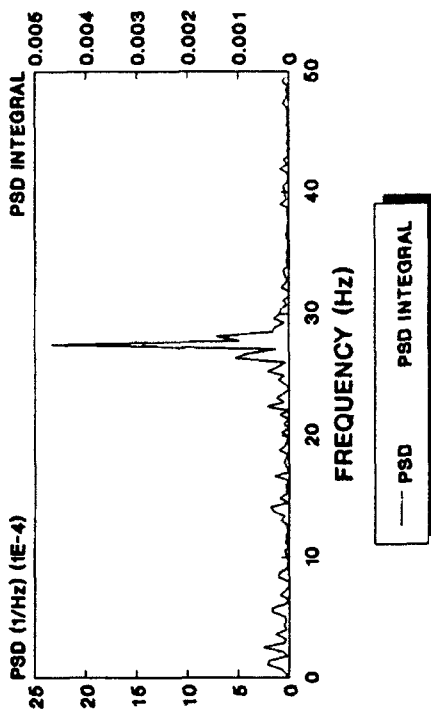
CUBE - HT 8.31 - THETA 45 - AZ 090

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



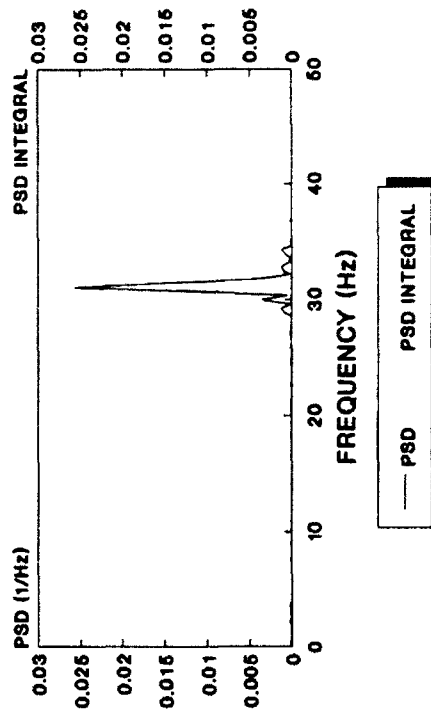
CUBE - HT 8.31 - THETA 45 - AZ 090

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



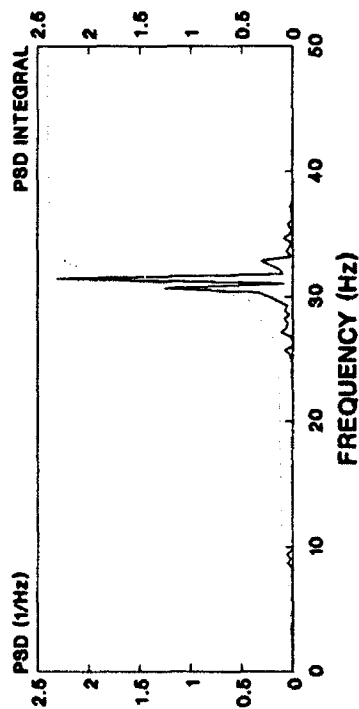
CUBE - HT 8.31 - THETA 45 - AZ 090

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



CUBE - HT 8.31 - THETA 45 - AZ 090

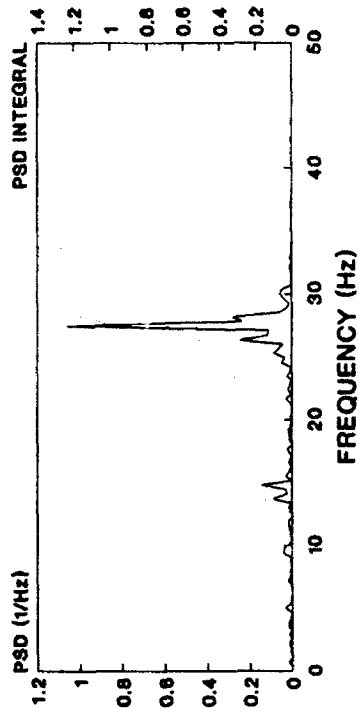
MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



— PSD — PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 090

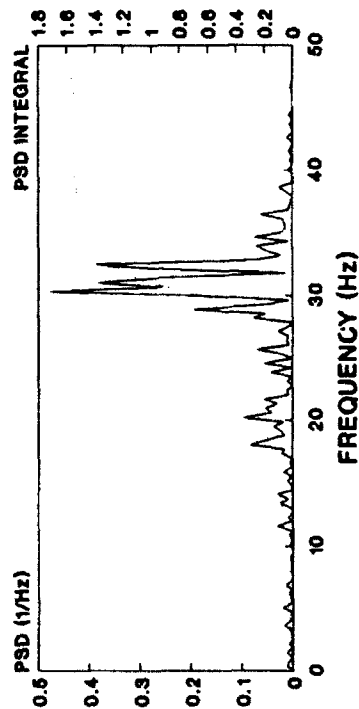
MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



— PSD — PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 090

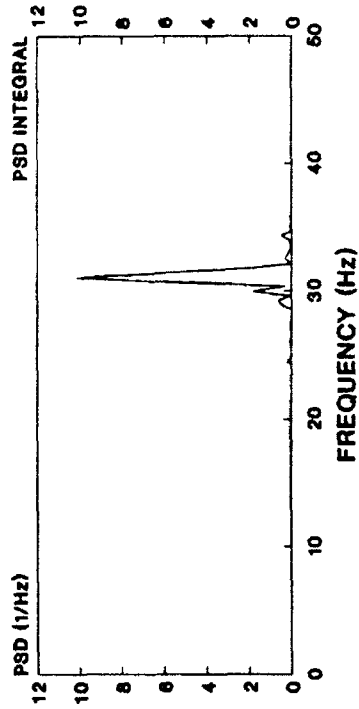
MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



— PSD — PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 090

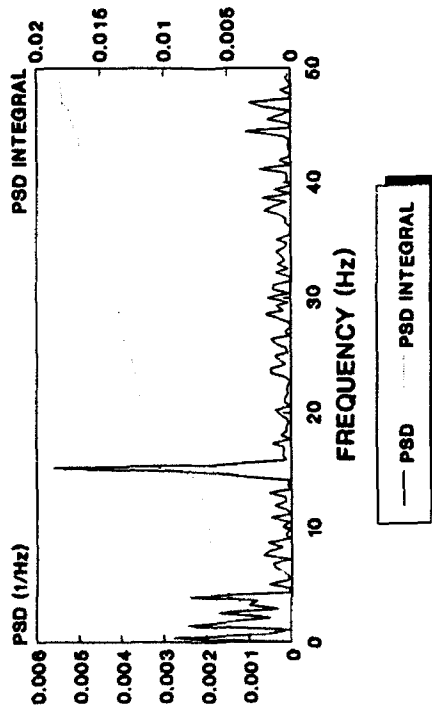
MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



— PSD — PSD INTEGRAL

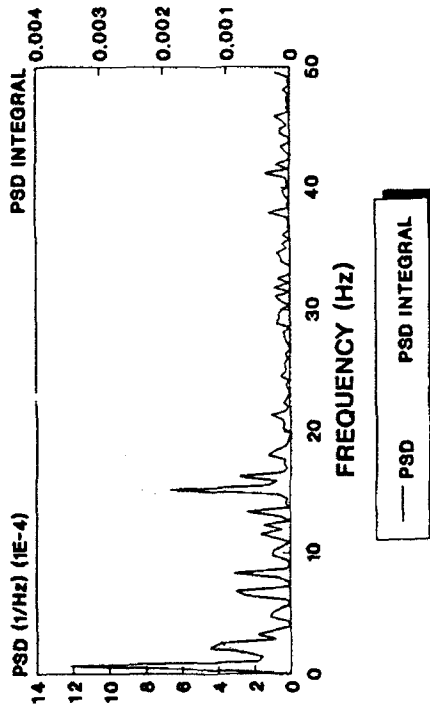
CUBE - HT 8.31 - THETA 45 - AZ 090

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



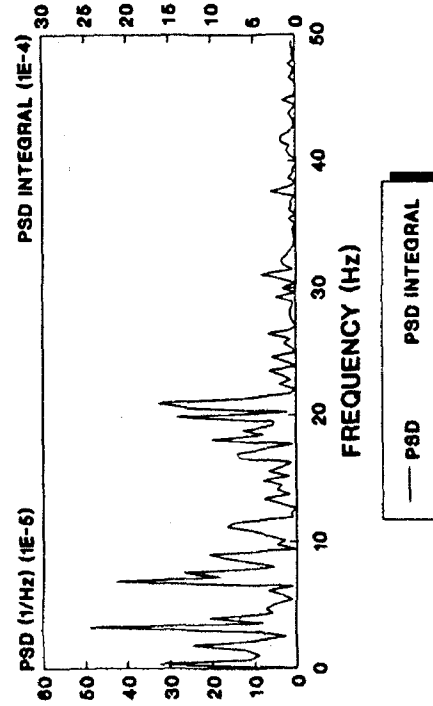
CUBE - HT 8.31 - THETA 45 - AZ 120

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



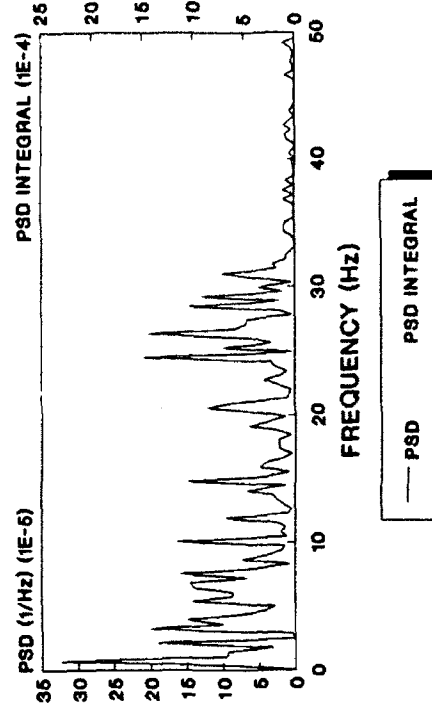
CUBE - HT 8.31 - THETA 45 - AZ 120

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



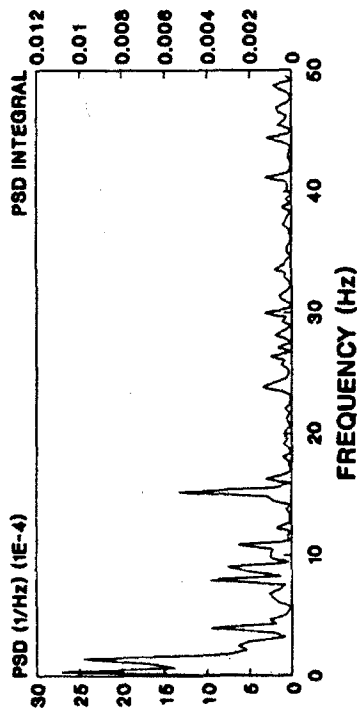
CUBE - HT 8.31 - THETA 45 - AZ 120

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



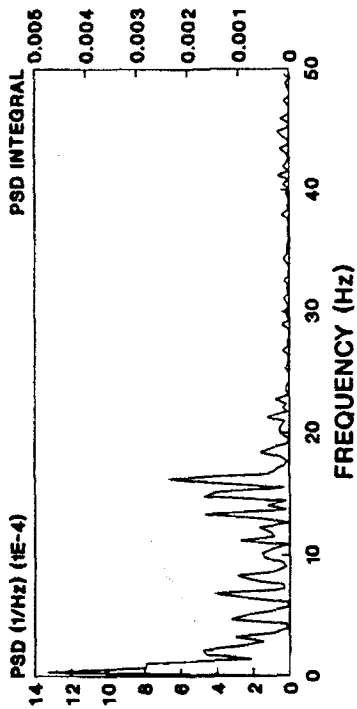
CUBE - HT 8.31 - THETA 45 - AZ 120

MOMENT COEFF - NORMAL **60 FT/SEC NOMINAL**



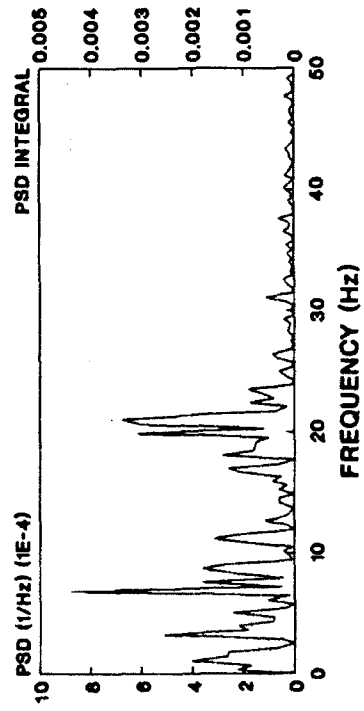
CUBE - HT 8.31 - THETA 45 - AZ 120

MOMENT COEFF - NORMAL **90 FT/SEC NOMINAL**



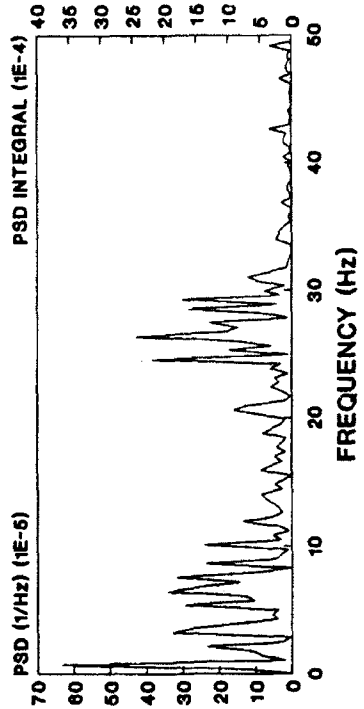
CUBE - HT 8.31 - THETA 45 - AZ 120

MOMENT COEFF - NORMAL **120 FT/SEC NOMINAL**



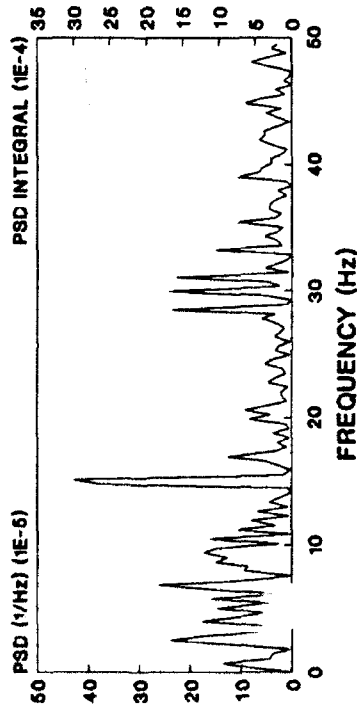
CUBE - HT 8.31 - THETA 45 - AZ 120

MOMENT COEFF - NORMAL **180 FT/SEC NOMINAL**



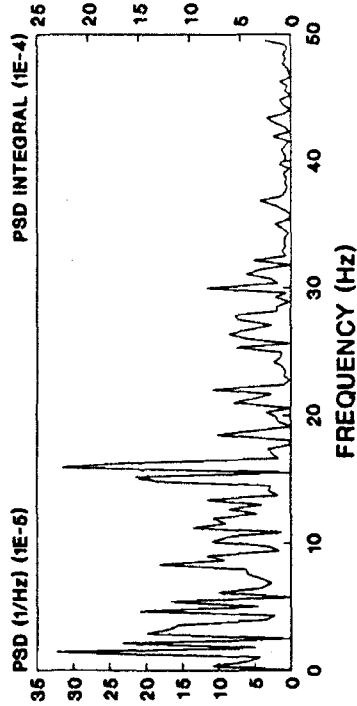
CUBE - HT 8.31 - THETA 45 - AZ 120

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



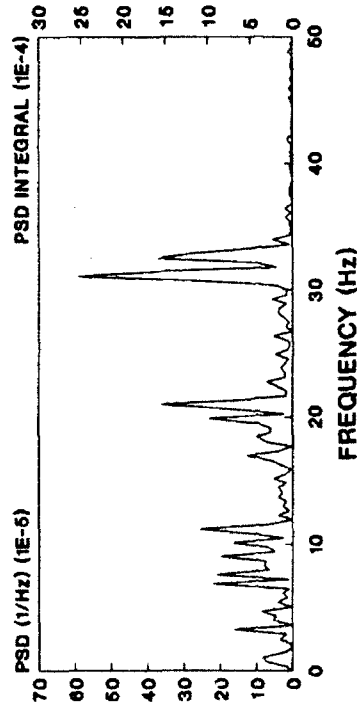
CUBE - HT 8.31 - THETA 45 - AZ 120

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



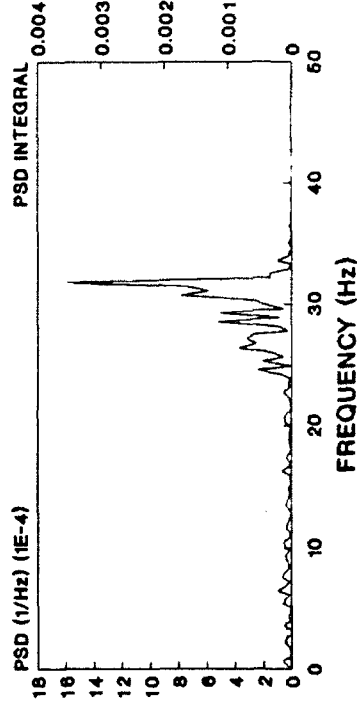
CUBE - HT 8.31 - THETA 45 - AZ 120

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



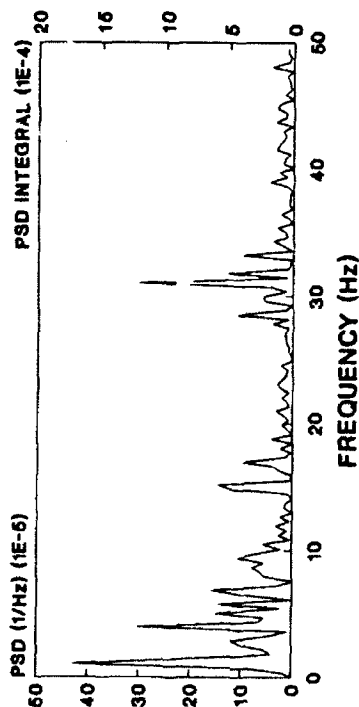
CUBE - HT 8.31 - THETA 45 - AZ 120

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



CUBE - HT 8.31 - THETA 45 - AZ 120

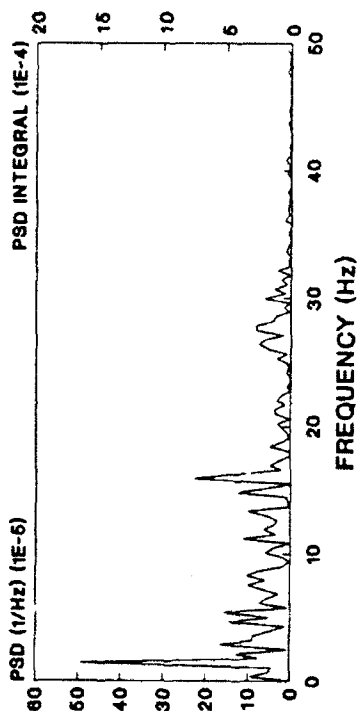
MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



— PSD - - - PSD INTEGRAL

CUBE - HT 8.31 - THETA 46 - AZ 120

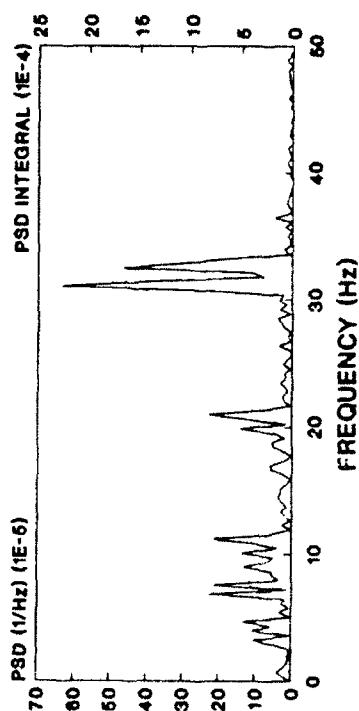
MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



— PSD - - - PSD INTEGRAL

CUBE - HT 8.31 - THETA 46 - AZ 120

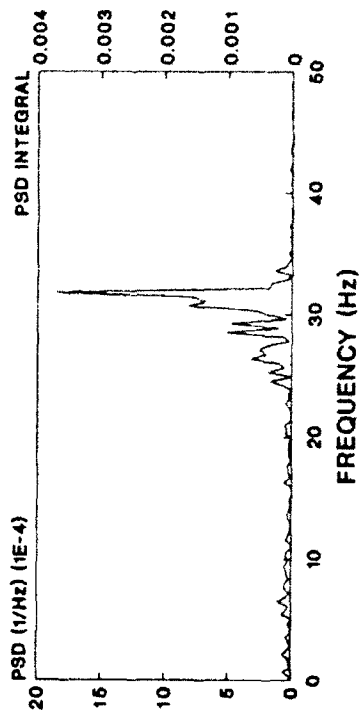
MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



— PSD - - - PSD INTEGRAL

CUBE - HT 8.31 - THETA 46 - AZ 120

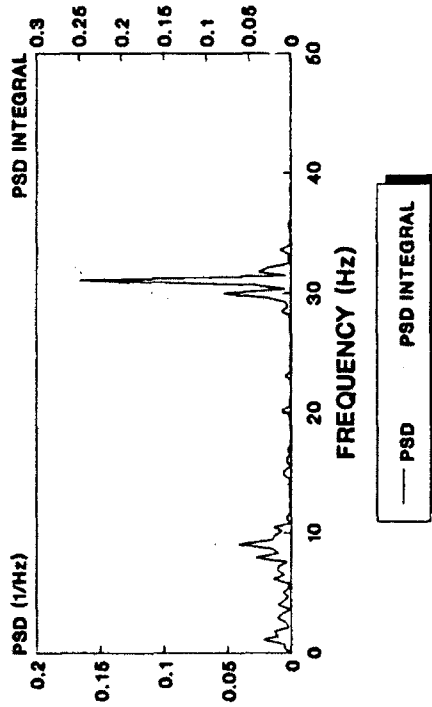
MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



— PSD - - - PSD INTEGRAL

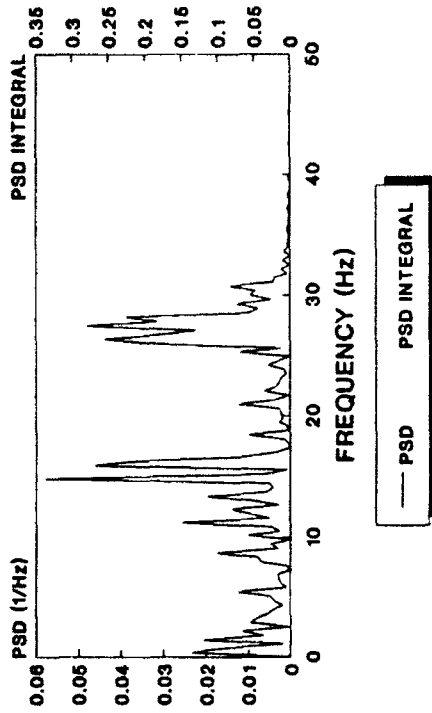
CUBE - HT 8.31 - THETA 46 - AZ 120

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



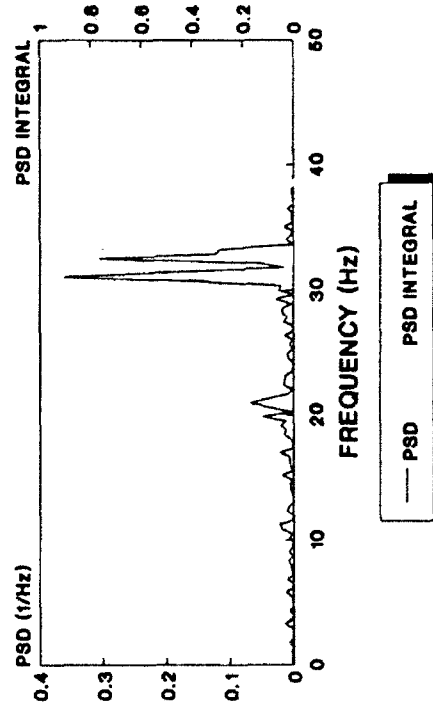
CUBE - HT 8.31 - THETA 46 - AZ 120

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



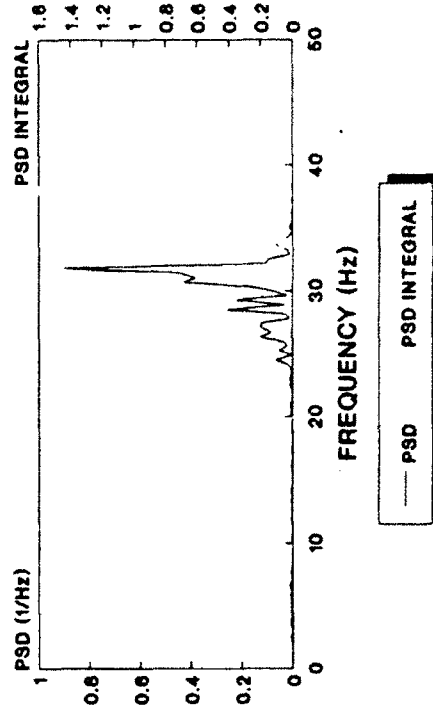
CUBE - HT 8.31 - THETA 46 - AZ 120

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



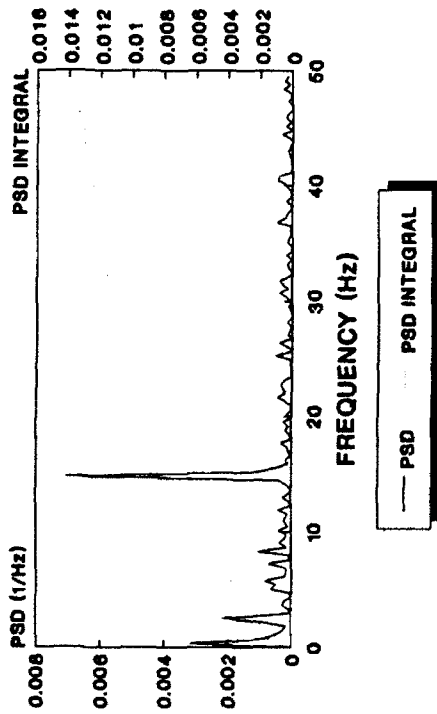
CUBE - HT 8.31 - THETA 46 - AZ 120

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



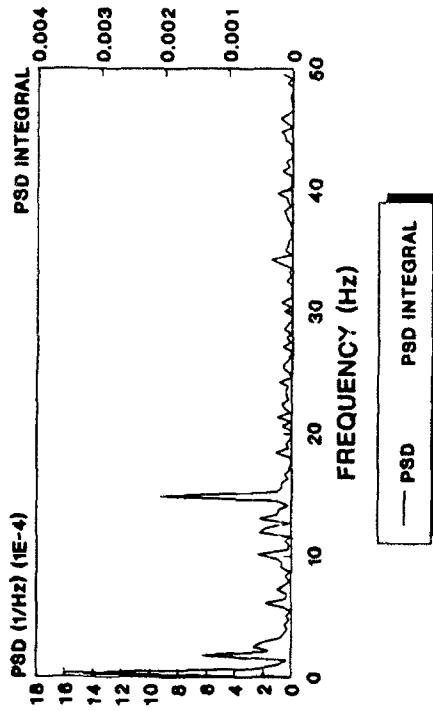
CUBE - HT 8.31 - THETA 46 - AZ 120

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



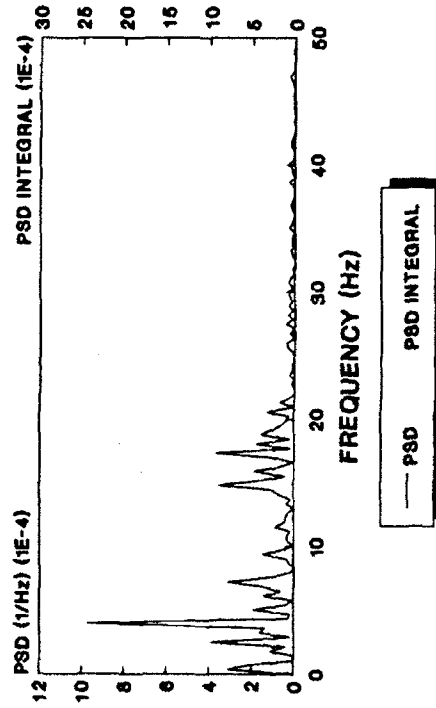
CUBE - HT 8.31 - THETA 46 - AZ 136

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



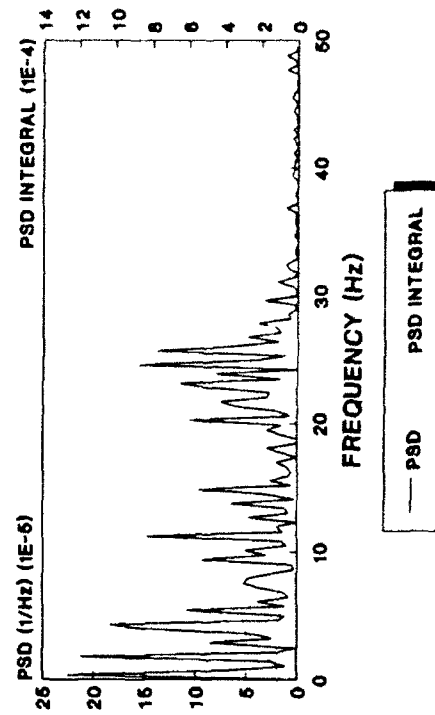
CUBE - HT 8.31 - THETA 46 - AZ 136

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



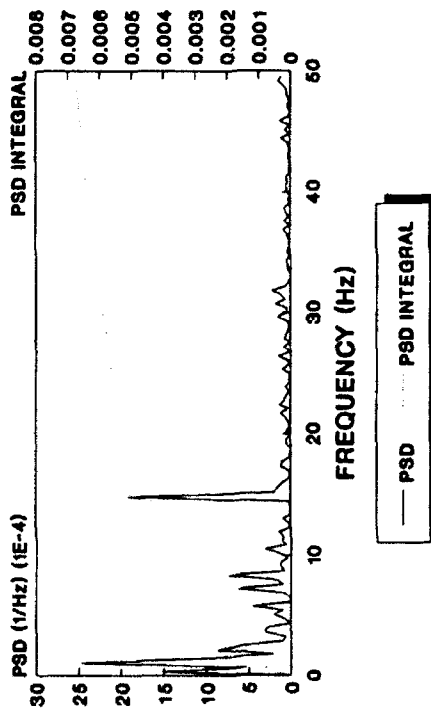
CUBE - HT 8.31 - THETA 46 - AZ 136

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



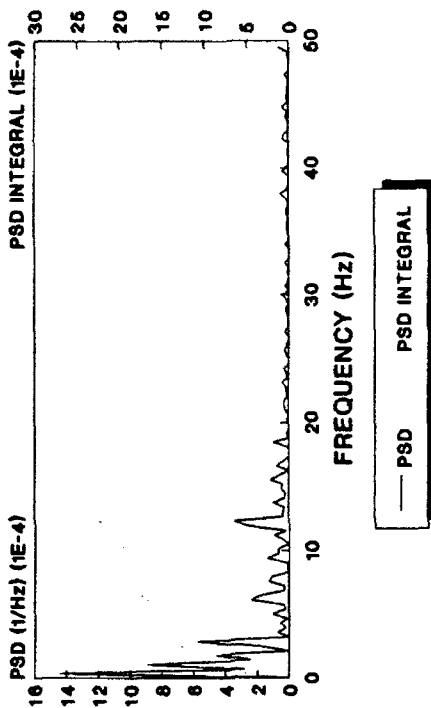
CUBE - HT 8.31 - THETA 46 - AZ 136

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



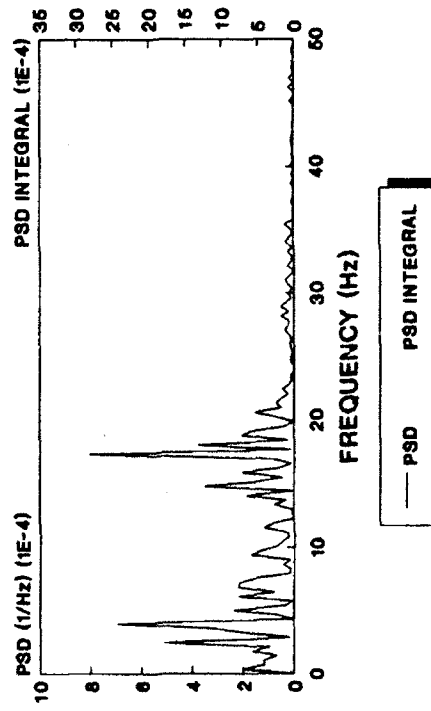
CUBE - HT 8.31 - THETA 48 - AZ 136

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



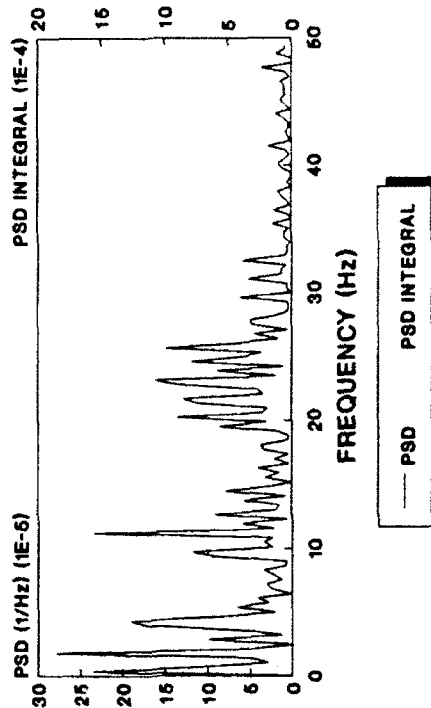
CUBE - HT 8.31 - THETA 46 - AZ 136

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



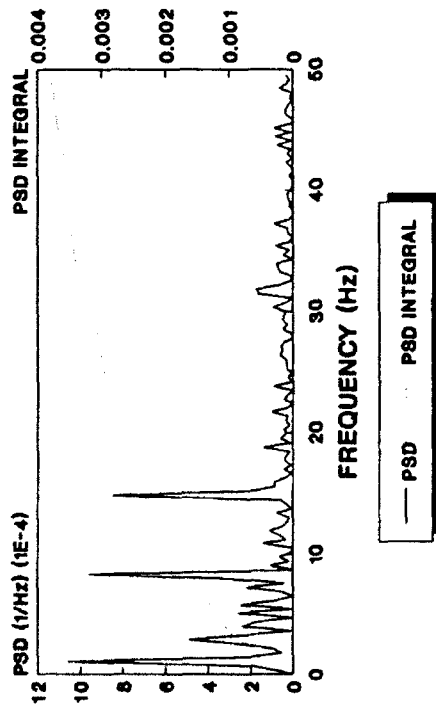
CUBE - HT 8.31 - THETA 48 - AZ 136

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



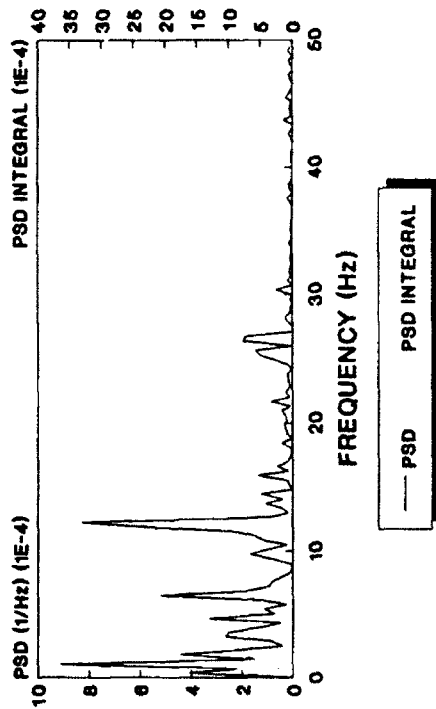
CUBE - HT 8.31 - THETA 46 - AZ 136

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



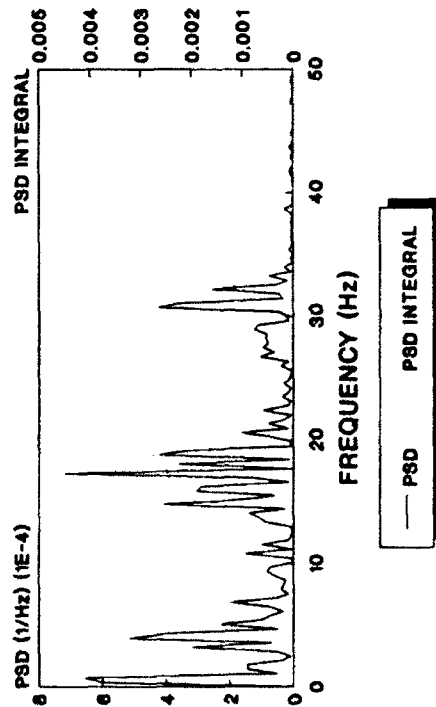
CUBE - HT 8.31 - THETA 46 - AZ 136

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



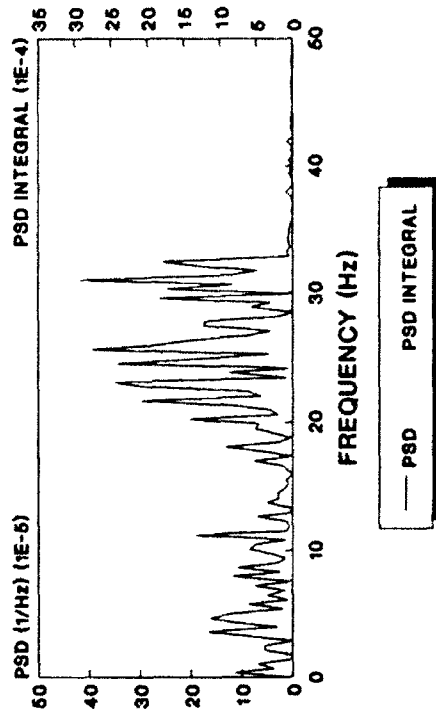
CUBE - HT 8.31 - THETA 46 - AZ 136

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



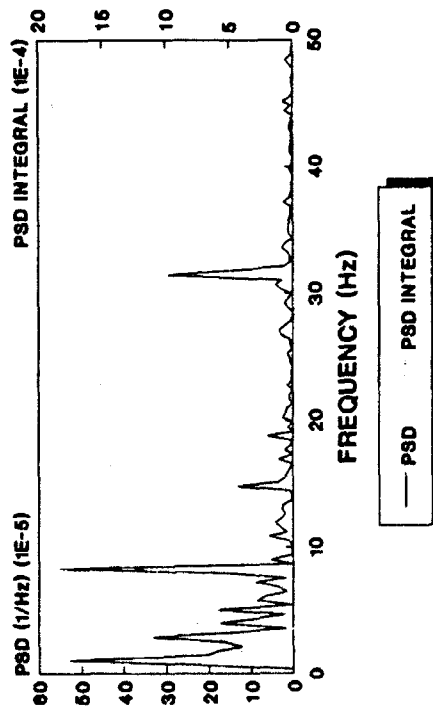
CUBE - HT 8.31 - THETA 46 - AZ 136

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



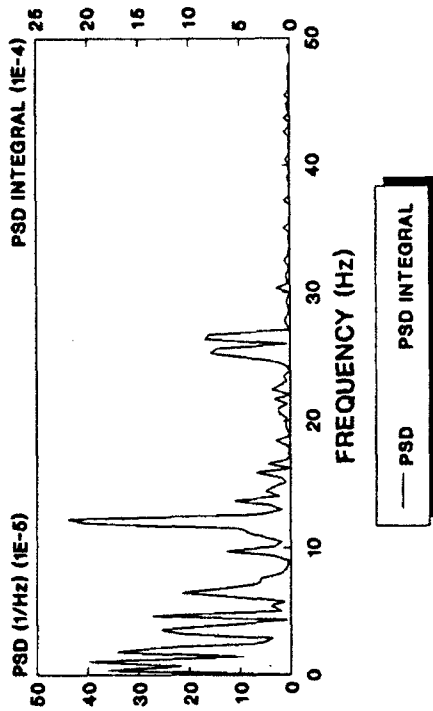
CUBE - HT 8.31 - THETA 46 - AZ 136

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



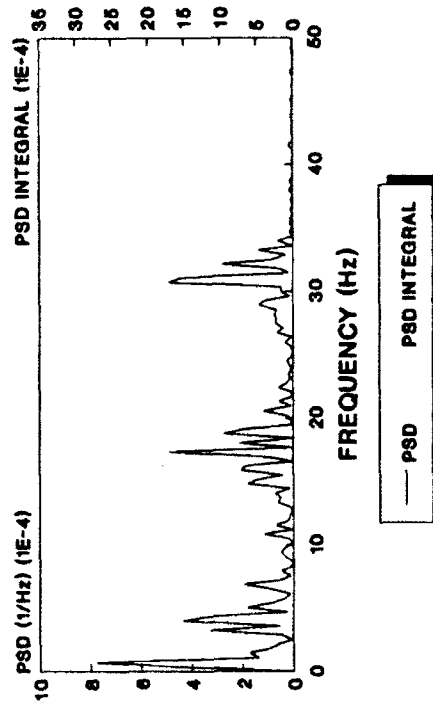
CUBE - HT 8.31 - THETA 45 - AZ 136

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



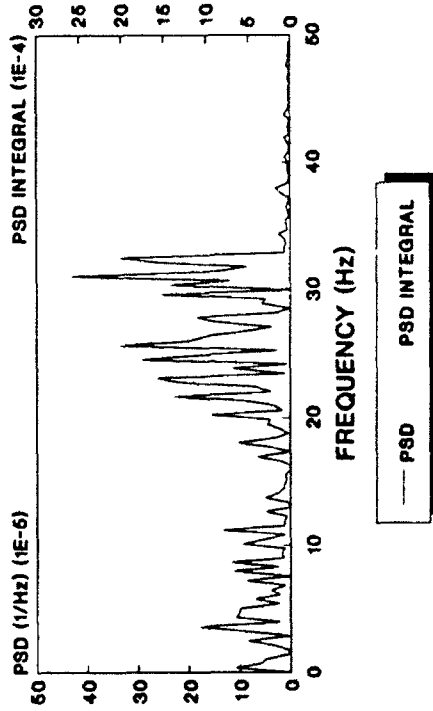
CUBE - HT 8.31 - THETA 45 - AZ 136

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



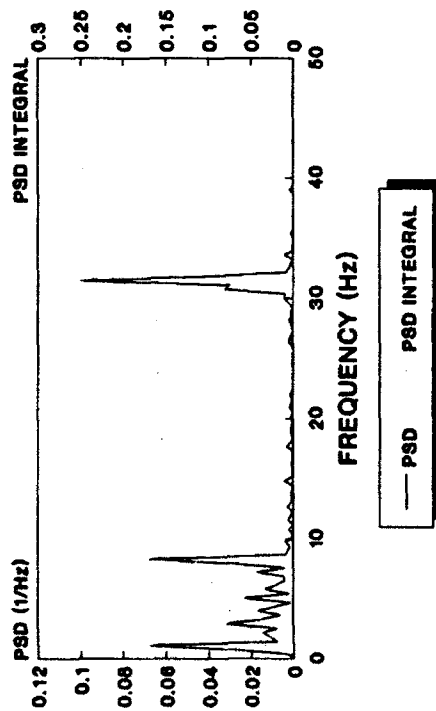
CUBE - HT 8.31 - THETA 45 - AZ 136

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



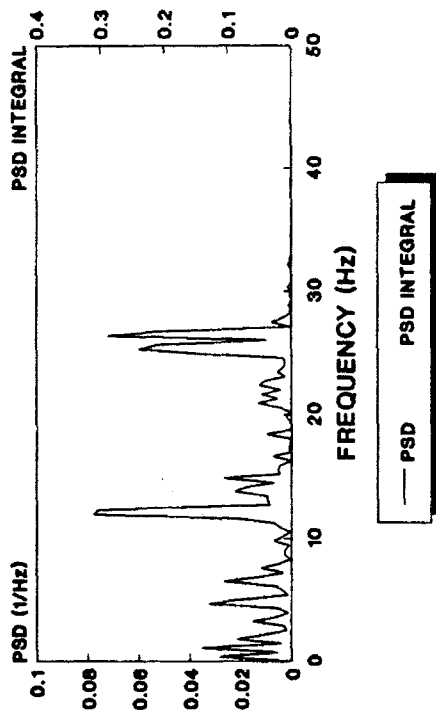
CUBE - HT 8.31 - THETA 45 - AZ 136

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



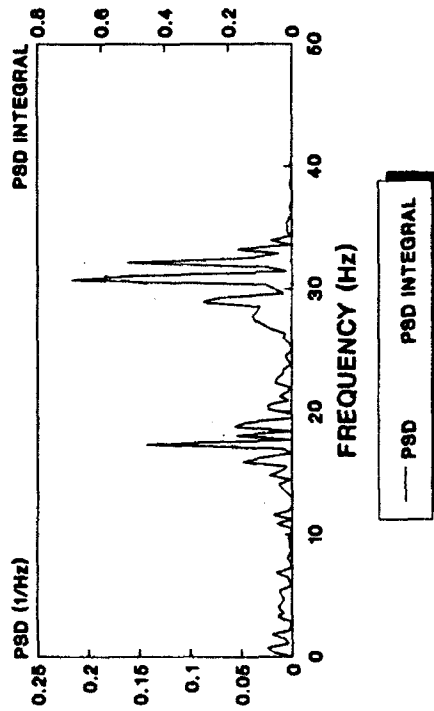
CUBE - HT 0.31 - THETA 45 - AZ 135

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



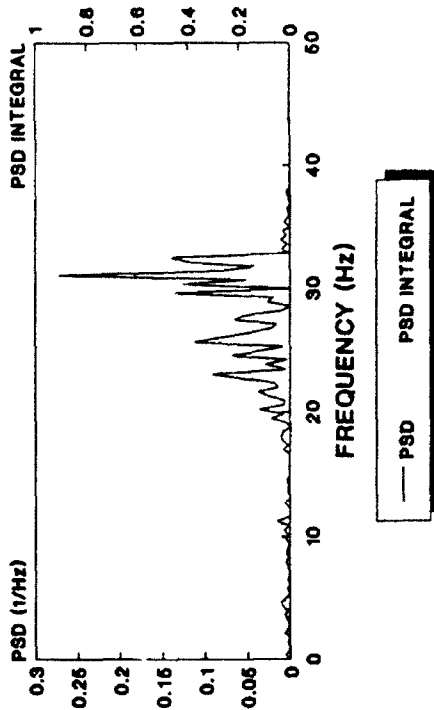
CUBE - HT 0.31 - THETA 45 - AZ 135

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



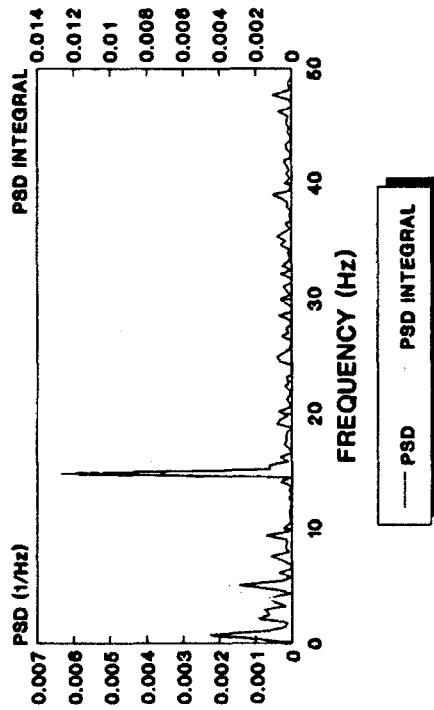
CUBE - HT 0.31 - THETA 45 - AZ 135

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



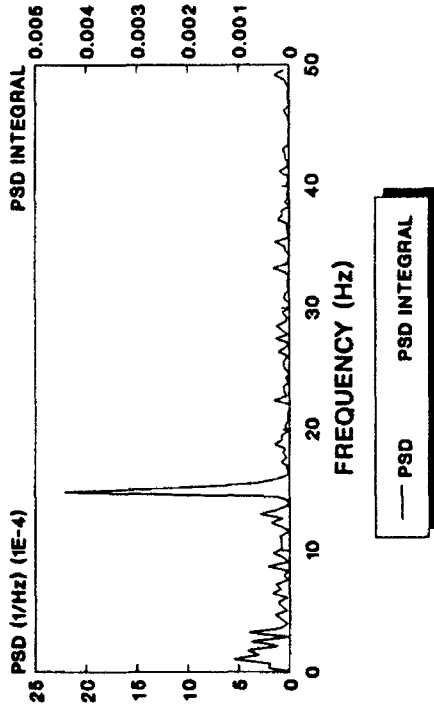
CUBE - HT 0.31 - THETA 45 - AZ 135

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



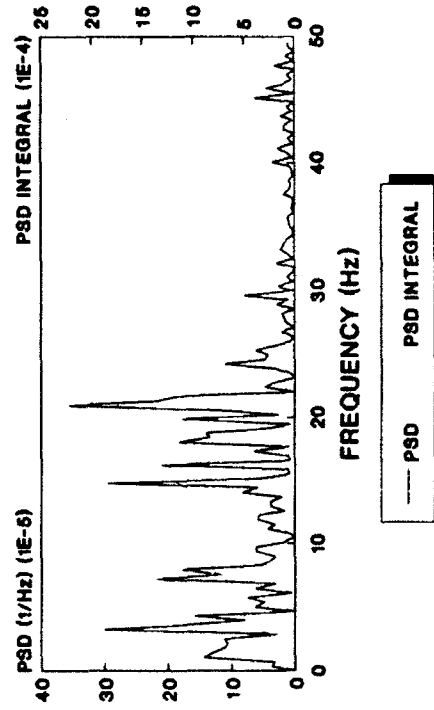
CUBE - HT 8.31 - THETA 45 - AZ 150

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



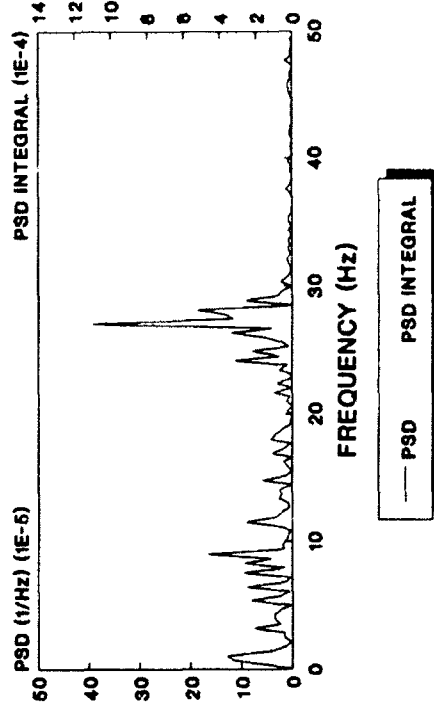
CUBE - HT 8.31 - THETA 45 - AZ 150

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



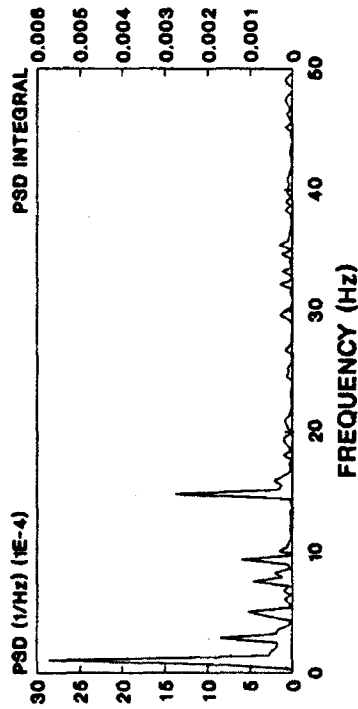
CUBE - HT 8.31 - THETA 45 - AZ 150

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



CUBE - HT 8.31 - THETA 45 - AZ 150

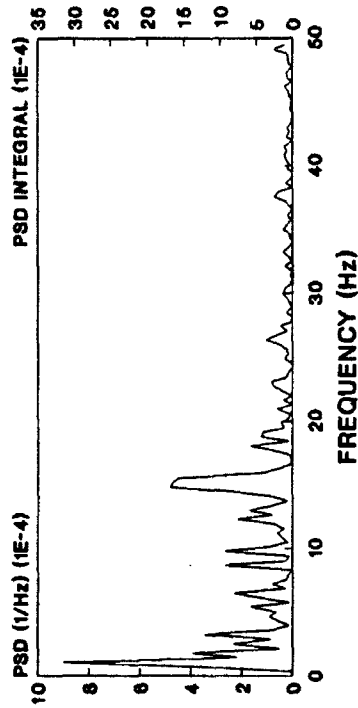
MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



— PSD
- - - PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 160

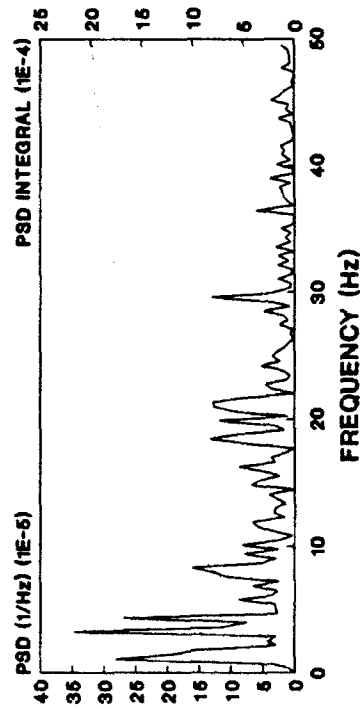
MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



— PSD
- - - PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 160

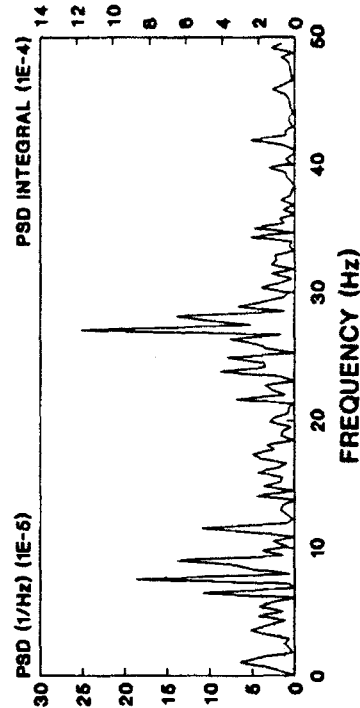
MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



— PSD
- - - PSD INTEGRAL

CUBE - HT 8.31 - THETA 45 - AZ 160

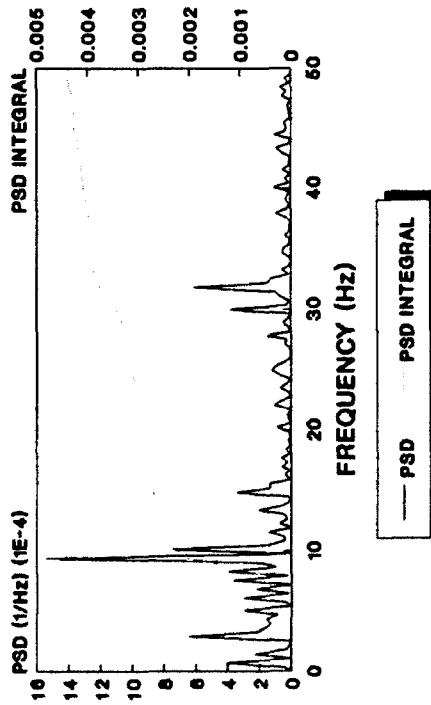
MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



— PSD
- - - PSD INTEGRAL

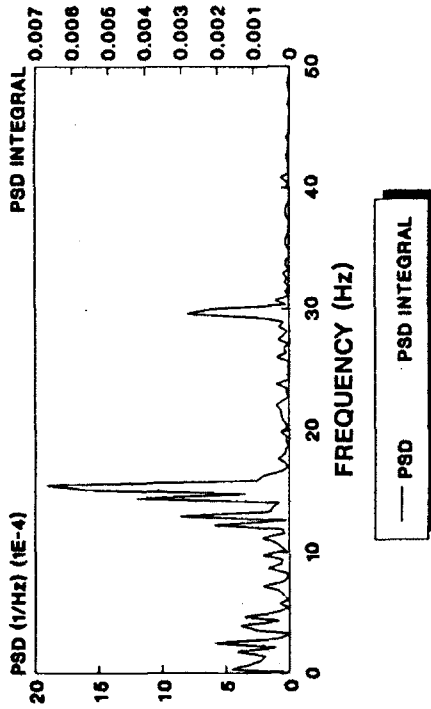
CUBE - HT 8.31 - THETA 45 - AZ 160

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



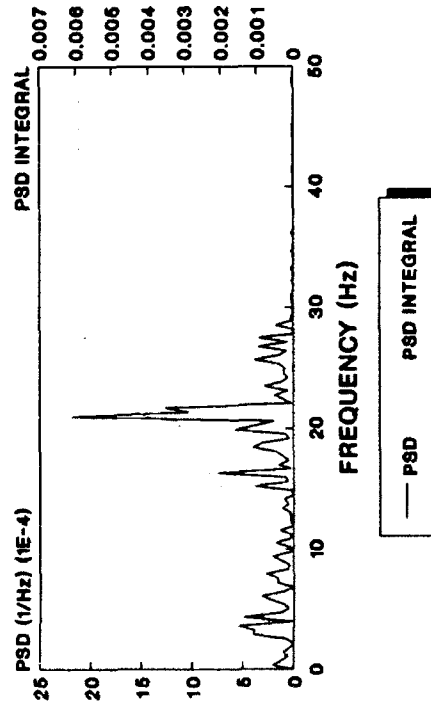
CUBE - HT 8.31 - THETA 46 - AZ 160

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



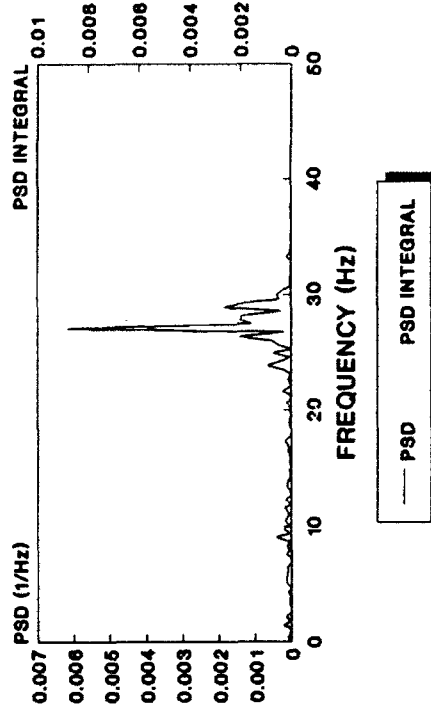
CUBE - HT 8.31 - THETA 46 - AZ 160

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



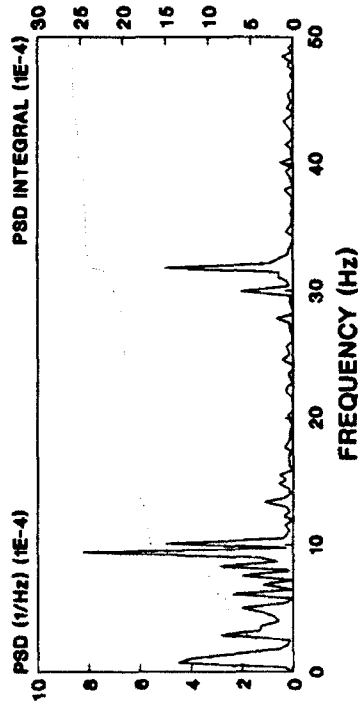
CUBE - HT 8.31 - THETA 46 - AZ 160

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



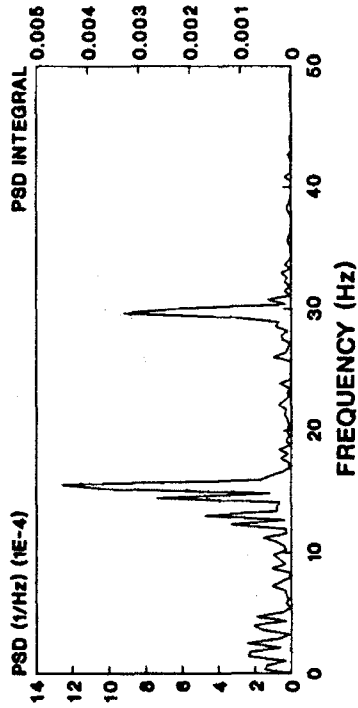
CUBE - HT 8.31 - THETA 46 - AZ 160

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



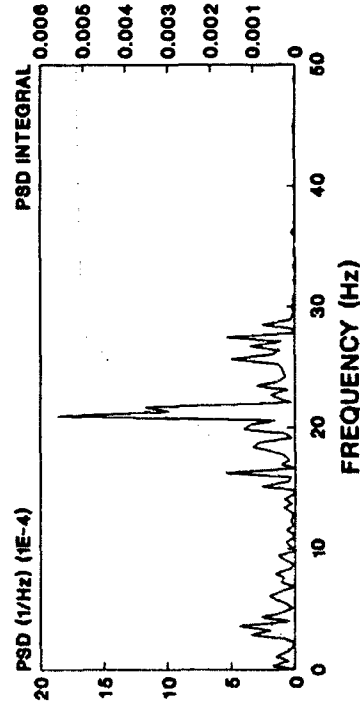
CUBE - HT 8.31 - THETA 45 - AZ 160

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



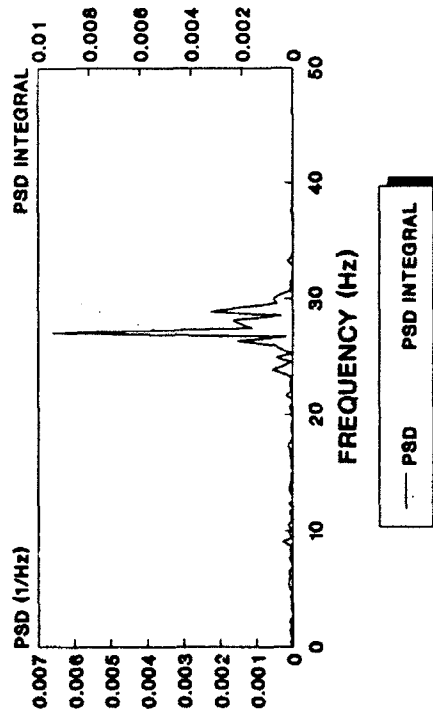
CUBE - HT 8.31 - THETA 45 - AZ 160

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



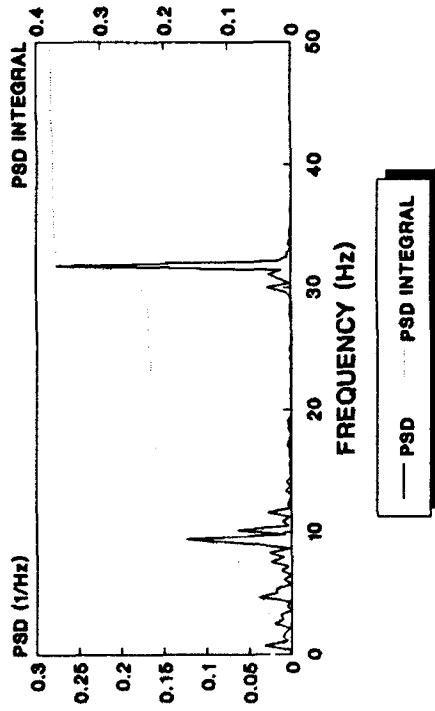
CUBE - HT 8.31 - THETA 45 - AZ 160

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



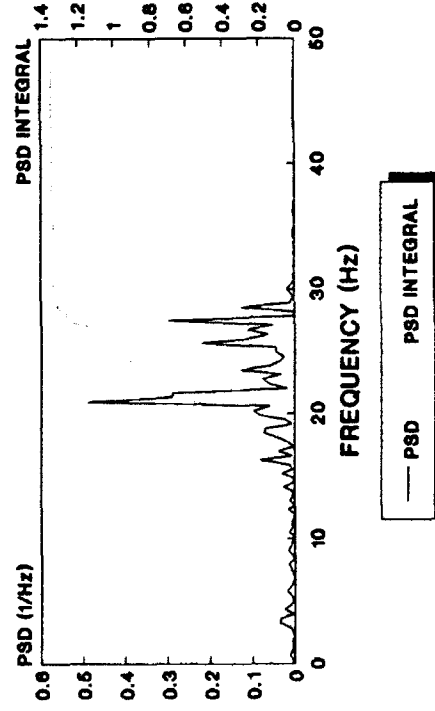
CUBE - HT 8.31 - THETA 45 - AZ 160

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



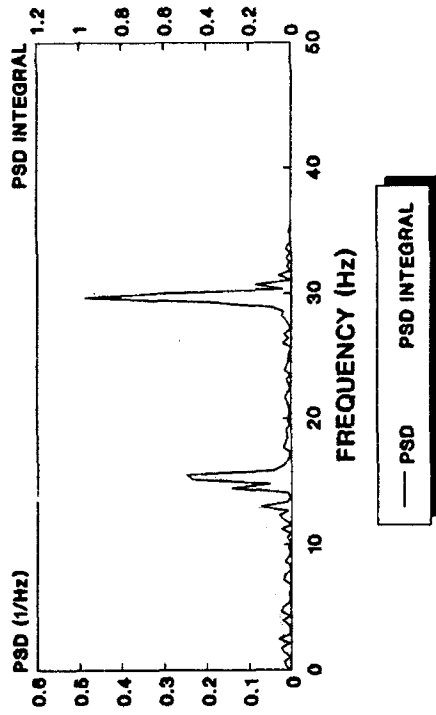
CUBE - HT 8.31 - THETA 45 - AZ 160

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



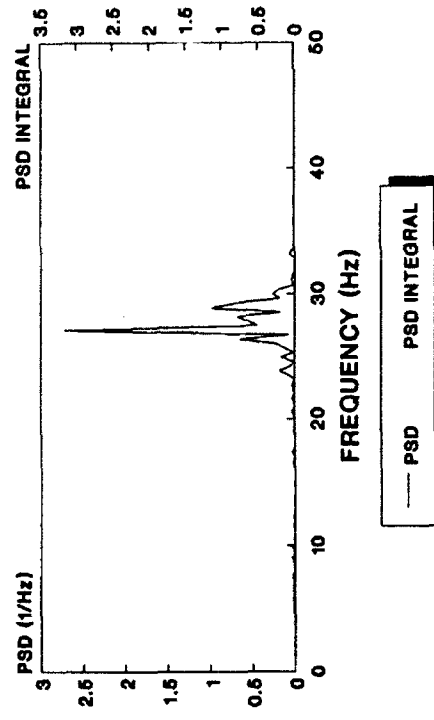
CUBE - HT 8.31 - THETA 45 - AZ 160

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



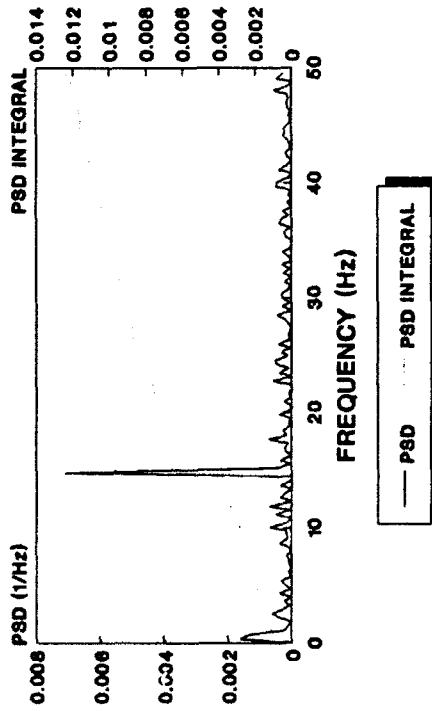
CUBE - HT 8.31 - THETA 45 - AZ 160

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



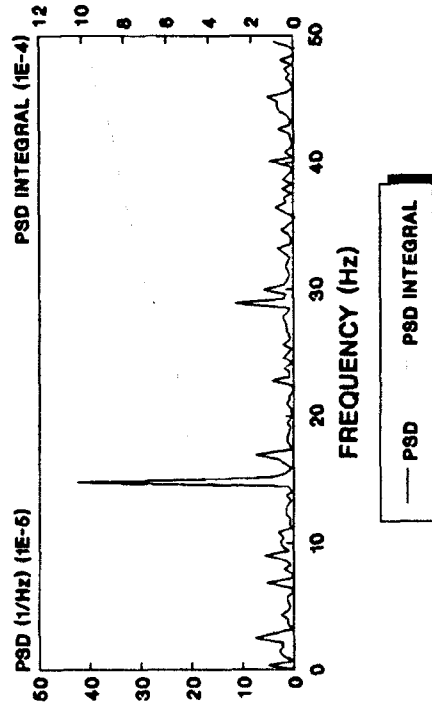
CUBE - HT 8.31 - THETA 45 - AZ 160

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



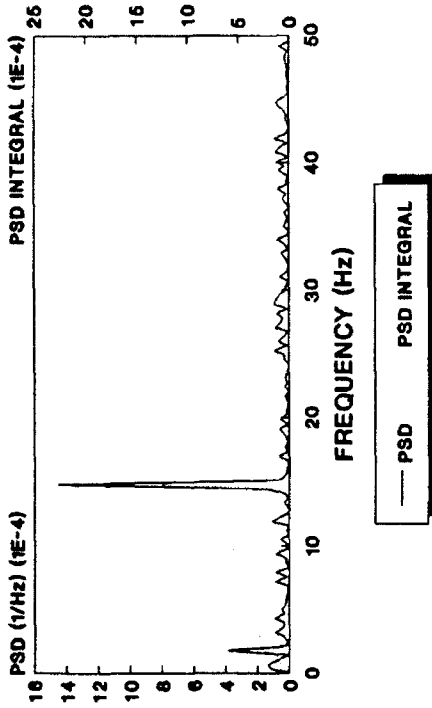
CUBE - HT 8.31 - THETA 45 - AZ 180

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



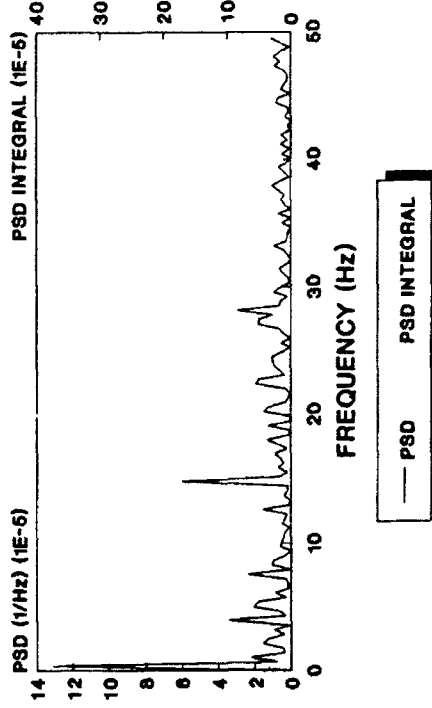
CUBE - HT 8.31 - THETA 45 - AZ 180

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



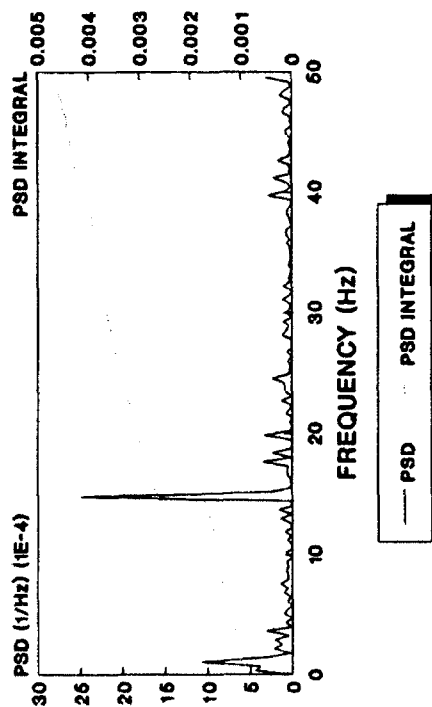
CUBE - HT 8.31 - THETA 45 - AZ 180

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



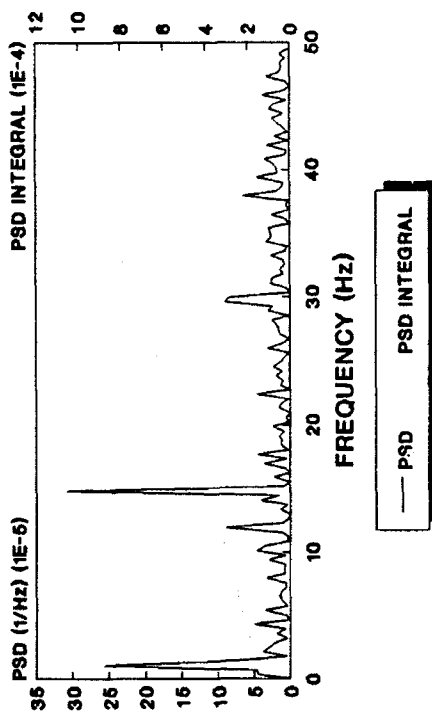
CUBE - HT 8.31 - THETA 45 - AZ 180

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



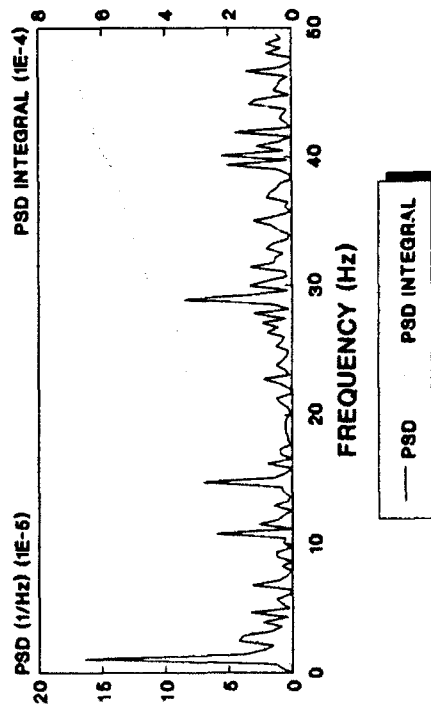
CUBE - HT 8.31 - THETA 45 - AZ 180

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



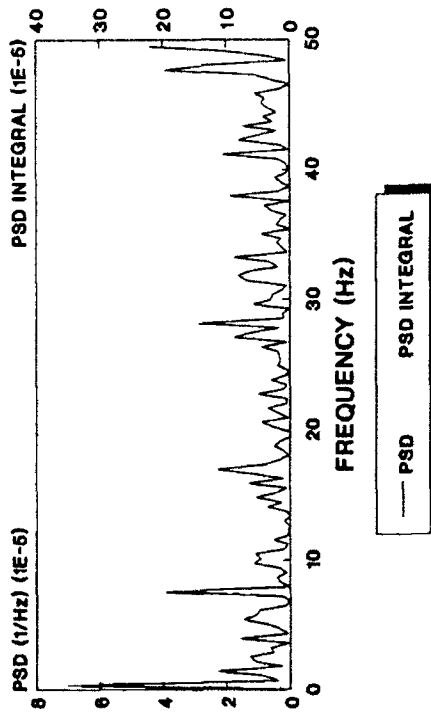
CUBE - HT 8.31 - THETA 45 - AZ 180

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



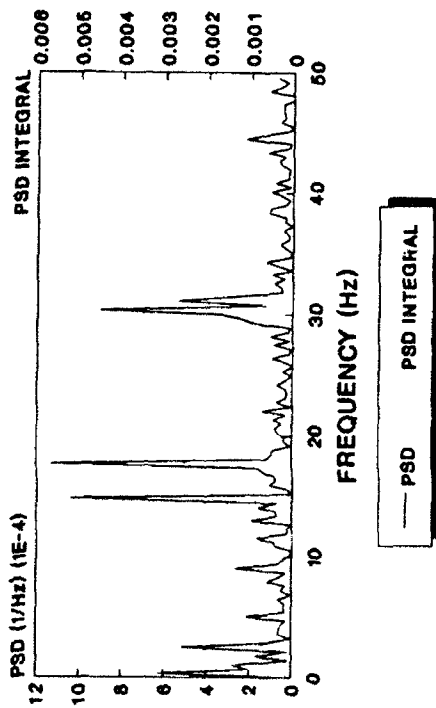
CUBE - HT 8.31 - THETA 45 - AZ 180

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



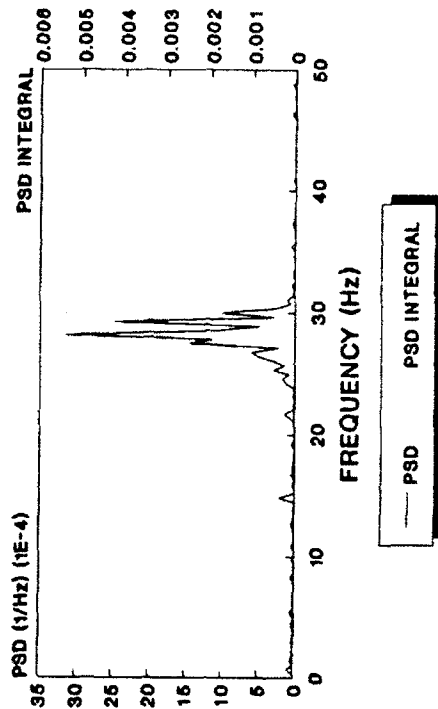
CUBE - HT 8.31 - THETA 45 - AZ 180

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



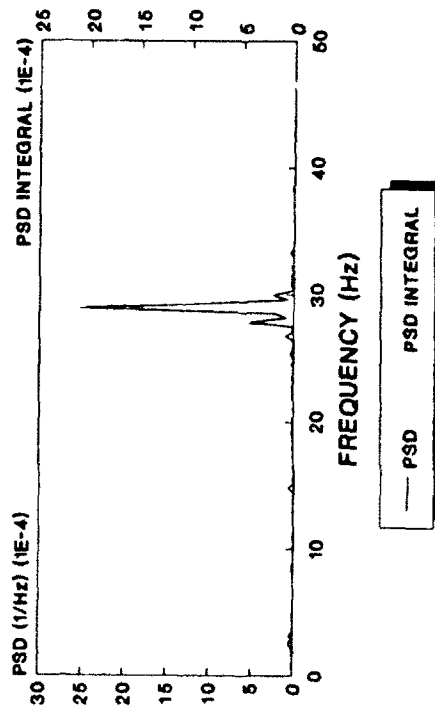
CUBE - HT 8.31 - THETA 45 - AZ 180

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



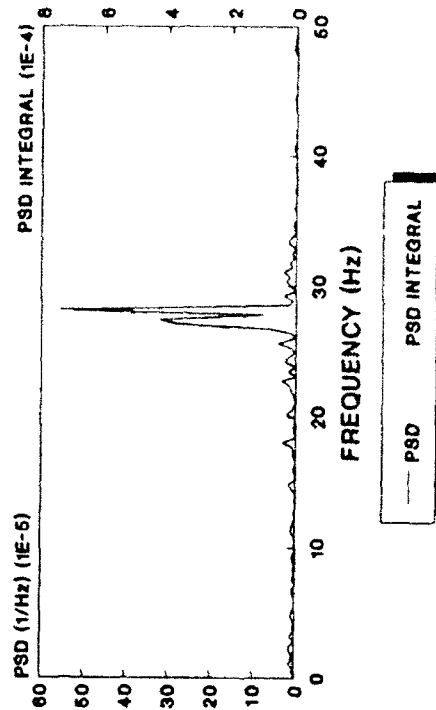
CUBE - HT 8.31 - THETA 45 - AZ 180

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



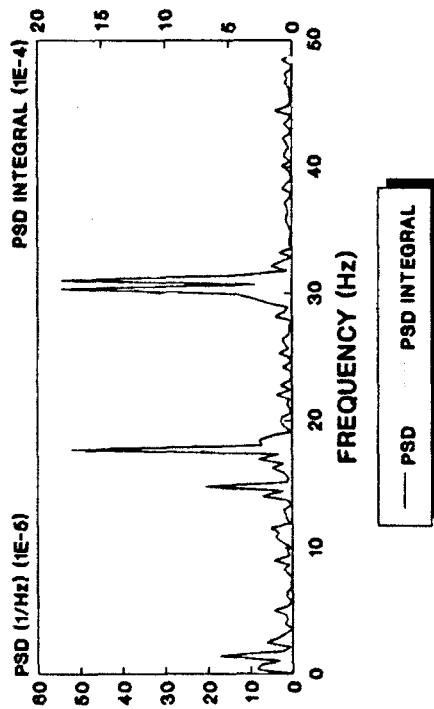
CUBE - HT 8.31 - THETA 45 - AZ 180

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



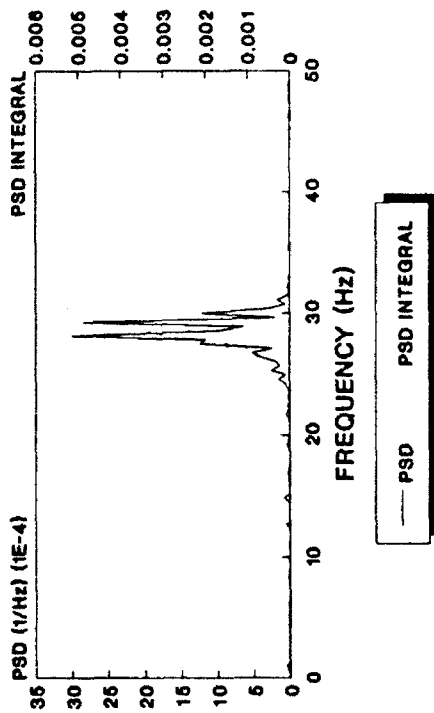
CUBE - HT 8.31 - THETA 45 - AZ 180

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



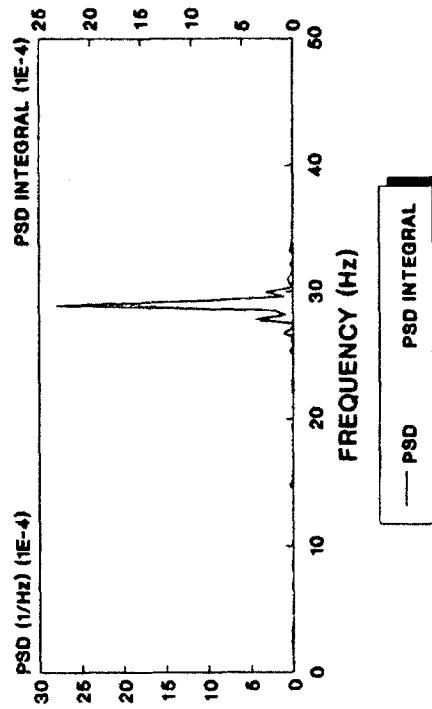
CUBE - HT 8.31 - THETA 45 - AZ 180

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



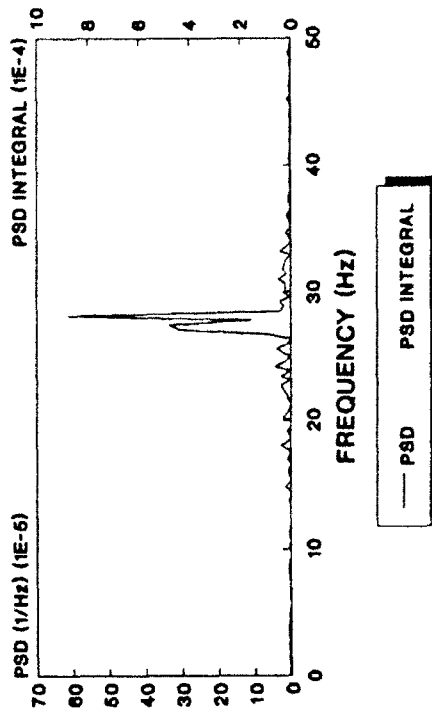
CUBE - HT 8.31 - THETA 45 - AZ 180

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



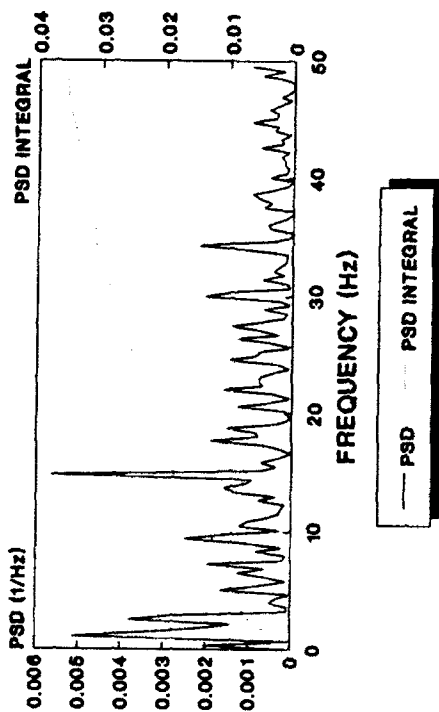
CUBE - HT 8.31 - THETA 45 - AZ 180

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



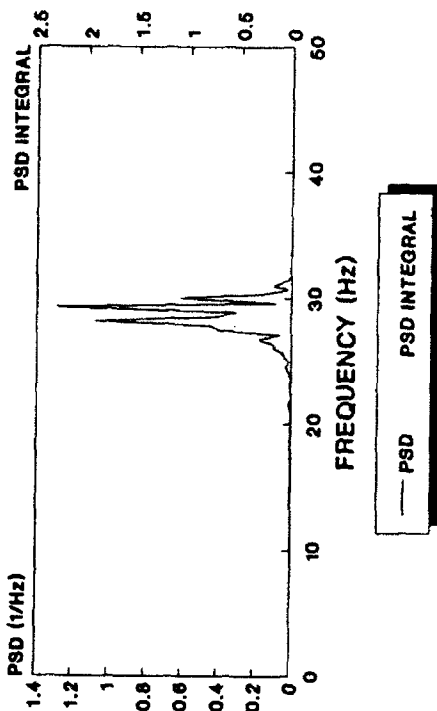
CUBE - HT 8.31 - THETA 45 - AZ 180

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



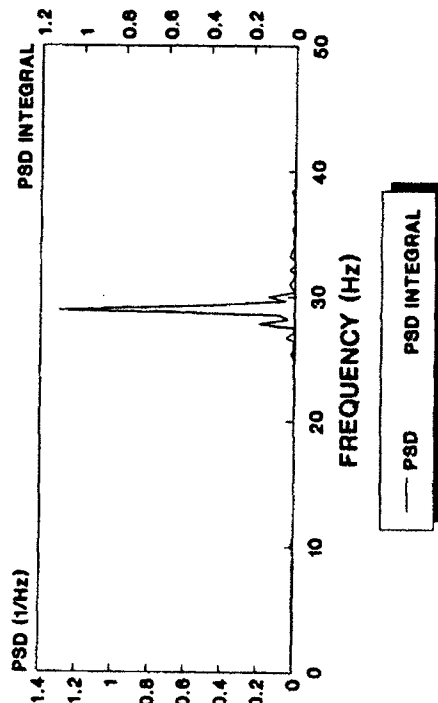
CUBE - HT 8.31 - THETA 46 - AZ 180

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



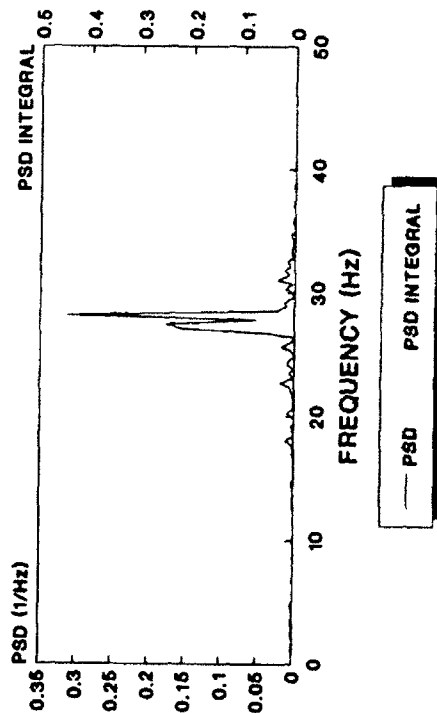
CUBE - HT 8.31 - THETA 46 - AZ 180

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



CUBE - HT 8.31 - THETA 46 - AZ 180

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



CUBE - HT 8.31 - THETA 46 - AZ 180

DATA REPORT

SHAPE:	CUBE (ROUNDED)
DECLINATION [THETA (degrees)]:	0
DIMENSIONS [LxWxH (in)]:	8.0 x 8.0 x 10.0
WEIGHT (gm):	1700.0
TORSION FREQUENCY (Hz):	34
LATERAL (SIDE BEND) FREQUENCY (Hz):	46
NORMAL (AFT BEND) FREQUENCY (Hz):	46
AZIMUTHS (degrees):	0, 30, 45, 60, 90

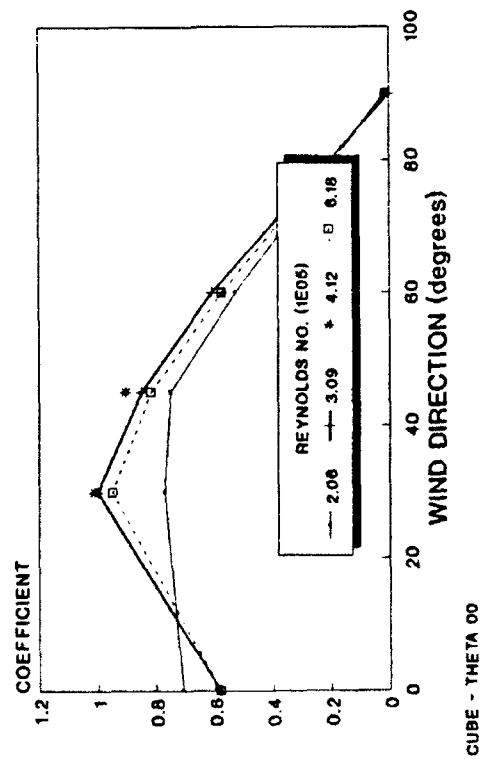
GRAPH CORRECTIONS:

- The mean value of the **ROLL** moment coefficients should be divided by 12.
- The PSD and PSD Integral values of the **ROLL** moment coefficients should be divided by 144.

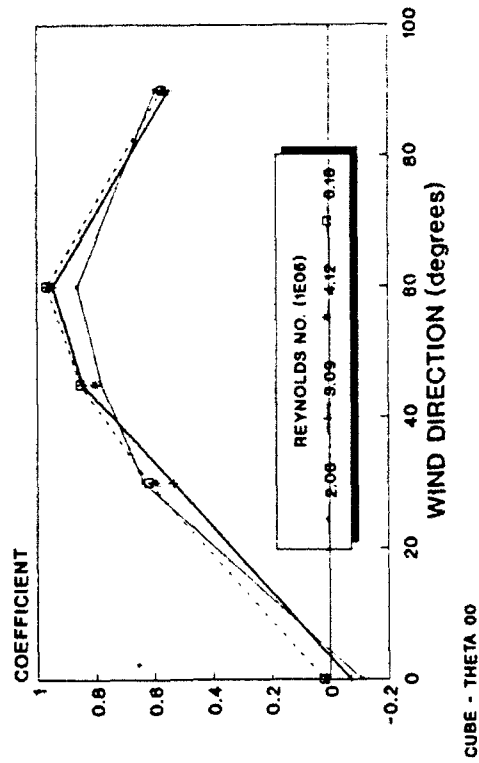
OBSERVATIONS:

- Shedding not observed.
- 15.176 Hz spike seen in data.

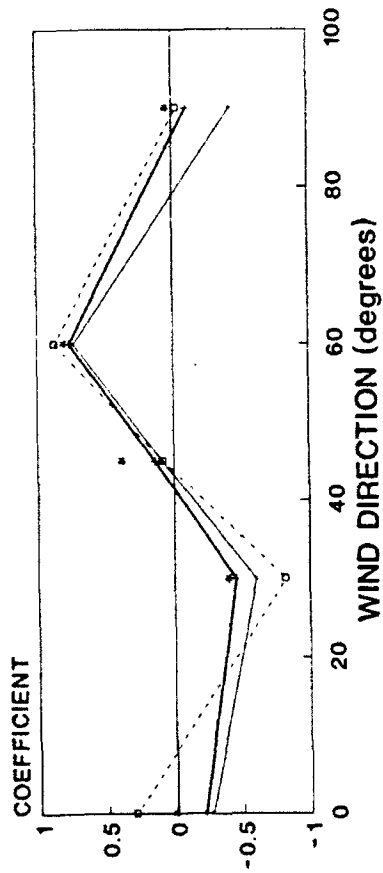
MEAN FORCE COEFFICIENT NORMAL DIRECTION



MEAN FORCE COEFFICIENT LATERAL DIRECTION

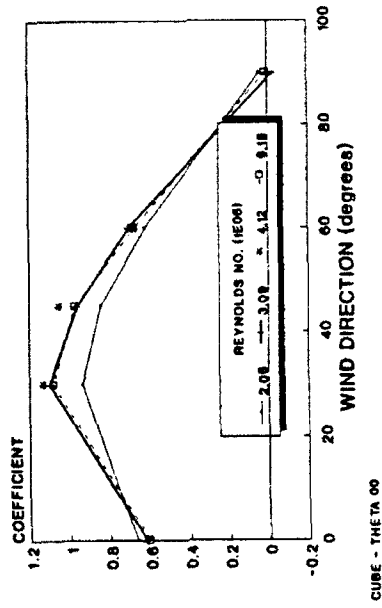


MEAN MOMENT COEFFICIENT ROLL DIRECTION



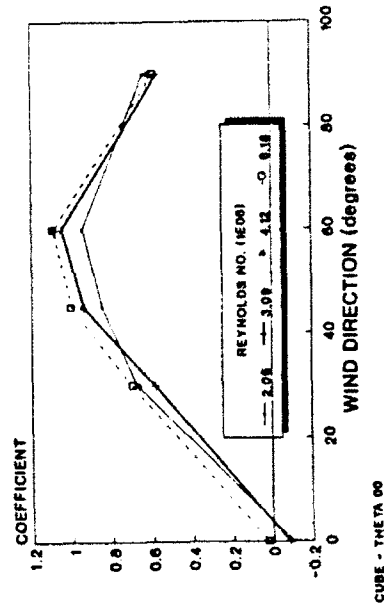
CUBE - THETA 00

MEAN MOMENT COEFFICIENT NORMAL DIRECTION



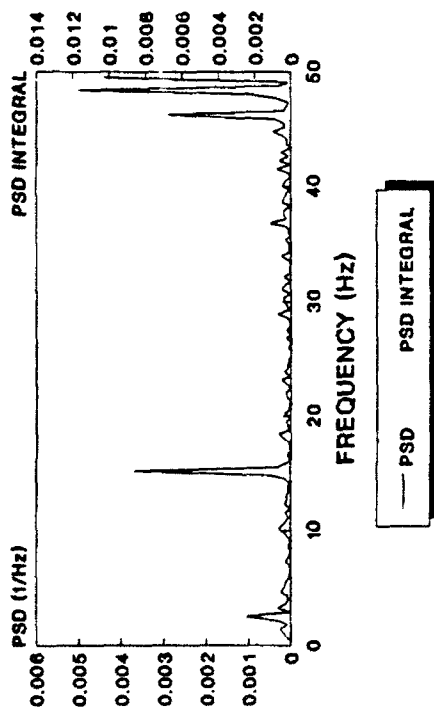
CUBE - THETA 00

MEAN MOMENT COEFFICIENT LATERAL DIRECTION



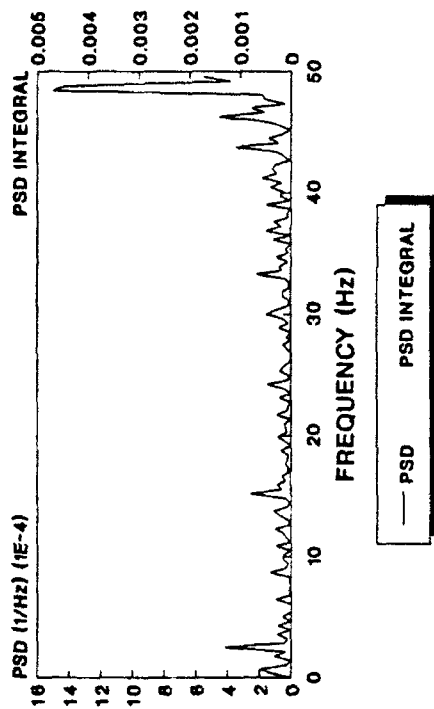
CUBE - THETA 00

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



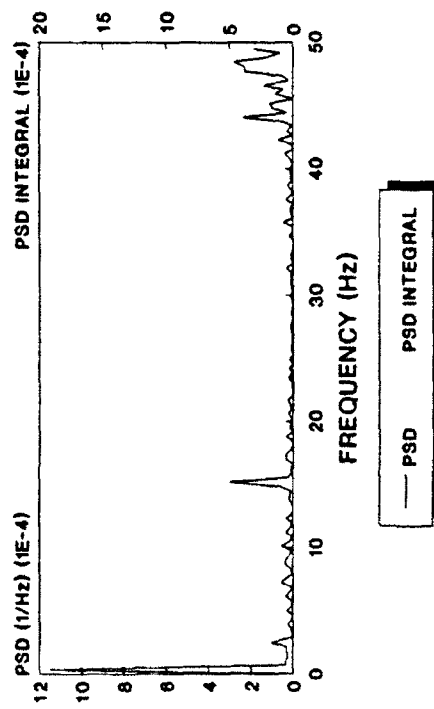
CUBE2 - THETA 00 - AZIMUTH - 000

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



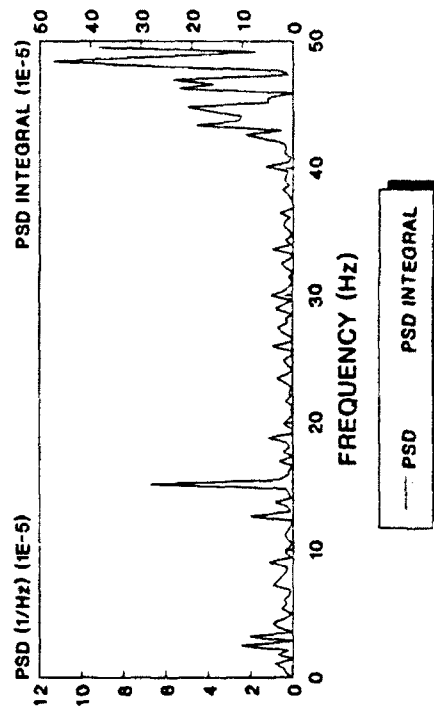
CUBE2 - THETA 00 - AZIMUTH - 000

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



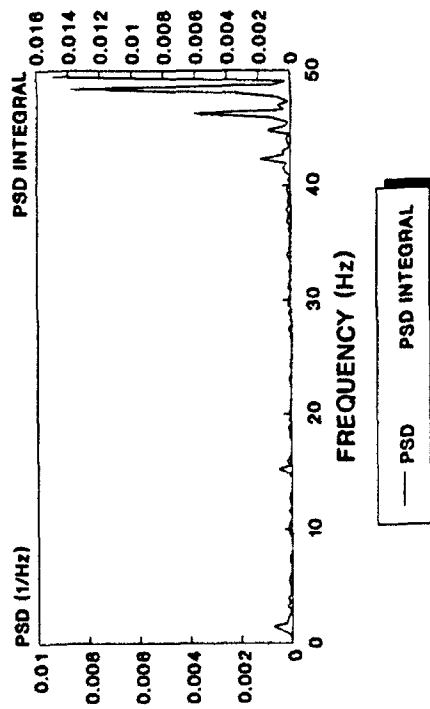
CUBE2 - THETA 00 - AZIMUTH - 000

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



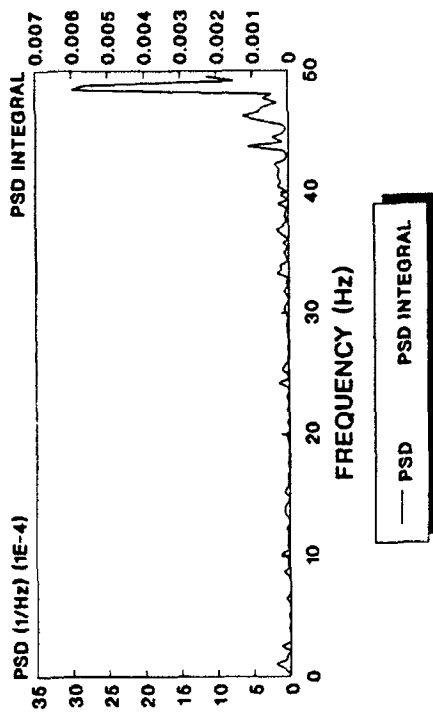
CUBE2 - THETA 00 - AZIMUTH - 000

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



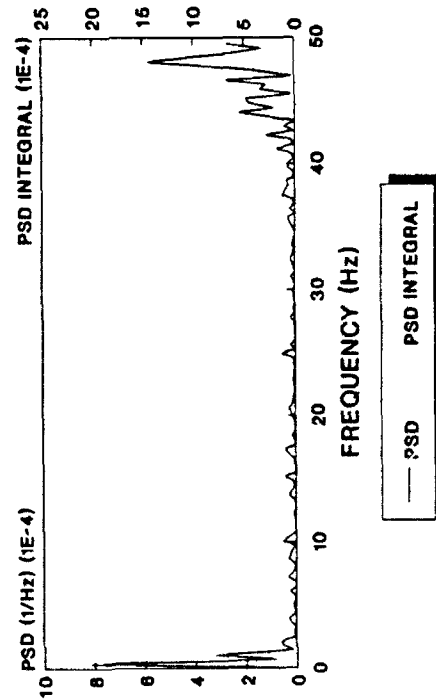
CUBE - THETA 00 - AZIMUTH - 000

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



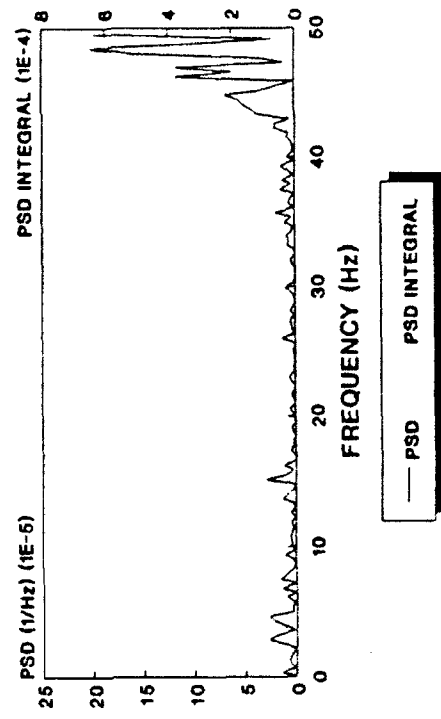
CUBE - THETA 00 - AZIMUTH - 000

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



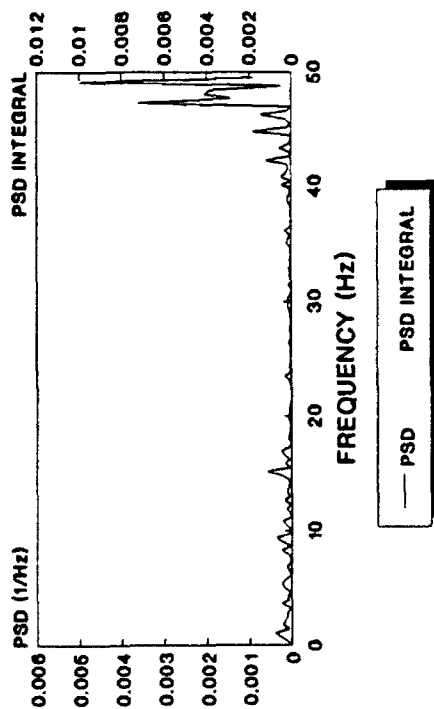
CUBE - THETA 00 - AZIMUTH - 000

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



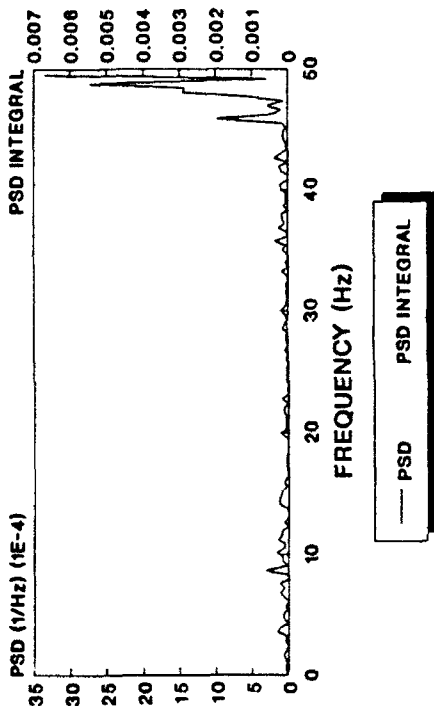
CUBE - THETA 00 - AZIMUTH - 000

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



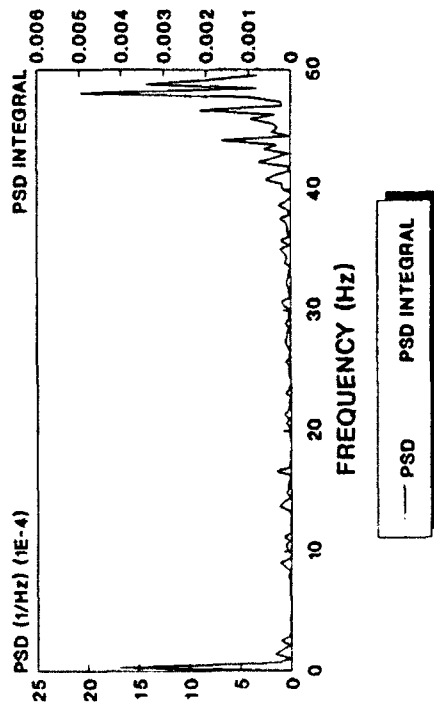
CUBE - THETA 00 - AZIMUTH - 000

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



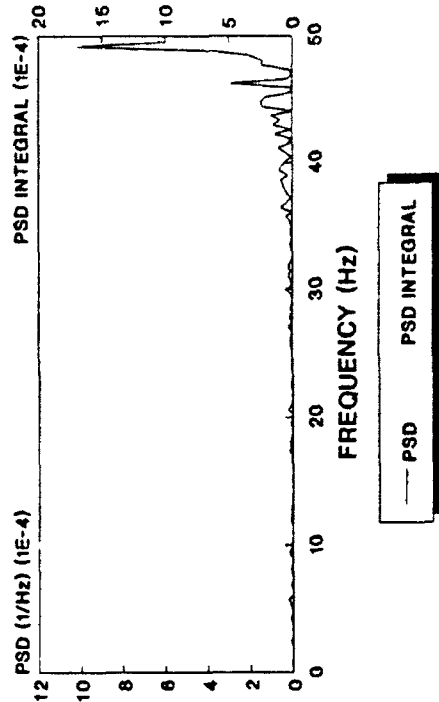
CUBE - THETA 00 - AZIMUTH - 000

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



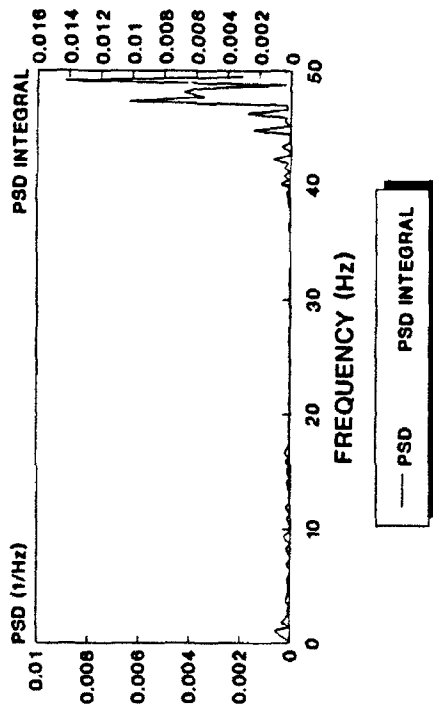
CUBE - THETA 00 - AZIMUTH - 000

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



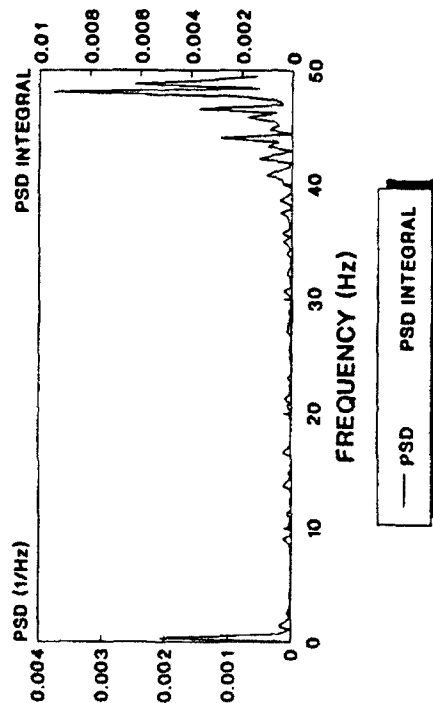
CUBE2 - THETA 00 - AZIMUTH - 000

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



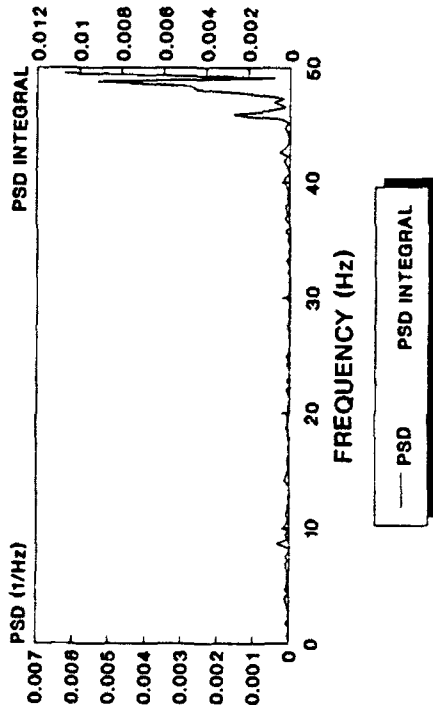
CUBE2 - THETA 00 - AZIMUTH - 000

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



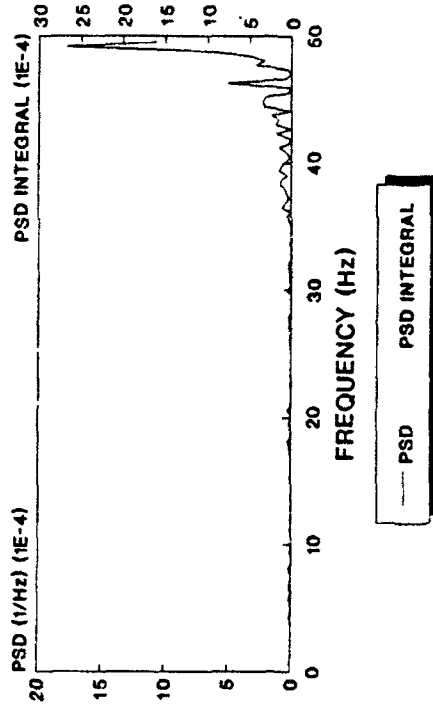
CUBE2 - THETA 00 - AZIMUTH - 000

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



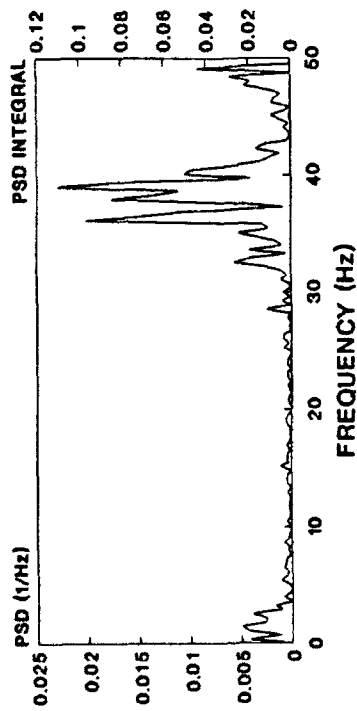
CUBE2 - THETA 00 - AZIMUTH - 000

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



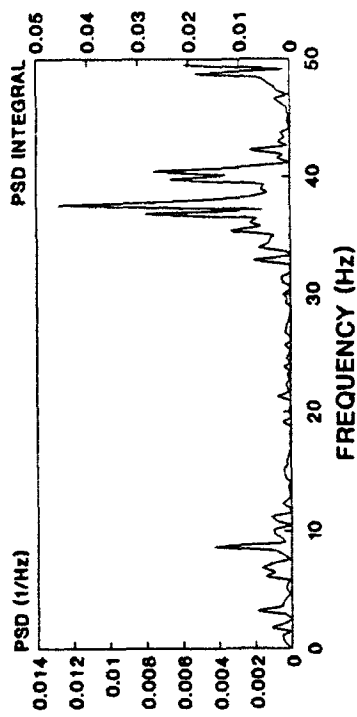
CUBE2 - THETA 00 - AZIMUTH - 000

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



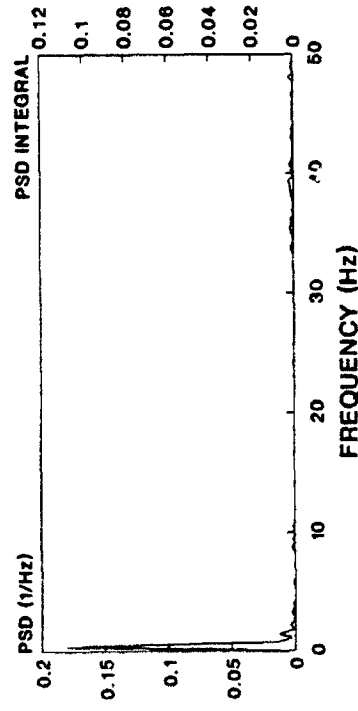
CUBE2 - THETA 00 - AZIMUTH - 000

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



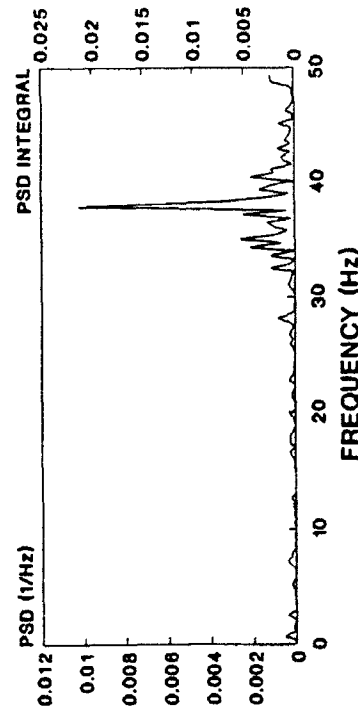
CUBE2 - THETA 00 - AZIMUTH - 000

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



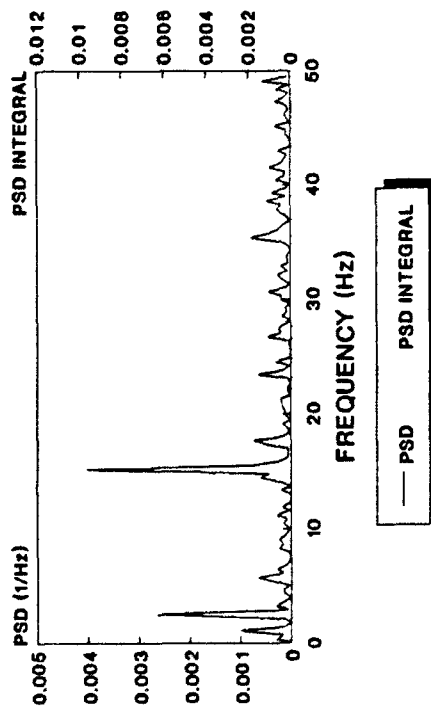
CUBE2 - THETA 00 - AZIMUTH - 000

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



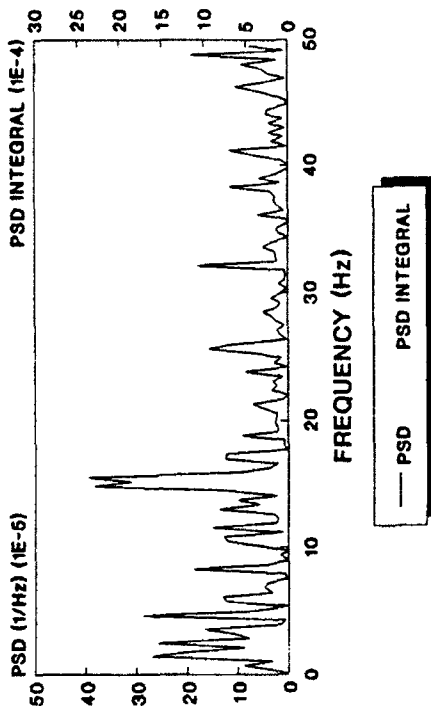
CUBE2 - THETA 00 - AZIMUTH - 000

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



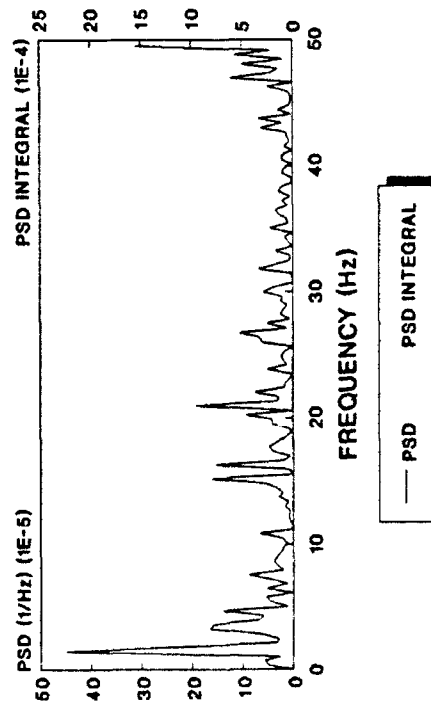
CUBE2 - THETA 00 - AZIMUTH - 030

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



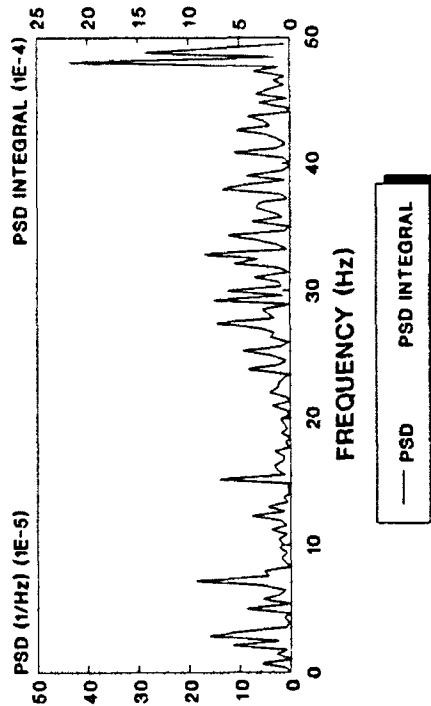
CUBE2 - THETA 00 - AZIMUTH - 030

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



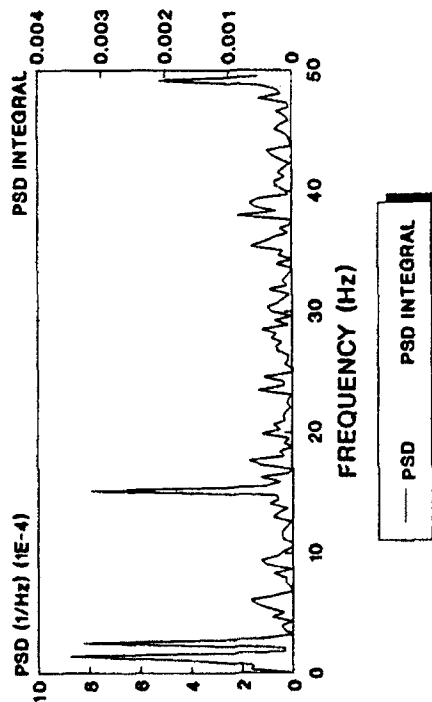
CUBE2 - THETA 00 - AZIMUTH - 030

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



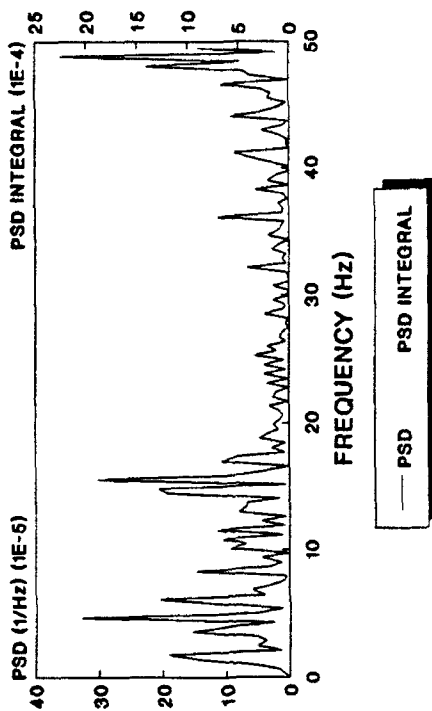
CUBE2 - THETA 00 - AZIMUTH - 030

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



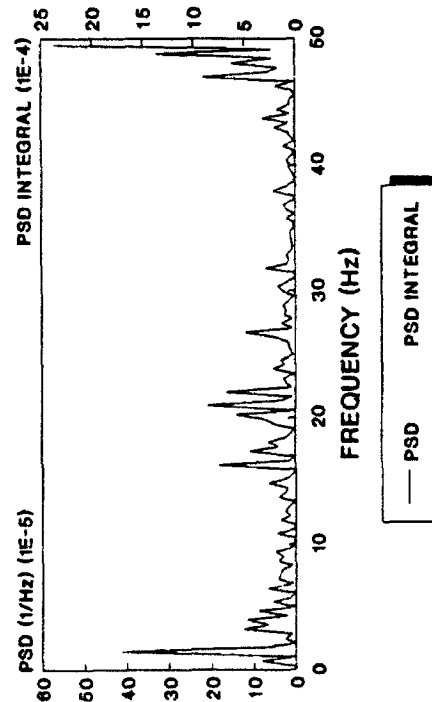
CUBE2 - THETA 00 - AZIMUTH - 030

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



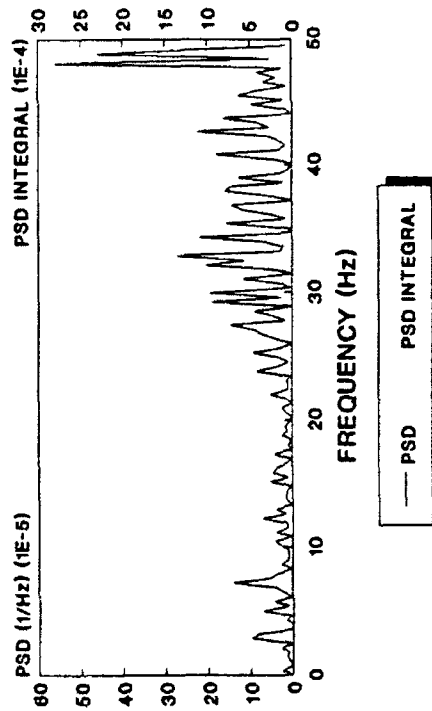
CUBE2 - THETA 00 - AZIMUTH - 030

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



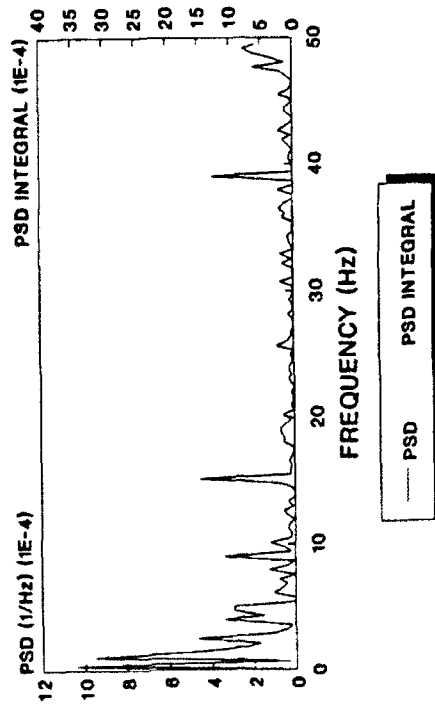
CUBE2 - THETA 00 - AZIMUTH - 030

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



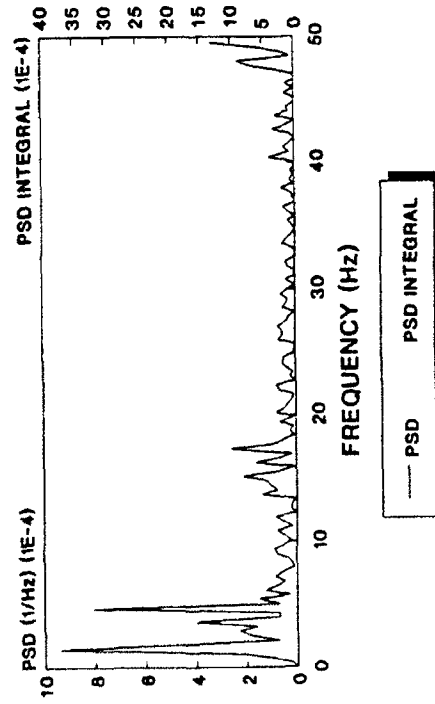
CUBE2 - THETA 00 - AZIMUTH - 030

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



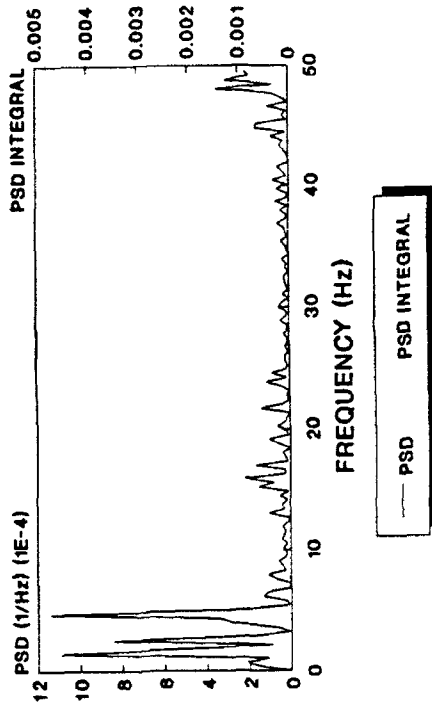
CUBE2 - THETA 00 - AZIMUTH - 030

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



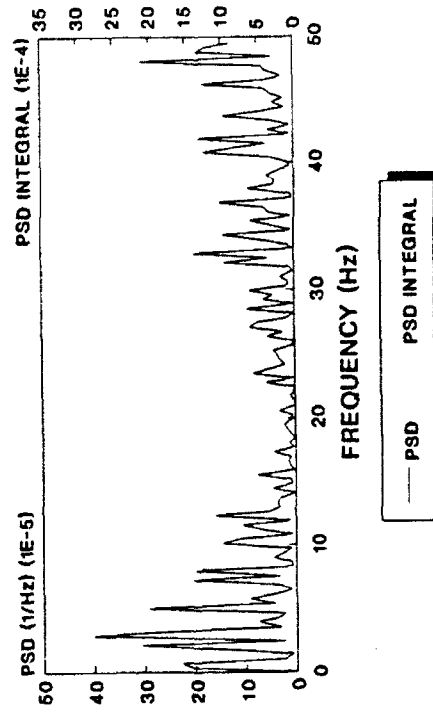
CUBE2 - THETA 00 - AZIMUTH - 030

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



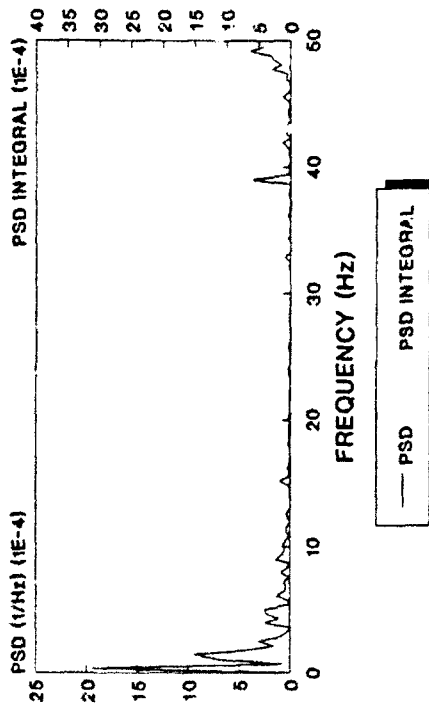
CUBE2 - THETA 00 - AZIMUTH - 030

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



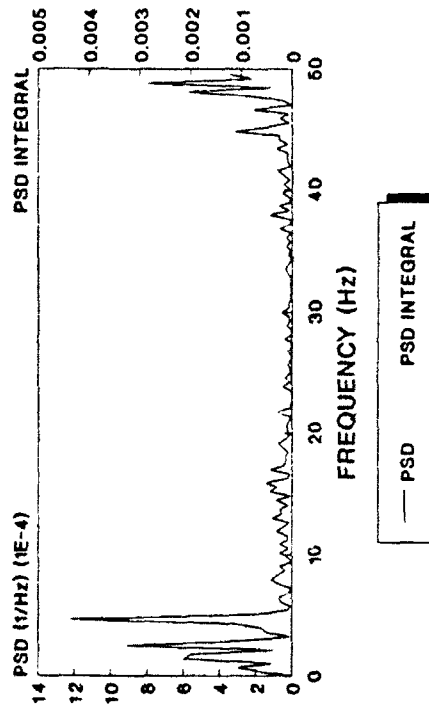
CUBE2 - THETA 00 - AZIMUTH - 030

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



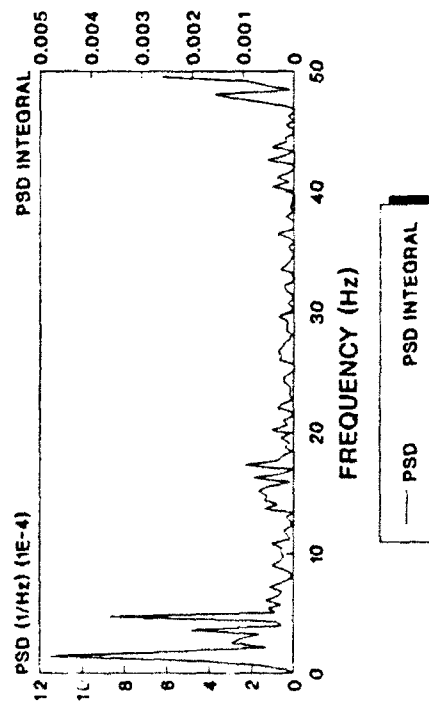
CUBE2 - THETA 00 - AZIMUTH - 030

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



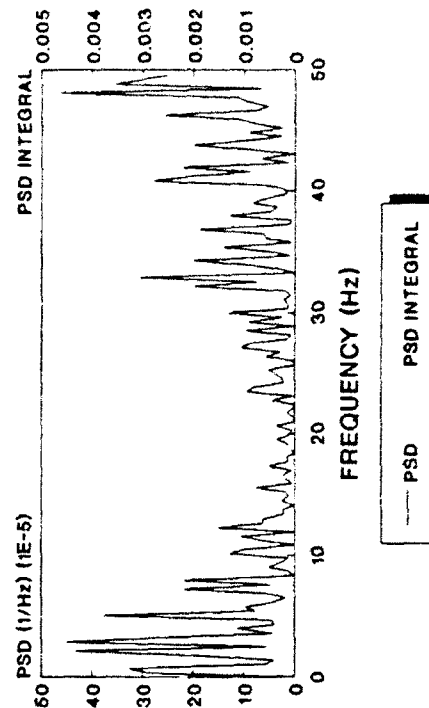
CUBE2 - THETA 00 - AZIMUTH - 030

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



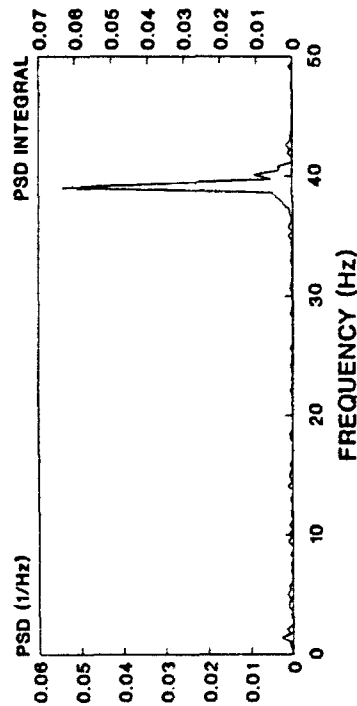
CUBE2 - THETA 00 - AZIMUTH - 030

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



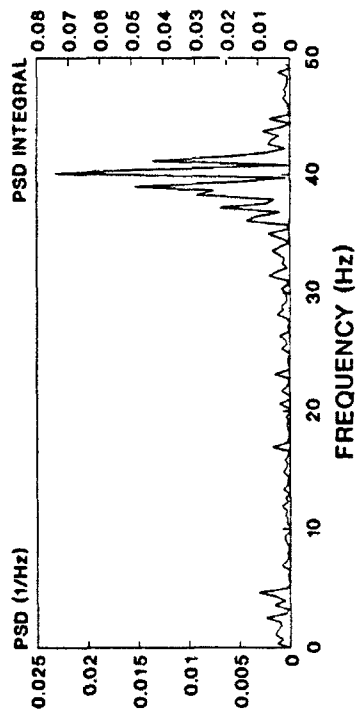
CUBE2 - THETA 00 - AZIMUTH - 030

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



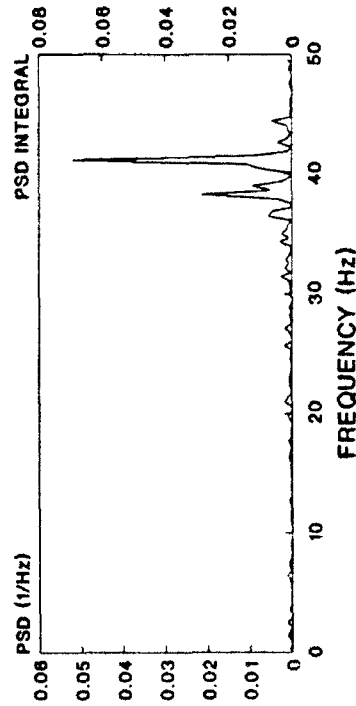
CUBE2 - THETA 00 - AZIMUTH - 030

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



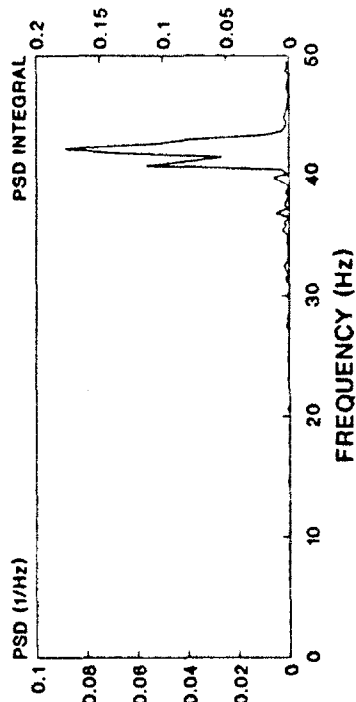
CUBE2 - THETA 00 - AZIMUTH - 030

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



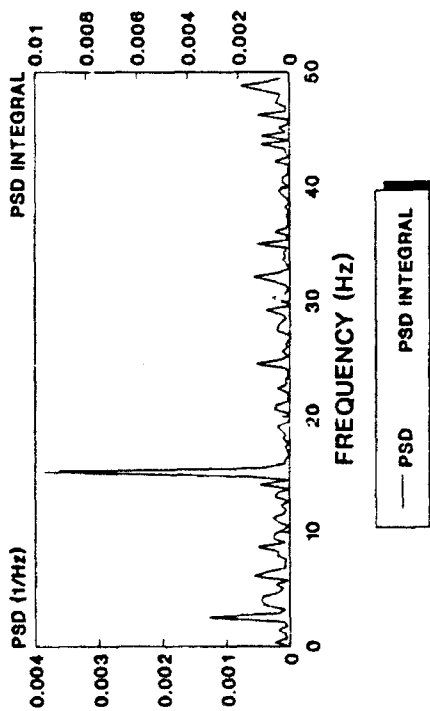
CUBE2 - THETA 00 - AZIMUTH - 030

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



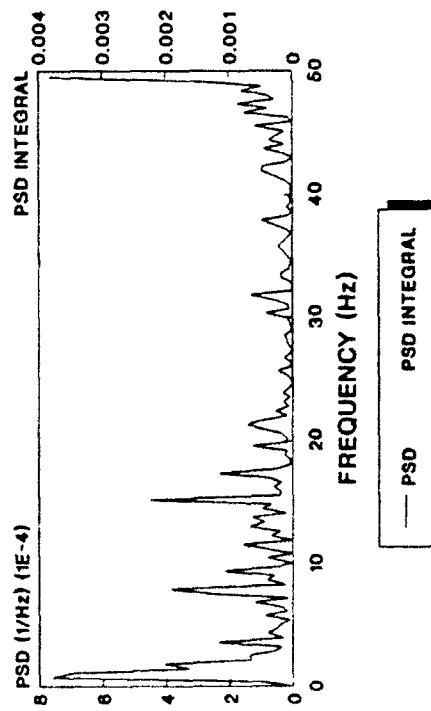
CUBE2 - THETA 00 - AZIMUTH - 030

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



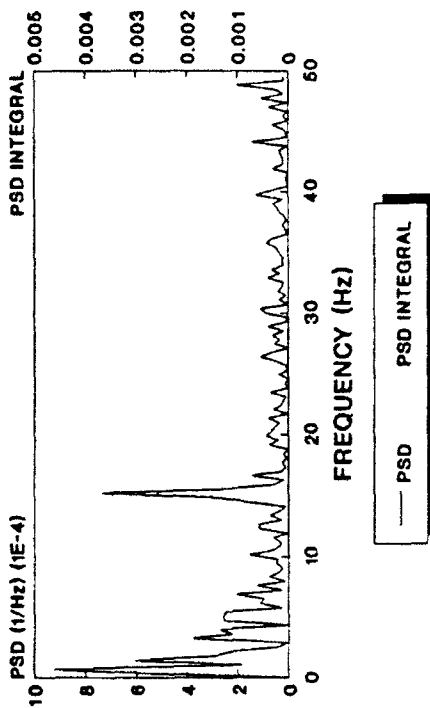
CUBE2 - THETA 00 - AZIMUTH - 045

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



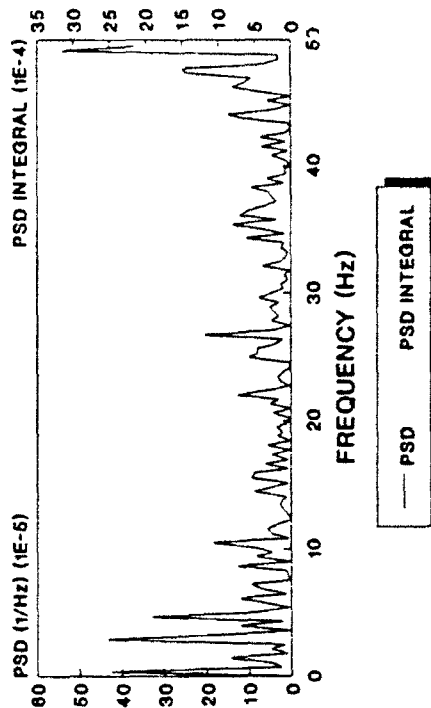
CUBE2 - THETA 00 - AZIMUTH - 045

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



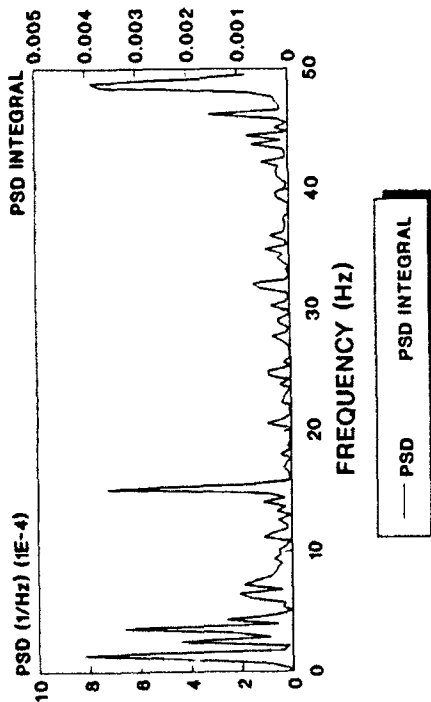
CUBE2 - THETA 00 - AZIMUTH - 045

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



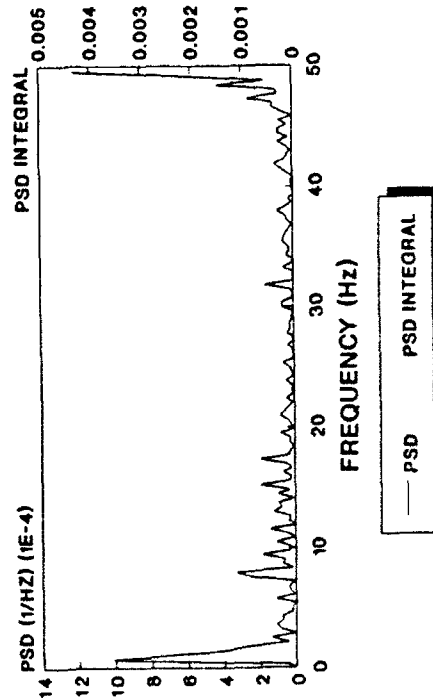
CUBE2 - THETA 00 - AZIMUTH - 045

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



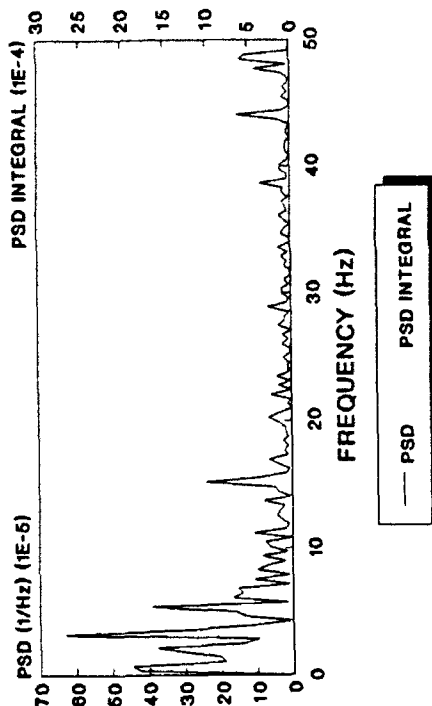
CUBE2 - THETA 00 - AZIMUTH - 045

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



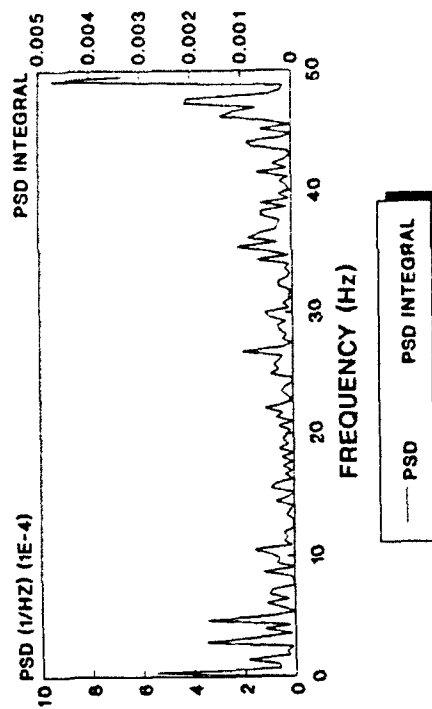
CUBE2 - THETA 00 - AZIMUTH - 045

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



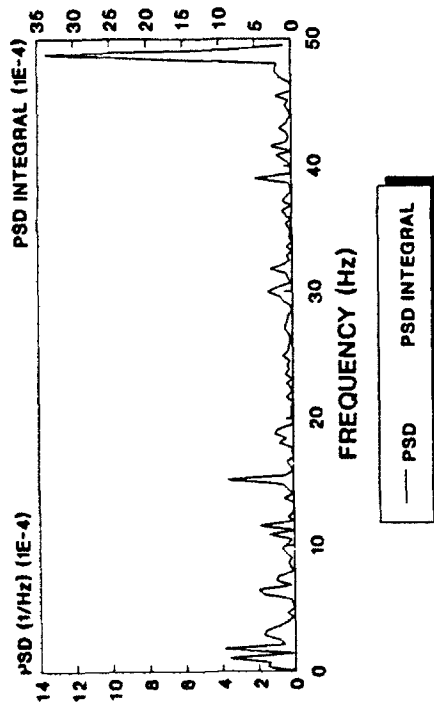
CUBE2 - THETA 00 - AZIMUTH - 045

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



CUBE2 - THETA 00 - AZIMUTH - 045

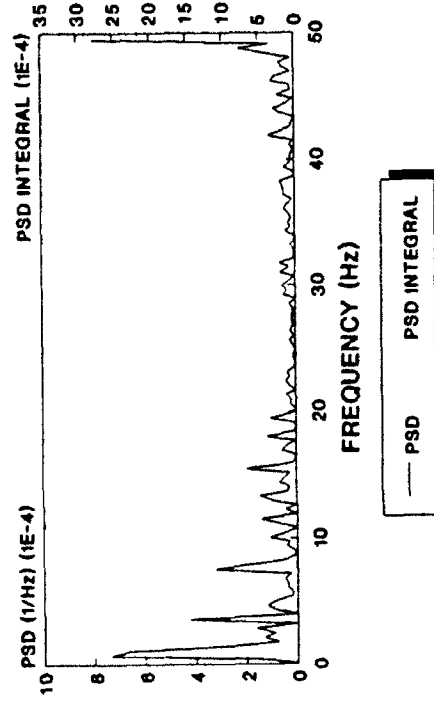
FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



CUBE2 - THETA 00 - AZIMUTH - 045

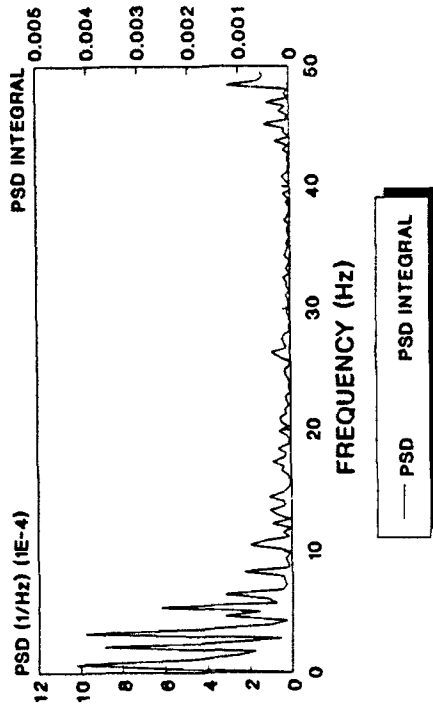
179

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



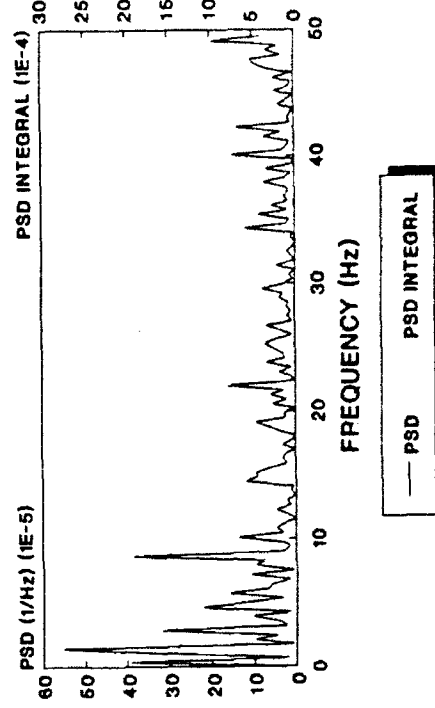
CUBE2 - THETA 00 - AZIMUTH - 045

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



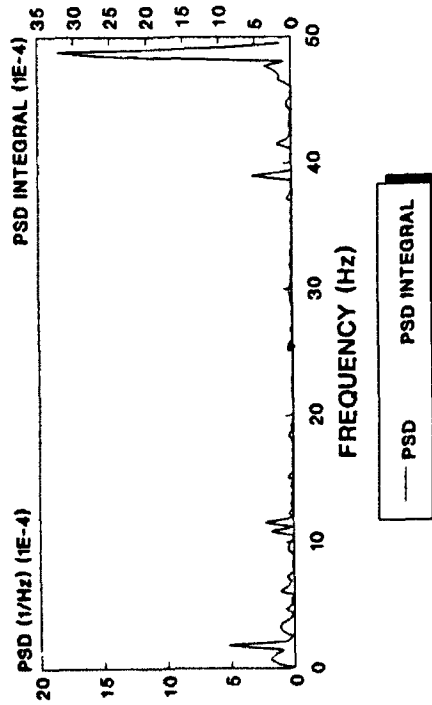
CUBE2 - THETA 00 - AZIMUTH - 045

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



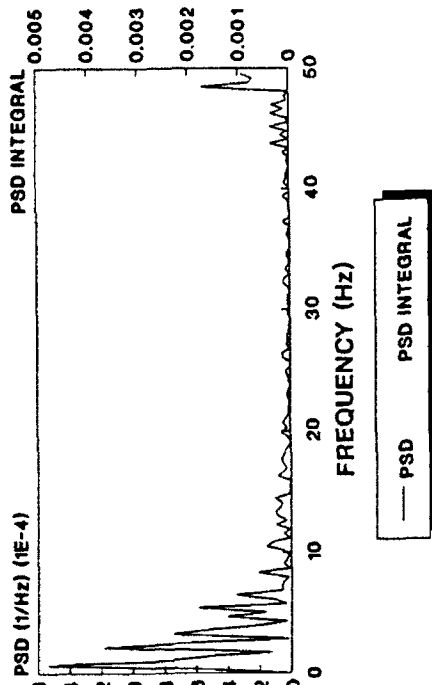
CUBE2 - THETA 00 - AZIMUTH - 045

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



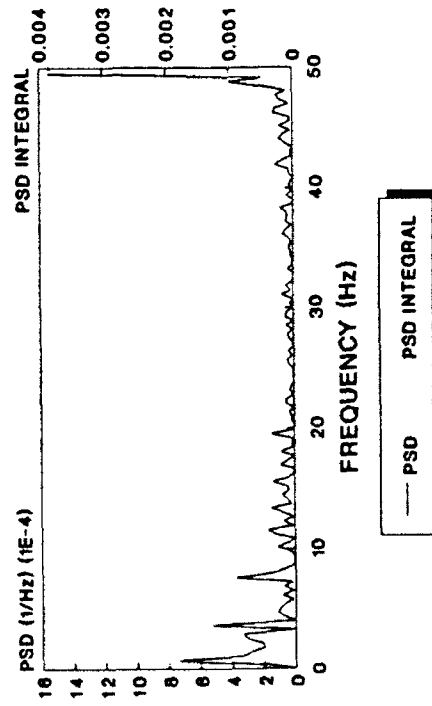
CUBE2 - THETA 00 - AZIMUTH - 045

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



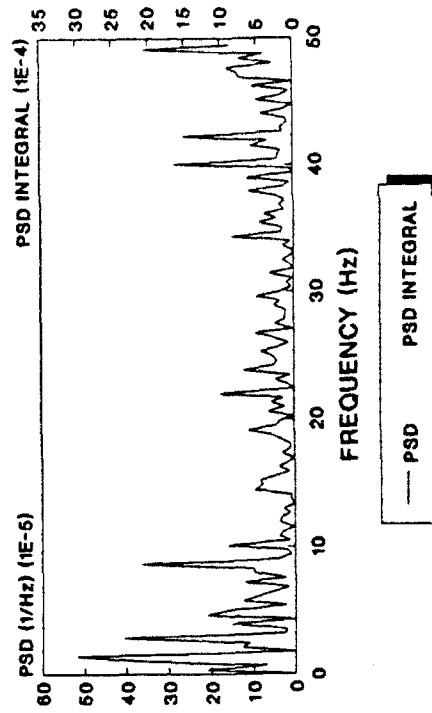
CUBE2 - THETA 00 - AZIMUTH - 045

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



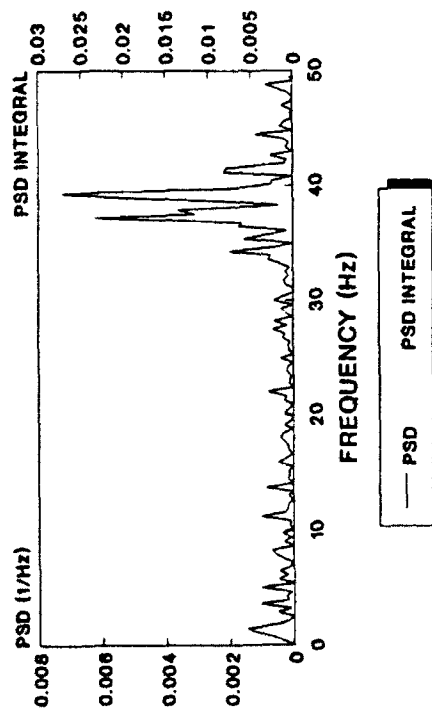
CUBE2 - THETA 00 - AZIMUTH - 045

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



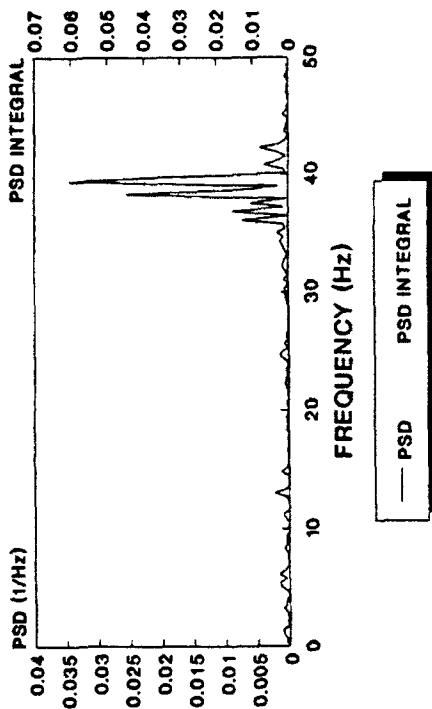
CUBE2 - THETA 00 - AZIMUTH - 045

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



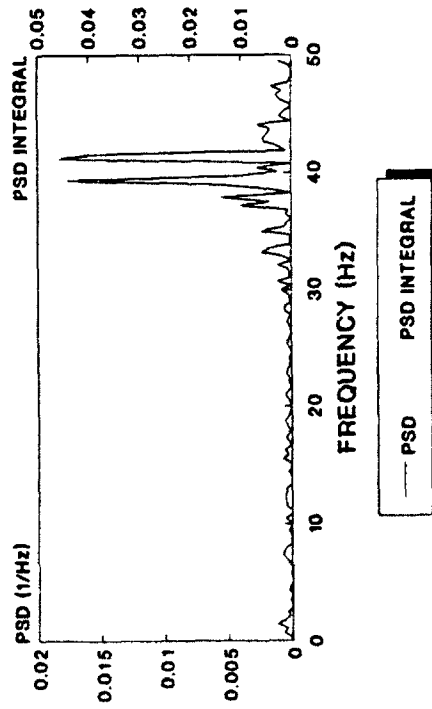
CUBE2 - THETA 00 - AZIMUTH - 046

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



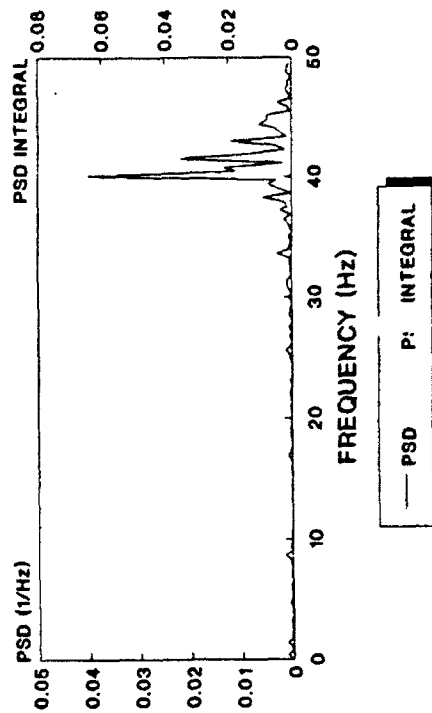
CUBE2 - THETA 00 - AZIMUTH - 046

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



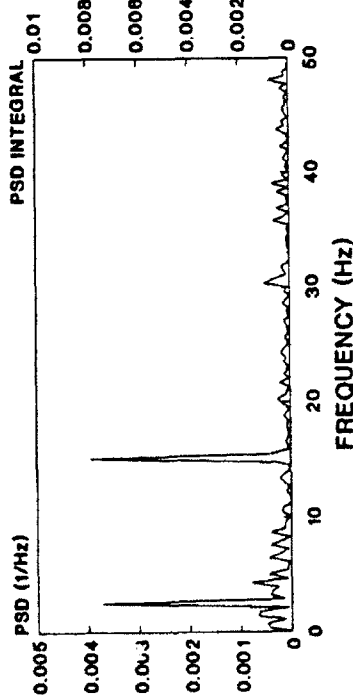
CUBE2 - THETA 00 - AZIMUTH - 046

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



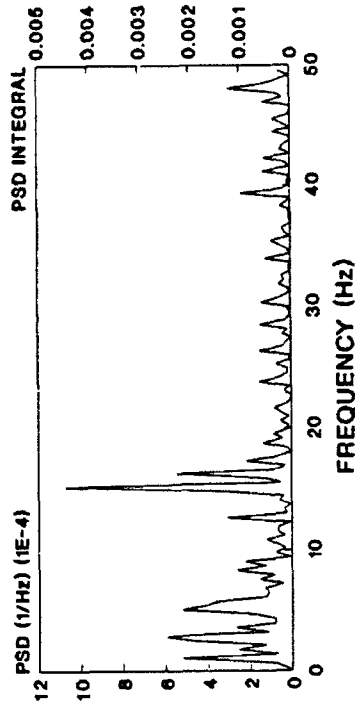
CUBE2 - THETA 00 - AZIMUTH - 046

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



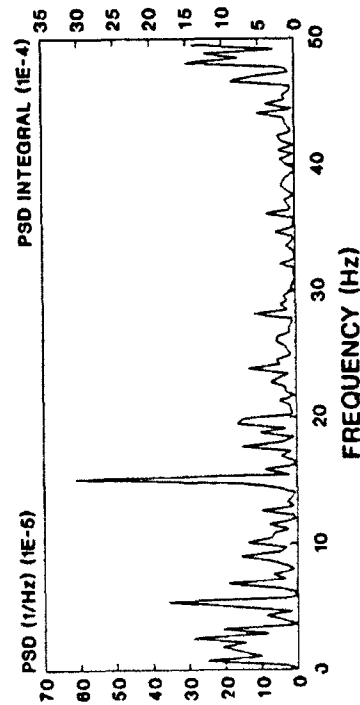
CUBE2 - THETA 00 - AZIMUTH - 060

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



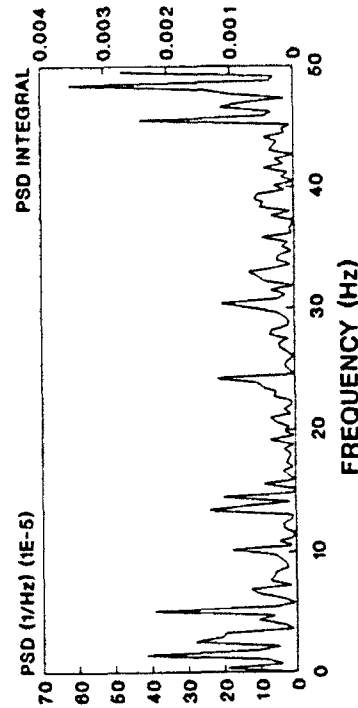
CUBE2 - THETA 00 - AZIMUTH - 060

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



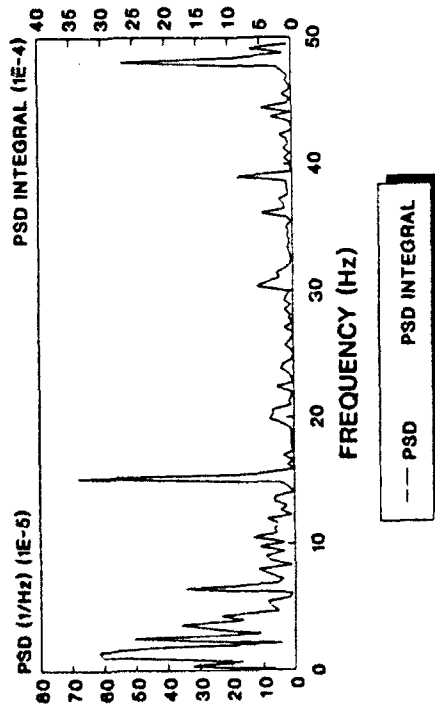
CUBE2 - THETA 00 - AZIMUTH - 060

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



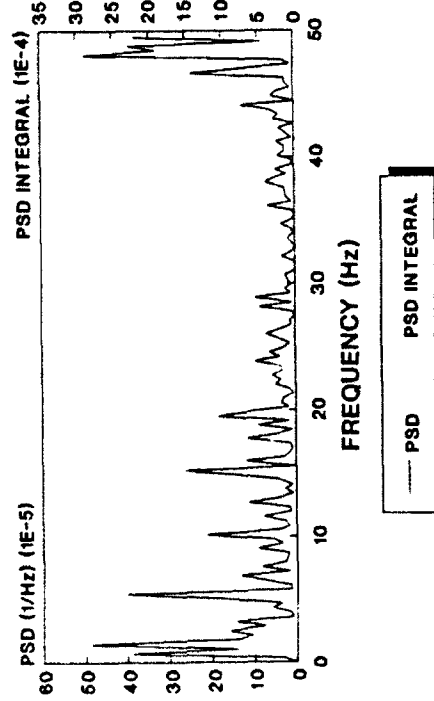
CUBE2 - THETA 00 - AZIMUTH - 060

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



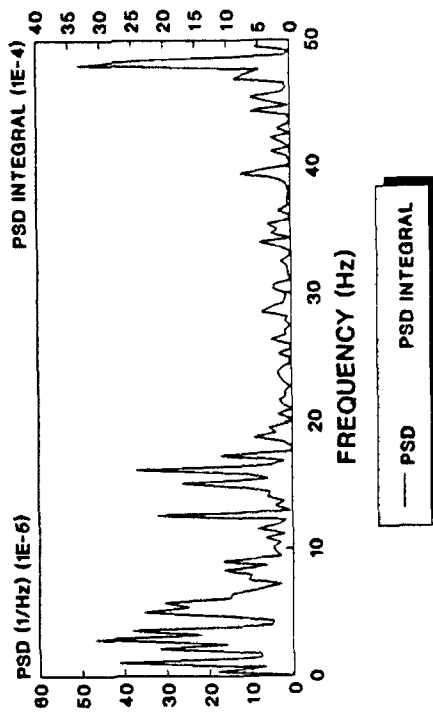
CUBE2 - THETA 00 - AZIMUTH - 060

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



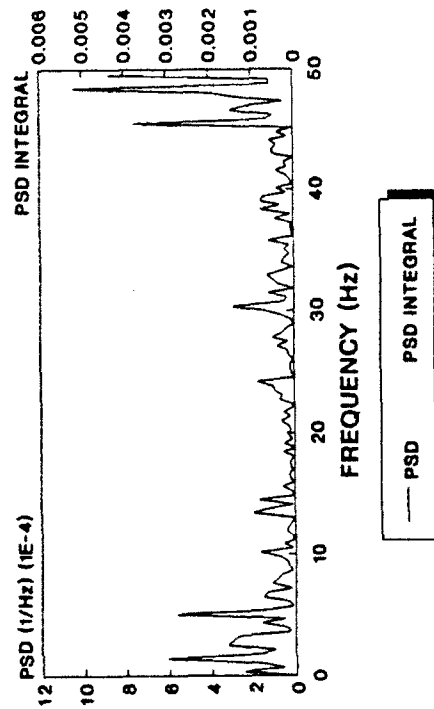
CUBE2 - THETA 00 - AZIMUTH - 060

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



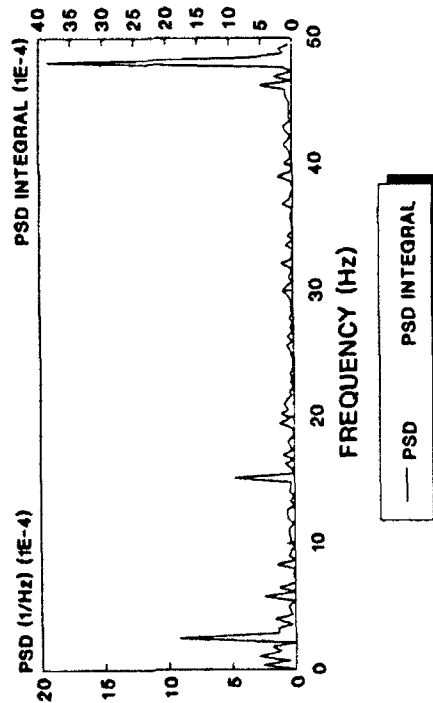
CUBE2 - THETA 00 - AZIMUTH - 060

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



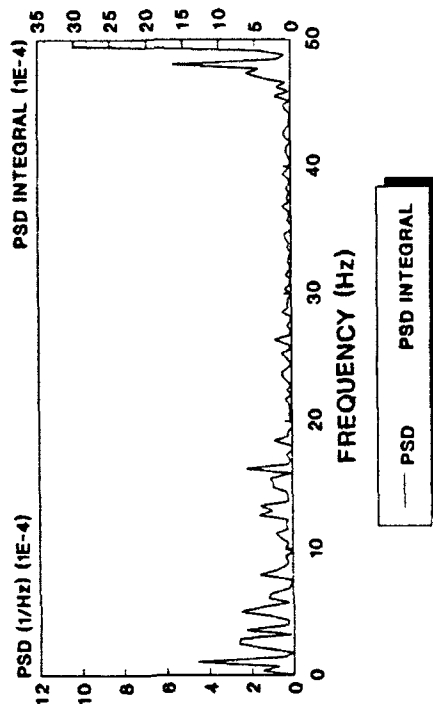
CUBE2 - THETA 00 - AZIMUTH - 060

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



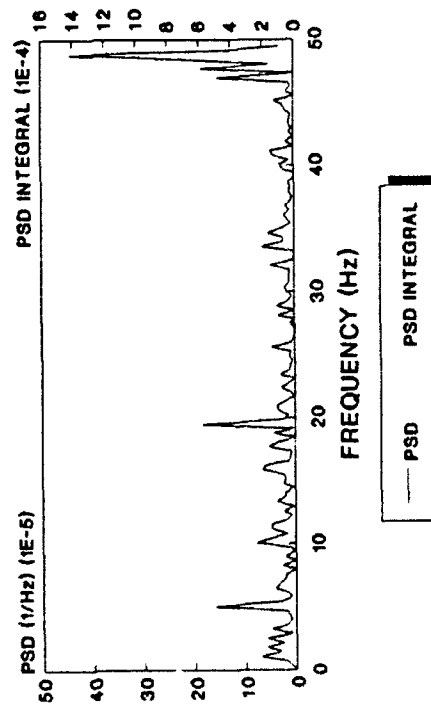
CUBE2 - THETA 00 - AZIMUTH - 060

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



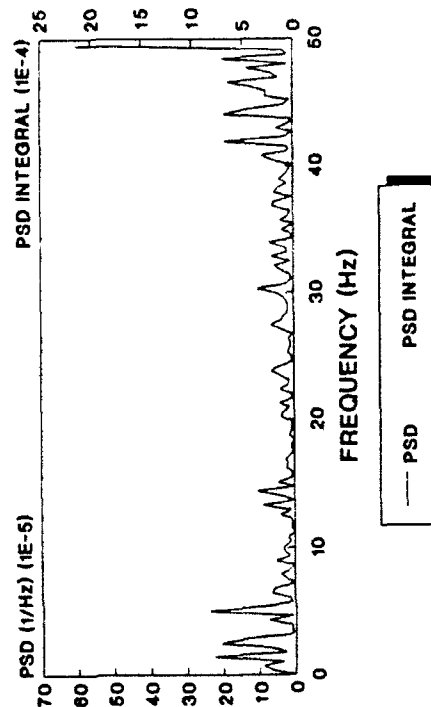
CUBE2 - THETA 00 - AZIMUTH - 060

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



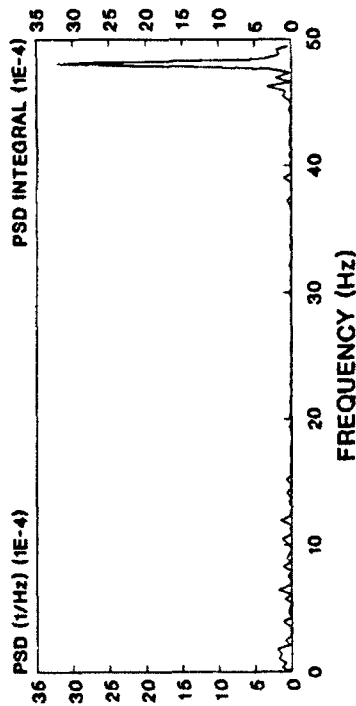
CUBE2 - THETA 00 - AZIMUTH - 060

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



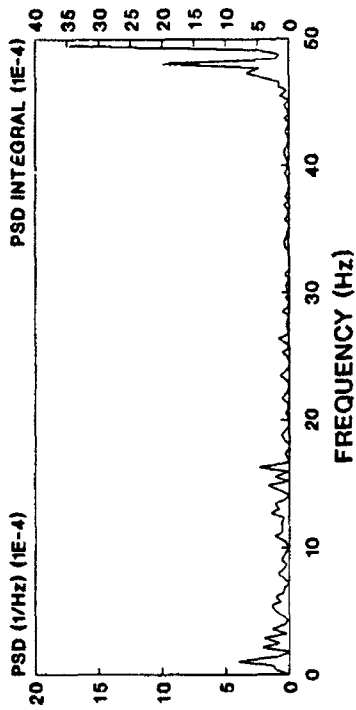
CUBE2 - THETA 00 - AZIMUTH - 060

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



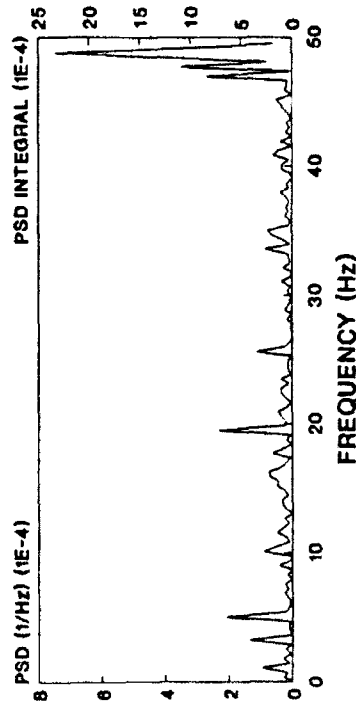
CUBE2 - THETA 00 - AZIMUTH - 060

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



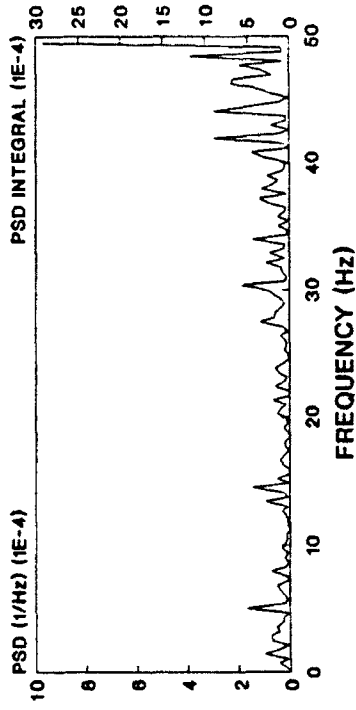
CUBE2 - THETA 00 - AZIMUTH - 060

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



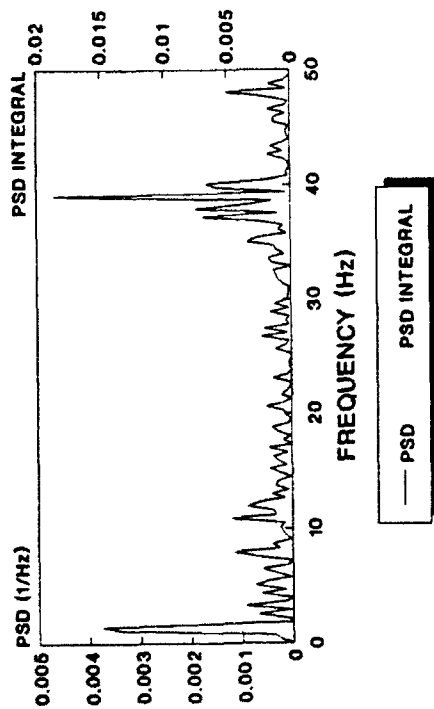
CUBE2 - THETA 00 - AZIMUTH - 060

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



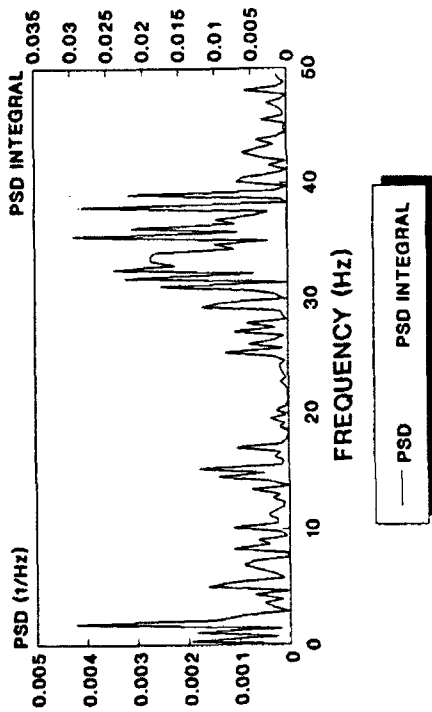
CUBE2 - THETA 00 - AZIMUTH - 060

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



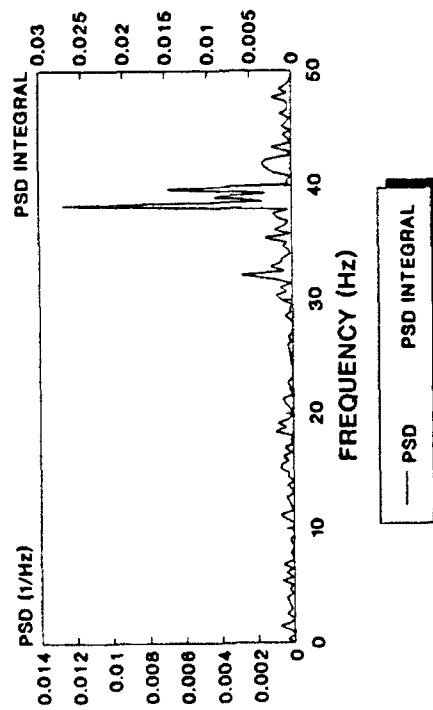
CUBE2 - THETA 00 - AZIMUTH - 060

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



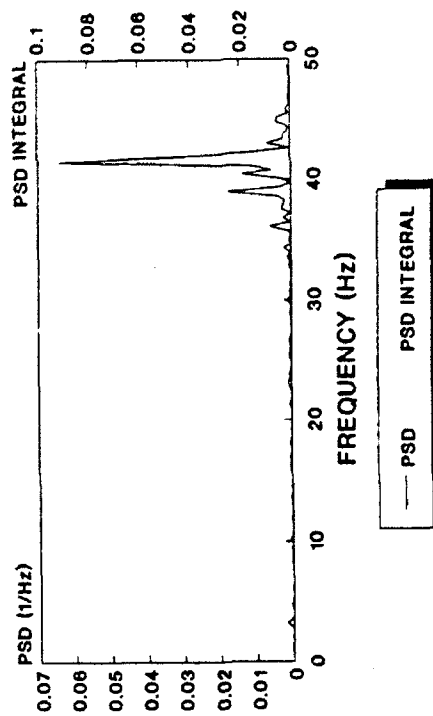
CUBE2 - THETA 00 - AZIMUTH - 060

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



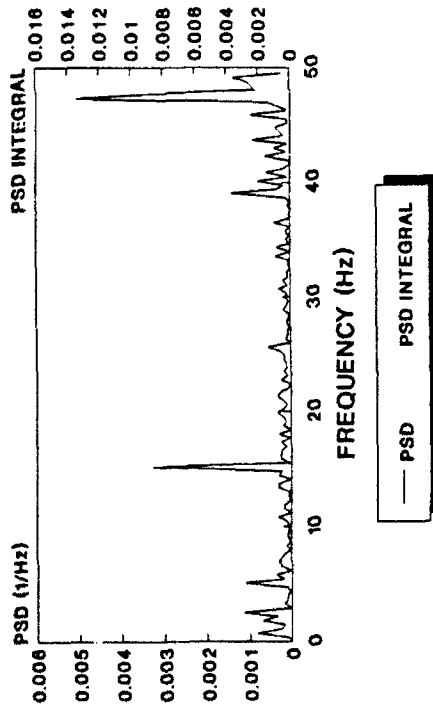
CUBE2 - THETA 00 - AZIMUTH - 060

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



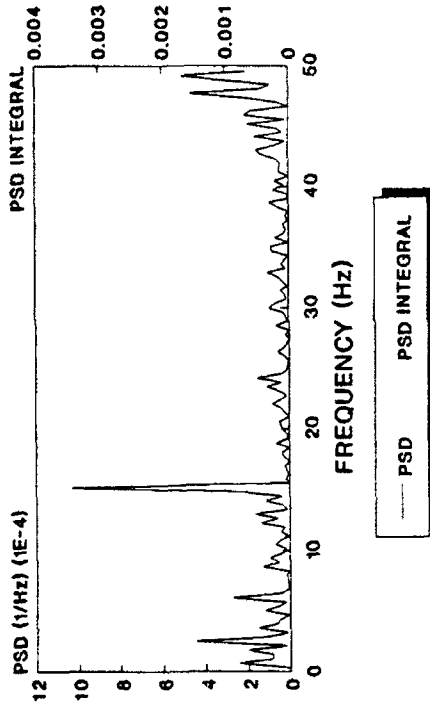
CUBE2 - THETA 00 - AZIMUTH - 060

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



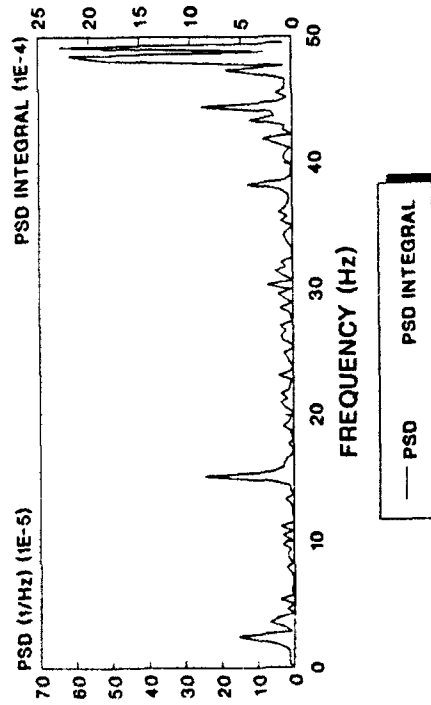
CUBE2 - THETA 00 - AZIMUTH - 090

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



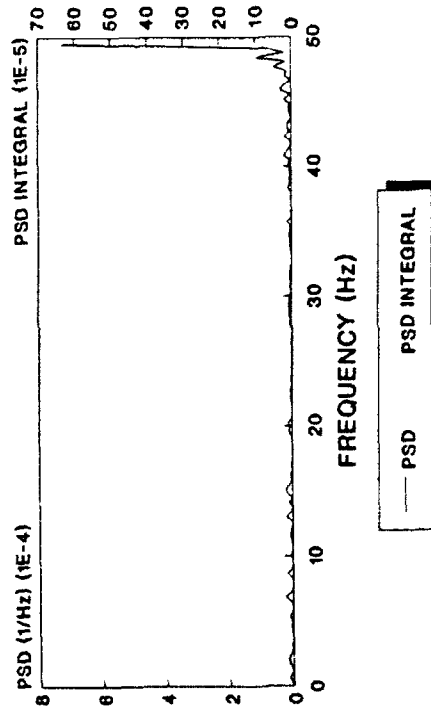
CUBE2 - THETA 00 - AZIMUTH - 090

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



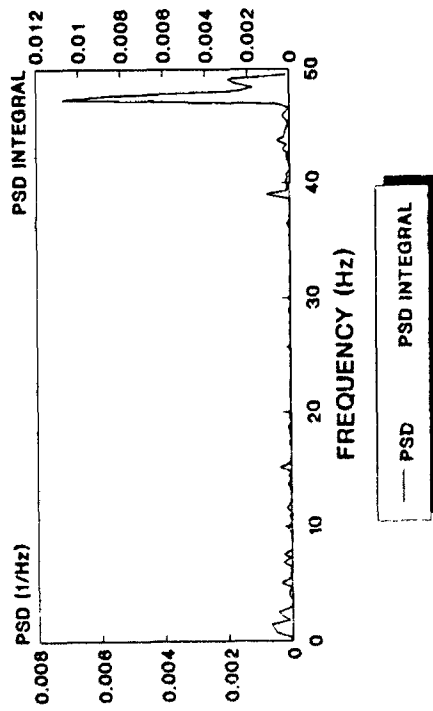
CUBE2 - THETA 00 - AZIMUTH - 090

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



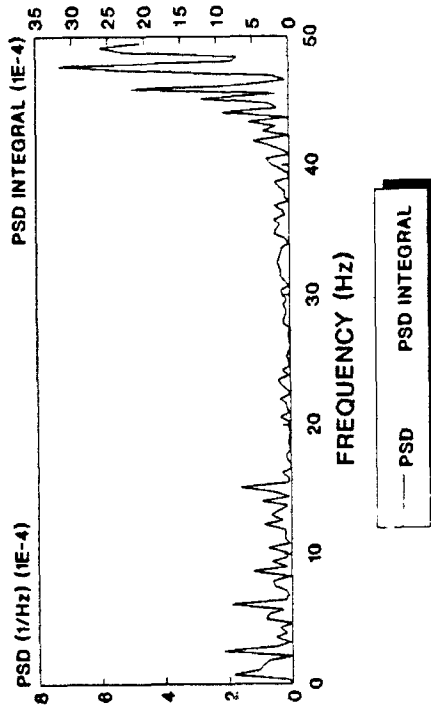
CUBE2 - THETA 00 - AZIMUTH - 090

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



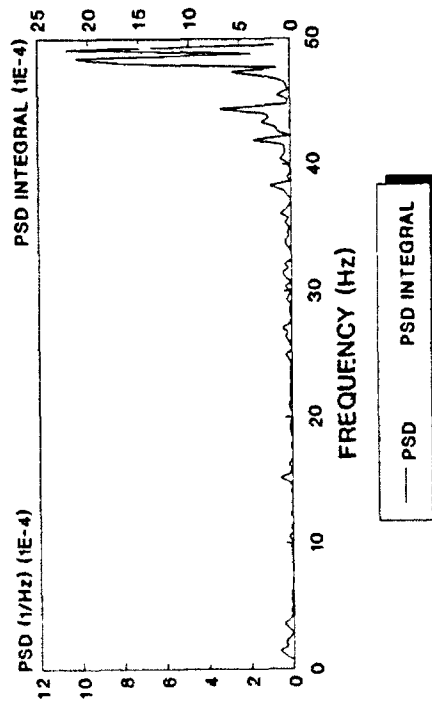
CUBE2 - THETA 00 - AZIMUTH - 090

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



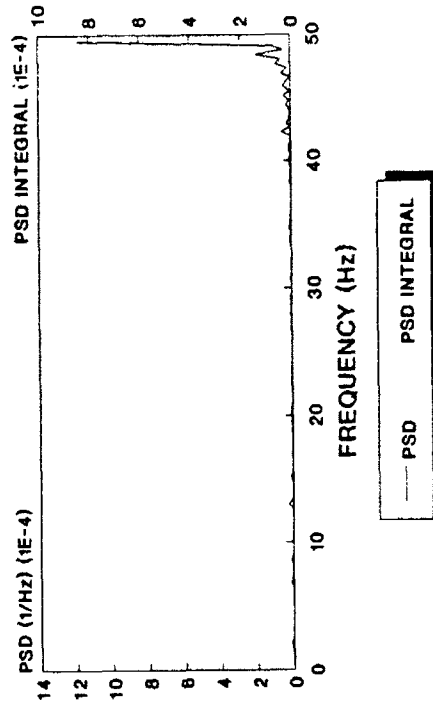
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MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



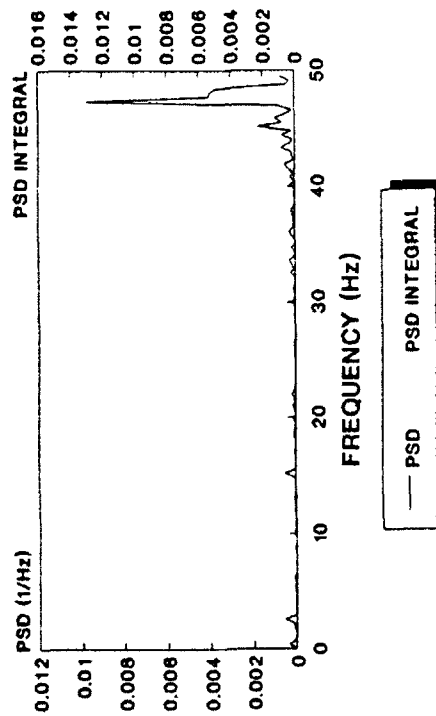
CUBE2 - THETA 00 - AZIMUTH - 090

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



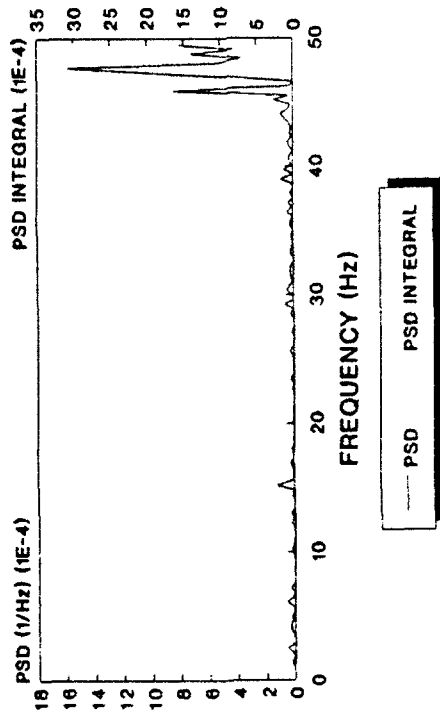
CUBE2 - THETA 00 - AZIMUTH - 090

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



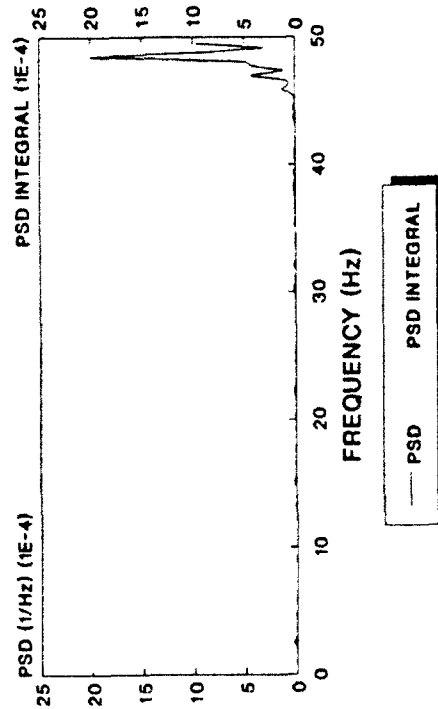
CUBE2 - THETA 00 - AZIMUTH - 090

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



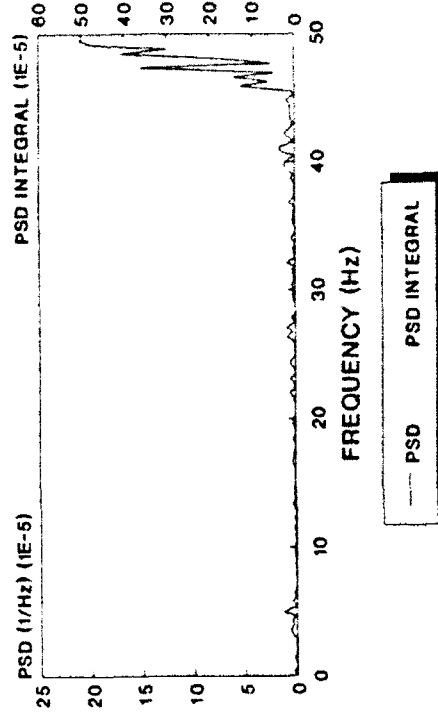
CUBE2 - THETA 00 - AZIMUTH - 090

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



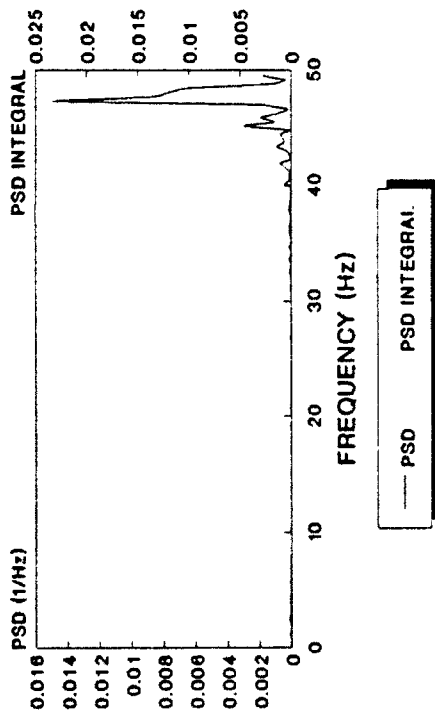
CUBE2 - THETA 00 - AZIMUTH - 090

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



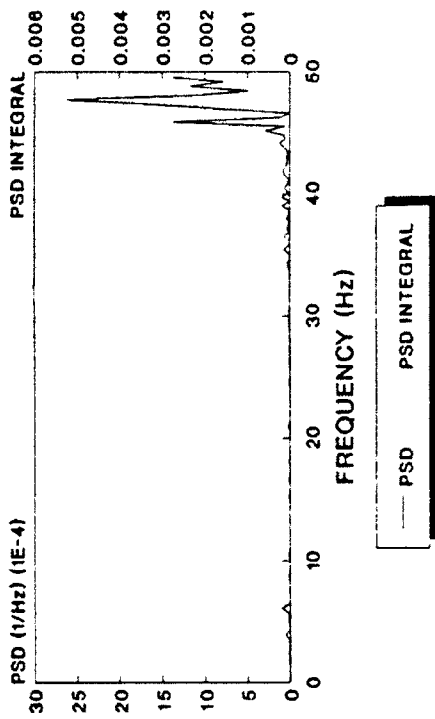
CUBE2 - THETA 00 - AZIMUTH - 090

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



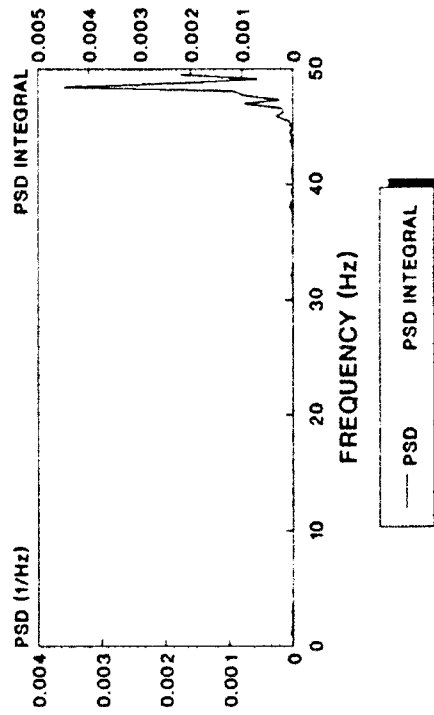
CUBE2 - THETA 00 - AZIMUTH - 090

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



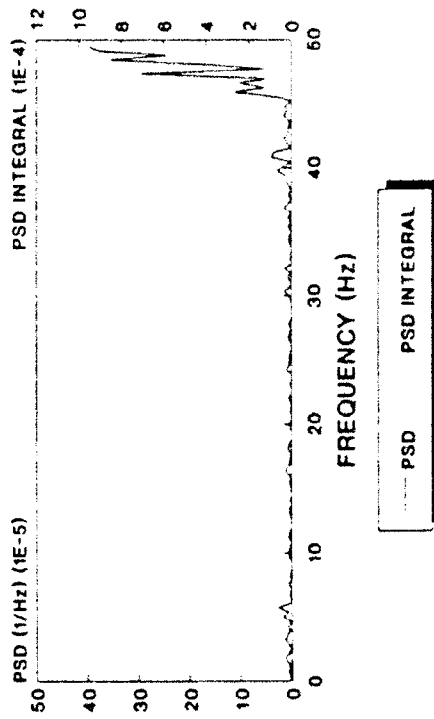
CUBE2 - THETA 00 - AZIMUTH - 090

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



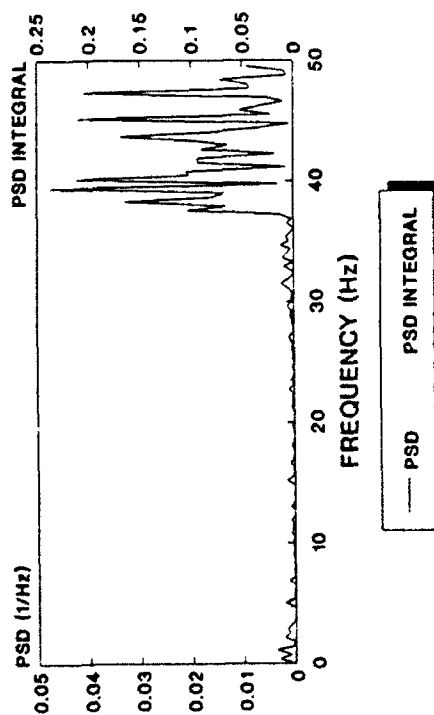
CUBE2 - THETA 00 - AZIMUTH - 090

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



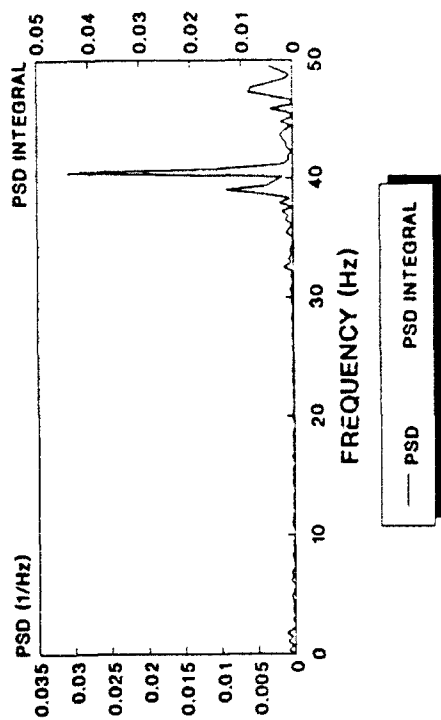
CUBE2 - THETA 00 - AZIMUTH - 090

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



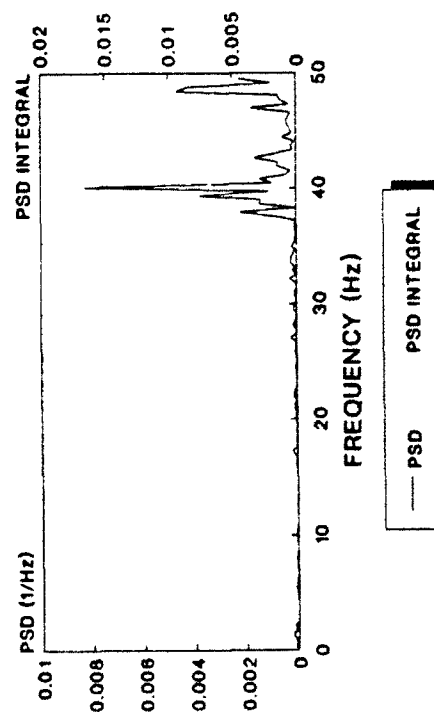
CUBE2 - THETA 00 - AZIMUTH - 090

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



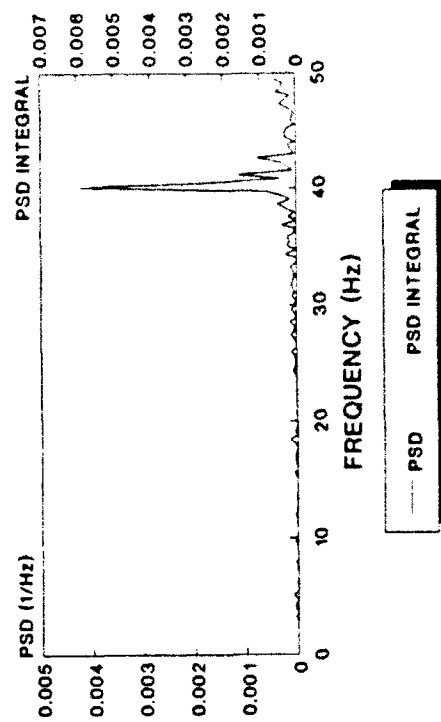
CUBE2 - THETA 00 - AZIMUTH - 090

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



CUBE2 - THETA 00 - AZIMUTH - 090

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



CUBE2 - THETA 00 - AZIMUTH - 090

DATA REPORT

SHAPE:	CUBE (ROUNDED)
DECLINATION [THETA (degrees)]:	30
DIMENSIONS [LxWxH (in)]:	9.0 x 8.0 x 8.9
WEIGHT (gm):	1575.4
TORSION FREQUENCY (Hz):	36
LATERAL (SIDE BEND) FREQUENCY (Hz):	61
NORMAL (AFT BEND) FREQUENCY (Hz):	74
AZIMUTHS (degrees):	0, 30, 45, 60, 90, 120, 135, 150, 180

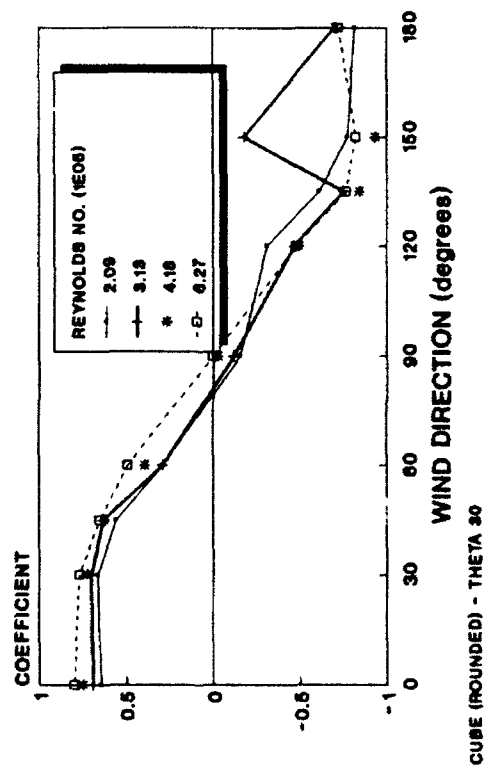
GRAPH CORRECTIONS:

- The mean value of the **ROLL** moment coefficients should be divided by 12.
- The PSD and PSD Integral values of the **ROLL** moment coefficients should be divided by 144.

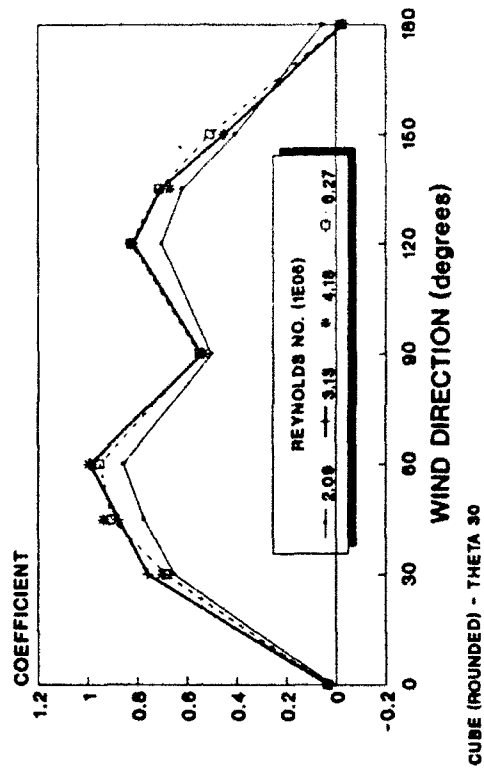
OBSERVATIONS:

- Very good shedding seen in the data at 135 degrees azimuth.
- Good shedding can be seen in the lateral data at 45 degrees azimuth, and in the normal, lateral, and roll data at 120 and 150 degrees azimuth.
- Poor shedding is seen in the data at 30 degrees.
- In comparison to the sharp edged cube at 30 degrees declination, it appears that rounded edges seem to reduce the shedding.

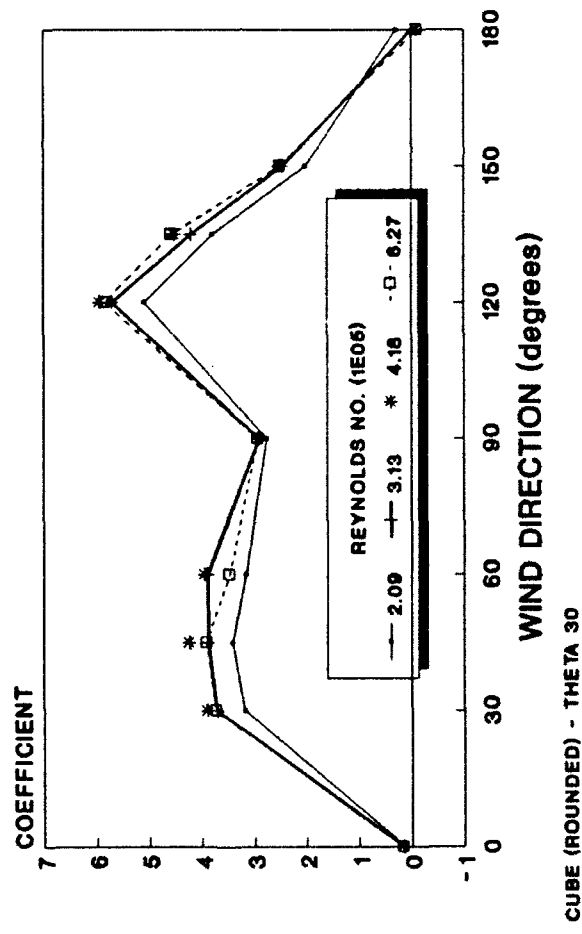
MEAN FORCE COEFFICIENT NORMAL DIRECTION



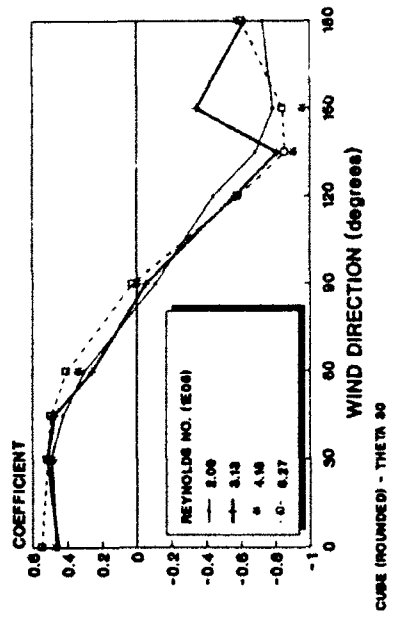
MEAN FORCE COEFFICIENT LATERAL DIRECTION



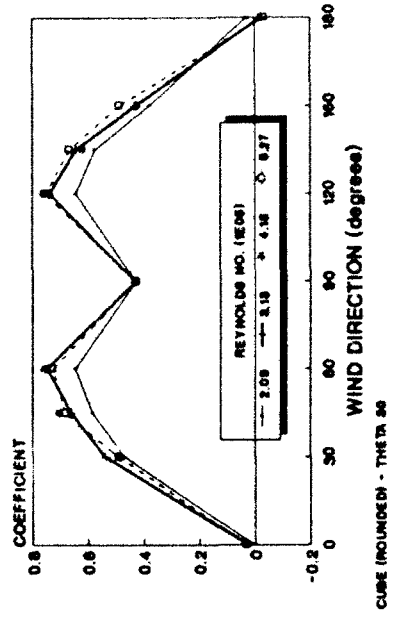
MEAN MOMENT COEFFICIENT ROLL DIRECTION



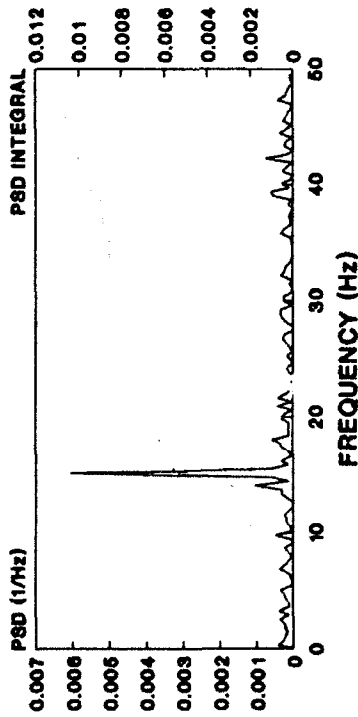
MEAN MOMENT COEFFICIENT NORMAL DIRECTION



MEAN MOMENT COEFFICIENT LATERAL DIRECTION

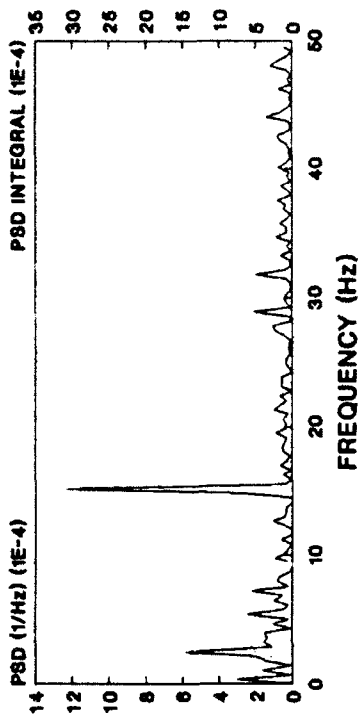


FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



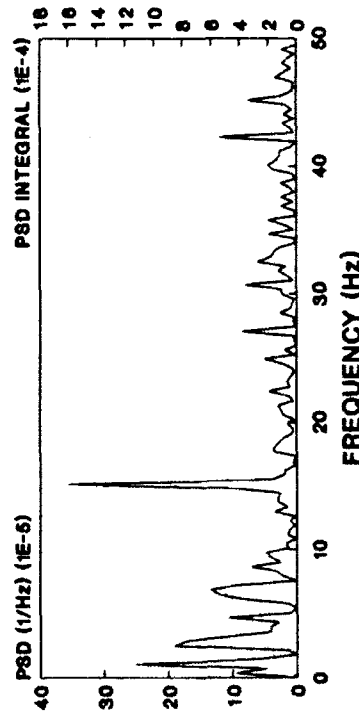
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



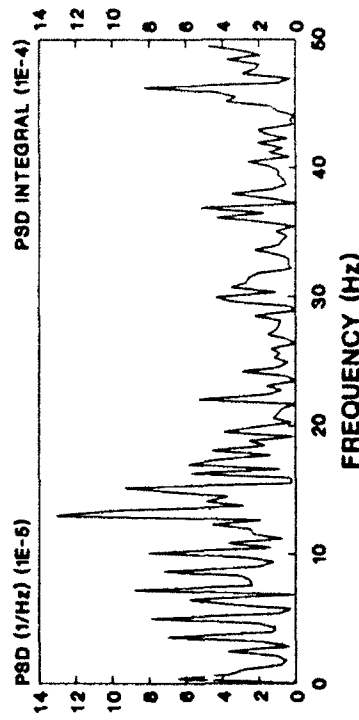
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



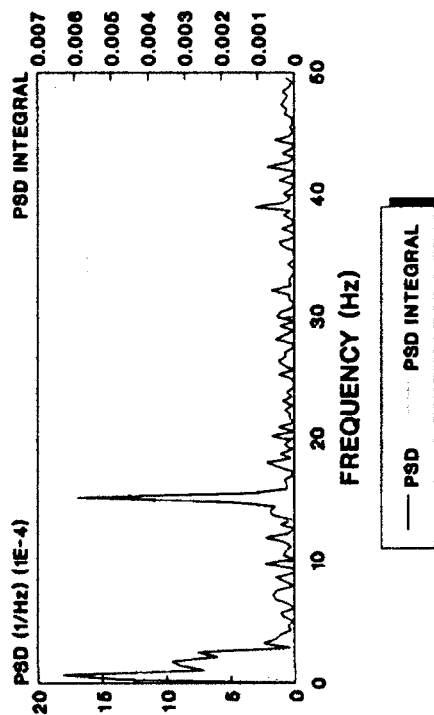
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



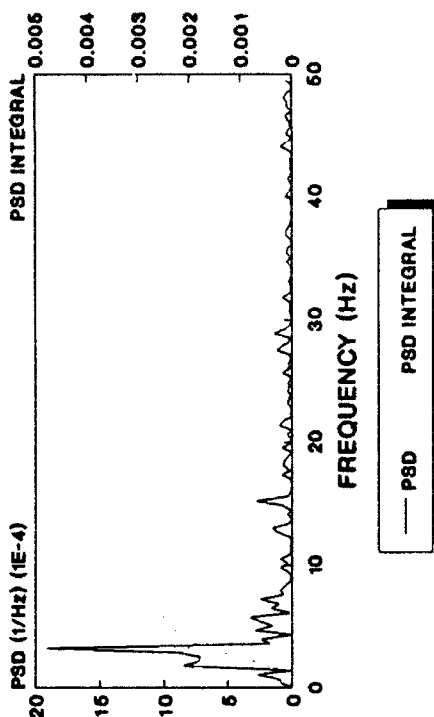
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



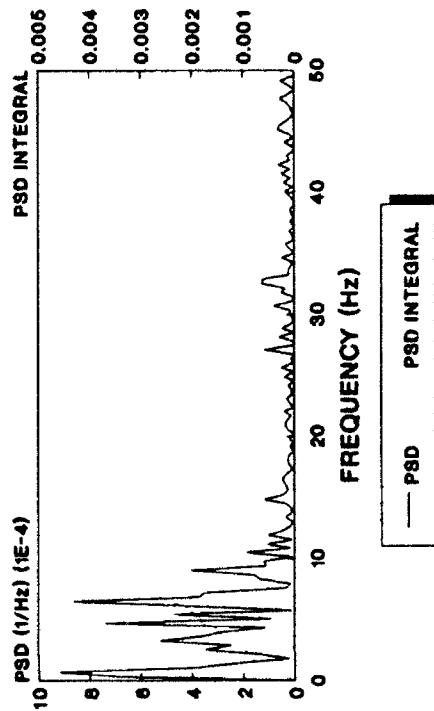
CUBE (R) - HT 6.9 - THETA 30 - AZ 000

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



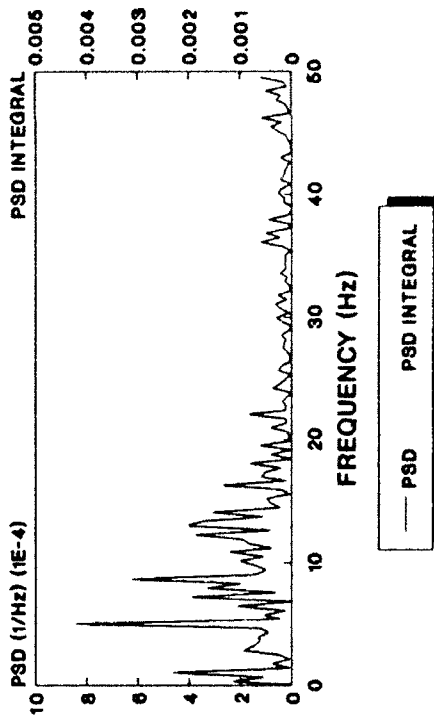
CUBE (R) - HT 6.9 - THETA 30 - AZ 000

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



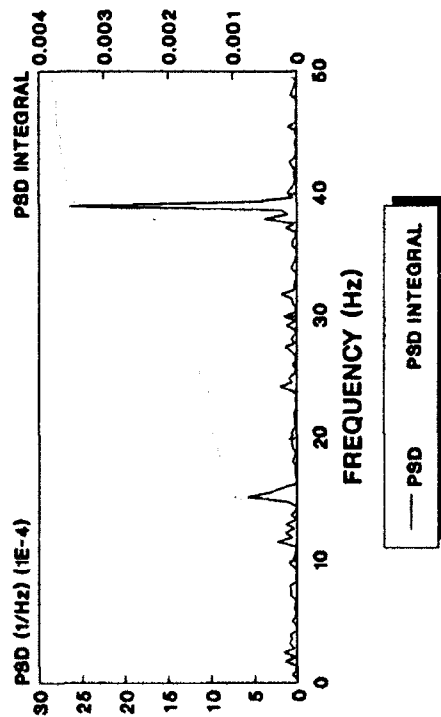
CUBE (R) - HT 6.9 - THETA 30 - AZ 000

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



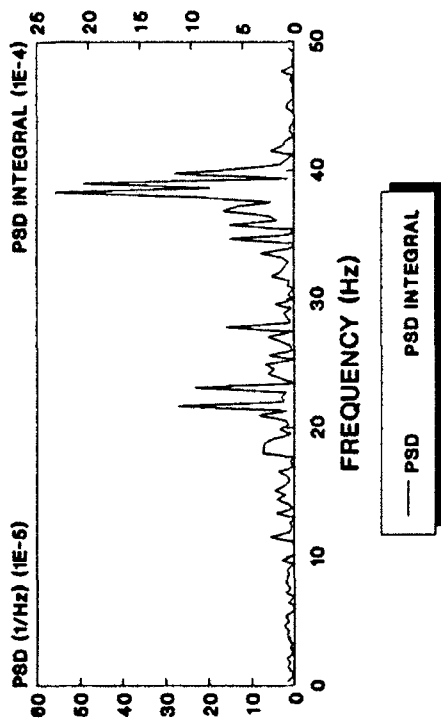
CUBE (R) - HT 6.9 - THETA 30 - AZ 000

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



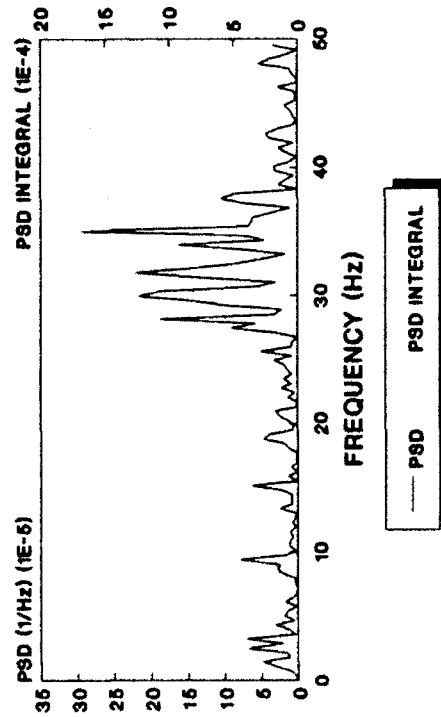
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



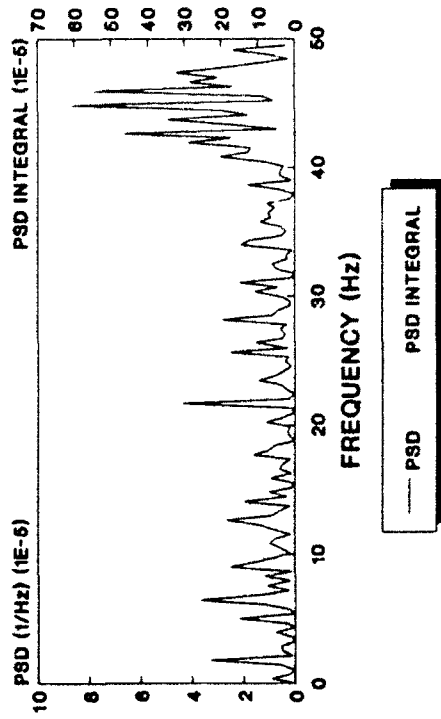
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



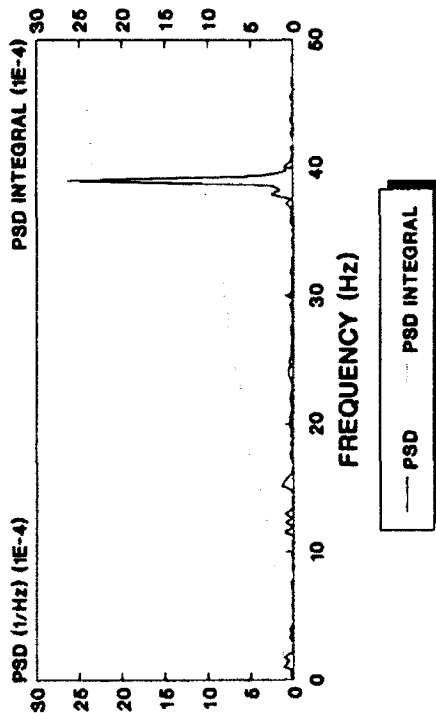
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



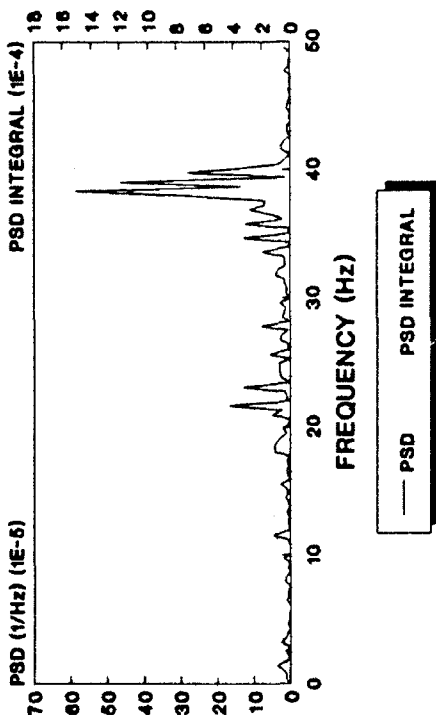
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



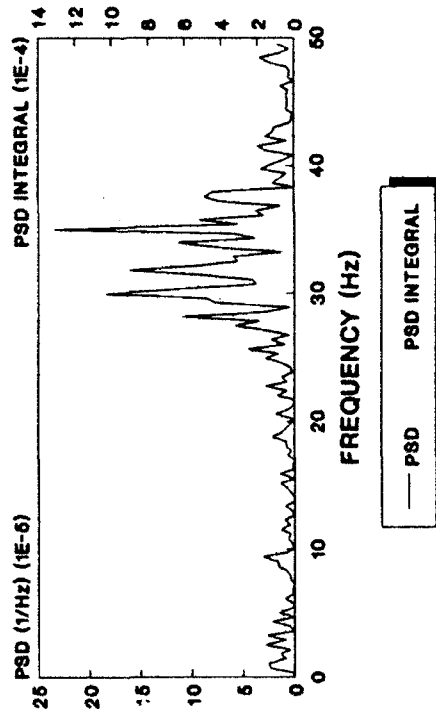
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



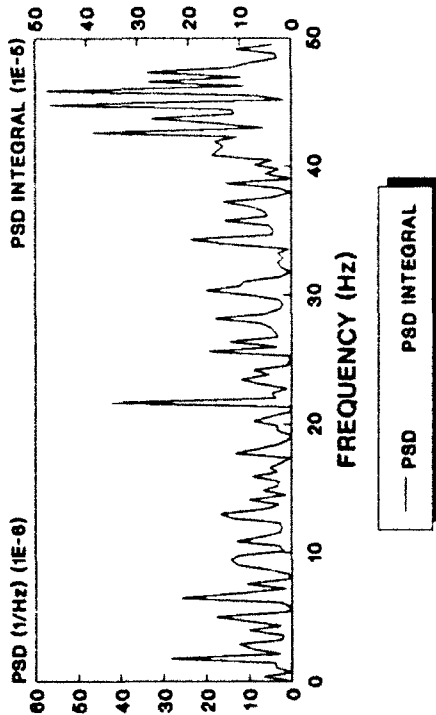
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



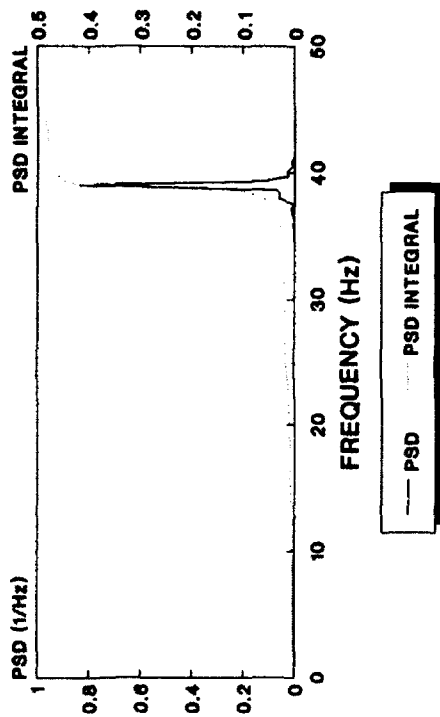
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



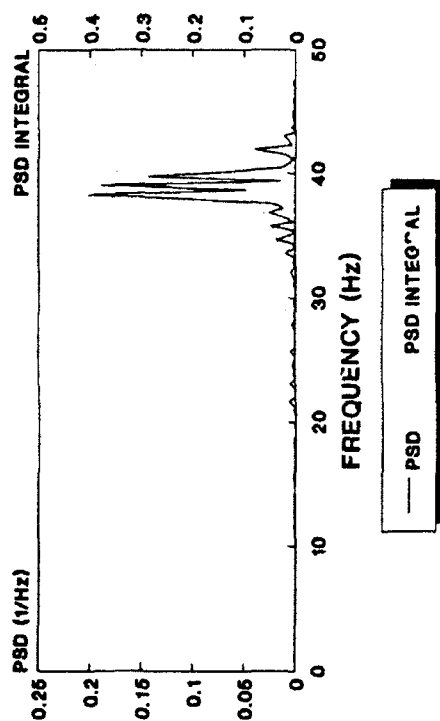
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



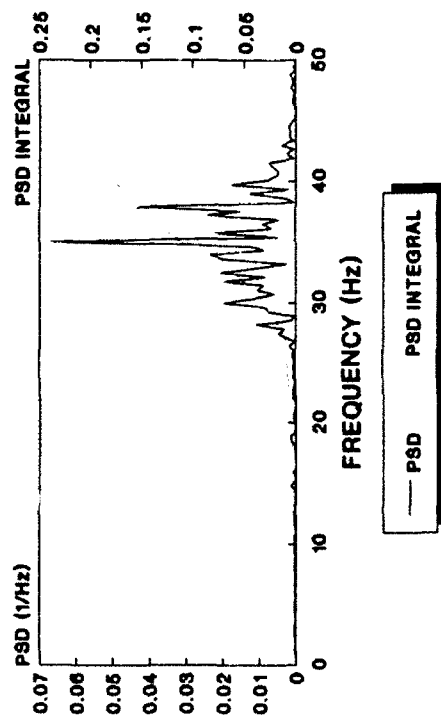
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



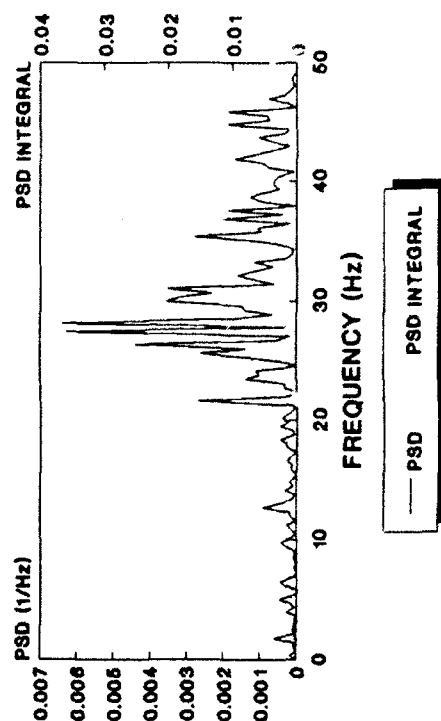
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



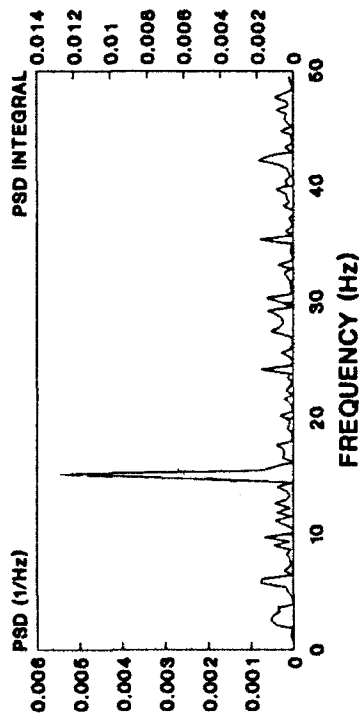
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



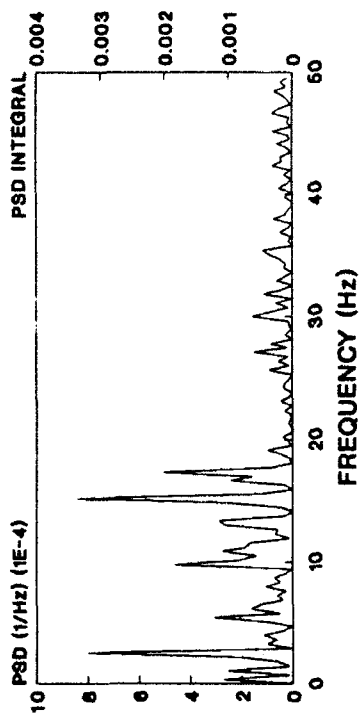
CUBE (R) - HT 8.9 - THETA 30 - AZ 000

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



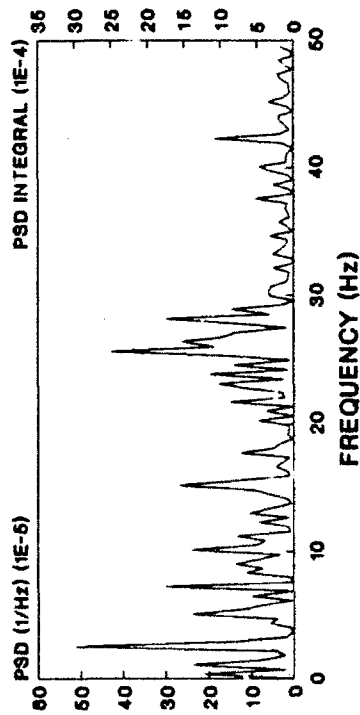
CUBE (R) - HT 8.9 - THETA 30 - AZ 030

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



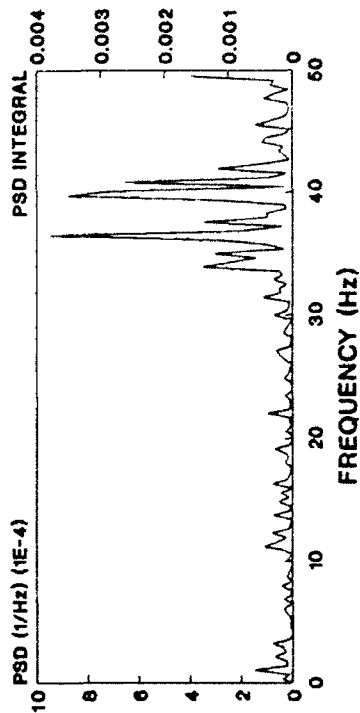
CUBE (R) - HT 8.9 - THETA 30 - AZ 030

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



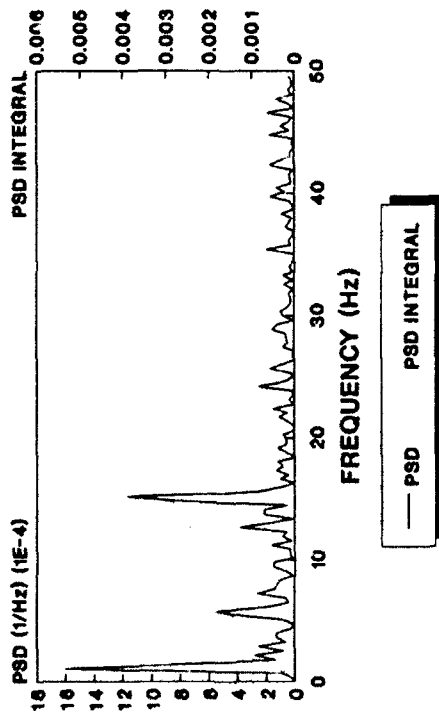
CUBE (R) - HT 8.9 - THETA 30 - AZ 030

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



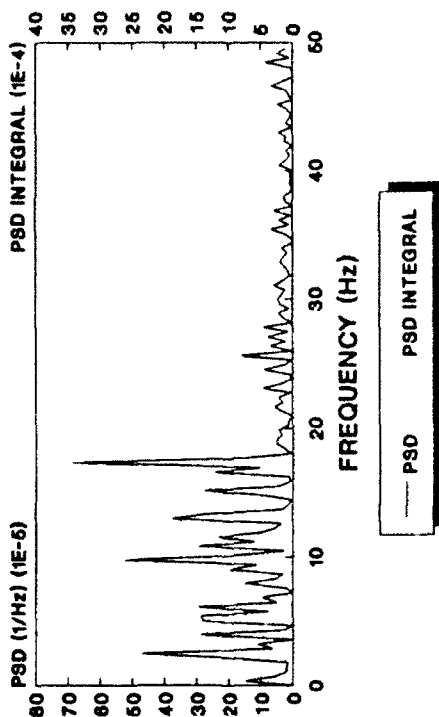
CUBE (R) - HT 8.9 - THETA 30 - AZ 030

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



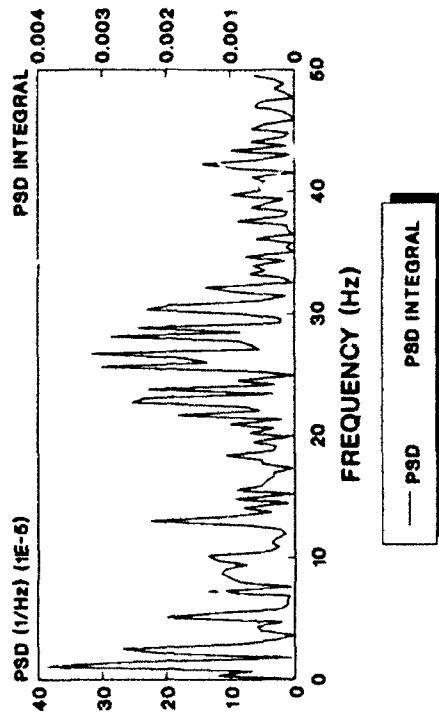
CUBE (R) - HT 8.8 - THETA 30 - AZ 030

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



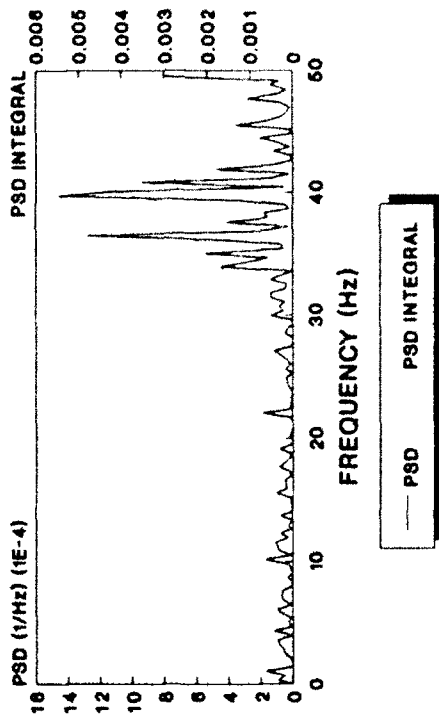
CUBE (R) - HT 8.8 - THETA 30 - AZ 030

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



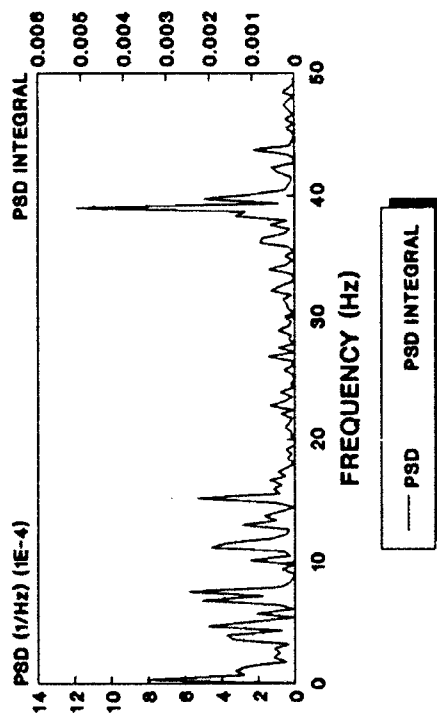
CUBE (R) - HT 8.8 - THETA 30 - AZ 030

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



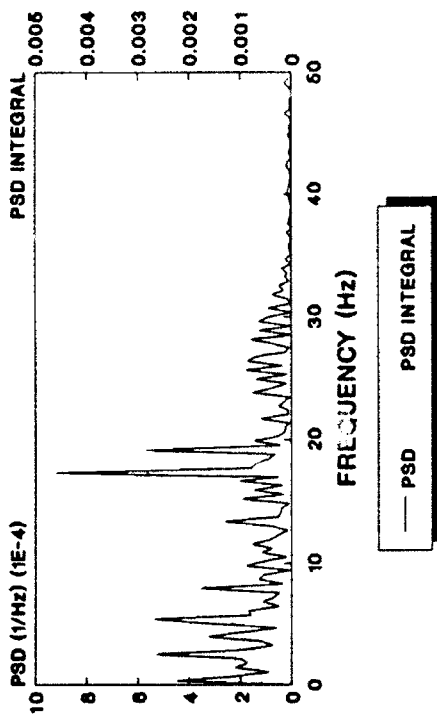
CUBE (R) - HT 8.8 - THETA 30 - AZ 030

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



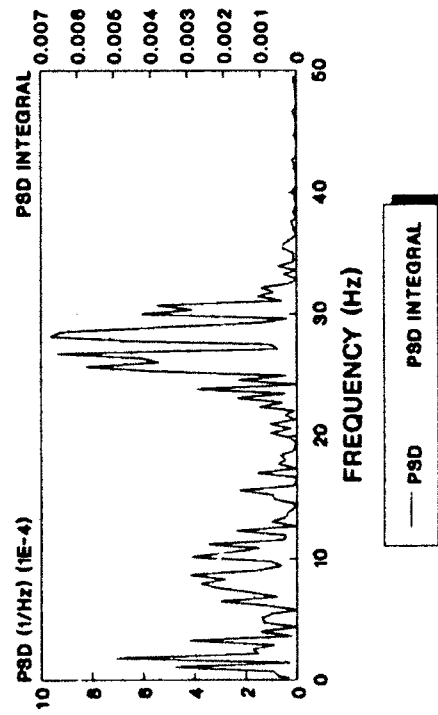
CUBE (R) - MT 8.8 - THETA 30 - AZ 030

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



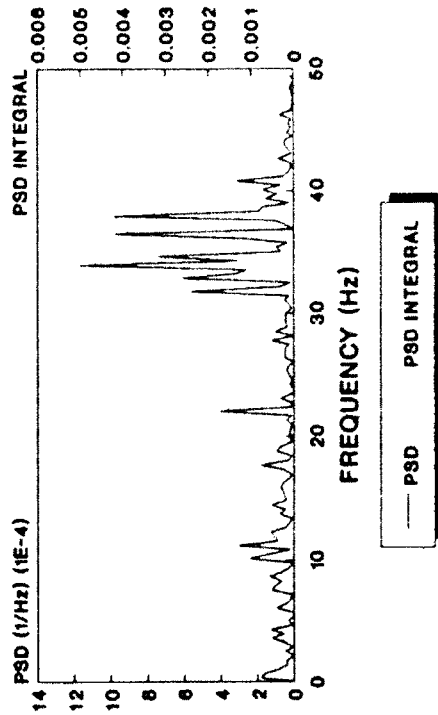
CUBE (R) - MT 8.8 - THETA 30 - AZ 030

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



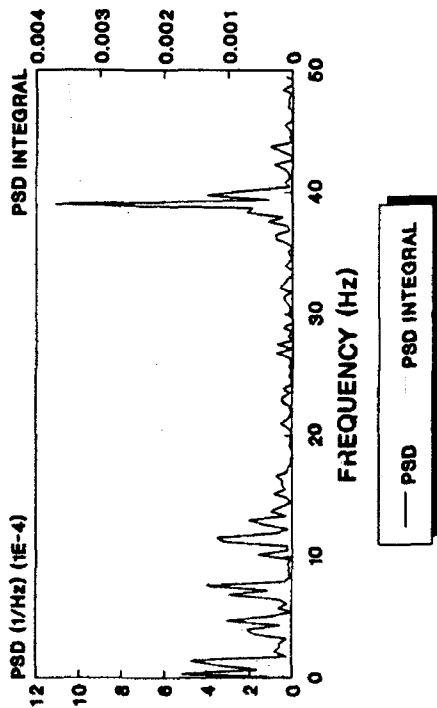
CUBE (R) - MT 8.8 - THETA 30 - AZ 030

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



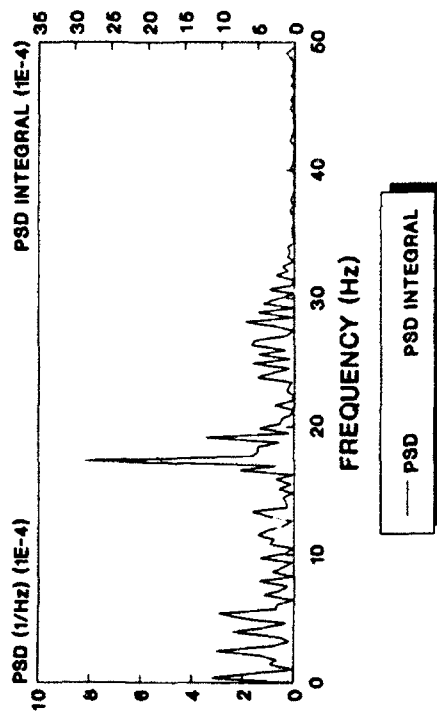
CUBE (R) - MT 8.8 - THETA 30 - AZ 030

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



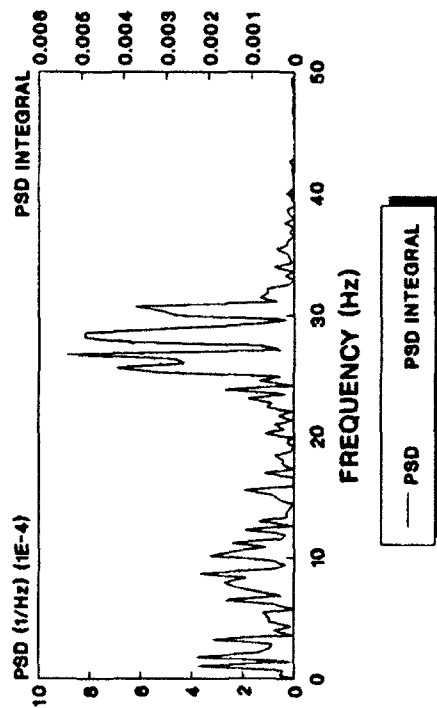
CUBE (R) - HT 8.9 - THETA 30 - AZ 030

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



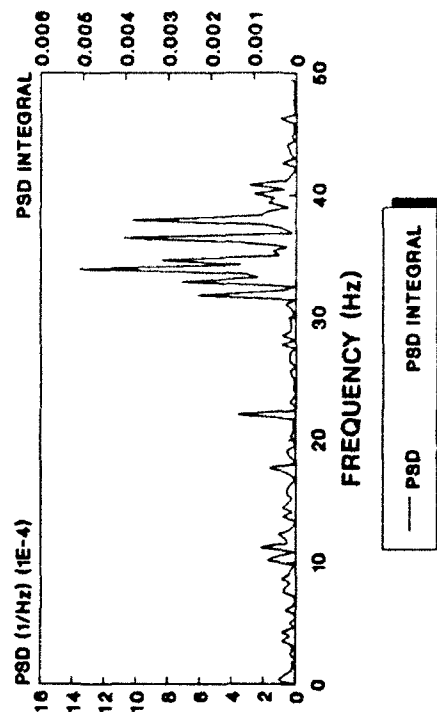
CUBE (R) - HT 8.9 - THETA 30 - AZ 030

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



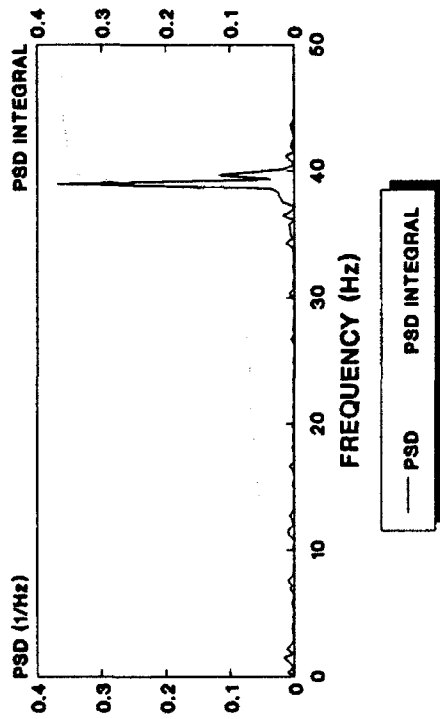
CUBE (R) - HT 8.9 - THETA 30 - AZ 030

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



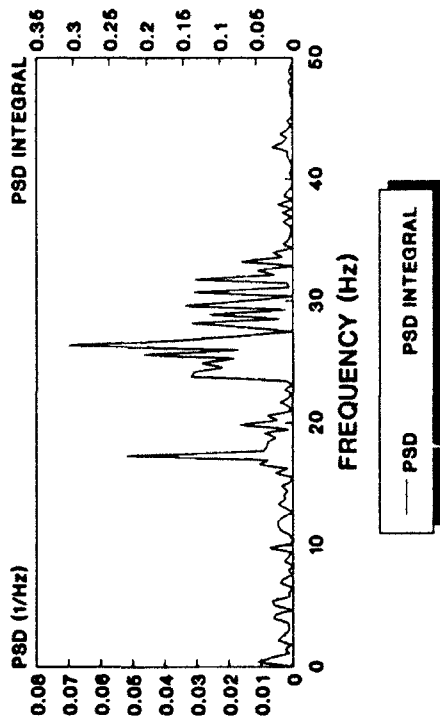
CUBE (R) - HT 8.9 - THETA 30 - AZ 030

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



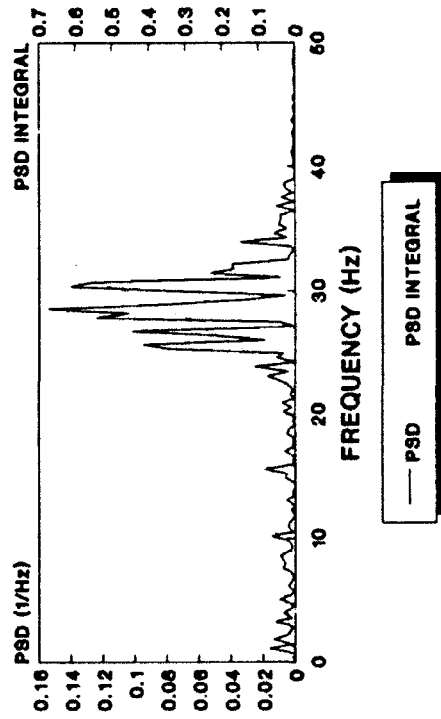
CUBE (R) - HT 8.9 - THETA 30 - AZ 030

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



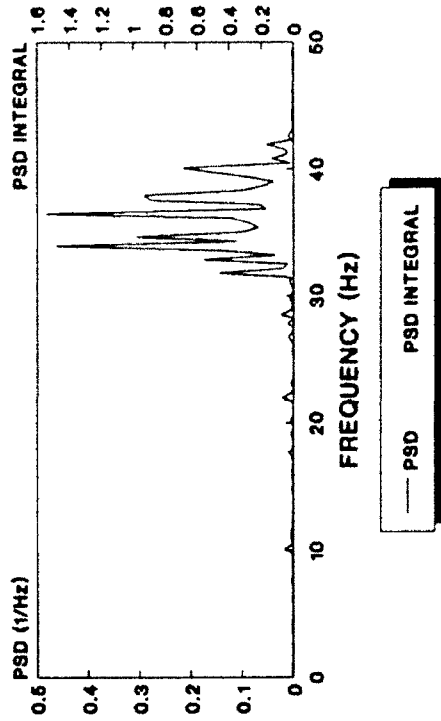
CUBE (R) - HT 8.9 - THETA 30 - AZ 030

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



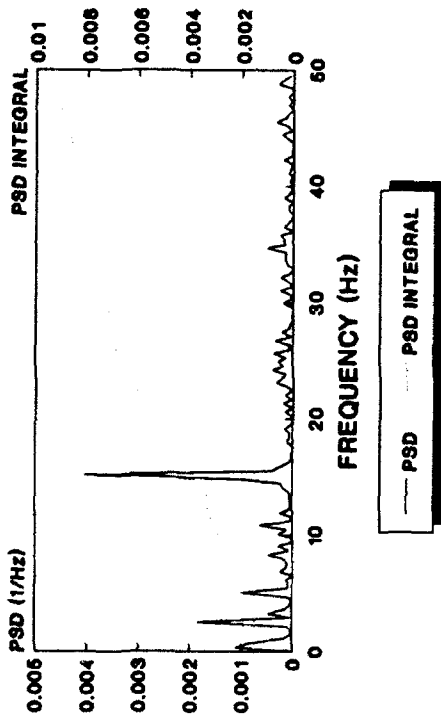
CUBE (R) - HT 8.9 - THETA 30 - AZ 030

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



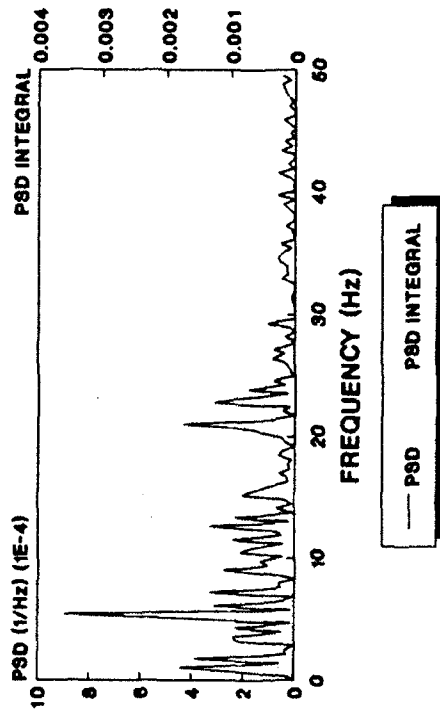
CUBE (R) - HT 8.9 - THETA 30 - AZ 030

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



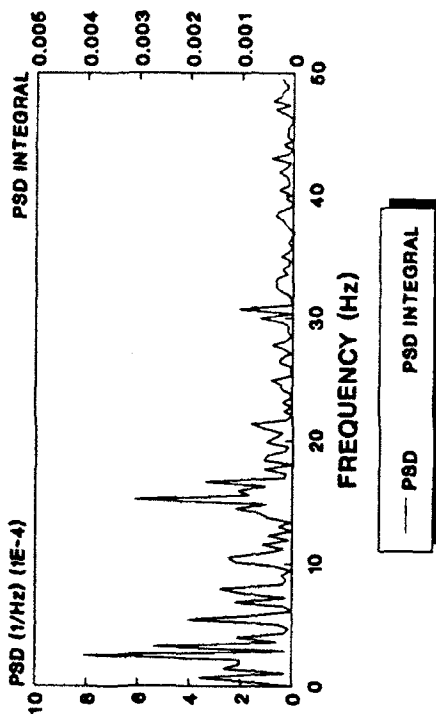
CUBE (R) - HT 8.8 - THETA 30 - AZ 046

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



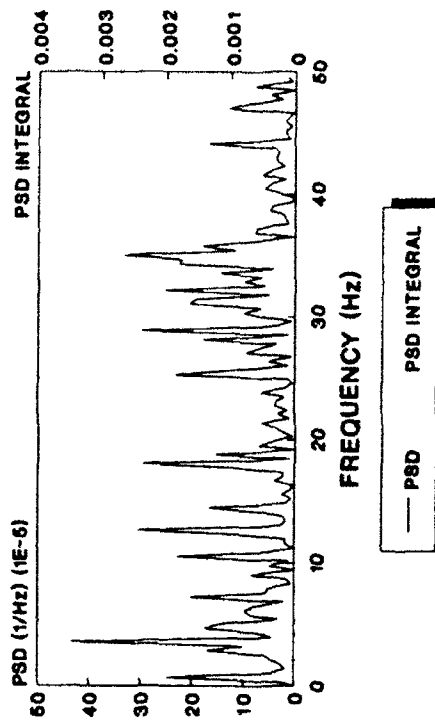
CUBE (R) - HT 8.8 - THETA 30 - AZ 046

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



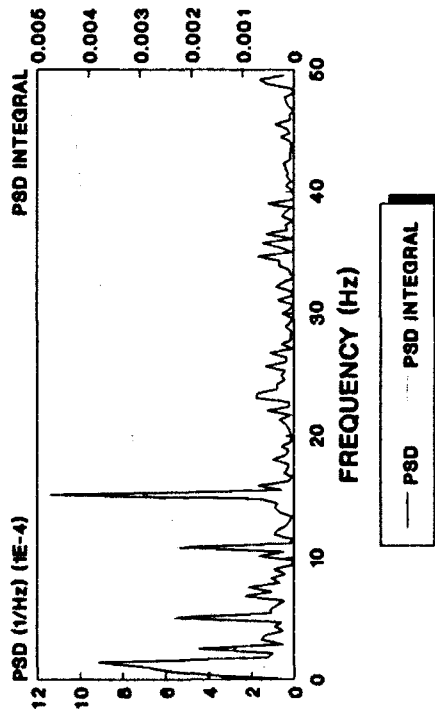
CUBE (R) - HT 8.8 - THETA 30 - AZ 046

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



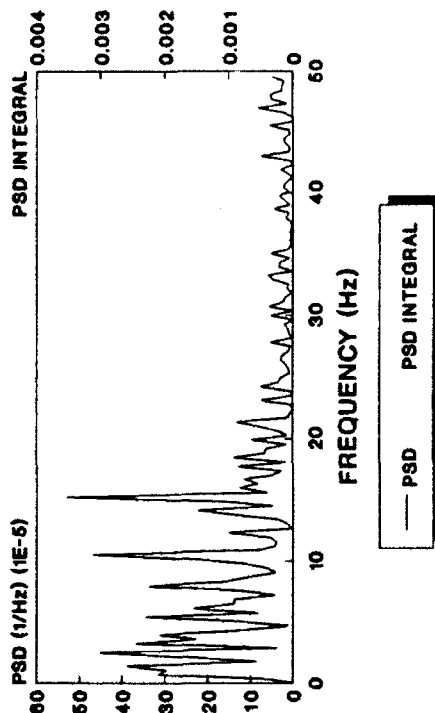
CUBE (R) - HT 8.8 - THETA 30 - AZ 046

MOMENT COEFF - NORMAL **60 FT/SEC NOMINAL**



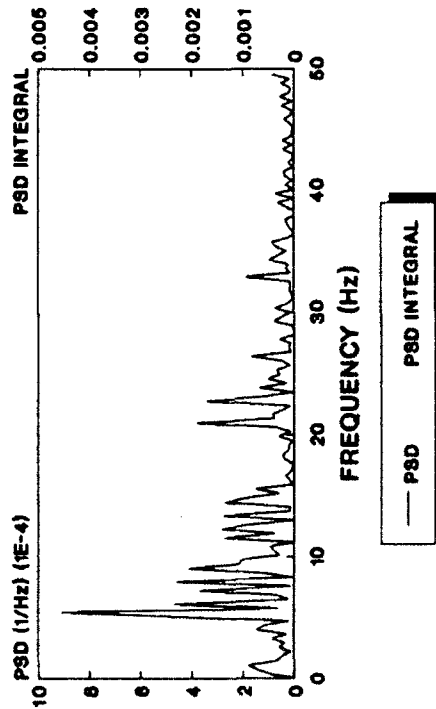
CUBE (R) - HT 8.9 - THETA 30 - AZ 048

MOMENT COEFF - NORMAL **90 FT/SEC NOMINAL**



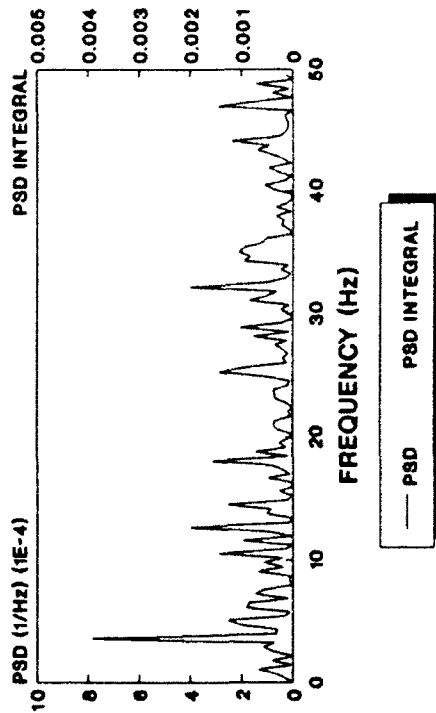
CUBE (R) - HT 8.9 - THETA 30 - AZ 048

MOMENT COEFF - NORMAL **120 FT/SEC NOMINAL**



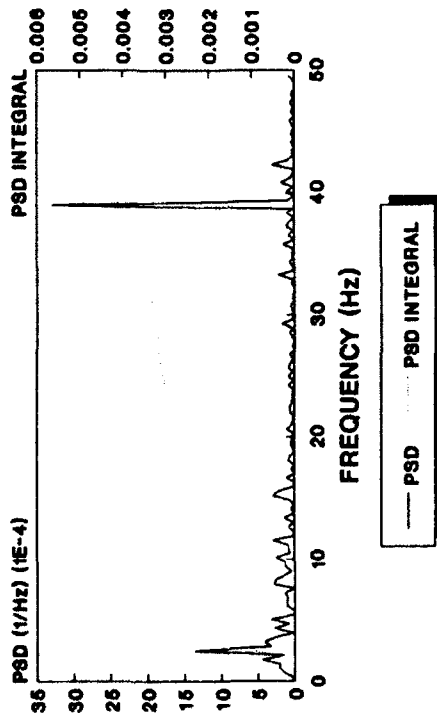
CUBE (R) - HT 8.9 - THETA 30 - AZ 048

MOMENT COEFF - NORMAL **180 FT/SEC NOMINAL**



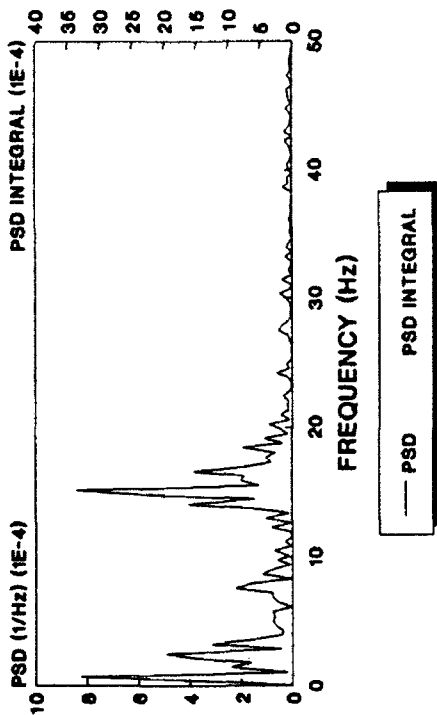
CUBE (R) - HT 8.9 - THETA 30 - AZ 048

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



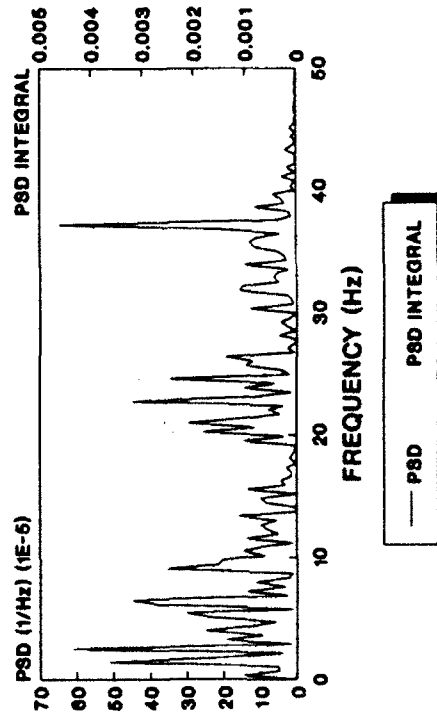
CUBE (R) - HT 8.9 - THETA 30 - AZ 045

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



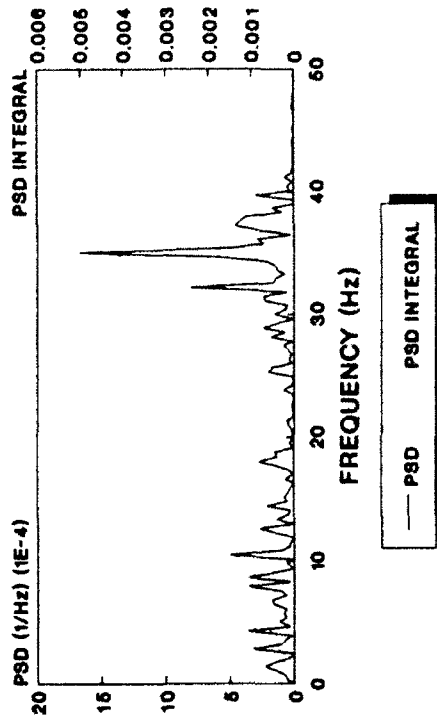
CUBE (R) - HT 8.9 - THETA 30 - AZ 046

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



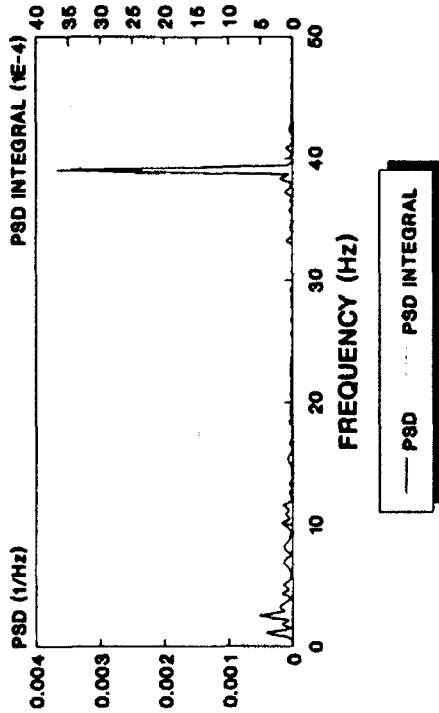
CUBE (R) - HT 8.9 - THETA 30 - AZ 045

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



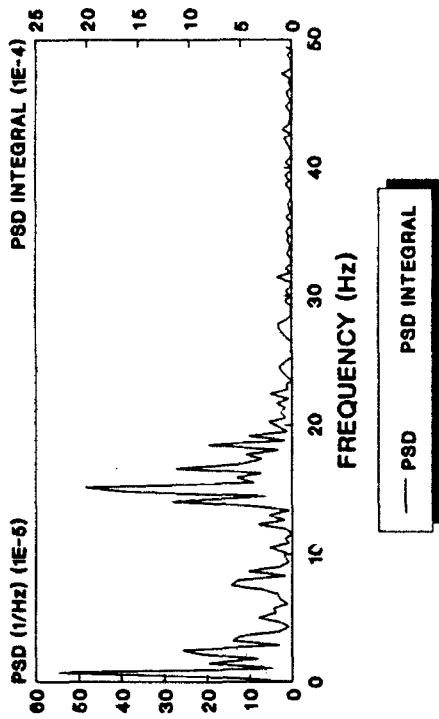
CUBE (R) - HT 8.9 - THETA 30 - AZ 046

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



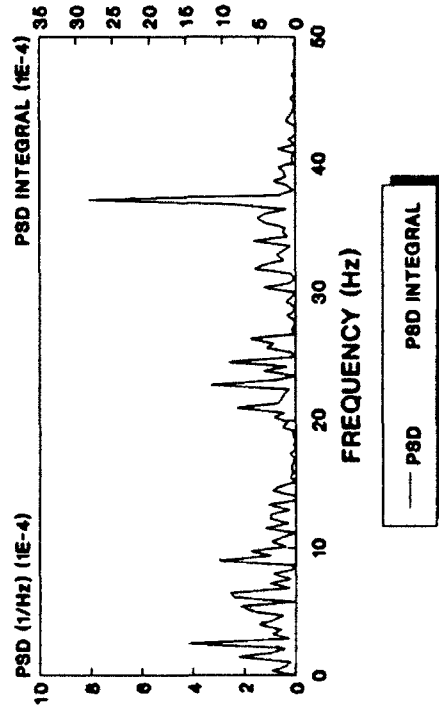
CUBE (R) - HT 8.9 - THETA 30 - AZ 045

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



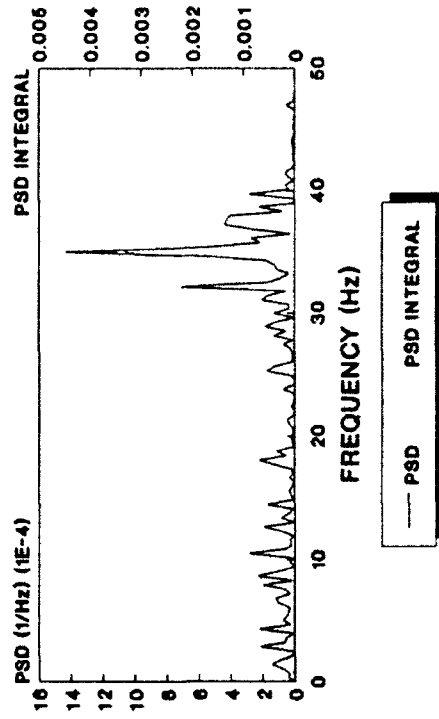
CUBE (R) - HT 8.9 - THETA 30 - AZ 045

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



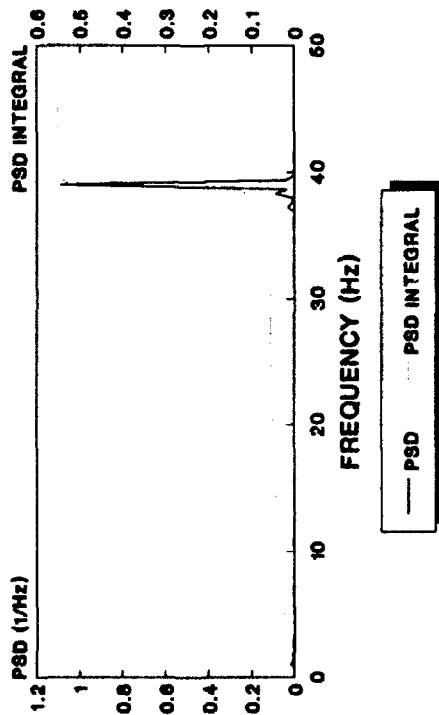
CUBE (R) - HT 8.9 - THETA 30 - AZ 045

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



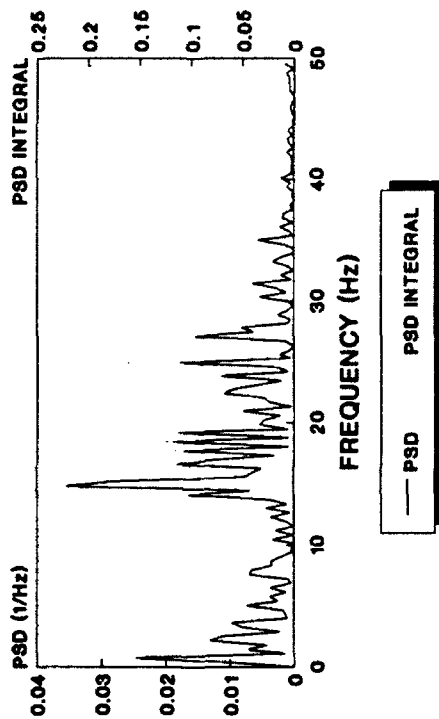
CUBE (R) - HT 8.9 - THETA 30 - AZ 045

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



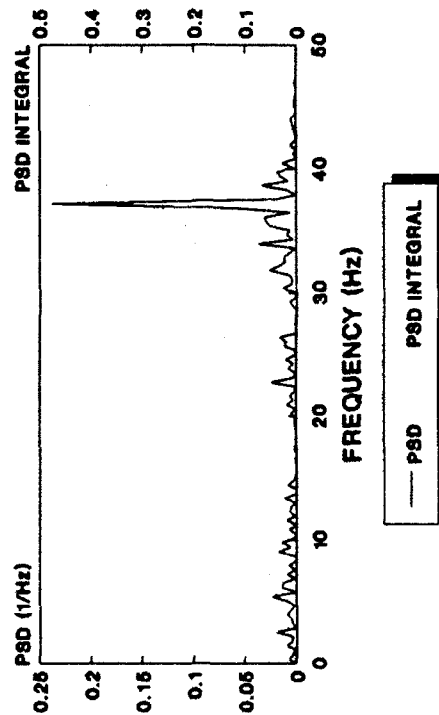
CUBE (R) - HT 8.9 - THETA 30 - AZ 045

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



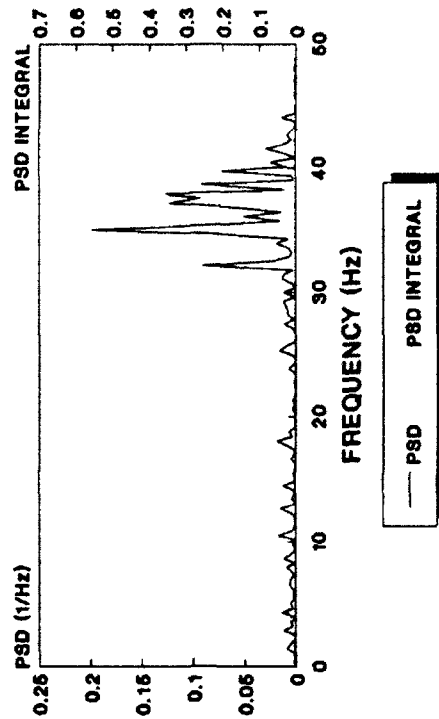
CUBE (R) - HT 8.9 - THETA 30 - AZ 045

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



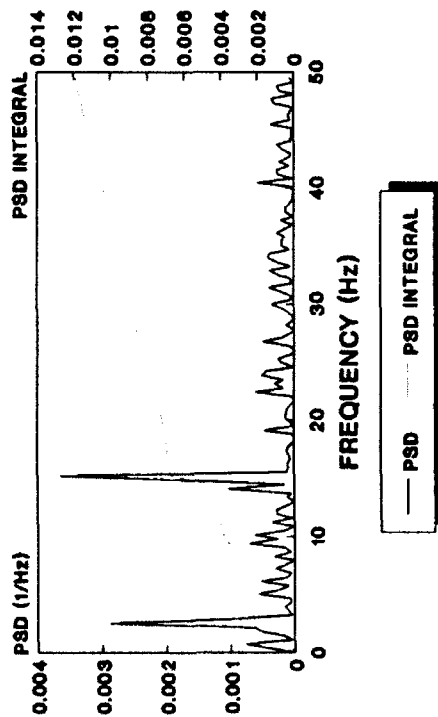
CUBE (R) - HT 8.9 - THETA 30 - AZ 045

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



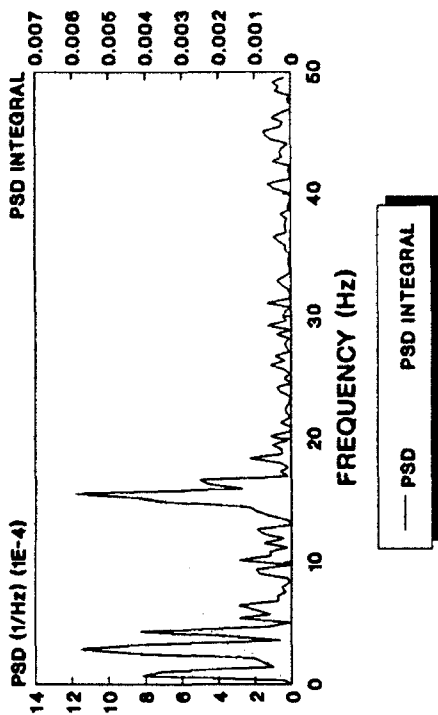
CUBE (R) - HT 8.9 - THETA 30 - AZ 045

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



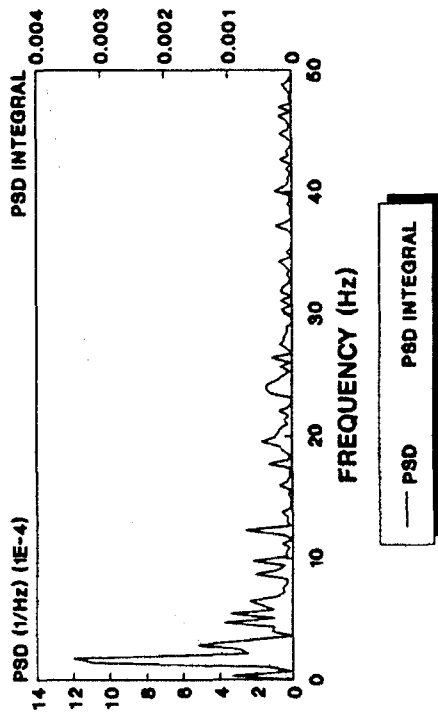
CUBE (R) - MT 8.9 - THETA 30 - AZ 060

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



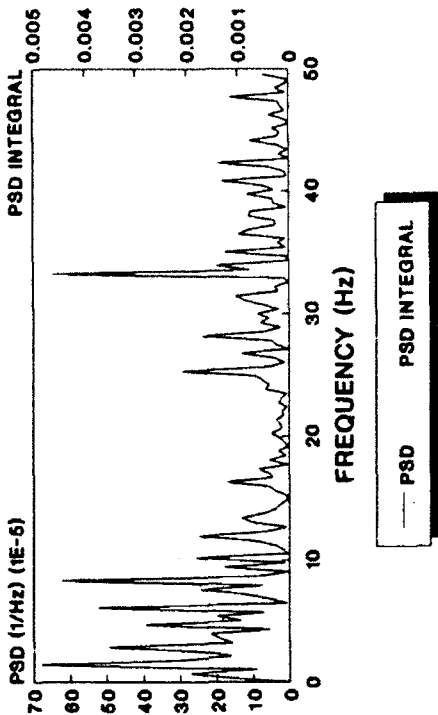
CUBE (R) - MT 8.9 - THETA 30 - AZ 060

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



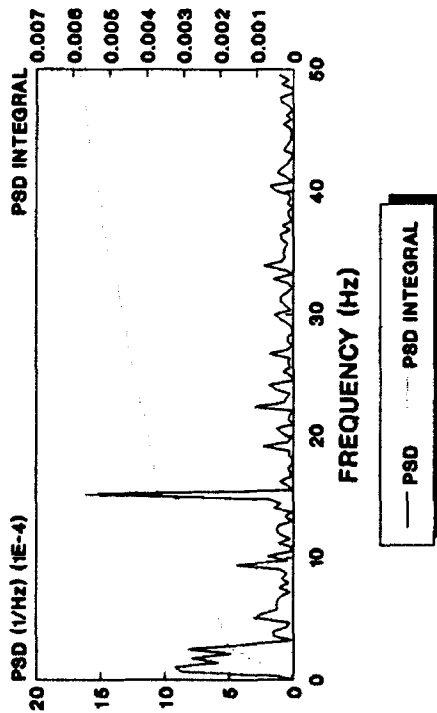
CUBE (R) - MT 8.9 - THETA 30 - AZ 060

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



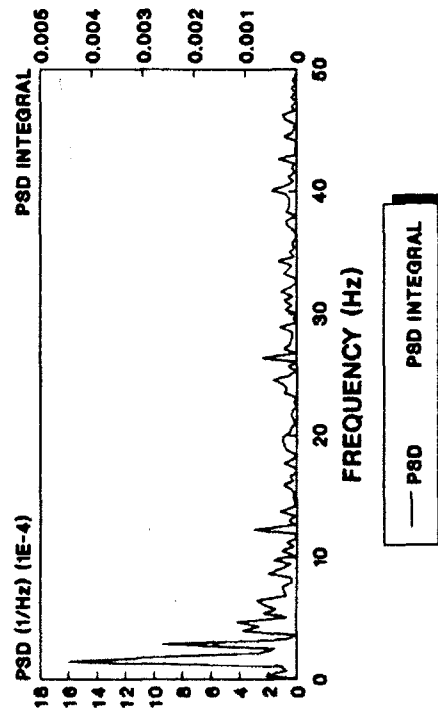
CUBE (R) - MT 8.9 - THETA 30 - AZ 060

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



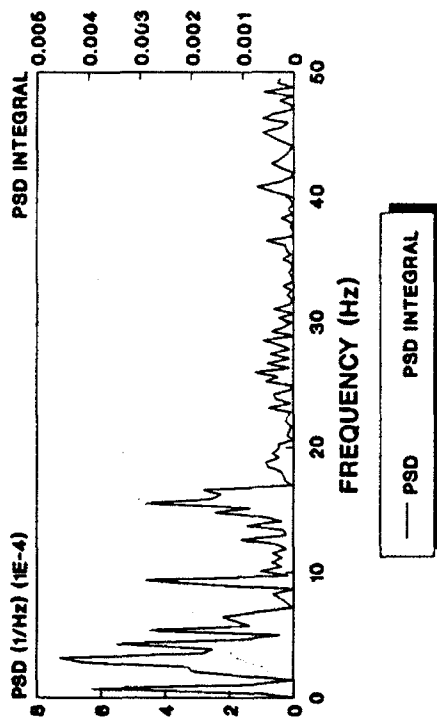
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



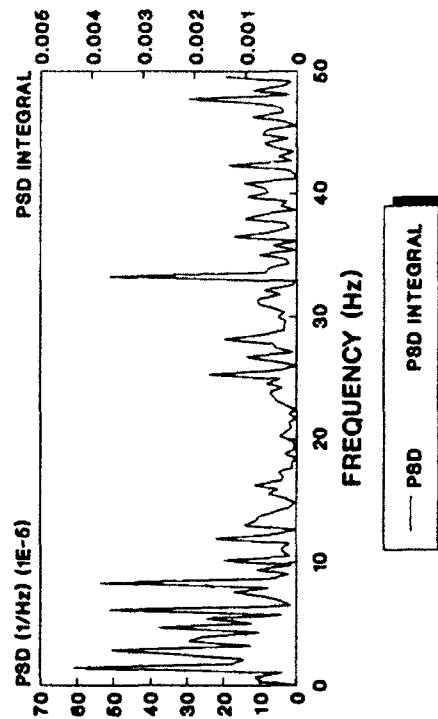
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



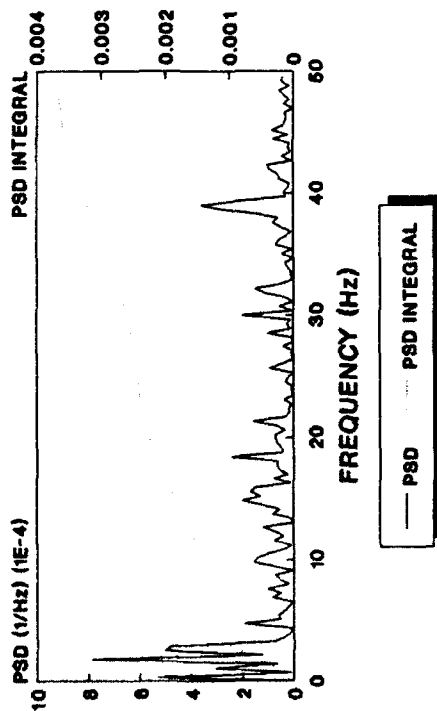
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



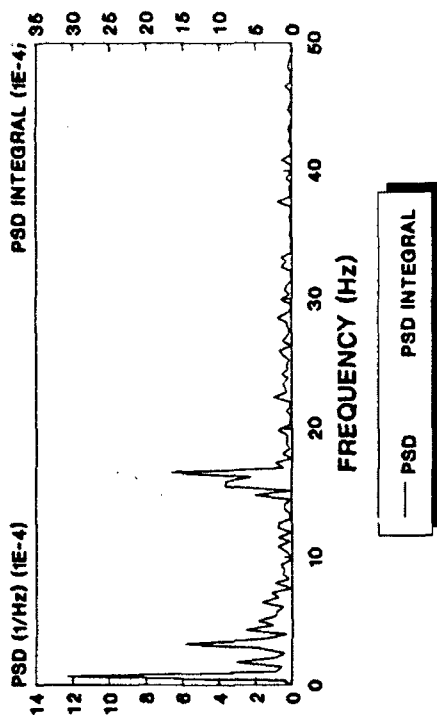
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



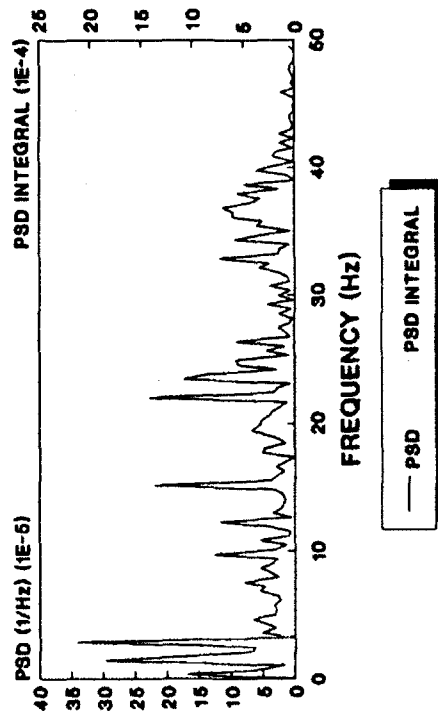
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



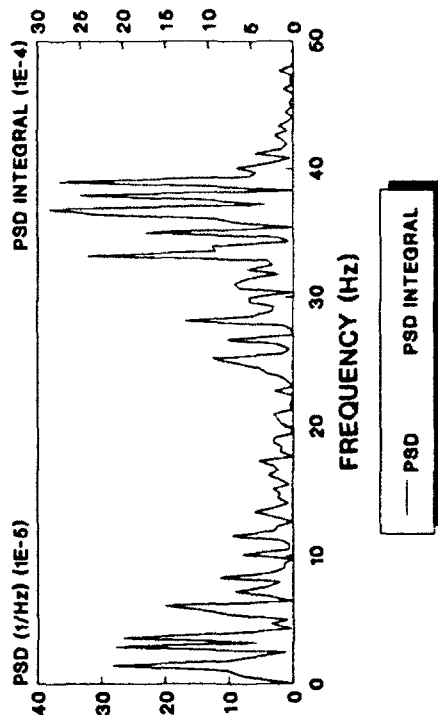
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



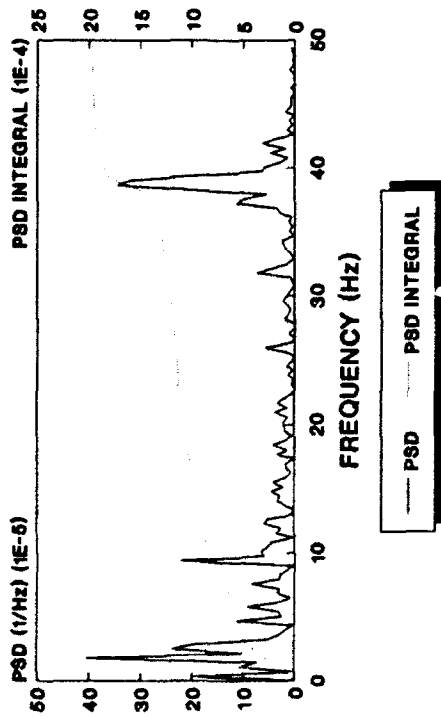
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



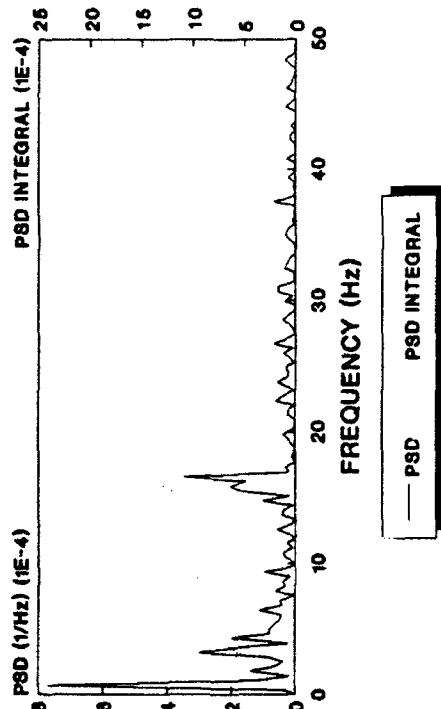
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



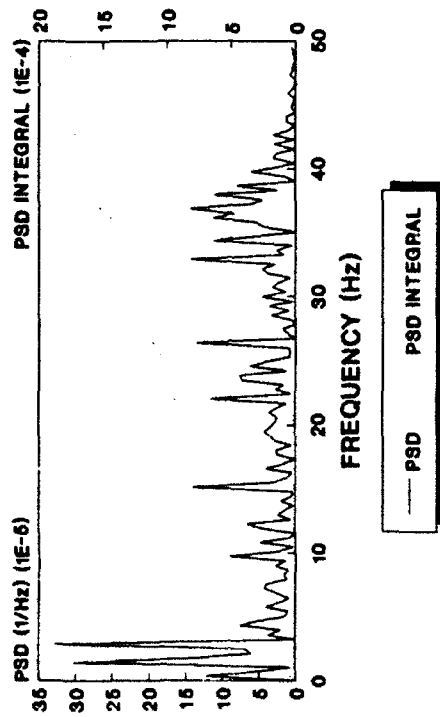
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



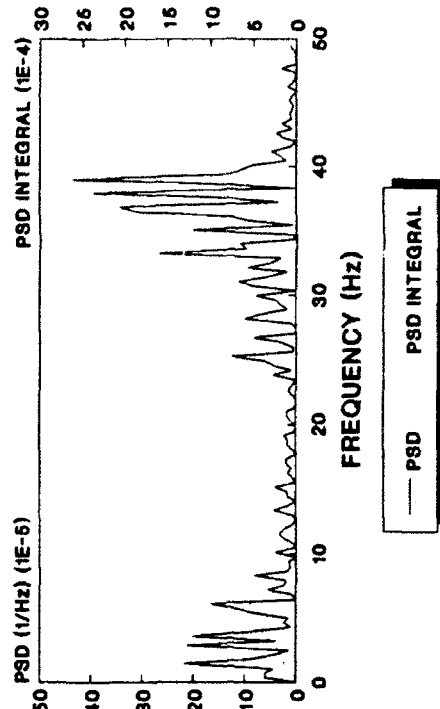
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



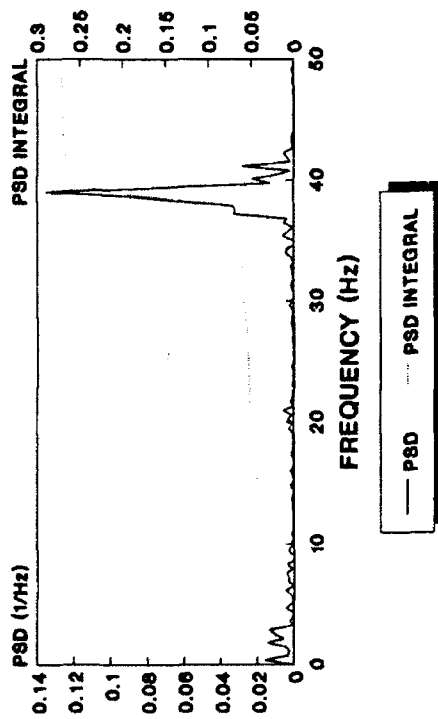
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



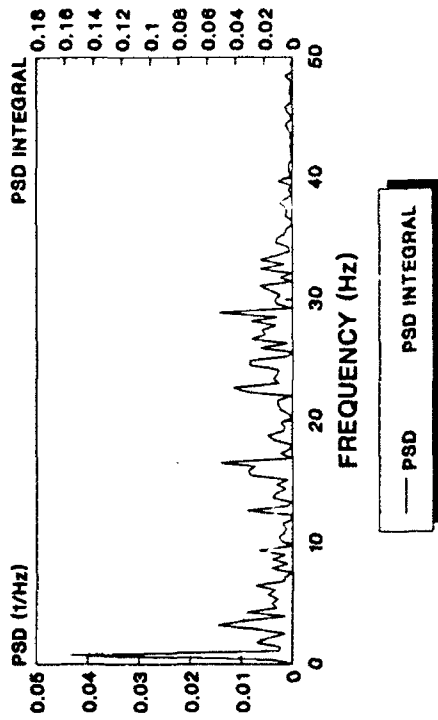
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



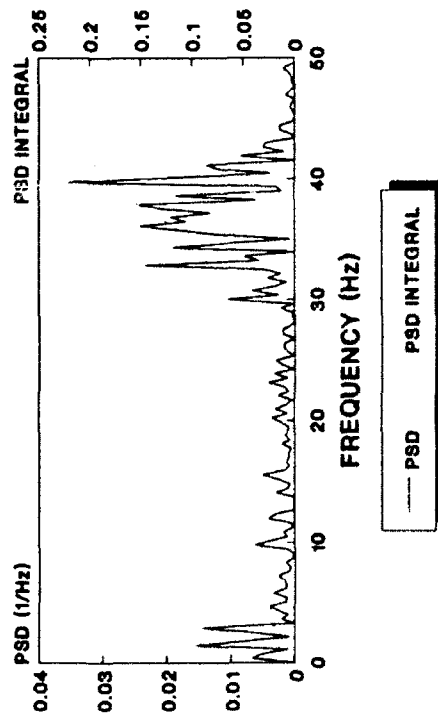
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



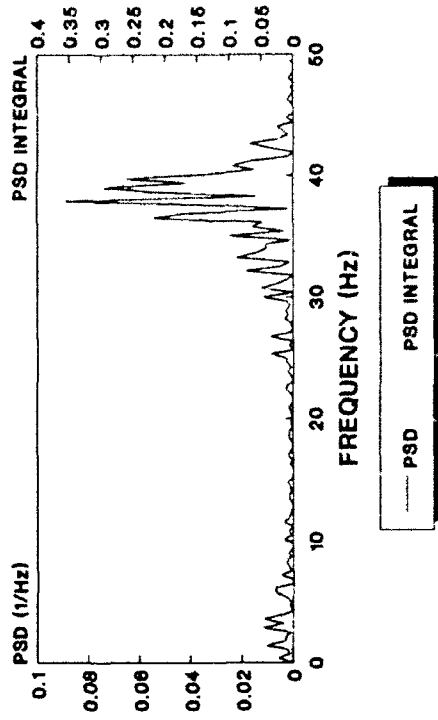
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



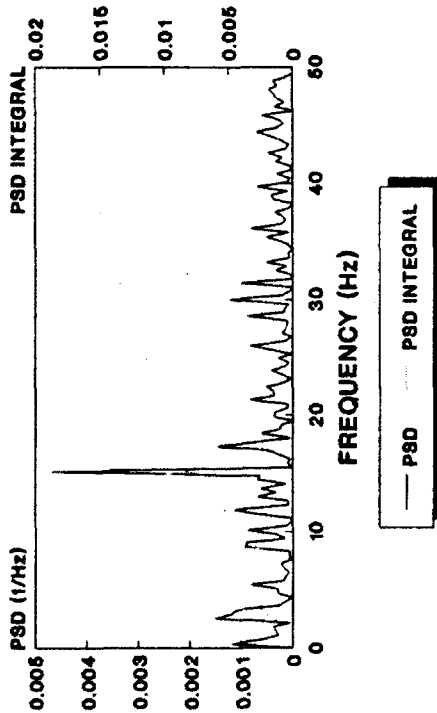
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



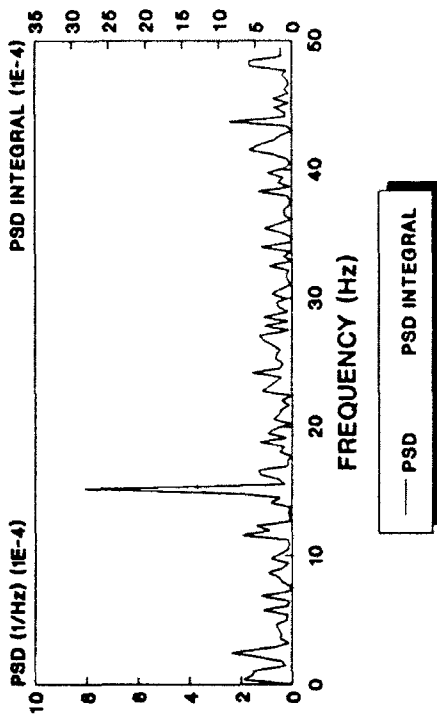
CUBE (R) - HT 8.9 - THETA 30 - AZ 060

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



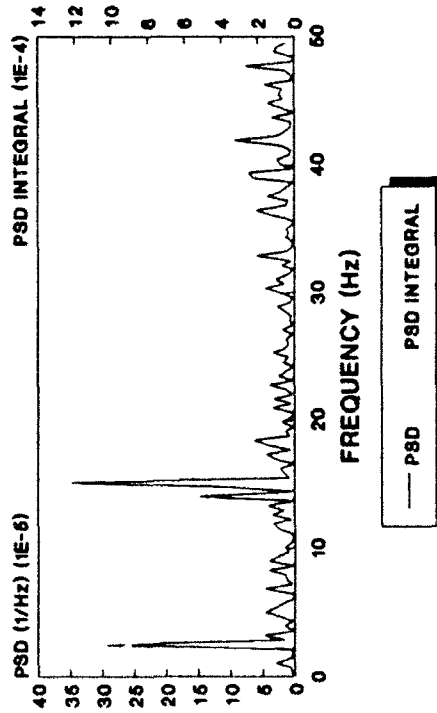
CUBE (R) - HT 8.9 - THETA 30 - AZ 090

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



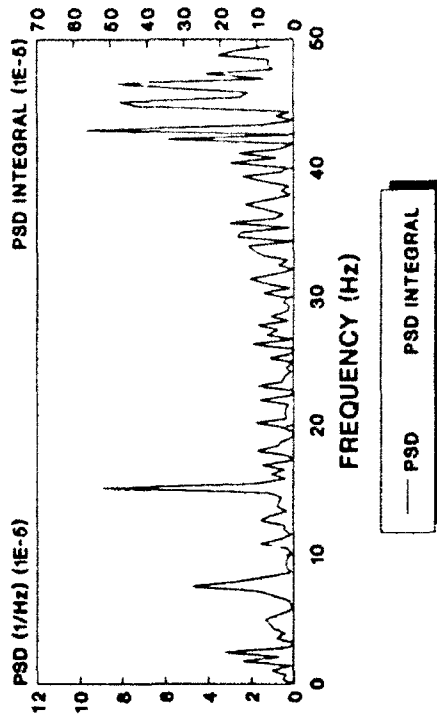
CUBE (R) - HT 8.9 - THETA 30 - AZ 090

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



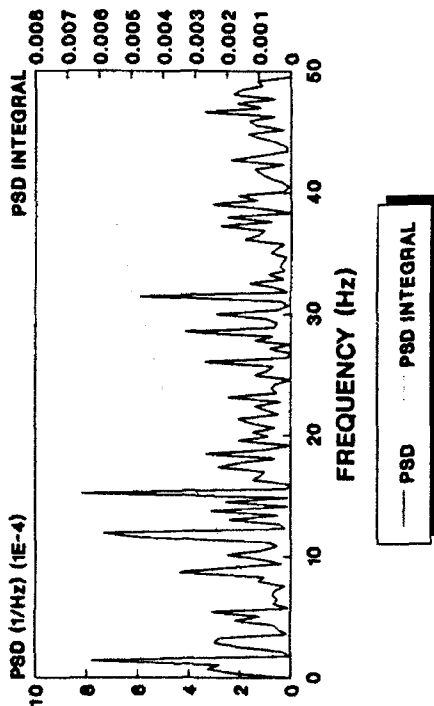
CUBE (R) - HT 8.9 - THETA 30 - AZ 090

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



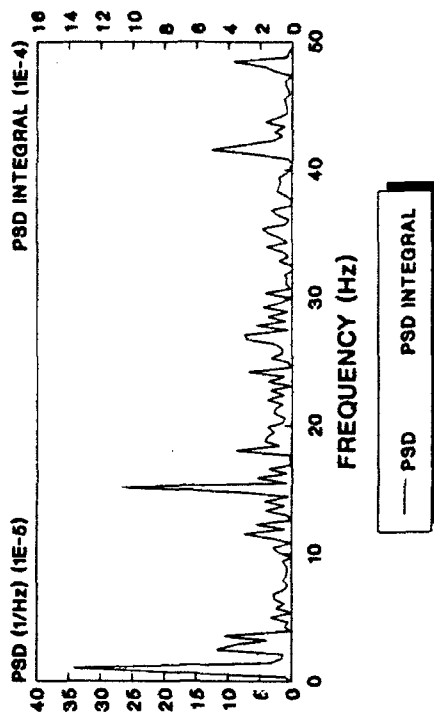
CUBE (R) - HT 8.9 - THETA 30 - AZ 090

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



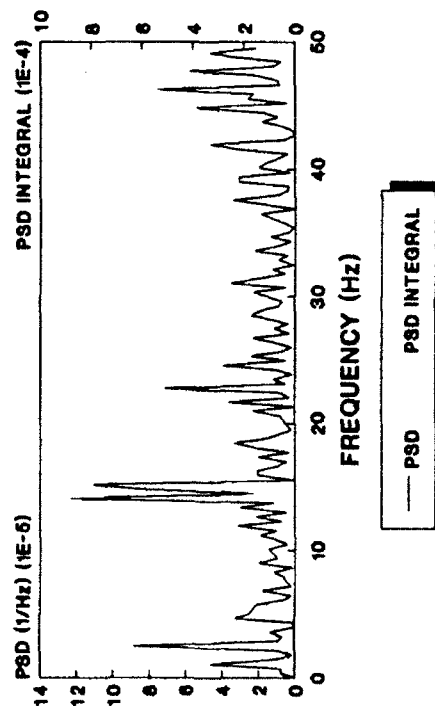
CUBE (R) - HT 8.8 - THETA 30 - AZ 090

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



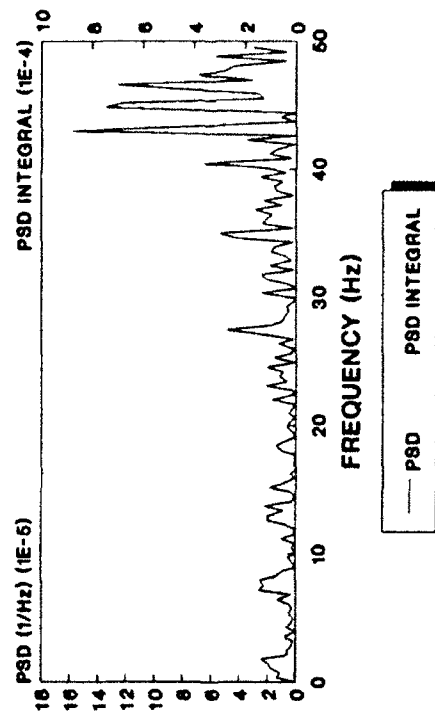
CUBE (R) - HT 8.8 - THETA 30 - AZ 090

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



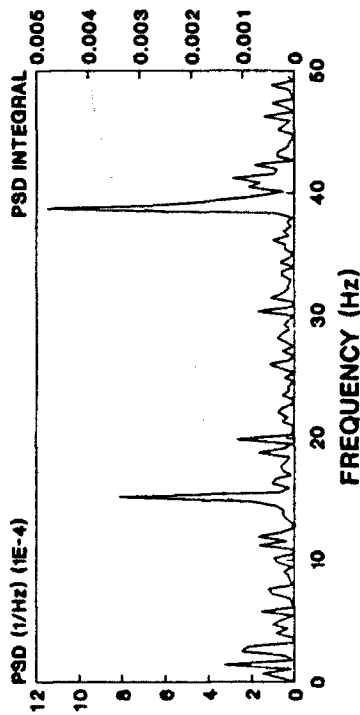
CUBE (R) - HT 8.8 - THETA 30 - AZ 090

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



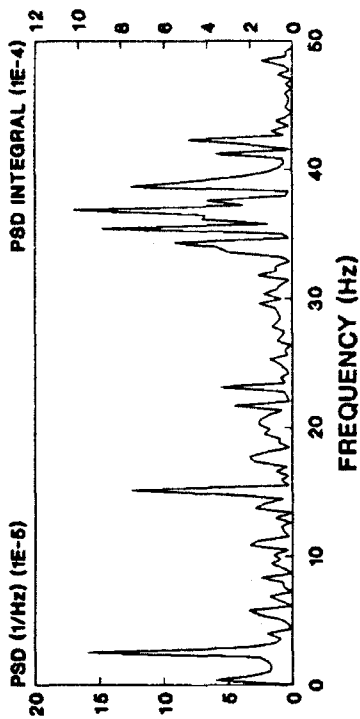
CUBE (R) - HT 8.8 - THETA 30 - AZ 090

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



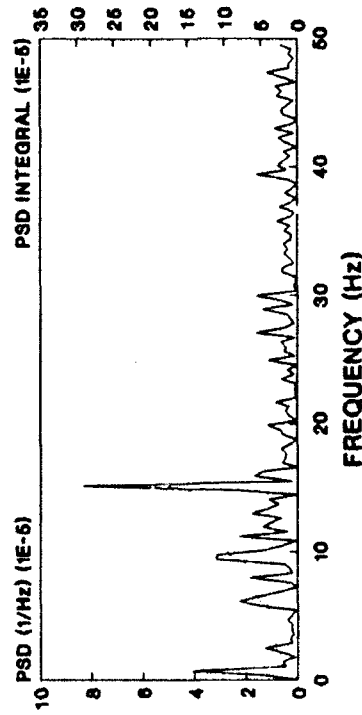
CUBE (R) - HT 8.9 - THETA 30 - AZ 090

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



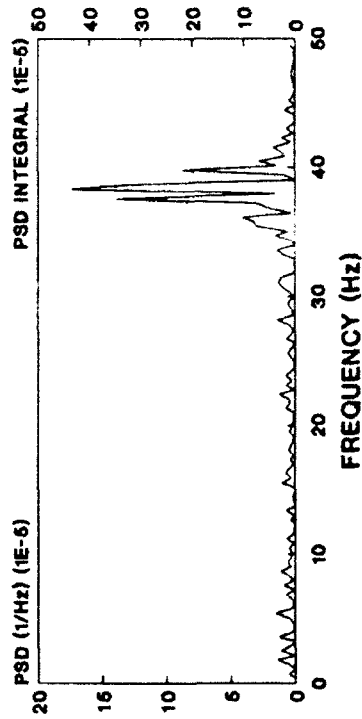
CUBE (R) - HT 8.9 - THETA 30 - AZ 090

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



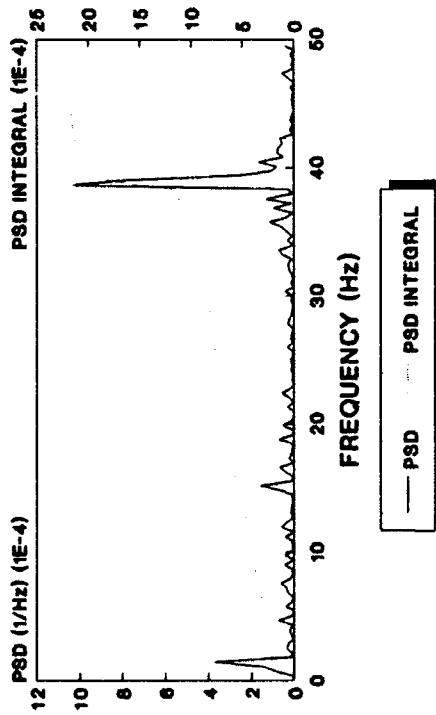
CUBE (R) - HT 8.9 - THETA 30 - AZ 090

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



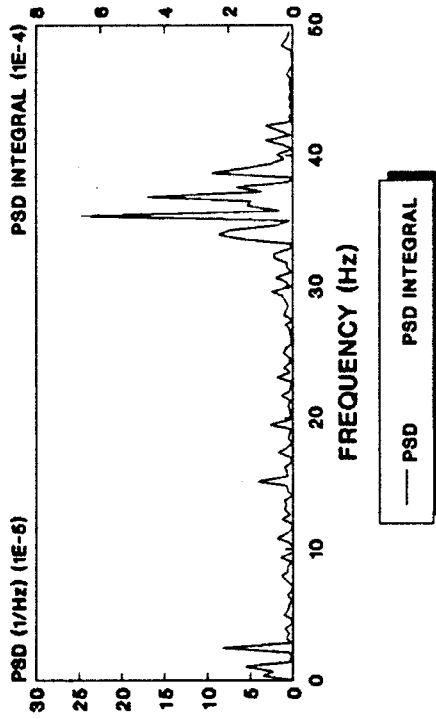
CUBE (R) - HT 8.9 - THETA 30 - AZ 090

MOMENT COEFF - LATERAL **60 FT/SEC NOMINAL**



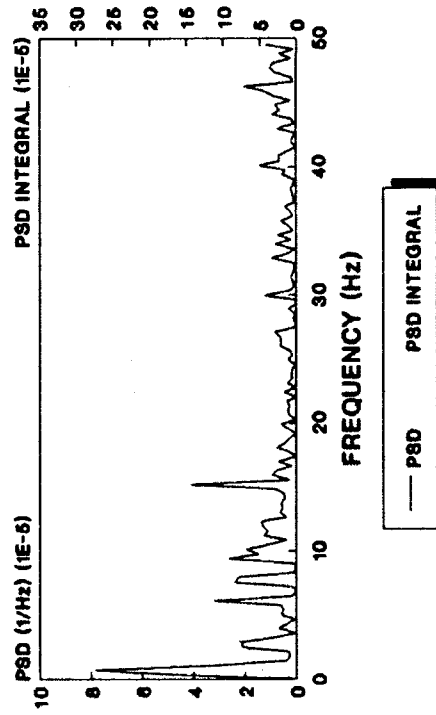
CUBE (R) - MT 8.9 - THETA 30 - AZ 090

MOMENT COEFF - LATERAL **90 FT/SEC NOMINAL**



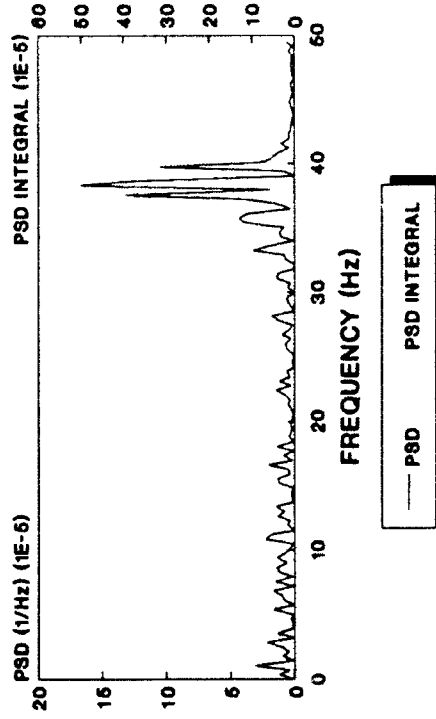
CUBE (R) - MT 8.9 - THETA 30 - AZ 090

MOMENT COEFF - LATERAL **120 FT/SEC NOMINAL**



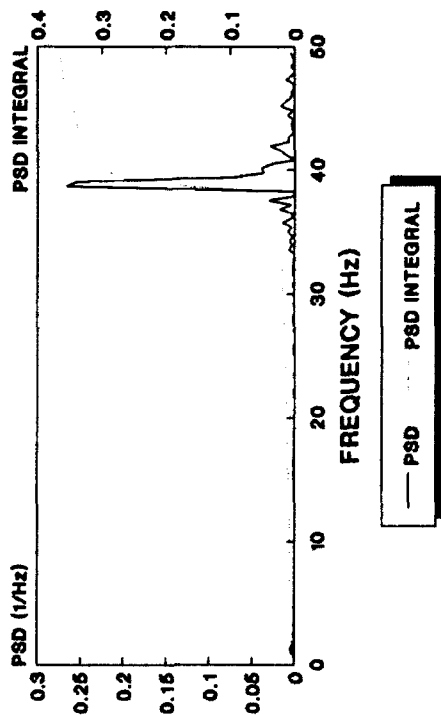
CUBE (R) - MT 8.9 - THETA 30 - AZ 090

MOMENT COEFF - LATERAL **180 FT/SEC NOMINAL**



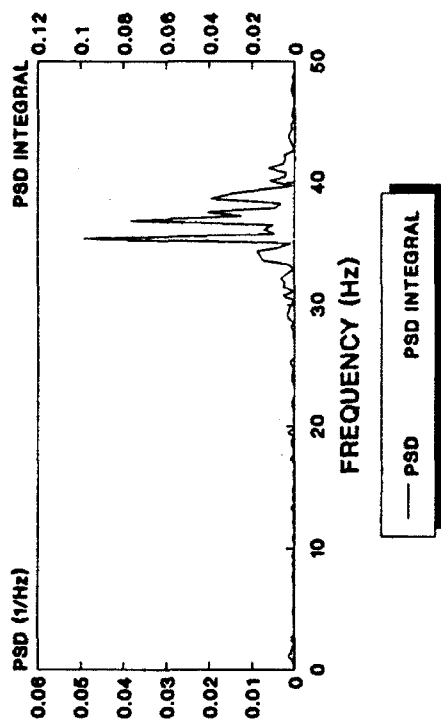
CUBE (R) - MT 8.9 - THETA 30 - AZ 090

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



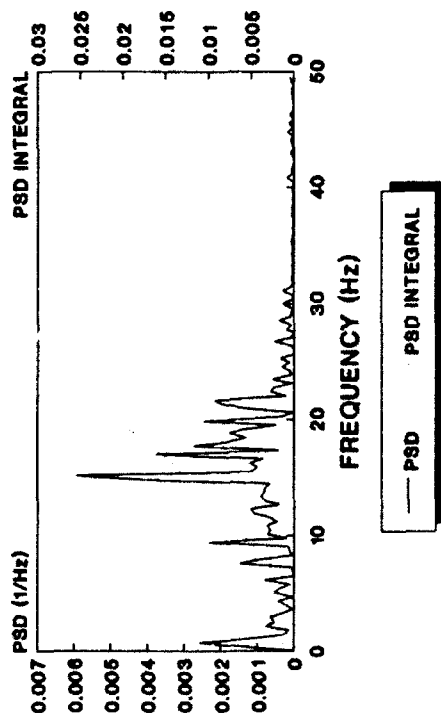
CUBE (R) - HT 8.8 - THETA 30 - AZ 090

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



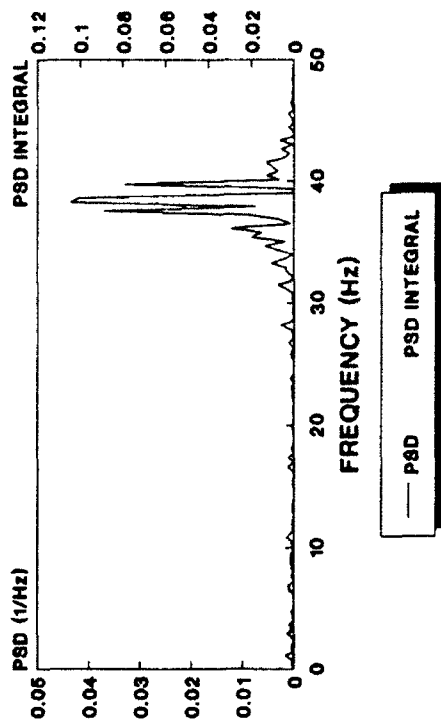
CUBE (R) - HT 8.8 - THETA 30 - AZ 090

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



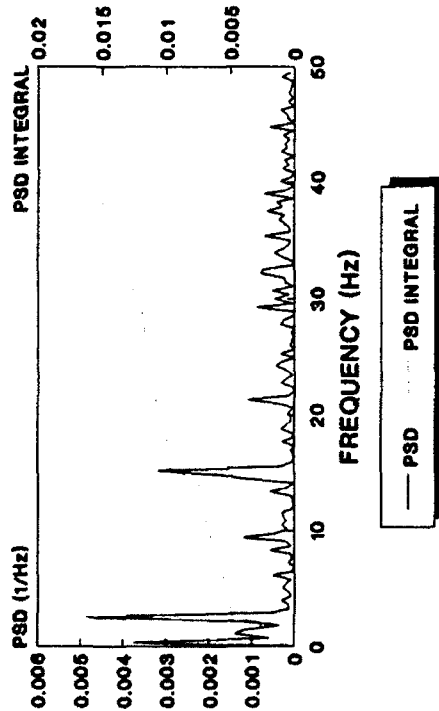
CUBE (R) - HT 8.8 - THETA 30 - AZ 090

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



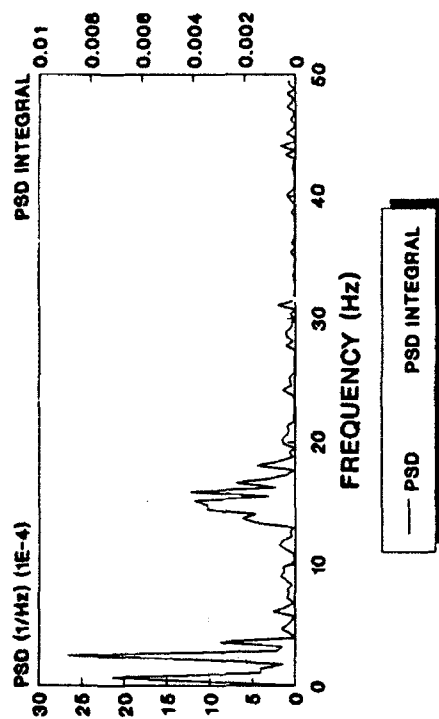
CUBE (R) - HT 8.8 - THETA 30 - AZ 090

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



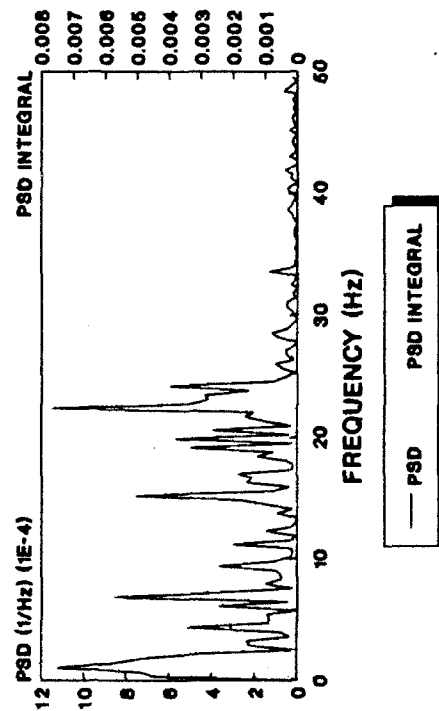
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



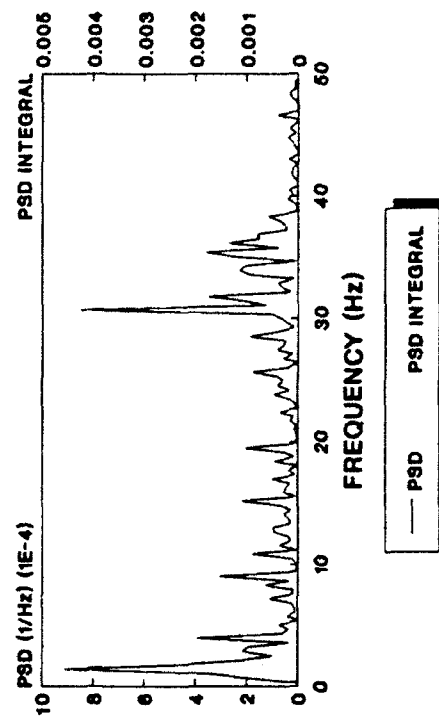
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



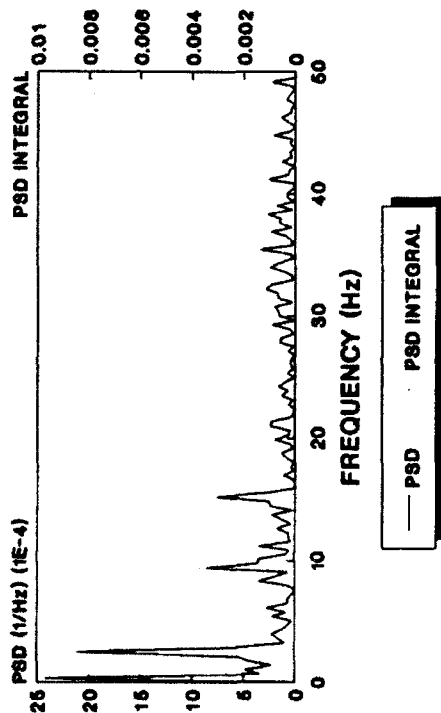
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



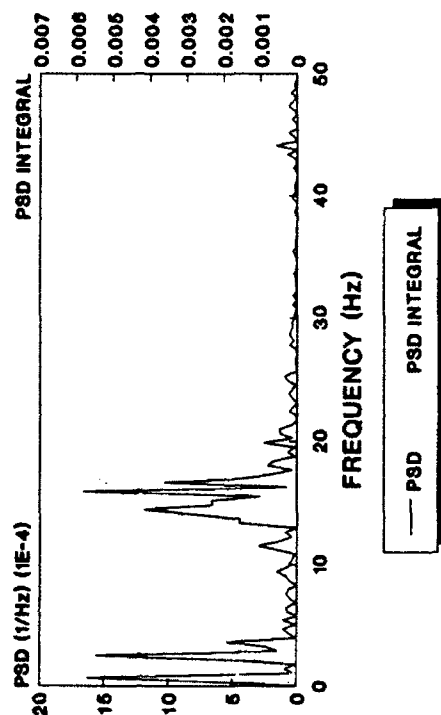
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



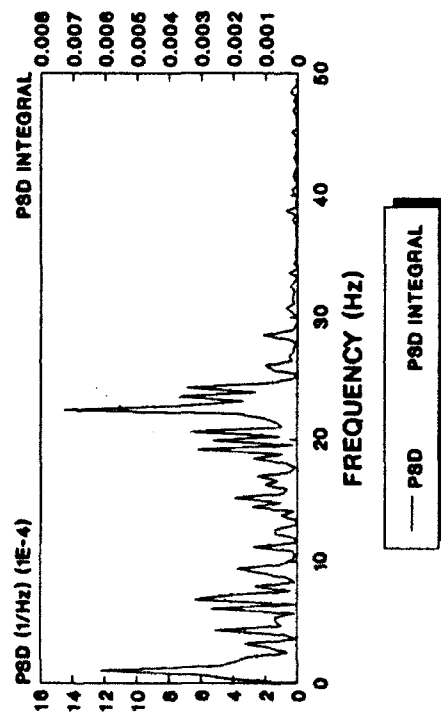
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



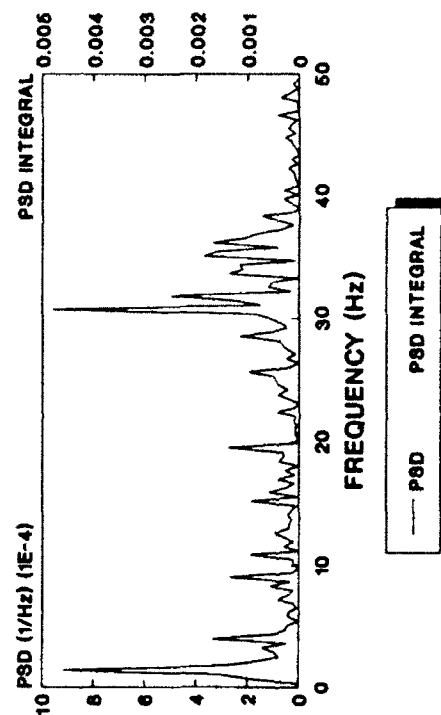
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



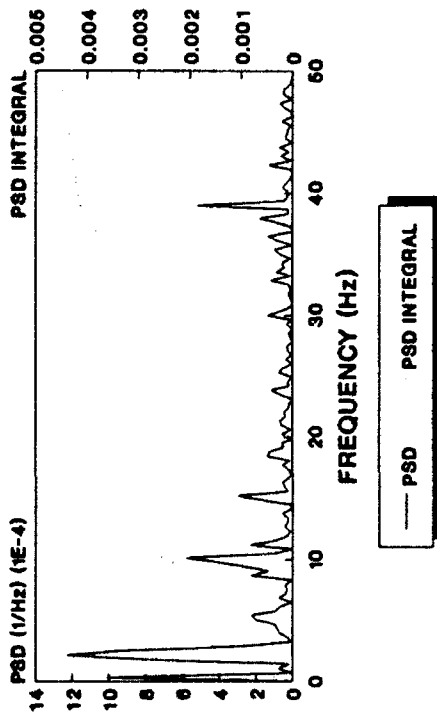
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



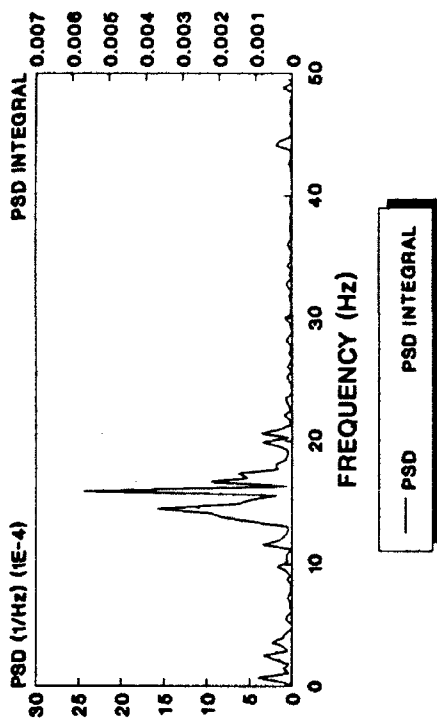
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



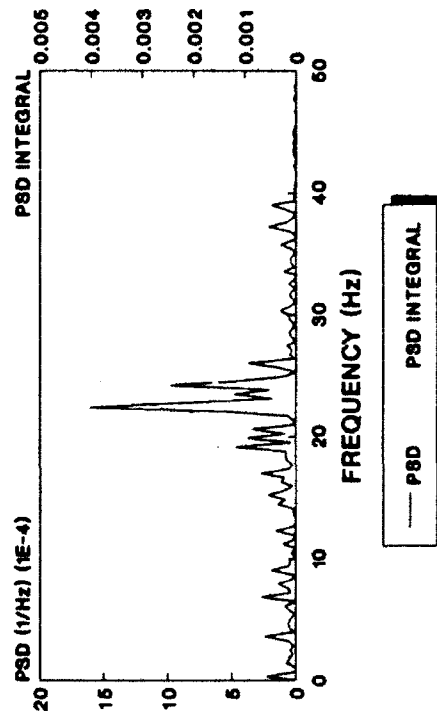
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



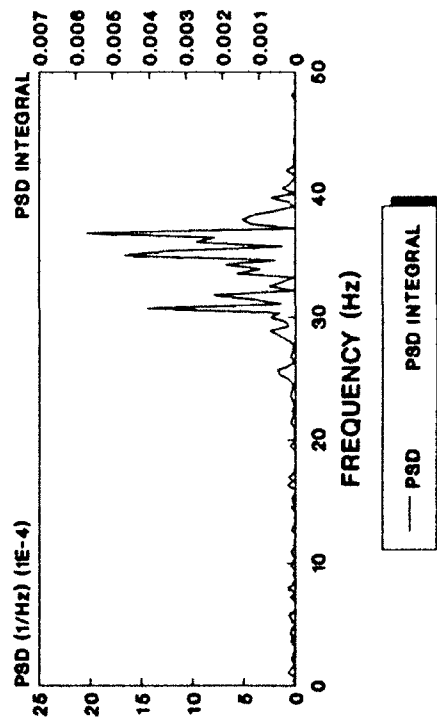
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



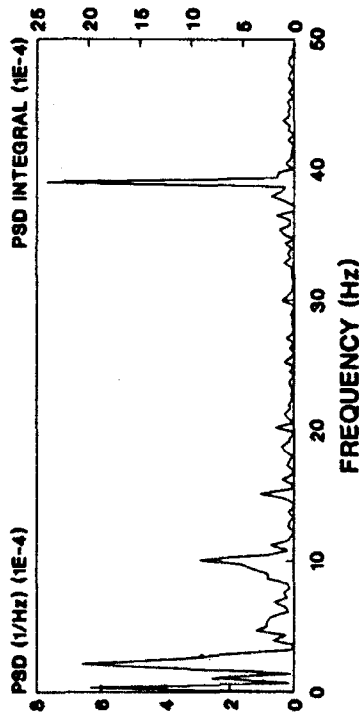
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



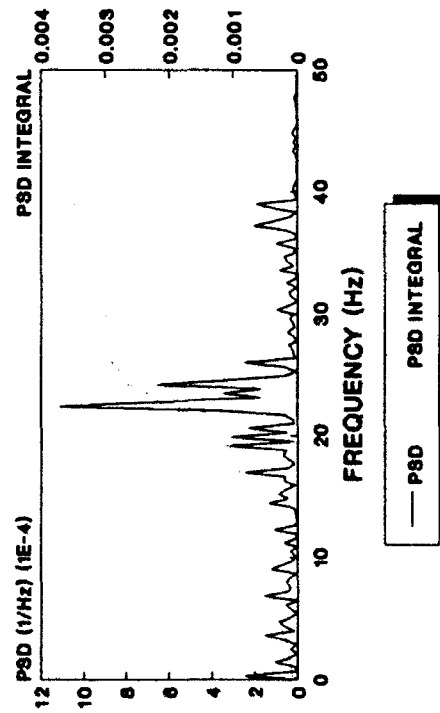
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



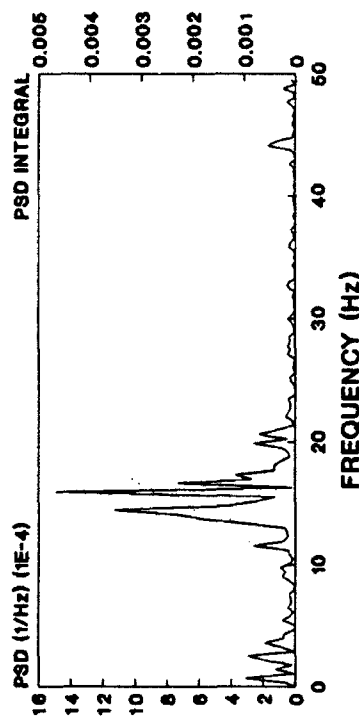
CUBE (R) - HT 6.9 - THETA 30 - AZ 120

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



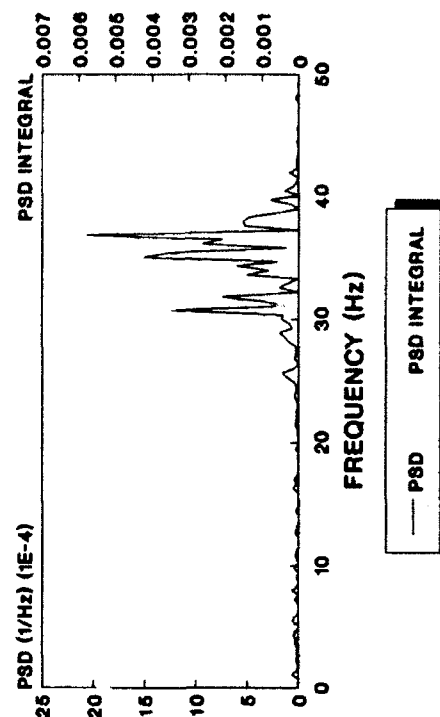
CUBE (R) - HT 6.9 - THETA 30 - AZ 120

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



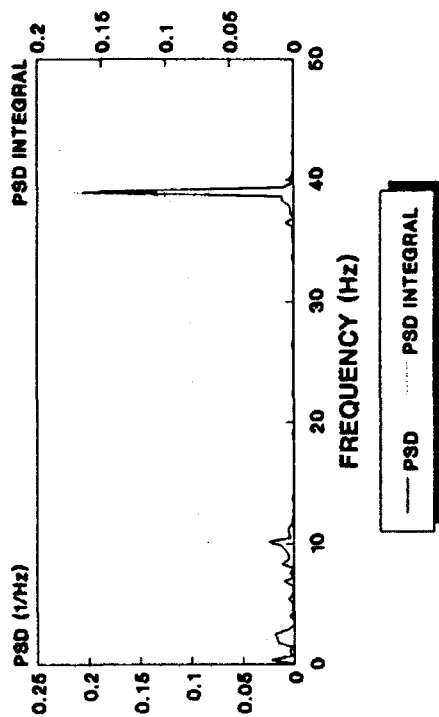
CUBE (R) - HT 6.9 - THETA 30 - AZ 120

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



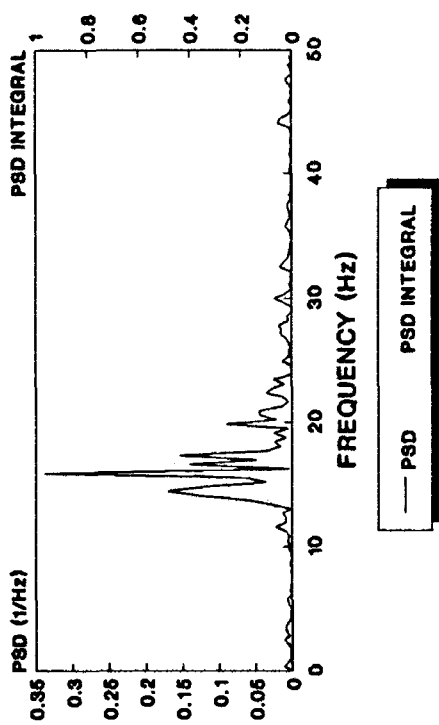
CUBE (R) - HT 6.9 - THETA 30 - AZ 120

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



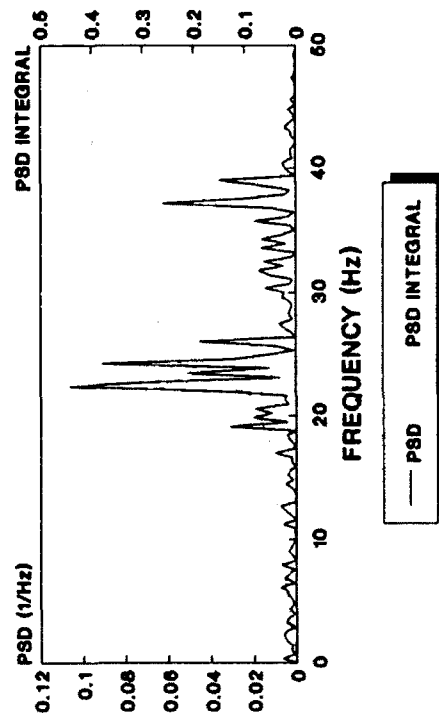
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



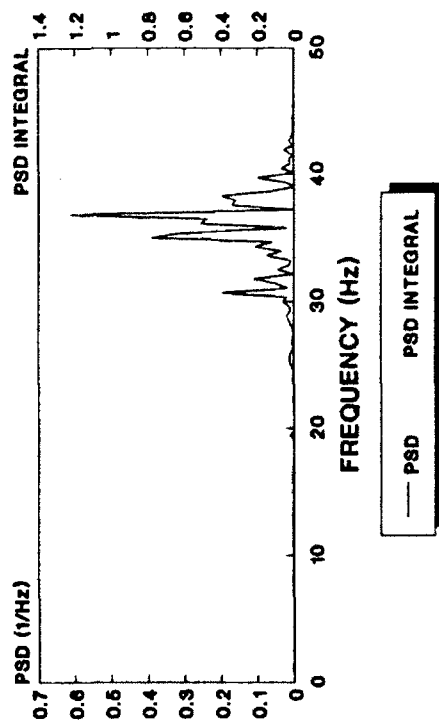
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



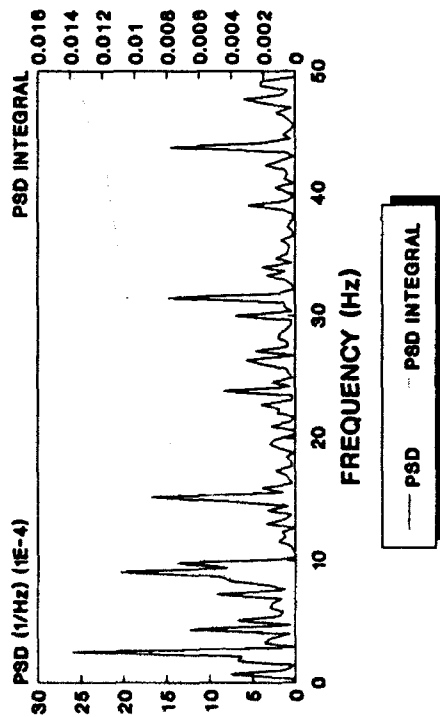
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



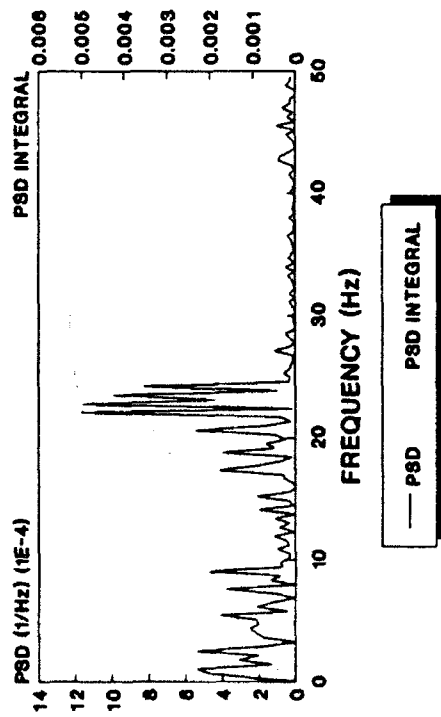
CUBE (R) - HT 8.9 - THETA 30 - AZ 120

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



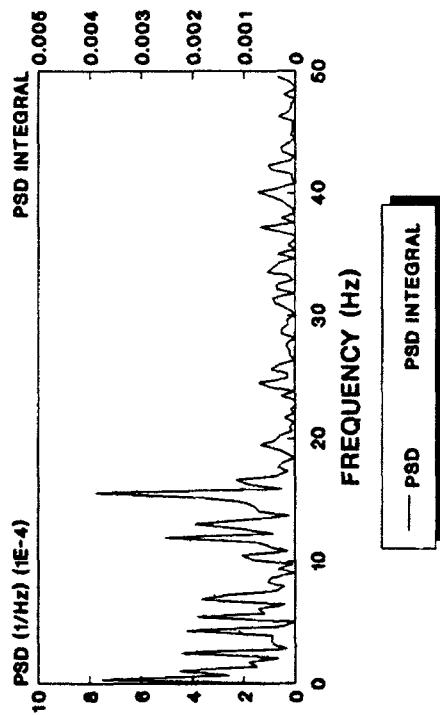
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



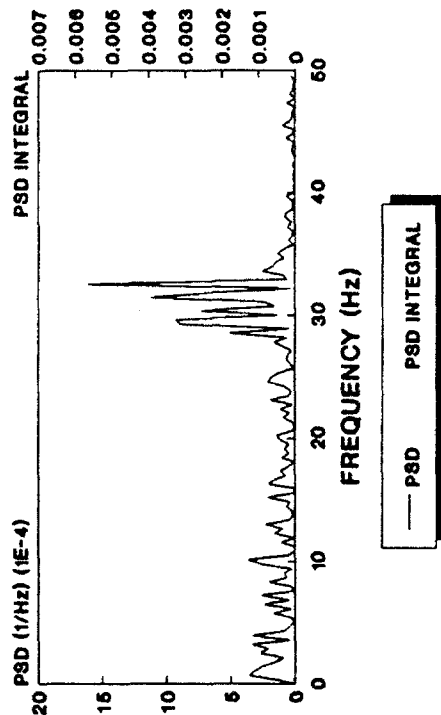
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



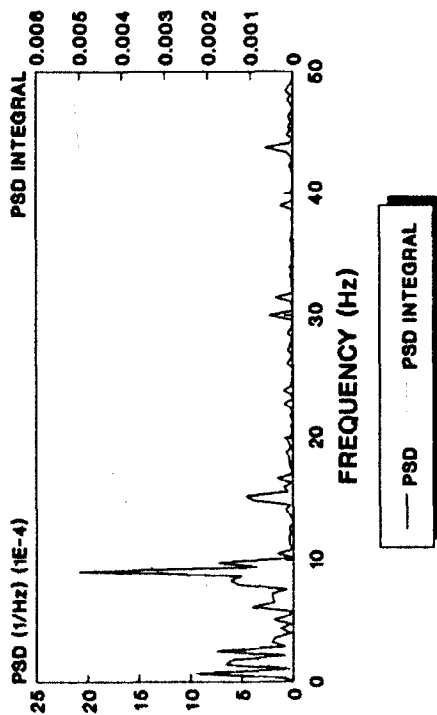
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FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



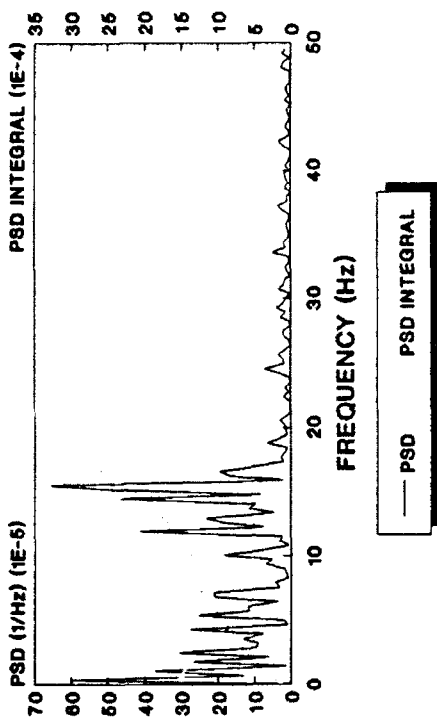
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MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



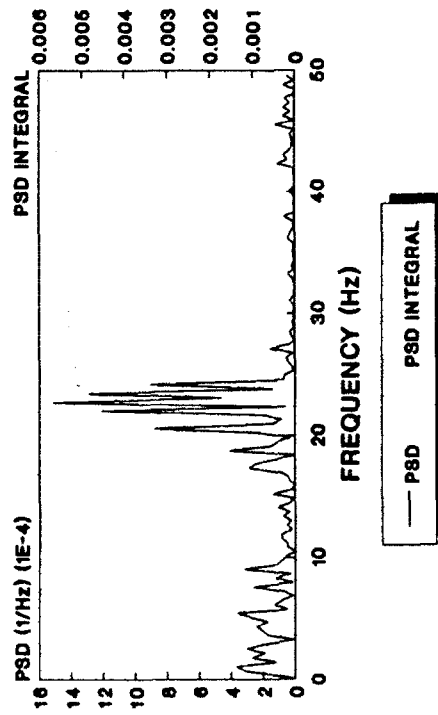
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



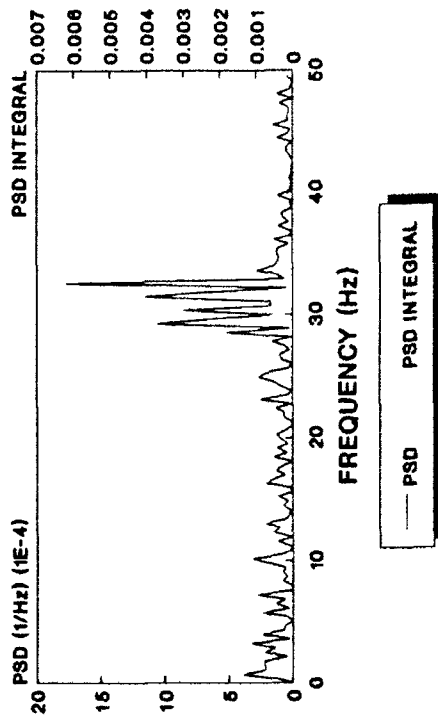
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



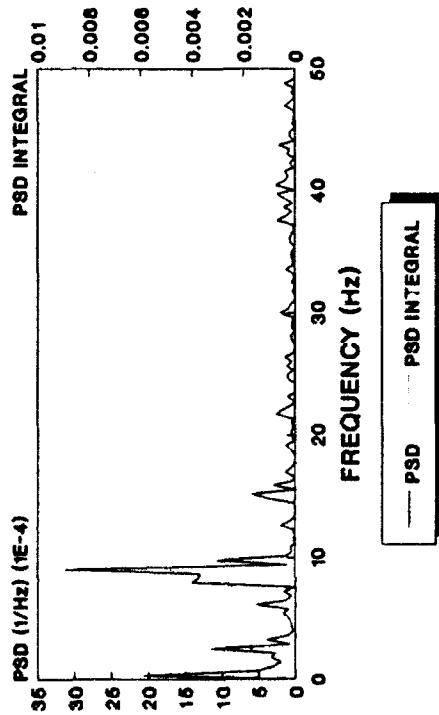
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



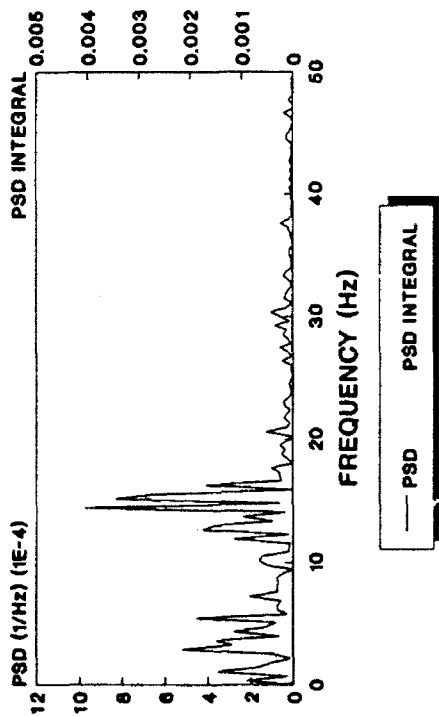
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



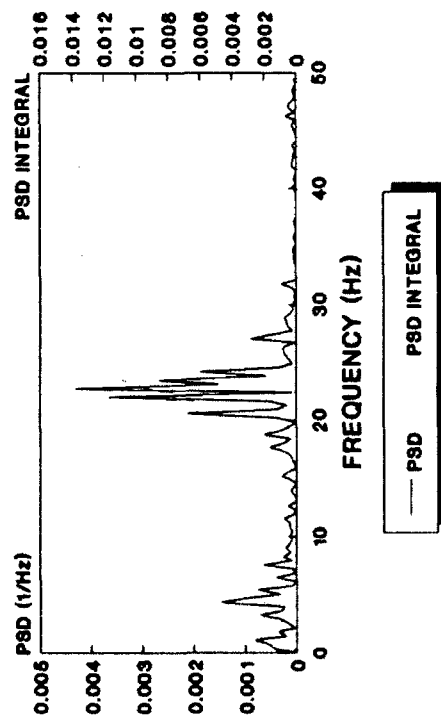
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



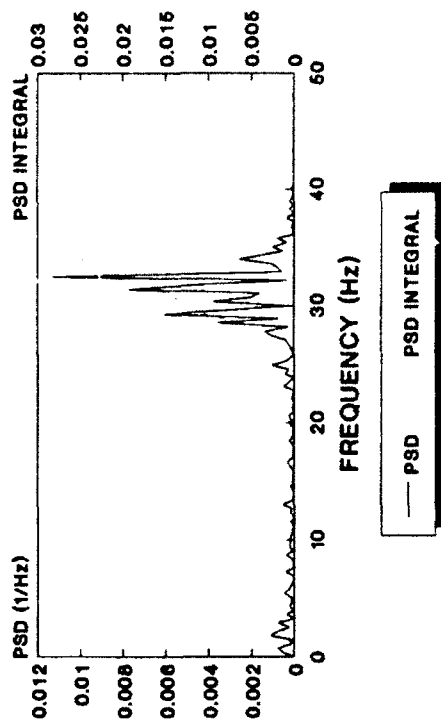
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



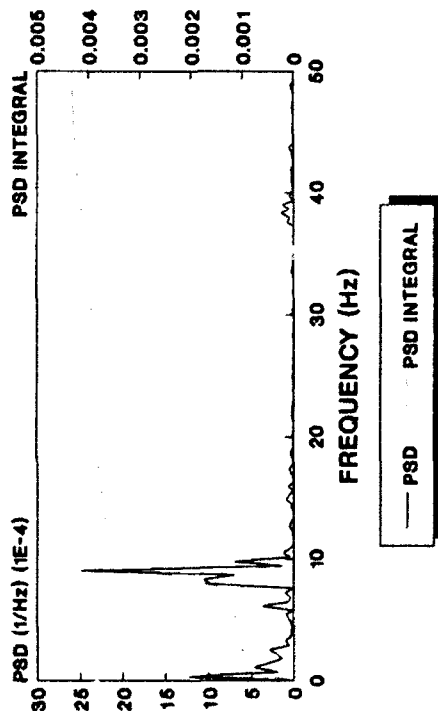
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



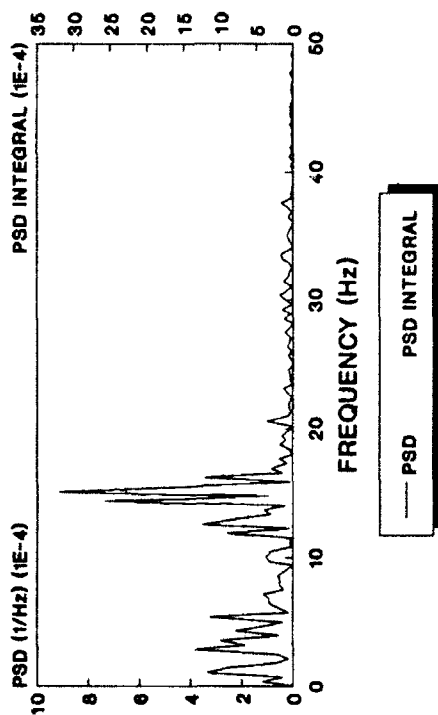
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



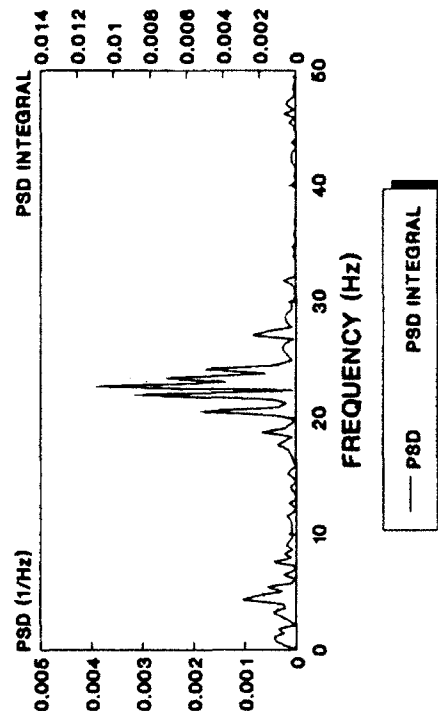
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



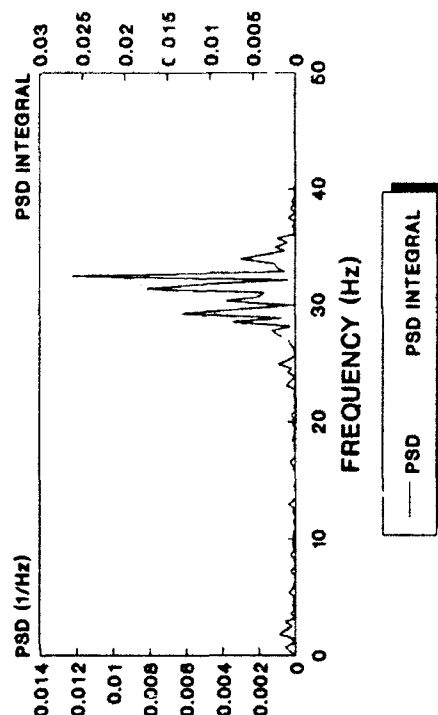
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



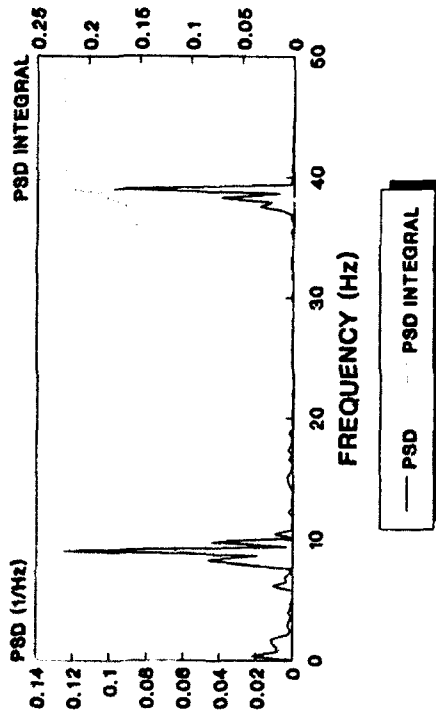
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



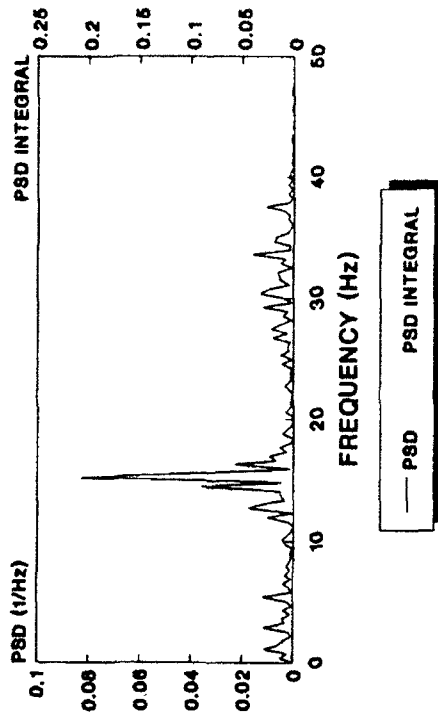
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MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



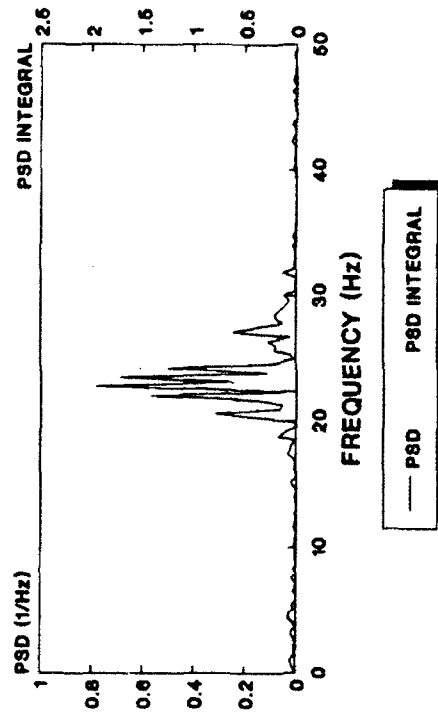
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



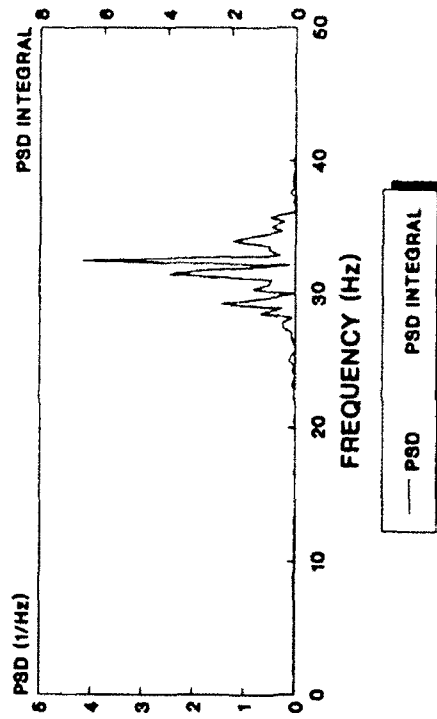
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



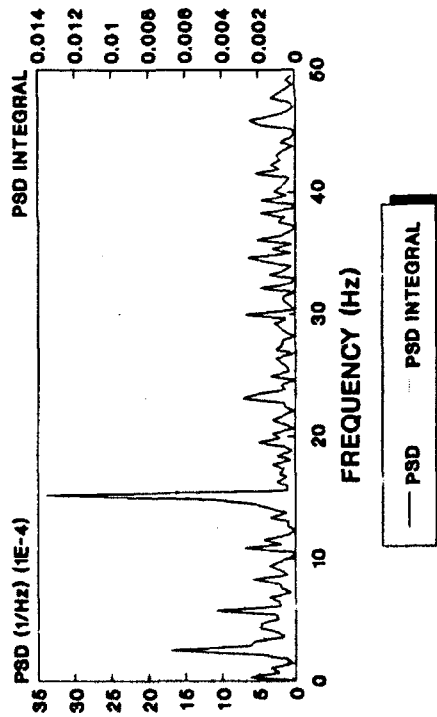
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



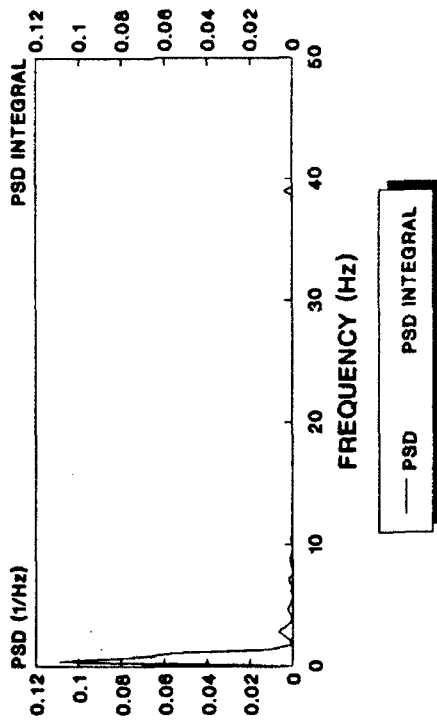
CUBE (R) - HT 8.9 - THETA 30 - AZ 136

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



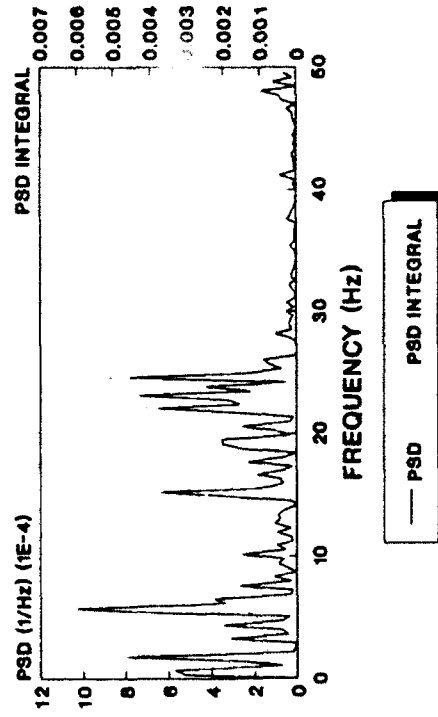
CUBE (R) - HT 8.9 - THETA 30 - AZ 160

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



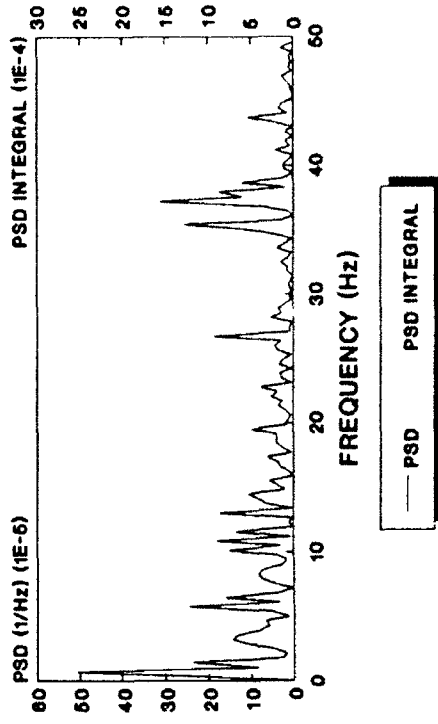
CUBE (R) - HT 8.9 - THETA 30 - AZ 160

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



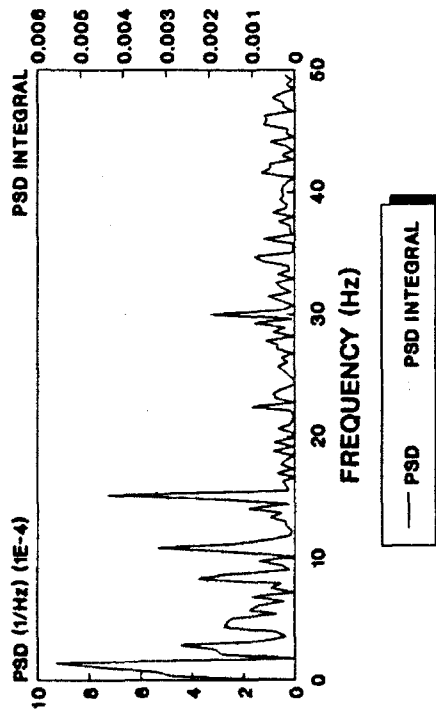
CUBE (R) - HT 8.9 - THETA 30 - AZ 160

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



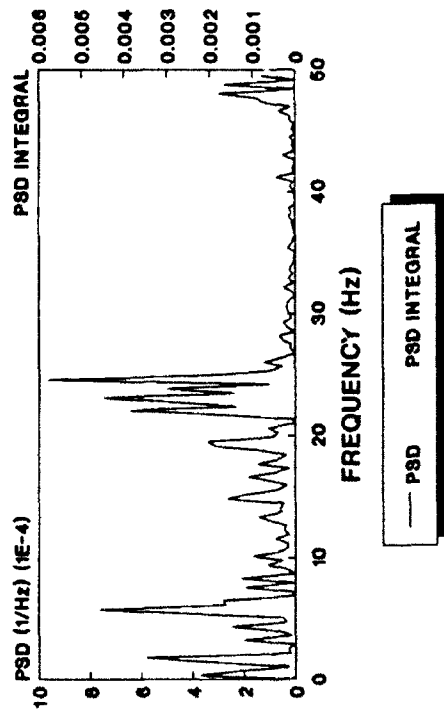
CUBE (R) - HT 8.9 - THETA 30 - AZ 160

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



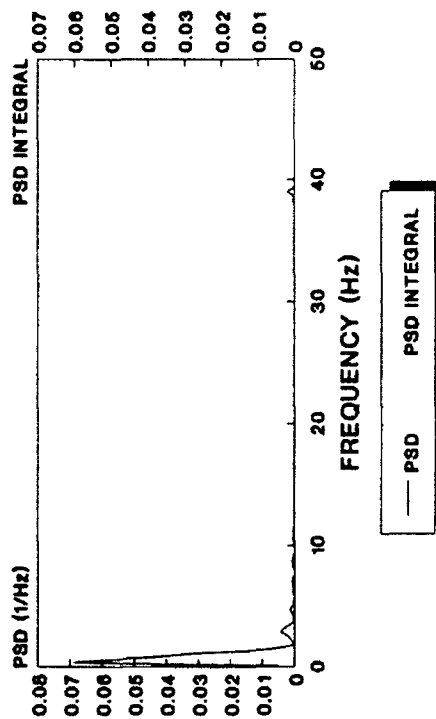
CUBE (R) - HT 8.9 - THETA 30 - AZ 160

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



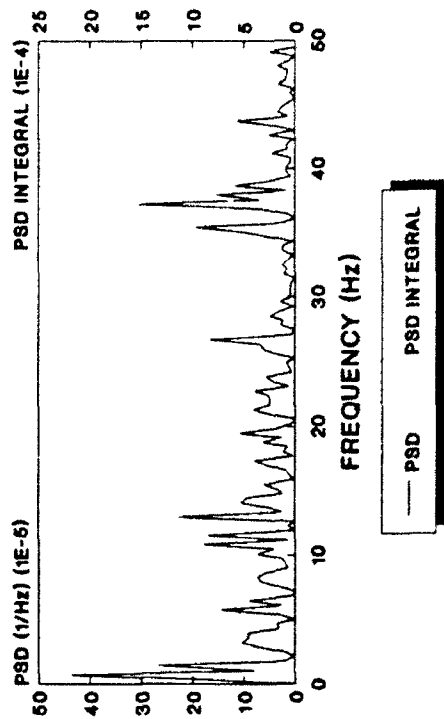
CUBE (R) - HT 8.9 - THETA 30 - AZ 160

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



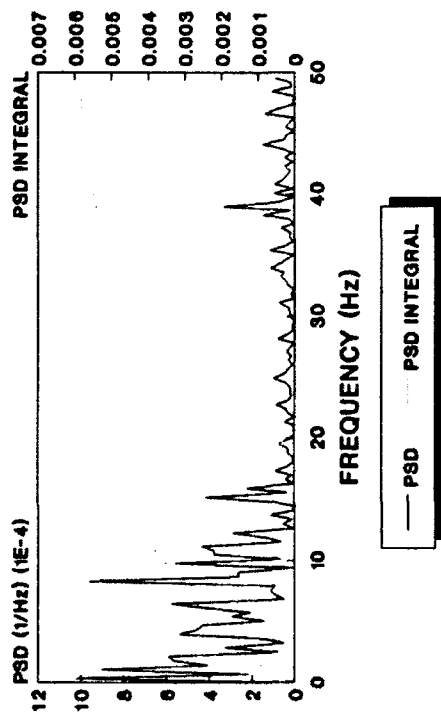
CUBE (R) - HT 8.9 - THETA 30 - AZ 160

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



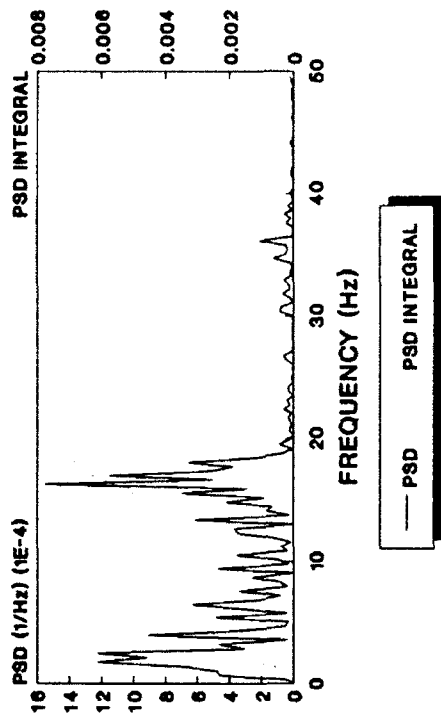
CUBE (R) - HT 8.9 - THETA 30 - AZ 160

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



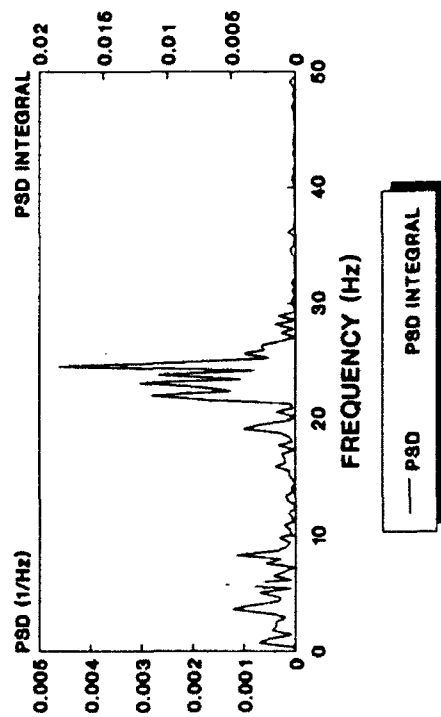
CUBE (R) - HT 8.9 - THETA 30 - AZ 150

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



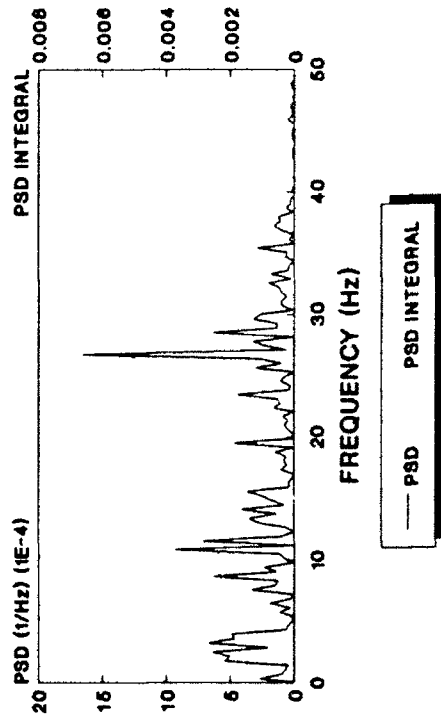
CUBE (R) - HT 8.9 - THETA 30 - AZ 150

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



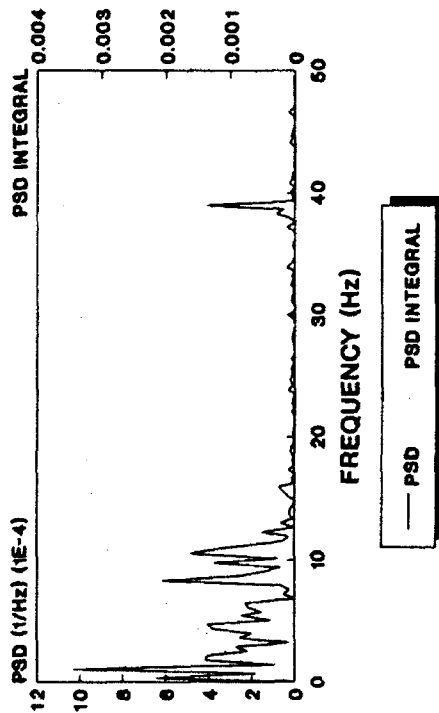
CUBE (R) - HT 8.9 - THETA 30 - AZ 150

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



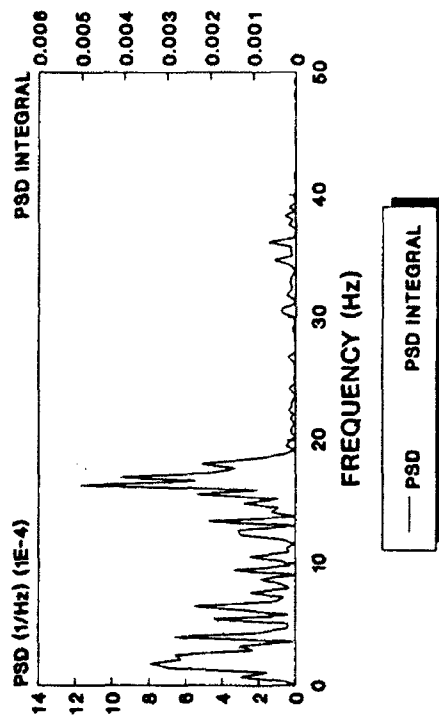
CUBE (R) - HT 8.9 - THETA 30 - AZ 150

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



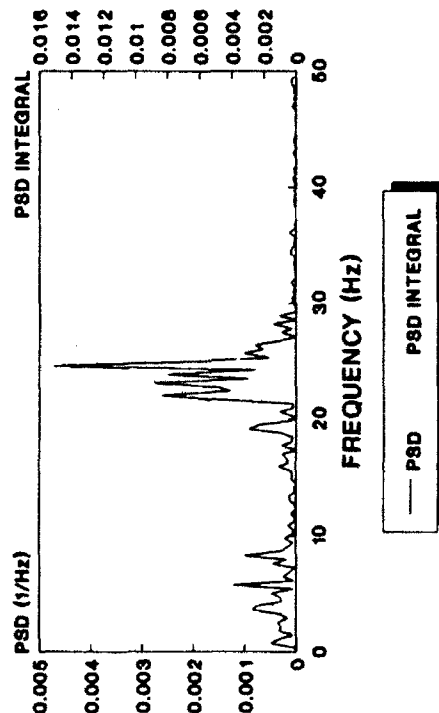
CUBE (R) - HT 6.9 - THETA 30 - AZ 160

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



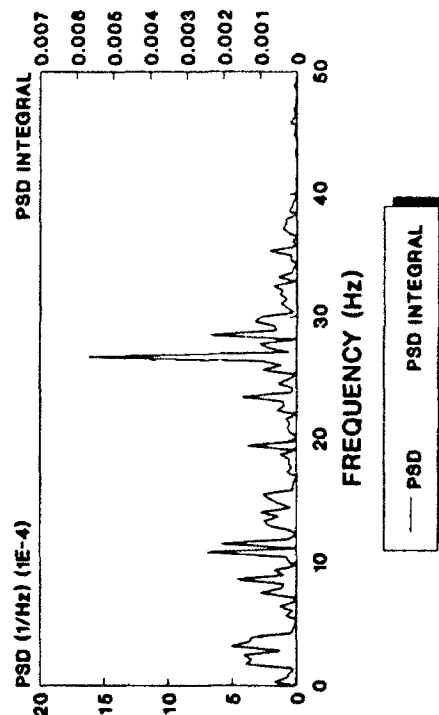
CUBE (R) - HT 6.9 - THETA 30 - AZ 160

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



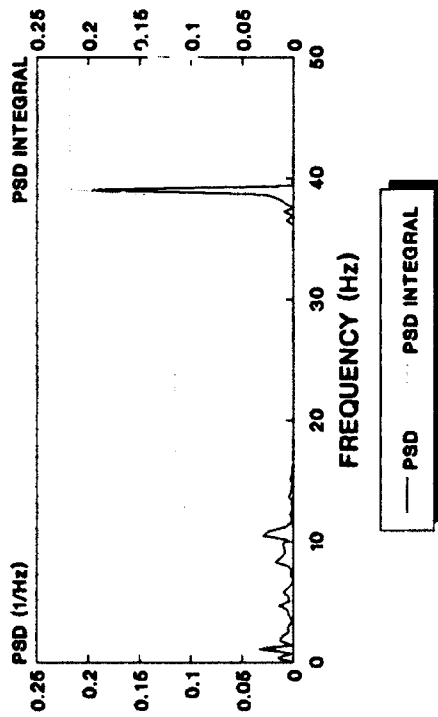
CUBE (R) - HT 6.9 - THETA 30 - AZ 160

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



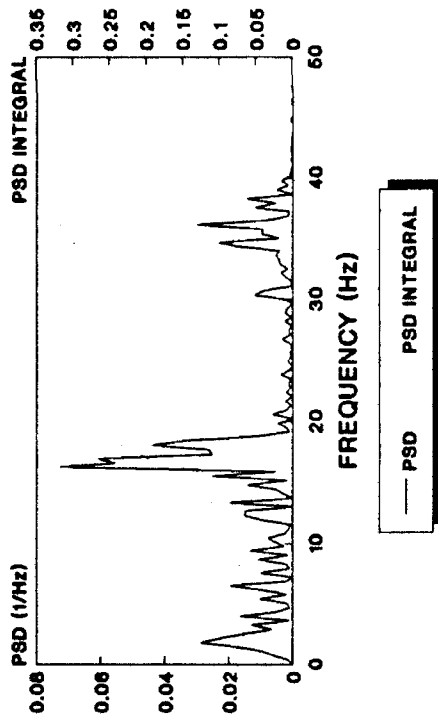
CUBE (R) - HT 6.9 - THETA 30 - AZ 160

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



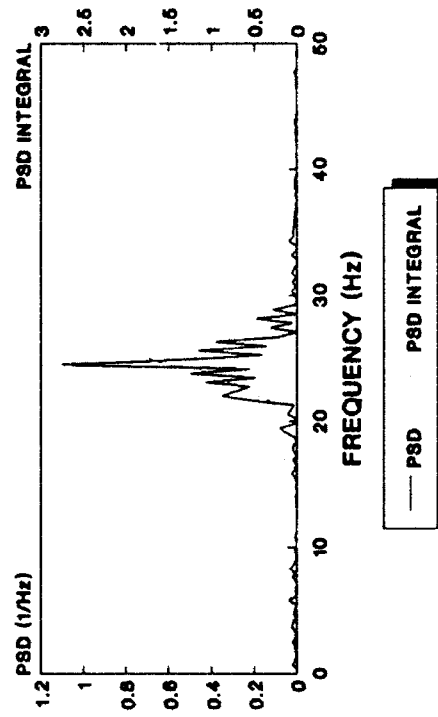
CUBE (R) - HT 8.9 - THETA 30 - AZ 160

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



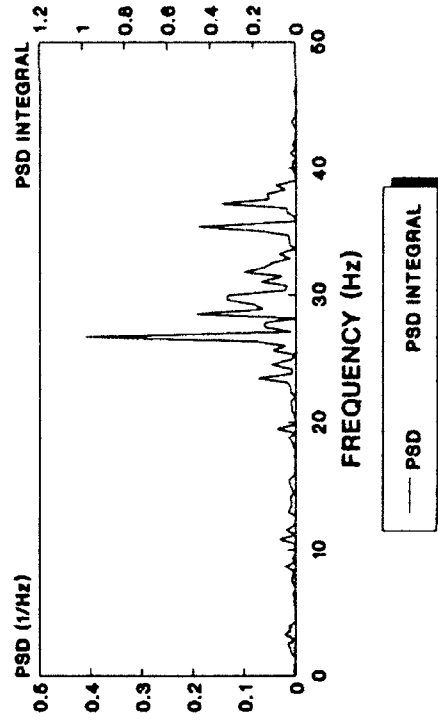
CUBE (R) - HT 8.9 - THETA 30 - AZ 160

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



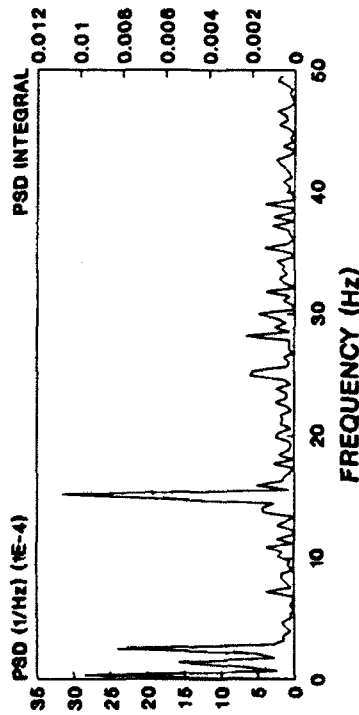
CUBE (R) - HT 8.9 - THETA 30 - AZ 160

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



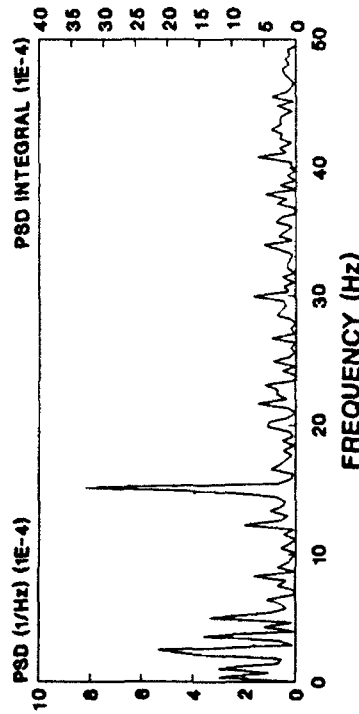
CUBE (R) - HT 8.9 - THETA 30 - AZ 160

FORCE COEFF - NORMAL 60 FT/SEC NOMINAL



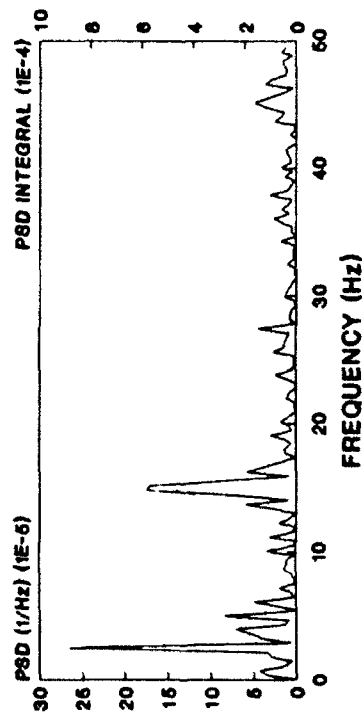
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

FORCE COEFF - NORMAL 90 FT/SEC NOMINAL



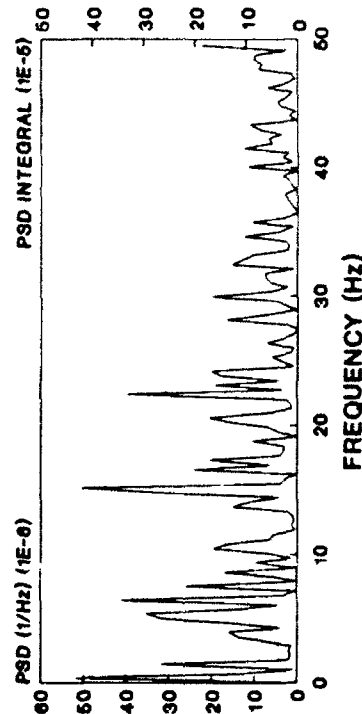
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

FORCE COEFF - NORMAL 120 FT/SEC NOMINAL



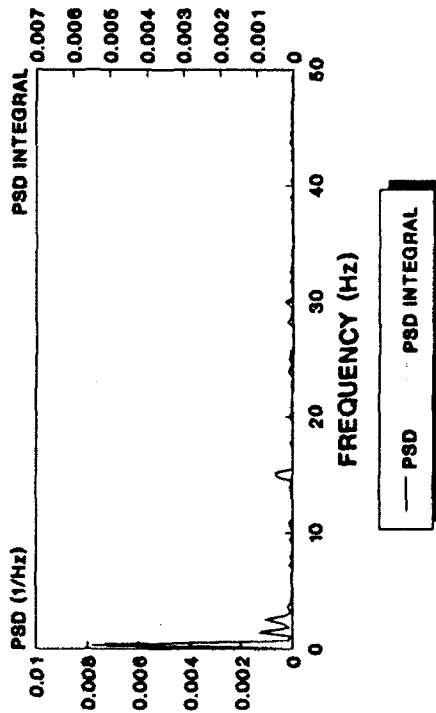
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

FORCE COEFF - NORMAL 180 FT/SEC NOMINAL



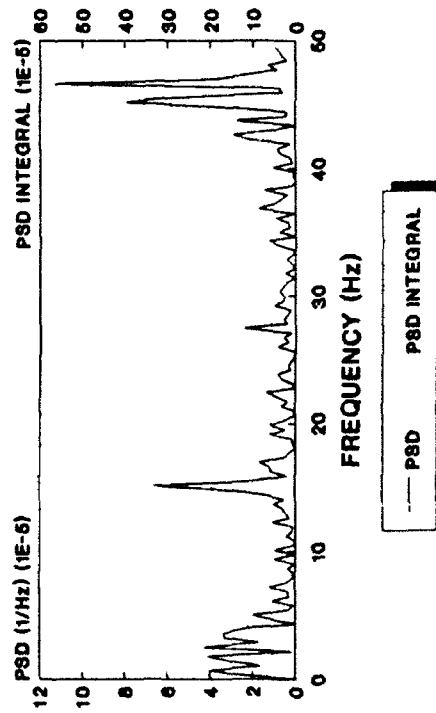
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

MOMENT COEFF - NORMAL 60 FT/SEC NOMINAL



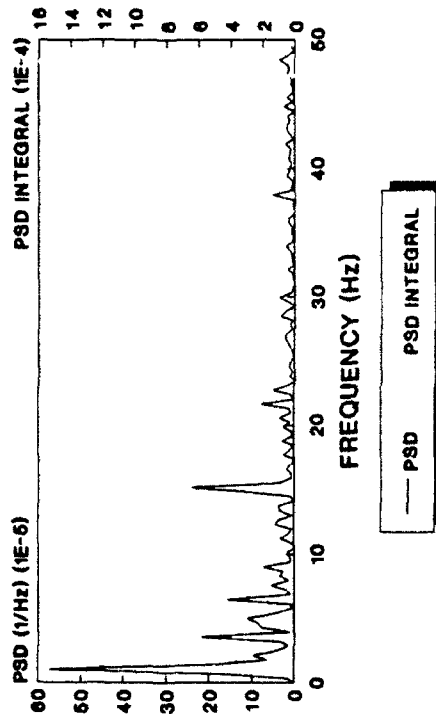
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

MOMENT COEFF - NORMAL 120 FT/SEC NOMINAL



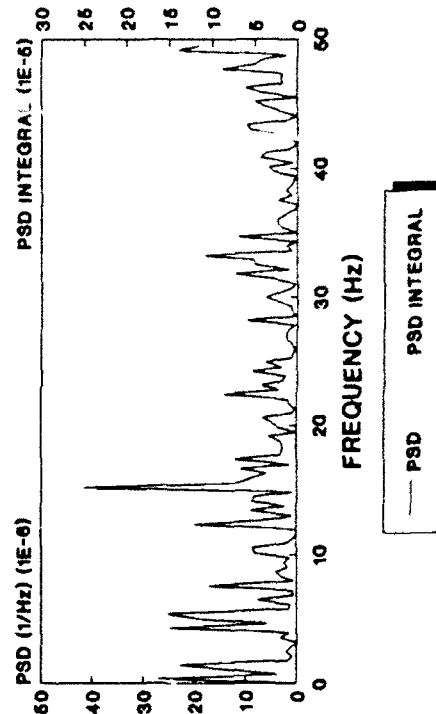
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

MOMENT COEFF - NORMAL 90 FT/SEC NOMINAL



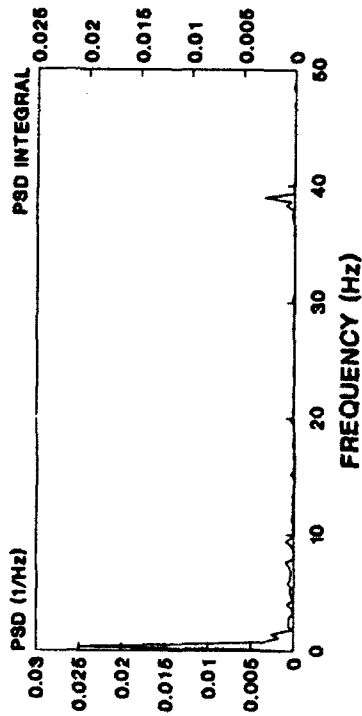
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

MOMENT COEFF - NORMAL 180 FT/SEC NOMINAL



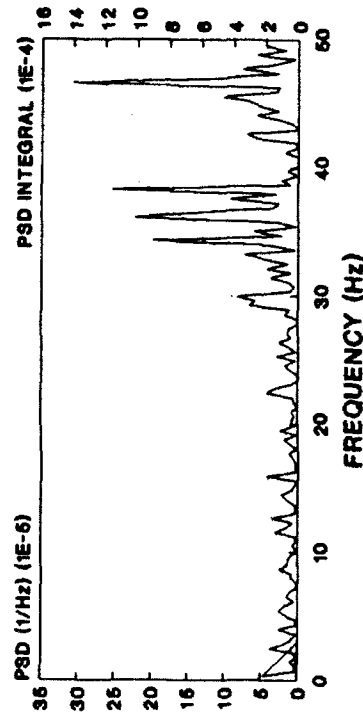
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

FORCE COEFF - LATERAL 60 FT/SEC NOMINAL



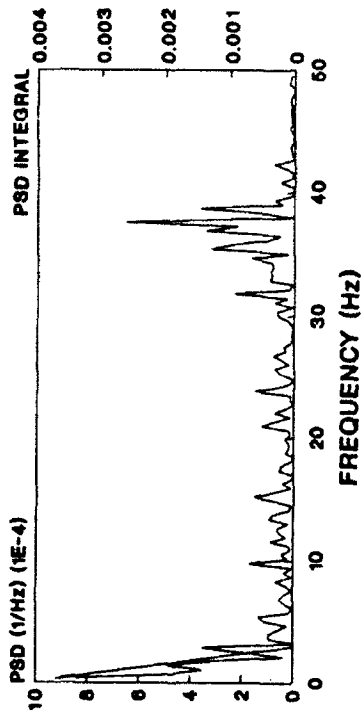
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

FORCE COEFF - LATERAL 120 FT/SEC NOMINAL



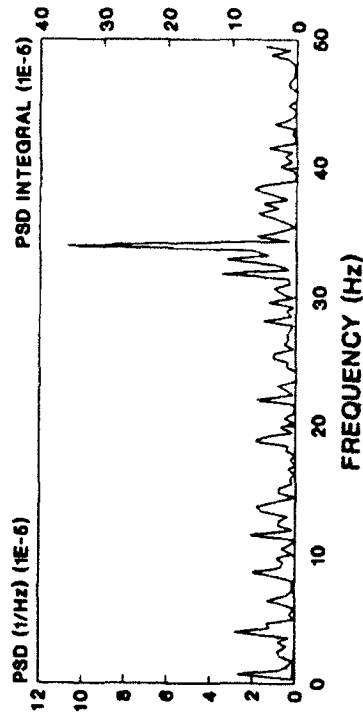
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

FORCE COEFF - LATERAL 90 FT/SEC NOMINAL



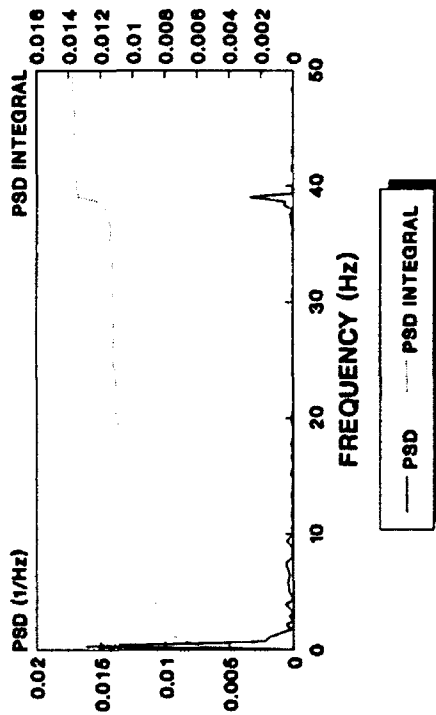
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

FORCE COEFF - LATERAL 180 FT/SEC NOMINAL



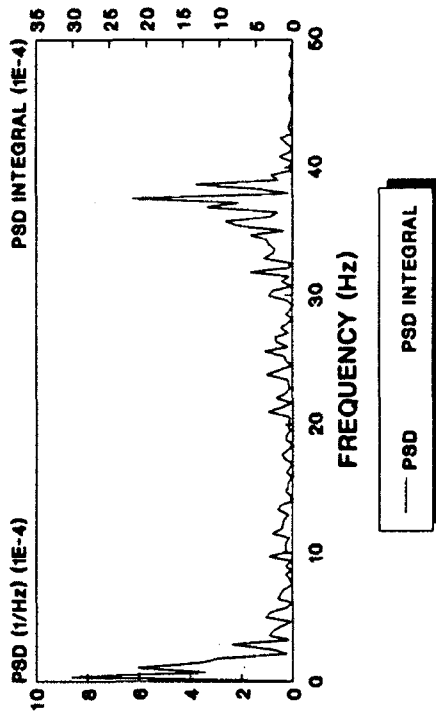
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

MOMENT COEFF - LATERAL 60 FT/SEC NOMINAL



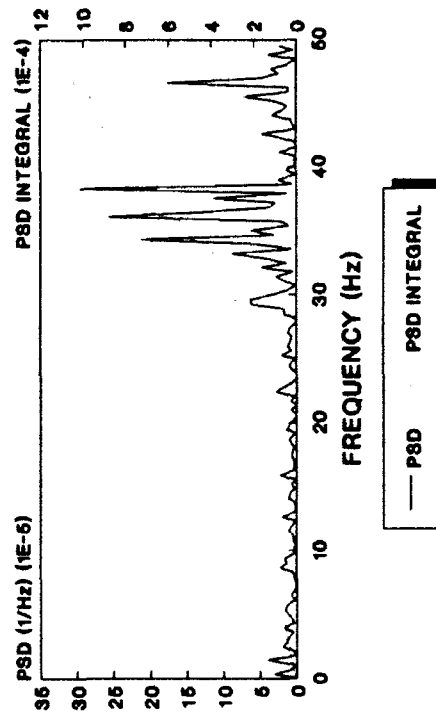
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

MOMENT COEFF - LATERAL 90 FT/SEC NOMINAL



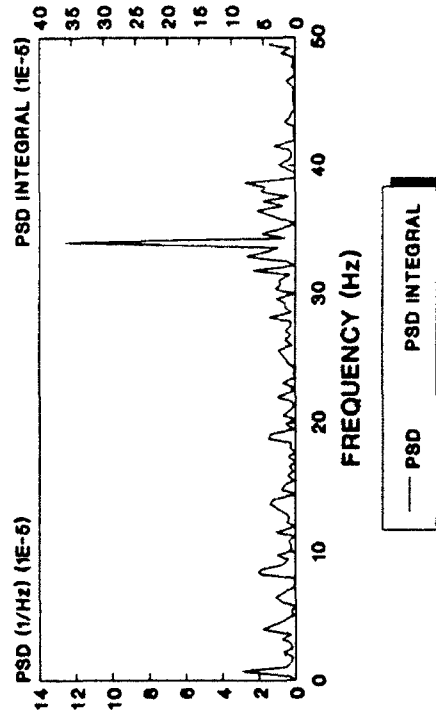
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

MOMENT COEFF - LATERAL 120 FT/SEC NOMINAL



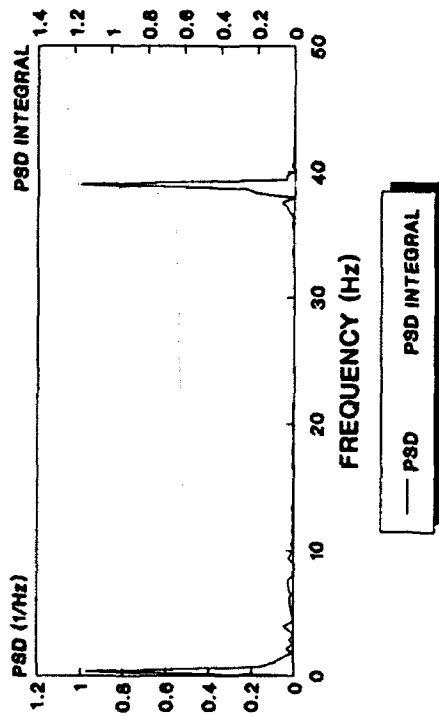
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

MOMENT COEFF - LATERAL 180 FT/SEC NOMINAL



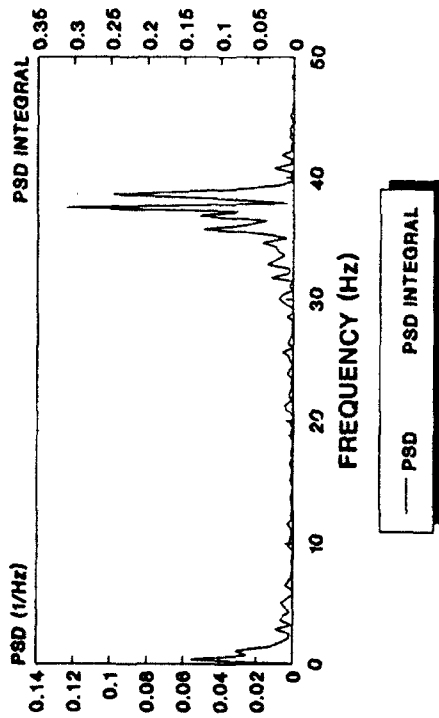
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

MOMENT COEFF - ROLL 60 FT/SEC NOMINAL



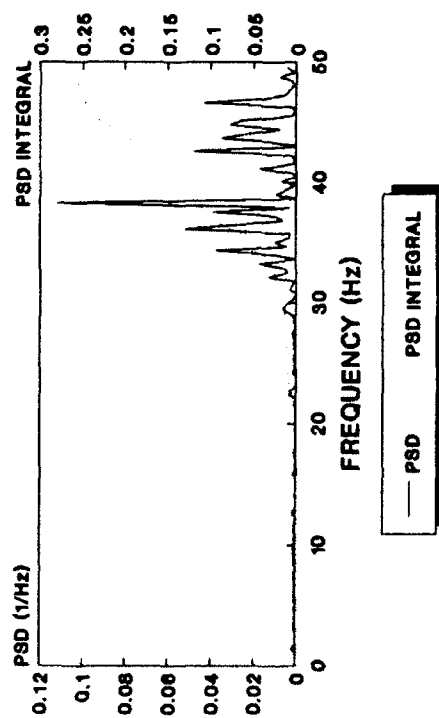
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

MOMENT COEFF - ROLL 90 FT/SEC NOMINAL



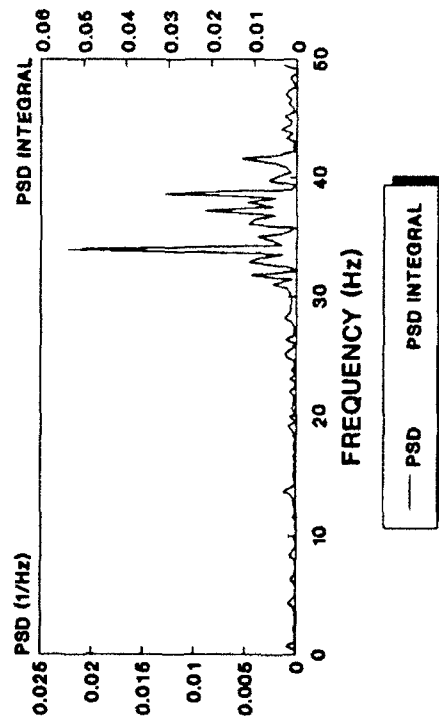
CUBE (R) - HT 8.9 - THETA 30 - AZ 180

MOMENT COEFF - ROLL 120 FT/SEC NOMINAL



CUBE (R) - HT 8.9 - THETA 30 - AZ 180

MOMENT COEFF - ROLL 180 FT/SEC NOMINAL



CUBE (R) - HT 8.9 - THETA 30 - AZ 180