

EA12-005

CHRYSLER

12-13-2012

Enclosure 6B

301 Developmental Crash  
Tests Public

KJ Development Crash Test  
VC08023.Photos-BuildDown









REAR SEAT BELT ASSEMBLY  
PART NO. 68100000  
QTY 1  
DATE 10/10/05  
BY [illegible]

REAR SEAT BELT ASSEMBLY  
PART NO. 68100000  
QTY 1  
DATE 10/10/05  
BY [illegible]













802

GOODYEAR R 3175 WRANGLER  
SR-A SXTF YK802310





3023







VK 8023  
POST

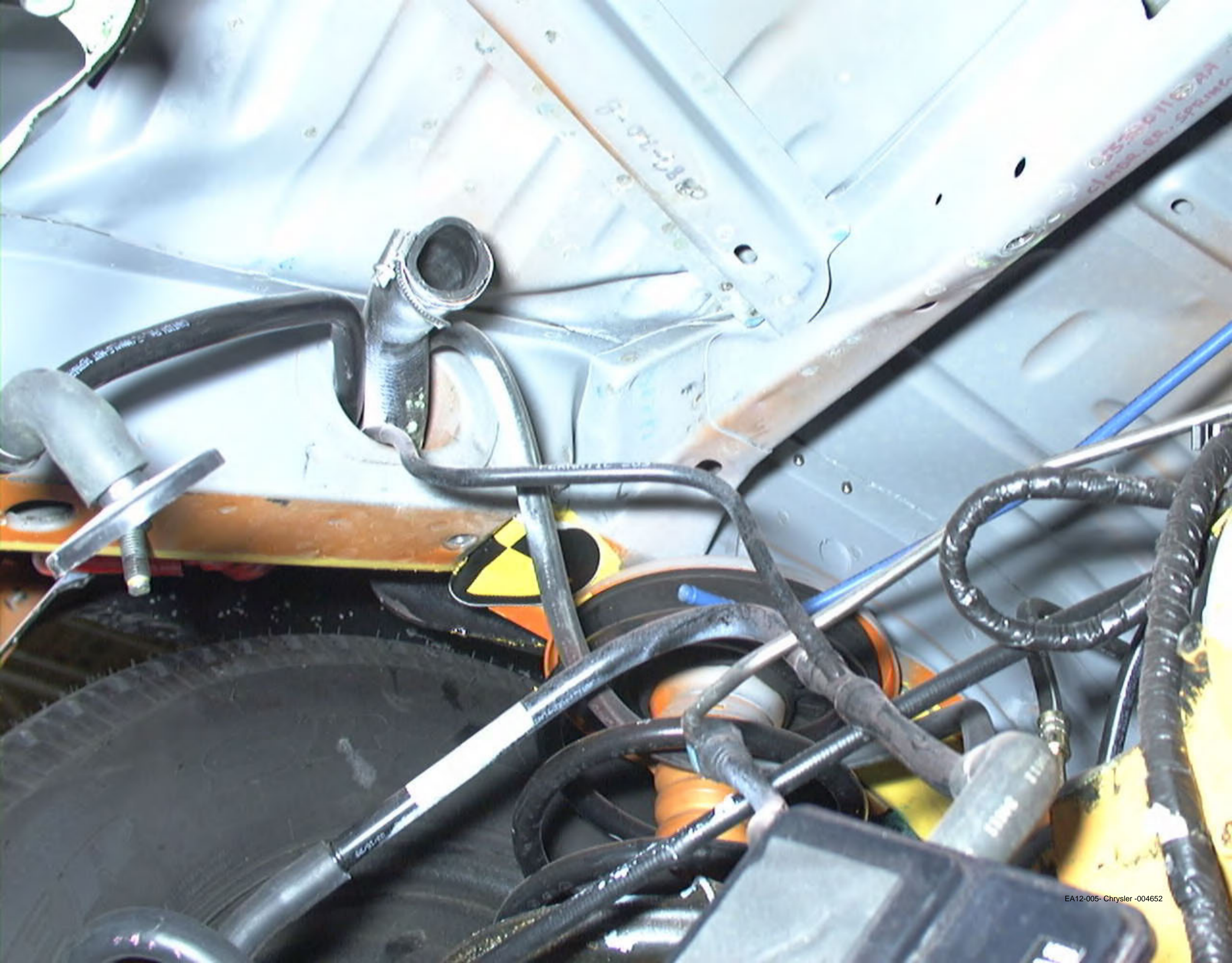
8023

SR-A  
GOODYEAR



















EA12-005

CHRYSLER

12-13-2012

Enclosure 6B

301 Developmental Crash  
Tests Public

KJ Development Crash Test

VC08023.Photos-  
Instrumentation



VC08023 KJ4276R  
REAR KJ  
LT REAR SILL



VC08023 KJ4276R  
REAR KJ  
RT RR RAIL MID TANK



VC08023 KJ4276R  
REAR KJ  
LT FT SIL FWD ST XMB



VC08023 KJ4276R  
REAR KJ  
RT FT SIL FWD ST XM



VC08023  
REAR  
RT SILL AT BPLR

KJ4276R  
KJ

ZND



VC08023 KJ4276R KJ  
REAR  
LT SILL AT BPLR



VC08023 KJ4276R  
REAR KJ  
LT RR SIL FWD ST XM



VC08023 KJ4276R  
REAR KJ  
RT RR SIL FWD ST XMB



VC08023 KJ4270  
REAR KJ  
ORC FRT LT

000





VC08023 KJ4276R  
REAR KJ  
LT FRT SILL



VC08023 KJ4276R  
REAR KJ  
RT FRT SILL

RFS

EA... Chr



VC08023 KJ427  
REAR  
RT REAR SILL

EA12-005- Chrysler -004666



VC08023 KJ4276R  
REAR  
RT RAIL FT XMB



VC08023 KJ4276R  
REAR KJ  
LT RAIL FT XMB



VC08023 KJ4276R  
REAR KJ  
LT RAIL TRANS XMB



VC08023 KJ4276R  
REAR KJ  
RT RAIL TRANS XMB



VC08023 KJ4276R  
REAR FUEL TANK RL PASTHRU

VC08023 KJ4276R  
REAR KJ  
LT RR RAIL MID TANK



EA12-005

CHRYSLER

12-13-2012

Enclosure 6B

301 Developmental Crash  
Tests Public

KJ Development Crash Test

VC08023.Photos-PostTest





EA12-005- Chrysler -004672



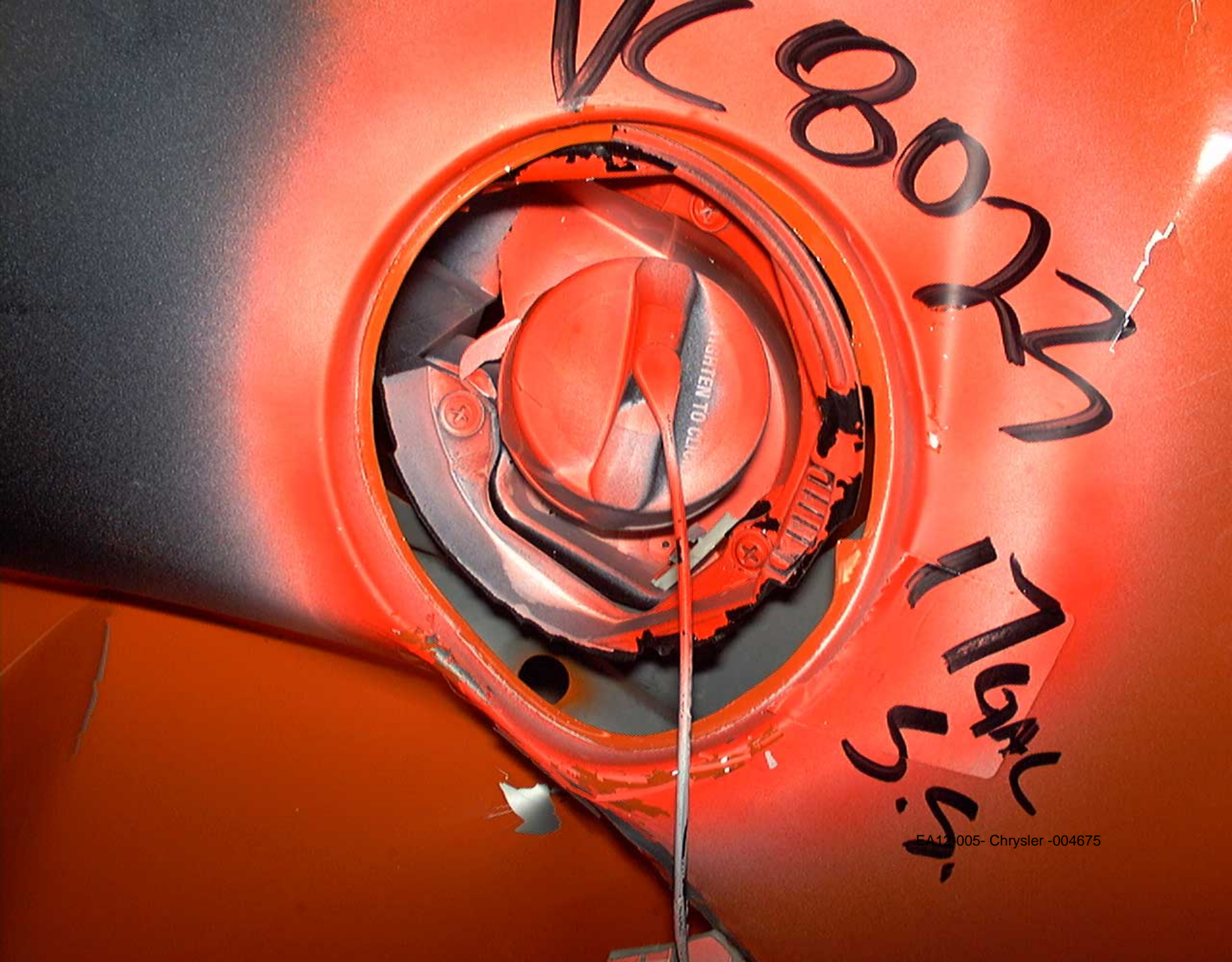






EA12-005-Chrysler-004674





Viper

000000





8023

GOODYEAR SR.A  
WRANGLER  
SR.A  
WRANGLER  
GOODYEAR





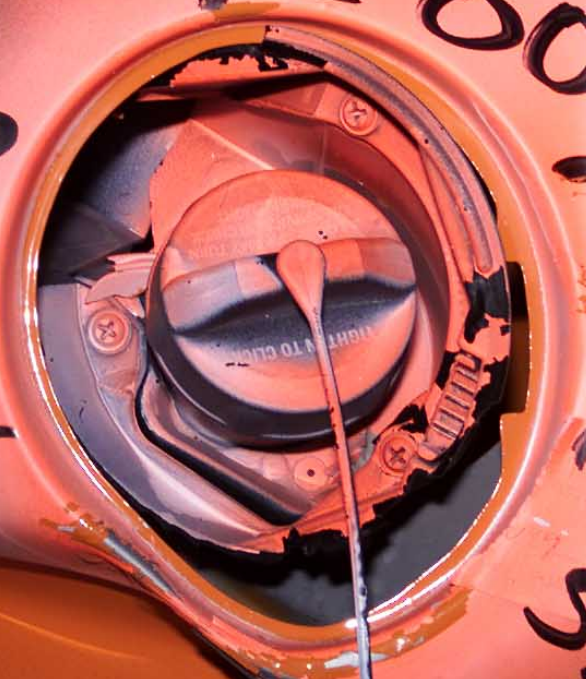
**VC-08023**

EA12-005- Chrysler 004677

**POST**



POST  
VK 8023  
Lamp







8023

EA12-005- Chrysler 1004619



**vc 8023**



EA12-005

CHRYSLER

12-13-2012

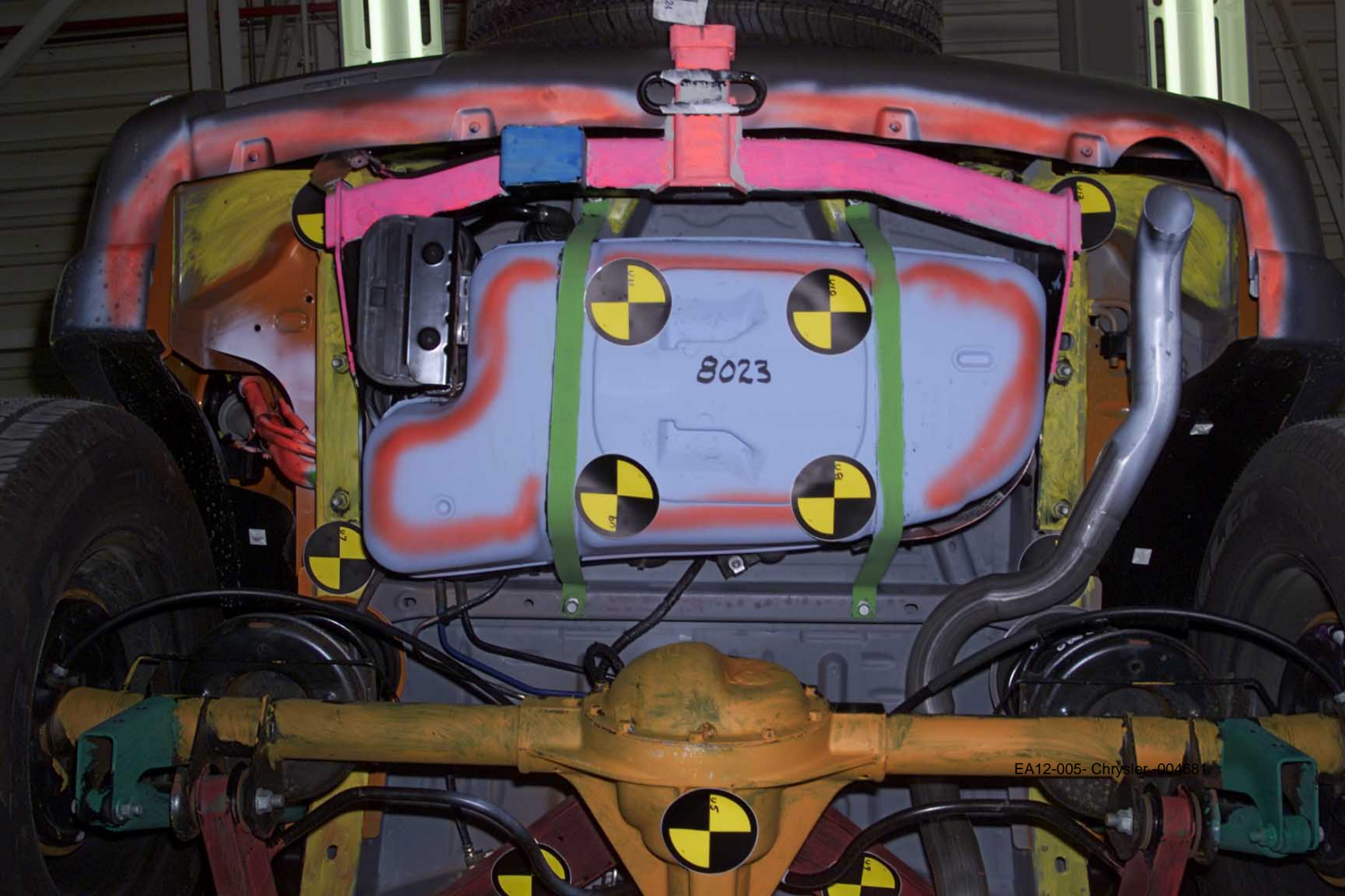
Enclosure 6B

301 Developmental Crash  
Tests Public

KJ Development Crash Test

VC08023.Photos-PreTest

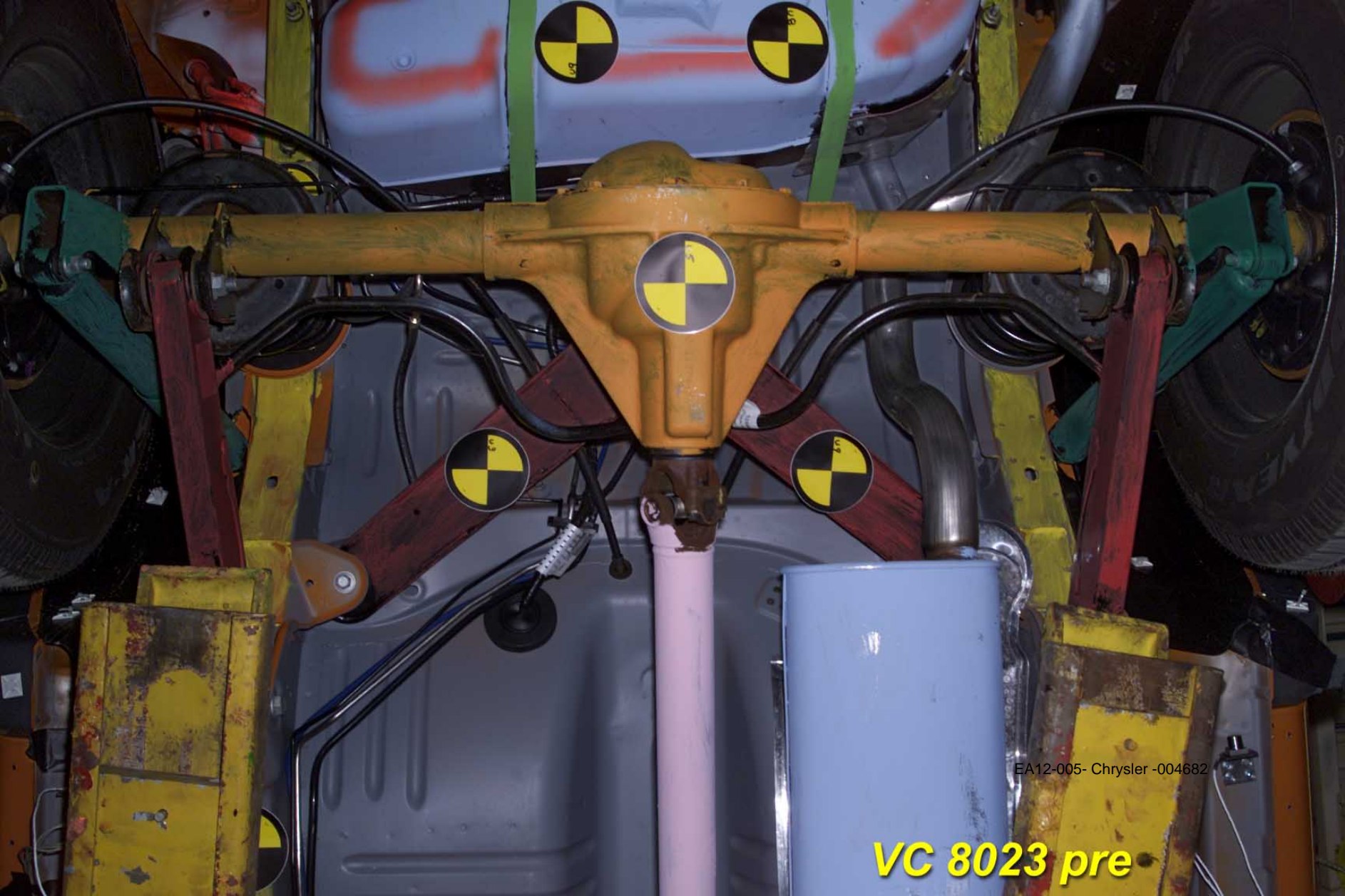




8023

EA12-005- Chrysler -004681





EA12-005- Chrysler -004682

**VC 8023 pre**



**VC 8023 pre**



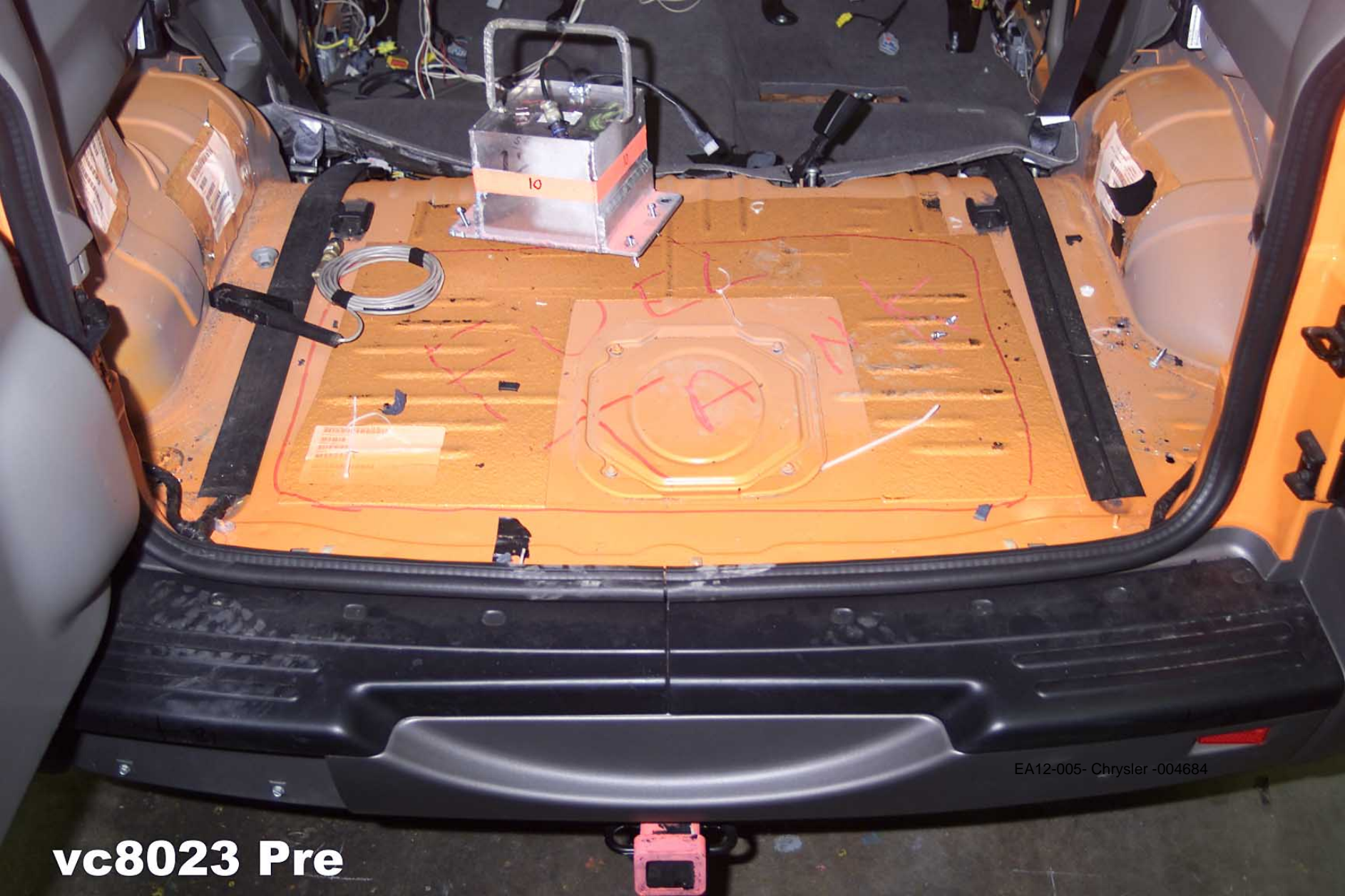
EA12-005- Chrysler -004683

QWt  
6929g  
"6.9"  
16.0

SWITCH-TYPE  
SUCKER CONTACTS

520881

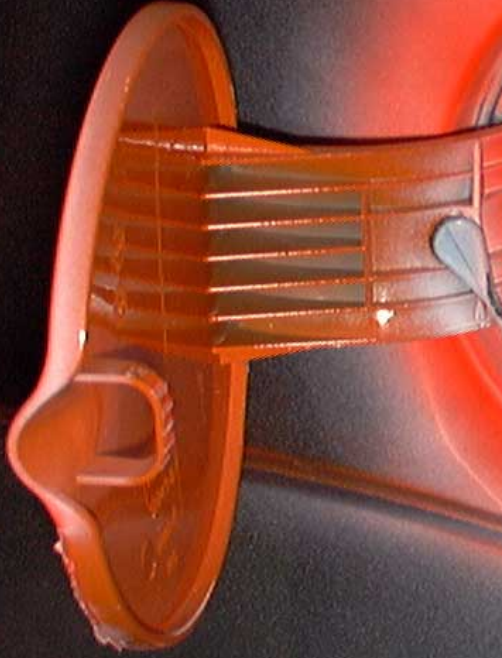




EA12-005- Chrysler -004684

**vc8023 Pre**





✓ 00 ✓ ✓ ✓

✓ 12/15 ✓





Small Picture  
of Lock, Required  
Force has proven  
to break the lock

8023





EA12-005- Chrysler -004687



EA12-005

CHRYSLER

12-13-2012

Enclosure 6B

301 Developmental Crash

Tests Public

KJ Development Crash Test

VC8023 Public







150mm

POINT SIZE

4  
6  
8

2xby Gmn0c  
Y3ub0 B1r9u

12  
7n34a K2hBt  
D6lmb 9ss9rl

14  
Wcuzl L1cdg  
6Y3sl Okjdg

FUTURA

NEWS GOTHIC

14  
K2b8t Okjdg  
4ef8k Gmn0c

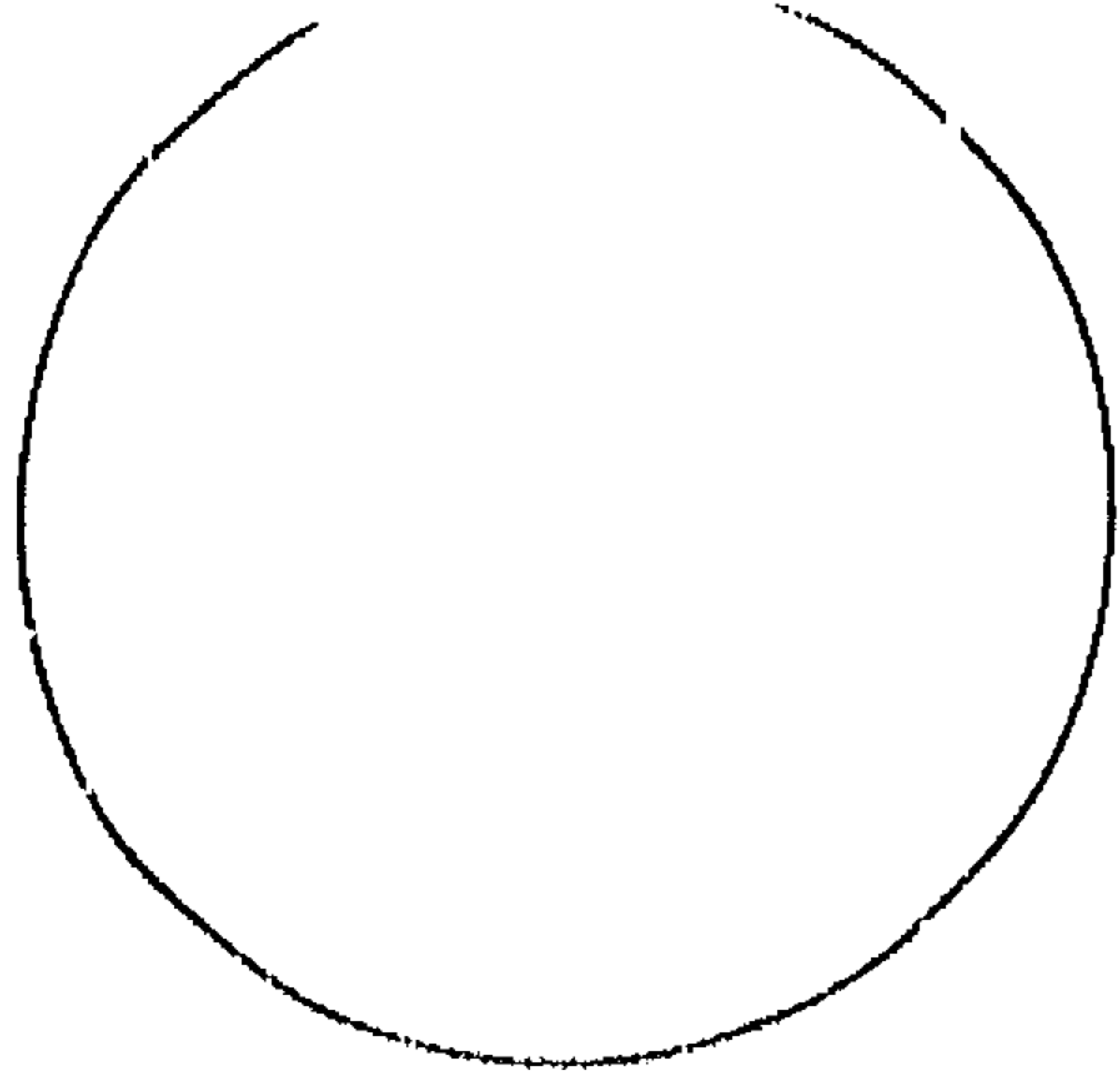
12  
Zlo6x G092  
7n34a 6Y3sl

10  
Y0r8j A7o7u  
Culvl 2xby

8  
91e70 L1cdg  
33q7a F1898

6  
4

POINT SIZE



--	--	--	--	--	--	--	--	--

4  
5  
8  
10  
12  
14  
16  
18  
20  
22  
25

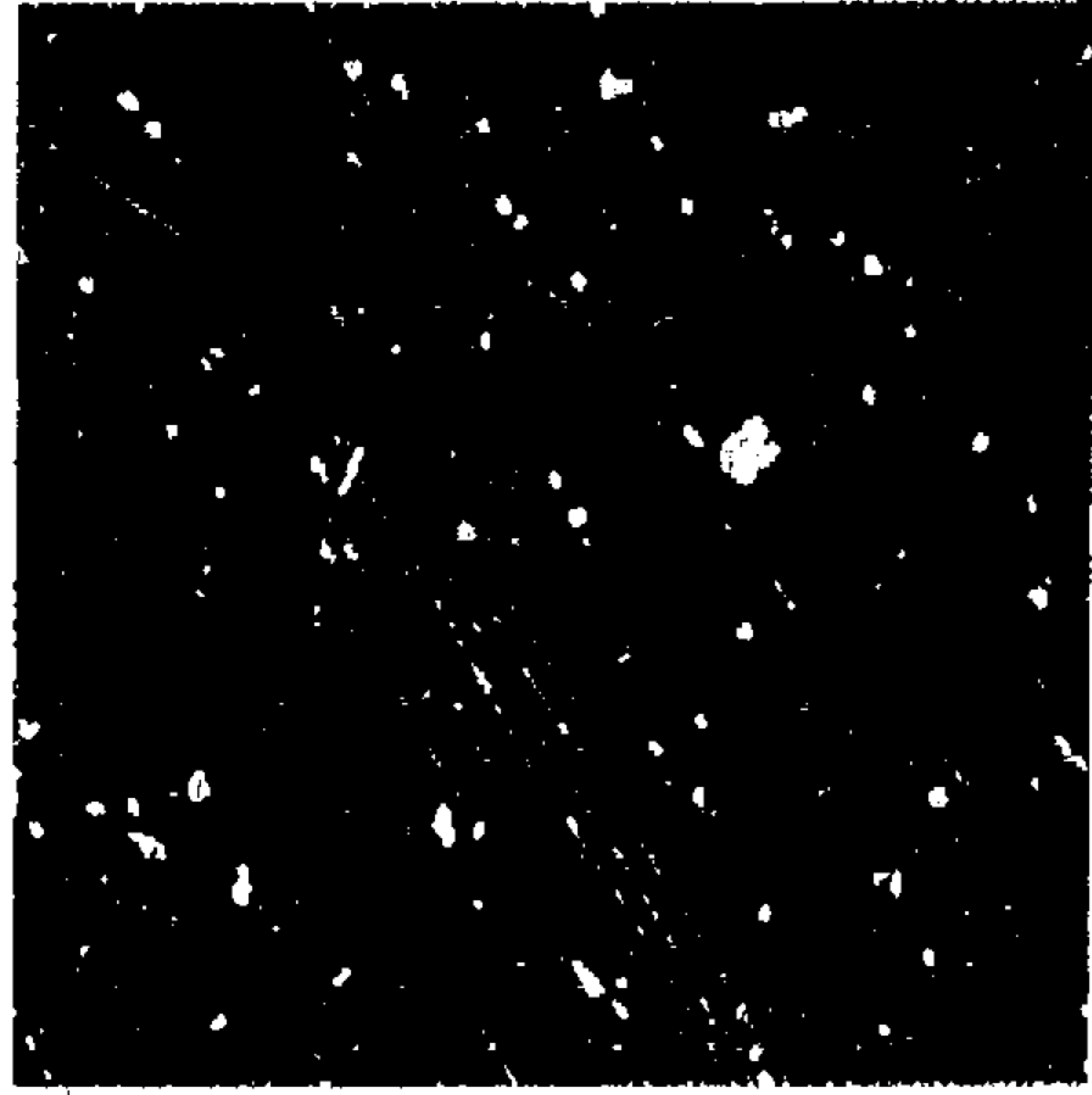
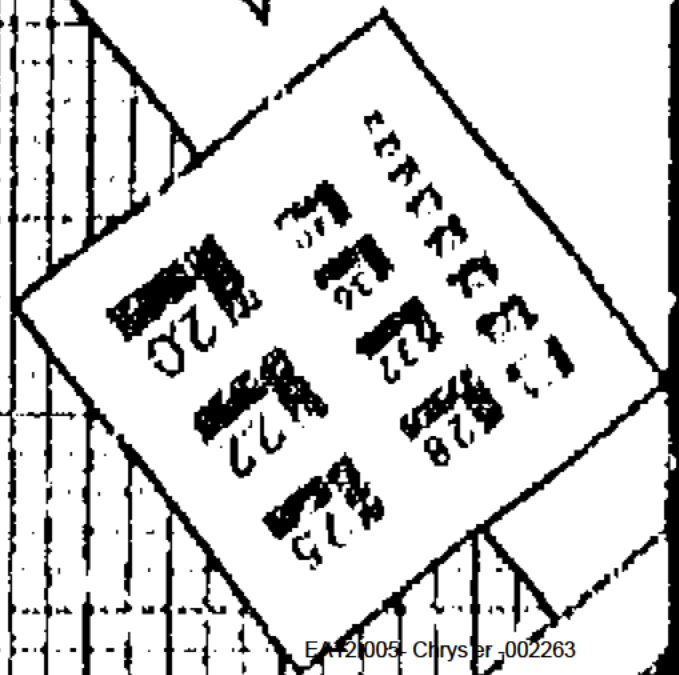
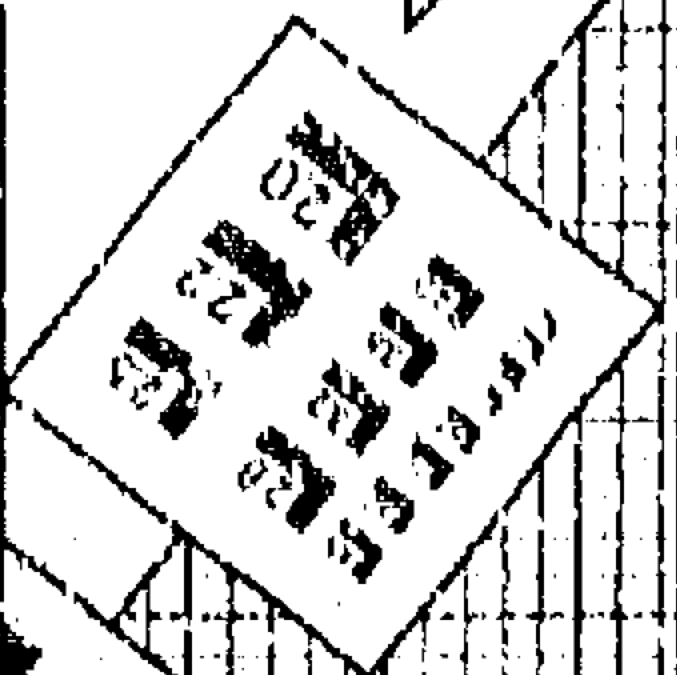
NEWS GOTHIC

FUTURA

SERIF (BASKERVILLE)

POINT SIZE SANS SERIF (MICROFONT)

6"





**Retrieval Methods Inc.**  
**1142 E. Big Beaver Rd.**  
**Troy, MI 48083**

**Declaration of Intent and Purpose**

**RANDALL WHYTE**

Employed by Retrieval Methods Inc., do hereby declare that the records microfiched herein are actual records of DaimlerChrysler Corp. created during its normal course of business and that it is the express intent and purpose of this organization to return all original records microphotographed herein.

Date: 05-01-2003

Microfiche Operator: Randall Whyte







SAFETY TEST  
VEHICLE CRASH TEST LETTER

PAGE 01

VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MV88 301 REAR IMPACT DEVELOPMENT.  
TEST DATE 12/13/99

TEST PURPOSE PRIMARY, 2002 USA 301 DEVELOPMENT.  
DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH  
DAMAGE LOCATION; REAR  
BARRIER TYPE; REAR TYPE IV  
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; KJ  
CAR LINE; J  
BODY; 74  
ENGINE; 2.4 LITRE  
ENGINE NOTE; ELECTRONIC FUEL INJECTION  
TRANSMISSION; 4 SPEED AUTO 4x4  
TRANS. NOTE;  
VIN AS TESTED; 1J4FF581X2A [REDACTED] MOD.  
VIN AS BUILT; 1J4FF501X2A [REDACTED] MOD.

TEST SPEED 30.2 MPH ELECTRONIC SPEED TRAP SYSTEM

TEST WEIGHT (LBS) 4578 TOTAL, 2487 FRONT, 2091 REAR

OCCUPANTS LEFT FRONT, HYBRID II BALLAST. AD-47  
RESTRAINT-BELTS ONLY.  
RIGHT FRONT, HYBRID II BALLAST. AD-70  
RESTRAINT-BELTS ONLY.



SAFETY TEST  
VEHICLE CRASH TEST LETTER

PAGE 02

7C08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MV88 301 REAR IMPACT DEVELOPMENT.  
TEST DATE 12/13/99

BUILD CONDITION

TARGET WEIGHT (LBS) 3938 TOTAL, 2135 FRONT, 1803 REAR REP BASE OPT. WT  
FOR A 3.7L 4X4 VEH. (CHART DATE: 3/17/99) W/OUT  
LUGGAGE OR OCCUPANTS.

FUEL AND BALLAST 17 GALLONS OF STODDARD SOLVENT.  
300 LBS.  
BALLAST ADDED (350LBS REAR SEAT) (200 FRONT)

REPORT CODES

A = TRANSDUCER DATA	B = ALL FILM DATA
C = HIGH SPEED FILM	D = ENGINEER'S REPORT
E = DUMMY KINEMATICS	F = STEERING COLUMN
G = UNDERBODY	H = A-POST
I = DYNAMIC CRUSH	J = ENGINE COMPARTMENT
K = DOOR CRUSH	L = FORCE/CRUSH/ENERGY
M = SPECIAL	N = CATALOG EDP DATA
* = REPORT REQUESTOR	



SAFETY TEST  
VEHICLE CRASH TEST LETTER

PAGE 03

VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MVSS 301 REAR IMPACT DEVELOPMENT.  
TEST DATE 12/13/99

DISTRIBUTION

M. P. LEVINE	514-17-41	(AB)
M. A. GIELOW	401-02-13	(AB)
M. STEBELTON	422-05-01	(AB)

DATE 12/14/99

TIME 16:08:57.



**THE FOLLOWING DOCUMENT(S)  
IS MICROFILMED IN AS IS  
CONDITION.**

Camera Operator: *RANDALL WHYTE*

Date: *05-01-2003*







CHRYSLER MOTORS  
SAFETY TEST  
VEHICLE CRASH TEST REQUEST

SUPPLEMENT NO. 05

BUILD CONDITION

TARGET WEIGHT (LBS) 3938 TOTAL, 2135 FRONT, 1803 REAR REP BASE OPT. WT  
FOR A 3.7L 4X4 VEH. (CHART DATE 3/17/99) W/OUT  
LUGGAGE OR OCCUPANTS.

TEST WEIGHT (LBS) \_\_\_\_\_ TOTAL, \_\_\_\_\_ FRONT, \_\_\_\_\_ REAR

FUEL BALLAST 17 GALLONS OF STODDARD SOLVENT.

LUGGAGE BALLAST 300 LBS.

OTHER BALLAST \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

OCCUPANTS LEFT FRONT, HYBRID II BALLAST. AD NO 47  
RESTRAINT-BELTS ONLY.  
RIGHT FRONT, HYBRID II BALLAST. AD NO 76  
RESTRAINT-BELTS ONLY.



CHRYSLER MOTORS  
SAFETY TEST  
VEHICLE CRASH TEST REQUEST

SUPPLEMENT NO. 05

## MECHANICAL REQ

TARGET VEHICLE PER THIRD SHEET FOR KJ VEHICLE.  
POSITION DRIVER & PASS SEAT 12 MM BACK FROM MID  
POSITION & FULL DOWN.  
ENSURE DRIVER & PASS AIRBAGS, SIDE CURTAINS,  
DRIVER IKB, AND DRIVER PRETENSIONER DO NOT FIRE.  
MEASURE VEHICLE ATTITUDE AS RECEIVED AND WHEN  
TESTED.  
PRESSURE TEST PRE TEST WITH PUMP RUNNING.  
FUEL PUMP TO BE RUNNING DURING TEST.  
STATIC ROLL VEHICLE POST TEST.  
PAINT RAILS AND REAR UNDERBODY COMPONENTS  
INCLUDING FUEL FILLER LINE, PASSTHROUGH HOLE IN  
RAIL, FUEL TANK, REAR SUSPENSION, REAR BUMPER,  
ORV CANISTER, LINES AND EQUIPMENT, ETC. IN  
CONTRASTING COLORS FOR UNDERBODY VIEW.

## INSTRUMENTATION REQ

SEE THIRD SHEET FOR KJ REAR IMPACT TESTING FOR  
ACCEL. LOCATIONS.  
ENSURE DRIVER & PASS AIRBAGS, SIDE CURTAINS,  
DRIVER IKB AND DRIVER PRETENSIONER DO NOT FIRE.  
TRIAxIAL ACCEL ON RAIL NEAR ABOVE TANK MOUNTED  
ACCEL (NEAR FUEL PASSTHROUGH IN RAIL)  
USE INDUCTIVE PICKUPS (6) TO MONITOR ALL (6) AECM  
OUTPUTS.  
X-AXIS ACCEL. ON UPPER SURFACE OF RAIL APPROX 30MM  
BEHIND RADIATOR SPT. (LEFT AND RIGHT SIDE)  
X-AXIS ACCEL ON REAR SURFACE OF RAD. SPT.  
(HALF WAY UP THE VERTICAL PART OF THE RAD. SPT)  
LEFT AND RIGHT SIDE. (ENSURE THE ACCEL IS  
PARALLEL TO THE YZ PLANE W/SPACERS IF NEEDED).  
X AXIS ACCEL ON THE REAR SURFACE OF THE RAD. SPT.  
(AT THE POINT WHERE HORIZ. PART OF RAD. SPT.  
STARTS CURVING DOWN) LEFT AND RIGHT SIDE.  
TRIAxIAL ACCEL L&R FRONT BUMPER CROSSMEMBER (AT  
FRONT REMOTE SENSOR LOCATIONS) "  
MONITOR AECM INTERNAL ACCEL & SAFING SENSOR.  
TRIAxIAL ACCEL ATTACHED TO ORC FT LT.  
DIAxIAL (X&Y) ACCEL ON INBOARD SURFACE OF FRONT  
SILL (L&R DOOR) FT SILL FWD STR XMBR  
DIAxIAL (X&Y) L&R SILL @ B-FILLAR (ON SAICM  
HOUSING)  
MONITOR SAICM INTERNAL ACCEL. (2L & 2R)  
USE INDUCTIVE PICKUPS (2) TO MONITOR RIGHT AND  
LEFT SAICM SQUIB OUTPUTS/FIRE TIMES.  
DIAxIAL (X&Y) ACCEL INBOARD SURFACE OF REAR DOOR  
SILL LT & RT RR SILL FWD ST XMBR



CHRYSLER MOTORS  
SAFETY TEST  
VEHICLE CRASH TEST REQUEST

SUPPLEMENT NO. 05

PHOTOGRAPHIC REQ

- 1-VELOCITY CAMERA.
- 1-PIT CAMERA TO VIEW ORVR EQUIPMENT (ATTACHED TO FUEL TANK).
- 1-LEFT OVERALL.
- 1-RIGHT OVERALL.
- 1-HIGH SPEED VIDEO OF LEFT (DRIVER) SIDE OVERALL.
- 1-HIGH SPEED VIDEO OF LEFT (DRIVER) SIDE REAR QUARTER.
- 2-PIT CAMERAS FOR REAR UNDERBODY ANALYSIS.
- 1-R SIDE CLOSE UP OF FUEL FILLER AREA FROM PIT
- 1-L&R CLOSE UP OF REAR QUARTER OF VEHICLE.
- 1-PIT CAMERA CLOSEUP OF L-RAIL FROM KICKUP RWD.
- PRE&POST TEST PHOTOS OF OVERALL & UNDERBODY (REAR), FRAME RAILS, FUEL TANK/REAR AXLE AREA, ETC.
- PHOTOS OF ALL SENSOR LOCATIONS.

ALL CAMERAS TO HAVE DIGITAL TIMING IF POSSIBLE.

PRE AND POST TEST DIGITAL PHOTOS.

ANALYSIS

REAR DYNAMIC CRUSH.  
REAR UNDERBODY ANALYSIS.

VEHICLE VELOCITY - ONLY IF REQUESTED.

REMARKS

TEST REQUESTOR: M.P. LEVINE (X35368)  
MAKE 2 COPIES OD FILM AND 1 VIDEO. SEND TO:  
M.P. LEVINE 514-17-41 1 FILM & 1 VIDEO  
M. GIELOW 481-02-13 1 FILM  
PLEASE RETURN VEHICLE TO JTE ATTEN. PAM MORTON.

T. E. REPORT

FUEL SYSTEM REPORT REQUIRED.

REPORT CODES

A = TRANSDUCER DATA	B = ALL FILM DATA
C = HIGH SPEED FILM	D = ENGINEER'S REPORT
E = DUMMY KINEMATICS	F = STEERING COLUMN
G = UNDERBODY	H = A-POST
I = DYNAMIC CRUSH	J = ENGINE COMPARTMENT
K = DOOR CRUSH	L = FORCE/CRUSH/ENERGY
M = SPECIAL	N = CATALOG EDP DATA
* = REPORT REQUESTOR	

DISTRIBUTION

M.P. LEVINE	514-17-41	(AB)
M.A. GIELOW	481-02-13	(AB)
M. STEBELTON	422-05-01	(AB)



CHRYSLER MOTORS  
SAFETY TEST  
VEHICLE CRASH TEST REQUEST

SUPPLEMENT NO. 05

\*\*\*\*\*CHANGED 10/21/99 08145 LEVINE SUPPLEMENT 01

BUILD CONDITION  
ADD

EUROPEAN TOW EYE ON RIGHT FRONT AND REAR LEFT.

\*\*\*\*\*CHANGED 10/22/99 13103 LEVINE SUPPLEMENT 02

TARGET WEIGHT (LBS)

MODIFY 3862 TOTAL, 2019 FRONT, 2843 REAR REP. MAX OPT. WT  
TO READ 3938 TOTAL, 2135 FRONT, 1803 REAR REP BASE OPT. WT  
MODIFY 2.4L 4X4 VEHICLE (CHART DATE 3/17/99) W/OUT  
TO READ FOR A 3.7L 4X4 VEH. (CHART DATE 3/17/99) W/OUT

\*\*\*\*\*CHANGED 11/08/99 14147 LEVINE SUPPLEMENT 03



CHRYSLER MOTORS  
SAFETY TEST  
VEHICLE CRASH TEST REQUEST

SUPPLEMENT NO. 05

BUILD CONDITION

\*\*\*\*\*CHANGED 12/07/99 08:28 LEVINE SUPPLEMENT 04

MECHANICAL REQ

MODIFY POSITION DRIVER AND PASS SEAT IN MID POSITION &  
TO HEAD POSITION DRIVER & PASS SEAT 12 MM BACK FROM MID  
ADD POSITION & FULL DOWN.  
DELETE FULL DOWN.

\*\*\*\*\*CHANGED 12/10/99 10:45 LEVINE SUPPLEMENT 05

BUILD CONDITION



**THE FOLLOWING DOCUMENT(S)  
IS MICROFILMED IN AS IS  
CONDITION.**

Camera Operator: *RANDALL WHITE*

Date: *05-01-2003*

VEHICLE ATTITUDE

TEST NUMBER VC8023

TEST ENGINEER HOWELL

ITEM NUMBER KJ4264R

TEST DATE 12/1/99

X FENDER/WHEELWELL HEIGHTS

\_\_\_\_\_ BILL HEIGHTS

AS RECEIVED

	LF	LR	RF	RR
AS RECEIVED	37.3	33.8	37.8	33.6
AS BUILT-UP				
AS TESTED	34.7	33.2	34.1	32.1

AS BUILT-UP

AS TESTED



X, Y, Z DIMENSIONS

TEST NUMBER VC8023, TEST ENGINEER HOWELL  
 TEST TYPE: 30 MPH REAR WITH TYPE 4 MOV. BARR. V.I.N. 1J4FF581X2A

LOCATION	X	Y	Z	LOCATION	X	Y	Z
BC1	0.0	0.0	XXXX	BC2		0.0	XXXX
B1			XXXX	B2			XXXX
U1	105.1	-16.5	11.1	U2	105.6	18.5	11.3
U3	121.8	-7.2	14.8	U4	121.4	7.2	17.1
U5	128.3	7.8	9.6	U6	136.1	19.0	25.3
U7	136.7	-19.4	28.7	U8	141.3	6.0	12.8
U9	141.6	-3.7	15.1	U10	149.7	5.8	17.1
U11	150.2	-3.5	14.1	U12	155.6	19.9	13.7
U13	155.2	-20.2	24.1				
UC1	0	0					
LFS	52.8	-31.3	12.8				
LMS	175	-31.3	12.8				
LRA 4" TARGET W/O BLACK RING	31.3	31.9	14.9				
		50-				50-	

TRAMMEL DIMENSIONS:

LFS-LMS

PRE

27.79

U1-U2

37.23

POST

23.88

# Program: 02KJ

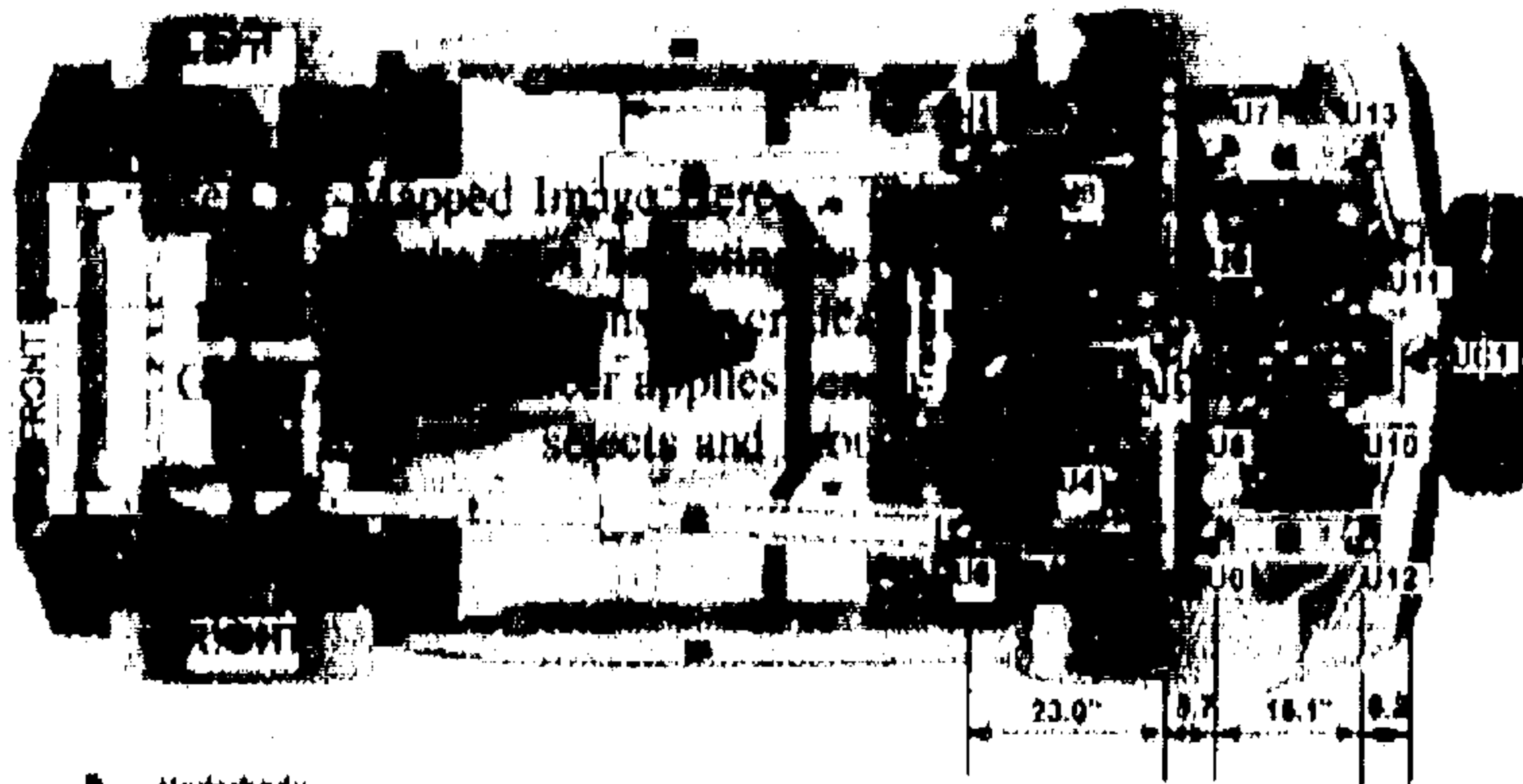
## REAR UNDERBODY

### FOR ALL REAR IMPACTS

VC ; Item No.

Impact Analysis Engineer: RRN / 05/03/1999  
 Viability Approved: DGL / 05/03/1999  
 Approved for CPQ Use: GAD / 05/03/1999

Third Sheet Item , YD  
 Jeep Cherokee 4x4 KJ  
 Target and Accelerometer Locations  
 For Rear Impact



- U Underbody
- U Hide View
- U Single Axis (X) Accelerometer
- U Bi-axial (X & Z) Accelerometer

#### Guidelines to Placement of Critical Targets:

Item	Comments
U1 & U2	6.5" ahead of forward edge of control arm mounting bracket.
U3 & U4	At midpoint of upper swing arms.



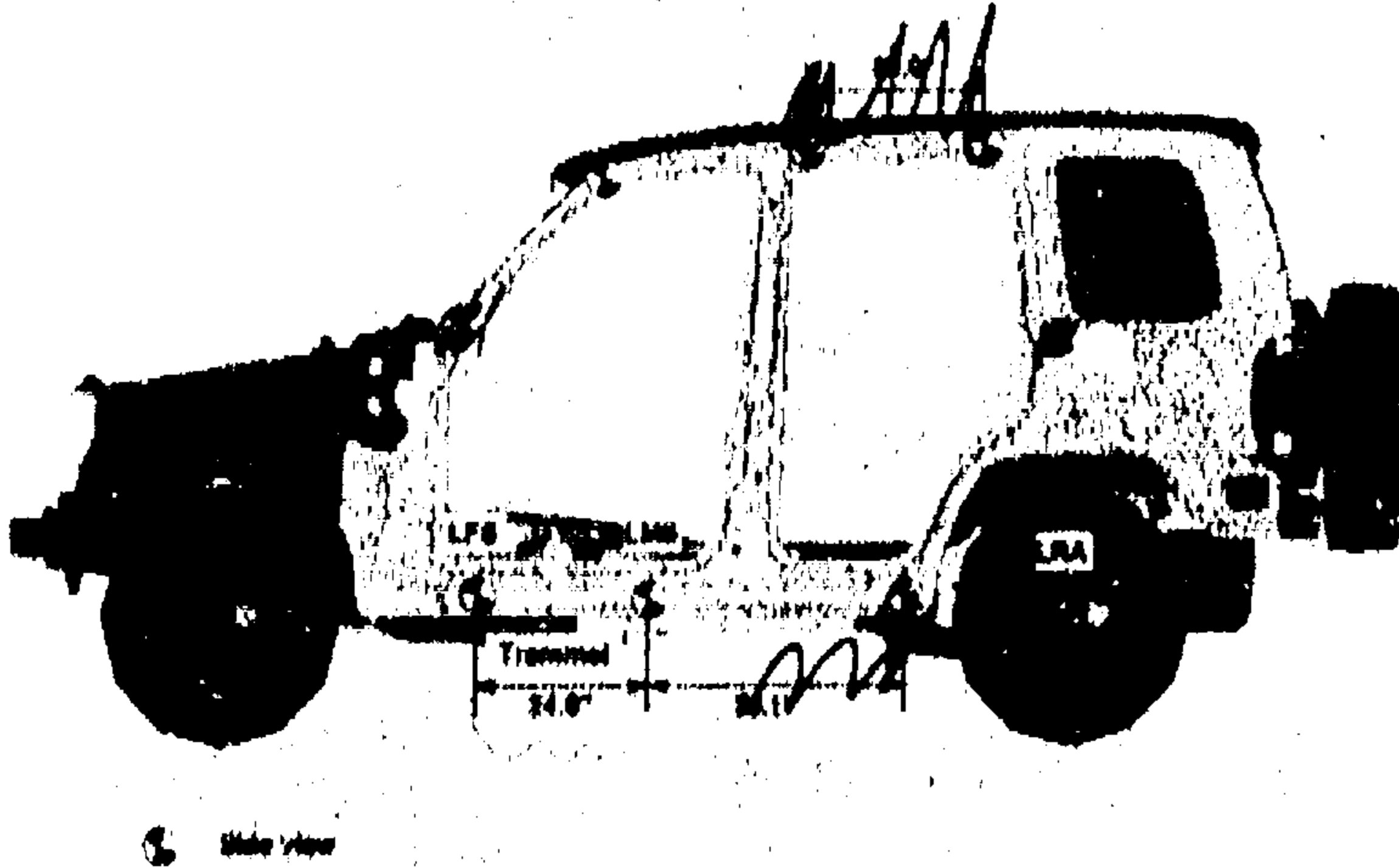
# Program: 02KJ

VC 82.5 ; Item No.

## LEFT SIDE FOR ALL REAR IMPACTS

Impact Analysis Engineer: RPH / 05/03/1999  
Viability Approved: DGL / 05/03/1999  
Approved for CPG Use: GAB / 05/03/1999

Third Sheet Start \_\_\_\_\_ VC \_\_\_\_\_  
Jeep Cherokee 4x4 KJ



### Guidelines to Placement of Critical Targets:

Item	Comments
L1	Target not required on rear impact.
L3	Target not required on rear impact.
L5	Target not required on rear impact.
LCP	Target not required on rear impact.
L18	Target not required on rear impact.
LRA	Place target on center of hub.
LFS, LMS	Besides LRA, these are only other two targets required.

Version: 02

EA12-005-Chrysler-002280

Last Revised: 05/03/99

**THE FOLLOWING DOCUMENT(S)  
IS MICROFILMED IN AS IS  
CONDITION.**

Camera Operator: *RANDALL WHYTE*

Date: *05-01-2003*



LEFT

FRONT SILL

REAR SILL

REAR AXLE

X=
Y=
Z=

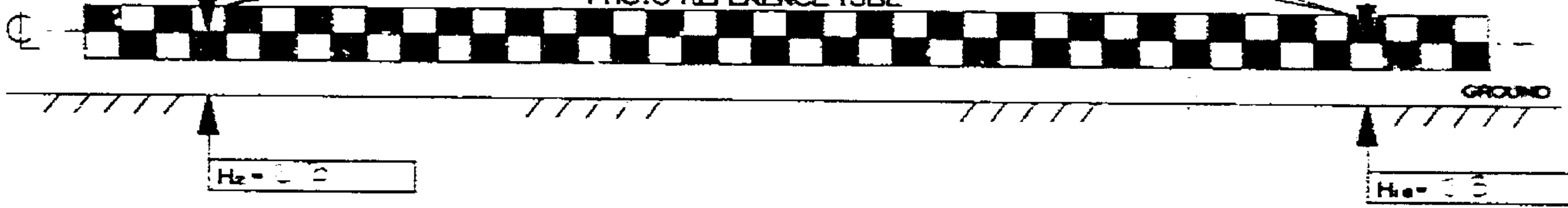
X=
Y=
Z=

X=
Y=
Z=

TUBE COLOR 22

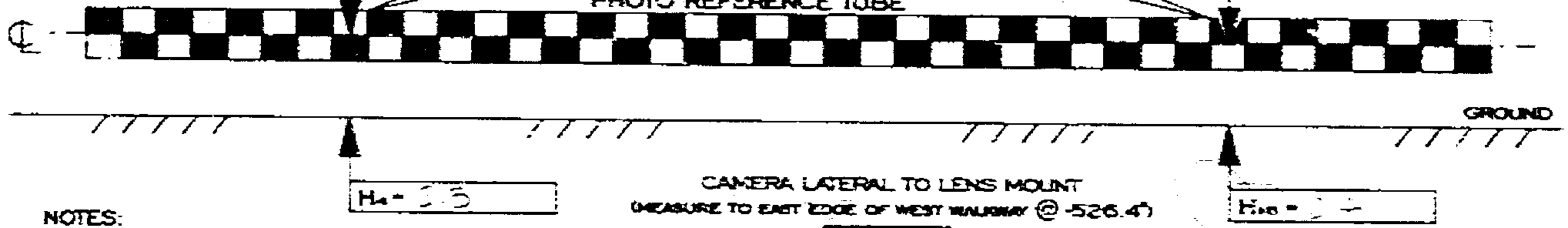
534	1005	1315	1525
-----	------	------	------

PHOTO REFERENCE TUBE



774	924	1320	
-----	-----	------	--

PHOTO REFERENCE TUBE



CAMERA LATERAL TO LENS MOUNT  
(MEASURE TO EAST EDGE OF WEST WALKWAY @ -526.4')

526.4 INCHES

NOTES:

1. THE Z DIMENSION FOR THE SILL TARGETS AND REAR AXLE MUST BE RETAKEN AT THE TEST SITE
2. IF OTHER TUBE POINTS ARE USED, SO INDICATE

FOR REAR IMPACT TESTS - DIMENSIONING BETWEEN SILL TARGETS AND PHOTO REFERENCE TUBE

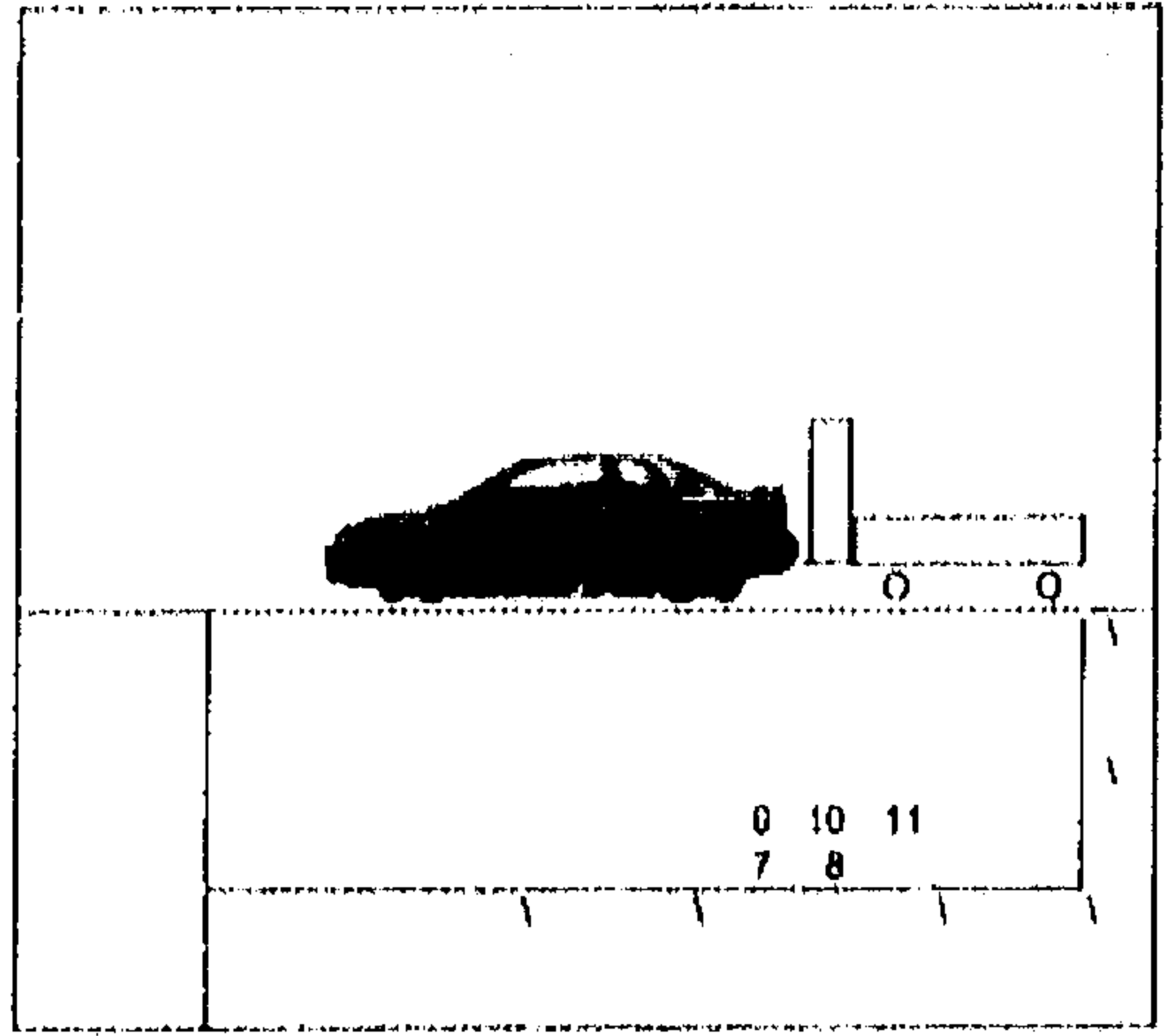
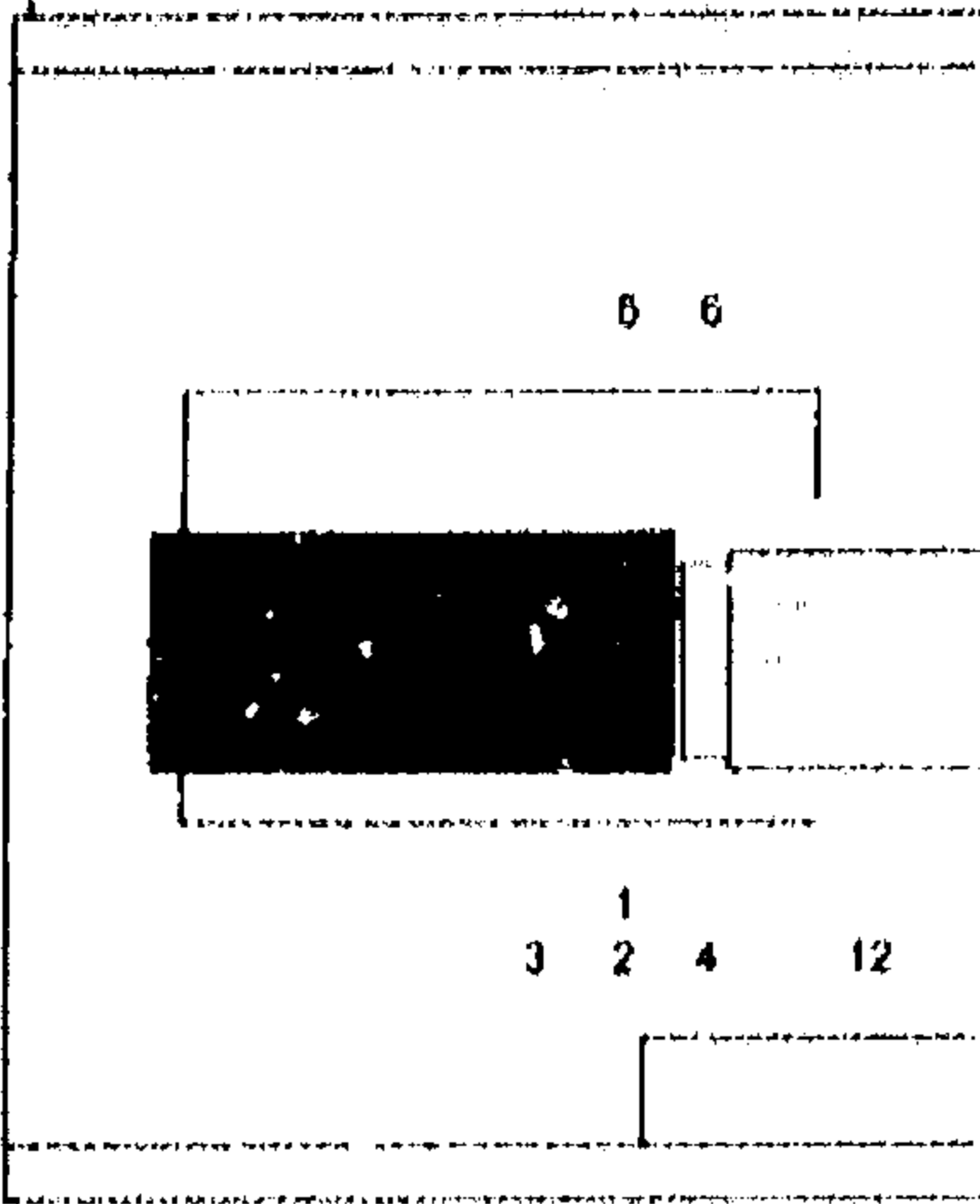
TEST ENGR VC 9023

PRE FA DIAGRAMS 01/28/97

EA12-005-01018-00228

PLAN VIEW

SIDE VIEW



TEST NUMBER:	VC08023	VEHICLE TYPE:	KJ
TEST TYPE:	30 MPH REAR	TEST ENGINEER:	HOWELL
REQ. TEST DATE:	4/10/00		

#	VIEW DESCRIPTION A=ANALYSIS	C/M S/N	LENS FL	LENS S/N	LENS MFG.	F. STOP	PN	SK	CB	MISC
1	A LT - OVERALL - DYNAMIC CRUSH	187	18MM	118889	KIN					
2	T LT - REAR QUARTER PANEL	1872*	35MM	111085	KIN					
3	T RT - OVERALL	1873	13MM	102906	KIN					
4	T RT - REAR QUARTER PANEL	1874*	35MM	111106	KIN					
6	A PIT - REAR UNDERBODY ANALYSIS	431	13MM	13-4	COS					
8	A PIT - REAR UNDERBODY ANALYSIS	432	13MM	13-7	COS					
7	T PIT - FUEL TANK & FILL TUBE	282	18MM	107233	KIN					
8	T PIT - CLOSE UP OF FUEL FILTER AREA	283	25MM	25-3	COS					
10	V VELOCITY	287	100MM	D73487	WOL					
30	LT - HIGH SPEED VIDEO OF LEFT (DRIVER) SIDE OVERALL	EKTA	ZOOM	300473	CAN					
31	LT - HIGH SPEED VIDEO OF (DRIVER) SIDE REAR QUARTER	PRO	ZOOM	300098	CAN					
	** PRE & POST TEST PHOTOS OF OVE AND UNDERBODY (REAR), FRAME RAILS, FUEL TANK/REAR AXLE AREA, ET									
	** PHOTOS OF ALL SENSOR LOCATION									
	** ALL CAMERAS TO HAVE DIGITAL TIMING**									
	M. LEVINE 1F 1V									
	M. GIELOW 1F									

MONDAY #2

12/13/99



**THE FOLLOWING DOCUMENT(S)  
IS MICROFILMED IN AS IS  
CONDITION.**

Camera Operator: *RANDALL WHYTE*

Date: *05-01-2003*

FUEL SYSTEM AND STATIC ROLLOVER SUMMARY

TEST NUMBER V00023, ITEM NUMBER KJ4264R, TEST ENGINEER HOWELL

V.I.N. 1G4FF5B1X2A [REDACTED] TEST DATE 12/13/99, ROLL DATE 12/14/99

TEST TYPE/ 30 MPH TYPE IV MOVING BARRIER REAR IMPACT

FUEL/ TYPE AND QUANTITY - .767 S.G. STODDARD SOLVENT, 17.0 GALLONS

TEST SPEED 30.2 MPH, TEST WEIGHT 4523 POUNDS.

POST IMPACT LEAKAGE(OZ); AT IMPACT 0

1ST 5 MIN. 0

NEXT 25 MIN. 0

POST TEST PRESSURE CHECK No Leakage

ELECTRIC FUEL PUMP RUN No Leakage

NO STATIC ROLL PERFORMED

STATIC ROLL LEAKAGE WITH VEHICLE \_\_\_\_\_ SIDE DOWN FIRST

		FUEL LEAKAGE LOCATIONS DURING STATIC ROLL				TOTAL
ROLL TIME						
0-90	1ST 5 MIN					0 *
<u>1:53</u>	POST 5 MIN					0 **
90-180	1ST 5 MIN					0 *
<u>1:48</u>	POST 5 MIN					0 **
180-270	1ST 5 MIN					0 *
<u>1:49</u>	POST 5 MIN					0 **
270-360	1ST 5 MIN					0 *
<u>1:47</u>	POST 5 MIN					0 **

\* OUNCES IN 5 MINUTES, \*\* OUNCES PER MINUTE

POST TEST FUEL SYSTEM OBSERVATIONS \_\_\_\_\_

LAST FORM MODIFICATION 08/22/96 - GAB (TESTOBS896, DOCVCFORMS)



DATE 12/14/99  
TIME 17:01:42.

ELECTRONIC DATA PROCESSING  
EDP TEST LETTER

VEHICLE CRASH ENGINEERING  
DEPT 5320

VC08023 ITEM KJ4276R  
VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MVEB 301 REAR IMPACT DEVELOPMENT.  
TEST DATE 12/13/99

TEST PURPOSE PRIMARY, 2002 USA 301 DEVELOPMENT.  
DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED; 30.1 MPH  
DAMAGE LOCATION; REAR  
BARRIER TYPE; REAR TYPE IV  
BARRIER SURFACE; PLYWOOD

VEHICLE BODY CLASS; KJ  
CAR LINE; J  
BODY; 74  
ENGINE; 2.4 LITRE  
ENGINE NOTE; ELECTRONIC FUEL INJECTION  
TRANSMISSION; 4 SPEED AUTO 4x4  
TRANS. NOTE;  
VIN AS TESTED; 1J4FF581X2A [REDACTED] MOD.  
VIN AS BUILT; 1J4FF581X2A [REDACTED] MOD.

TEST SPEED 30.2 MPH ELECTRONIC SPEED TRAP SYSTEM

TEST WEIGHT (LBS) 4578 TOTAL, 2487 FRONT, 2091 REAR

OCCUPANTS LEFT FRONT, HYBRID II BALLAST. AD-47  
RESTRAINT-BELTS ONLY.  
RIGHT FRONT, HYBRID II BALLAST. AD-70  
RESTRAINT-BELTS ONLY.

DATE 12/14/99  
TIME 17:01:42.

ELECTRONIC DATA PROCESSING  
EDP TEST LETTER

VEHICLE CRASH ENGINEERING  
DEPT 5320

VC08023 ITEM KJ4276R  
VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MVSS 301 REAR IMPACT DEVELOPMENT.  
TEST DATE 12/13/99

BUILD CONDITION

TARGET WEIGHT (LBS) 3938 TOTAL, 2135 FRONT, 1803 REAR REP BASE OPT. WT  
FOR A 3.7L 4X4 VEH. (CHART DATE 3/17/99) W/OUT  
LUGGAGE OR OCCUPANTS.

FUEL AND BALLAST 17 GALLONS OF STODDARD SOLVENT.  
300 LBS.  
BALLAST ADDED (350LBS REAR SEAT) (200 FRONT)

EDP TECHNICIAN G. MARCHENIA

No. of Pages 102  
CC

M. A. GIELOW	481-02-13
M. F. LEVINE	514-17-41
M. STEBELTON	422-05-01



TITLE: Page Index of EDP plots

Pages 001 - 102

Page I-01

\*\*\*\*\* VC08023A \*\*\*\*\*

TITLE: Transducer Summary Reports

Pages 001 - 009

PAGE: 001 TSR Channels 001 - 008  
 PAGE: 002 TSR Channels 009 - 016  
 PAGE: 003 TSR Channels 017 - 024  
 PAGE: 004 TSR Channels 025 - 032  
 PAGE: 005 TSR Channels 033 - 040  
 PAGE: 006 TSR Channels 041 - 048  
 PAGE: 007 TSR Channels 049 - 056  
 PAGE: 008 TSR Channels 057 - 064  
 PAGE: 009 TSR Channels 065 - 066

\*\*\*\*\* VC08023B \*\*\*\*\*

TITLE: Vehicle Channels

Pages 010 - 098

PAGE: 010 Average of Sill Chls 7, 9, 15, & 17  
 PAGE: 011 Average of Frc Sill Chls 7 & 9  
 PAGE: 012 LEFT FRONT SILL X, Chl 1  
 PAGE: 013 LEFT FRONT SILL X, Chl 1, VD  
 PAGE: 014 RIGHT FRONT SILL X, Chl 2  
 PAGE: 015 RIGHT FRONT SILL X, Chl 2, VD  
 PAGE: 016 LEFT REAR SILL X, Chl 3  
 PAGE: 017 LEFT REAR SILL X, Chl 3, VD  
 PAGE: 018 LEFT REAR SILL Z, Chl 4  
 PAGE: 019 RIGHT REAR SILL X, Chl 5  
 PAGE: 020 RIGHT REAR SILL X, Chl 5, VD  
 PAGE: 021 RIGHT REAR SILL Z, Chl 6  
 PAGE: 022 LT FT SILL FWD ST XMBRX, Chl 7  
 PAGE: 023 LT FT SILL FWD ST XMBRY, Chl 7, VD  
 PAGE: 024 RT FT SILL FWD ST XMBRY, Chl 8  
 PAGE: 025 RT FT SILL FWD ST XMBRX, Chl 9  
 PAGE: 026 RT FT SILL FWD ST XMBRY, Chl 9, VD  
 PAGE: 027 RT FT SILL FWD ST XMBRY, Chl 10  
 PAGE: 028 LT SILL AT B PILLAR X, Chl 11  
 PAGE: 029 LT SILL AT B PILLAR X, Chl 11, VD  
 PAGE: 030 LT SILL AT B PILLAR Y, Chl 12  
 PAGE: 031 RT SILL AT B PILLAR X, Chl 13  
 PAGE: 032 RT SILL AT B PILLAR X, Chl 13, VD  
 PAGE: 033 RT SILL AT B PILLAR Y, Chl 14  
 PAGE: 034 LT RR SILL FWD ST XMBRX, Chl 15  
 PAGE: 035 LT RR SILL FWD ST XMBRY, Chl 15, VD  
 PAGE: 036 LT RR SILL FWD ST XMBRY, Chl 16  
 PAGE: 037 RT RR SILL FWD ST XMBRX, Chl 17  
 PAGE: 038 RT RR SILL FWD ST XMBRY, Chl 17, VD  
 PAGE: 039 RT RR SILL FWD ST XMBRY, Chl 18  
 PAGE: 040 RT REAR RAIL MID TANK X, Chl 19  
 PAGE: 041 RT REAR RAIL MID TANK X, Chl 19, VD  
 PAGE: 042 RT REAR RAIL MID TANK Z, Chl 20  
 PAGE: 043 LT REAR RAIL MID TANK X, Chl 21  
 PAGE: 044 LT REAR RAIL MID TANK X, Chl 21, VD  
 PAGE: 045 LT REAR RAIL MID TANK Z, Chl 22  
 PAGE: 046 LT RAIL TRANS X/MBR X, Chl 23  
 PAGE: 047 LT RAIL TRANS X/MBR X, Chl 23, VD  
 PAGE: 048 LT RAIL TRANS X/MBR Z, Chl 24  
 PAGE: 049 RT RAIL TRANS X/MBR X, Chl 25  
 PAGE: 050 RT RAIL TRANS X/MBR X, Chl 25, VD  
 PAGE: 051 RT RAIL TRANS X/MBR Z, Chl 26  
 PAGE: 052 LT RAIL FT XMBR X, Chl 27  
 PAGE: 053 LT RAIL FT XMBR X, Chl 27, VD  
 PAGE: 054 RT RAIL FT XMBR X, Chl 28

\*C\*  
\*C\*

PAGE: 055 RT RAIL FT XMBR Y, Chl 28, VD  
 PAGE: 056 LT RL UPR 30MM AFT RADX, Chl 29 \*C\*  
 PAGE: 057 LT RL UPR 30MM AFT RADX, Chl 29, VD \*C\*  
 PAGE: 058 RT RL UPR 30MM AFT PADX, Chl 30 \*C\*  
 PAGE: 059 RT RL UPR 30MM AFT RADX, Chl 30, VD \*C\*  
 PAGE: 060 LT RR VERT SURF RAD SUX, Chl 31  
 PAGE: 061 LT RR VERT SURF RAD SUX, Chl 31, VD  
 PAGE: 062 RT RR VERT SURF RAD SUX, Chl 32  
 PAGE: 063 RT RR VERT SURF RAD SUX, Chl 32, VD  
 PAGE: 064 LT RR SURF CURVE RAD SX, Chl 33  
 PAGE: 065 LT RR SURF CURVE RAD SX, Chl 33, VD  
 PAGE: 066 RT RR SURF CURVE RAD SX, Chl 34  
 PAGE: 067 RT RR SURF CURVE RAD SX, Chl 34, VD  
 PAGE: 068 LT FT XMBR SENSOR LOC X, Chl 35  
 PAGE: 069 LT FT XMBR SENSOR LOC X, Chl 35, VD  
 PAGE: 070 LT FT XMBR SENSOR LOC Y, Chl 36  
 PAGE: 071 LT FT XMBR SENSOR LOC Z, Chl 37  
 PAGE: 072 RT FT XMBR SENSOR LOC X, Chl 38  
 PAGE: 073 RT FT XMBR SENSOR LOC X, Chl 38, VD  
 PAGE: 074 RT FT XMBR SENSOR LOC Y, Chl 39  
 PAGE: 075 RT FT XMBR SENSOR LOC Z, Chl 40  
 PAGE: 076 FUEL TANK RL PASS-THRU X, Chl 41 \*C\*  
 PAGE: 077 FUEL TANK RL PASS-THRU X, Chl 41, VD \*C\*  
 PAGE: 078 FUEL TANK RL PASS-THRU Y, Chl 42  
 PAGE: 079 FUEL TANK RL PASS-THRU Z, Chl 43  
 PAGE: 080 ACM DAB1 SQUIB EVENT, Chl 44, Event \*N\*  
 PAGE: 081 ACM DAB2 SQUIB EVENT, Chl 45, Event \*N\*  
 PAGE: 082 ACM PAB1 SQUIB EVENT, Chl 46, Event \*N\*  
 PAGE: 083 ACM PAB2 SQUIB EVENT, Chl 47, Event \*N\*  
 PAGE: 084 DR PRETEN SQUIB, Chl 48, Event \*N\*  
 PAGE: 085 PS PRETEN SQUIB, Chl 49, Event \*N\*  
 PAGE: 086 LT SIACM INT ACCEL1 G, Chl 50  
 PAGE: 087 LT SIACM INT ACCEL2 G, Chl 51  
 PAGE: 088 RT SIACM INT ACCEL1 G, Chl 52  
 PAGE: 089 RT SIACM INT ACCEL2 G, Chl 53  
 PAGE: 090 LT SIACM SQUIB EVENT, Chl 54, Event \*N\*  
 PAGE: 091 RT SIACM SQUIB EVENT, Chl 55, Event \*N\*  
 PAGE: 092 ACM SAFING SENSOR, Chl 56, Event \*N\*  
 PAGE: 093 ACM INTERN ACCEL G, Chl 57  
 PAGE: 094 ORC FRONT LT X, Chl 58  
 PAGE: 095 ORC FRONT LT X, Chl 58, VD  
 PAGE: 096 ORC FRONT LT Y, Chl 59  
 PAGE: 097 ORC FRONT LT Z, Chl 60  
 PAGE: 098 TRAILER HITCH EVENT, Chl 61, Event \*N\*

TITLE: Moving barrier Channels Pages 099 - 102

PAGE: 099 LT RAIL MBAR MID X Chl 65  
 PAGE: 100 LT RAIL MBAR MID X, Chl 65, VD  
 PAGE: 101 RT RAIL MBAR MID X Chl 66  
 PAGE: 102 RT RAIL MBAR MID X, Chl 66, VD

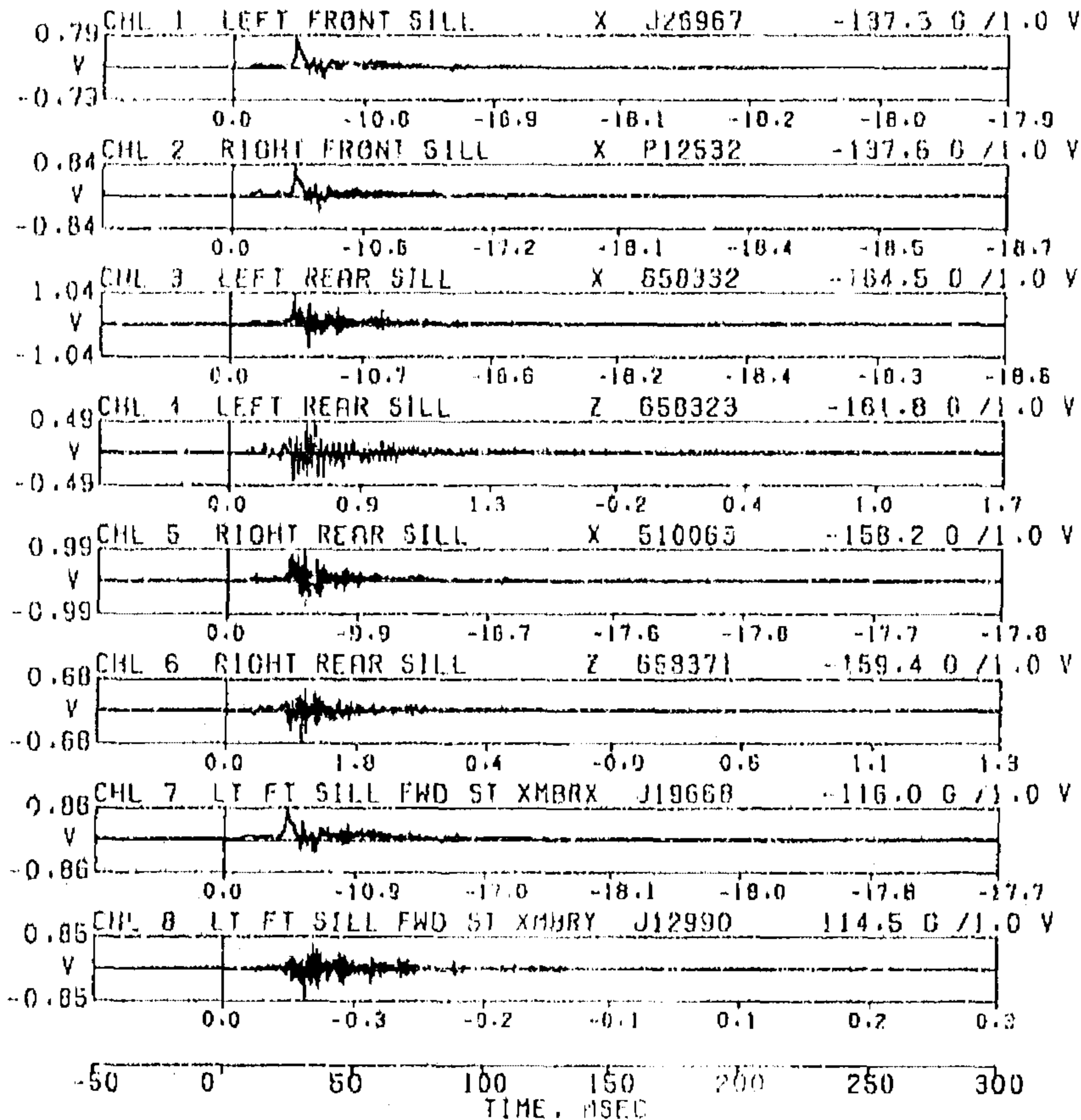


TRANSDUCER SUMMARY REPORT

VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4278R  
 2002 MY55 301 REAR IMPACT DEVELOPMENT,  
 IMPACT ANALYSIS DEPT. 6320  
 DEC 14, 1999

PAGE 001  
 OF 102  
 DATA SET 12/13/998F  
 ERRATA 1

-50 0 50 100 150 200 250 300

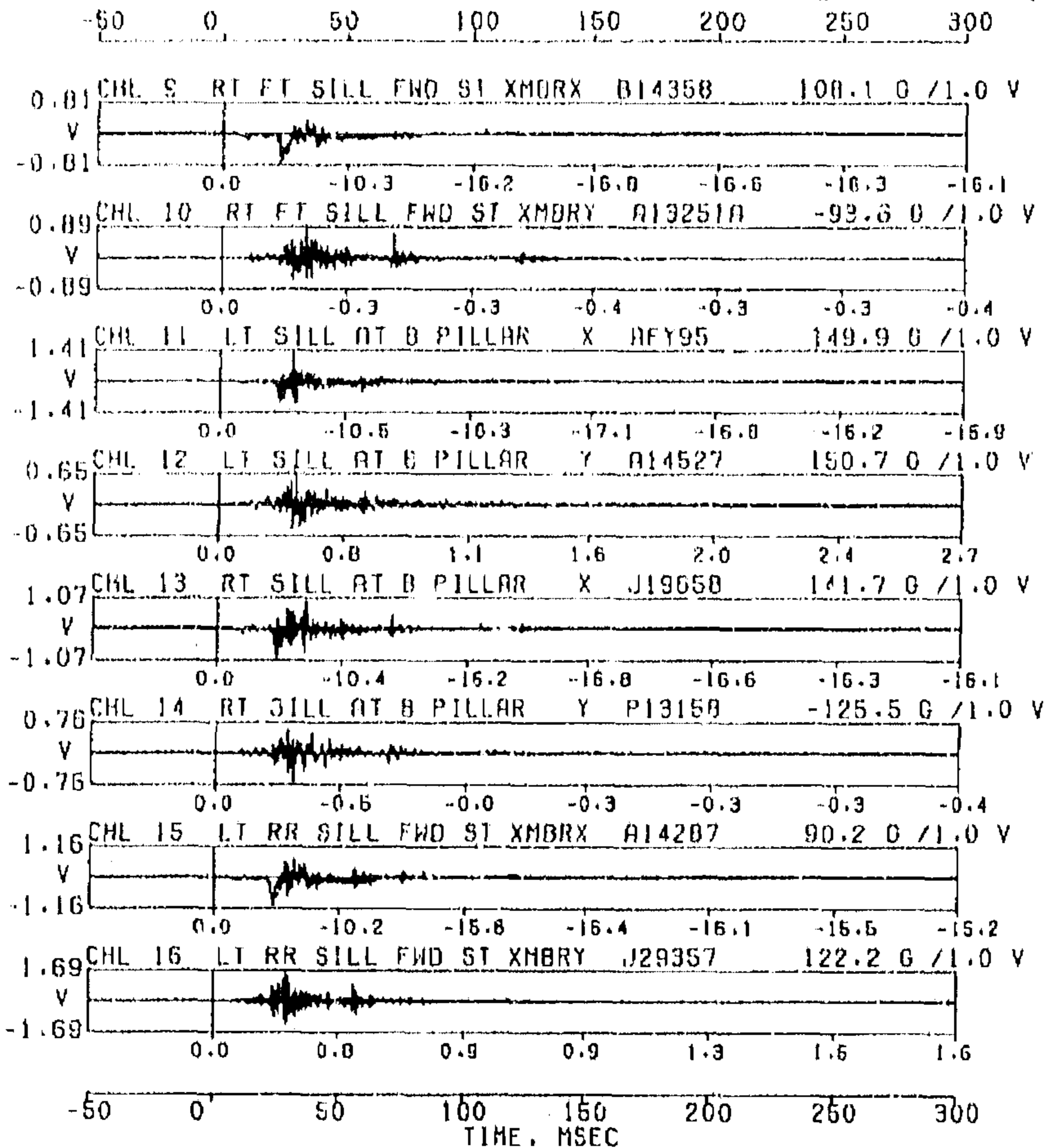


NOTE COMPUTED FIRST INTEGRAL VALUES ARE INDICATED BELOW EACH CHANNEL AND BRIDGED DATA IS INDICATED BY A -B-.

TRANSDUCER SUMMARY REPORT

VC08025 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
 2002 MYSS 301 REAR IMPACT DEVELOPMENT.  
 IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

PAGE 002  
 OF 102  
 DATA SET 12/13/99BF  
 ERRATA 1



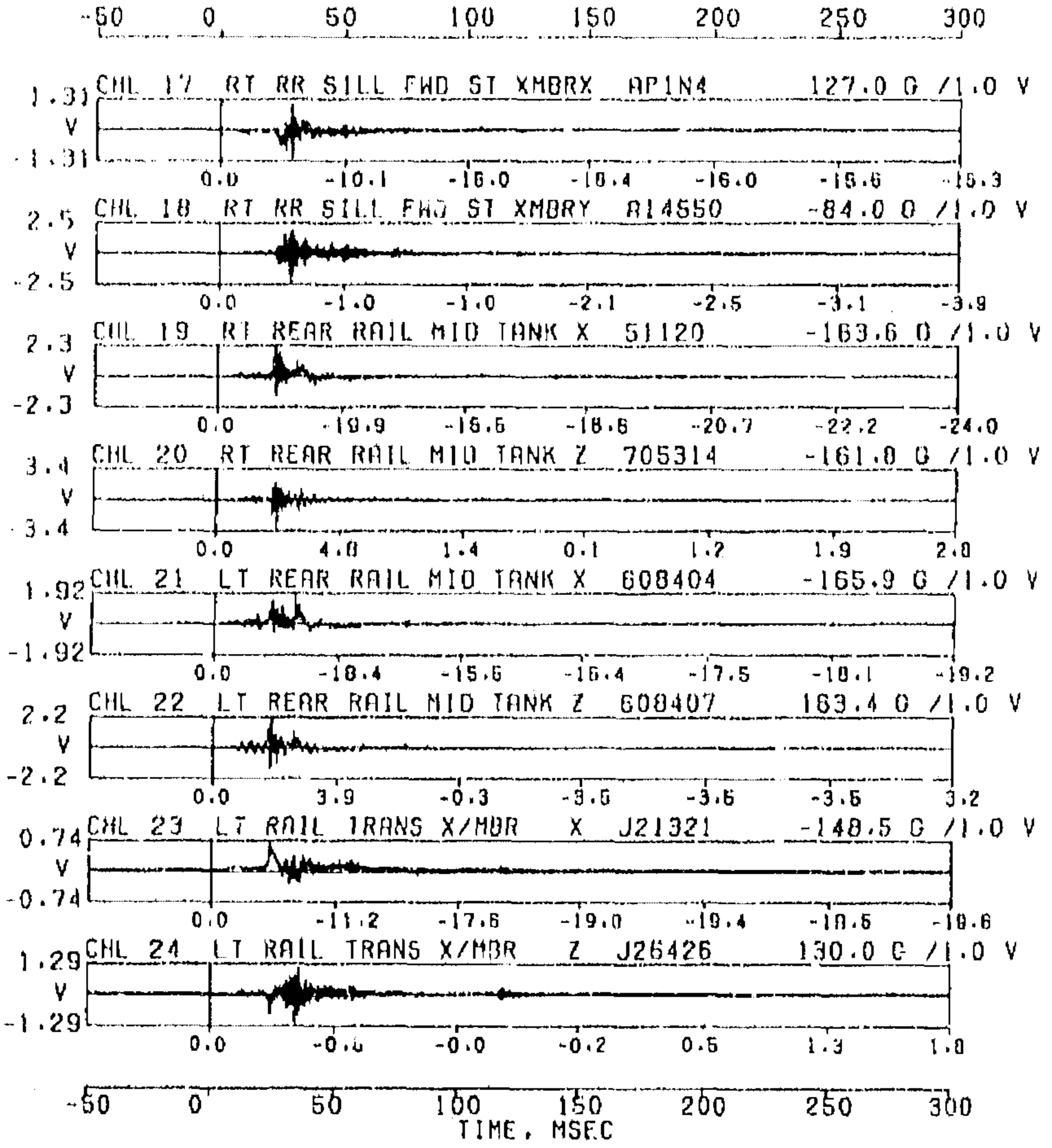
NOTE COMPUTED FIRST INTEGRAL VALUES ARE INDICATED BELOW EACH CHANNEL AND BRIDGED DATA IS INDICATED BY A -B-.



TRANSDUCER SUMMARY REPORT

VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
 2002 HV55 301 REAR IMPACT DEVELOPMENT.  
 IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

PAGE 003  
 OF 102  
 DATA SET 12/13/9980  
 ERRATA 1

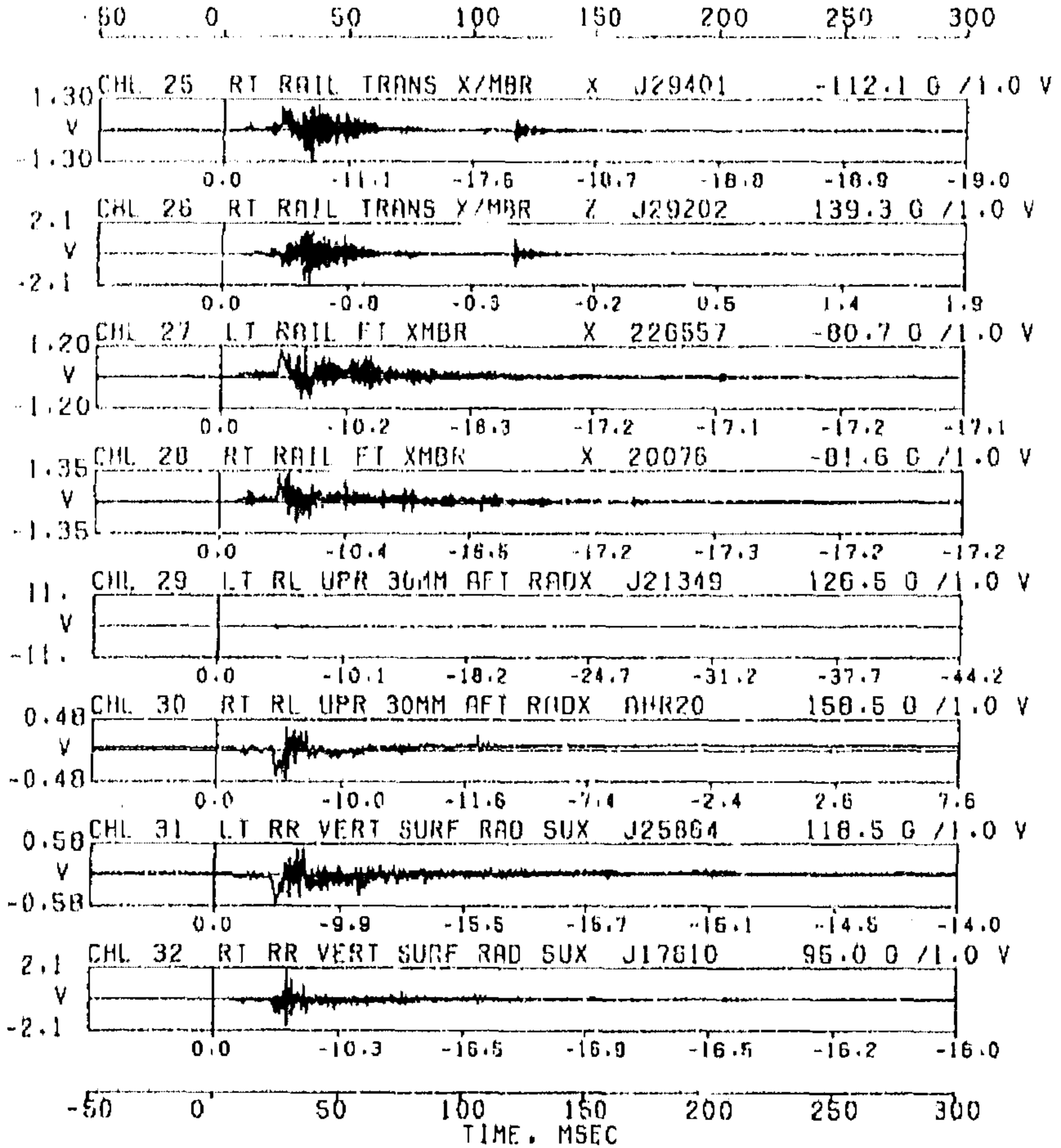


NOTE COMPUTED FIRST INTEGRAL VALUES ARE INDICATED BELOW EACH CHANNEL AND BRIDGED DATA IS INDICATED BY A -B-.

TRANSDUCER SUMMARY REPORT

VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
 2002 MY55 301 REAR IMPACT DEVELOPMENT.  
 IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

PAGE 004  
 OF 102  
 DATA SET 12/13/99BG  
 ERRATA 1



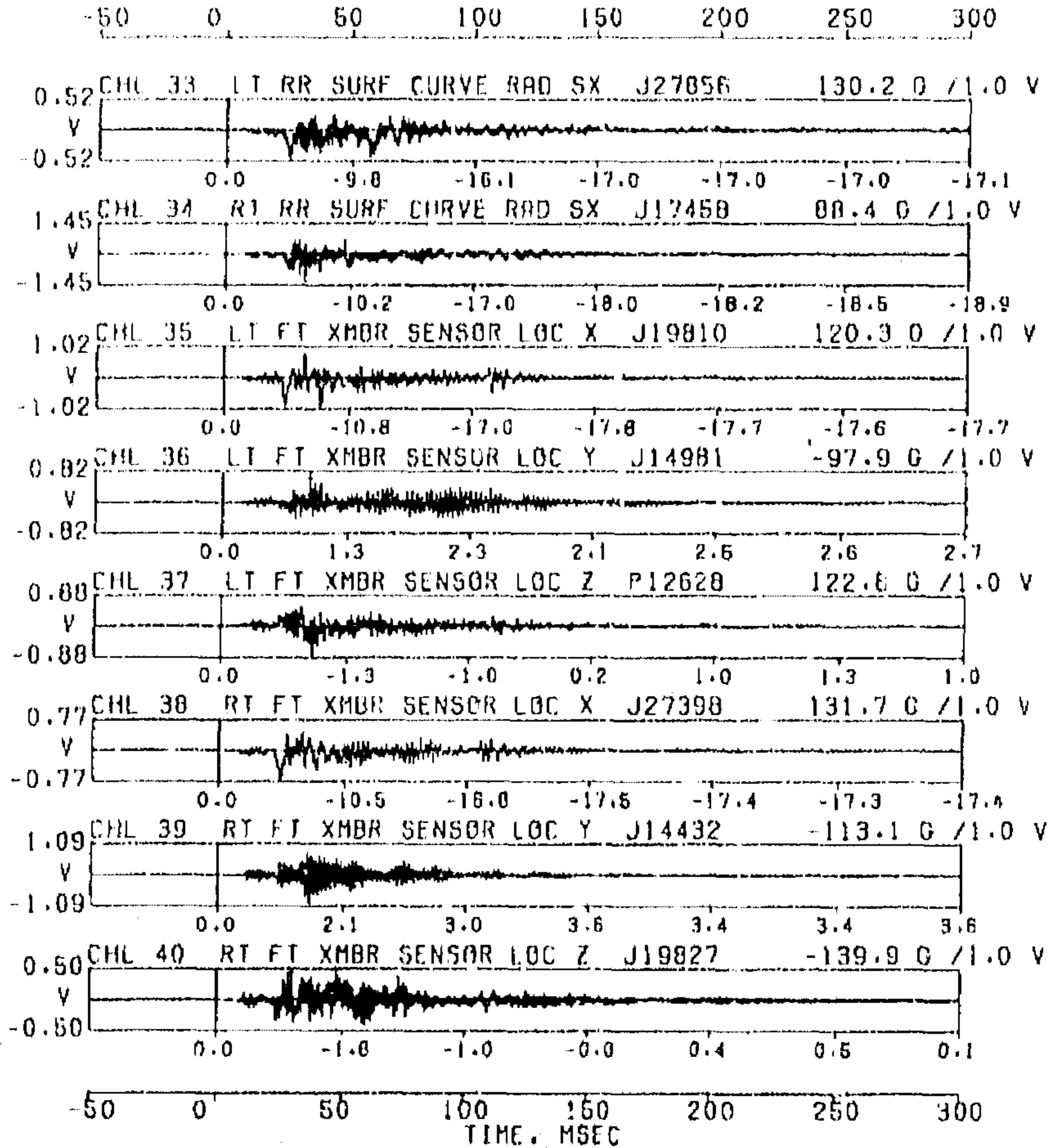
NOTE COMPUTED FIRST INTEGRAL VALUES ARE INDICATED BELOW EACH CHANNEL AND BRIDGED DATA IS INDICATED BY A -B-.



TRANSDUCER SUMMARY REPORT

VCO8023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
 2002 MYSS 301 REAR IMPACT DEVELOPMENT.  
 IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

PAGE 005  
 OF 102  
 DATA SET 12/13/99BH  
 ERRATA 1



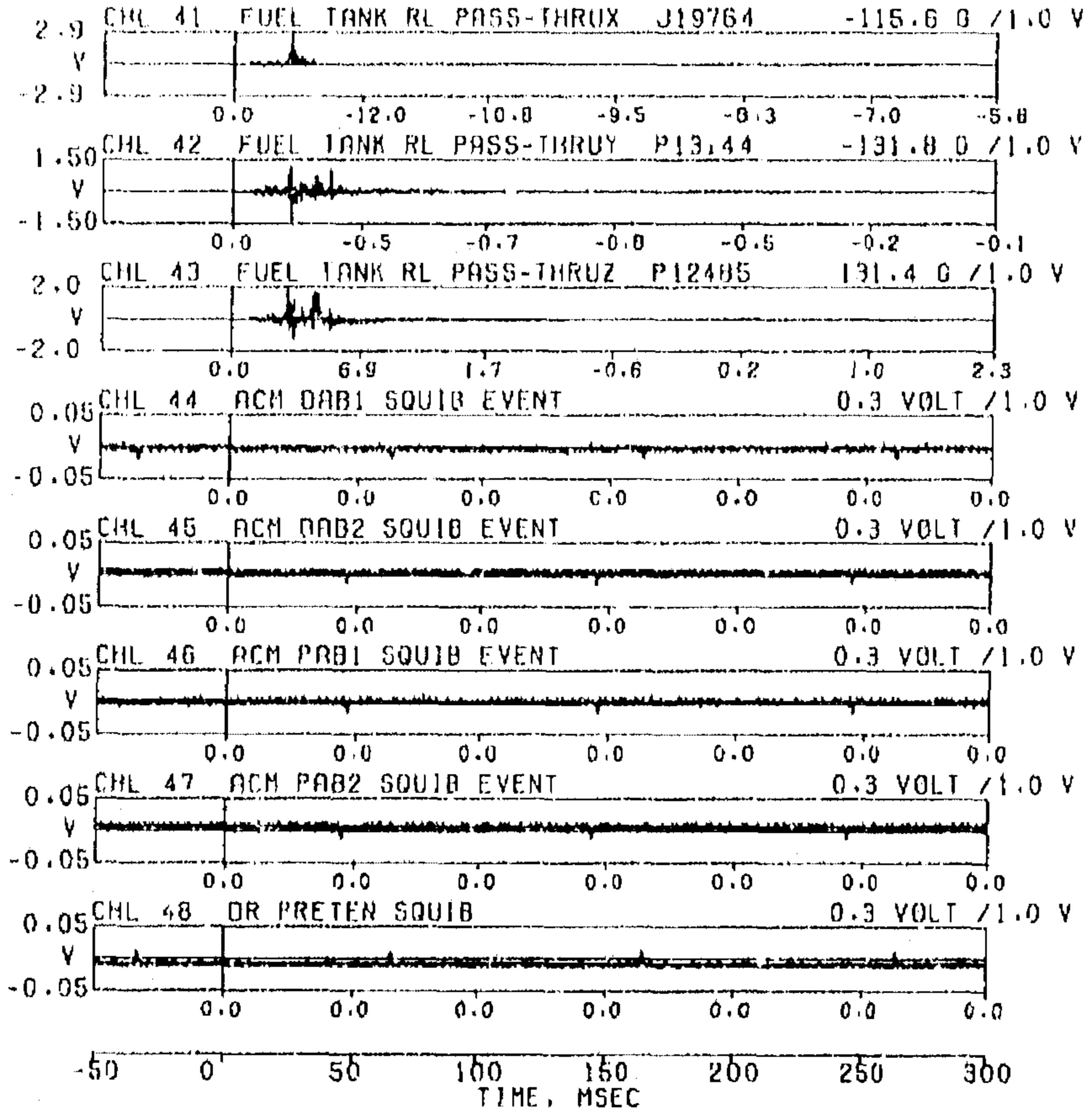
NOTE COMPUTED FIRST INTEGRAL VALUES ARE INDICATED BELOW EACH CHANNEL AND BRIDGED DATA IS INDICATED BY A -B-.

TRANSDUCER SUMMARY REPORT

VC08023 30 MPH REAR MOVING BARRIER. KJJ-74 ITEM KJ4276R  
 2002 HY95 301 REAR IMPACT DEVELOPMENT.  
 IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

PAGE 006  
 OF 102  
 DATA SET 12/13/99BM  
 ERRATA 1

-50 0 50 100 150 200 250 300



NOTE COMPUTED FIRST INTEGRAL VALUES ARE INDICATED BELOW EACH CHANNEL AND BRIDGED DATA IS INDICATED BY A -B-.

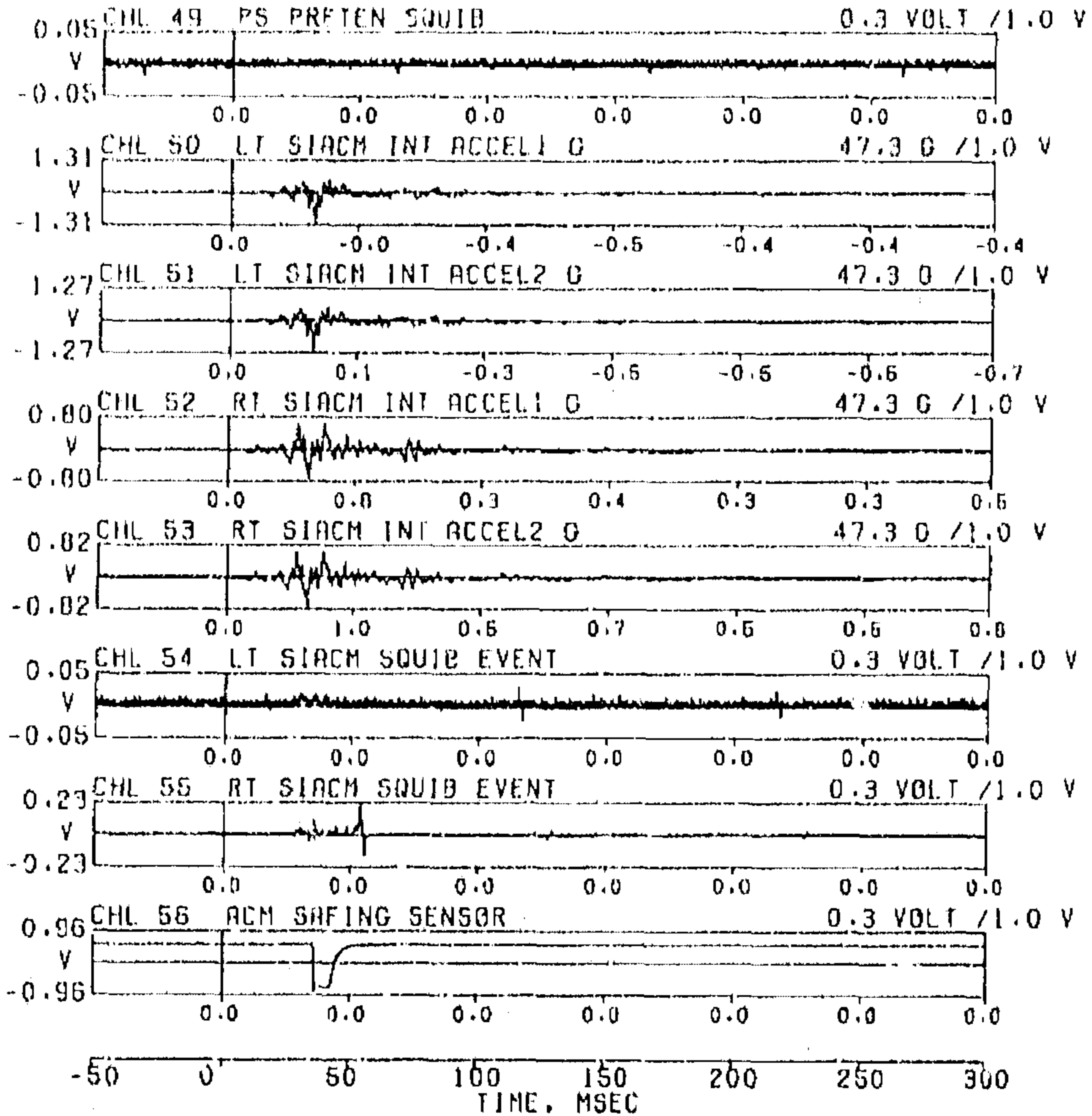


TRANSDUCER SUMMARY REPORT

VCOB023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
 2002 HYSS 301 REAR IMPACT DEVELOPMENT.  
 IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

PAGE 007  
 OF 102  
 DATA SET 12/13/99B1  
 ERRATA 1

-50 0 50 100 150 200 250 300



NOTE COMPUTED FIRST INTEGRAL VALUES ARE INDICATED BELOW EACH CHANNEL AND BRIDGED DATA IS INDICATED BY A -B-.

TRANSDUCER SUMMARY REPORT

VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MYSS 901 REAR IMPACT DEVELOPMENT.  
IMPACT ANALYSIS DEPT. 5320

PAGE 008  
OF 102

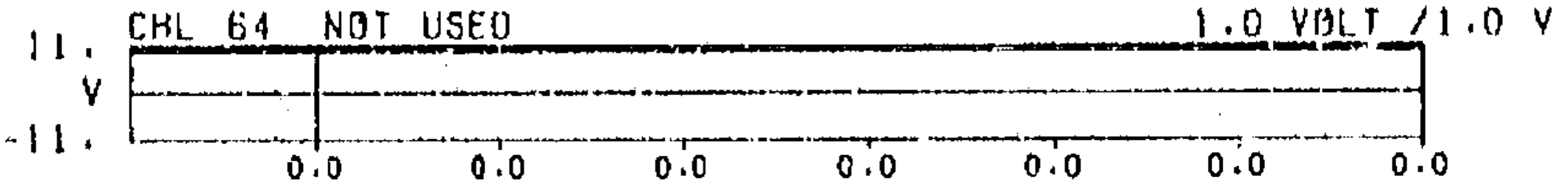
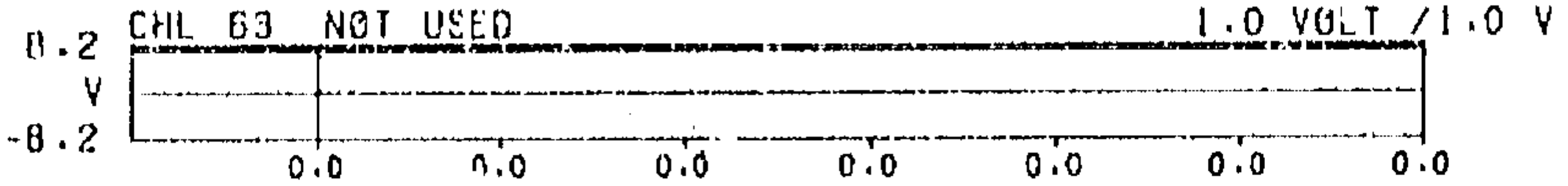
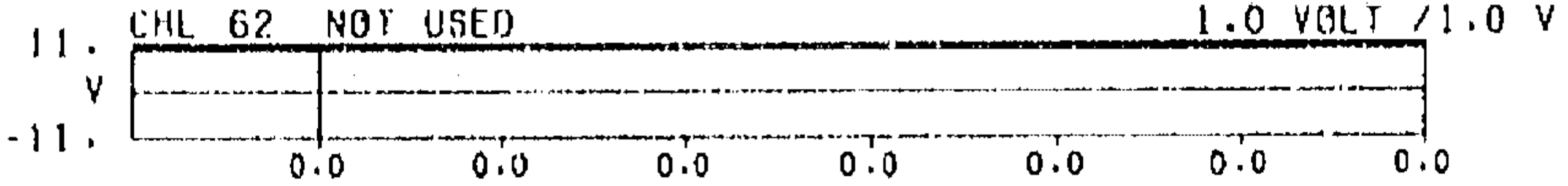
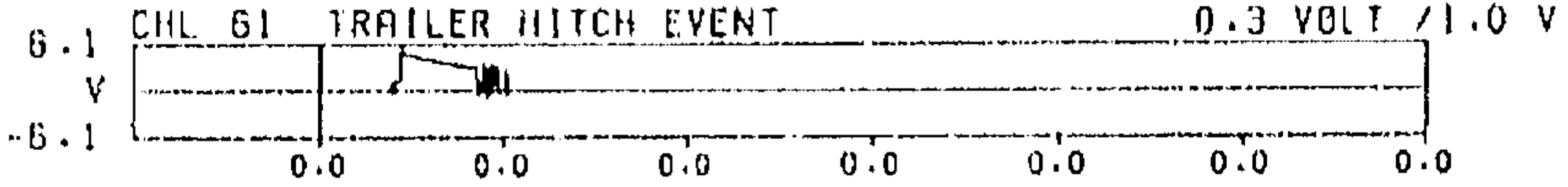
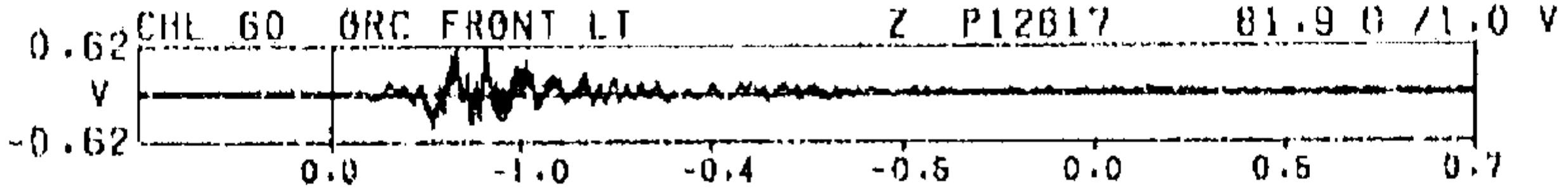
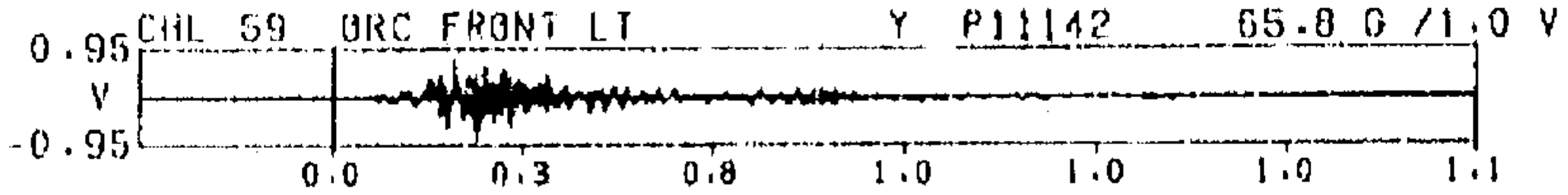
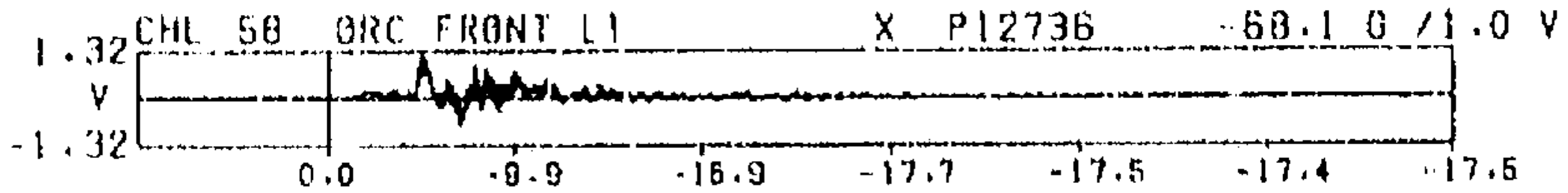
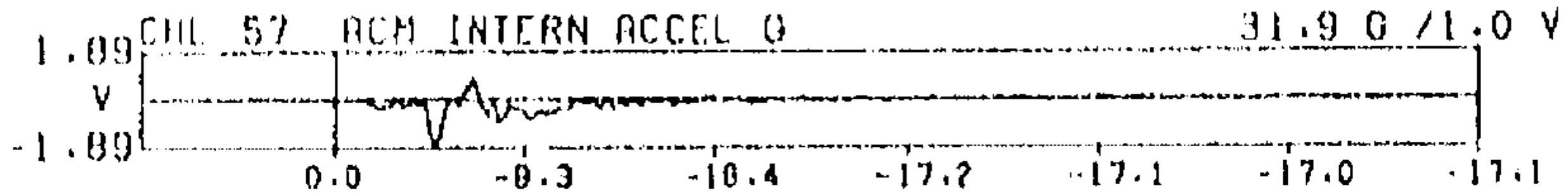
DATA SET 12/13/99B1

DEC 14, 1999

ERRATA

1

-50 0 50 100 150 200 250 300



-50 0 50 100 150 200 250 300  
TIME, MSEC

NOTE COMPUTED FIRST INTEGRAL VALUES ARE INDICATED BELOW  
EACH CHANNEL AND BRIDGED DATA IS INDICATED BY A -B-.

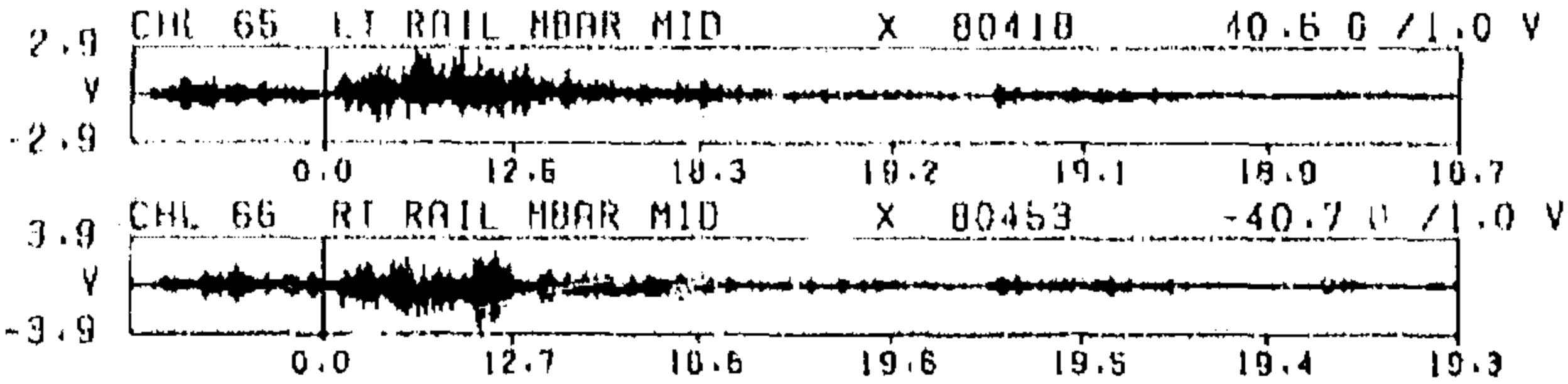


TRANSDUCER SUMMARY REPORT

VC08023 30 MPH REAR MOVING BARRIER, KJJ-7A ITEM KJ4278A  
2002 MYSB 301 REAR IMPACT DEVELOPMENT.  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 009  
OF 102  
DATA SET 12/13/99BJ  
ERRATA 1

-50 0 50 100 150 200 250 300



-50 0 50 100 150 200 250 300  
TIME, MSEC

NOTE COMPUTED FIRST INTEGRAL VALUES ARE INDICATED BELOW EACH CHANNEL AND BRIDGED DATA IS INDICATED BY A -B-.





VC05023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 HYSS 301 REAR IMPACT DEVELOPMENT.

PAGE 011  
OF 102

AVERAGE OF

CHANNEL 007 LT FT SILL FWD ST XMBRX J19868  
CHANNEL 009 RT FT SILL FWD ST XMBRX 014358

FILTER TYPE: SAE J2110/90 DC C601(PF-R) EFF 3/24/86

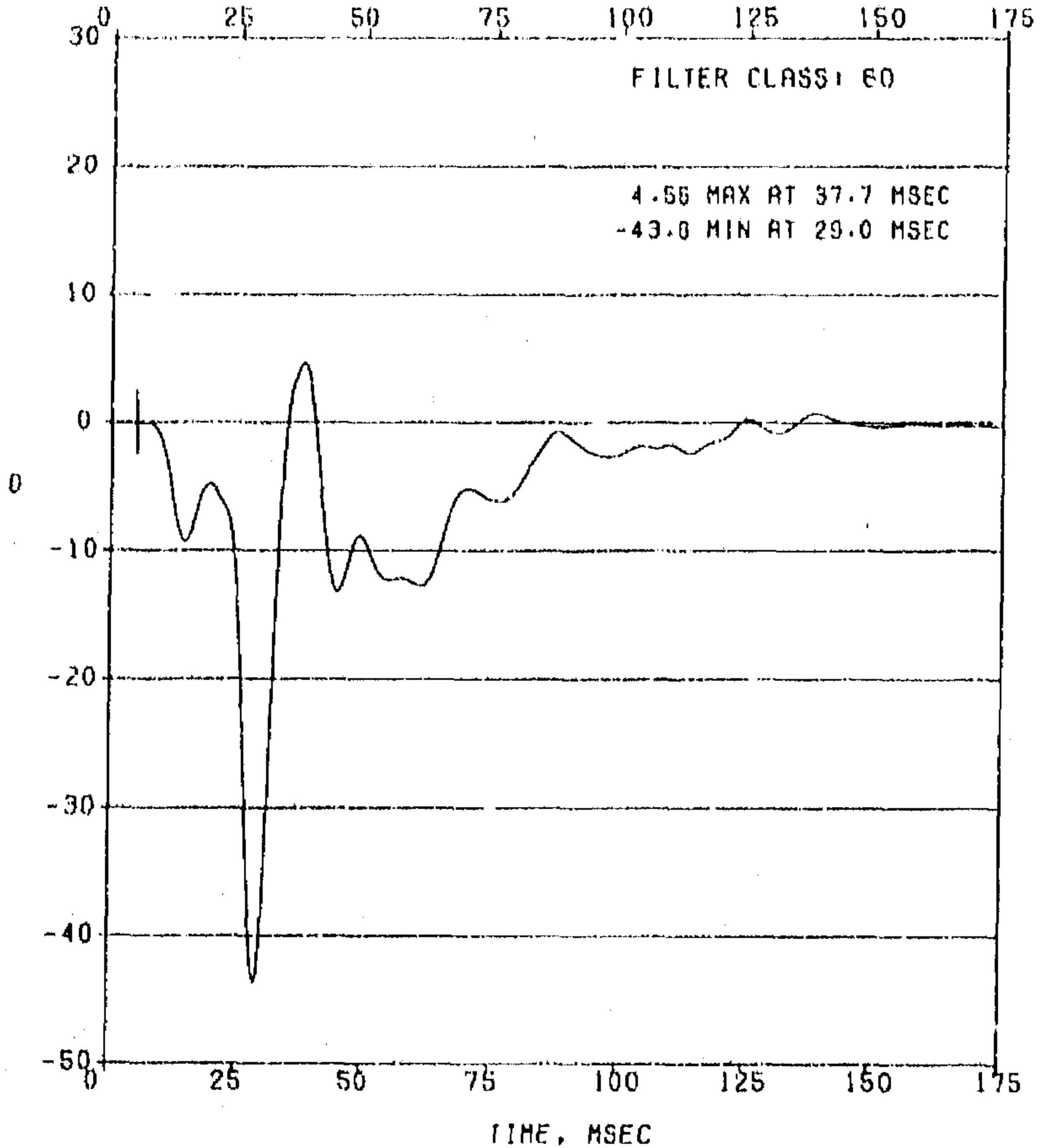
IMPACT ANALYSIS DEPT. 5320

DATA SET 12/13/99BF

DEC 14, 1999

ERRATA

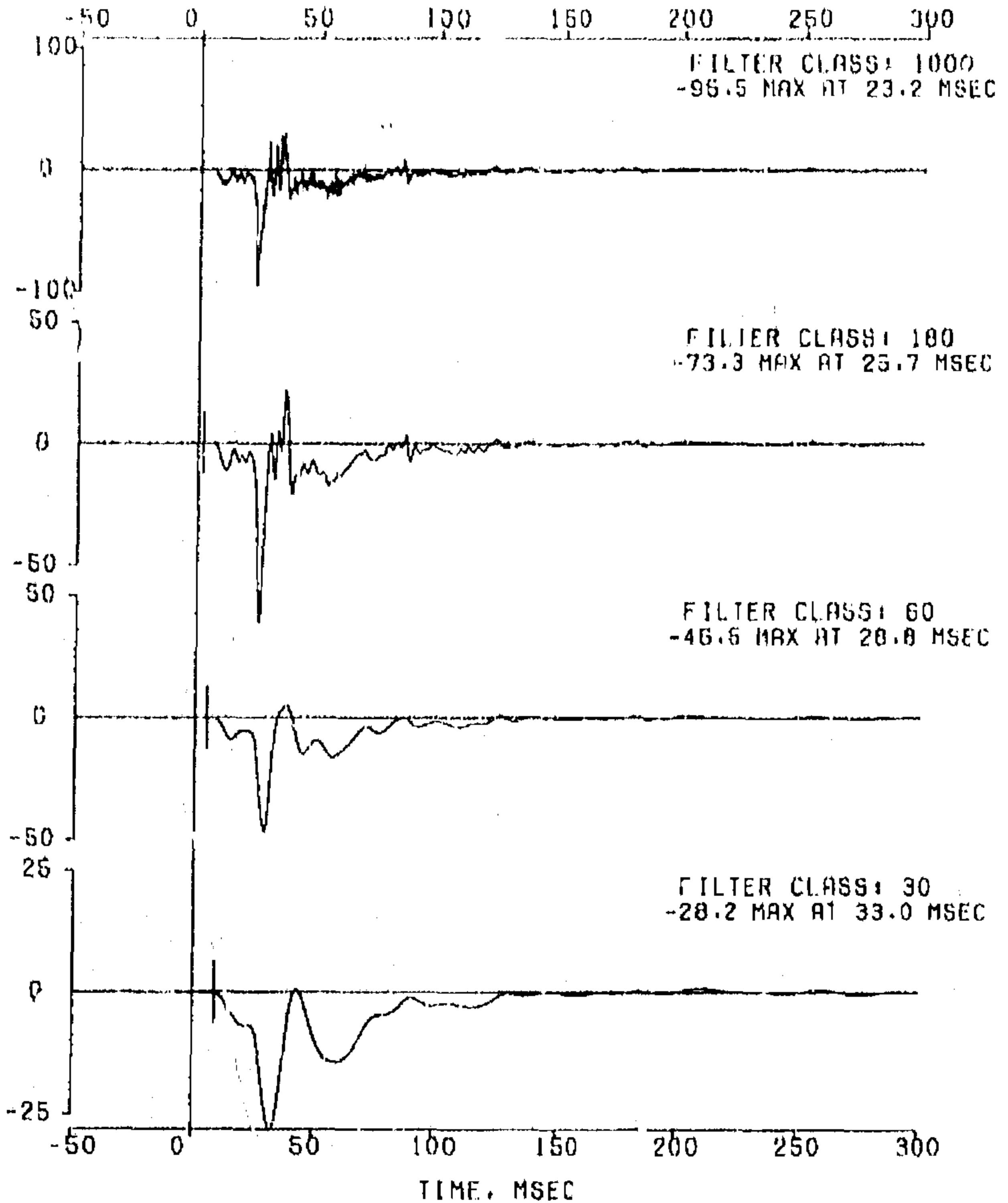
1



VC00023 30 MPH REAR MOVING BARRIER, KIJ-74 ITEM KJ4276R  
2002 MYSS 301 REAR IMPACT DEVELOPMENT,  
CHANNEL 001 LEFT FRONT SILL X J28967  
FILTER TYPE: OBDAS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1850)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PROG 012  
OF 102

DATA SET 12/13/99BF  
ERRATA 1





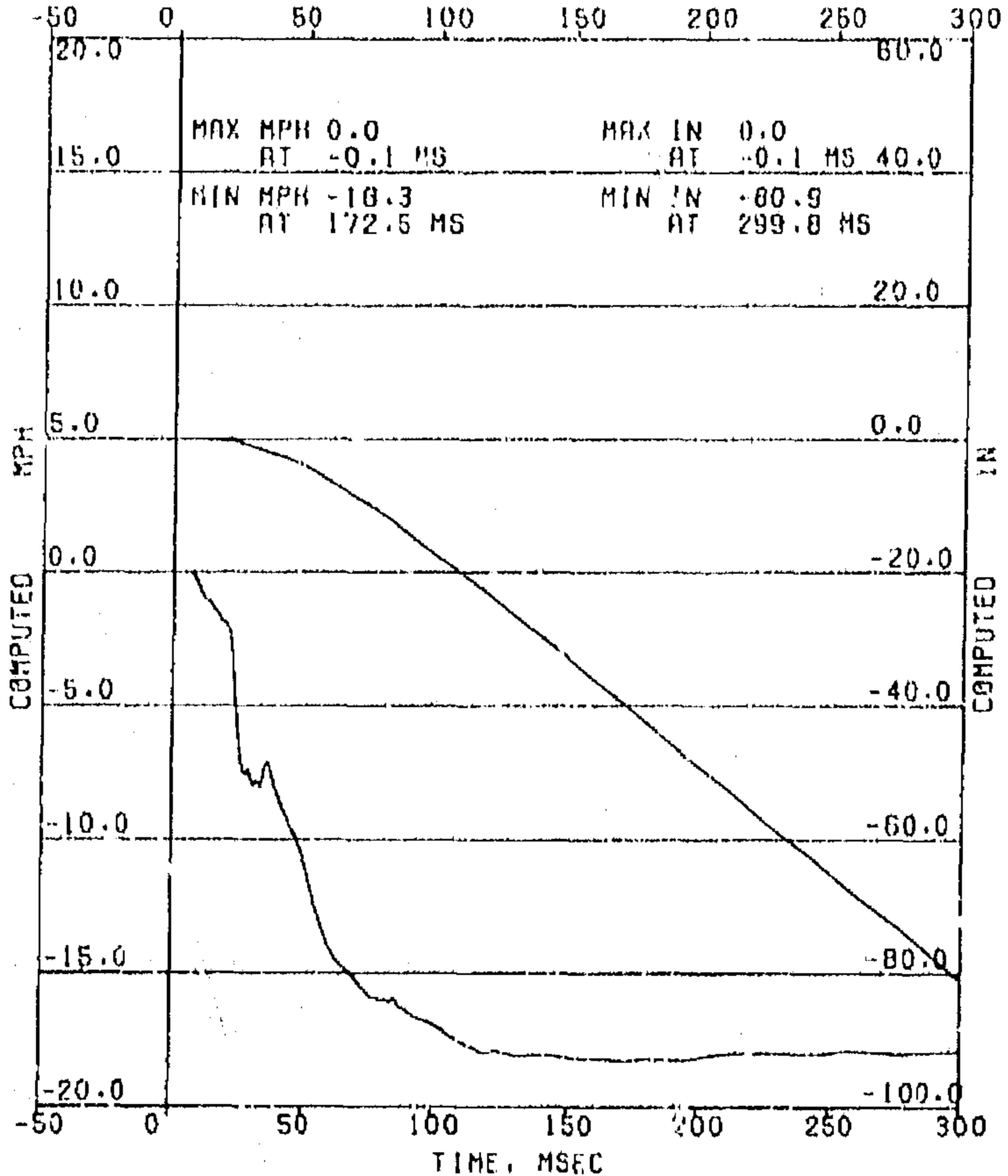
YCOB023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4270R  
 2002 HY65 301 REAR IMPACT DEVELOPMENT.  
 CHANNEL 001 (LEFT FRONT BILL) X J26067

PAGE 013  
 OF 102

FILTER TYPE: 00DAB-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

DATA SET 12/13/99BF  
 ERRATA 1

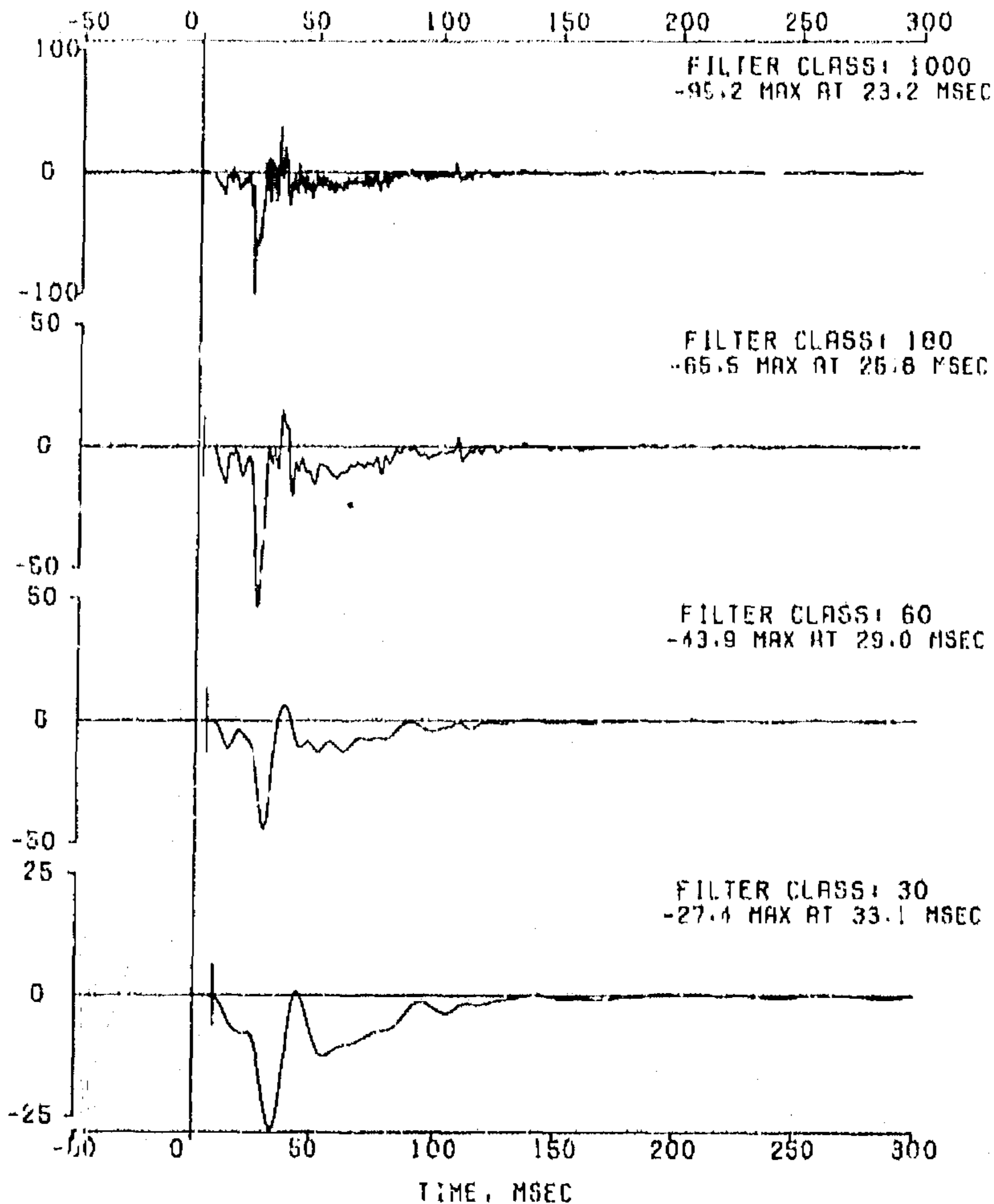


COMPUTED MPH  
 COMPUTED IN

VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MY56 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 002 RIGHT FRONT SILL X P12532  
FILTER TYPE: OBDAS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 014  
OF 102

DATA SET 12/13/99DF  
ERRATA 1

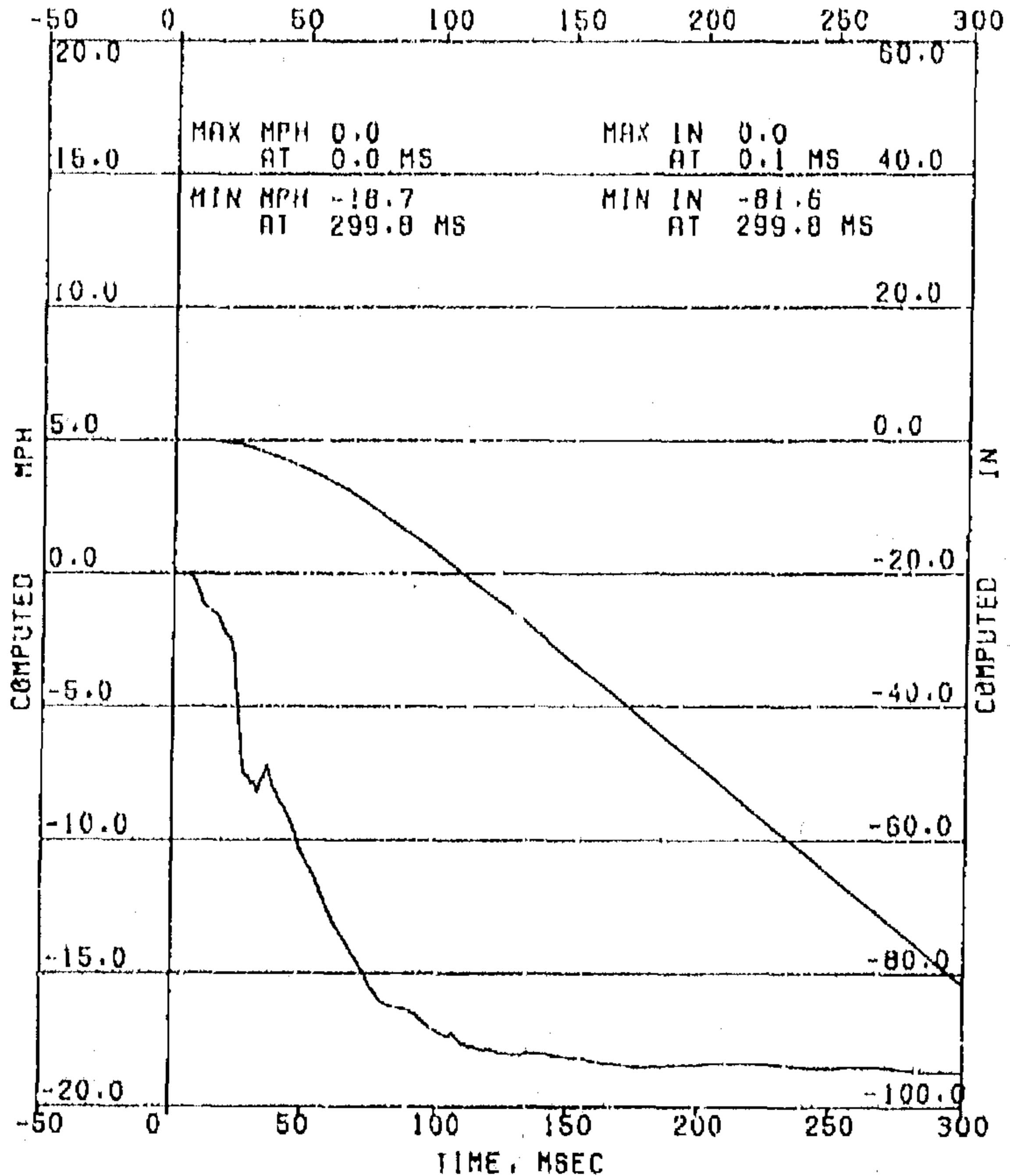




FILTER TYPE: 02DAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1660)  
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

DATA SET 12/13/99BF  
ERRATA

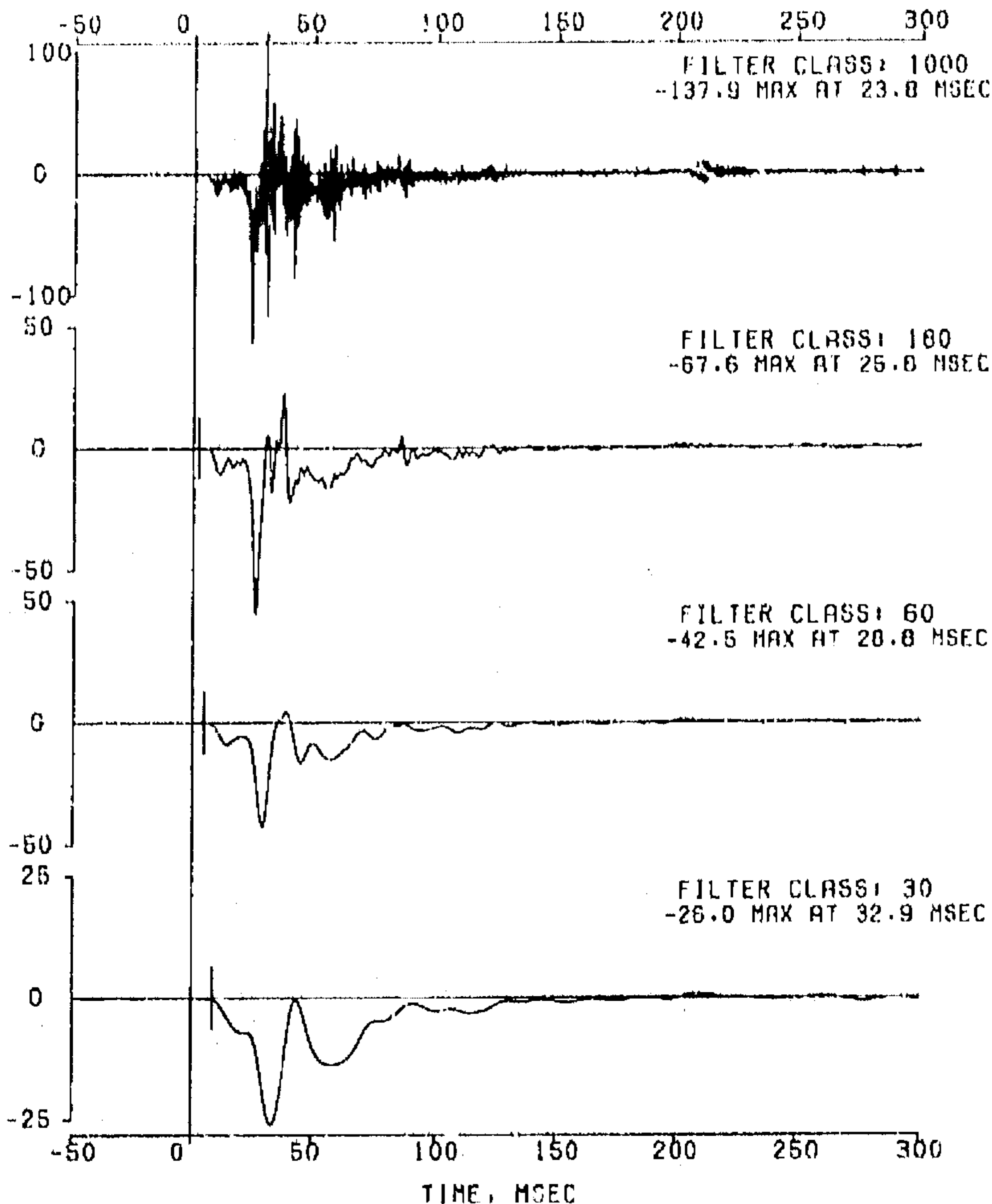


COMPUTED MPH  
COMPUTED IN

VC08023 30 MPH REAR MOVING BARRIER, KJ4-74 ITEM KJ4276R  
2002 MJS 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 003 LEFT REAR BILL. X 858332  
FILTER TYPE: OBDA5-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PROE 010  
OF 102

DATA SET 12/13/99DF  
ERRATA 1

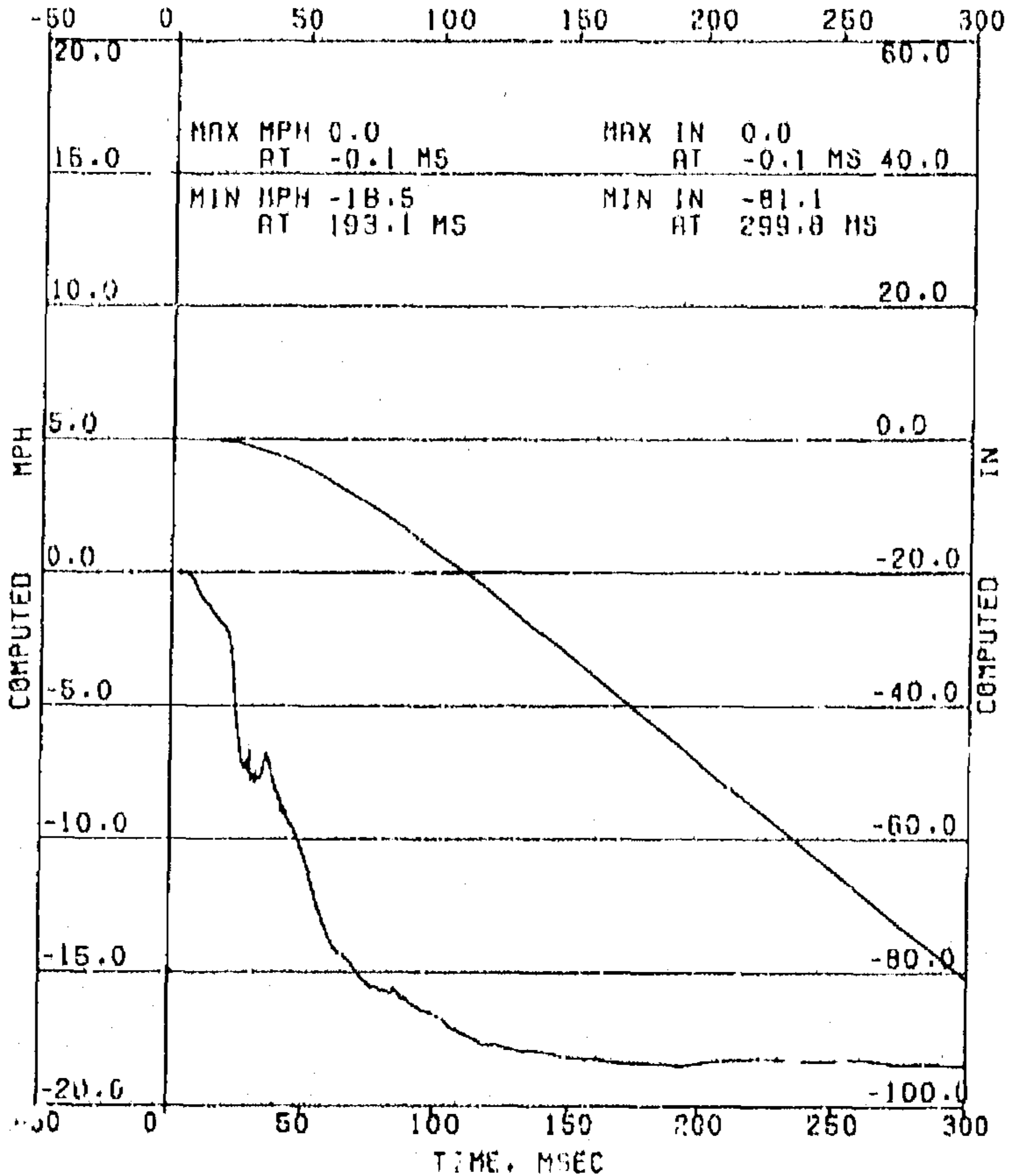




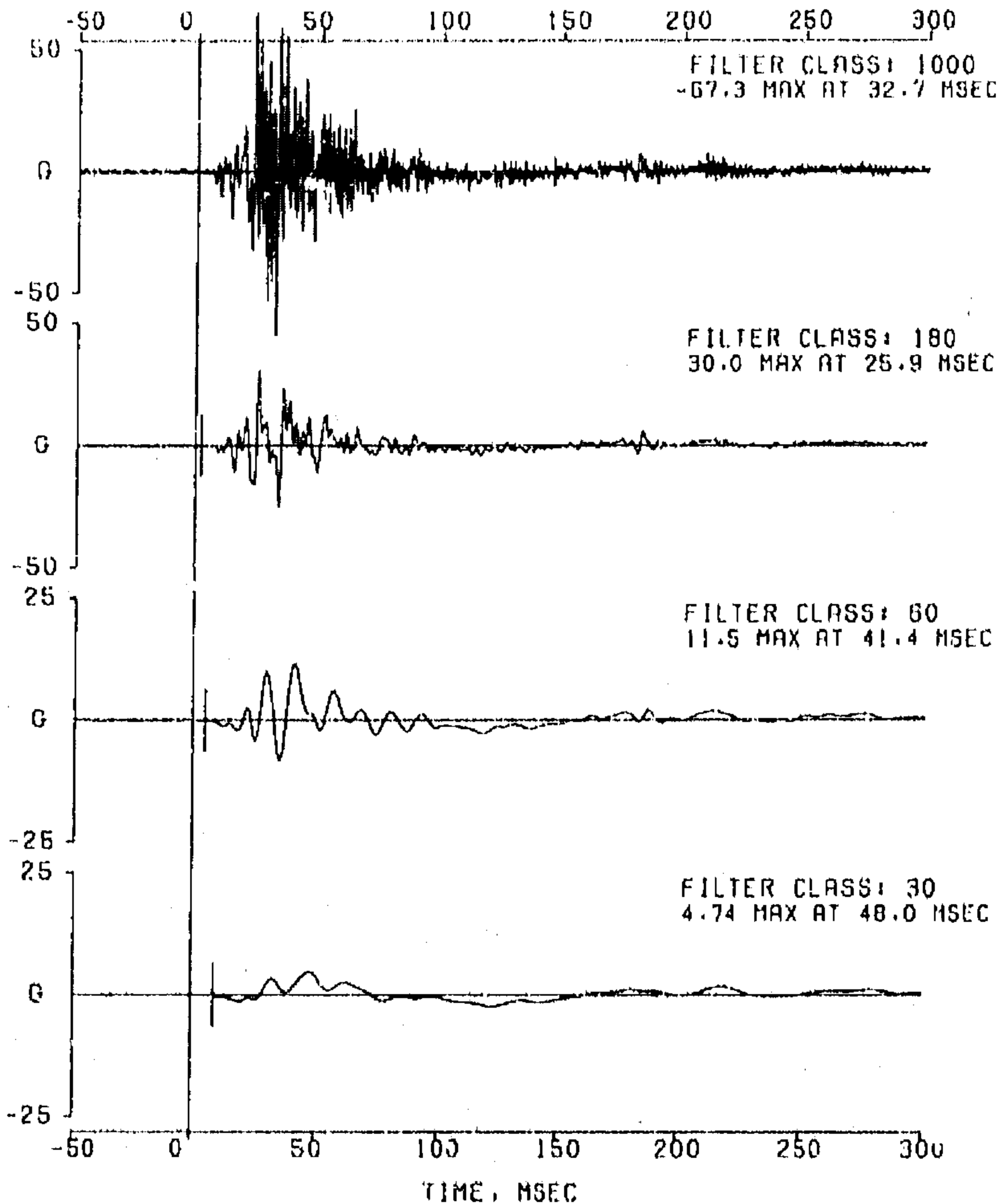
FILTER TYPE: QBDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1850)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 6320  
 DEC 14, 1999

DATA SET 12/13/99DF  
 ERRATA 1



COMPUTED MPH  
 COMPUTED IN

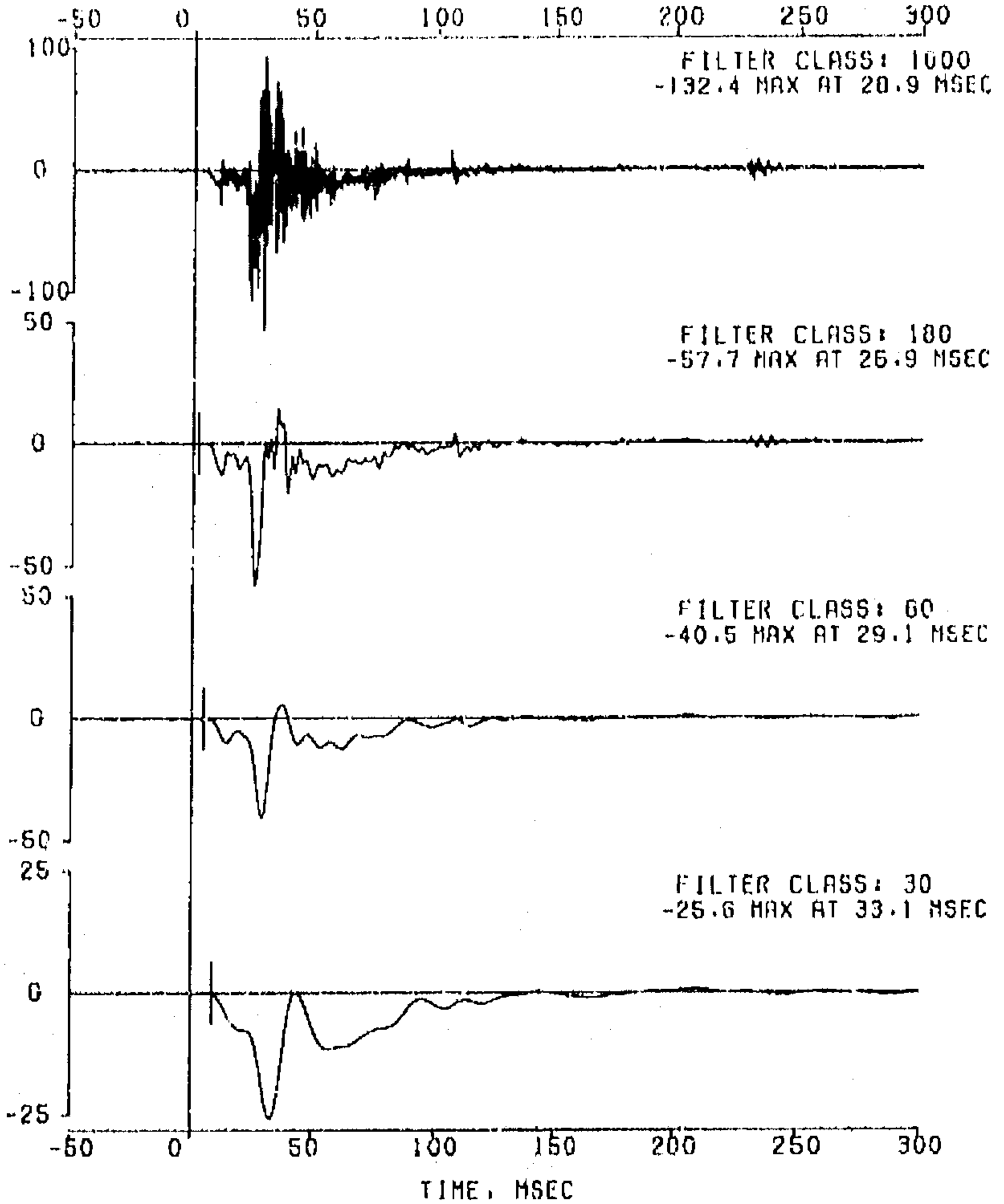




VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
20J2 MY68 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 005 RIGHT REAR SILL X 510063  
FILTER TYPE: 080A9-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 019  
OF 102

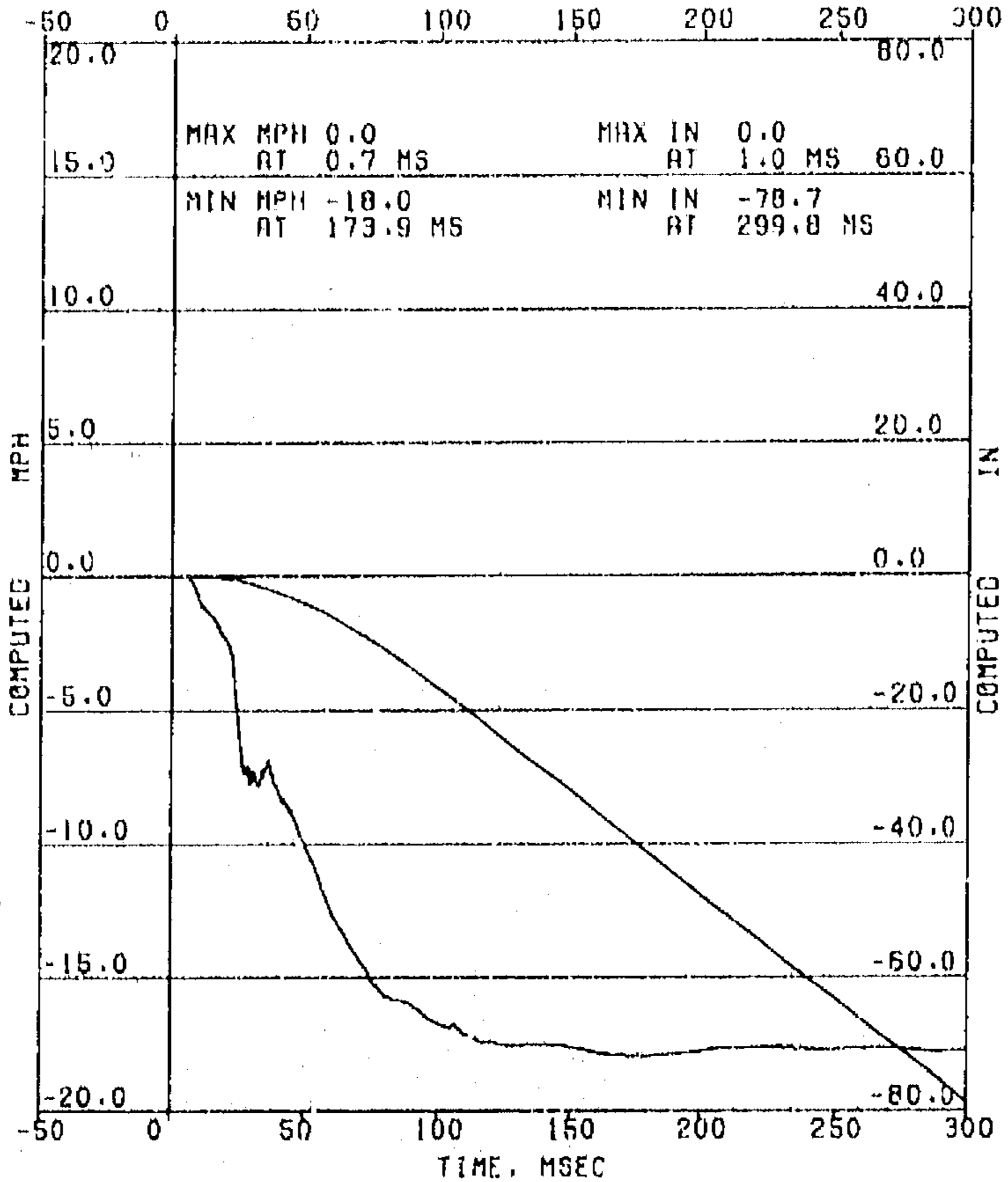
DATA SET 12/13/99BF  
ERRATA 1



FILTER TYPE: 080A5-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1050)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

DATA SET 12/13/99BF  
 ERRATA 1



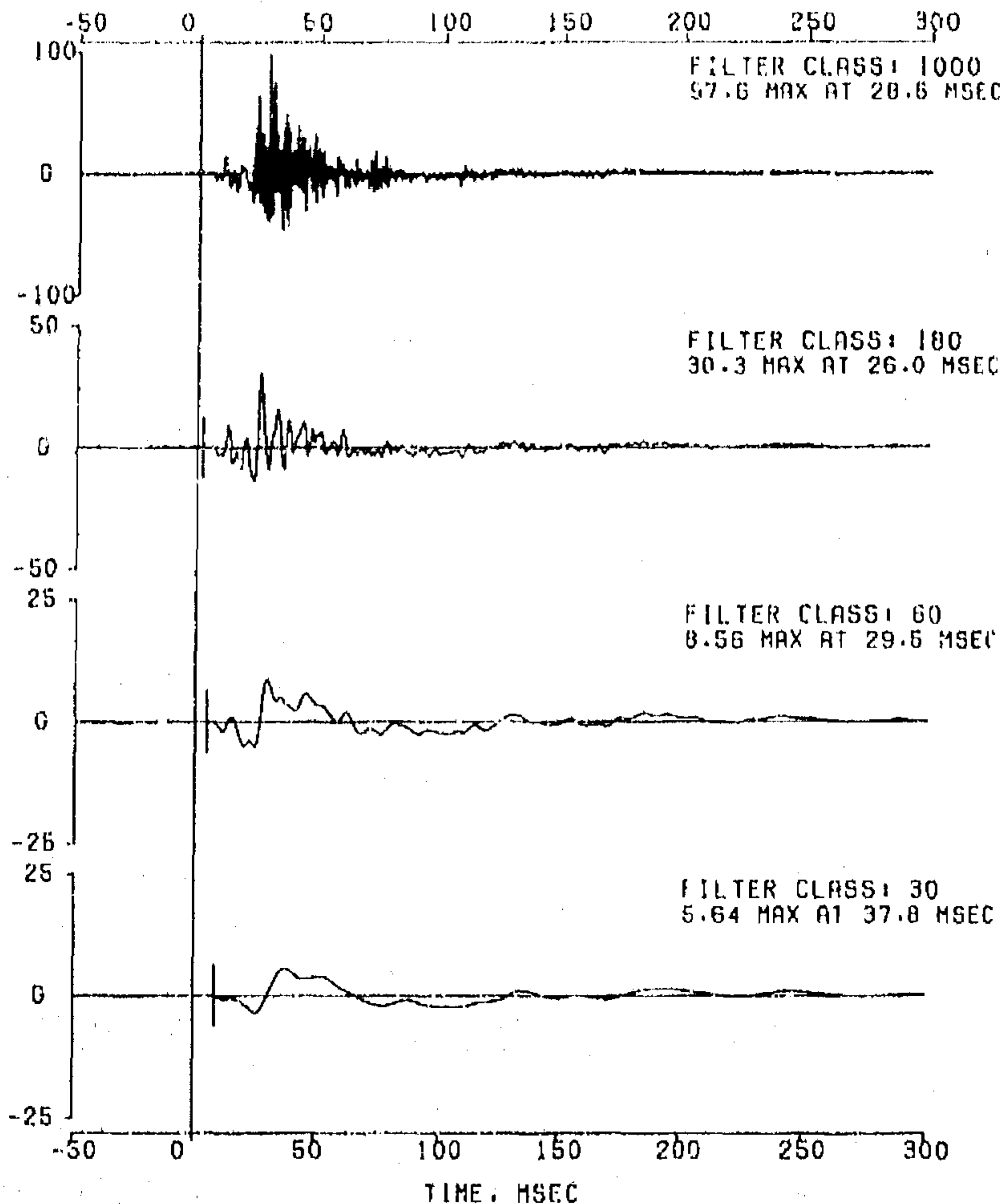
COMPUTED MPH  
 COMPUTED IN



VC08023 30 MPH REAR MOVING BARRIER, KJ-74 ITEM KJ4276R  
2002 MV65 301 REAR IMPACT DEVELOPMENT,  
CHANNEL 006 RIGHT REAR SILL Z 658371  
FILTER TYPE: OBDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1850)  
IMPACT ANALYSIS DEPT. 4320  
DEC 14, 1999

PAGE 021  
OF 102

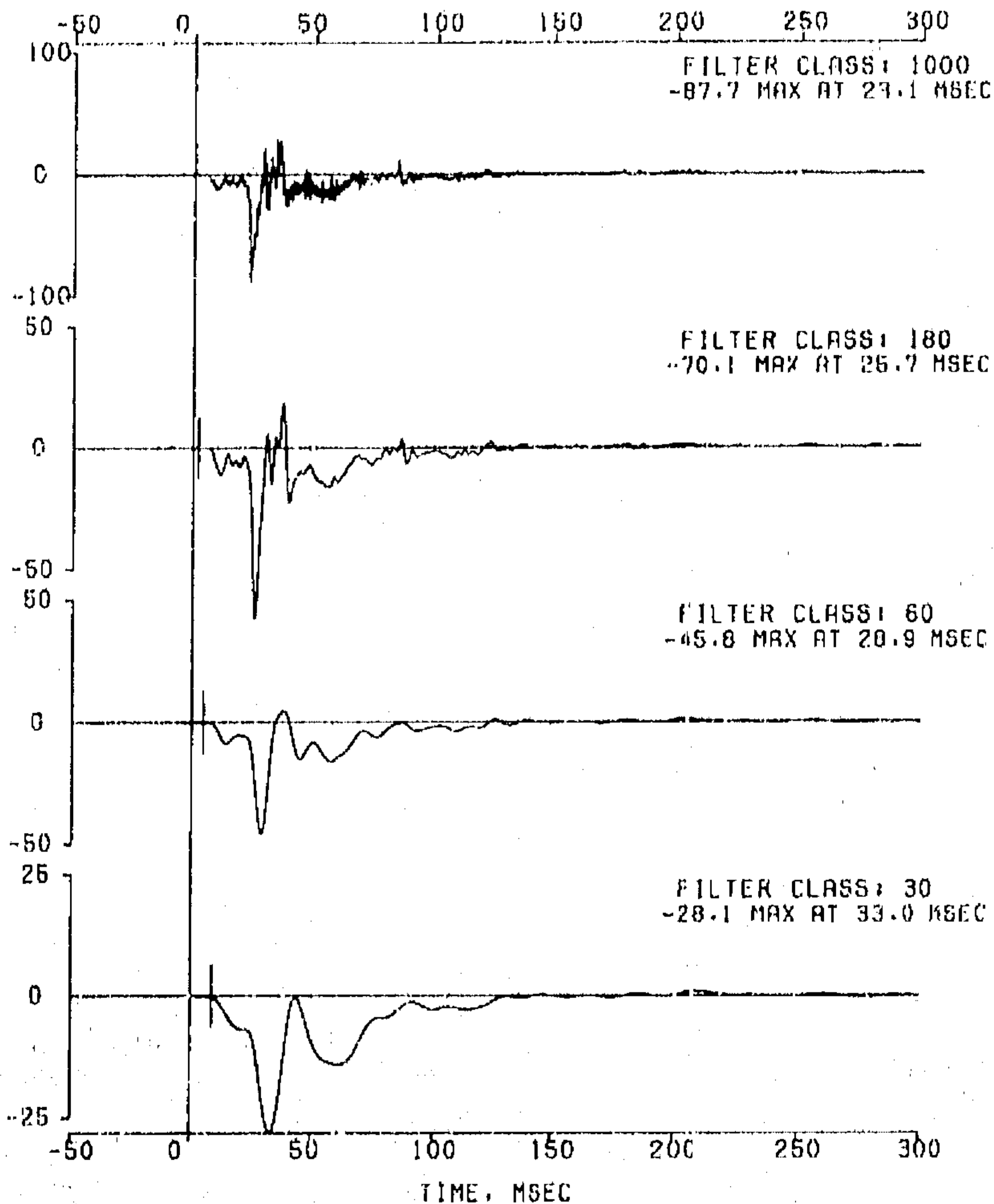
DATA SET 12/13/99BF  
ERRATA 1



YC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MY66 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 007 LT FT SILL FWD ST XMRX J19660  
FILTER TYPE: 08DAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 022  
OF 102

DATA SET 12/13/99BF  
ERRATA 1





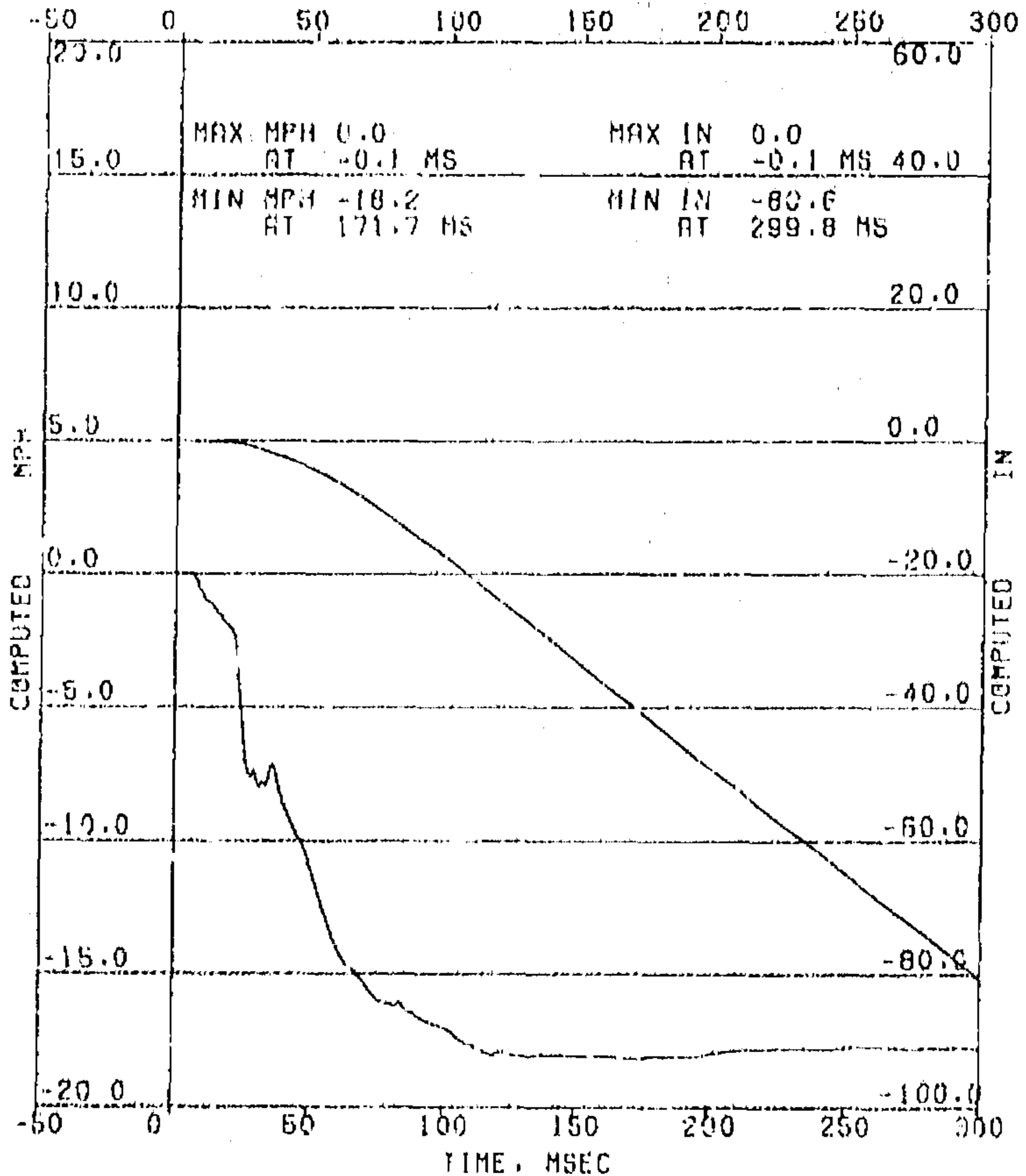
YCO0023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 NV85 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 007 LT FT SILL FWD ST XMBRX .119660

PAGE 023  
OF 102

FILTER TYPE: 030MS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5920  
DEC 14, 1999

DATA SET 12/13/99B  
ERRATA 1



COMPUTED MPH  
COMPUTED IN

VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R

PAGE 024

2002 NYS6 301 REAR IMPACT DEVELOPMENT.

OF 102

CHANNEL 008 LT FT SILL FWD ST XMBRY J12990

FILTER TYPE: 000AS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)

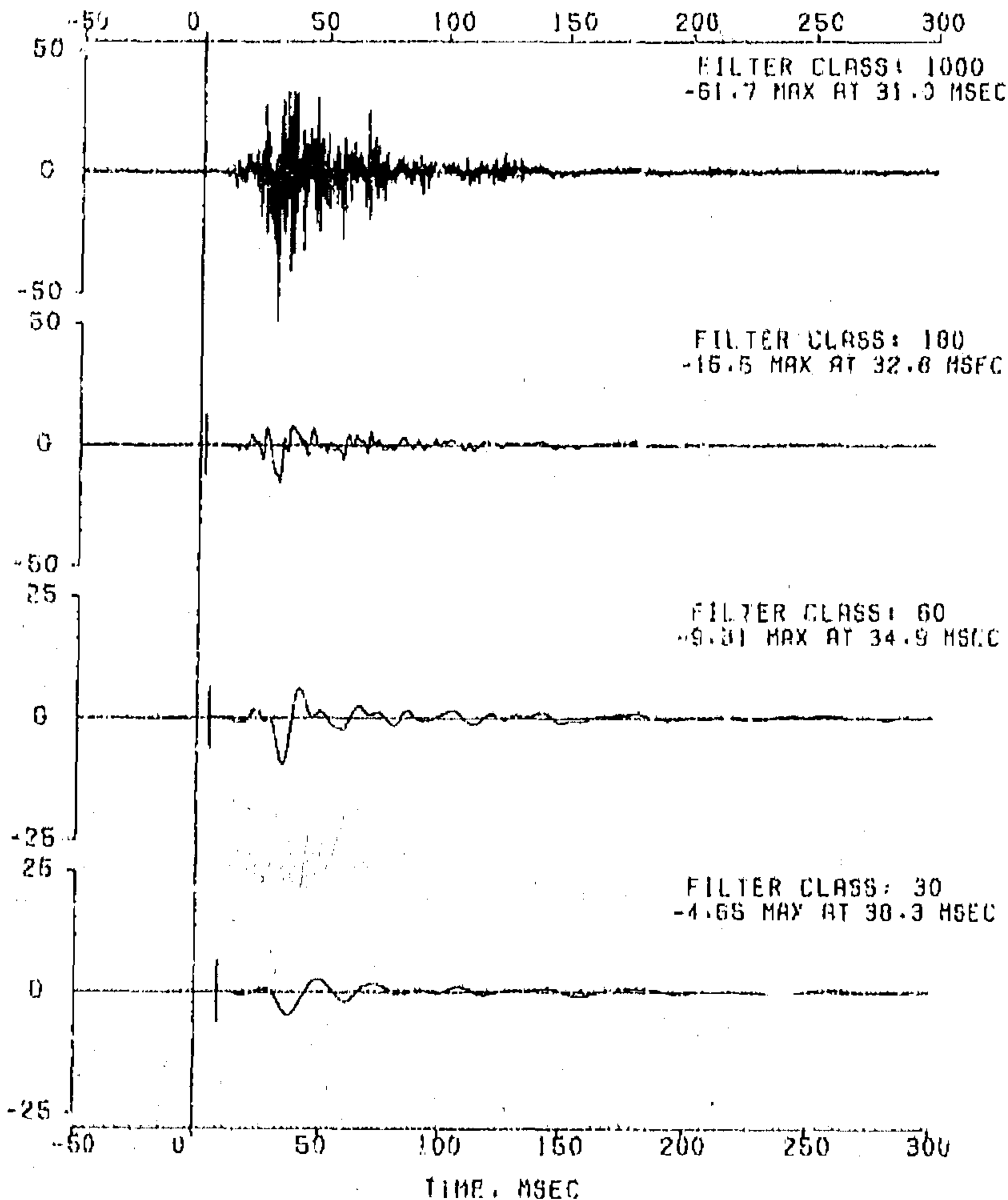
IMPACT ANALYSIS DEPT. 5320

DATA SET 12/13/99BF

DEC 14, 1999

ERRATA

1

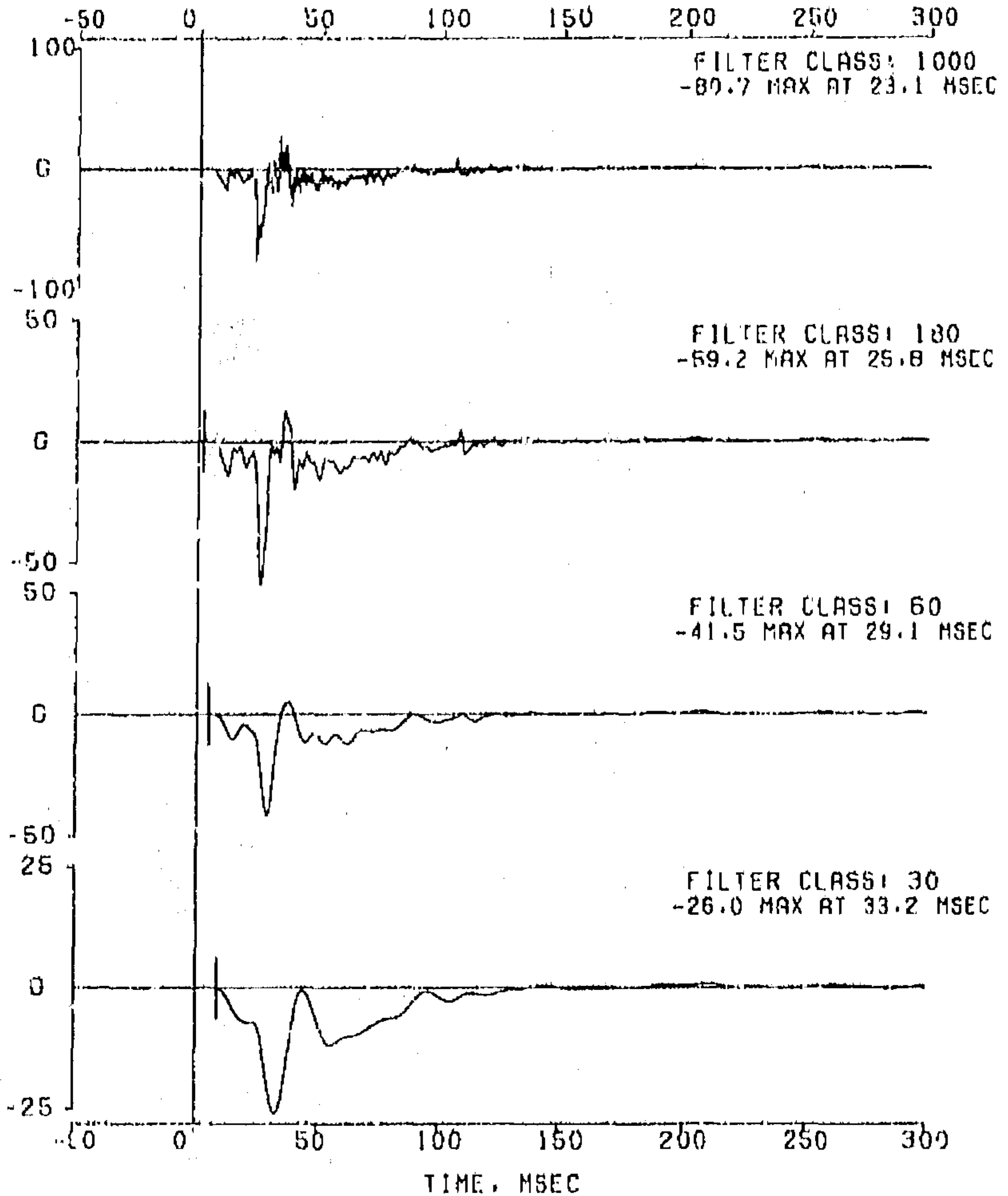




VCO0023 30 MPH REAR MOVING BARRIER. KJJ-74 ITEM KJ4276R  
2002 HYSS 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 009 RT FT SILL FWD ST XMBRX B14358  
FILTER TYPE: 00DAS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PROE 025  
OF 102

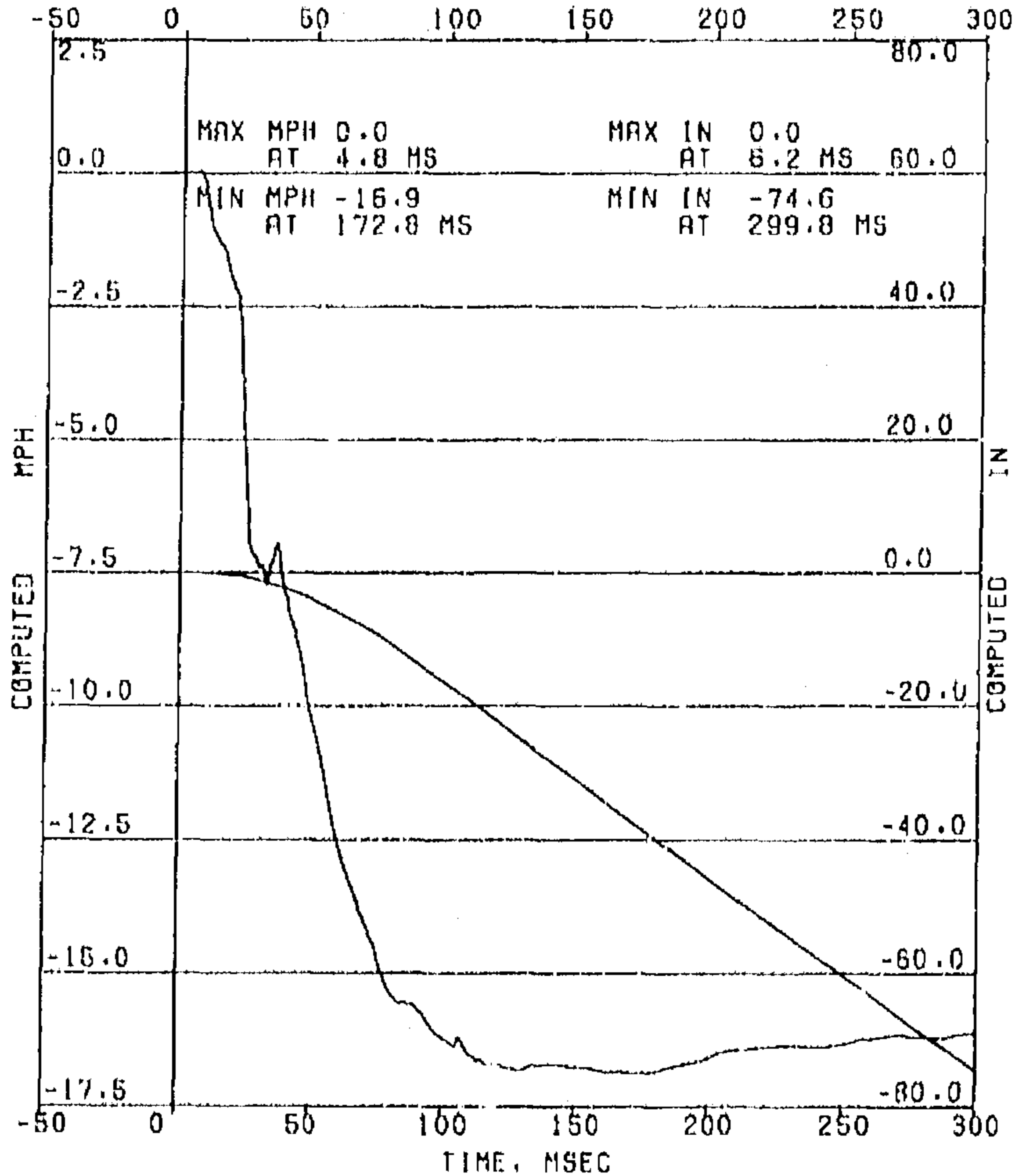
DATA SET 12/13/99BF  
ERRATA 1



FILTER TYPE: 08085-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 6320  
 DEC 14, 1999

DATA SET 12/13/99BF  
 ERRATA 1



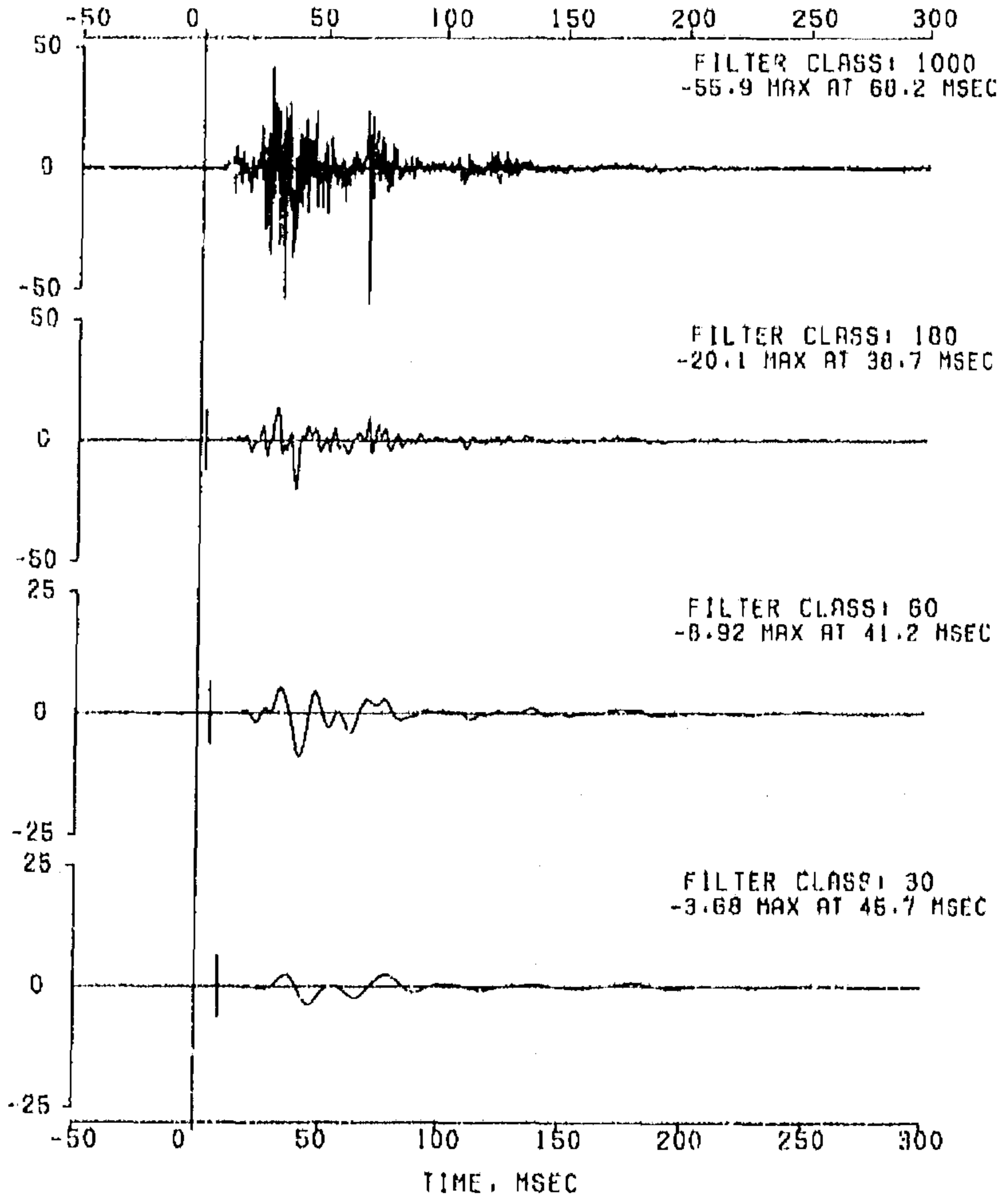
COMPUTED MPH  
 COMPUTED IN



VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MY53 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 010 RT FT SILL FWD ST XMBRY A13251A  
FILTER TYPE: 38008-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 027  
OF 102

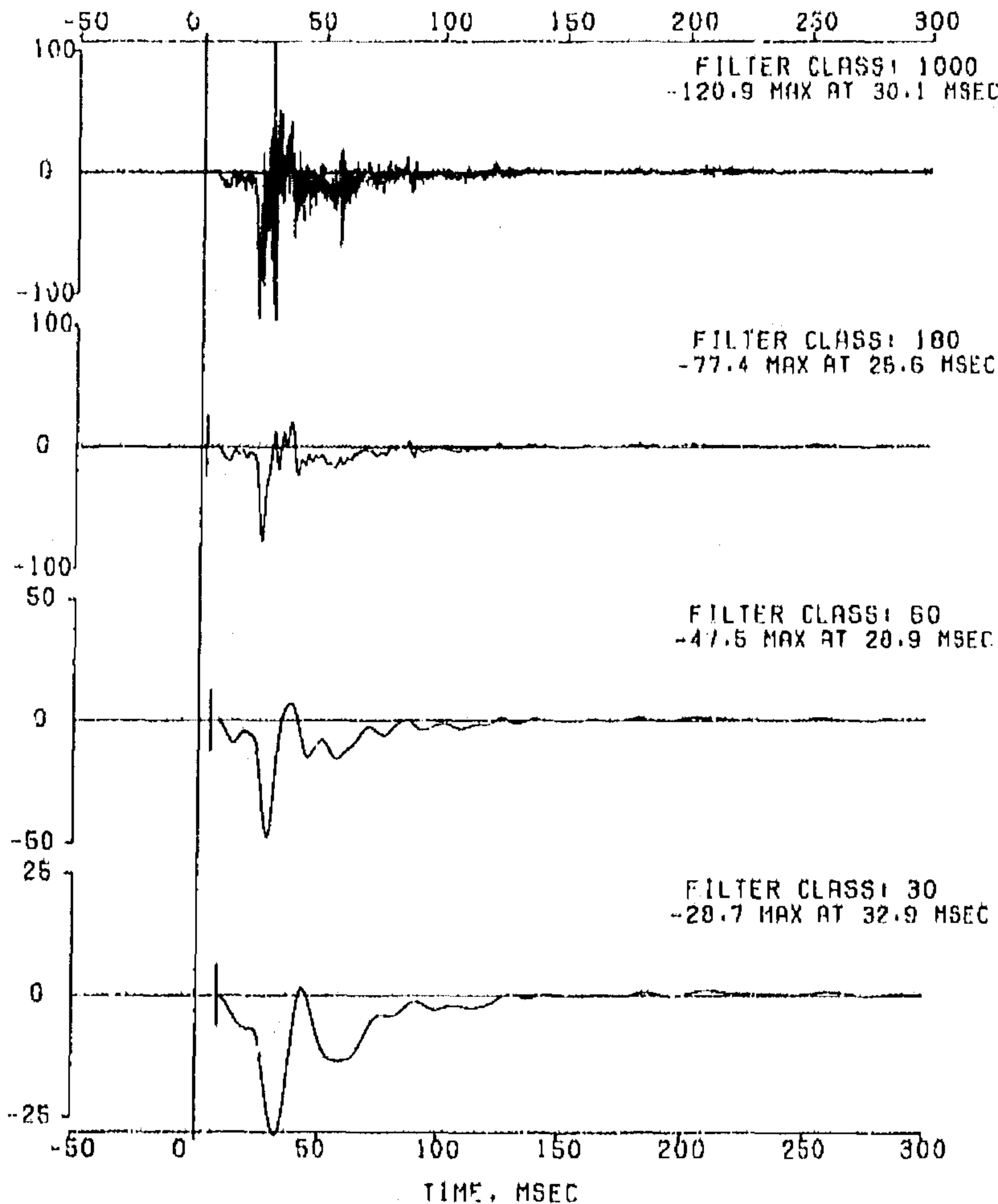
DATA SET 12/13/99BF  
ERRATA 1



VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 NV58 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 011 LT SILL AT B FILLAR X AFY95  
FILTER TYPE: OBDAS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1995

PAGE 020  
OF 102

DATA SET 12/13/99BF  
ERRATA 1

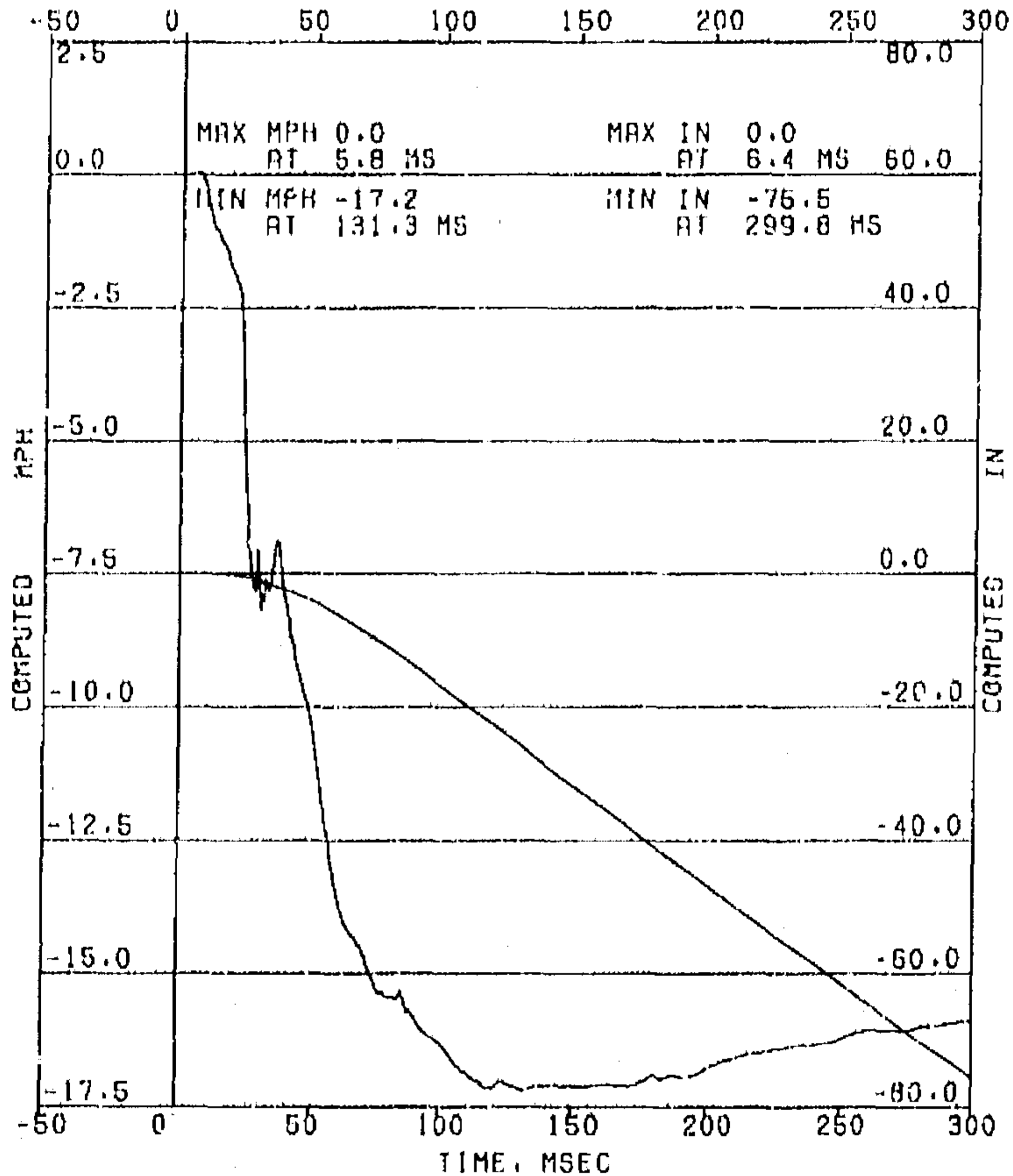




FILTER TYPE: 000AS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

DATA SET 12/13/99BF  
 ERRATA 1

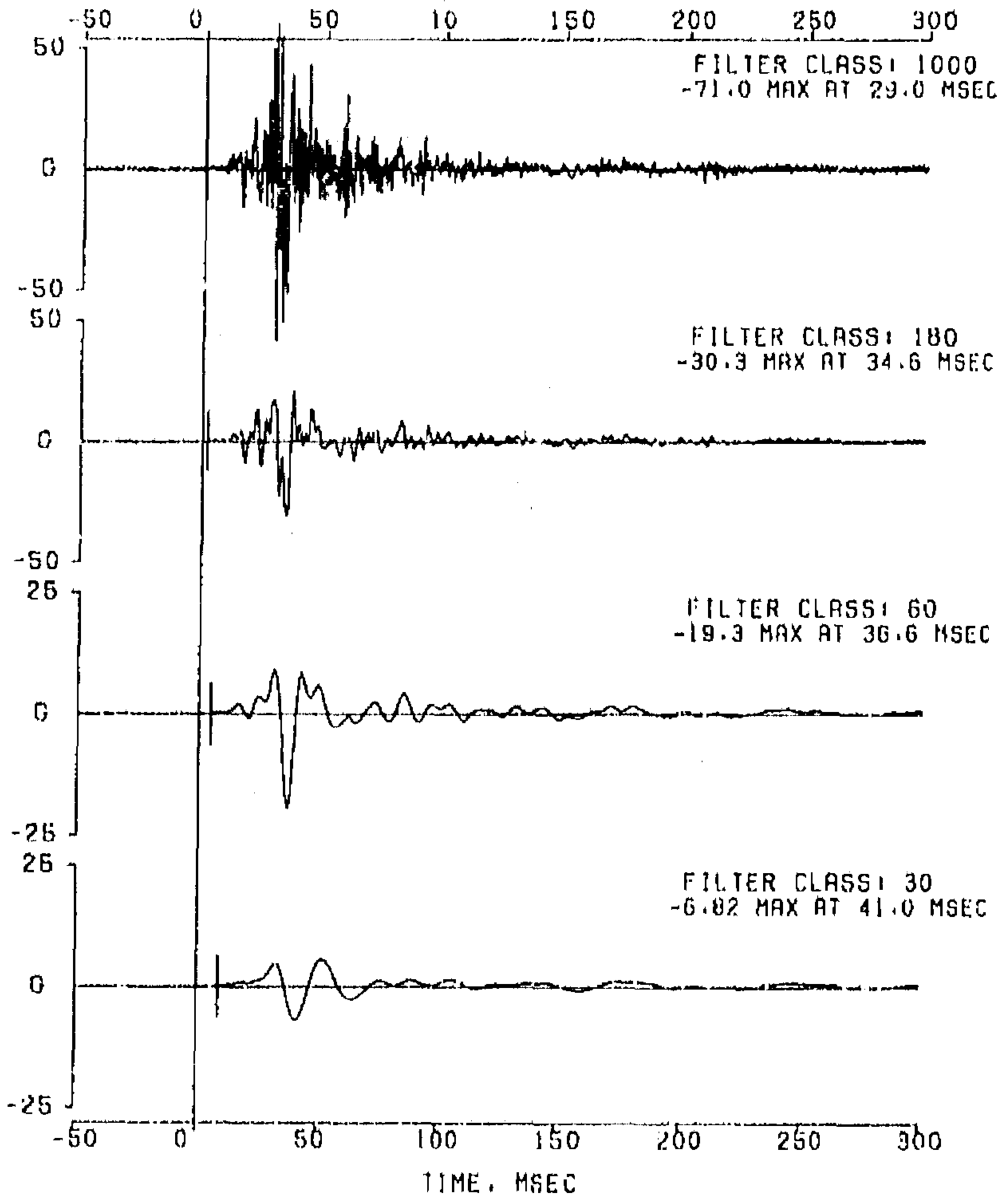


COMPUTED MPH  
 COMPUTED IN

VC08023 30 MPH REAR MOVING BARRIER. KJJ-74 ITEM KJ4276R  
2002 MY65 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 012 LT SILL AT B PILLAR Y A14527  
FILTER TYPE: OBDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 030  
OF 102

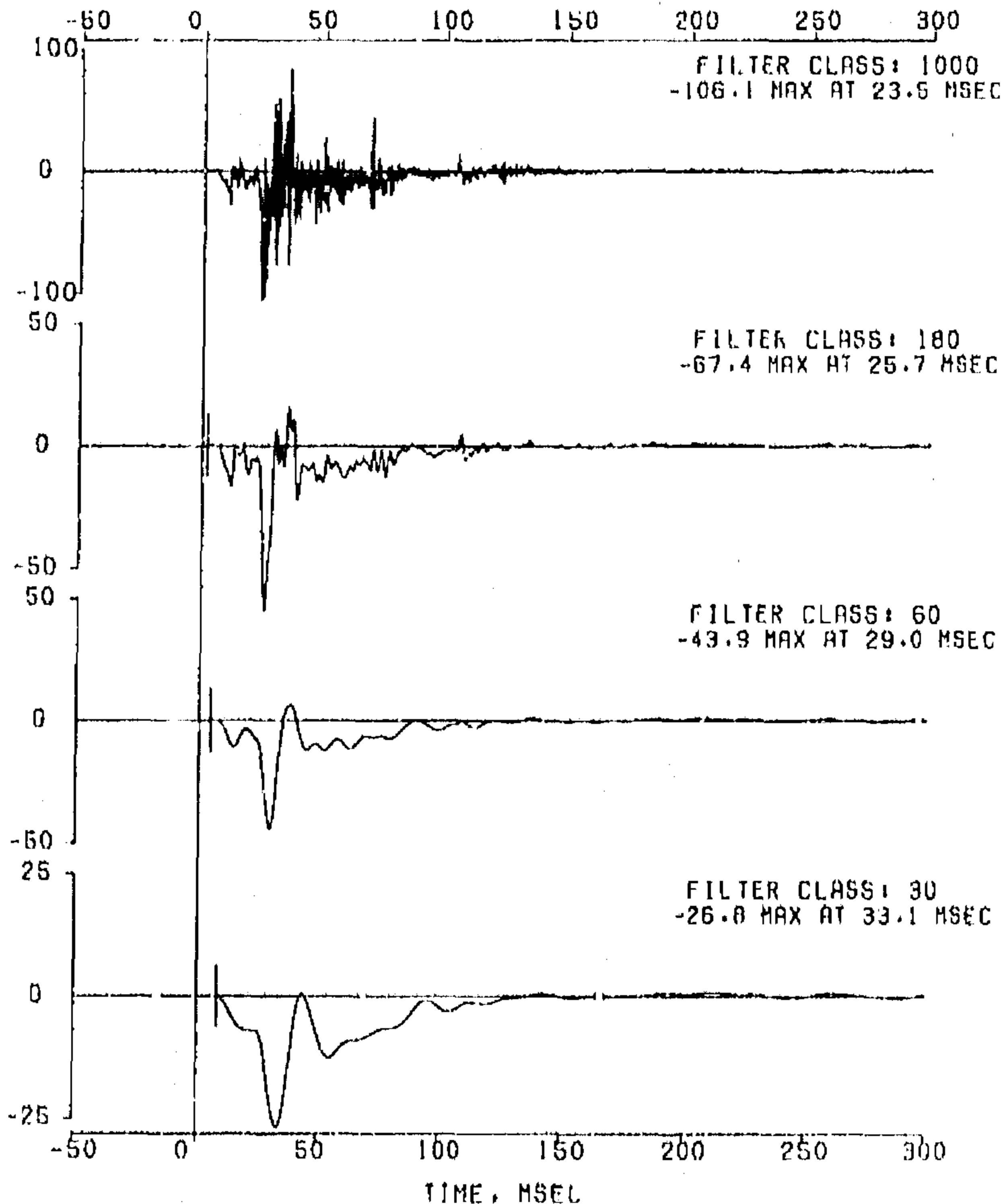
DATA SET 12/13/99BF  
ERRATA 1



VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MYSS 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 013 RT SILL AT B PILLAR X J19658  
FILTER TYPE: 0800S-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1660)  
IMPACT ANALYSIS DEPT, 5320  
DEC 14, 1999

PAGE 031  
OF 102

DATA SET 12/13/99BF  
ERRATA 1

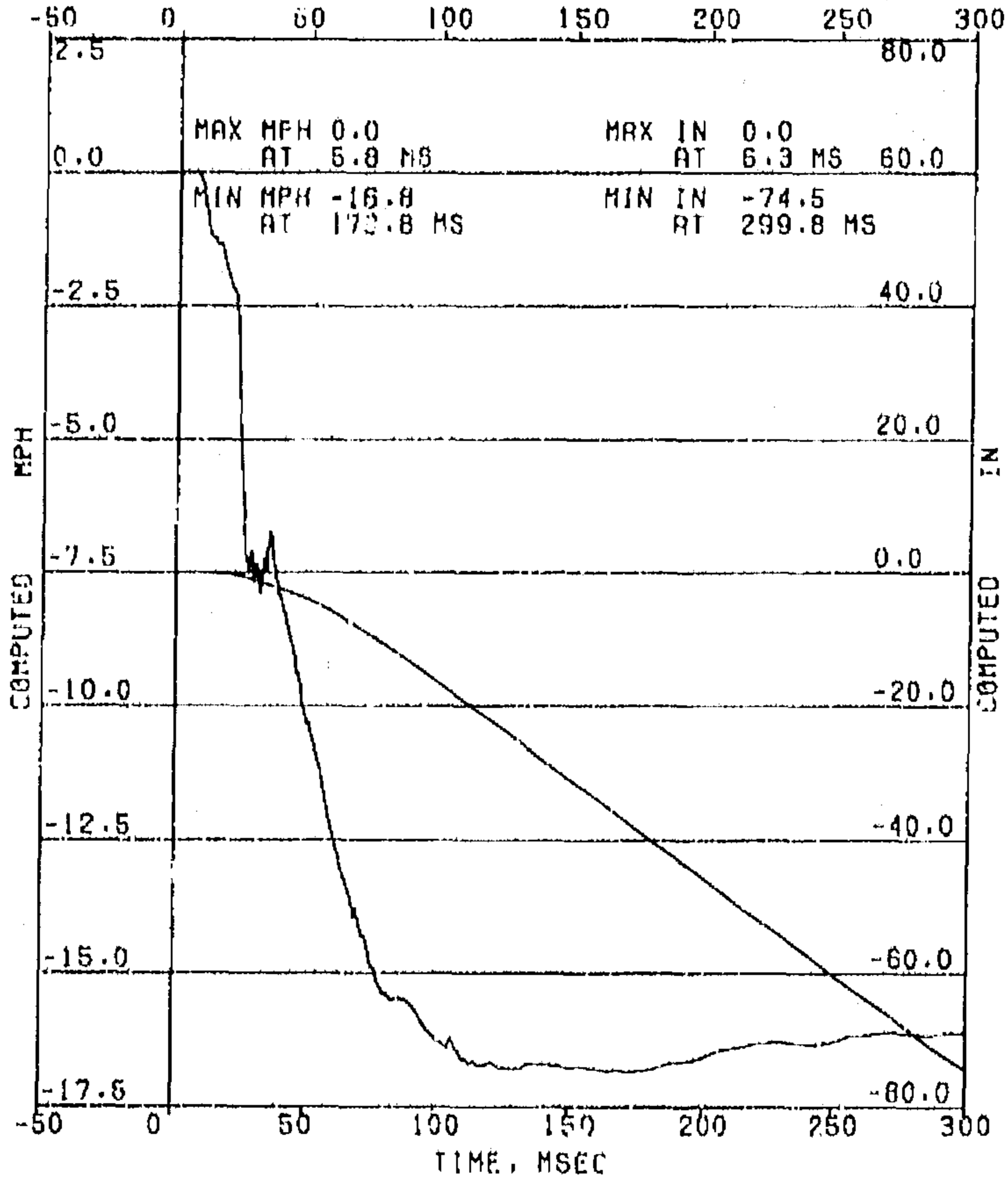




FILTER TYPE: 00DAS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

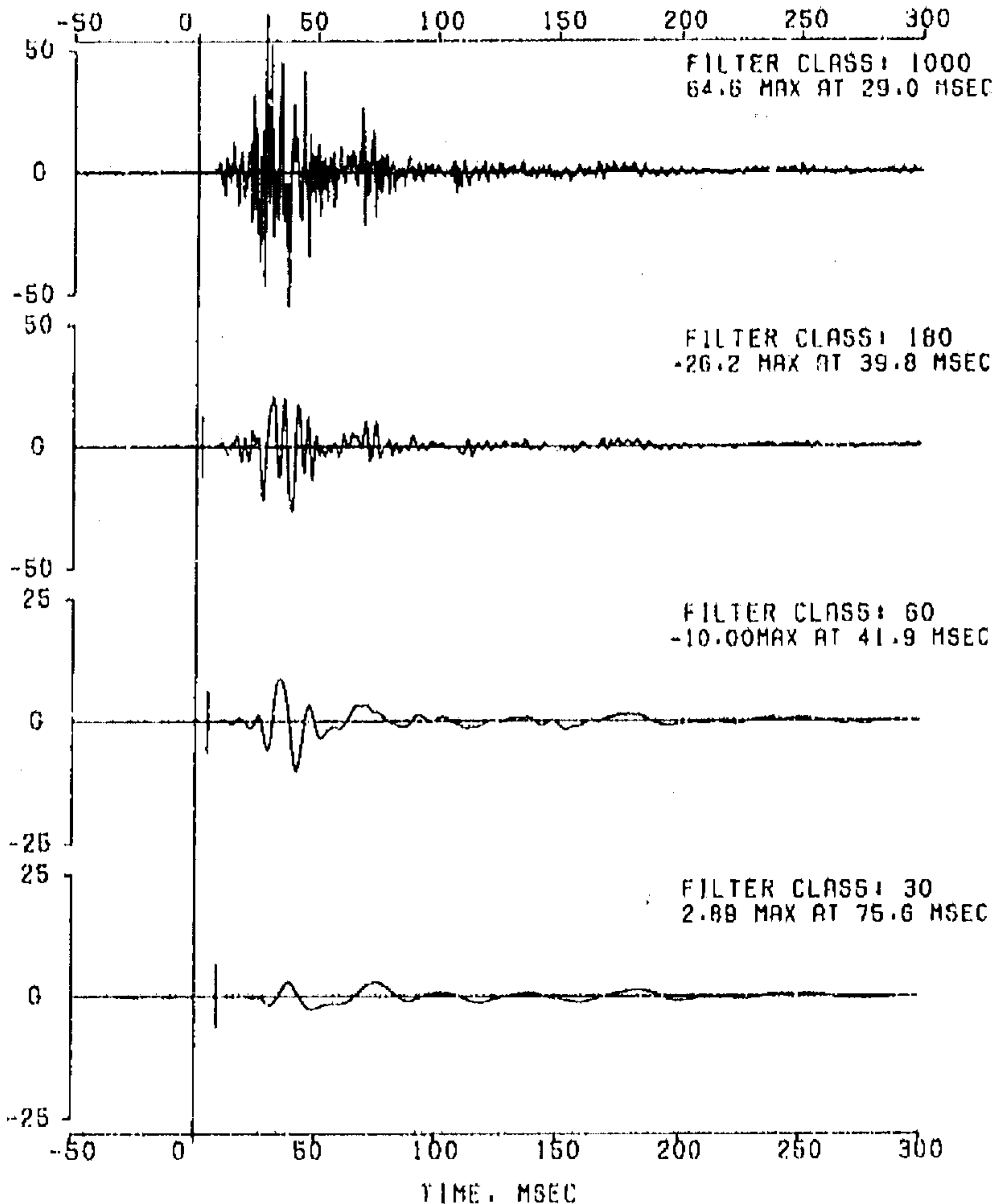
DATA SET 12/13/99BF  
ERRATA 1



COMPUTED MPH  
COMPUTED IN

YC00023 30 MPH REAR MOVING BARRIER, KJ-74 ITEM KJ4276R  
 2002 MV98 301 REAR IMPACT DEVELOPMENT.  
 CHANNEL 014 RT SILL AT B PILLAR Y P13150  
 FILTER TYPE: 0BDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1660)  
 IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

DATA SET 12/13/99BF  
 ERRATA 1



VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R

PAGE 034

2002 MYSS 301 REAR IMPACT DEVELOPMENT.

OF 102

CHANNEL 015 LT RR GILL FWD ST XMRX A14207

FILTER TYPE: 08DAS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1850)

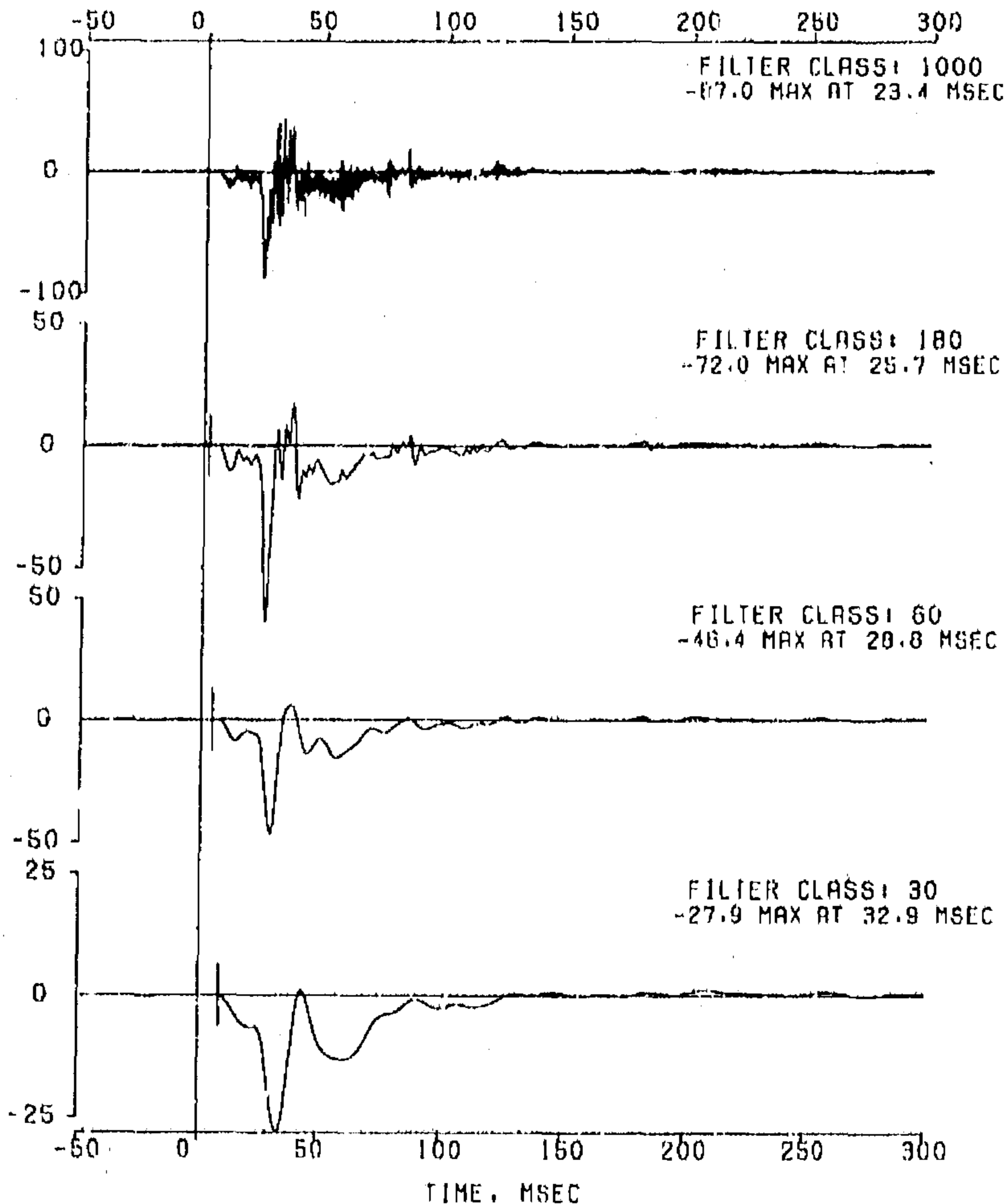
IMPACT ANALYSIS DEPT. 5320

DATA SET 12/13/99BF

DEC 14, 1999

ERRATA

1

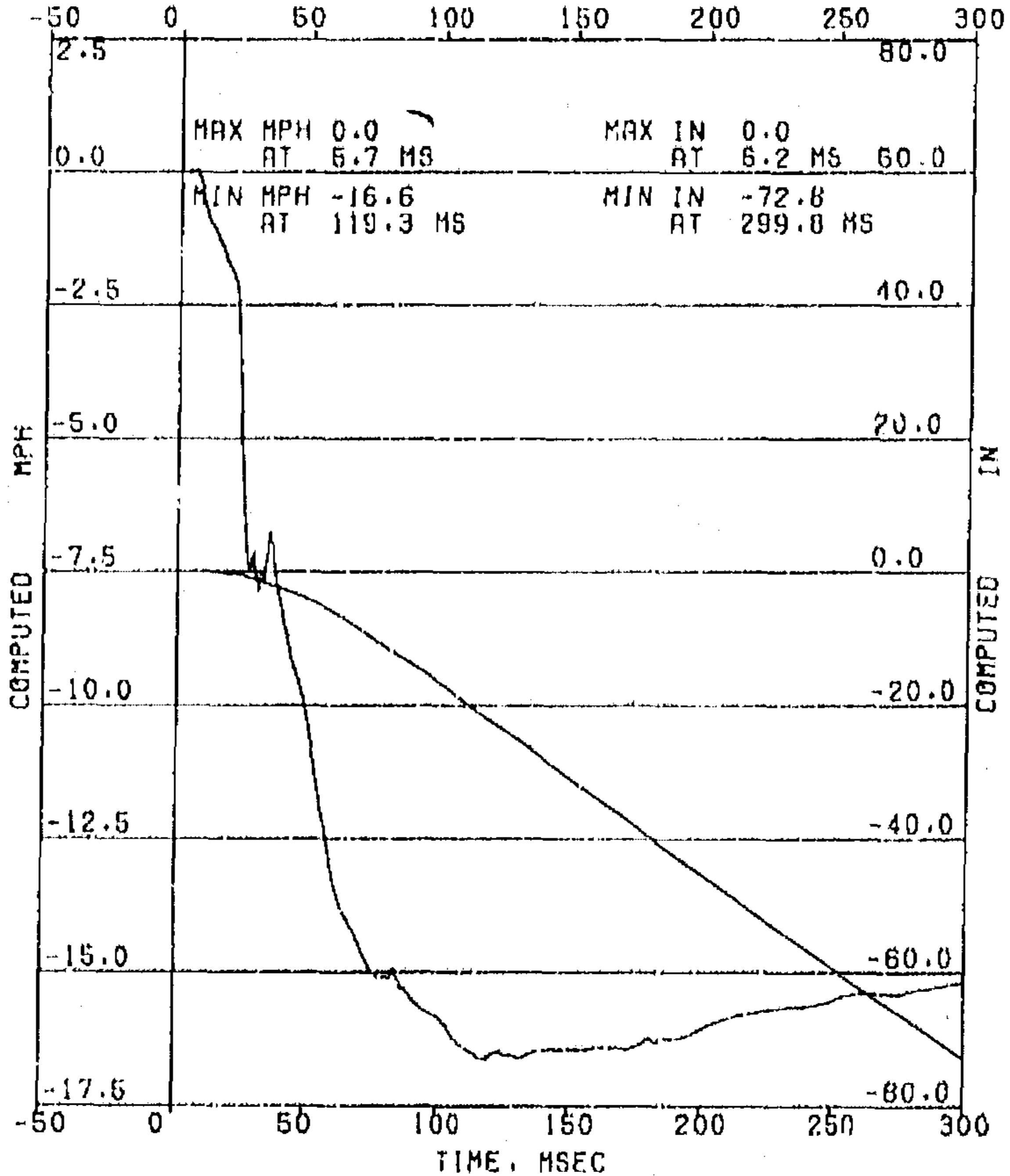




FILTER TYPE: 08DAG-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

DATA SET 12/13/99BF  
ERRATA 1

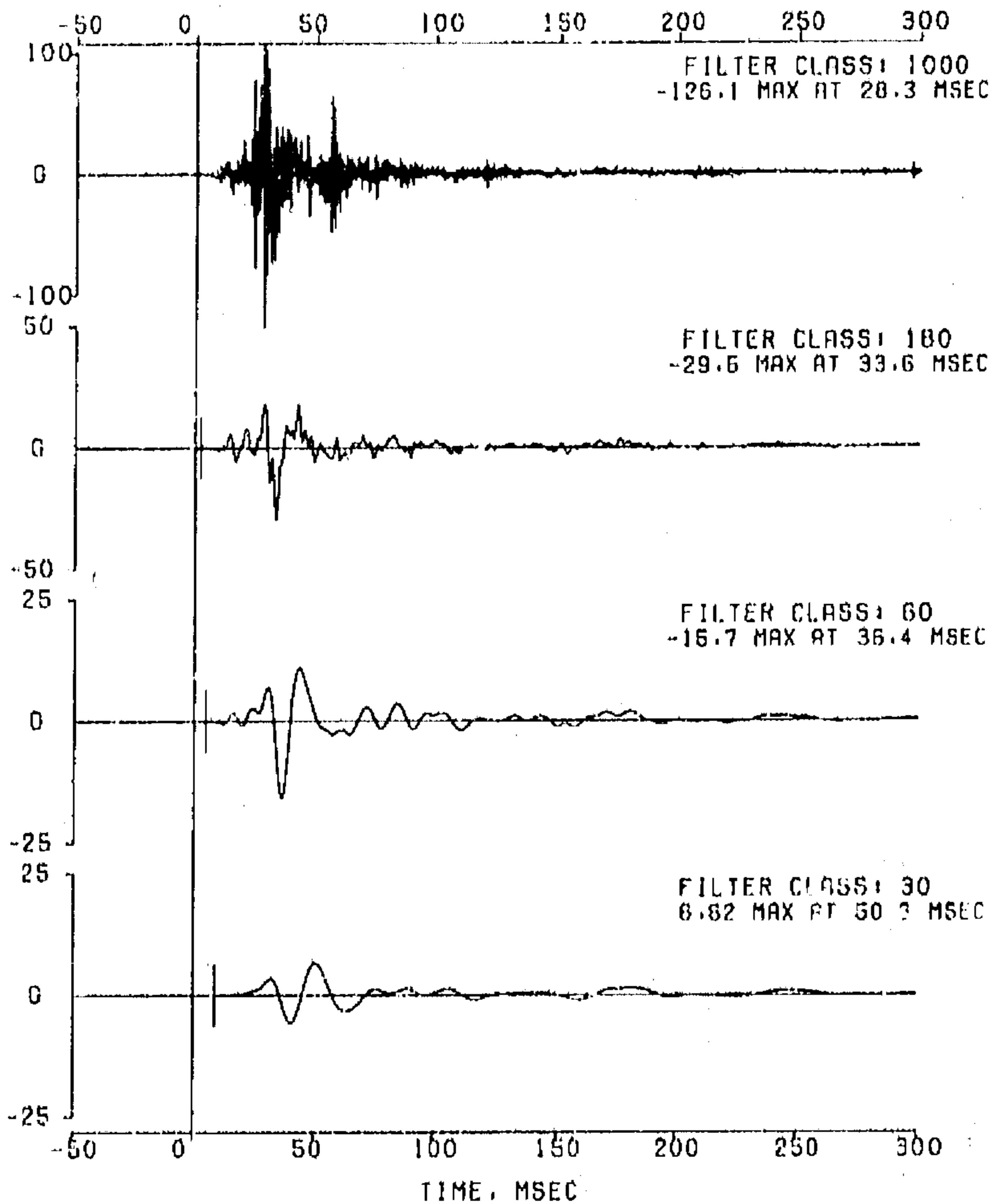


COMPUTED MPH  
COMPUTED IN

VC0B023 30 MPH REAR MOVING BARRIER, KJJ 74 ITEM KJ4276R  
2002 MYSS 301 REAR IMPACT DEVELOPMENT,  
CHANNEL 016 LT RR SILL FWD ST XMBRY J29357  
FILTER TYPE: OBDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 6320  
DEC 14, 1999

PAGE 036  
OF 102

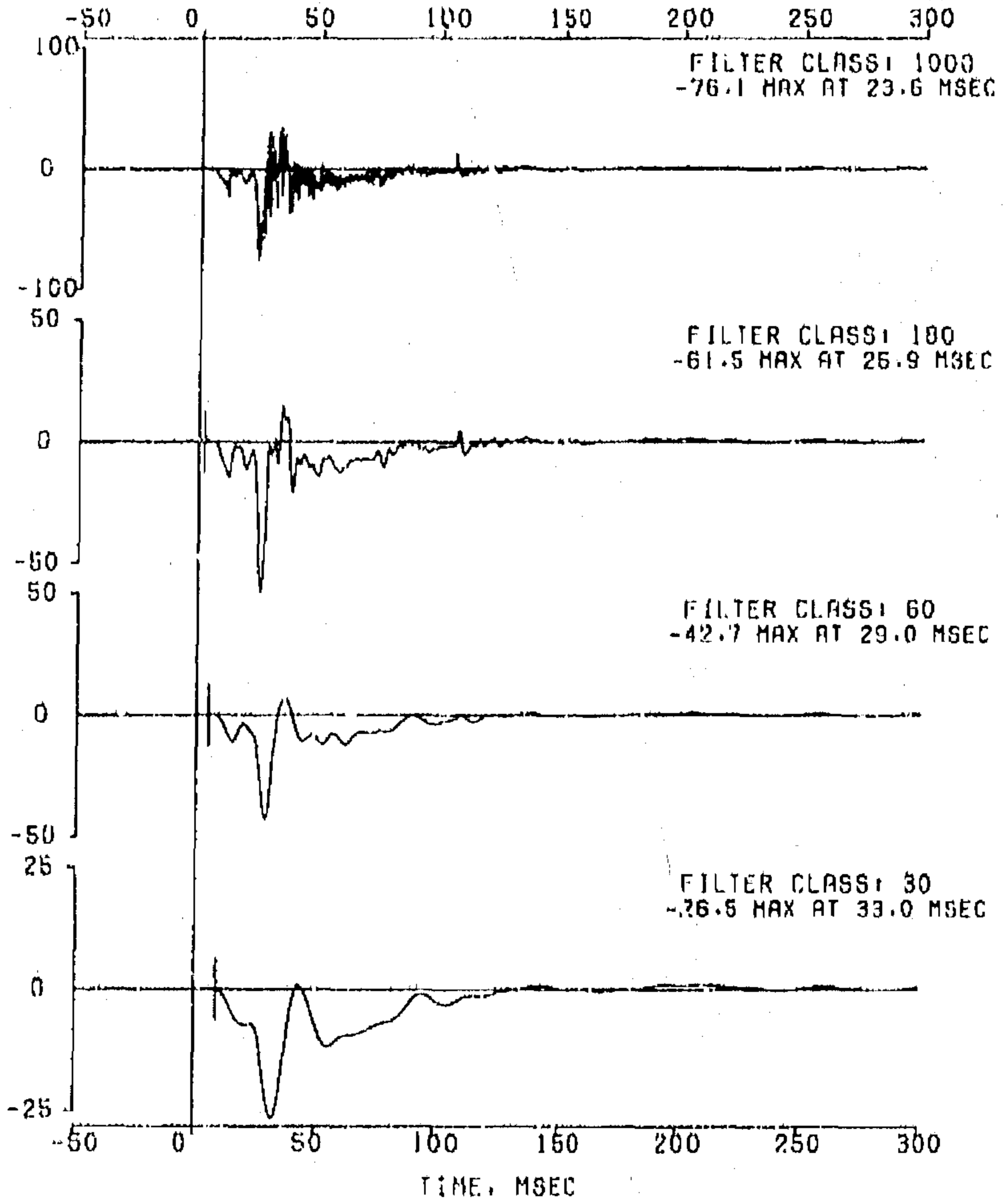
DATA SET 12/13/99BF  
ERRATA 1



YCOR023 30 MPH REAR MOVING BARRIER. KJJ-74 ITEM KJ4278R  
2002 HYSS 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 017 RT RR SILL FWD ST XMBRX APIN4  
FILTER TYPE: OBDAS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1850)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 037  
OF 102

DATA SET 12/13/9980  
ERRATA 1

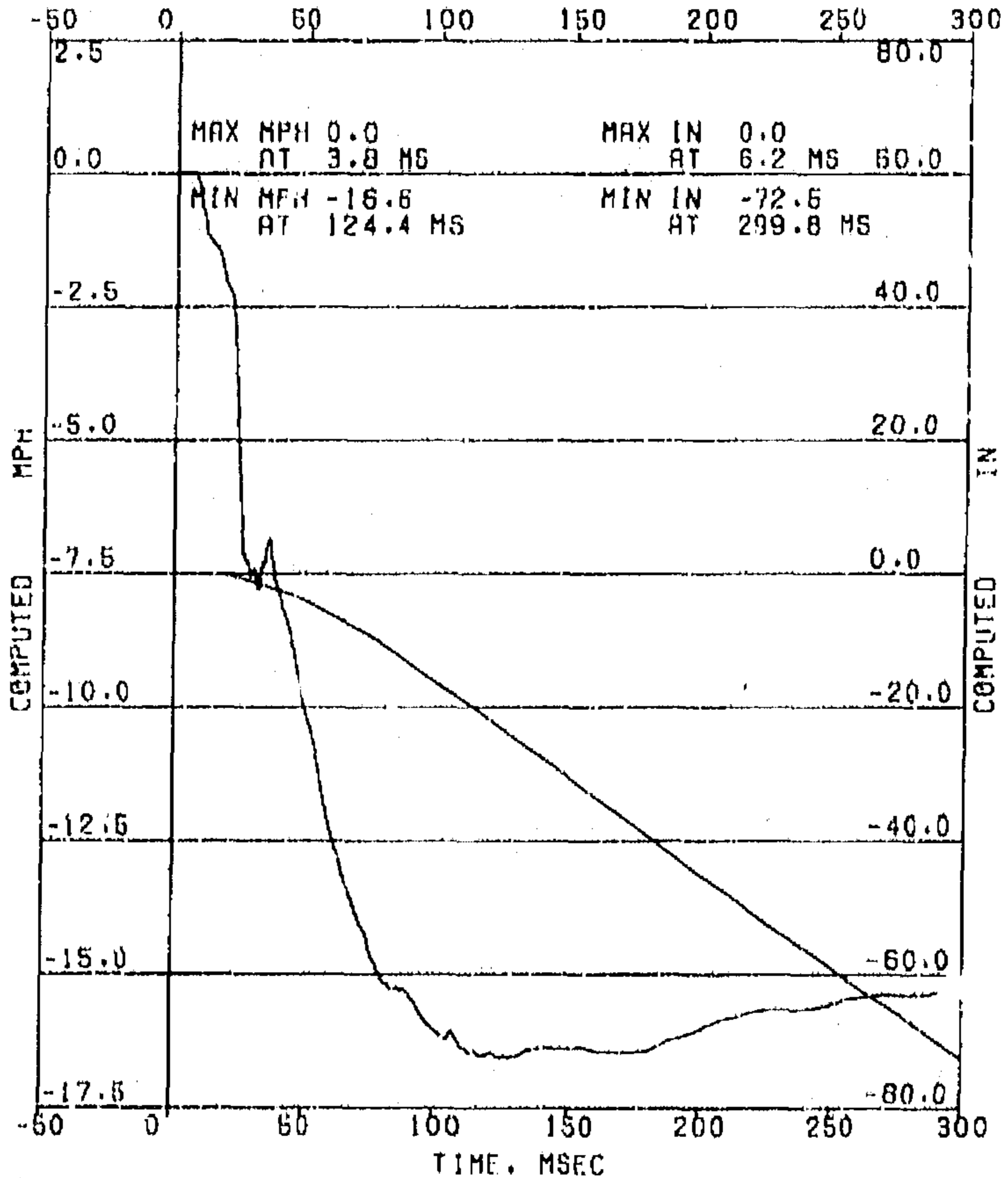




FILTER TYPE: GUDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1630)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT: 5320  
 DEC 14, 1999

DATA SET 12/13/99B0  
 ERRATA :



COMPUTED MPH  
 COMPUTED IN

VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R

PAGE 039

2002 MYSS 301 REAR IMPACT DEVELOPMENT.

OF 102

CHANNEL 01B RT RR SILL FWD ST XBODY R14550

FILTER TYPE: QDDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)

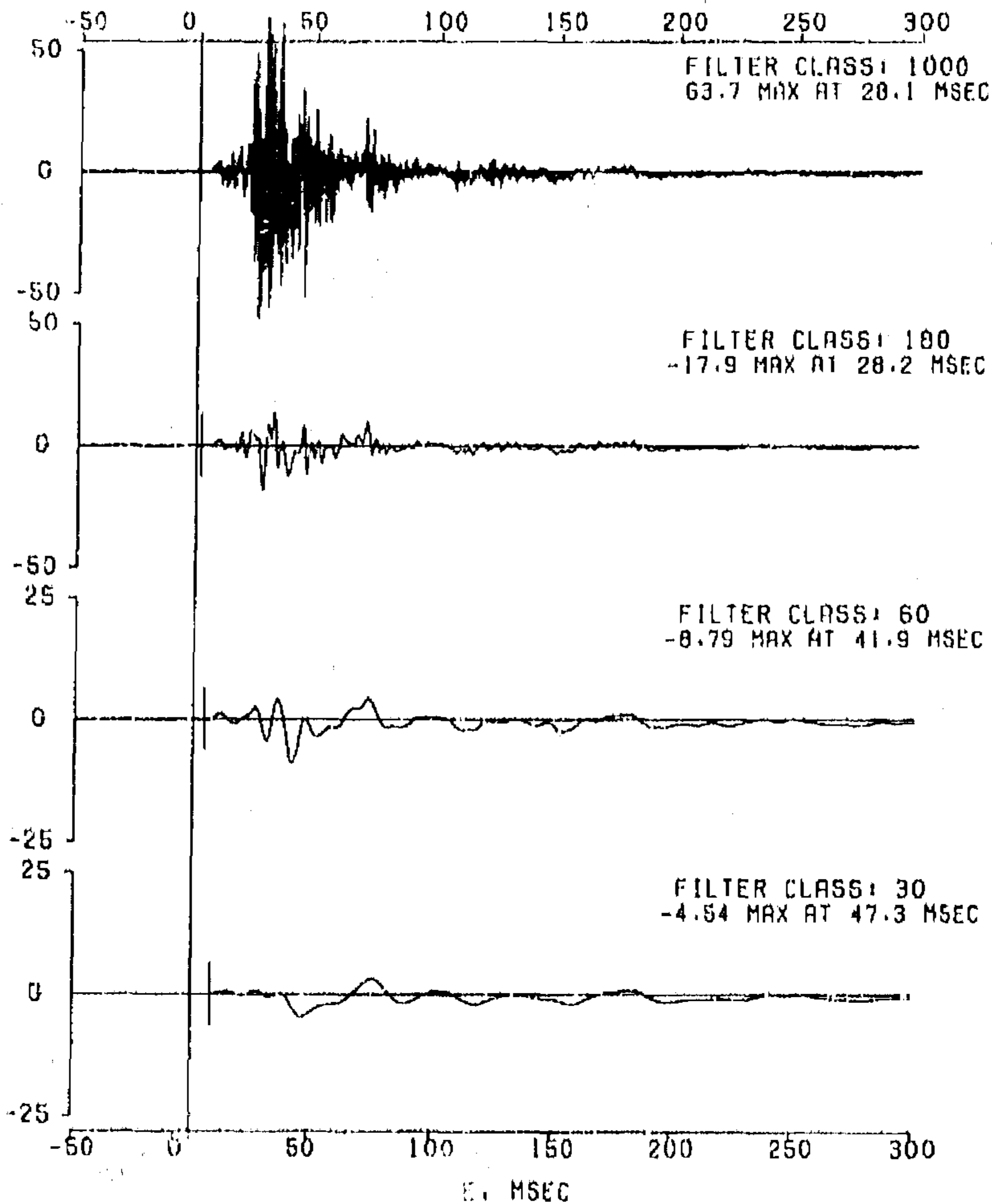
IMPACT ANALYSIS DEPT. 5320

DATA SET 12/13/9980

DEC 14, 1999

ERRATA

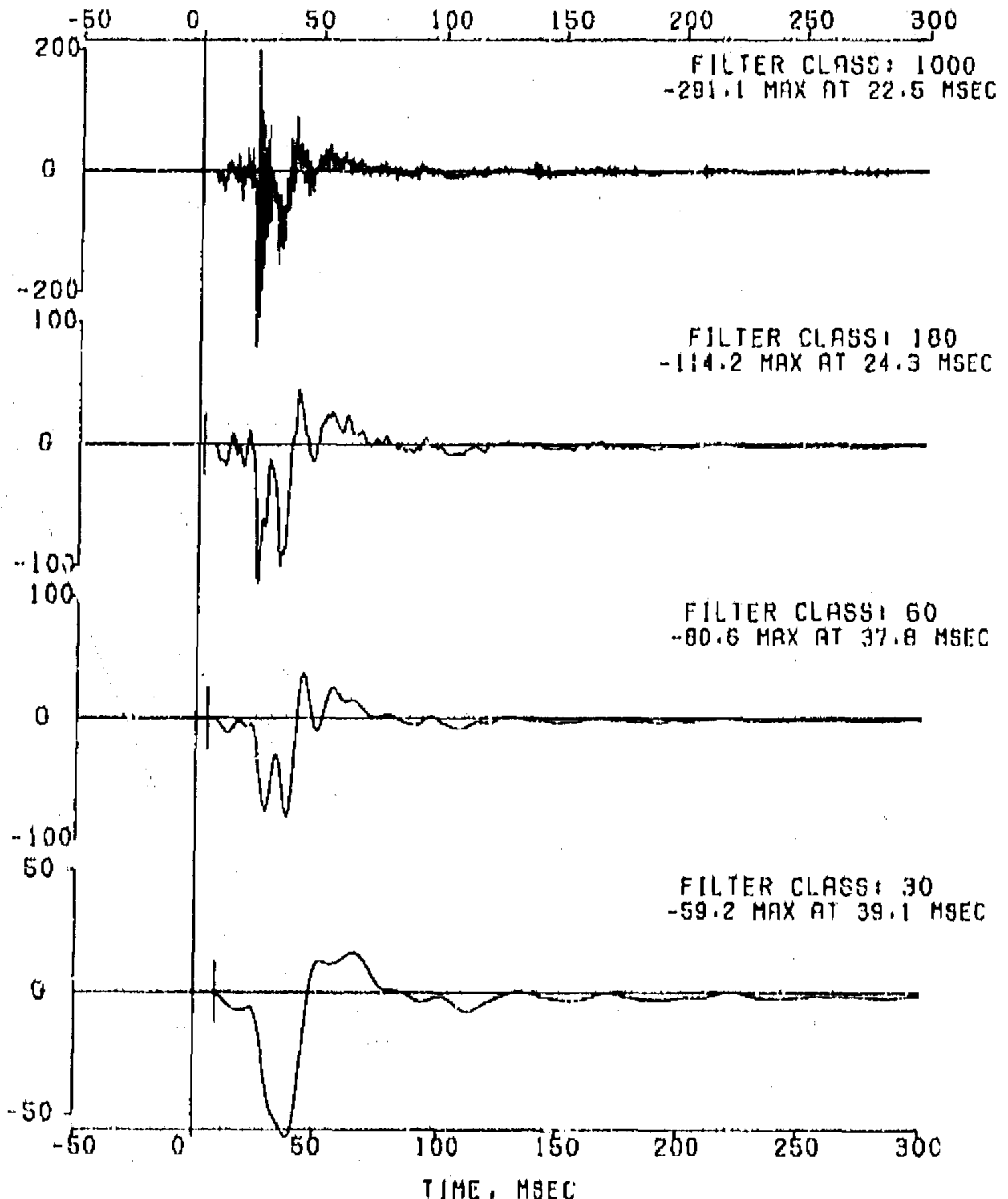
1



VC0B023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MY85 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 019 RT REAR RAIL MID TANK X 51120  
FILTER TYPE: OBDAG-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 040  
OF 102

DATA SET 12/13/9980  
ERRATA 1



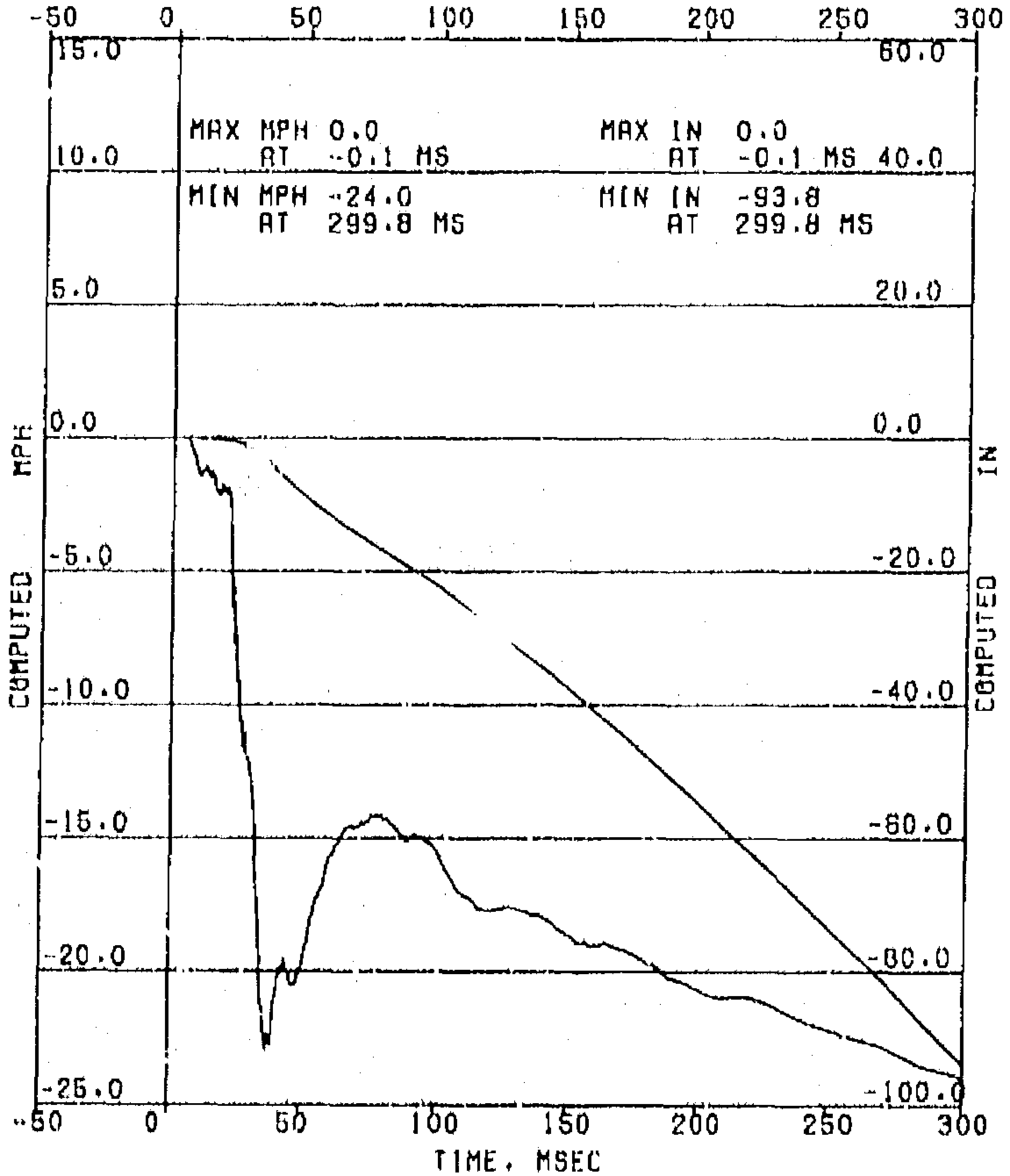
CAUTION  
DATA IS OFFSET 2.0 0 AT 78.0 MS



FILTER TYPE: QBDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1850)  
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

DATA SET 12/13/9980  
ERRATA 1



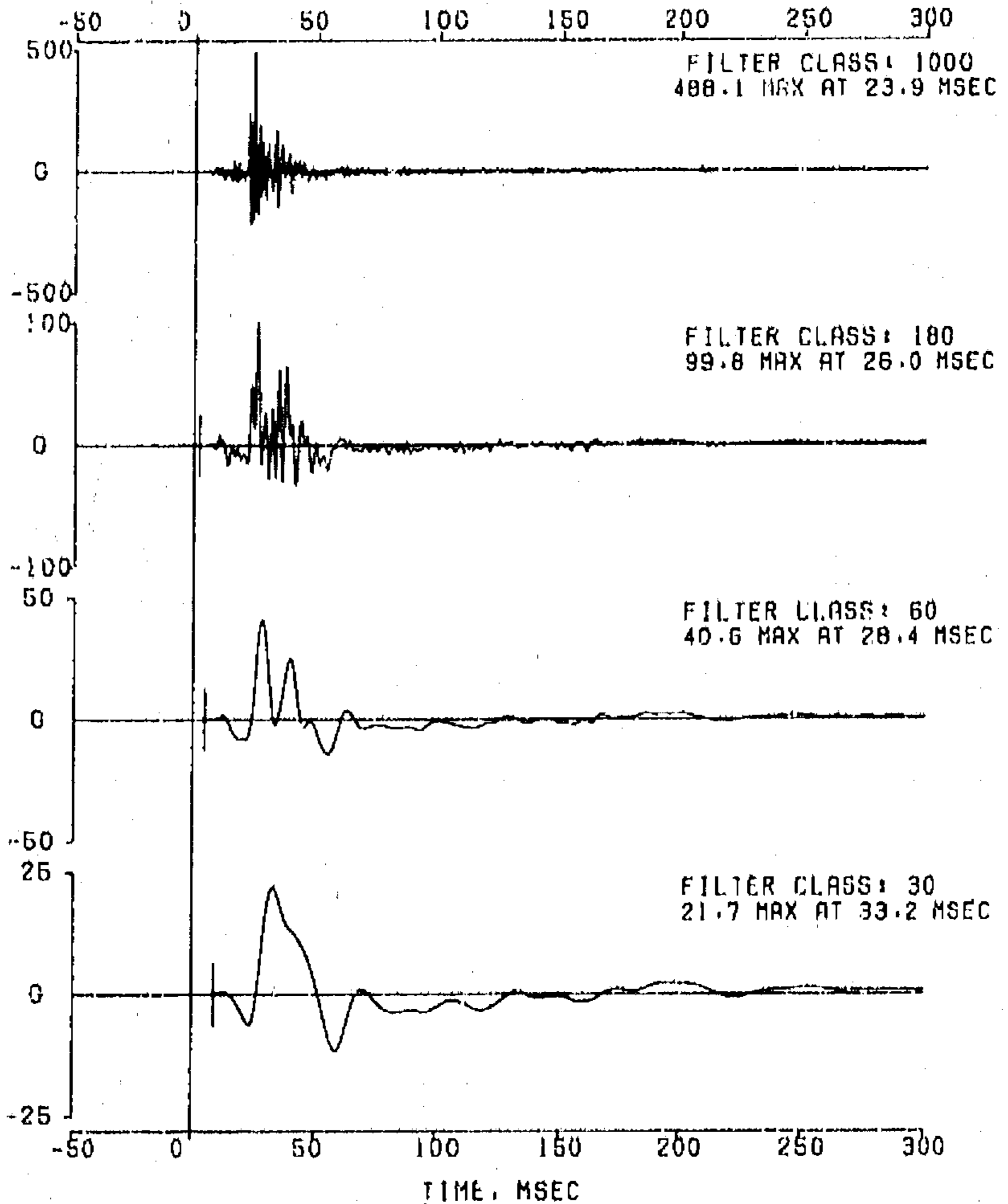
CAUTION  
DATA IS OFFSET 2.5 G AT 75.0 MS

COMPUTED MPH  
COMPUTED IN

VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MV85 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 020 RT REAR RAIL MID TANK Z 705314  
FILTER TYPE: 080AS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 042  
OF 102

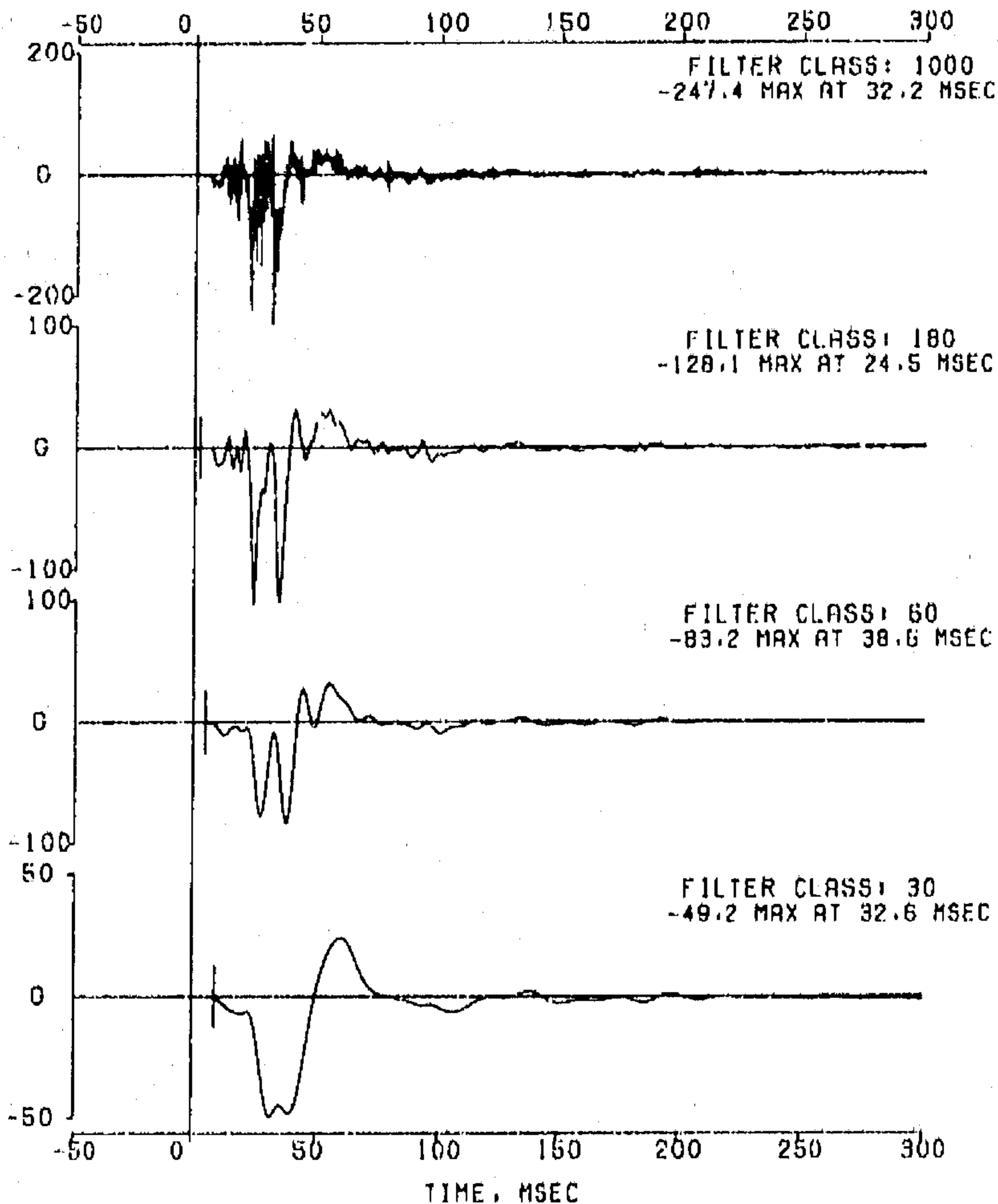
DATA SET 12/13/9900  
ERRATA 1



VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 HY88 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 021 LT REAR RAIL MID TANK X 608404  
FILTER TYPE: OBD045-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 043  
OF 102

DATA SET 12/13/9880  
ERRATA 1





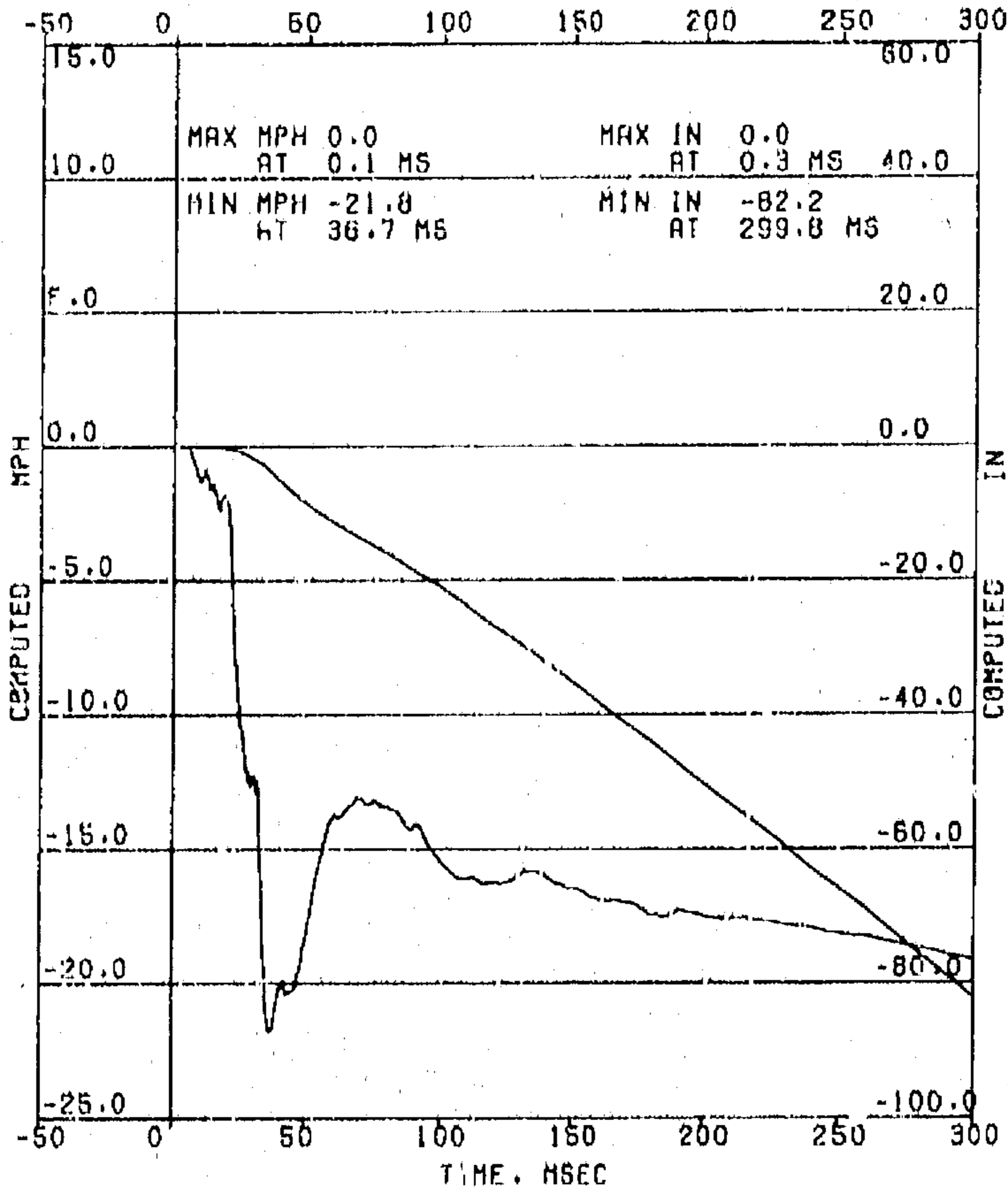
VCOR029 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
 2002 MY68 301 REAR IMPACT DEVELOPMENT  
 CHANNEL 021 LT REAR RAIL MID TANK X 608404

PAGE 044  
 OF 102

FILTER TYPE: 000A5-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1850)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1989

DATA SET 12/13/9980  
 ERRATA 1

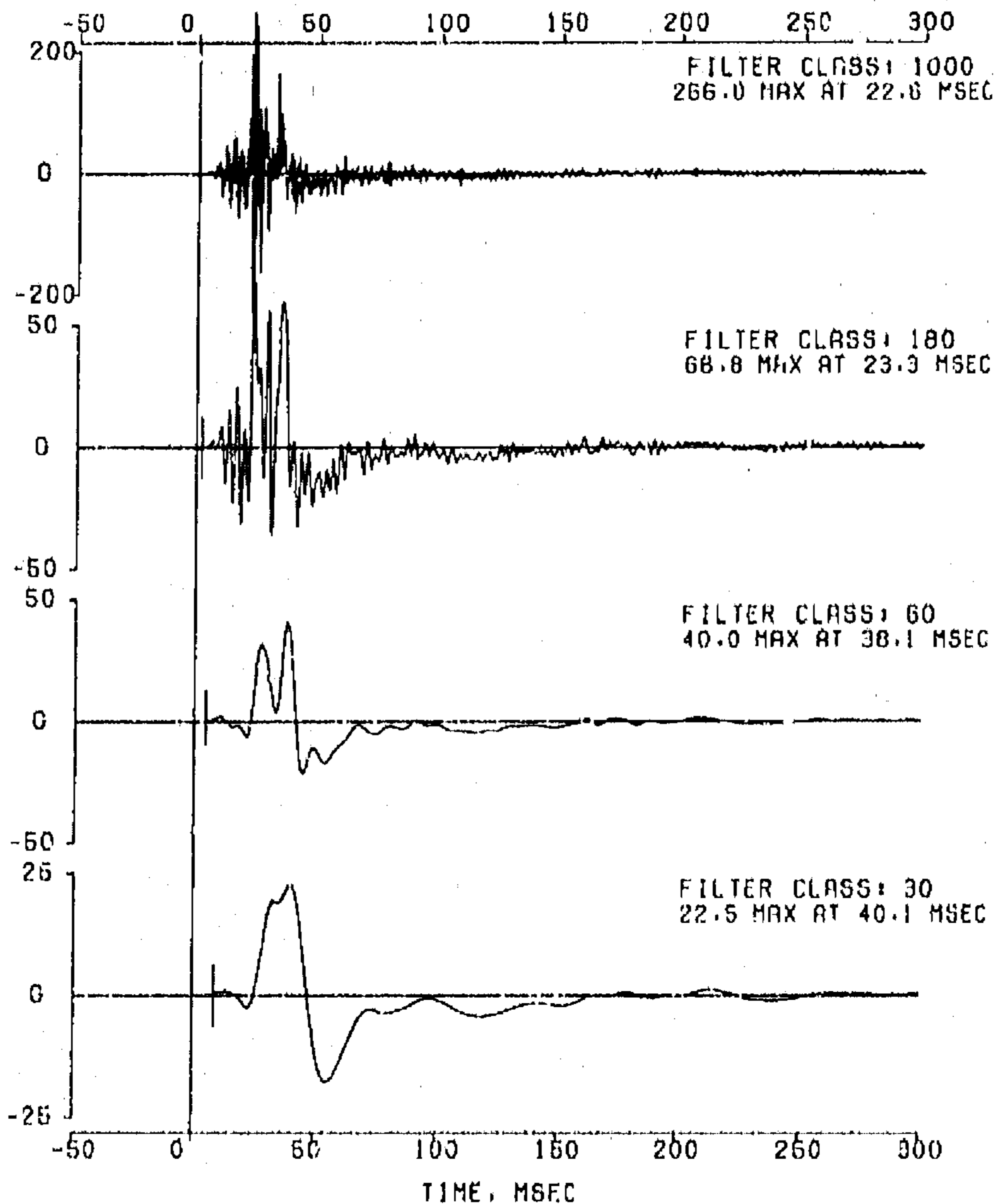


COMPUTED MPH  
 COMPUTED IN

VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4278R  
2002 MY05 301 REAR IMPACT DEVELOPMENT,  
CHANNEL 022 LT REAR RAIL MID TANK Z 608407  
FILTER TYPE: 080AS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 045  
OF 102

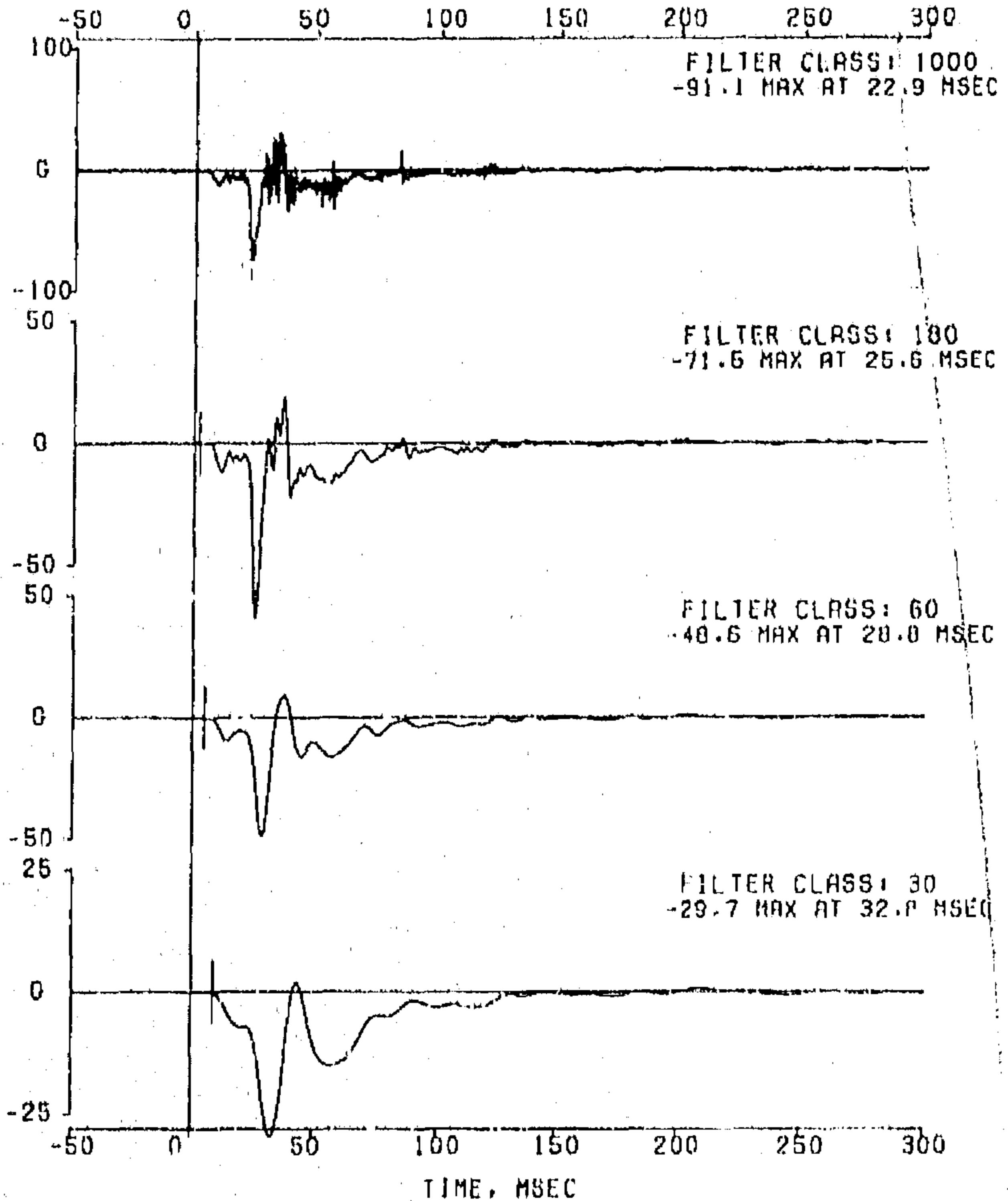
DATA SET 12/13/9980  
ERRATA 1



VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 HV65 301 REAR IMPACT DEVELOPMENT,  
CHANNEL 023 LT RAIL TRANS X/MAR X J21321  
FILTER TYPE: 08DAS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 046  
OF 102

DATA SET 12/13/99B0  
ERRATA 1

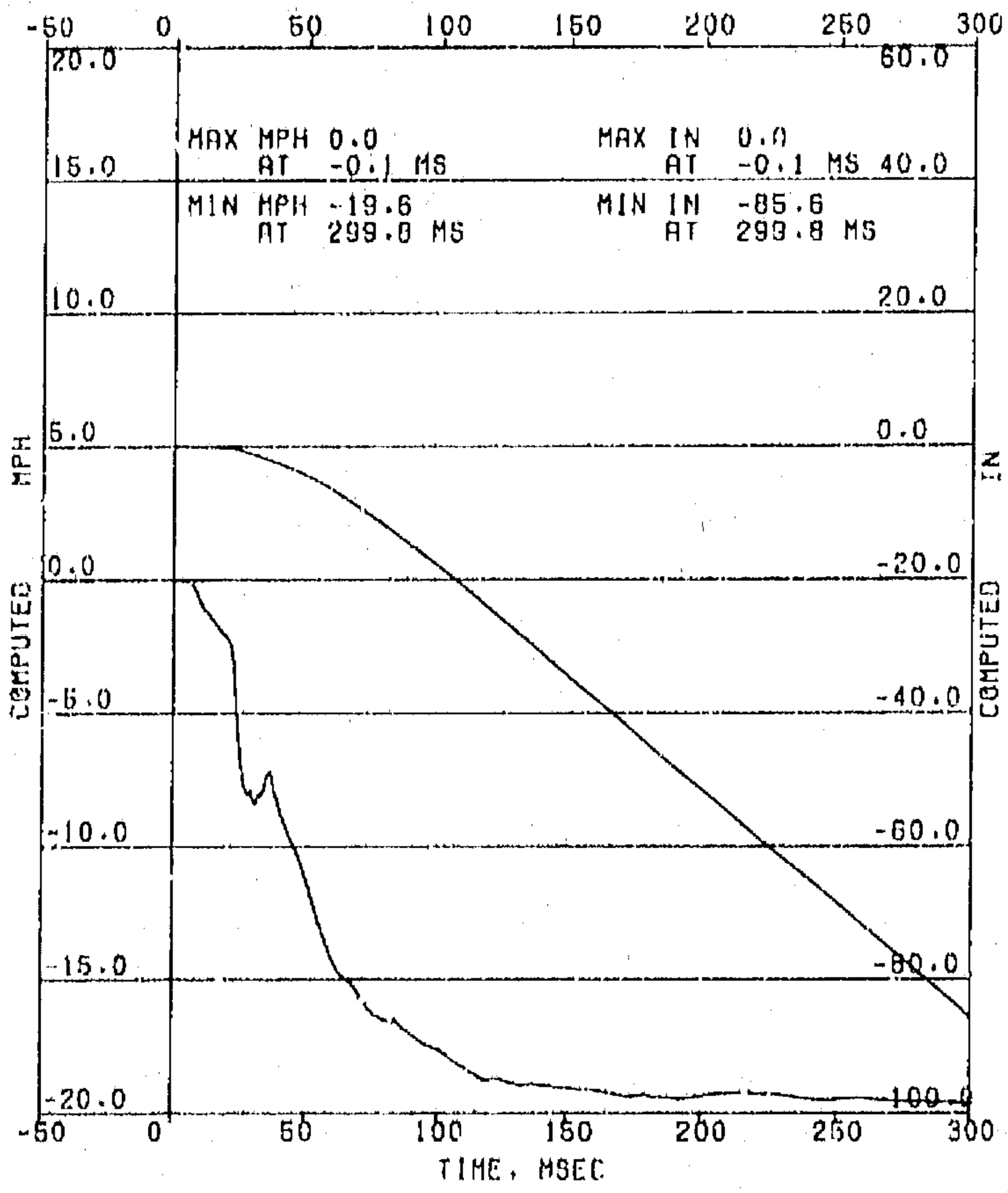




FILTER TYPE: 080A8-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

IR SET 12/13/9900  
 ERRATA 1

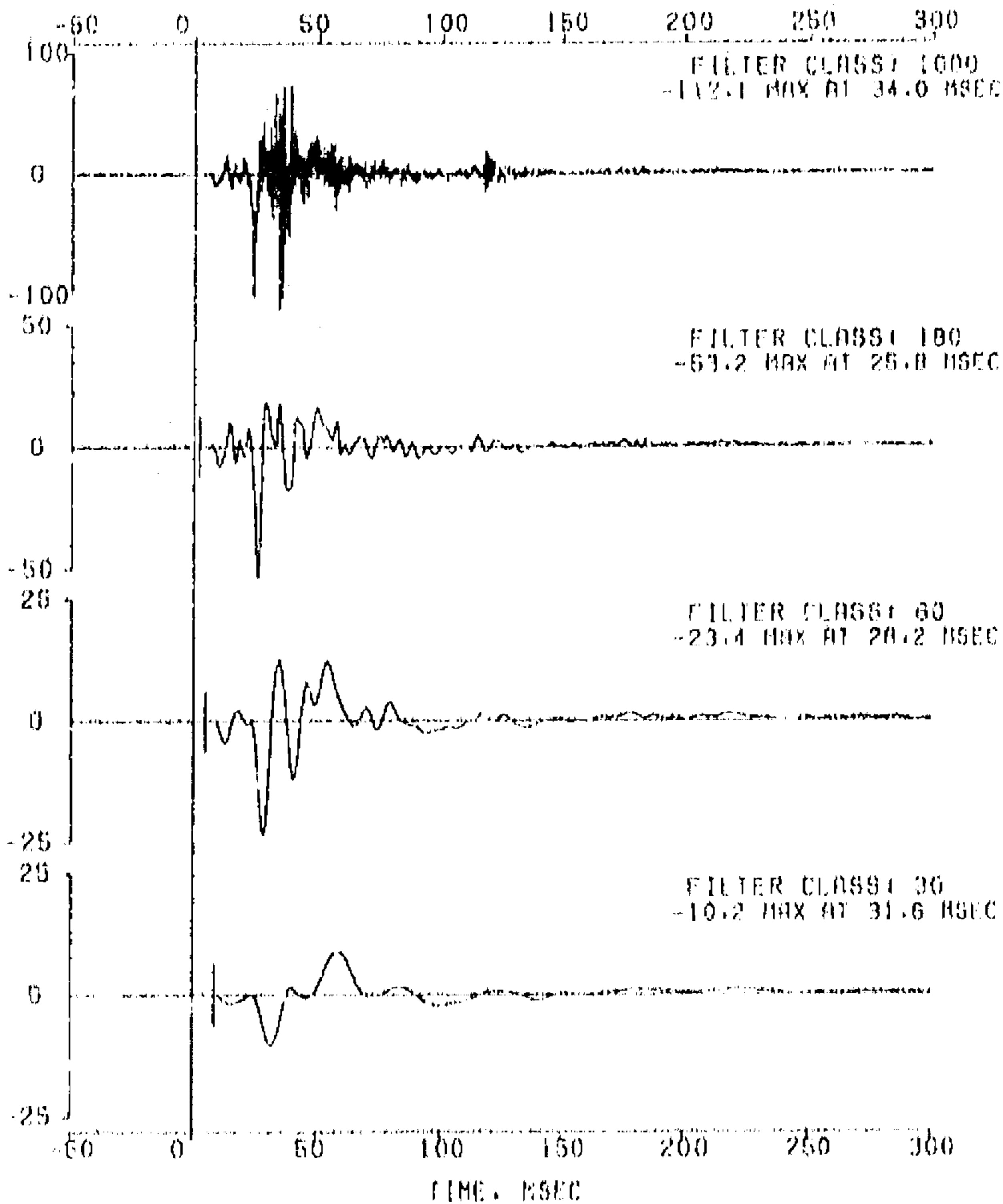


COMPUTED MPH  
 COMPUTED IN

VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MY38 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 024 LT RAIL TRANS X/MOR 2 J26426  
FILTER TYPE: 0009-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 040  
OF 107

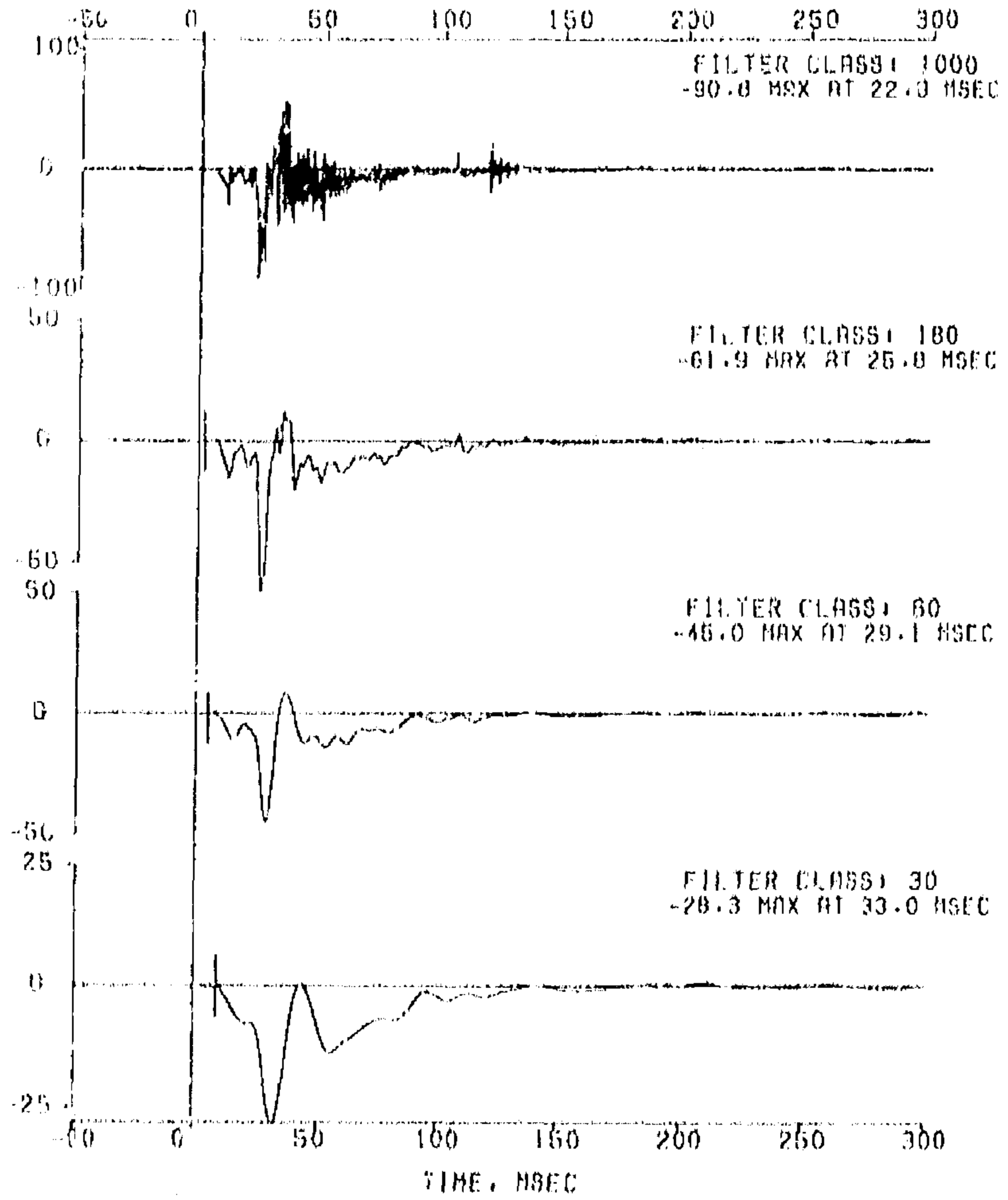
DATA SET 12/13/9900  
ERRATA 1



VC03023 30 MPH REAR MOVING BARRIER, KJ4-74 ITEM KJ42Y6R  
2002 HYSS 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 025 RT RAIL TRANS X/MOR X J29401  
FILTER TYPE: OHDS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 049  
OF 102

DATA SET 12/13/99B0  
ERRATA 1

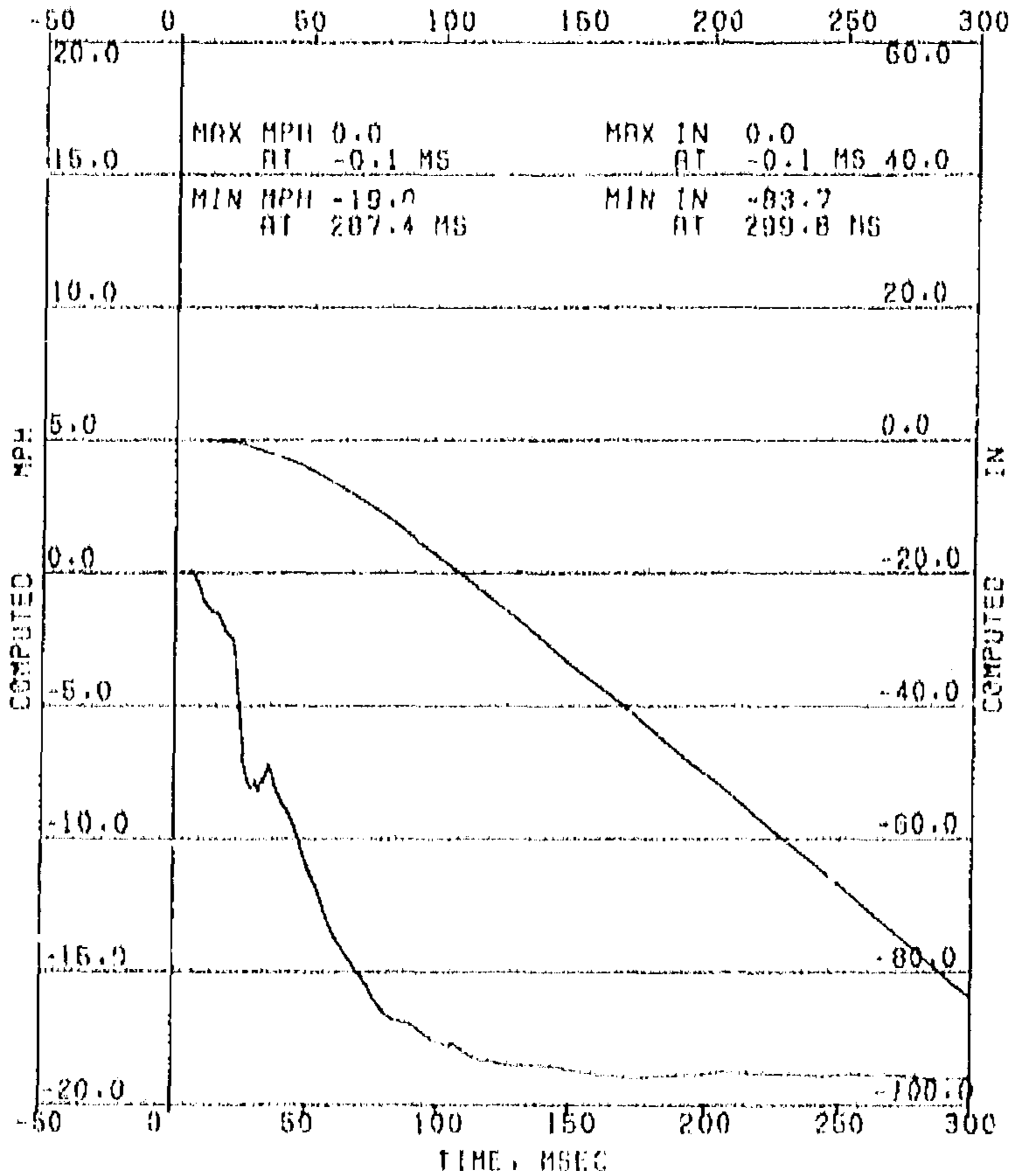




FILTER TYPE: ODDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1550)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

DATA SET 12/13/9980  
 ERRATA 1

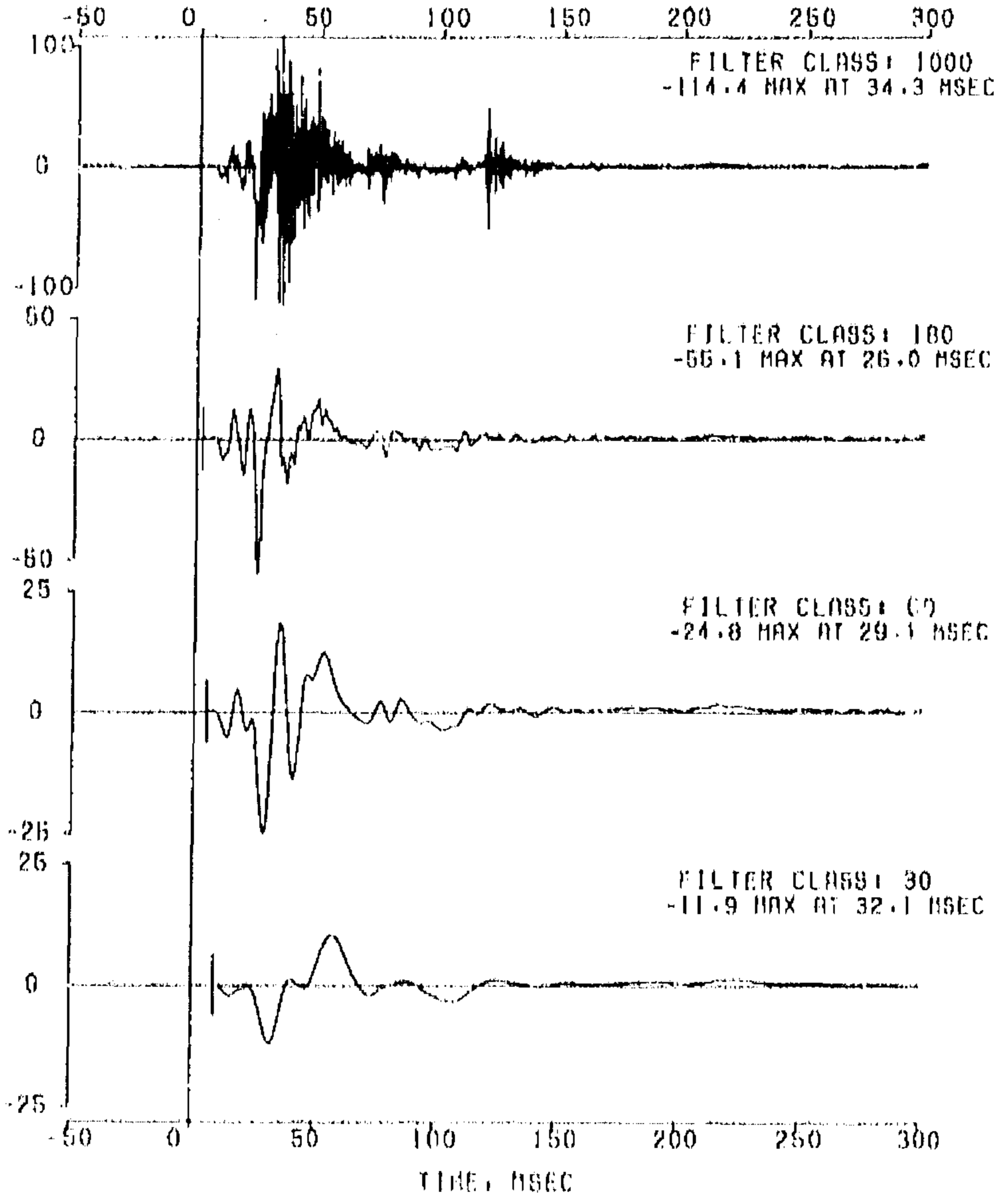


COMPUTED MPH  
 COMPUTED IN

VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4278R  
2002 MY88 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 026 RT RAIL TRANS X/MBR Z J29202  
FILTER TYPE: OBUNG-III RESPONSE CORRECTION, CLASS 1000 FILTER(1850)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 001  
OF 102

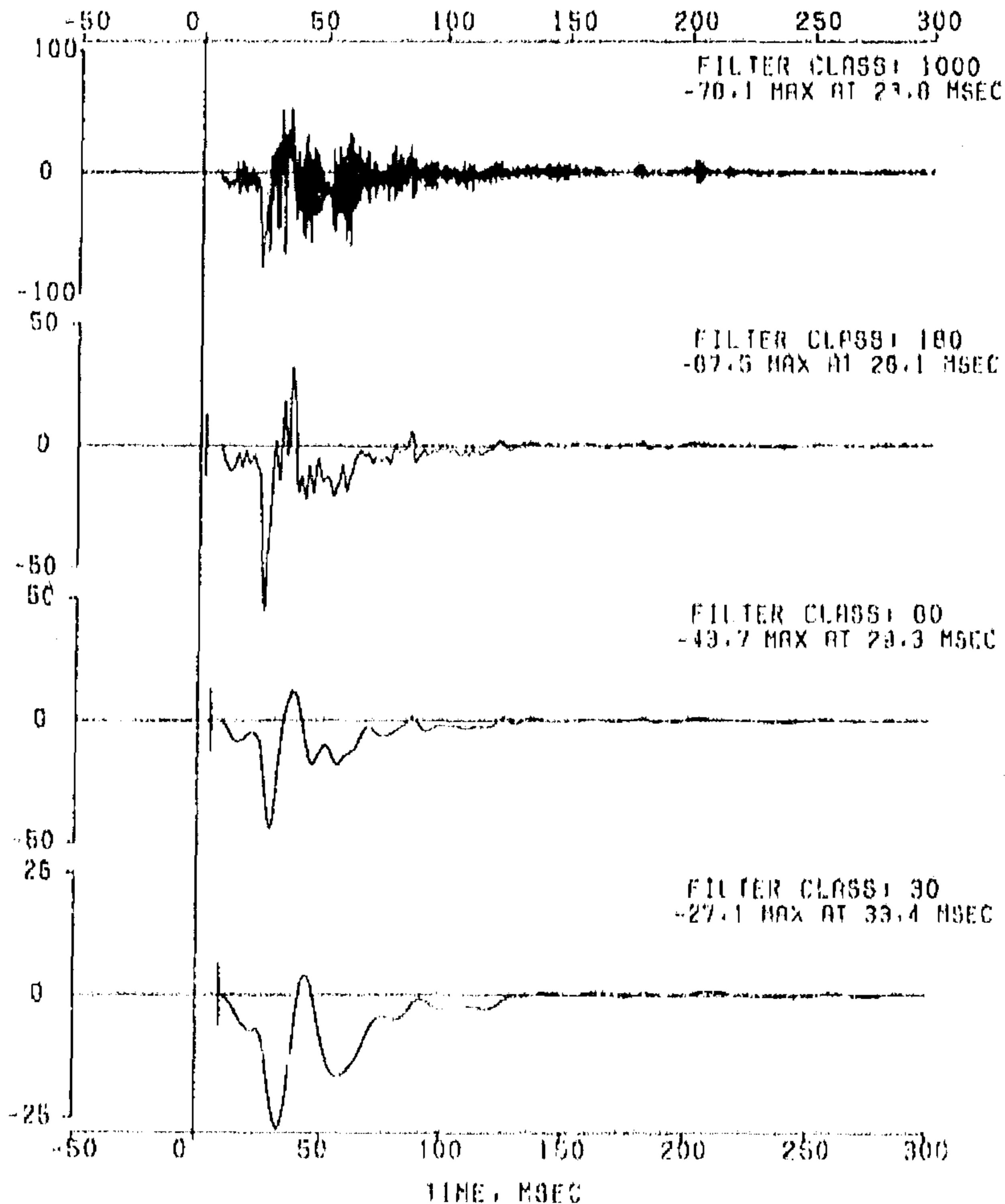
DATA SET 12/13/9980  
ERRATA 1



VC00023 30 MPH REAR MOVING BARRIER, KJJ-7: ITEM KJ4276R  
2002 MYSS 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 027 LT RAIL FT XMR X 226557  
FILTER TYPE: 080AS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1660)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 052  
OF 102

DATA SET 12/13/99DD  
ERRATA 1

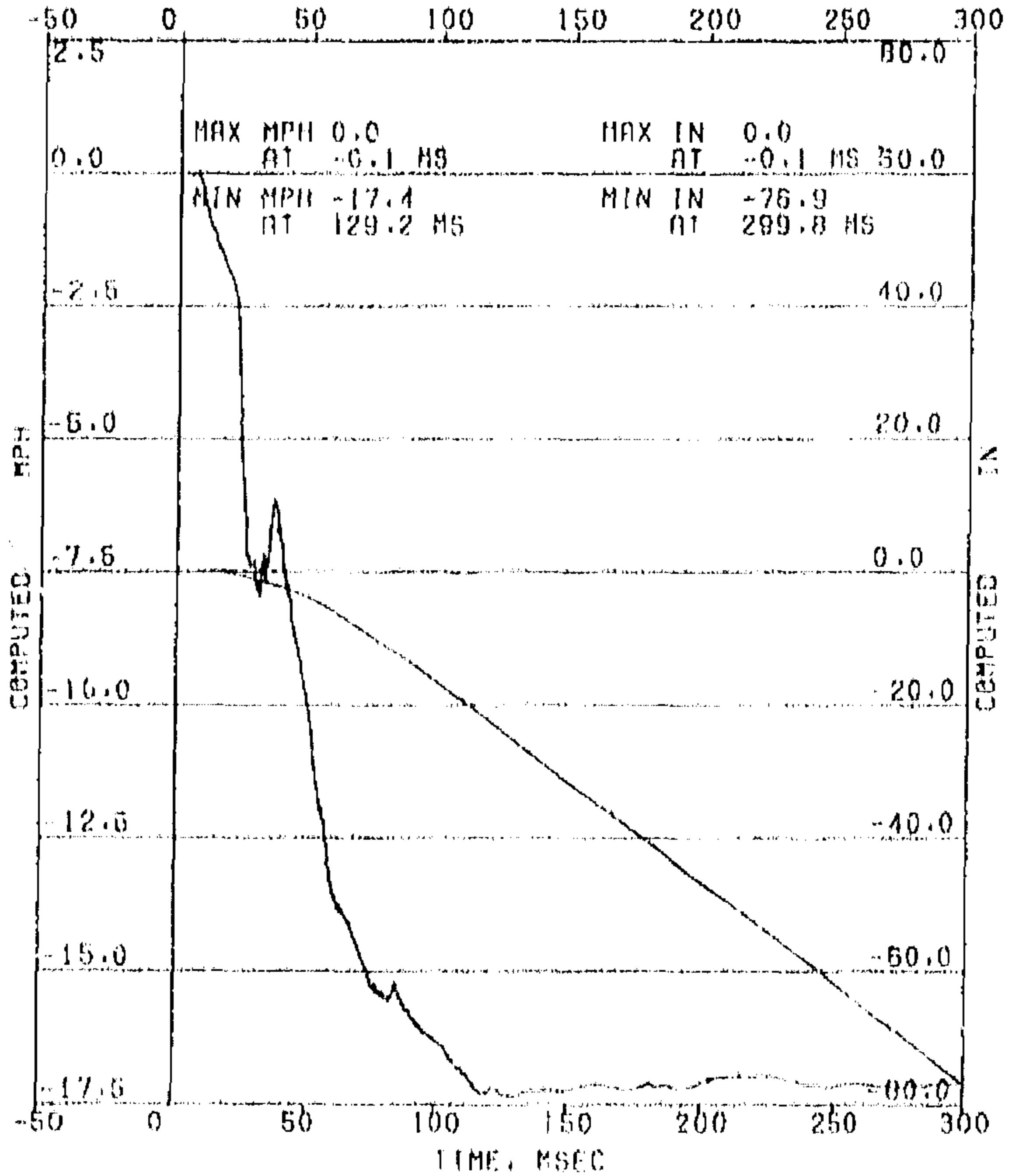




FILTER TYPE: 00006-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

DATA SET 12/13/9900  
ERRATA 1

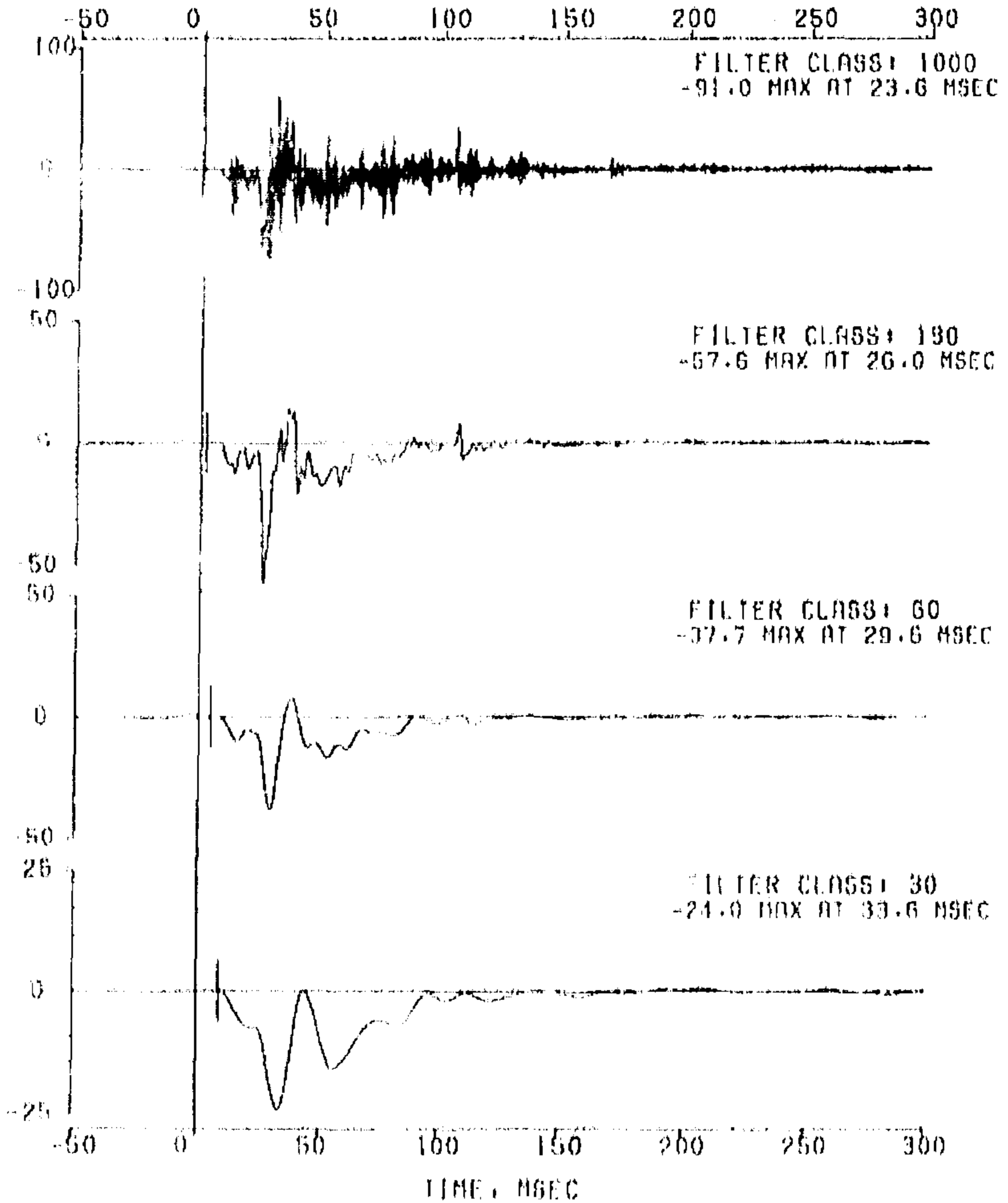


COMPUTED MPH  
COMPUTED IN

VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4270R  
2002 MV99 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 028 RT RAIL FT XDR X 20076  
FILTER TYPE: 300AS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 054  
OF 102

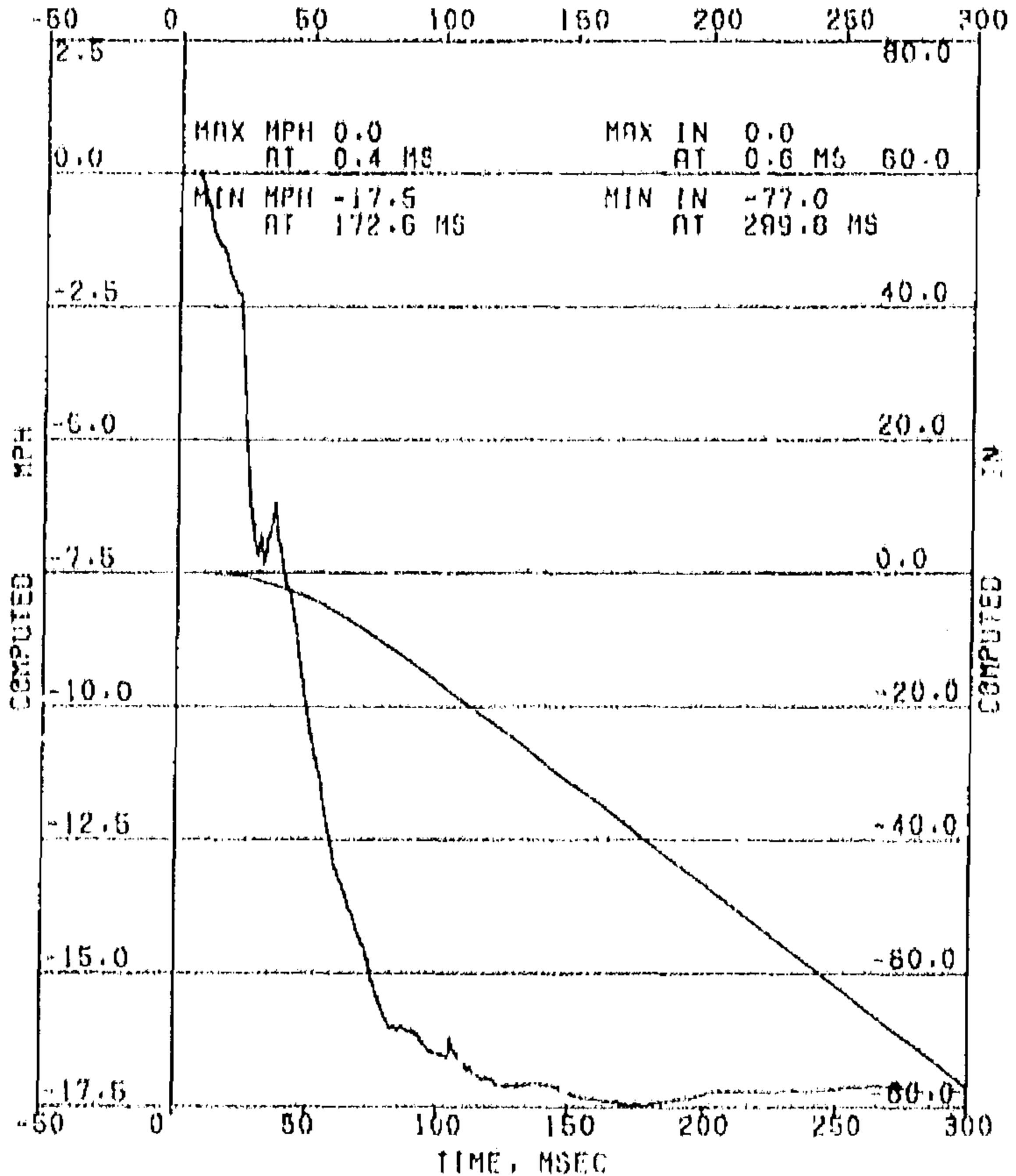
DATA SET 12/13/9980  
ERRATA 1



FILTER TYPE: 08085-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1660)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

DATA SET 12/13/9980  
 ERRATA 1



COMPUTED MPH  
 COMPUTED IN





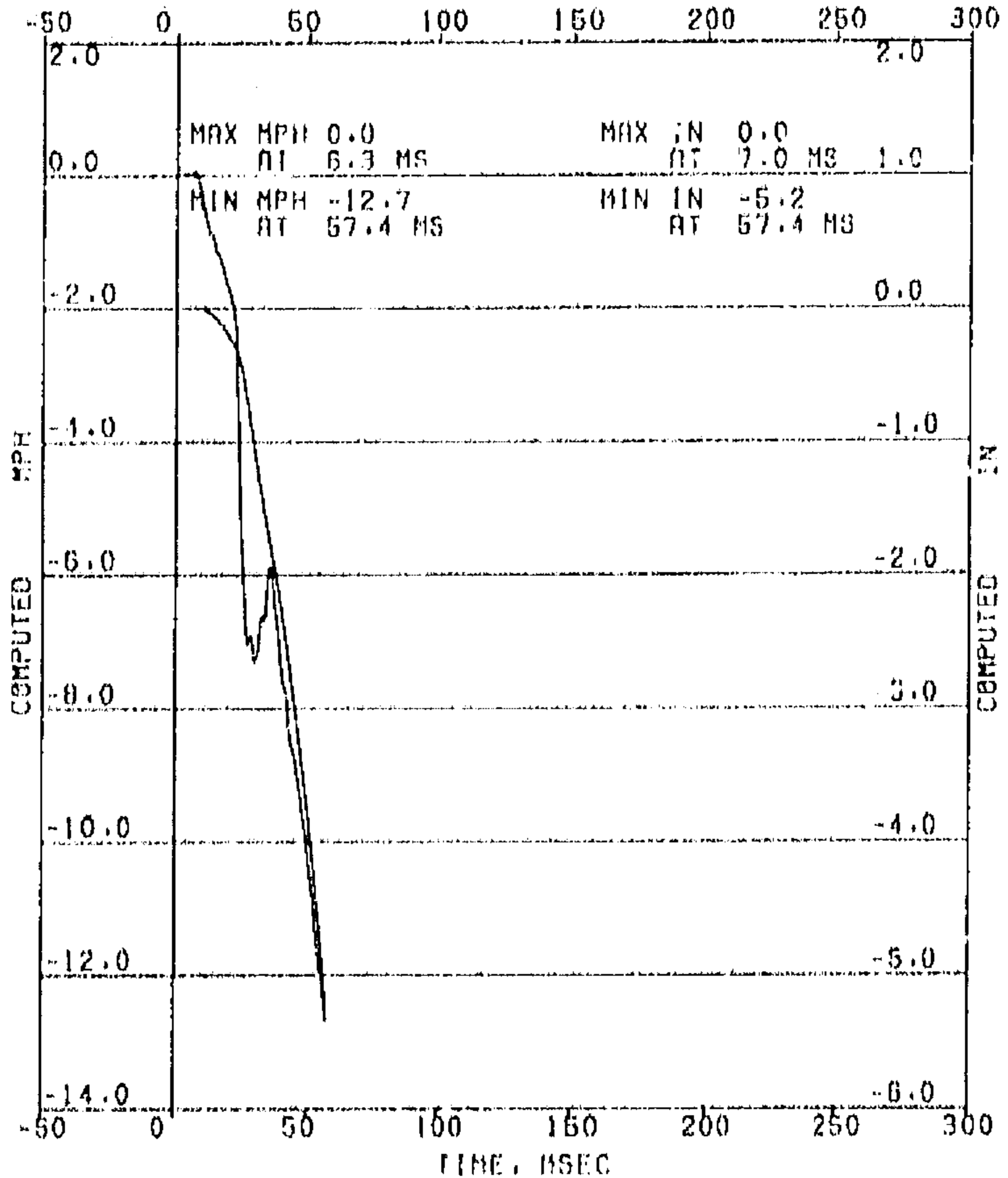
VC00023 30 MPH REAR MOVING BARRIER, KJ4-74 ITEM KJ4276R  
 2002 HYBR 301 REAR IMPACT DEVELOPMENT,  
 CHANNEL 029 LT RL UPR 30MM HFT RADX J21349

PAGE 057  
 OF 102

FILTER TYPE: 080AS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1860)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

DATA SET 12/13/99B0  
 ERRATA 1



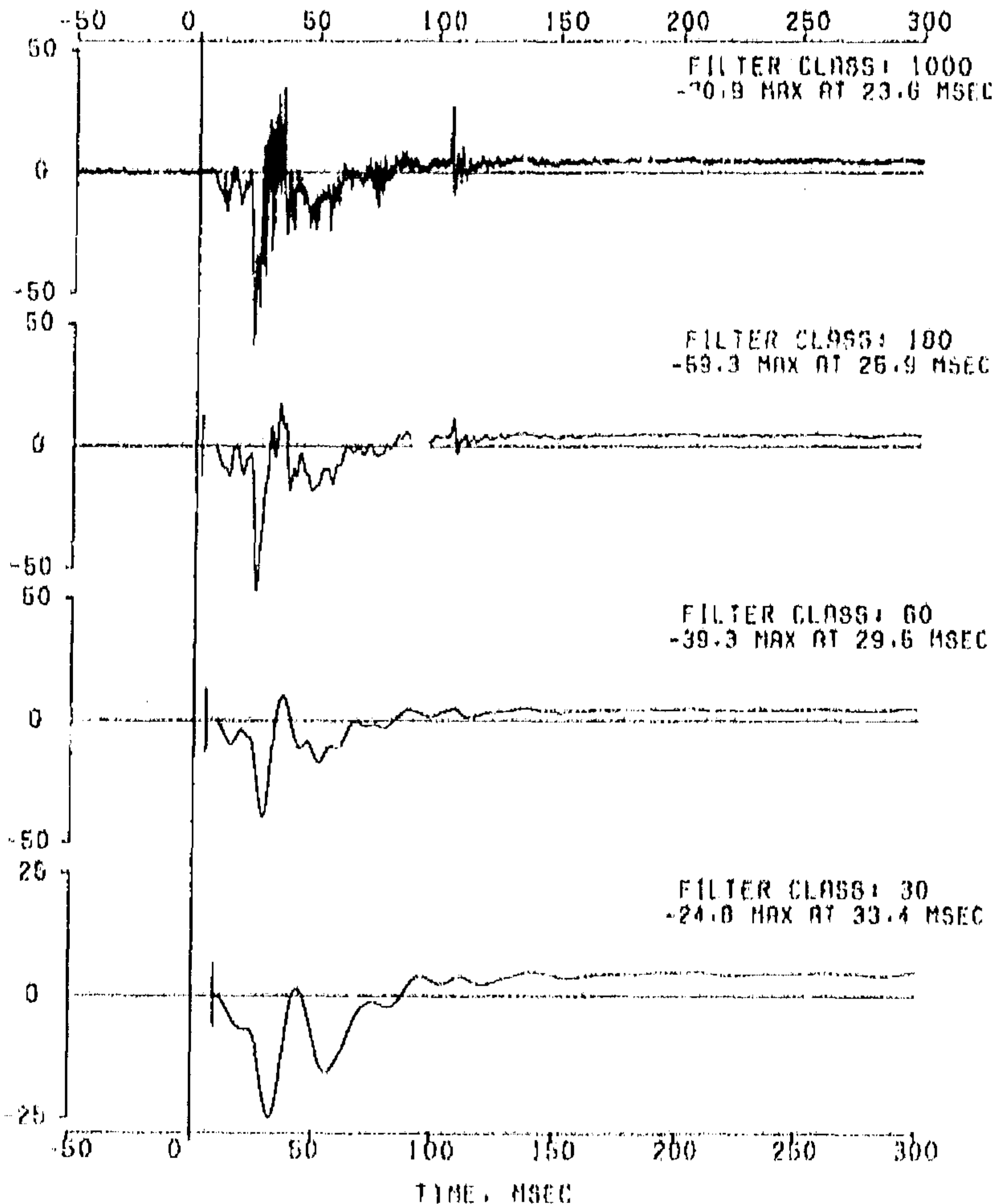
CAUTION: IMPACT ANALYSIS AFTER 67.6 MS

COMPUTED MPH  
 COMPUTED IN

VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
 2002 MY56 301 REAR IMPACT DEVELOPMENT.  
 CHANNEL 030 RT RL UPK 30MM AFT RADX ANR20  
 FILTER TYPE: 000AS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1850)  
 IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

PAGE 050  
 OF 102

DATA SET 12/13/0980  
 ERRATA 1



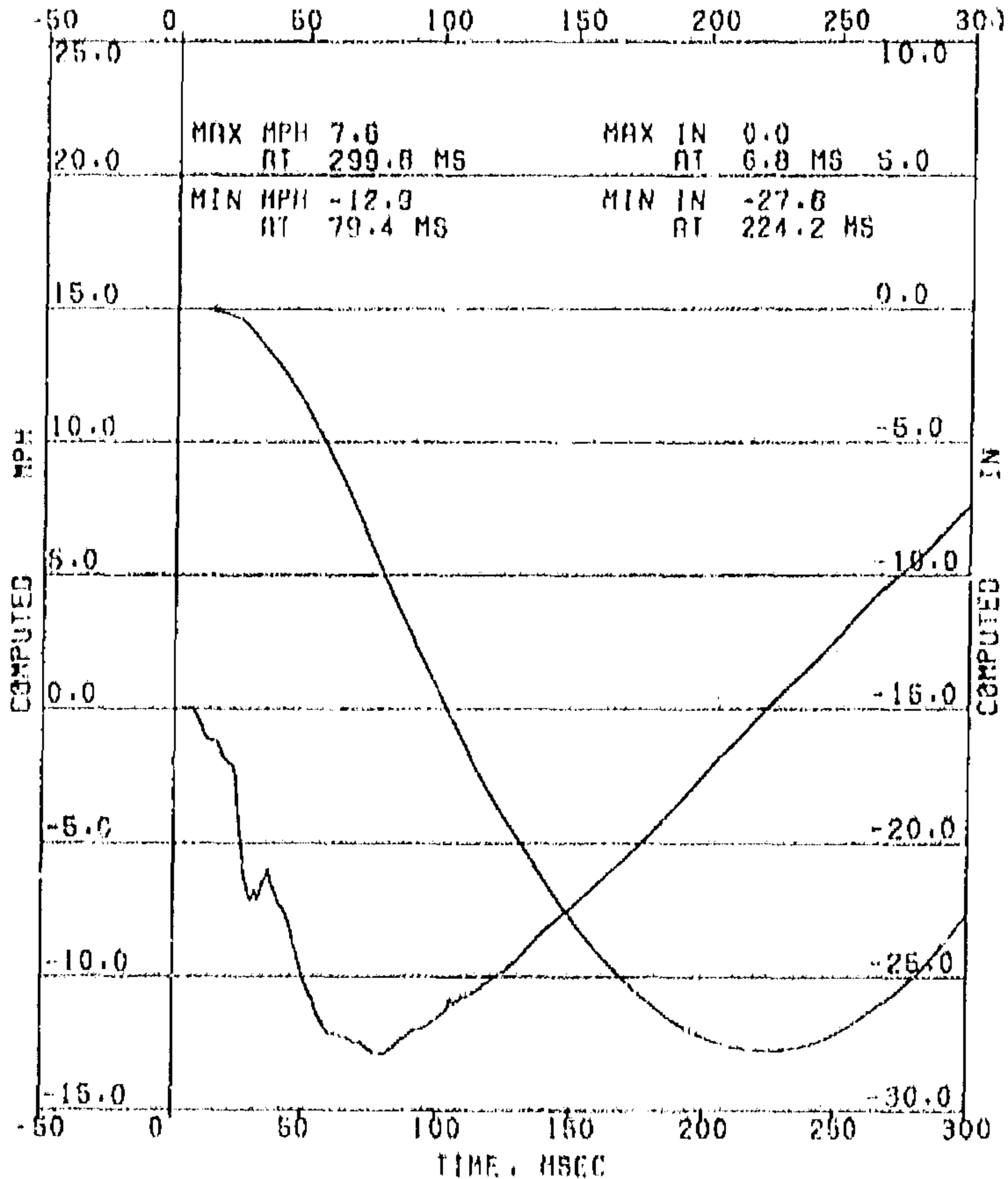
\*\*\*\*\* CAUTION \*\*\*\*\*  
 \*\*\*\*\* CHL 30 R. RL UPK 30MM AFT RADX ANR20, 18 OFF/DET. \*\*\*\*\*



FILTER TYPE: ODDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

DATA SET 12/13/9900  
 ERRATA 1



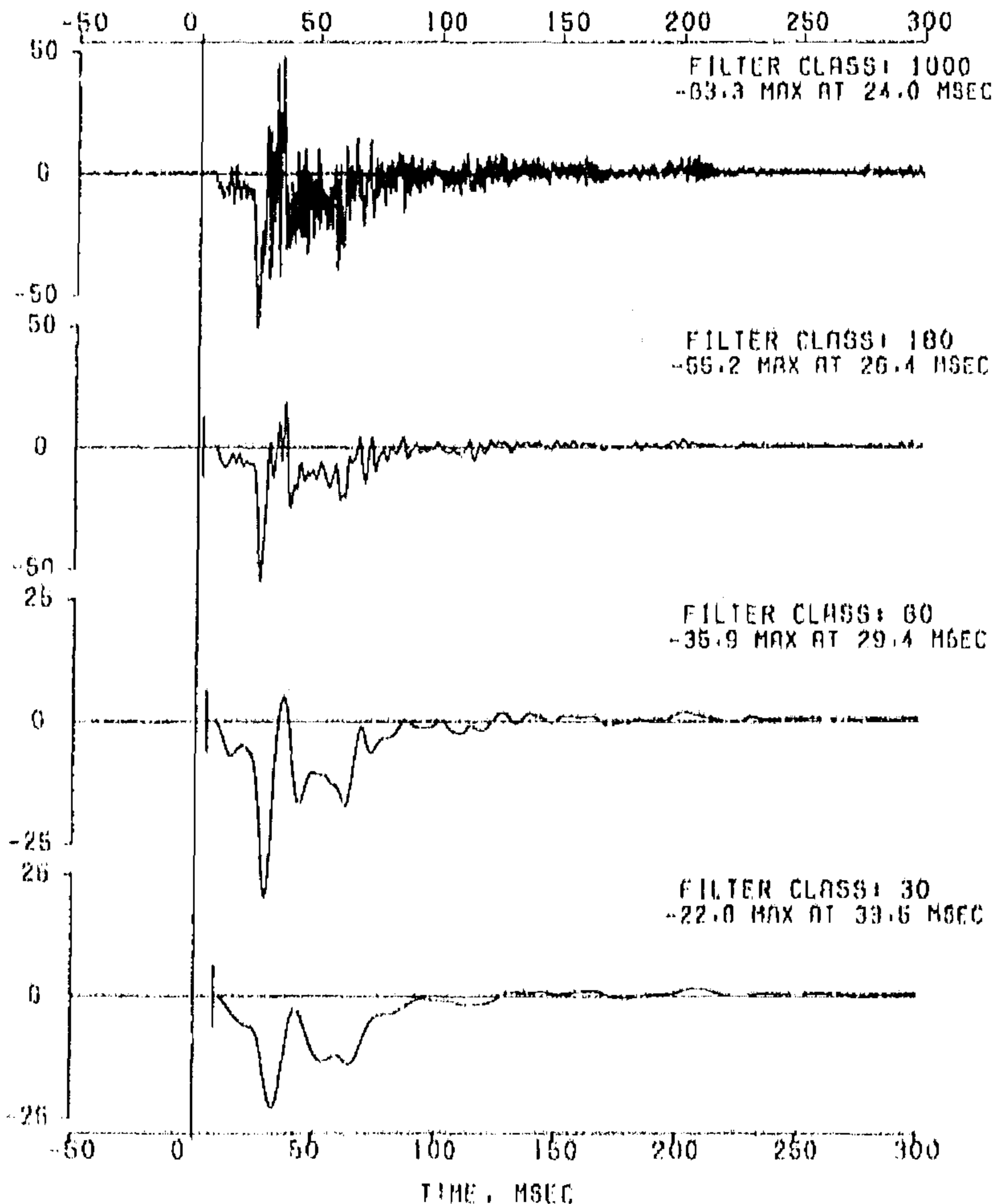
CAUTION: CHANNEL 030 RT RL UPR 30MM AFT RROX AHR20, IS OFFSET. NAME

COMPUTED MPH  
 COMPUTED IN

VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MYSS 301 REAR IMPACT DEVELOPMENT,  
CHANNEL 031 LT RR VERT SURF RAD SIX J25064  
FILTER TYPE: 000AS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 060  
OF 102

DATA SET 12/13/99B0  
ERRATA 1



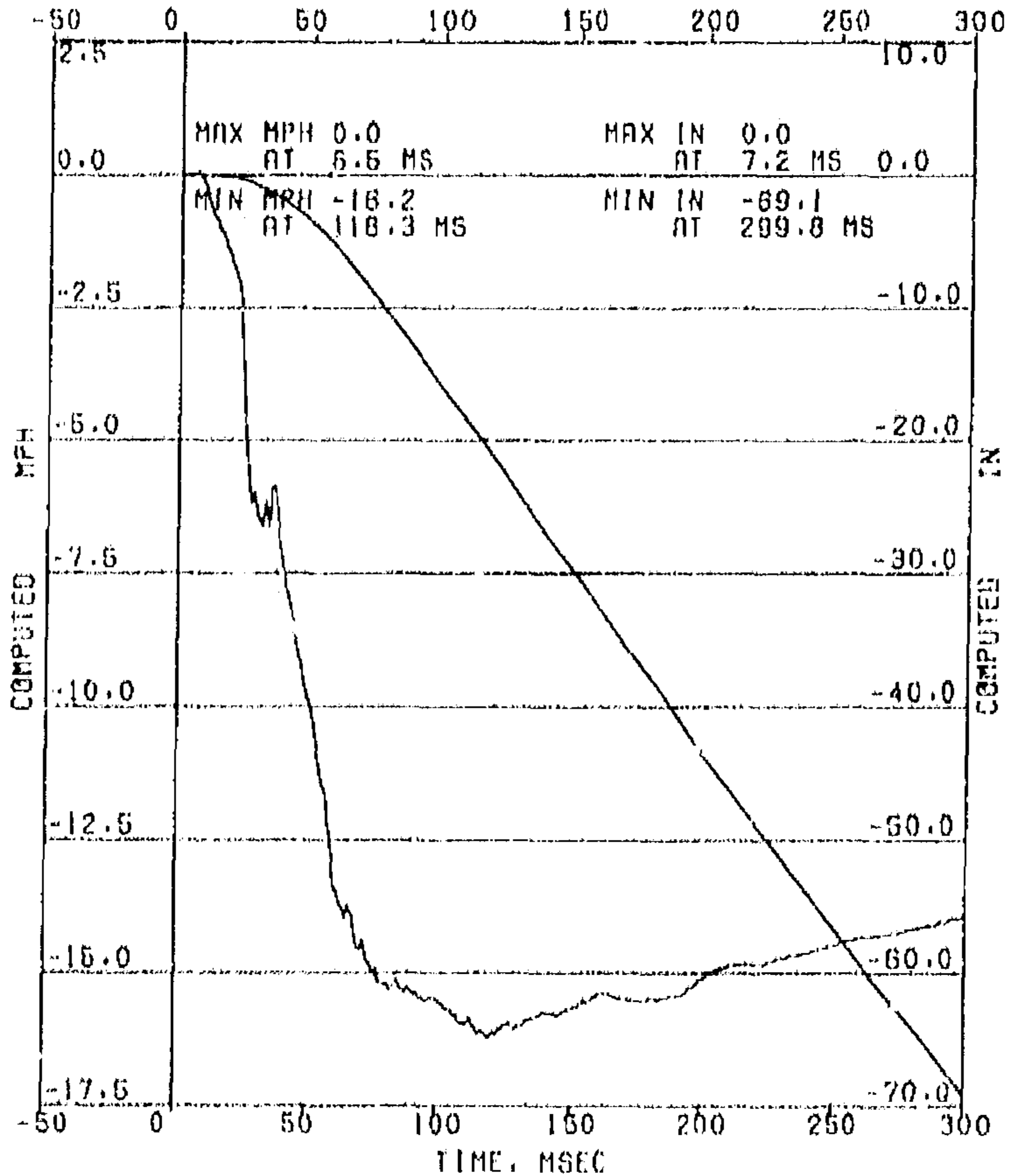
VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 HY66 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 031 CT RR VERT SURF RAD 5UX J25864

PAGE 061  
OF 102

FILTER TYPE: 00D06-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

DATA SET 12/13/99BC  
ERRATA 1



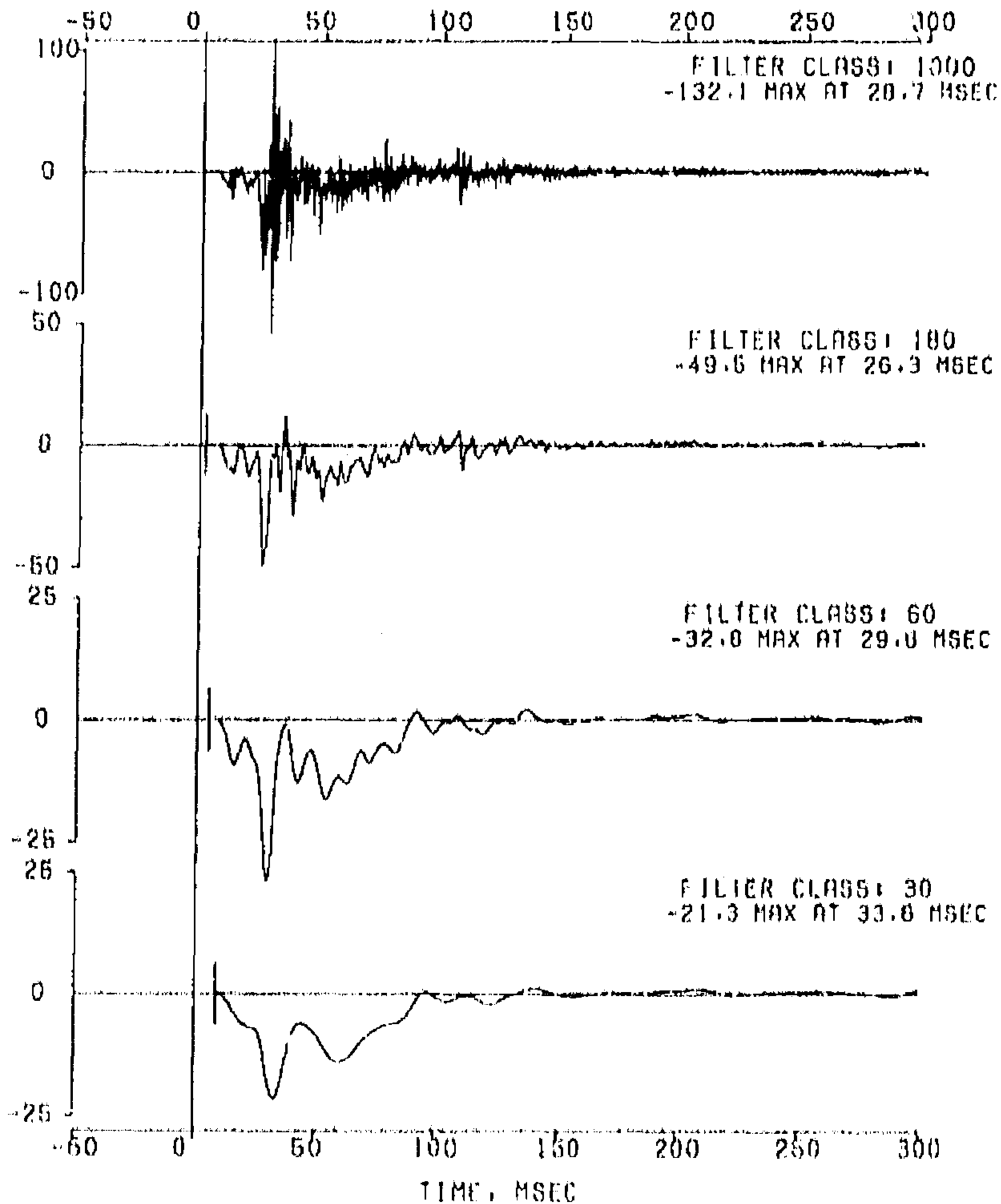
COMPUTED MPH  
COMPUTED IN



VC08023 30 MPH REAR MOVING BARRIER, KJJ 74 ITCM KJ4276R  
2002 MY88 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 032 RT RR VERT SURF RAD SIX J17610  
FILTER TYPE: OBDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1950)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 062  
OF 102

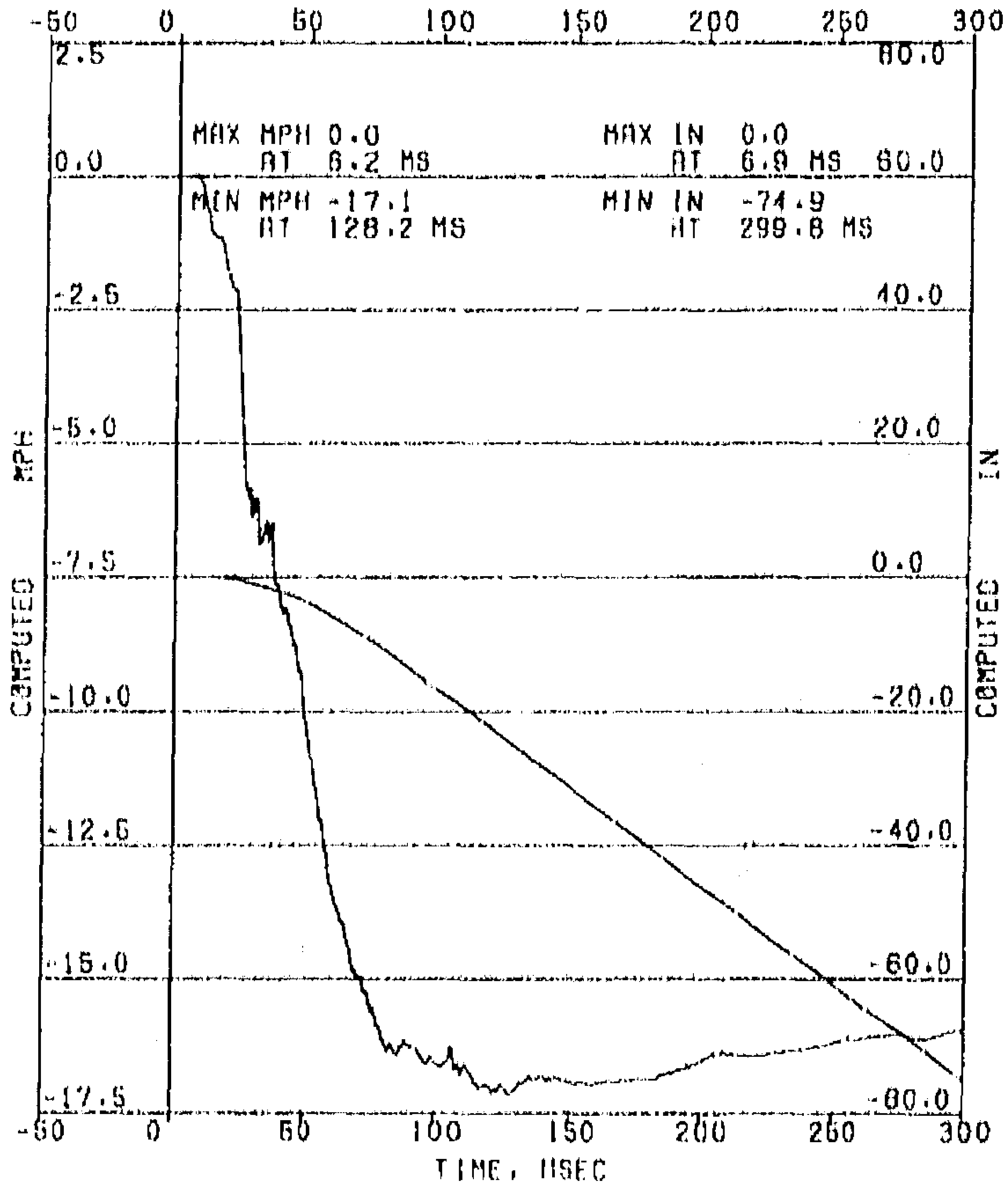
DATA SET 12/13/9900  
ERRATA 1



FILTER TYPE: 000AS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1050)  
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

DATA SET 12/13/9980  
ERRATA 1

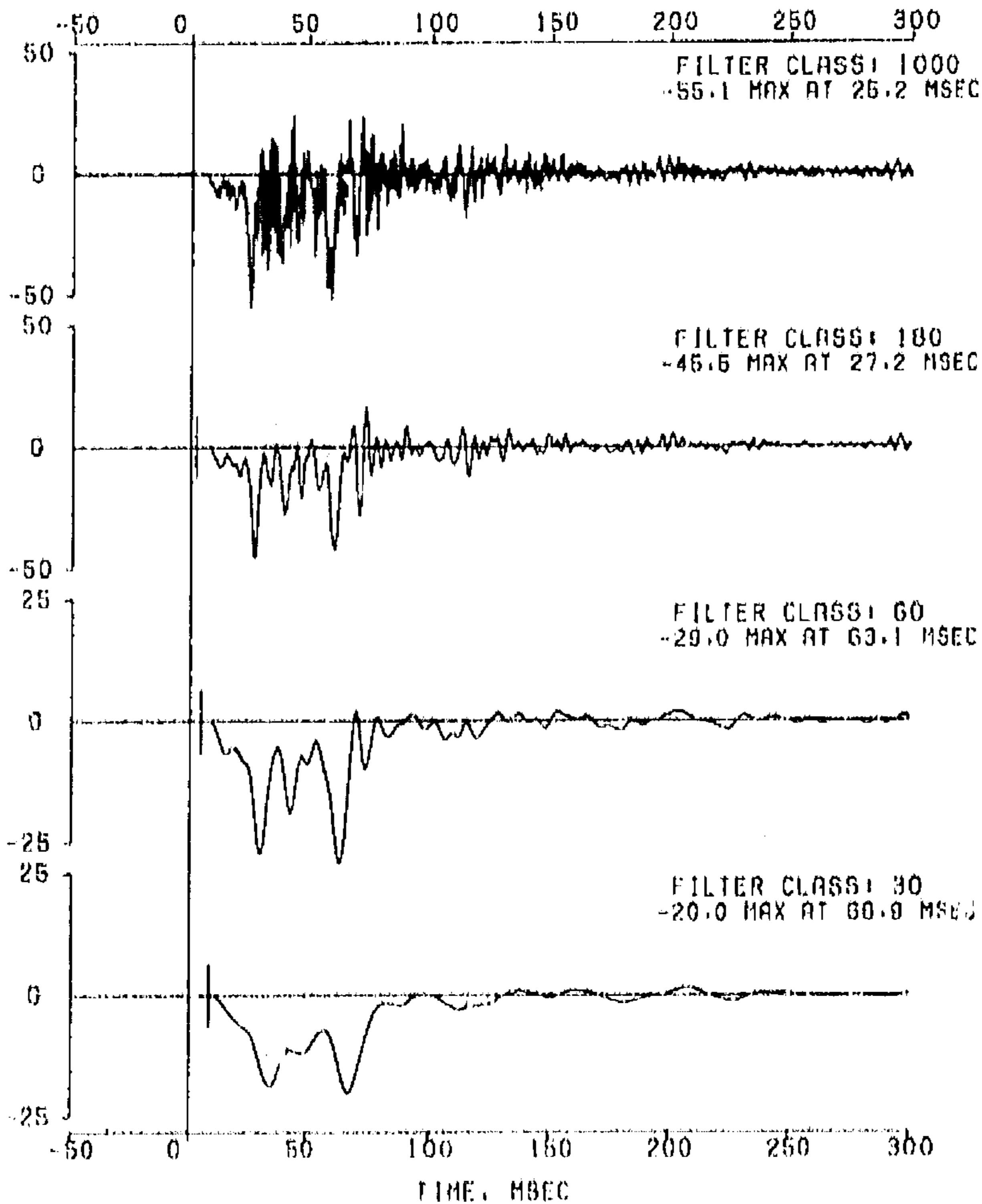


COMPUTED MPH  
COMPUTED IN

VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MY98 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 033 LT RR SURF CURVE RAD 5X J27858  
FILTER TYPE: 08085-III RESPONSE CORRECTION, CLASS 1000 FILTER(1680)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 004  
OF 102

DATA SET 12/13/99BH  
ERRATA 1

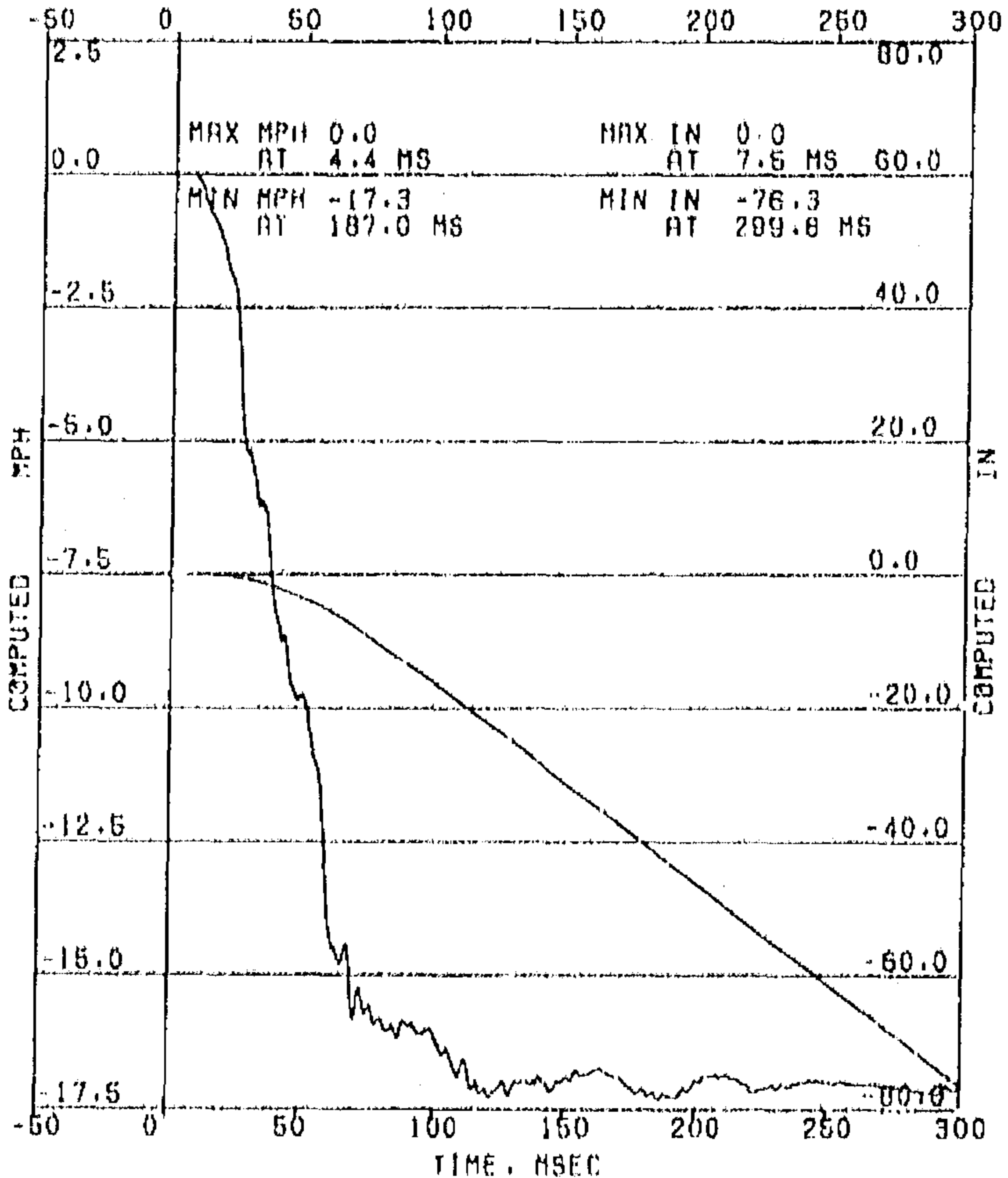




FILTER TYPE: 080A8-III RESPONSE CORRECTION, CLASS 1000 FILTER(1660)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 6320  
 DEC 14, 1999

DATA SET 12/13/99BH  
 ERRATA 1

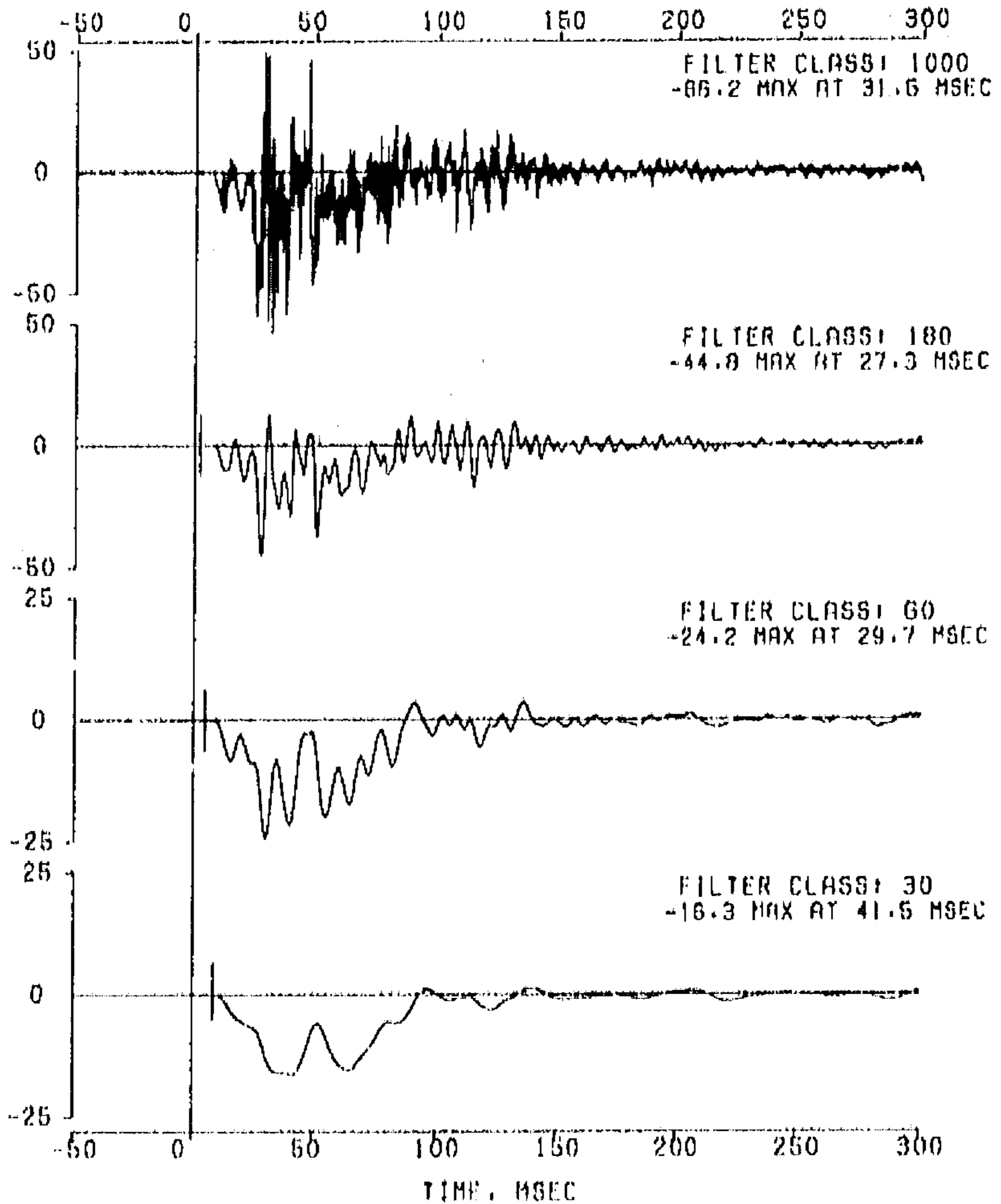


COMPUTED MPH  
 COMPUTED IN

VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MY98 01 REAR IMPACT DEVELOPMENT.  
CHANNEL 034 RT RR SURF CURVE RAD SX J17458  
FILTER TYPE: 980AS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 086  
OF 102

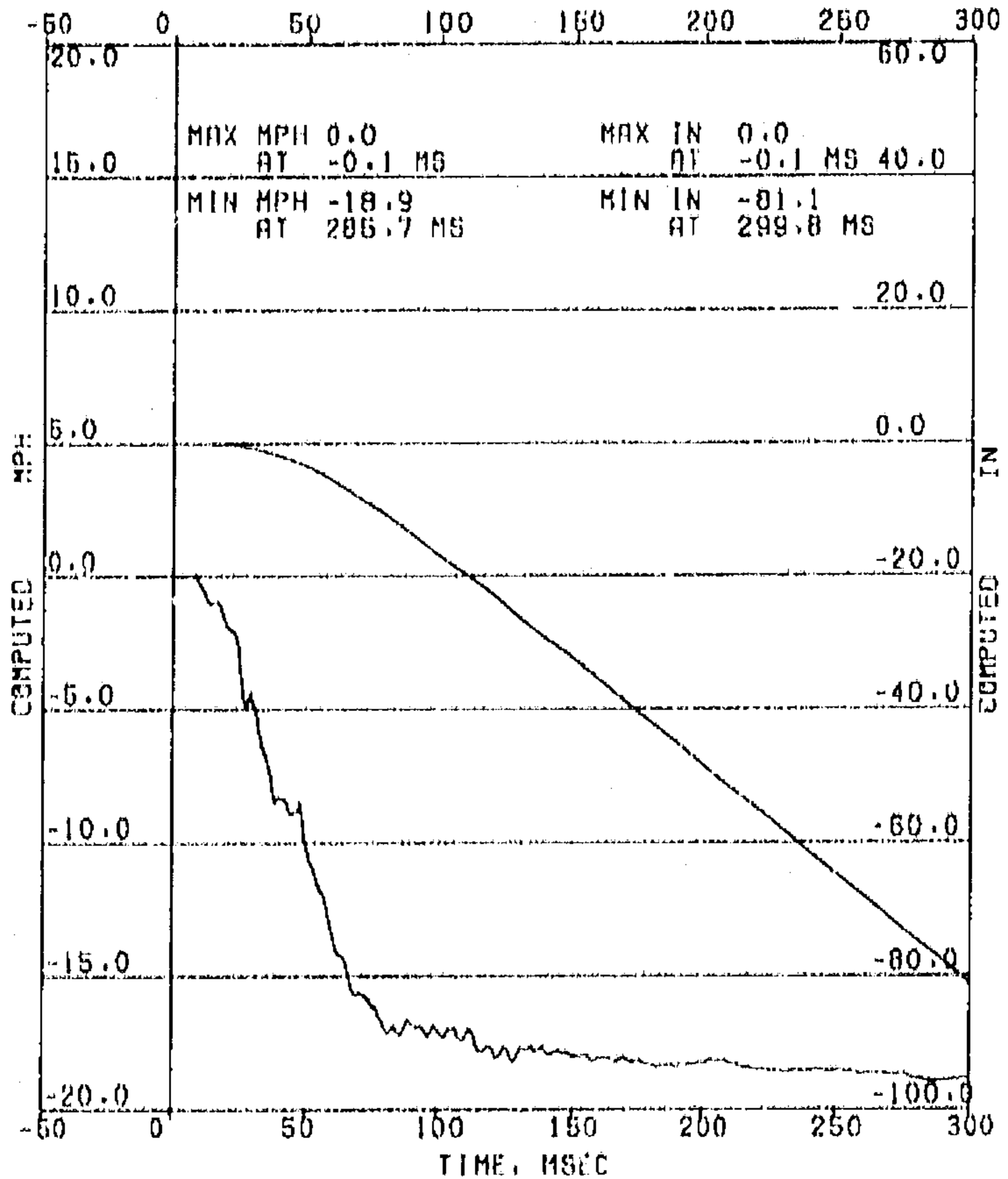
DATA SET 12/13/98BH  
ERRATA 1



FILTER TYPE: OBDAS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1550)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

DATA SET 12/13/99BH  
 ERRATA 1



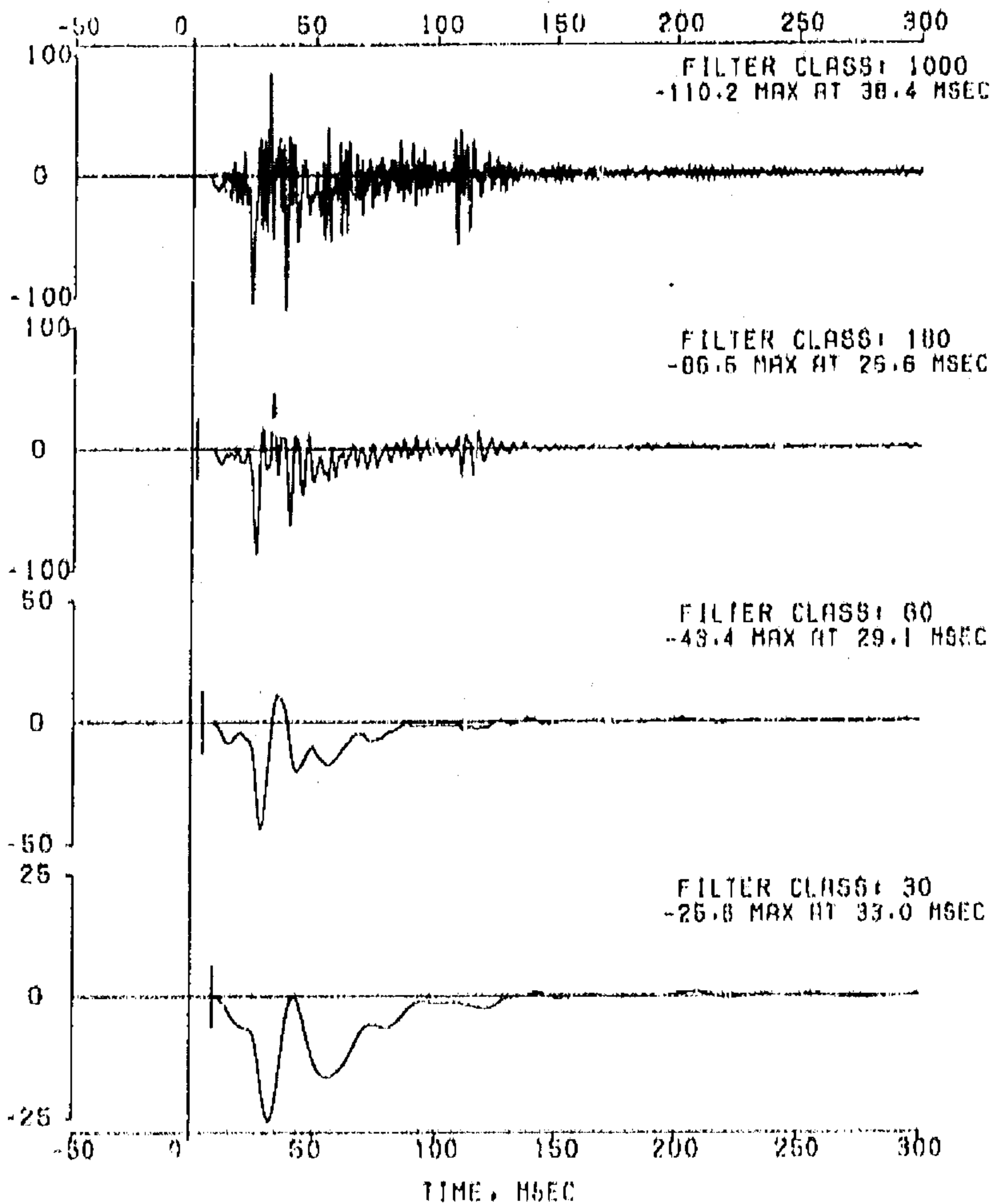
COMPUTED MPH  
 COMPUTED IN



VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MY90 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 035 LT FT XMR SENSOR LOC X J19810  
FILTER TYPE: BB088-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 060  
OF 102

DATA SET 12/13/99BH  
ERRATA 1



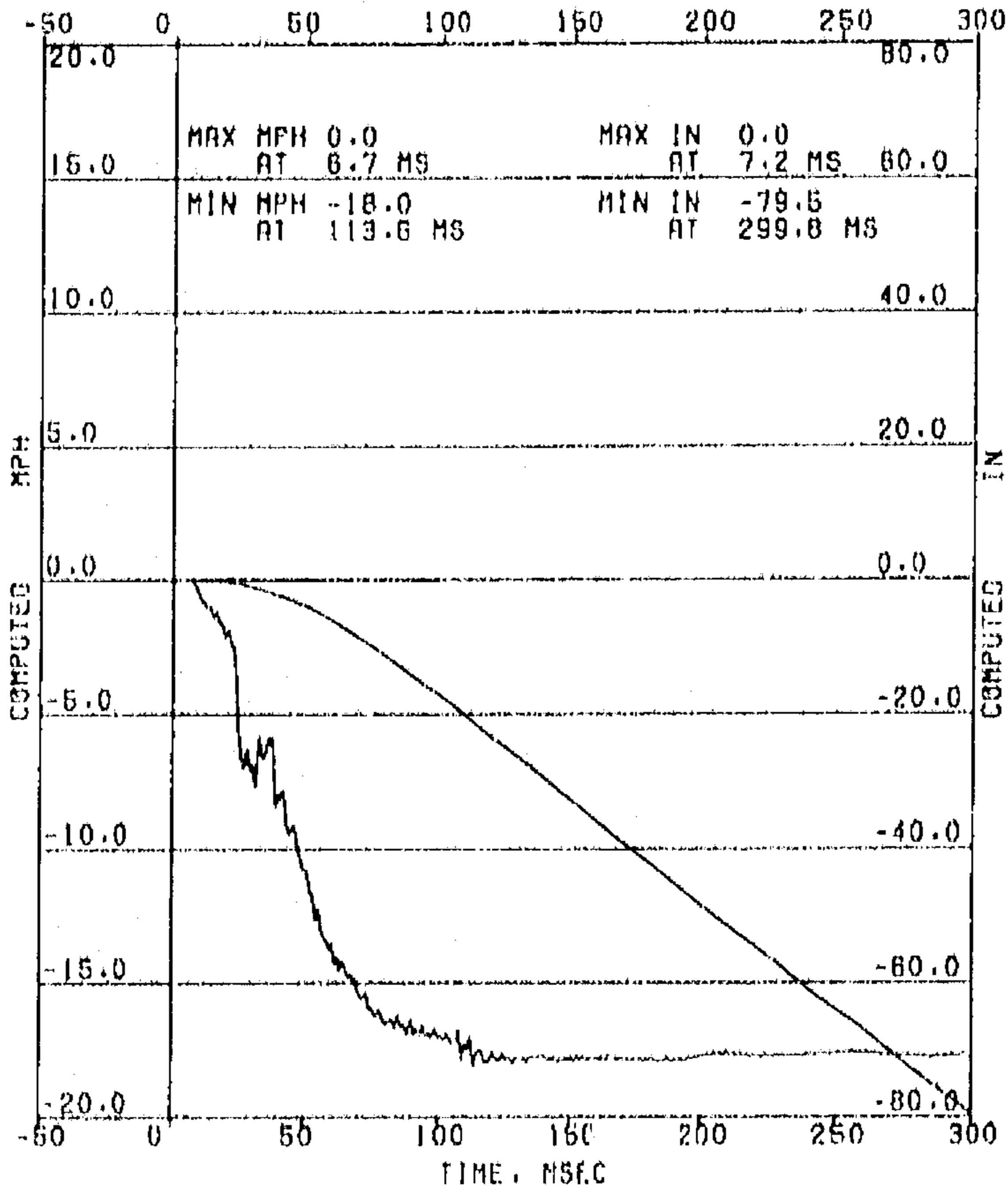
YCO0023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4278R  
 2002 MY88 301 REAR IMPACT DEVELOPMENT  
 CHANNEL 035 LT FT X/48R SENSOR LOC X J19810

PAGE 089  
 OF 102

FILTER TYPE: 000AB-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

DATA SET 12/13/998H  
 ERRATA 1

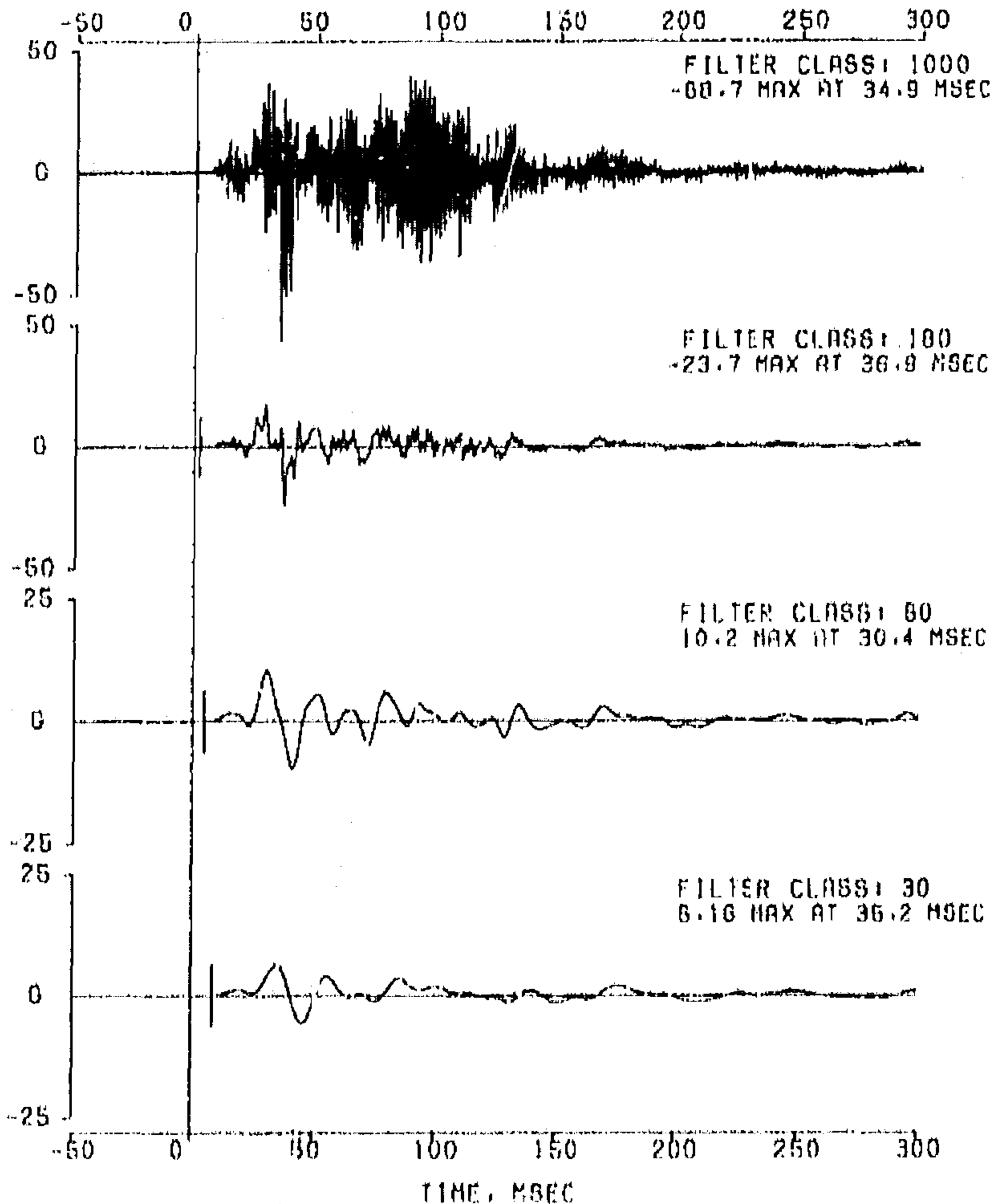


COMPUTED MPH  
 COMPUTED IN

VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MY88 301 REAR IMPACT DEVELOPMENT,  
CHANNEL 036 LT FT XMR SENSOR LOC Y J149B1  
FILTER TYPE: 080AS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1660)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 070  
OF 102

DATA SET 12/13/99BH  
ERRATA 1

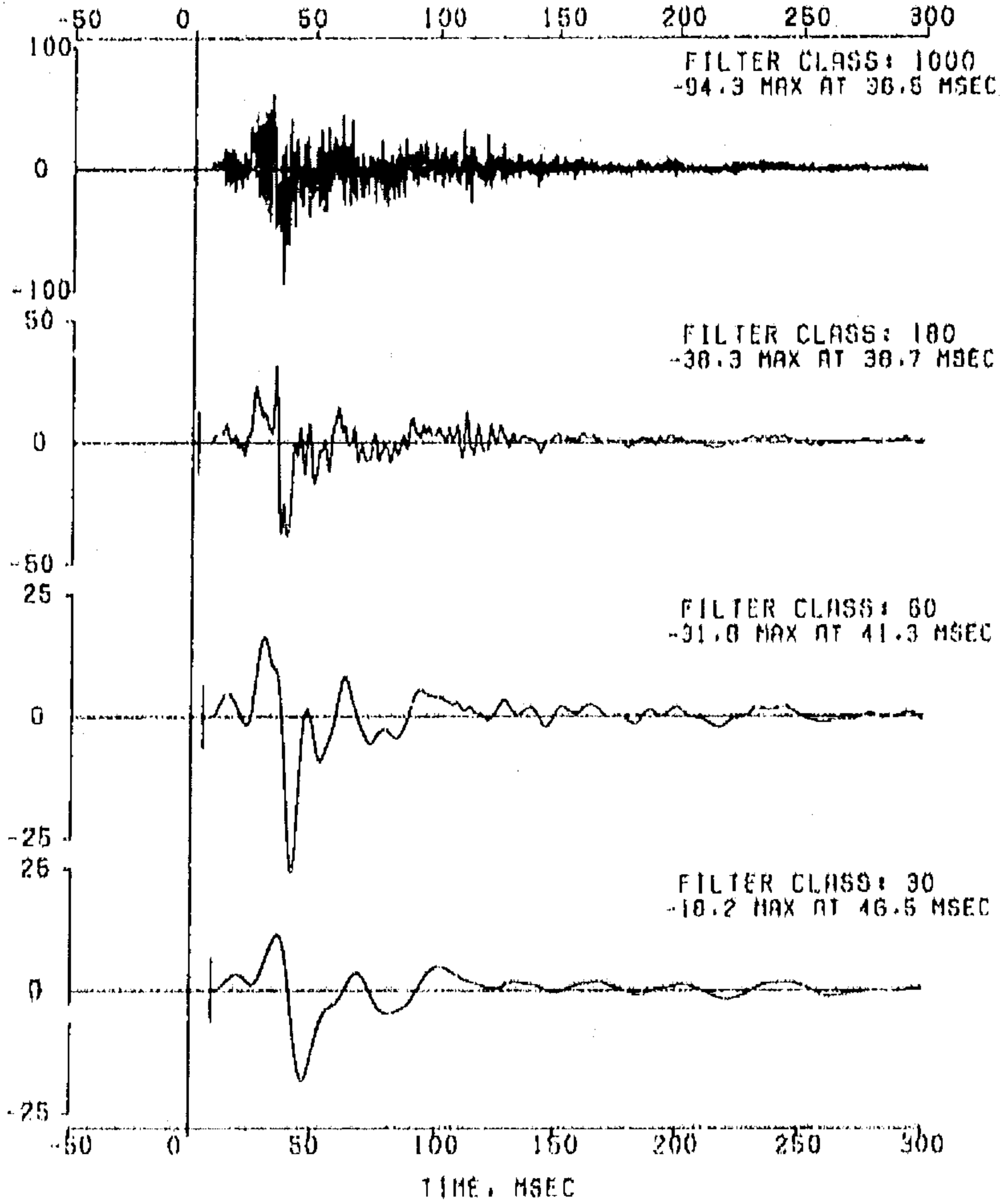




VC09023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MY85 301 REAR IMPACT DEVELOPMENT,  
CHANNEL 037 LT FT XMR SENSOR LOC 2 P12628  
FILTER TYPE: QBDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1850)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 071  
OF 102

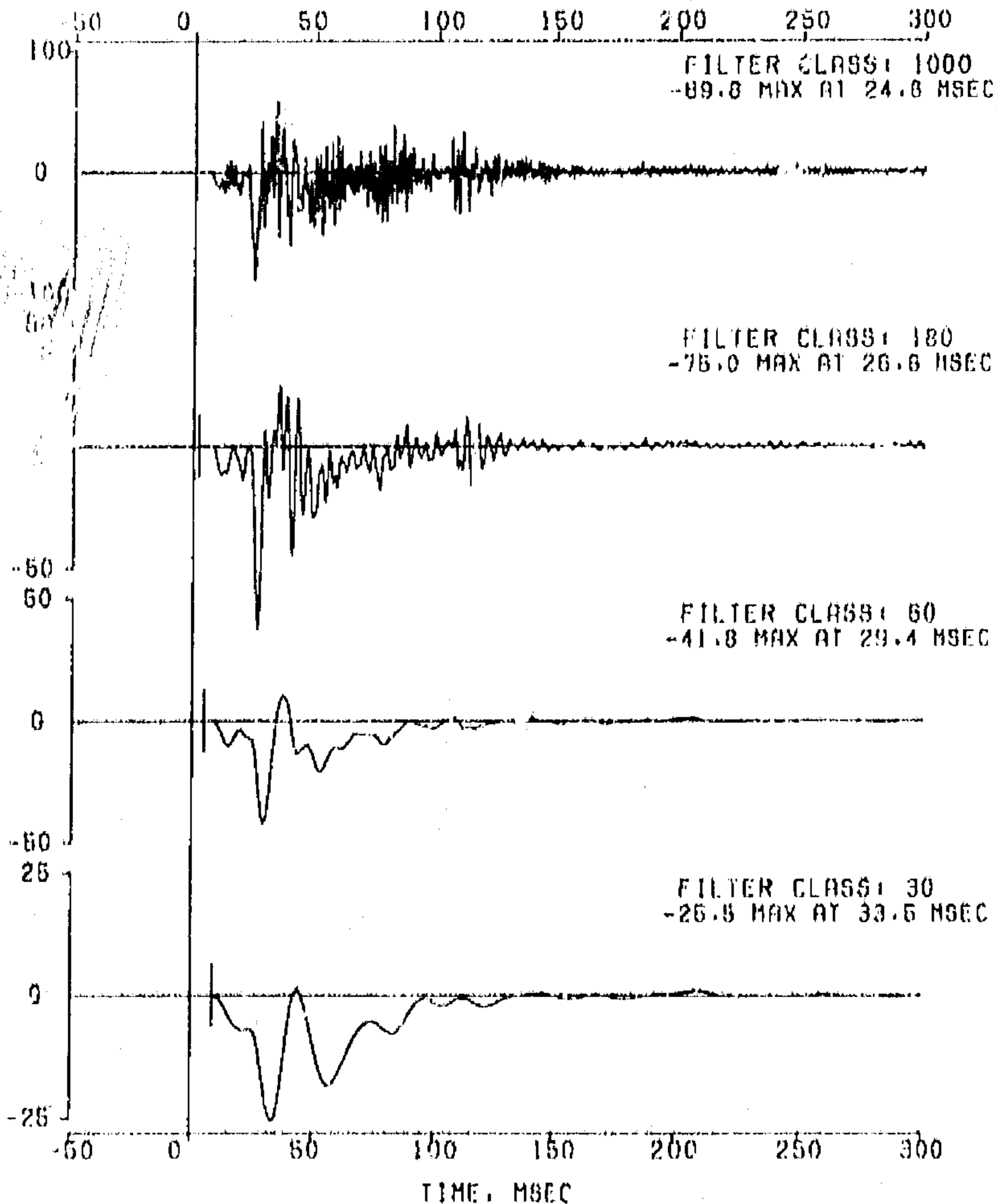
DATA SET 12/13/99BH  
ERRATA 1



VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4270R  
2002 HY55 301 REAR IMPACT DEVELOPMENT,  
CHANNEL 030 RT FT XMR SENSOR LOC X J27398  
FILTER TYPE: 080AS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 072  
OF 102

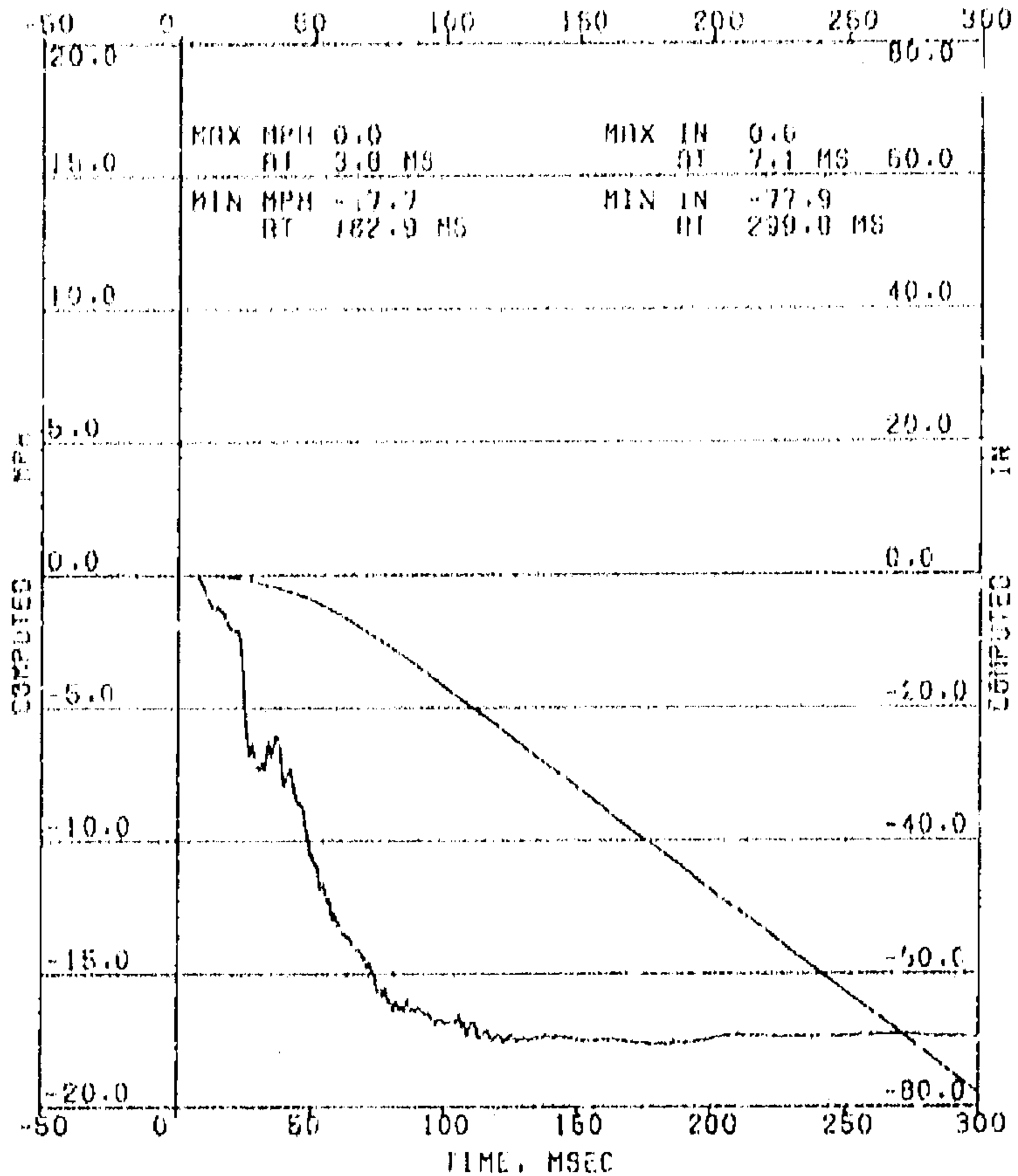
DATA SET 12/13/99AH  
ERRATA 1



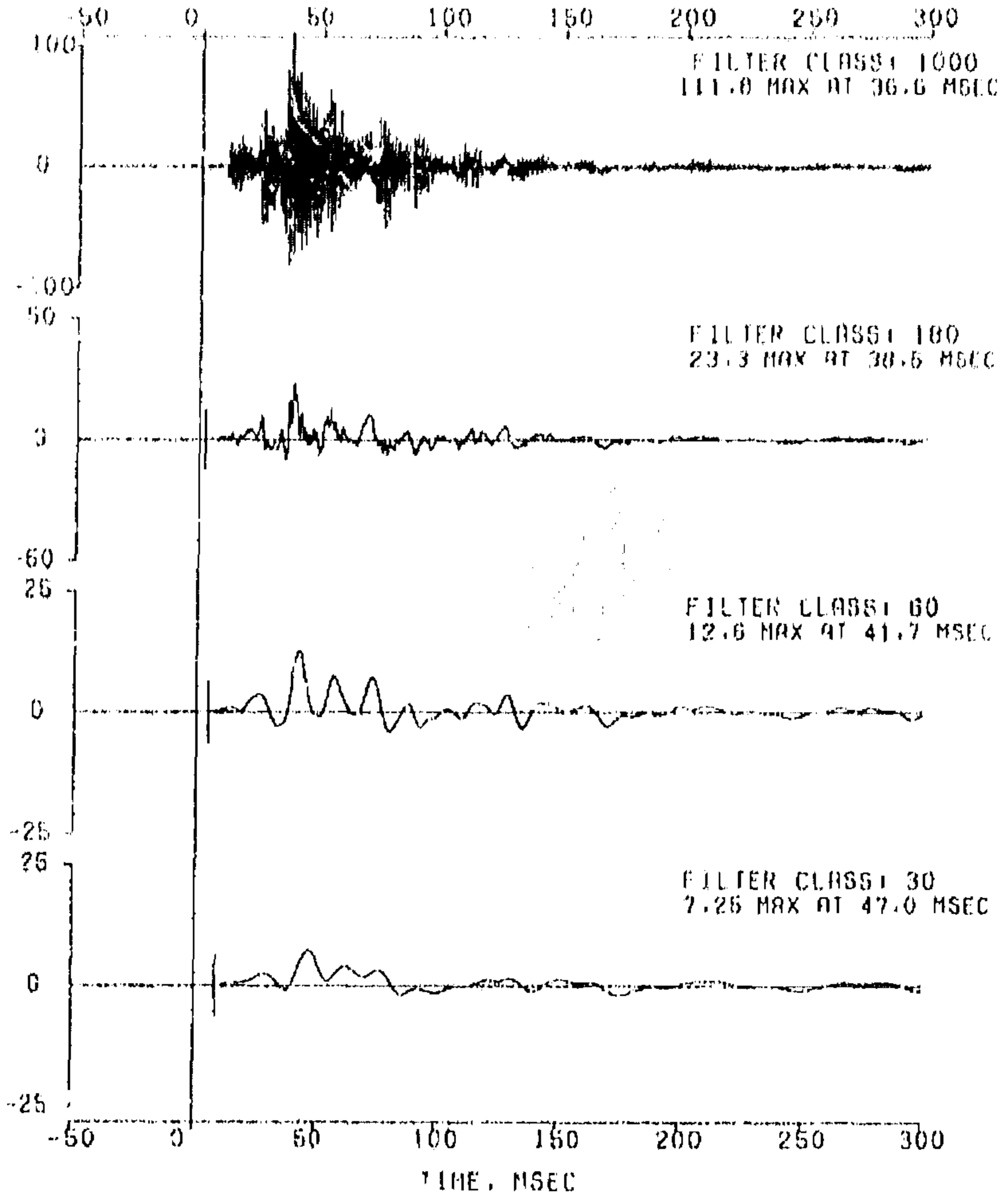
FILTER TYPE: 00095-111 RESPONSE CORRECTION: CLASS 1000 FILTER(1650)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 6920  
 DEC 14, 1996

DATA SET 12/13/99DH  
 ERRATA 1



COMPUTED MPH  
 COMPUTED IN

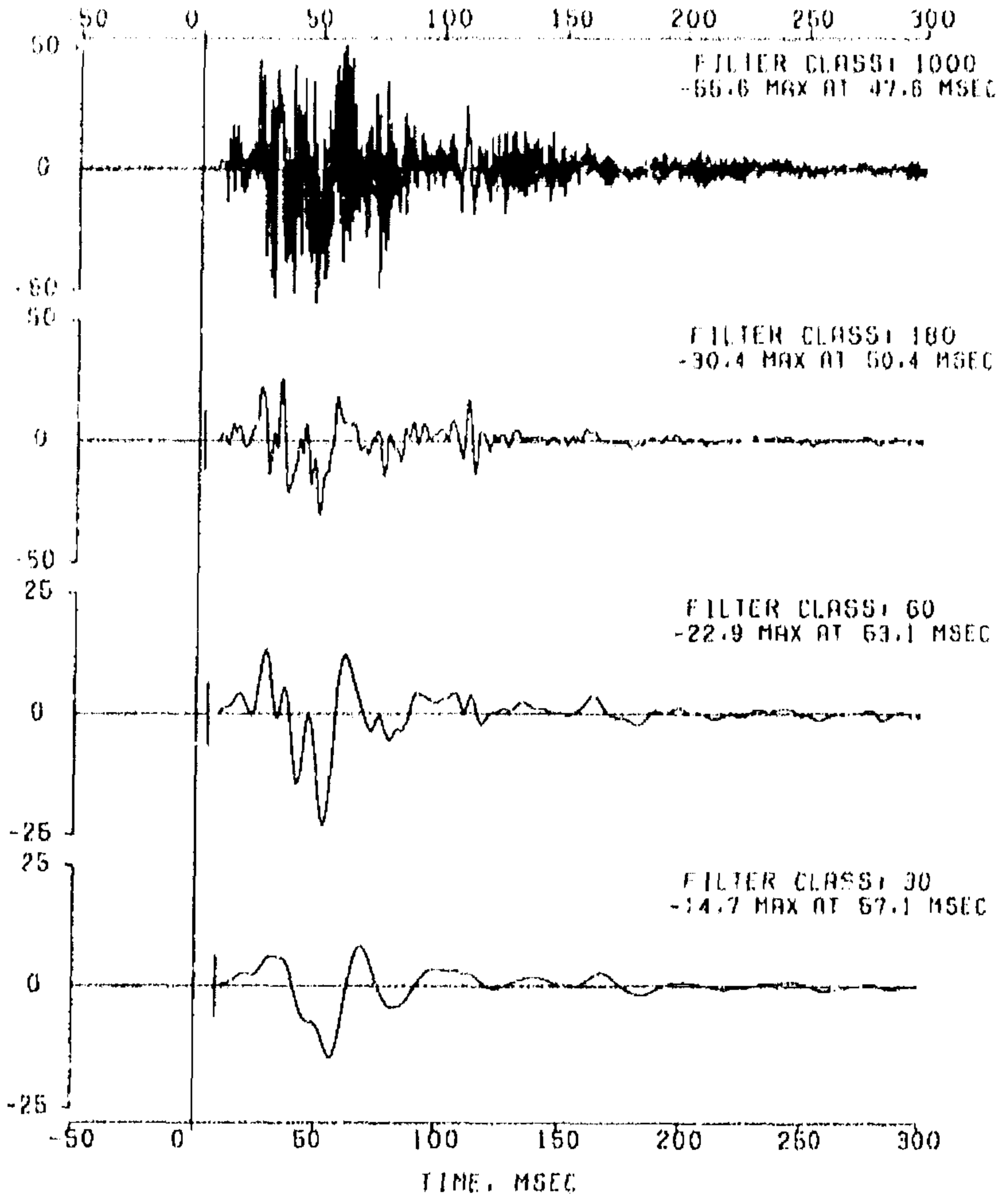




VC0023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4278R  
2002 MY56 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 040 RT FT XMR SENSOR LOC Z J19027  
FILTER TYPE: 000AS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 076  
OF 102

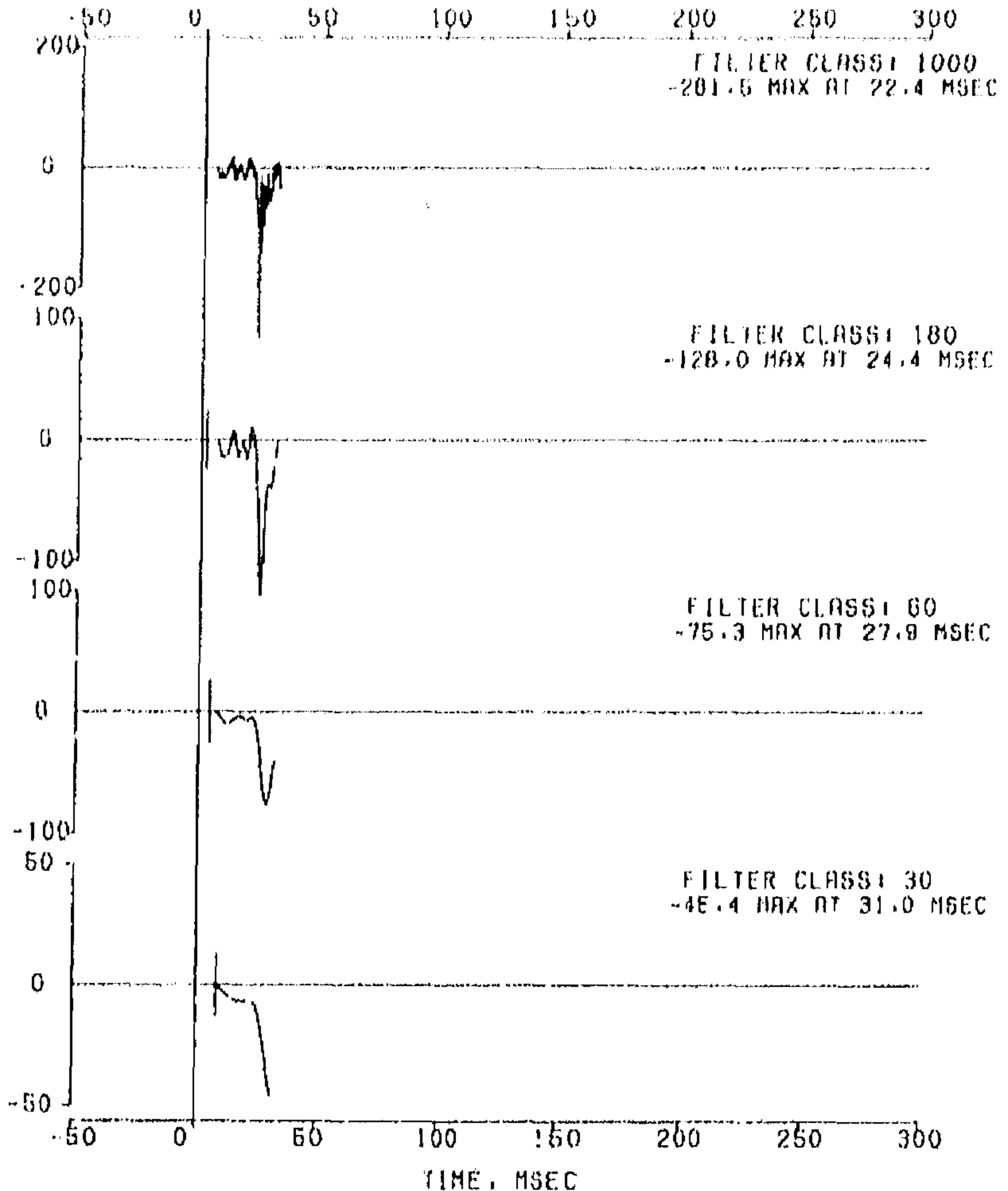
DATA SET 12/13/98BH  
ERRATA 1



VC08023 30 MPH REAR MOVING BARRIER. KJJ-74 ITEM KJ4276R  
2002 MY88 901 REAR IMPACT DEVELOPMENT.  
CHANNEL 041 FUEL TANK RL PASS-THRU J19764  
FILTER TYPE: 000AS-111 RESPONSE CORRECTION. CLASS 1000 FILTER(1680)  
IMPACT ANALYSIS DEPT. 6320  
DEC 14, 1999

PAGE 070  
OF 102

DATA SET 12/13/99BH  
CRKATA 1



CAUTION  
INST. MALFUNCTION AFTER 31.0 MS

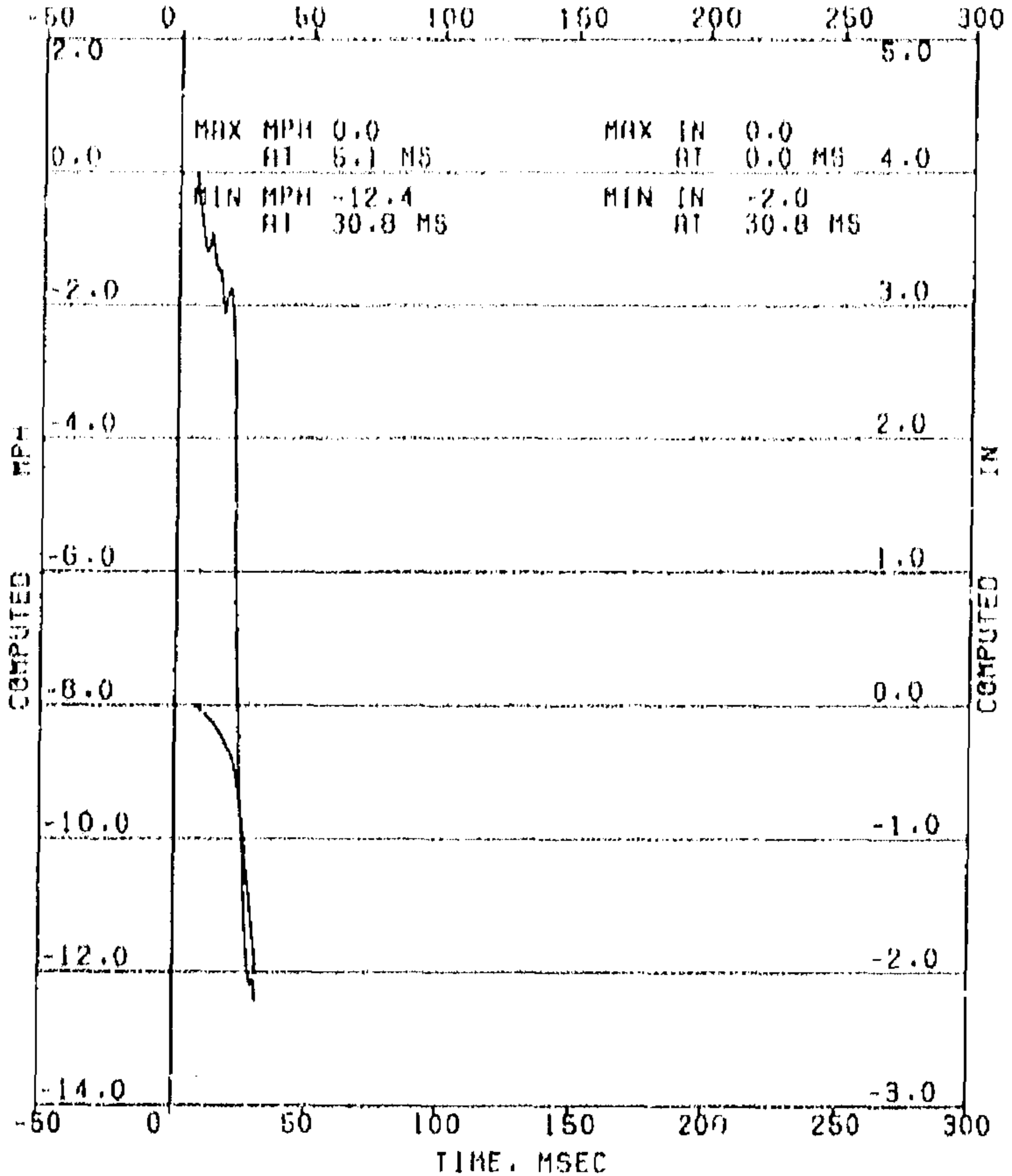
VC00029 30 MPH REAR ROLLING BARRIER, KJ4-74 ITEM KJ4270R  
 2002 MYSS 301 REAR IMPACT DEVELOPMENT,  
 CHANNEL 041 FUEL TANK RE PASS-THROX J19764

PAGE 077  
 OF 102

FILTER TYPE: 000AS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1060)  
 FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
 DEC 14, 1999

DATA SET 12/13/990H  
 ERRATA 1



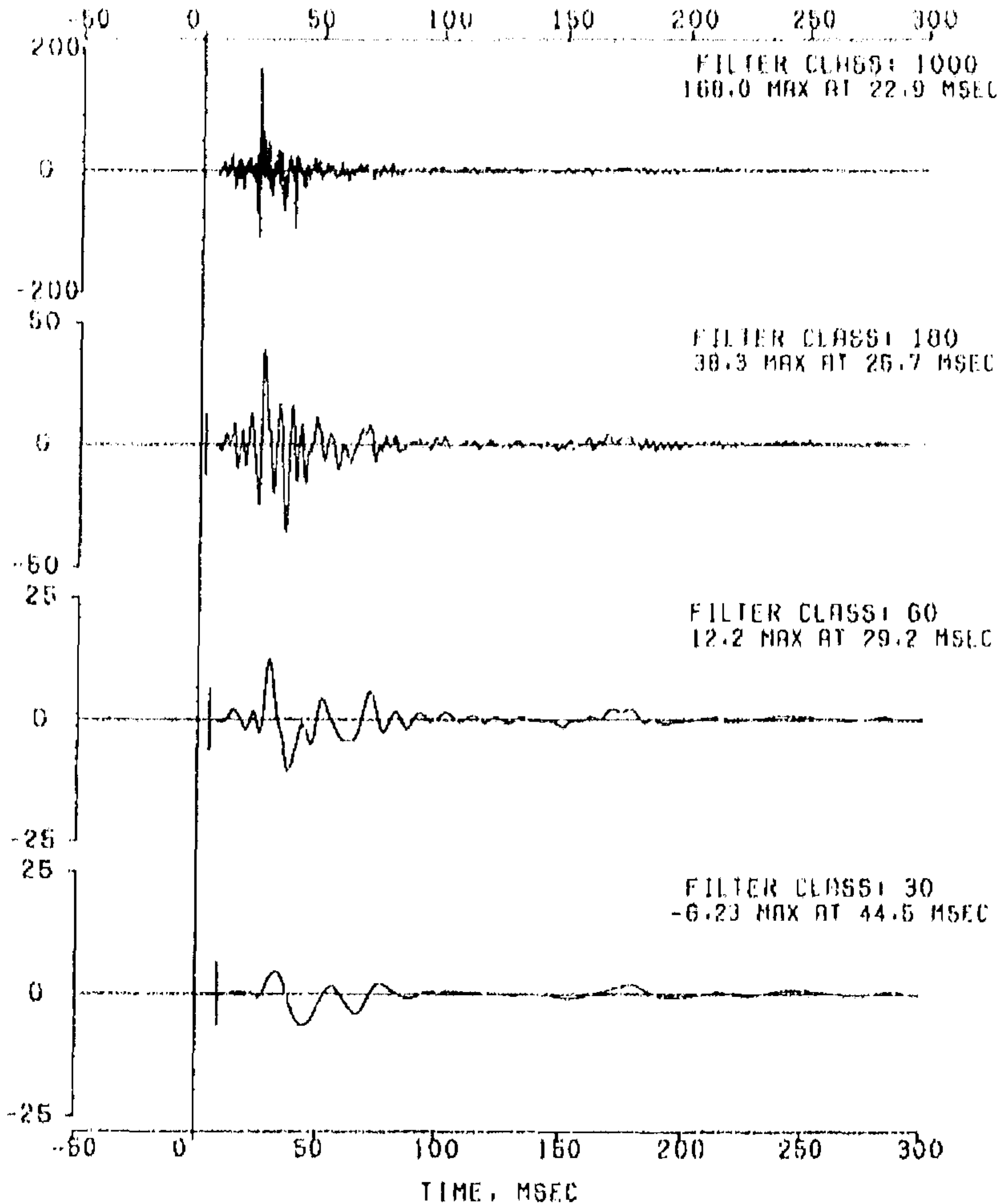
CAUTION  
 INST. MALFUNCTION AFTER 31.0 MS

COMPUTED MPH  
 COMPUTED IN

VC08023 30 MPH REAR MOVING BARRIER, KJ-74 ITEM KJ4276R  
2002 MY55 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 042 FUEL TANK RL PASS-CHRY P13144  
FILTER TYPE: BUDD'S (1) RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5329  
DEC 14, 1999

PAGE 078  
OF 102

DATA SET 12/13/99811  
ERRATA 1

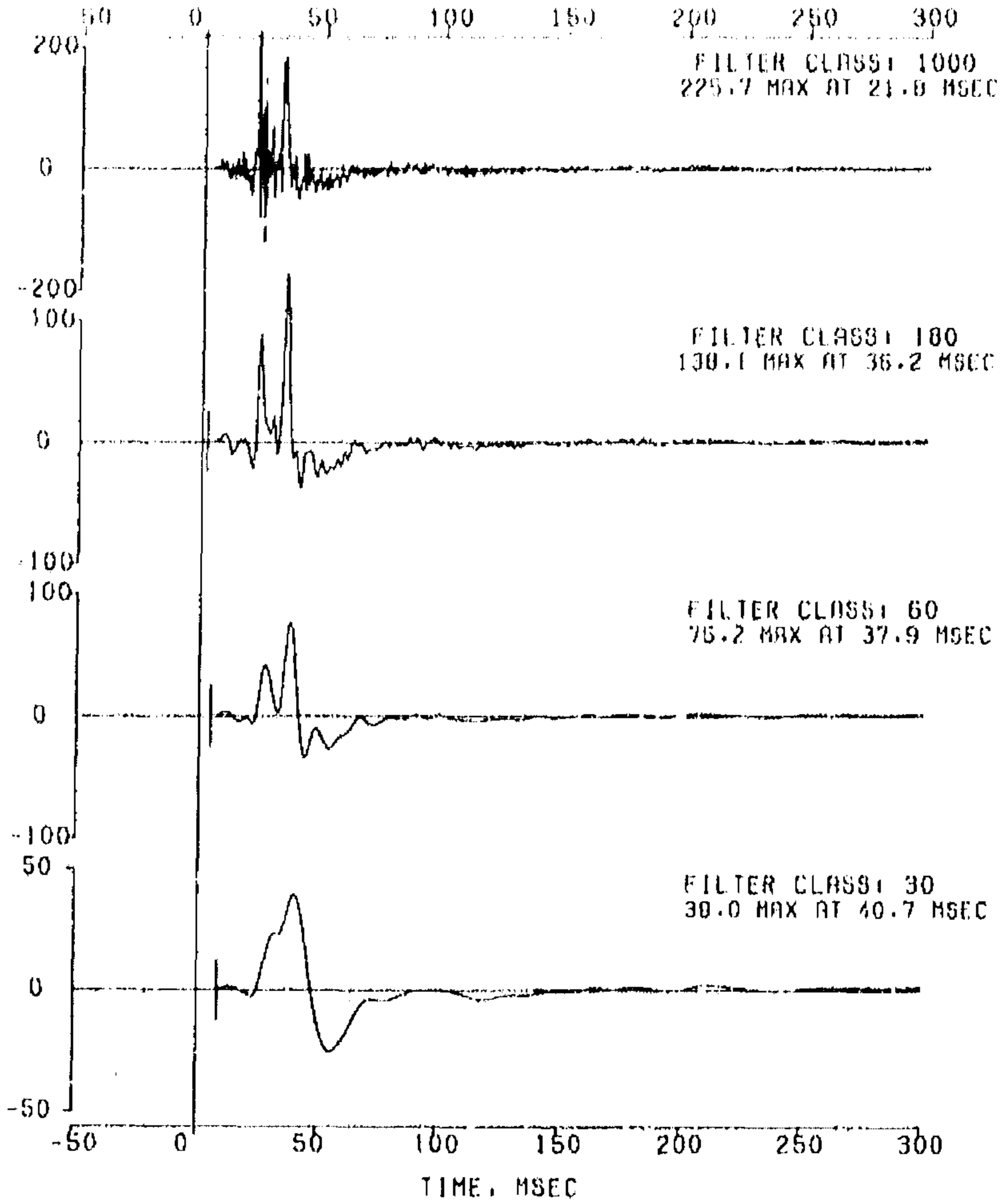




VE08023 30 MPH REAR MOVING BARRIER, KJ-74 ITEM R14270R  
2002 MY95 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 043 FUEL TANK RL PASS-THRUZ P12405  
FILTER TYPE: 080AS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1660)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

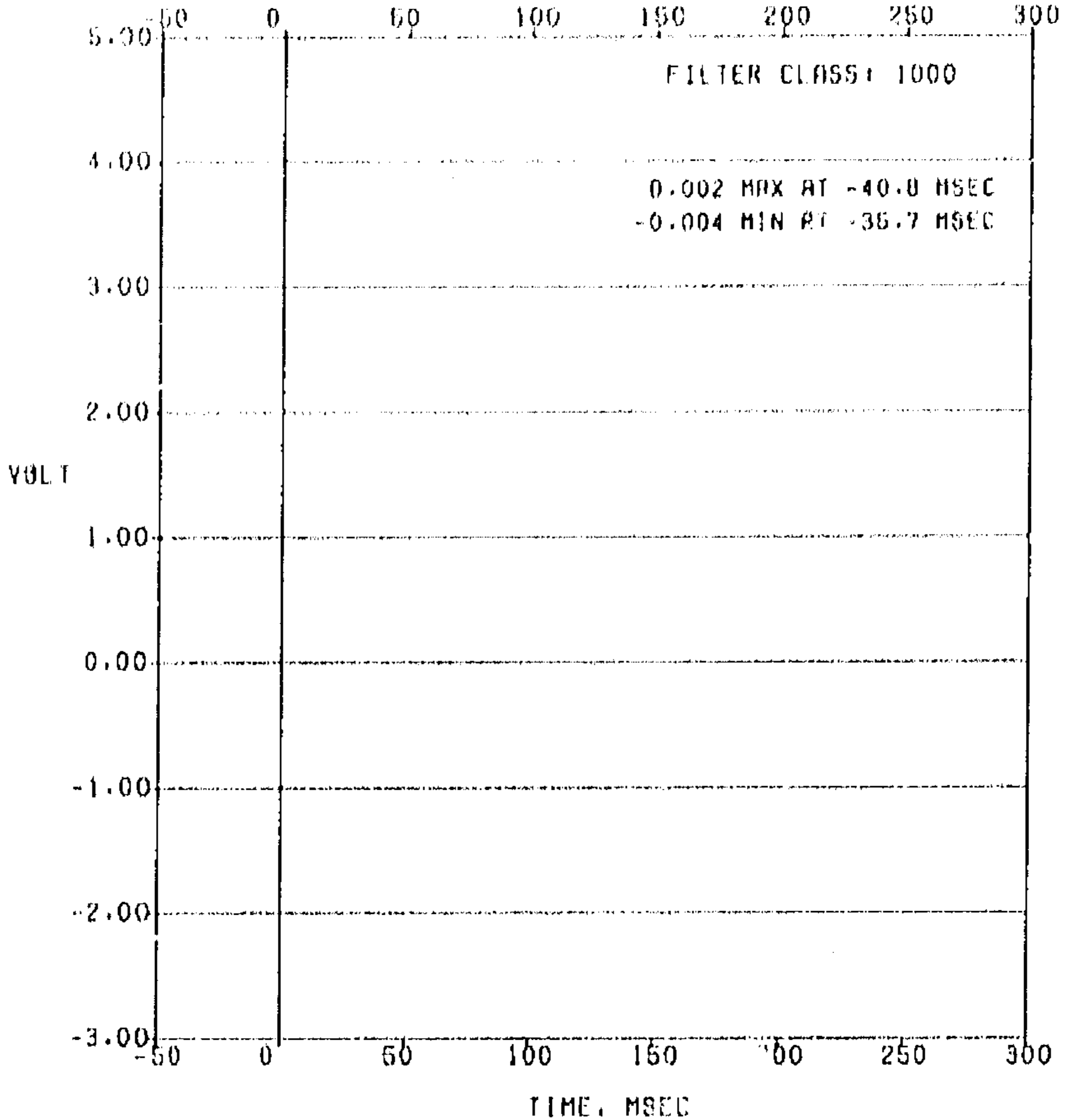
PAGE 079  
OF 102

DATA SET 12/13/99BH  
ERRATA 1



CHANNEL 044 ACM DAB1 SQUIB EVENT

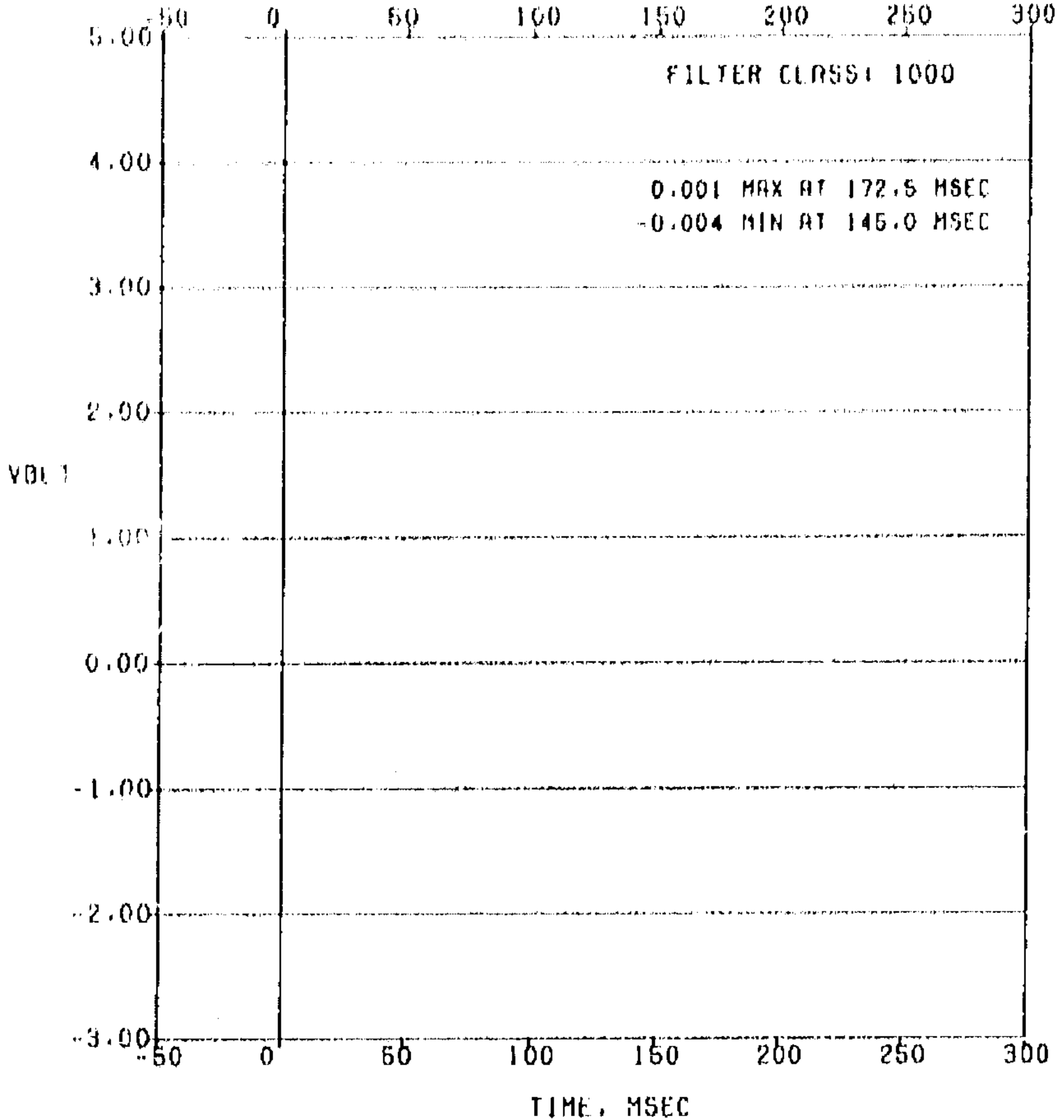
FILTER TYPE: 000AS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320 DATA SET 12/13/990H  
DEC 14, 1999 ERRATA 1



\*\*\*\*\* NOTE \*\*\*\*\*  
\*\*\*\*\* NO EVENT \*\*\*\*\*

CHANNEL 046 RCM DRB2 SOUTH EVENT

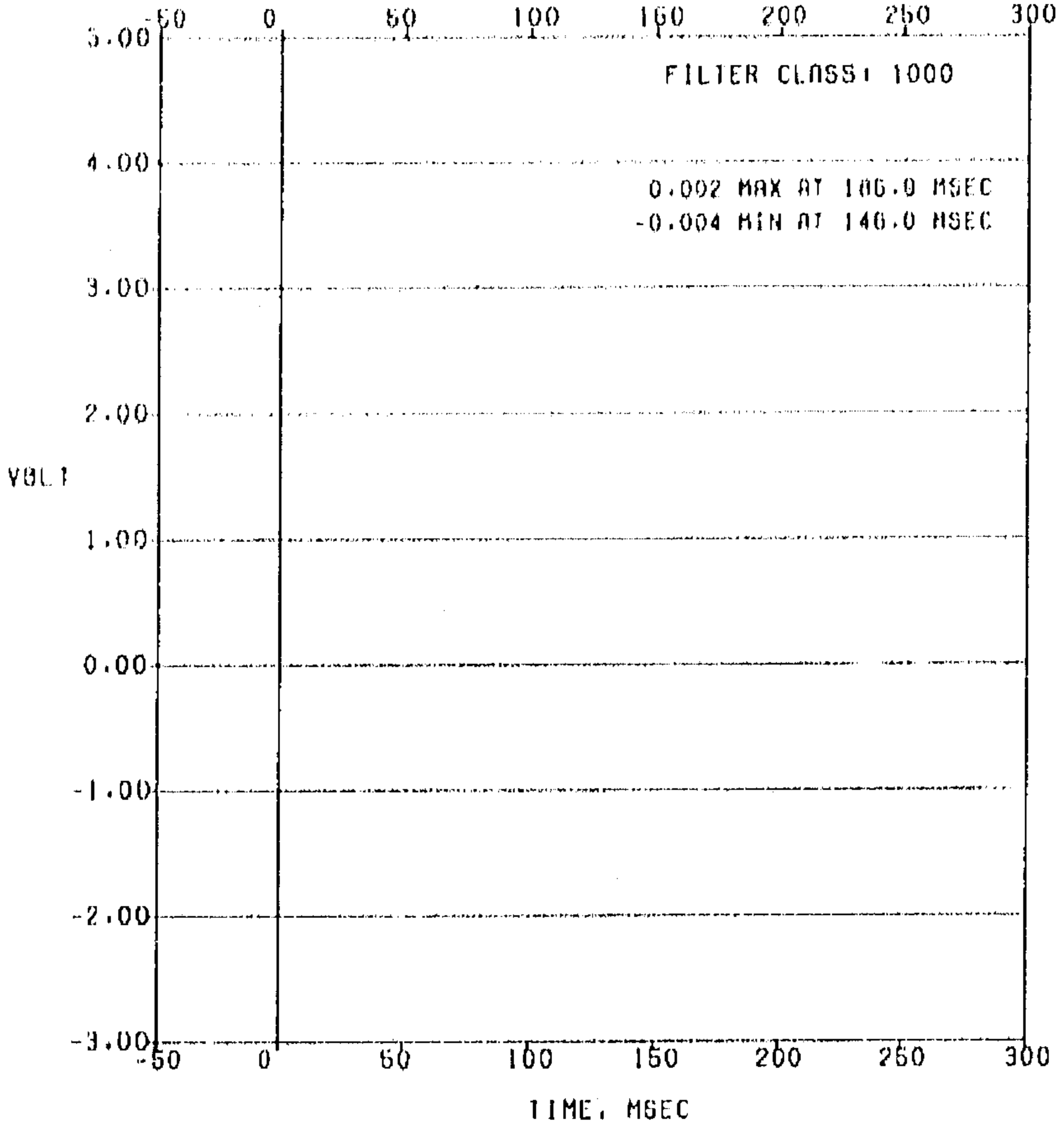
FILTER TYPE: OBDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5329 DATA SET 12/13/9984  
DEC 14, 1999 ERRATA 1



##### K 'E #####  
##### NO EVENT #####

CHANNEL 048 ACM PAB1 SQUID EVENT

FILTER TYPE: 80045-111 RESPONSE CORRECTION, CLASS 1000 FILTER: 16601  
IMPACT ANALYSIS DEPT. 5320 DATA SET 12/13/99BM  
DEC 14, 1999 ERRATA 1

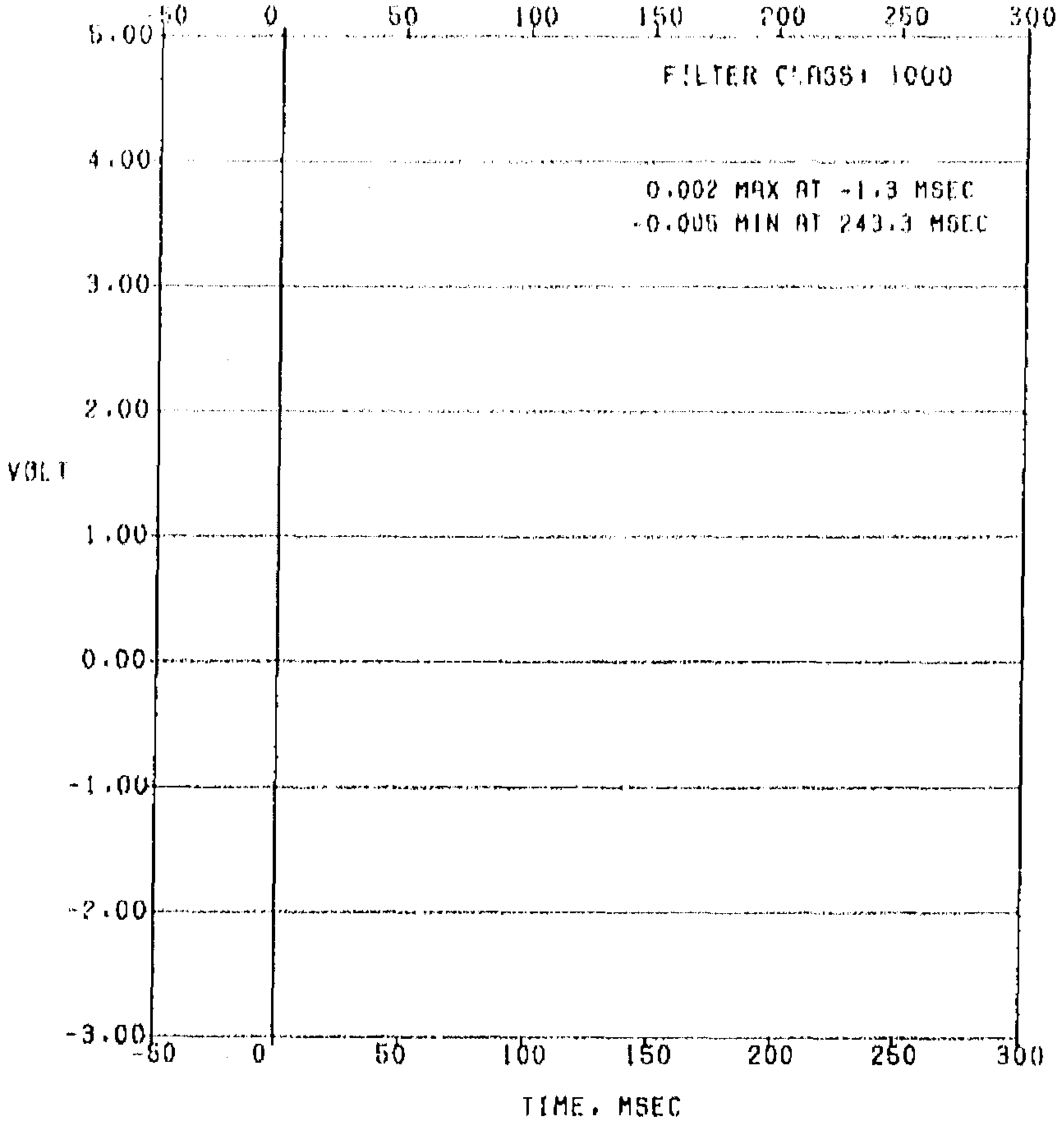


##### NOISE #####  
##### NO EVENT #####



CHANNEL 047 ACM PA02 SQUID EVENT

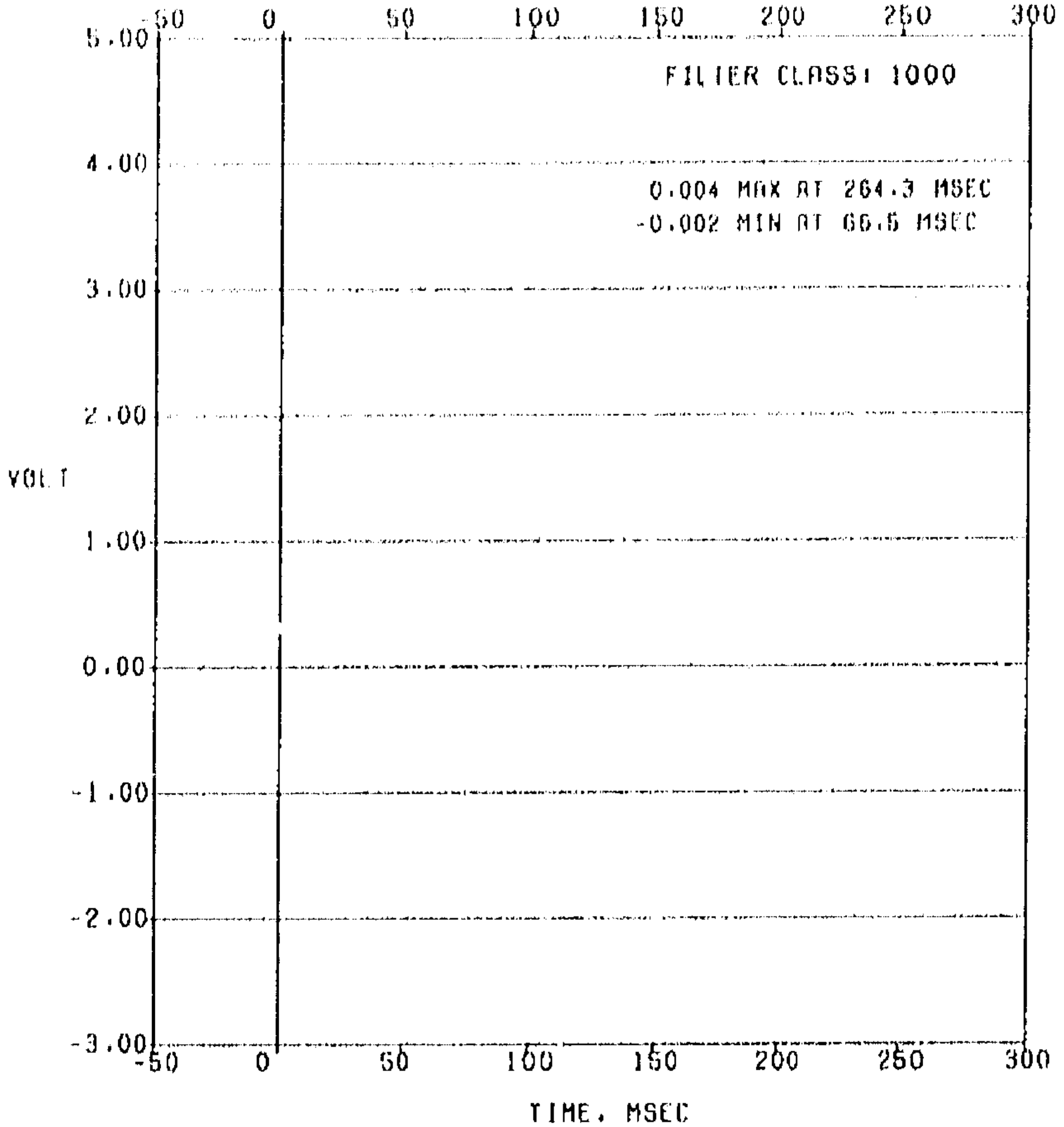
FILTER TYPE: 000AB-III RESPONSE CORRECTION, CLASS 1000 FILTER(1850)  
IMPACT ANALYSIS DEPT. 6320 DATA SET 12/13/99BN  
DEC 14, 1999 ERRATA 1



\*\*\*\*\* NOTE \*\*\*\*\*  
\*\*\*\*\* NO EVENT \*\*\*\*\*

CHANNEL 048 OR PRETEN SQUID

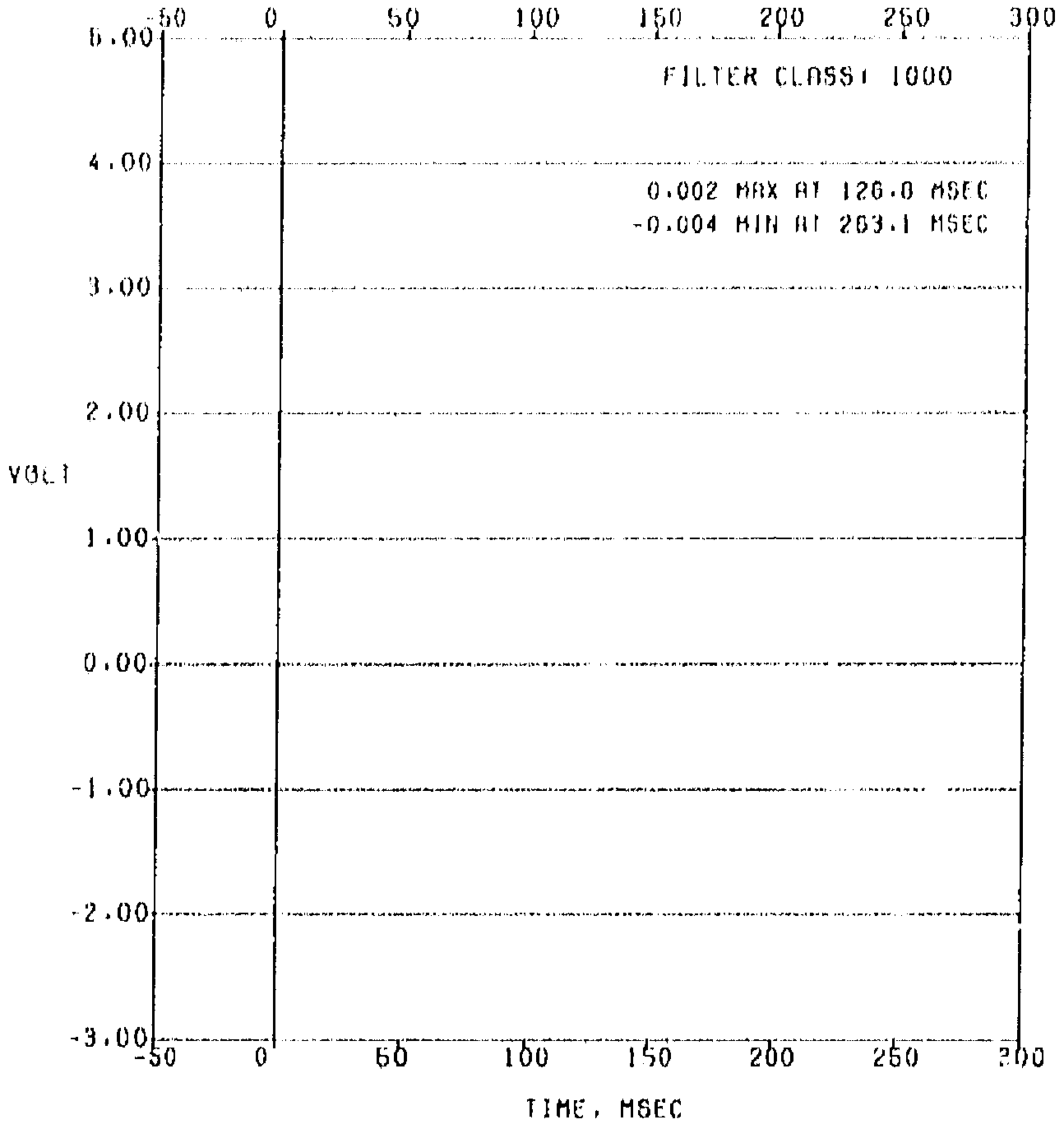
FILTER TYPE: 08005-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5920 DATA SET 12/13/99BH  
DEC 14, 1999 ERRATA 1



NOTE: NO EVENT

CHANNEL 049 P5 PRETEN SQUID

FILTER TYPE: 000S-111 RESPONSE CORRECTION, CLASS 1000 FILTER(18601  
IMPACT ANALYSIS DEPT. 5320 DATA SET 12/13/9901  
DEC 14, 1999 ERRATA 1



NOTE: NO EVENT



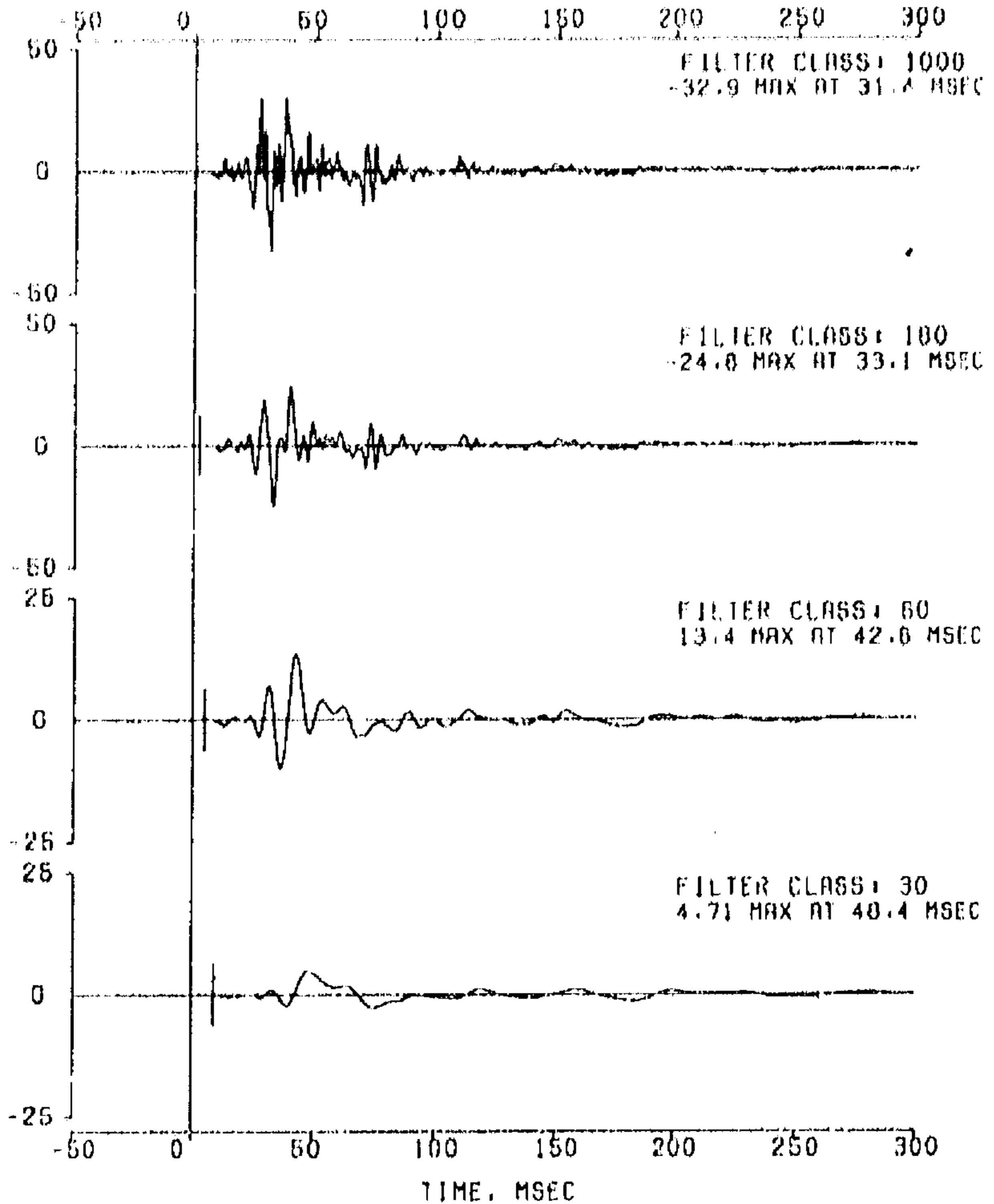




V00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITER KJ427BR  
2002 HYB 301 REAR IMPACT DEVELOPMENT,  
CHANNEL 052 BY SIRCH INT ACCEL 0  
FILTER TYPE: 000AS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1850)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 080  
OF 102

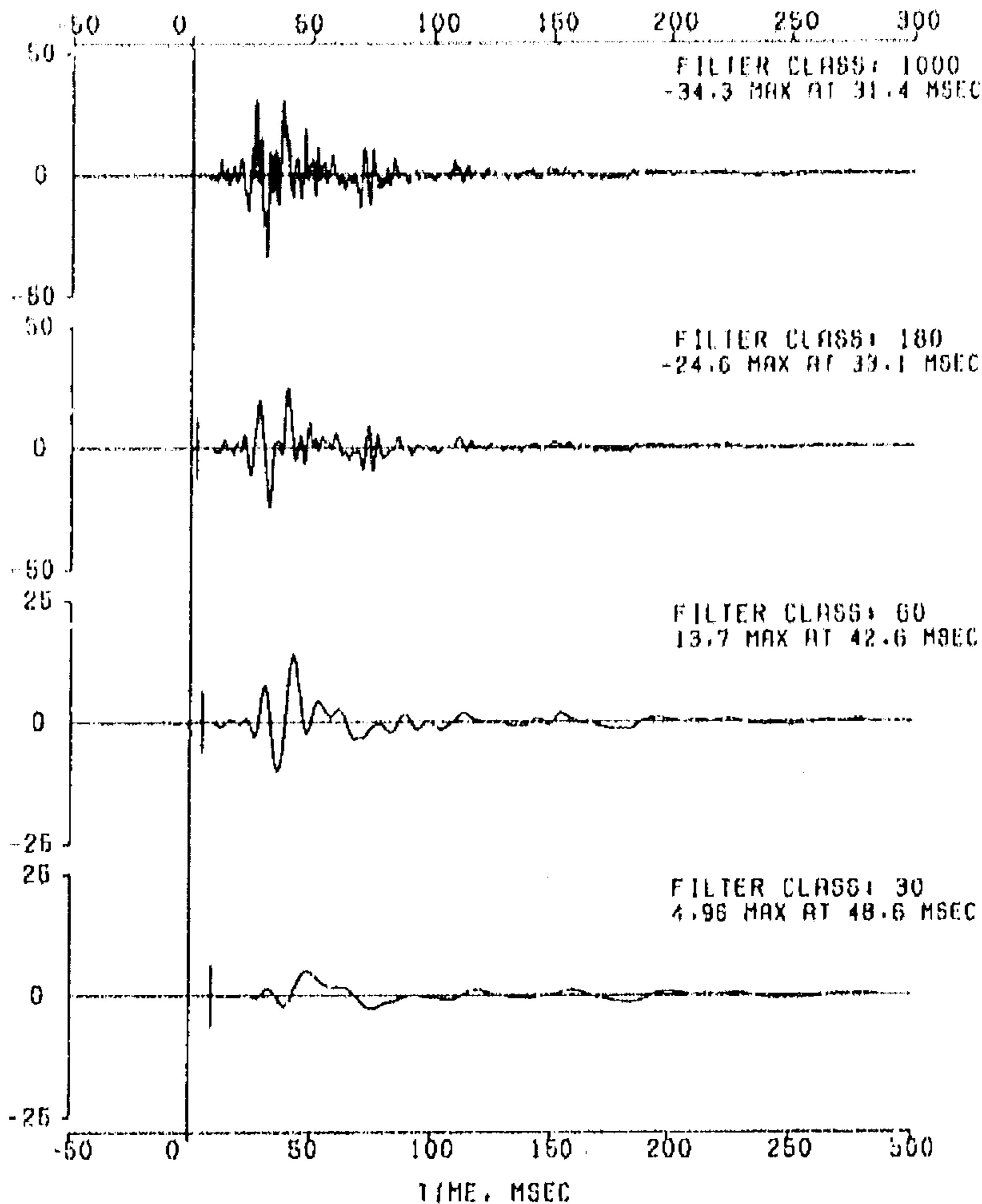
DATA SET 12/13/00B1  
ERRATA 1



VC06023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 HYBR 301 REAR IMPACT DEVELOPMENT,  
CHANNEL 053 RT BIACH INT ACCE: 2 0  
FILTER TYPE: 0B005-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 6320  
DEC 14, 1990

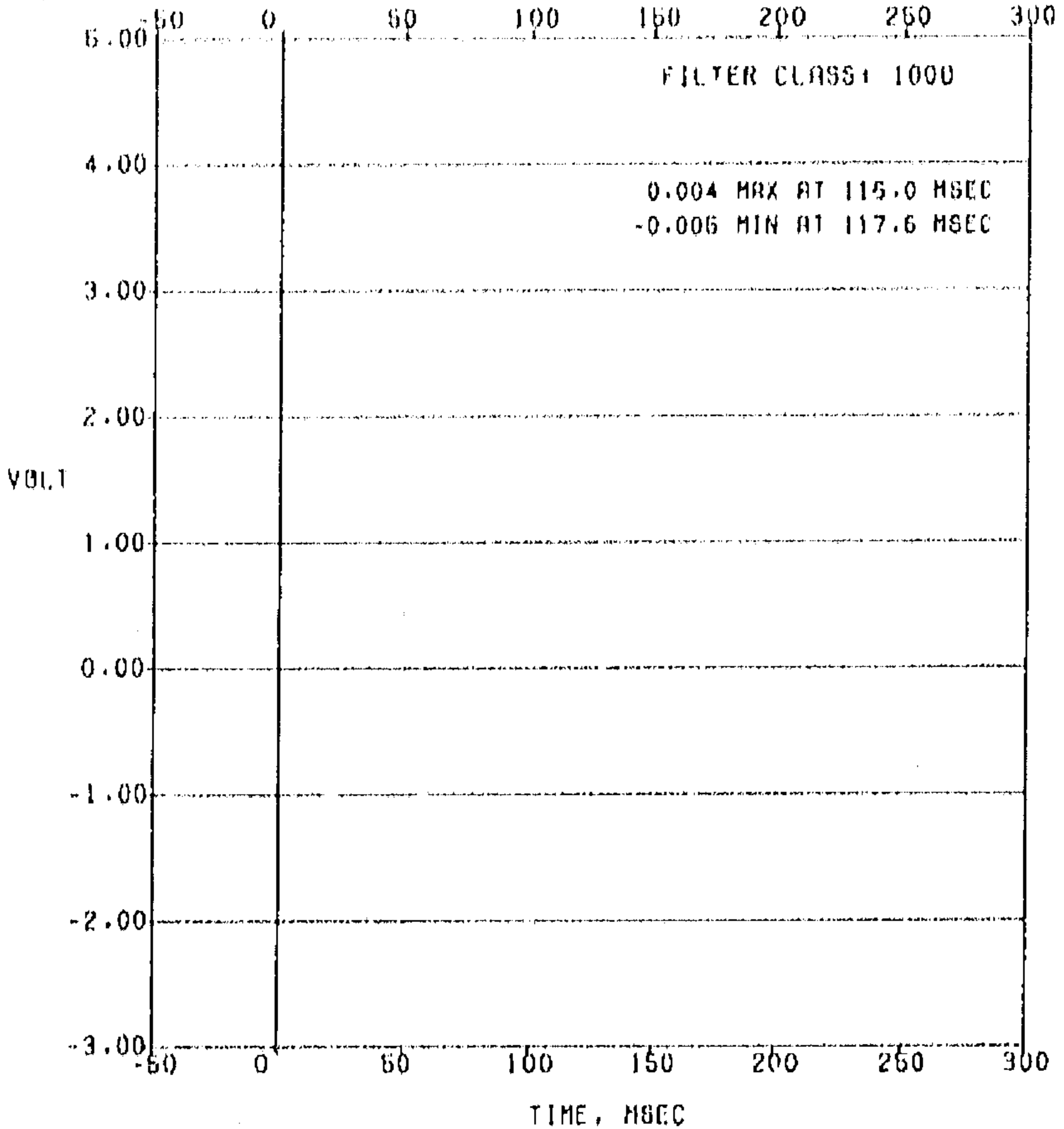
PAGE 000  
OF 102

DATA SET 12/13/9901  
ERRATA 1



CHANNEL 054 LT STROM SQUID EVENT

FILTER TYPE: 0808-111 RESPONSE CORRECTION, CLASS 1000 FILTER: 16501  
IMPACT ANALYSIS DEPT. 5320 DATA SET 12/13/99B1  
DEC 14, 1999 ERRATA 1

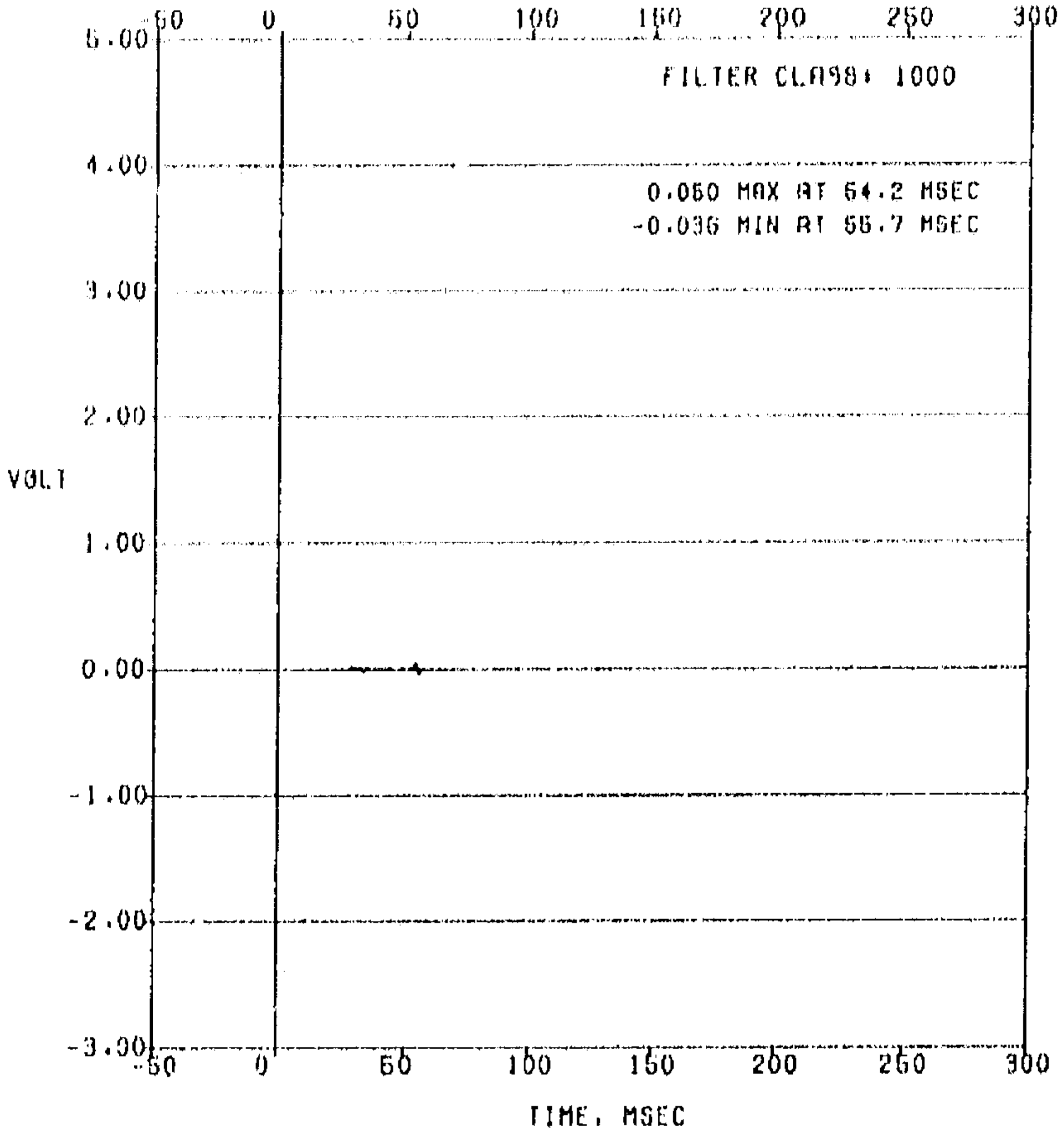


\*\*\*\*\* NOTE \*\*\*\*\*  
\*\*\*\*\* AB EVENT \*\*\*\*\*



CHANNEL 055 RT SIACH BQUID EVENT

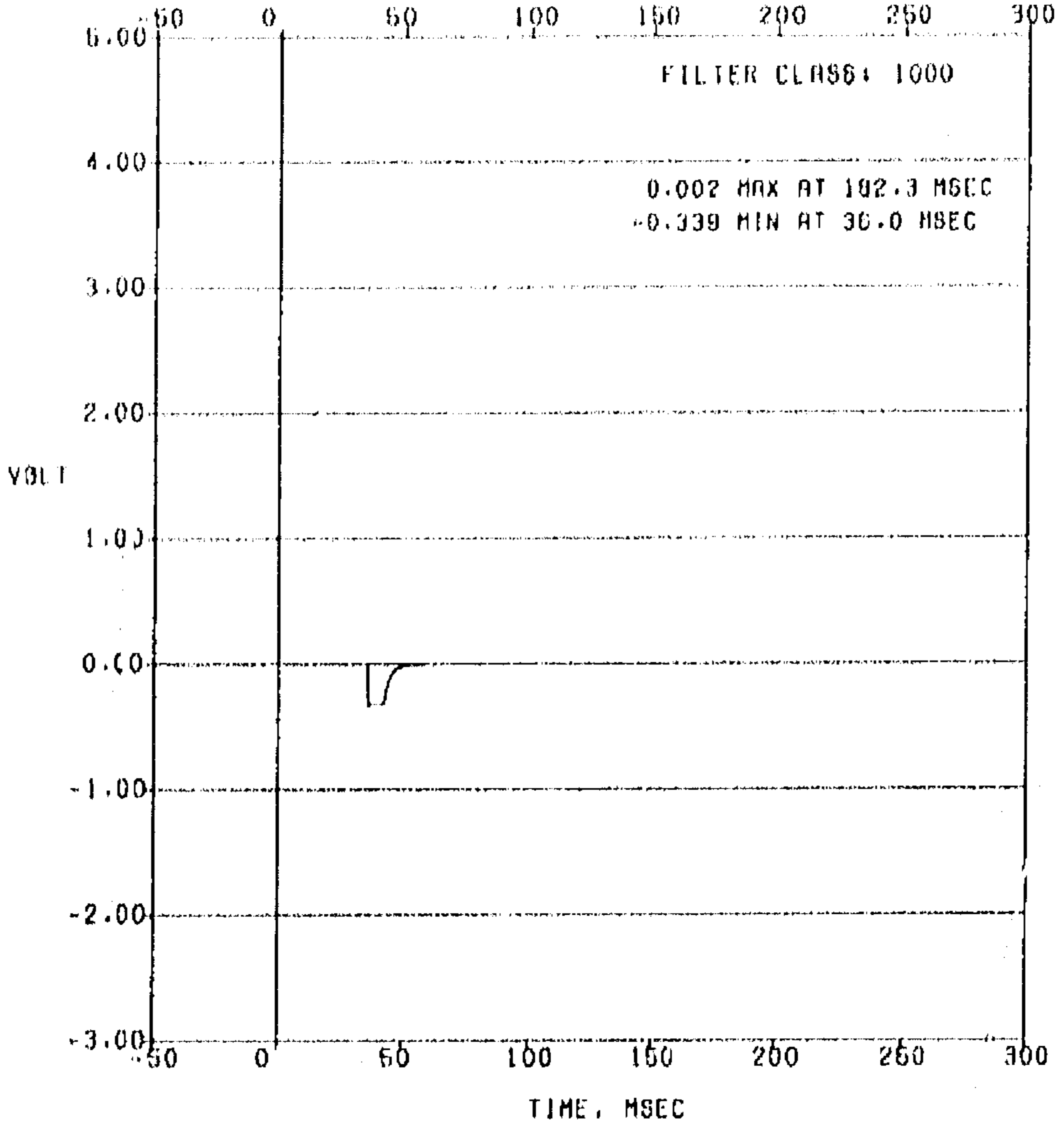
FILTER TYPE: ODDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1660)  
IMPACT ANALYSIS DEPT. 5320 DATA SET 12/13/99B1  
DEC 14, 1999 ERRATA 1



NOTE  
NO EVENT

CHANNEL 050 ACM SAFING SENSOR

FILTER TYPE: OBDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 6320 DATA SET 12/13/99B1  
DEC 14, 1999 ERRATA 1

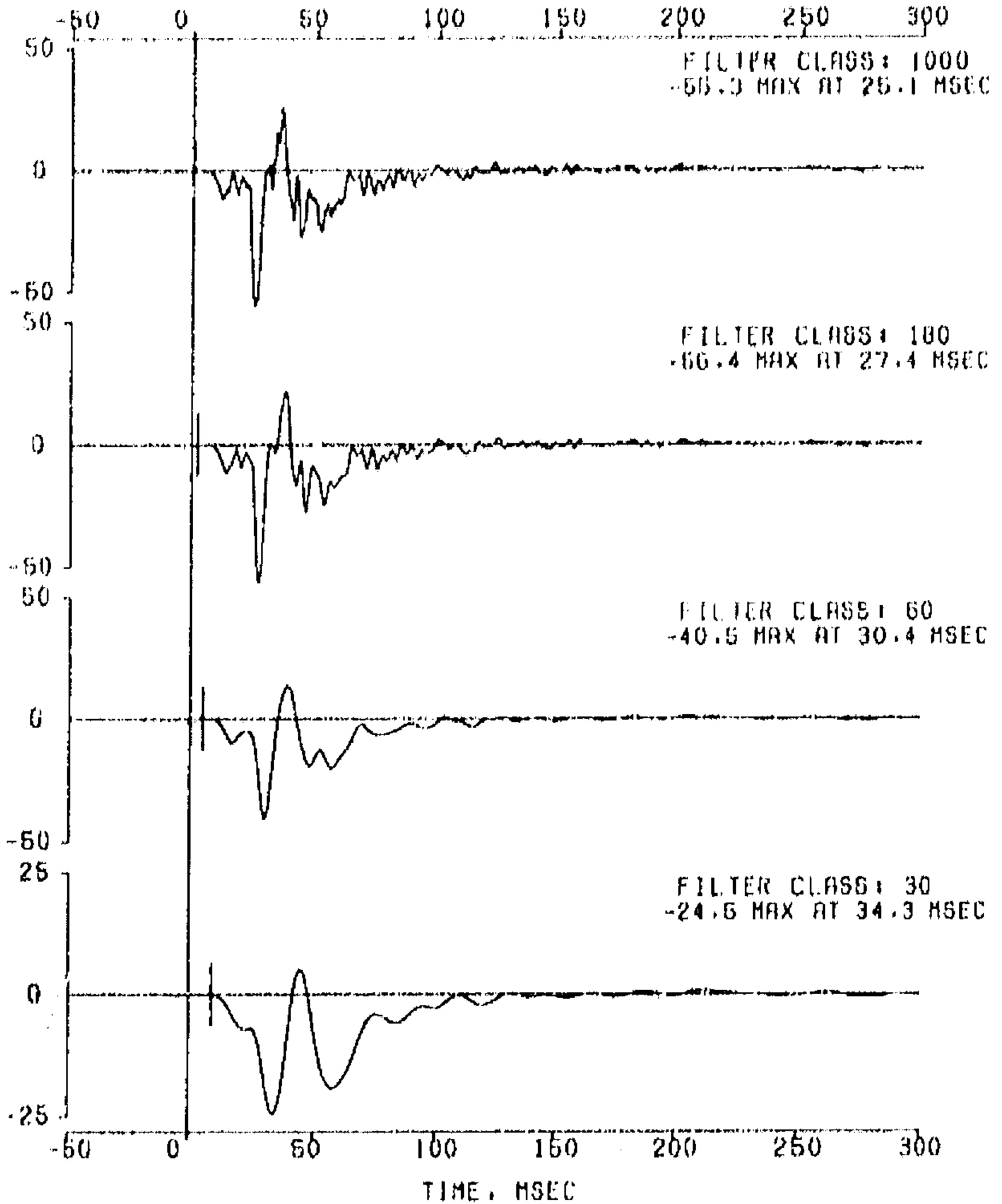


\*\*\*\*\* NOTE \*\*\*\*\*  
\*\*\*\*\* EVENT AT 30.0 MSEC \*\*\*\*\*

VCD0023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4273R  
2002 HY55 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 057 ACM INTERN ACCEL 0  
FILTER TYPE: 080A5-III RESPONSE CORRECTION. CLASS 1000 FILTER(1000)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 083  
OF 102

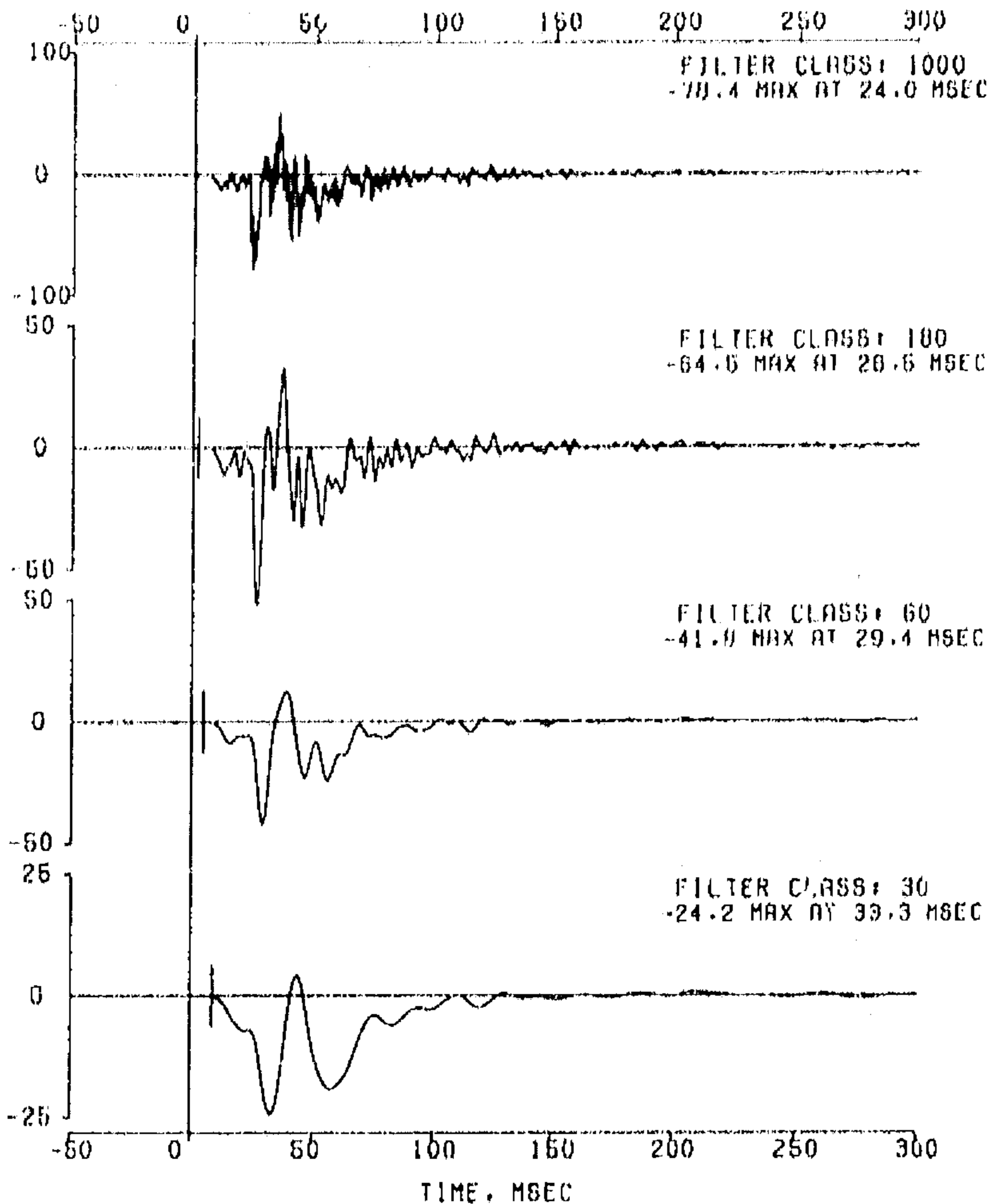
DATA SET 12/13/99B1  
ERRATA 1



VC00023 30 MPH REAR MOVING BARRIER, KJ4-76 ITEM KJ427GR  
2002 MY08 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 05B ORC FRONT LT X P12738  
FILTER TYPE: 0800S III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEP'. 5920  
DEC 14, 1999

PAGE 094  
OF 102

DATA SET 12/19/99BI  
ERRATA 1





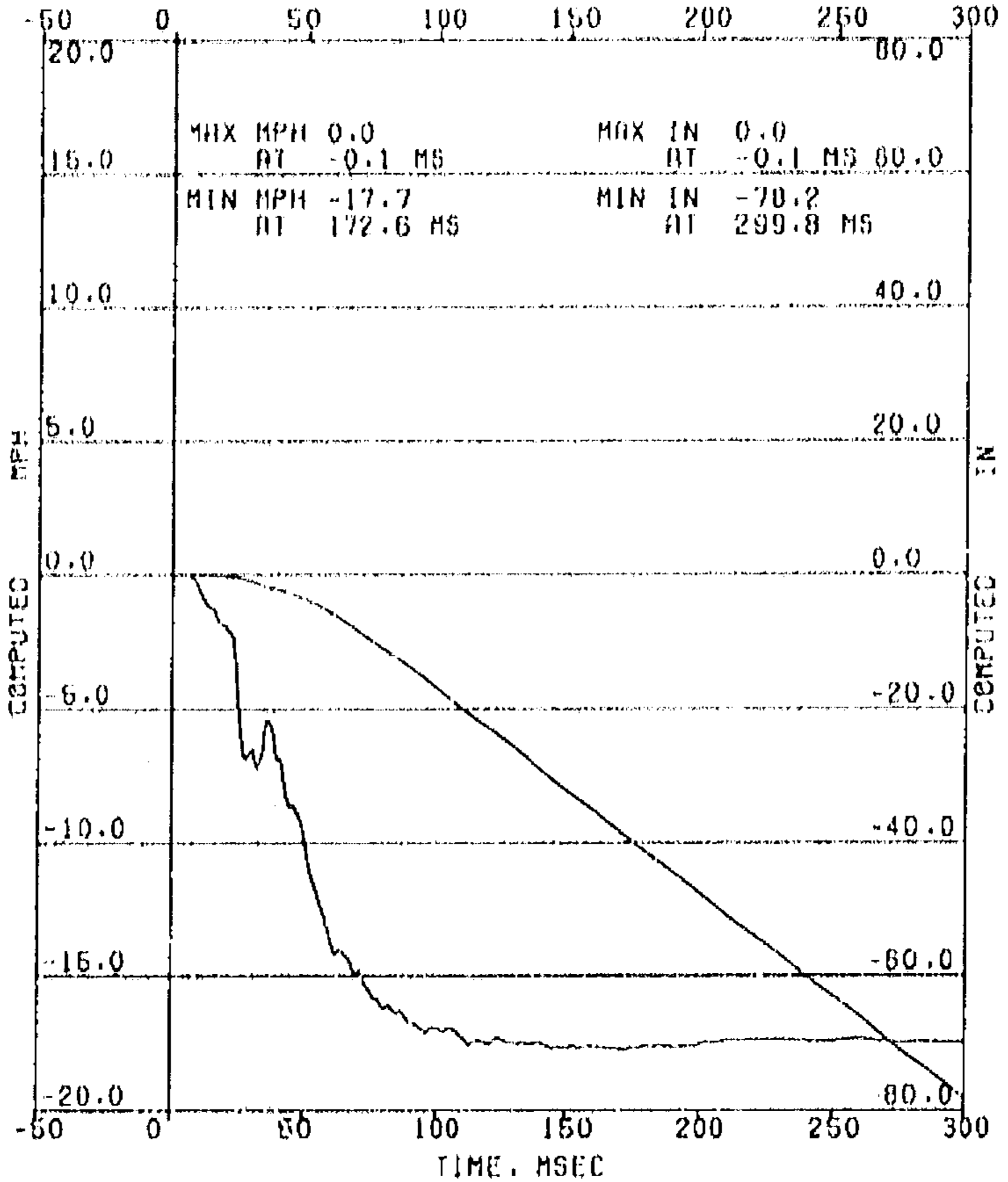
VC08023 30 MPH NEAR MOVING BARRIER, KJ4276R  
2002 HY58 301 NEAR IMPACT DEVELOPMENT,  
CHANNEL 058 DRG FRONT LT X P12736

PAGE 095  
OF 102

FILTER TYPE: 000AS-III RESPONSE CORRECTION: CLASS 1000 FILTER(1650)  
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

DATA SET 12/13/9901  
ERRATA 1

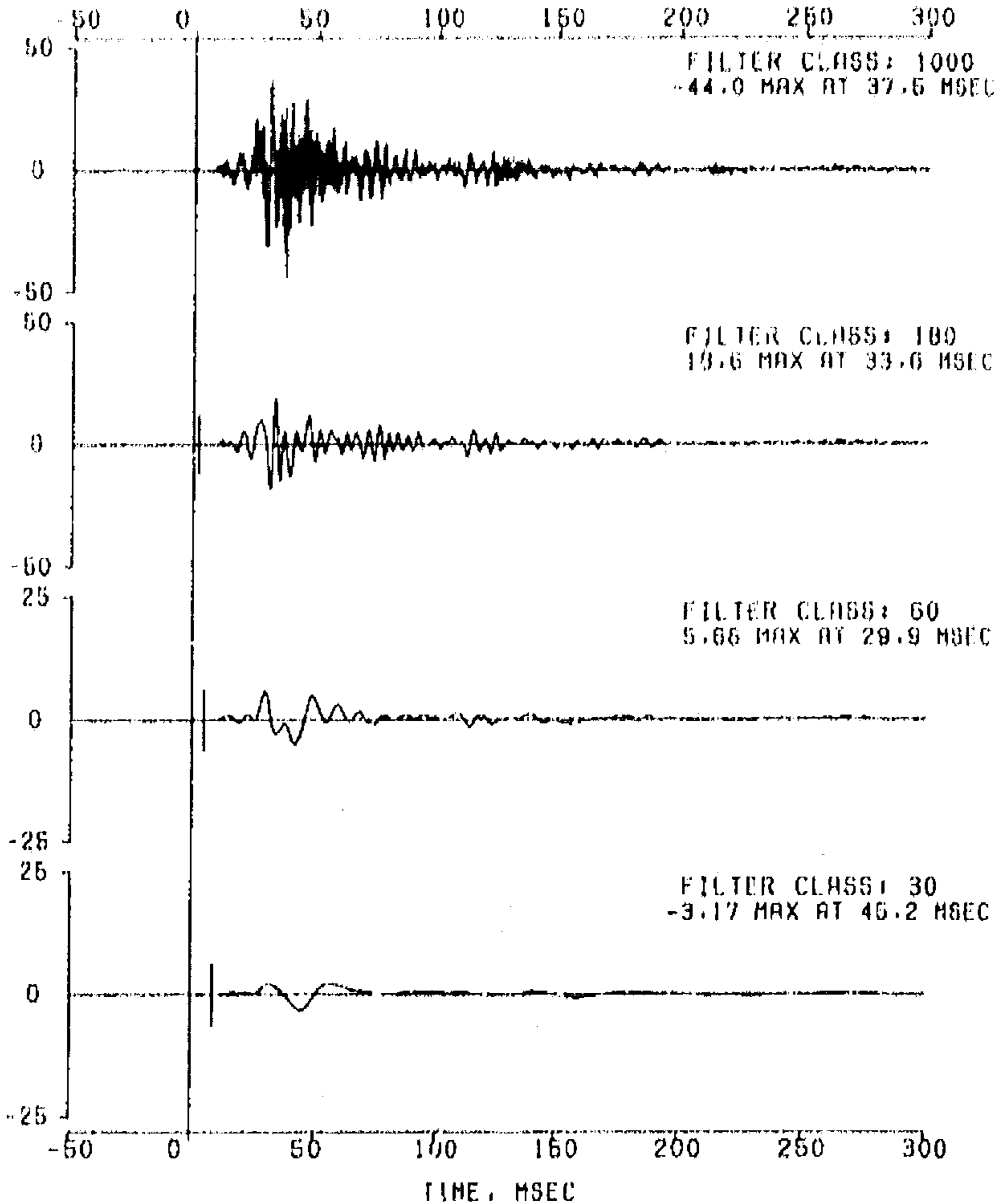


COMPUTED MPH  
COMPUTED IN

VC08023 30 MPH REAR MOVING BARRIER, KJ3-74 ITEM KJ4276R  
2002 MY09 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 059 ORC FRONT LT Y P11142  
FILTER TYPE: 00D05-L11 RESPONSE CORRECTION, CLASS 1000 FILTER(1000)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 006  
OF 102

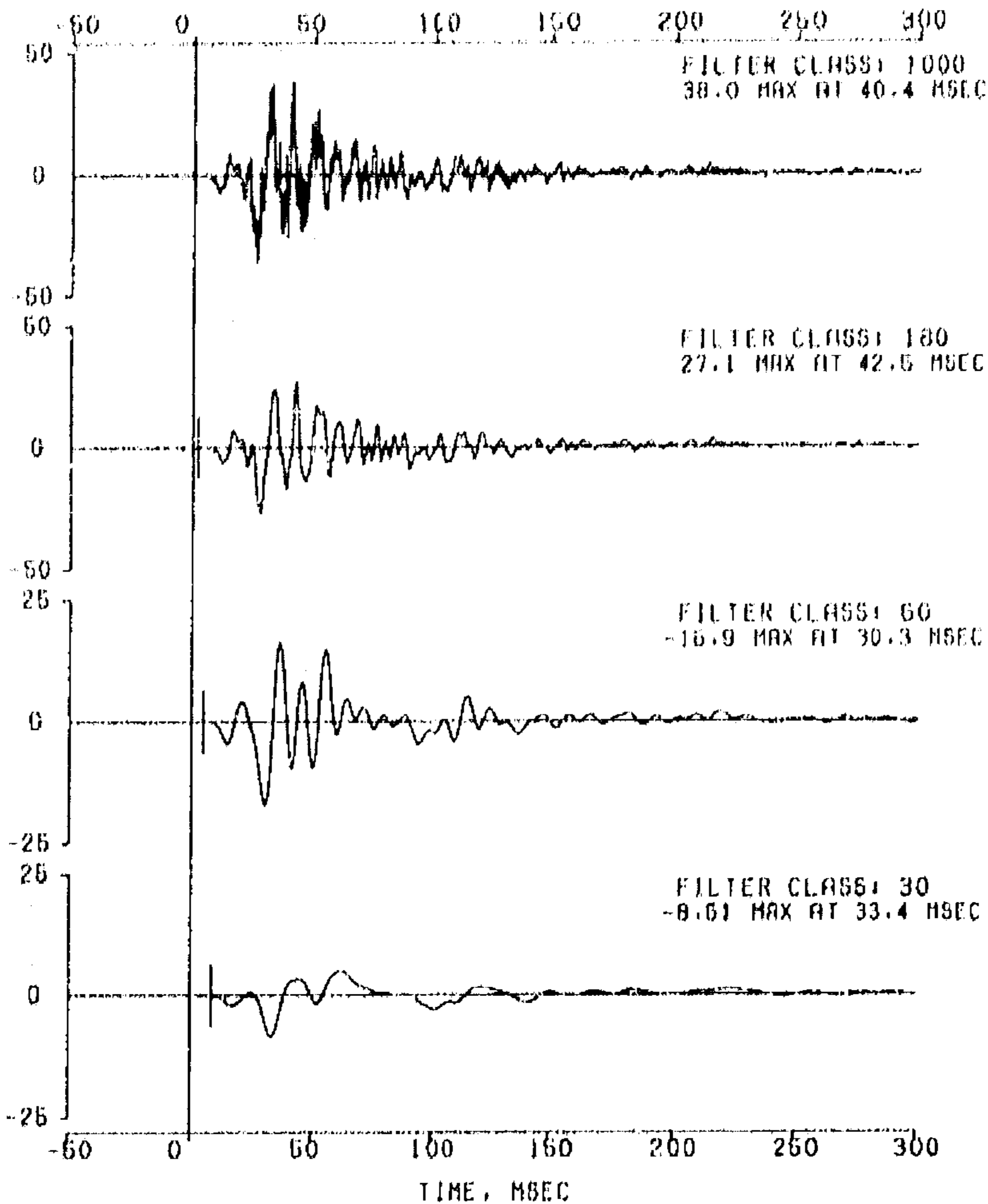
DATA SET 12/13/9901  
ERRATA 1



VC00023 30 MPH REAR HOVING BARRIER, KJ-74 ITEM KJ4276R  
2002 MYSS 901 REAR IMPACT DEVELOPMENT,  
CHANNEL 060 ORC FRONT LT Z P12617  
FILTER TYPE: 000A5-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1850)  
IMPACT ANALYSIS DEPT. 6320  
DEC 14, 1999

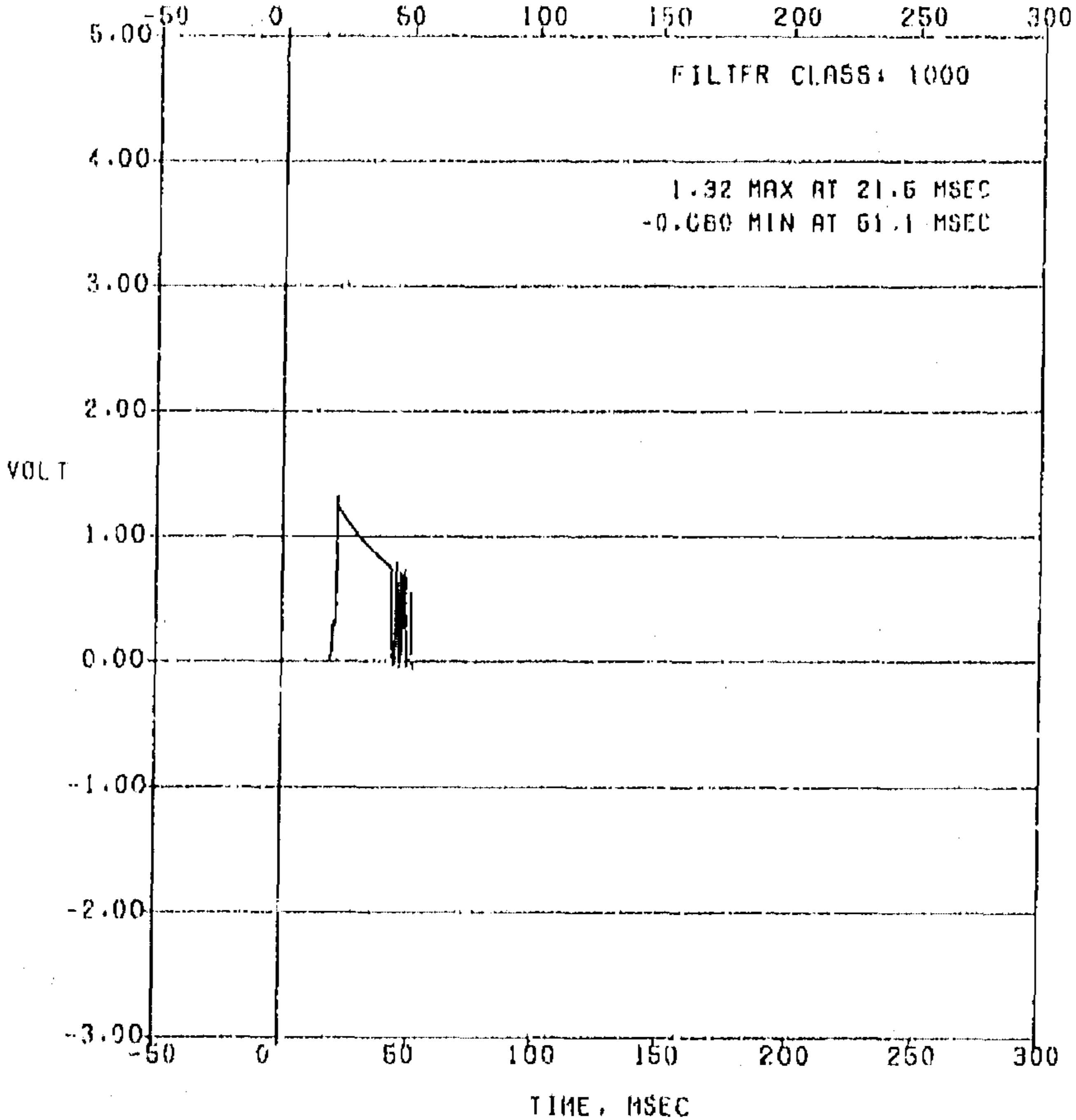
PAGE 097  
OF 102

DATA SET 12/13/0001  
ERRATA 1



CHANNEL 061 TRAILER HITCH EVENT

FILTER TYPE: 08005-111 RESPONSE CORRECTION, CLASS 1000 FILTER(16501  
IMPACT ANALYSIS DEPT. 5320 DATA SET 12/13/9901  
DEC 14, 1999 ERRATA 1



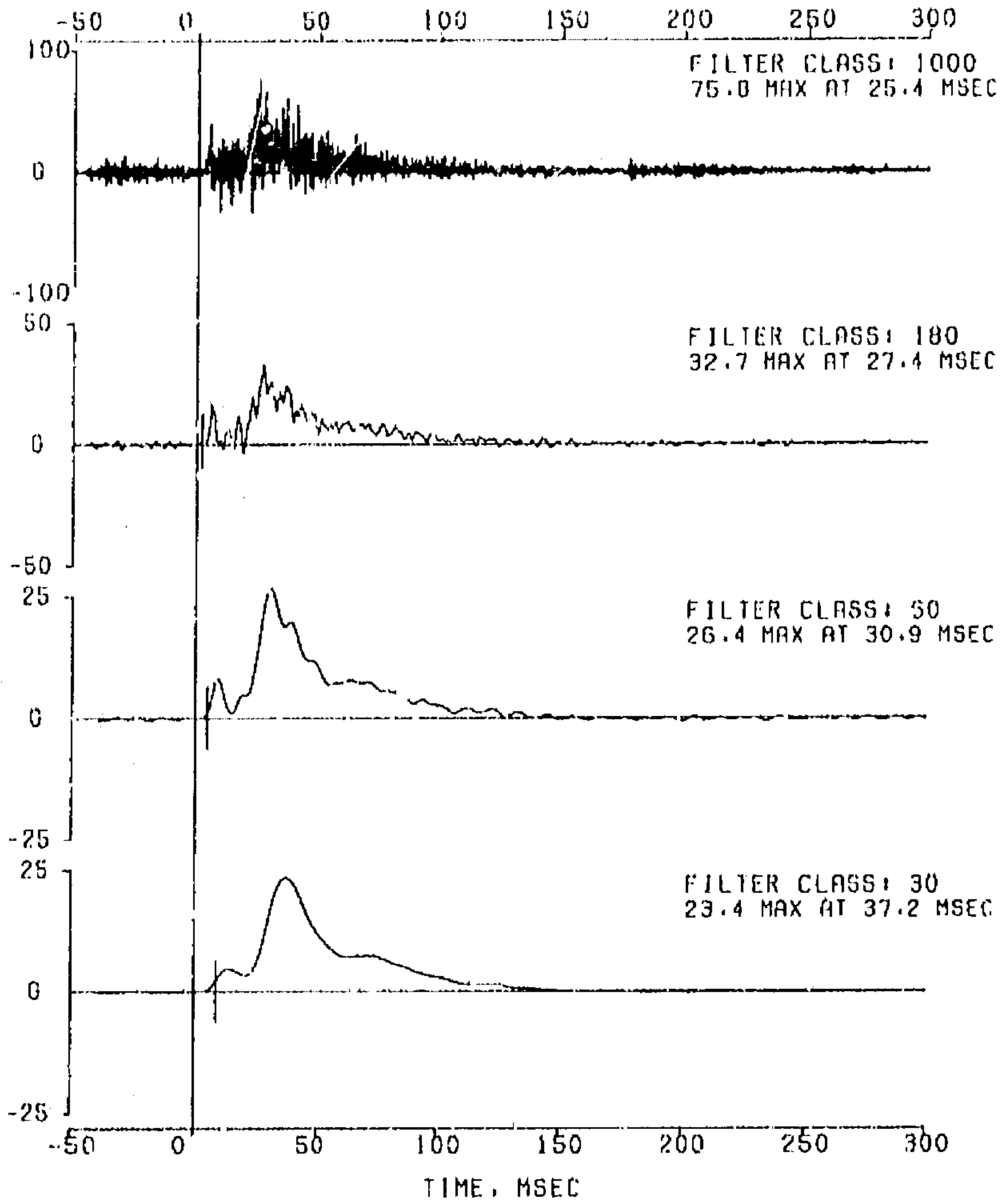
NOTE: EVENT AT 19.0 MS



VC00023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4270R  
2002 MY98 301 REAR IMPACT DEVELOPMENT.  
CHANNEL 065 LT RAIL HOAR MID X 80418  
FILTER TYPE: 08005-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 099  
OF 102

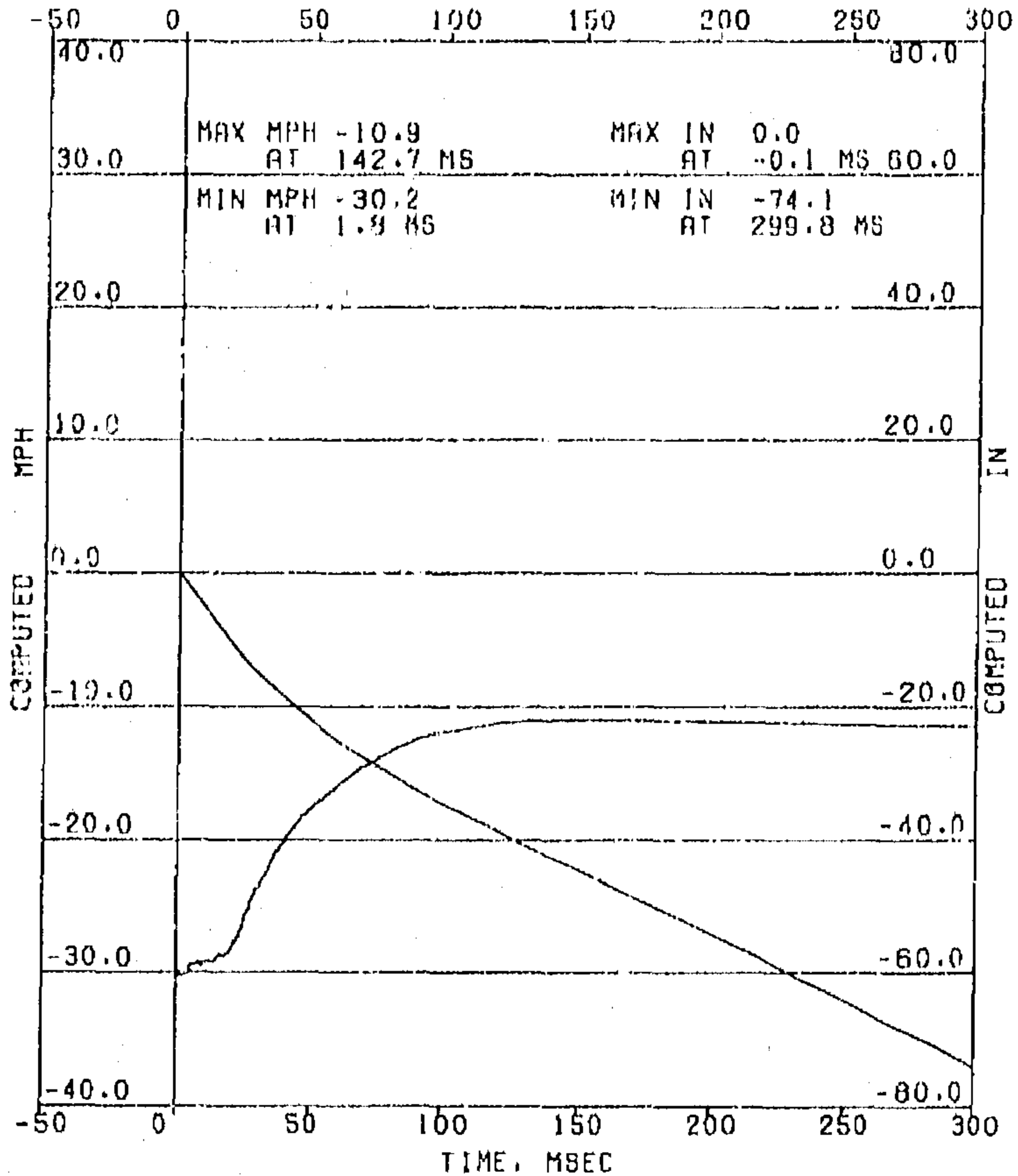
DATA SET 12/13/99BJ  
ERRATA 1



FILTER TYPE: ODDAS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

DATA SET 12/13/99BJ  
ERRATA 1

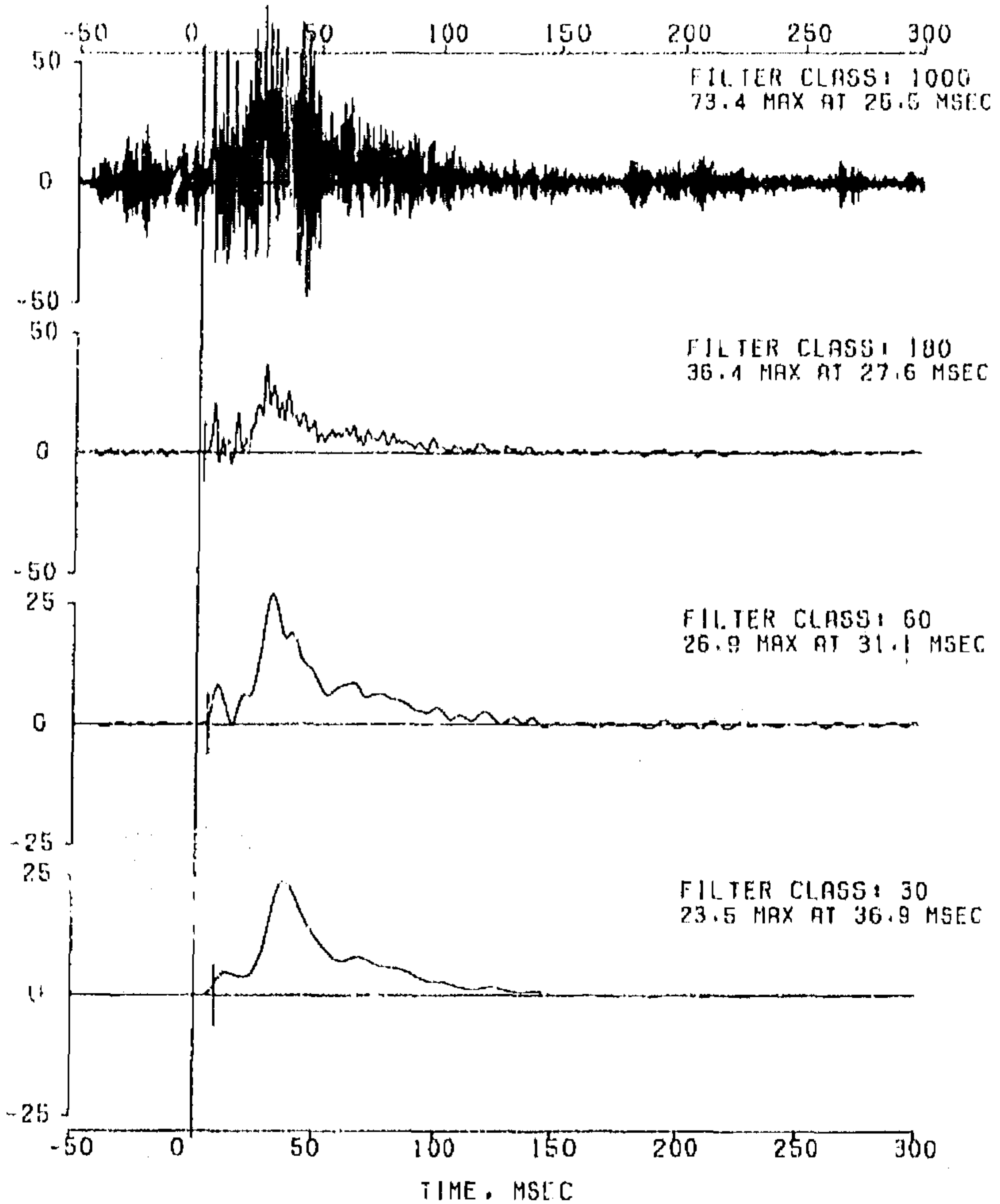


COMPUTED MPH  
COMPUTED IN

VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MYSS 301 REAR IMPACT DEVELOPMENT,  
CHANNEL 066 RT RAIL MBR MID X 00453  
FILTER TYPE: 00DAS-111 RESPONSE CORRECTION, CLASS 1000 FILTER(1650)  
IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

PAGE 101  
OF 102

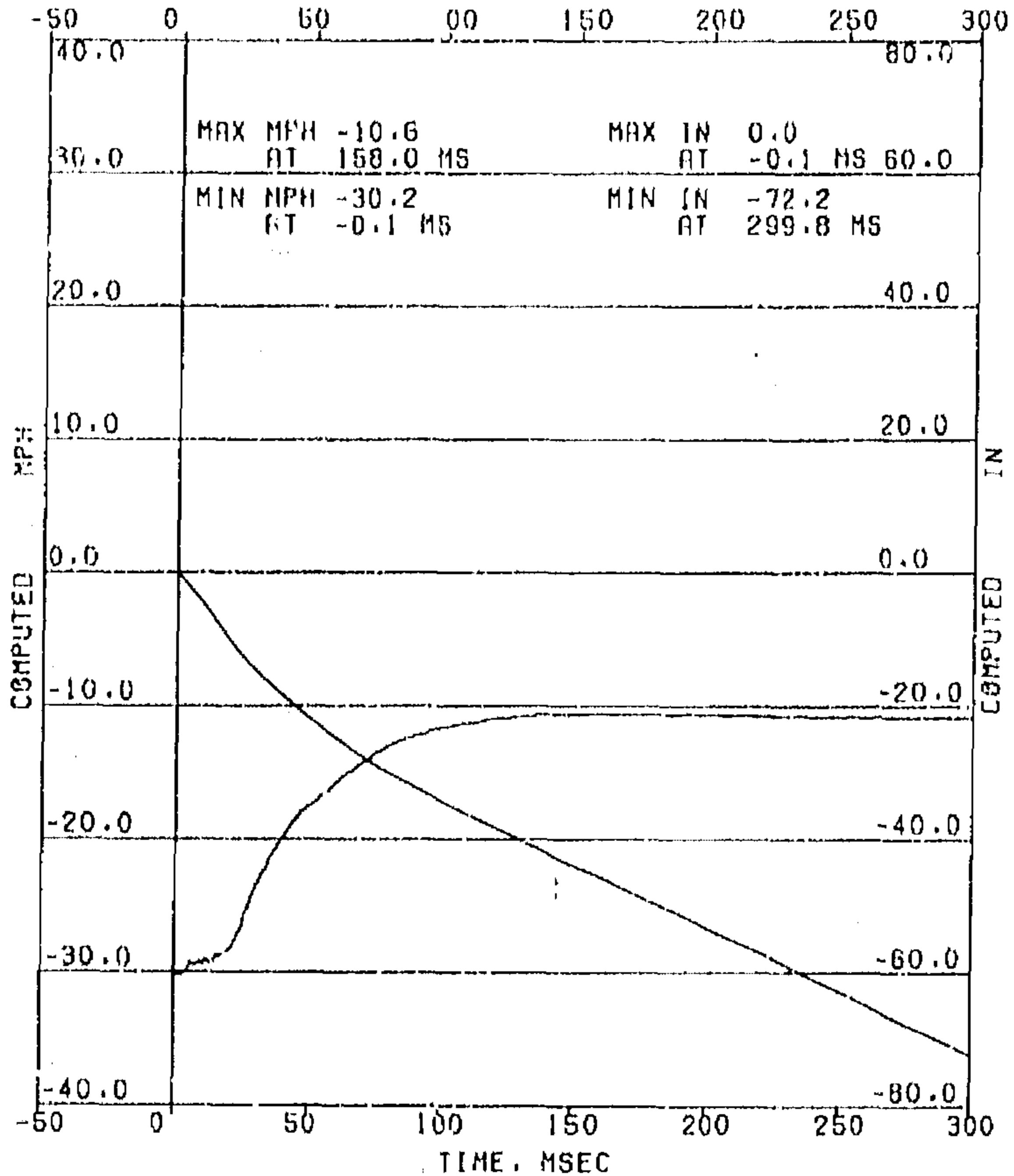
DATA SET 12/13/99BJ  
ERRATA 1



FILTER TYPE: UDDHS-III RESPONSE CORRECTION, CLASS 1000 FILTER(1660)  
FILTER CLASS: 1000

IMPACT ANALYSIS DEPT. 5320  
DEC 14, 1999

DATA SET 12/13/99/J  
ERRATA 1



COMPUTED MPH  
COMPUTED IN



**THE FOLLOWING DOCUMENT(S)  
IS MICROFILMED IN AS IS  
CONDITION.**

Camera Operator: *RANDALL WHYTE*

Date: *05-01-2003*

FILED MAR 1 6 2000

INTER COMPANY CORRESPONDENCE

DATE 02/07/00

TO  
DISTRIBUTION

FROM  
S. P. FLETCHER

DEPARTMENT  
5320

PLANT/OFFICE  
CTC

CMS NUMBER  
481-00-27

SUBJECT:  
REAR DYNAMIC CRUSH ANALYSIS  
VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MYSS 301 REAR IMPACT DEVELOPMENT.  
TEST DATE 12/13/99

TEST PURPOSE PRIMARY, 2002 USA 301 DEVELOPMENT,  
DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE TARGET SPEED: 30.1 MPH  
DAMAGE LOCATION: REAR  
BARRIER TYPE: REAR TYPE IV  
BARRIER SURFACE: PLYWOOD

VEHICLE BODY CLASS: KJ  
CAR LINE: J  
BODY: 74  
ENGINE: 2.4 LITRE  
ENGINE NOTE: ELECTRONIC FUEL INJECTION  
TRANSMISSION: 4 SPEED AUTO 4x4  
TRANS. NOTE:  
VIN AS TESTED: 1J4FF581X2A [REDACTED] MOD.  
VIN AS BUILT: 1J4FF581X2A [REDACTED] MOD.

TEST SPEED 30.2 MPH ELECTRONIC SPEED TRAP SYSTEM

TEST WEIGHT (LBS) 4578 TOTAL, 2487 FRONT, 2091 REAR

OCCUPANTS LEFT FRONT, HYBRID II BALLAST, RO-47  
RESTRAINT-BELTS ONLY.  
RIGHT FRONT, HYBRID II BALLAST, RO-70  
RESTRAINT-BELTS ONLY.

BUILD CONDITION

TEST VC08023 02/07/00 08:33 PAGE 1 OF 2

TARGET WEIGHT (LBS) 3930 TOTAL, 2135 FRONT, 1803 REAR REP BASE OPT. WT  
FOR A 3.7L 4X4 VEH. (CHART DATE 3/17/99) W/OUT  
LOADS OR OCCUPANTS.

FUEL AND BALLAST 17 GALLONS OF STODDARD SOLVENT,  
300 LBS,  
BALLAST ADDED (350LBS REAR SEAT) (200 FRONT)

DATA FOR THIS ANALYSIS WAS DIGITIZED BY L. G. PLATA.

REAR DYNAMIC CRUSH, PITCH, AND REAR WHEEL MOTION RELATIVE TO  
THE FRONT SILL HAVE BEEN DETERMINED BY FILM ANALYSIS. TIME  
WAS BASED ON CAMERA TIMING DATA. LATERAL VALUES WERE HELD  
CONSTANT THROUGHOUT THE ANALYSIS.

DYNAMIC CRUSH 18.6 +/- 1 INCH AT 71. +/- 5 MSEC.

*Michael W. Focchi*  
D. C. ANALYST

*Stephen P. Fletcher*  
S. P. FLETCHER

GRAPHS - 4

# C L O S S A R Y O F T E R M S

## U S E D I N S T A N D A R D R E P O R T S

AD	ANTHROPOMORPHIC DEVICE
ATO	ANTHROPOMORPHIC TEST DEVICE
BASE COORD	BASE COORDINATE SYSTEM
C/L	CENTERLINE
CAR COORD	CAR COORDINATE SYSTEM
CCW	COUNTER CLOCKWISE
CORR-IN	SEPARATION IN INCHES (MINUS INITIAL LENGTH)
CORR-MM	SEPARATION IN MM (MINUS INITIAL LENGTH)
CORR-P	CORRECTED (ZEROED) PITCH
CORR-R	CORRECTED (ZEROED) ROLL
CORR-Y	CORRECTED (ZEROED) YAW
CH	CLOCKWISE
EFI	ELECTRONIC FUEL INJECTOR
END	ENGINE
ENOPY	ENGINE PITCH AND YAW
FESH	FRONT END SHEET METAL
FIDUCIAL	REFERENCE POINT OR TARGET
FS	FRONT SILL TARGET
FWD	FORWARD
IP	INSTRUMENT PANEL TARGET
LBS	POUNDS
LCP,LOP	LEFT C-POST & QUARTER PANEL TARGETS
LFS,LMS,LRS	LEFT FRONT SILL, MID SILL, & REAR SILL TARGETS
LT	LEFT
MS	MID SILL TARGET
NORMALIZE	PUT ON A COMMON BASIS
NOSE-DOWN	LEADING END BELOW TRAILING
NOSE-UP	LEADING END ABOVE TRAILING
PERF	PERFORMANCE
REF	REFERENCE
REL	RELATIVE TO (ONE-DIMENSIONAL)
REP,ROP	RIGHT C-POST & QUARTER PANEL TARGETS
RFS,RMS,RRS	RIGHT FRONT, MID, & REAR SILL TARGETS
ROLL-LEFT	LEFT SIDE LOWER THAN RIGHT
ROLL-RIGHT	RIGHT SIDE LOWER THAN LEFT
RS	REAR SILL TARGET
RT	RIGHT
SEP	SEPARATION OF (THREE-DIMENSIONAL)
SYS	SYSTEM
TBI	THROTTLE BODY INJECTOR
TIME,MS	TIME IN MILLISECONDS
U/B	UNDERBODY
VS	VERSUS
X	LONGITUDINAL AXIS (INCREASING TOWARD TRAILING EDGE)
XF	X-FILTERED
Y	LATERAL AXIS (INCREASING TO THE RIGHT)
YAW-LEFT	LEADING EDGE TO LEFT
YAW-RIGHT	LEADING EDGE TO RIGHT
Z	VERTICAL AXIS (INCREASING UPWARD)
ZEROED	SHIFTED TO START AT ZERO
ZERO-IN	ZEROED INCHES
ZERO-MM	ZEROED MILLIMETERS

IMPACT ANALYSIS  
DEPARTMENT 5320  
02/07/00 08:33  
TEST VC08023



VC08023 30 MPH REAR MOVING BARRIER. KJJ-74 ITEM KJ4275R  
 2002 MVSS 301 REAR IMPACT DEVELOPMENT.

ZERGED X MOTION OF F3 REL TO LFS IN BASE COORD SYS  
 VERSUS TIME IN MILLISECONDS

REAR DYNAMIC CRUSH AND REAR WHEEL MOTION ANALYSIS

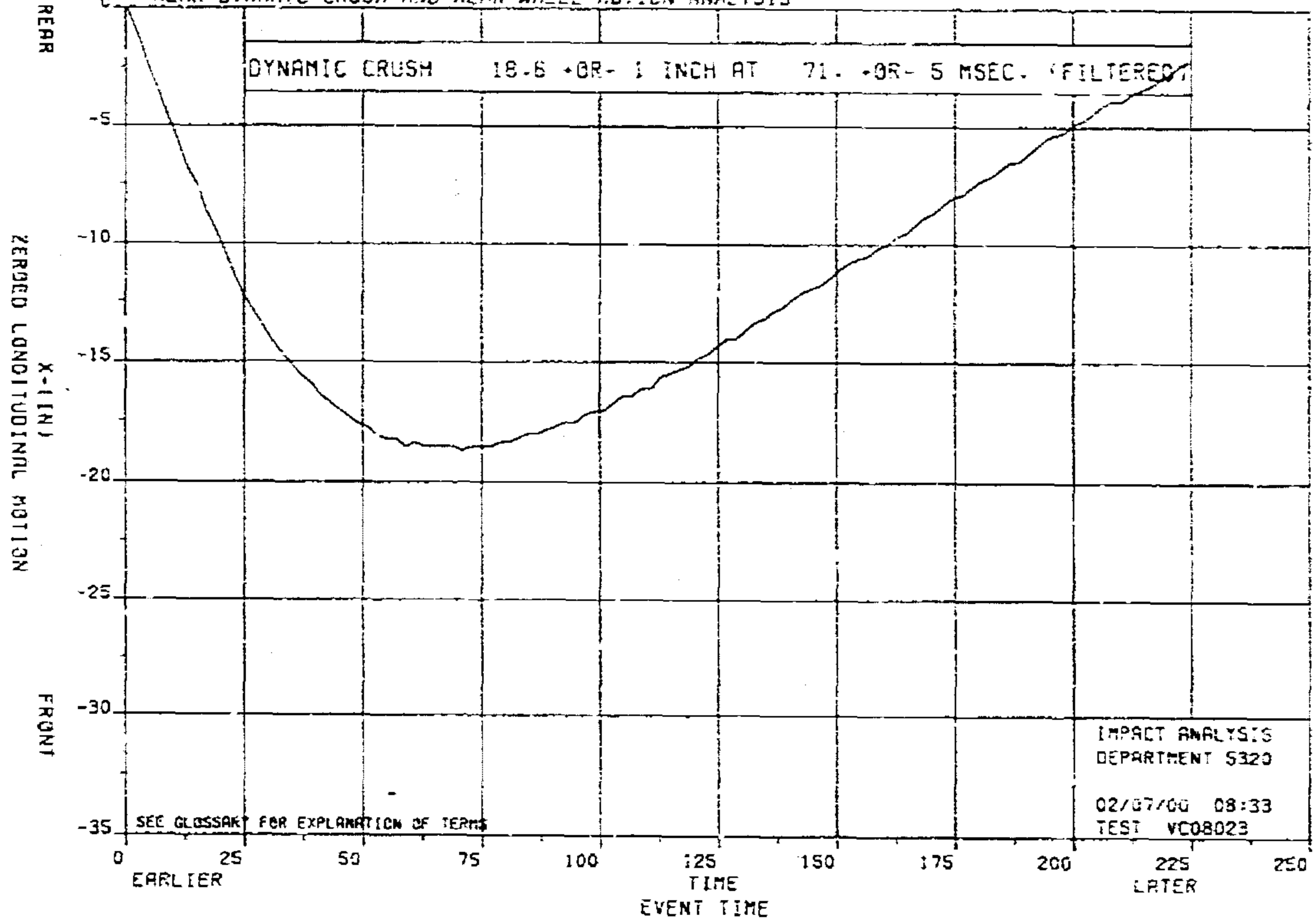


FIGURE 1

VC08023 30 MPH REAR MOVING BARRIER. KJ4-74 ITEM KJ4276R  
2002 HVSS 301 REAR IMPACT DEVELOPMENT.

ZERGED Z OF LAW RELATIVE TO LFS IN CAR COORD  
VERSUS ZERGED X OF LAW RELATIVE TO LFS IN CAR COORD  
REAR DYNAMIC CRUSH AND REAR WHEEL MOTION ANALYSIS

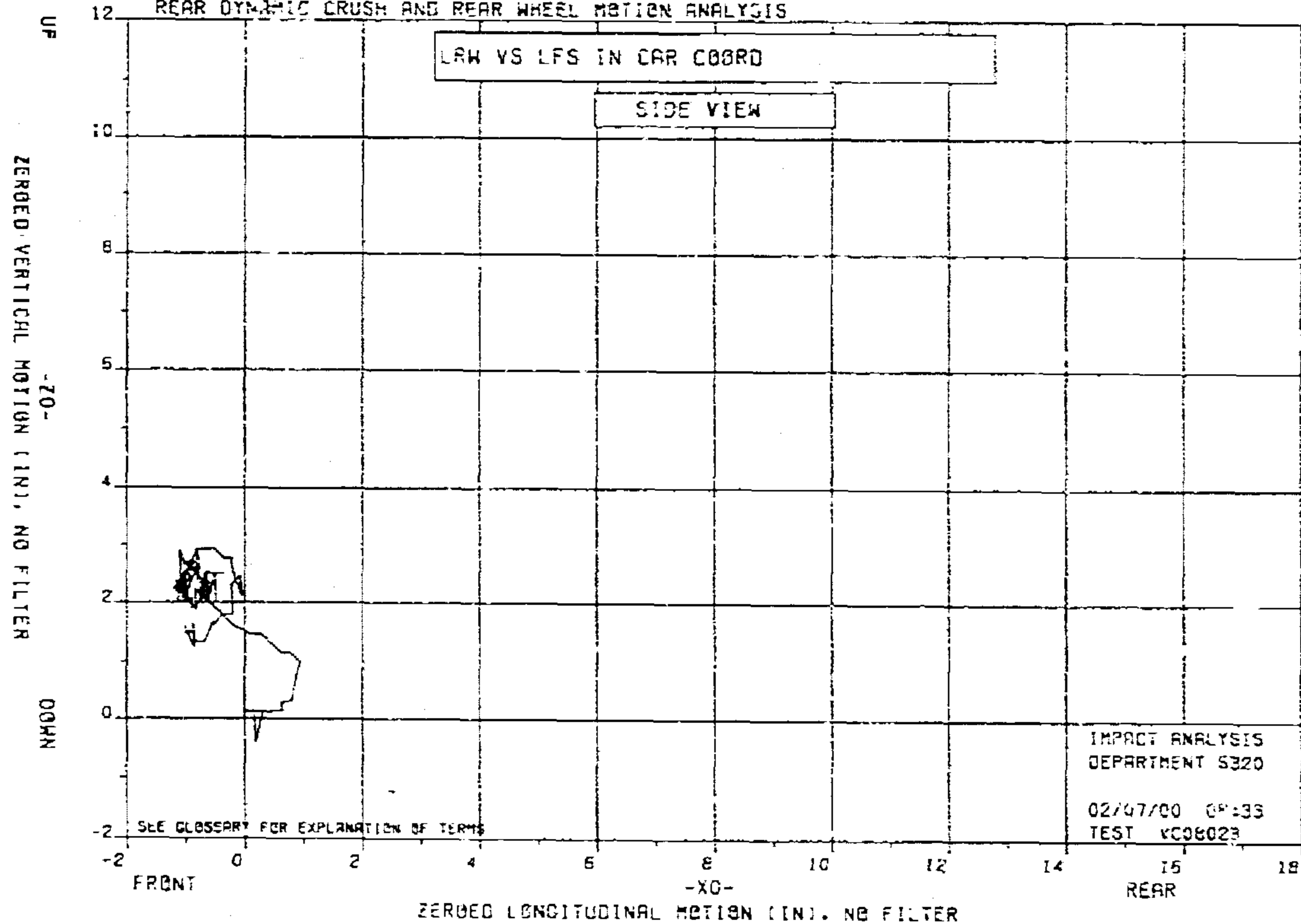


FIGURE 2

VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MVSS 301 REAR IMPACT DEVELOPMENT.

ZERGED PITCH OF LMS TO LFS IN BASE COORD SYSTEM  
VERSUS TIME IN MILLISECOND

REAR DYNAMIC CRUSH AND REAR WHEEL MOTION ANALYSIS

NOSE-UP  
DEGREES CCM AROUND Y RELATIVE TO X (RT SIDE VIEW) 50HZ FILTER  
CURR-P  
NOSE-DOWN

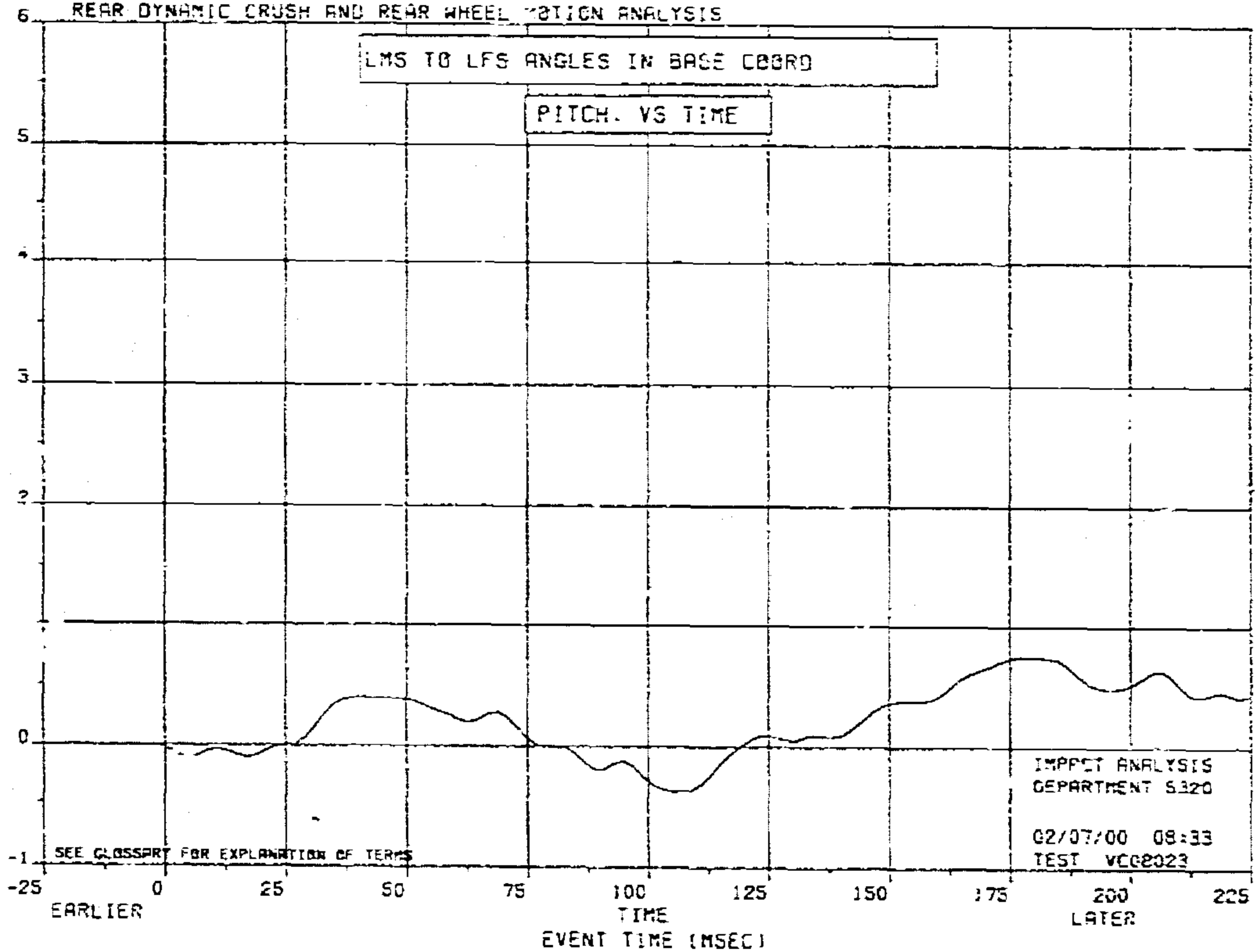


FIGURE 3

VC08023 30 MPH REAR MOVING BARRIER. KJJ-74 ITEM KJ4276R  
2J02 MVSS 301 REAR IMPACT DEVELOPMENT.

LMS TO LFS DISTANCE -23.79 INCHES (INITIAL DIST) (IN)  
VERSUS TIME IN MILLISECONDS

REAR DYNAMIC CRUSH AND REAR WHEEL MOTION ANALYSIS

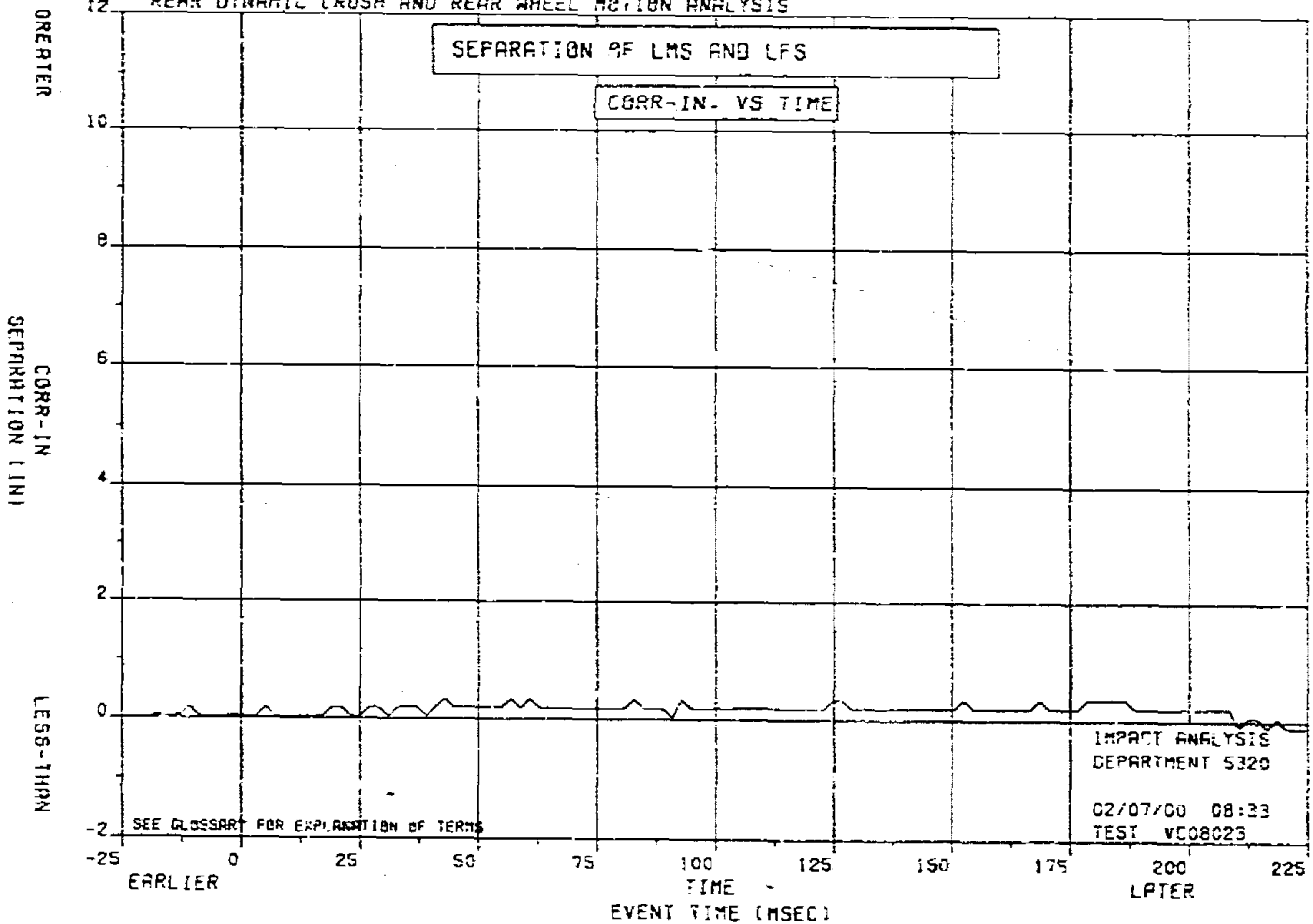


FIGURE 4



**THE FOLLOWING DOCUMENT(S)  
IS MICROFILMED IN AS IS  
CONDITION.**

Camera Operator: *RANDALL WHYTE*

Date: *05-01-2003*

FILED MAR 1 6 2000

INTER COMPANY CORRESPONDENCE

DATE 02/17/00

TO  
DISTRIBUTION

FROM  
S. P. FLETCHER

DEPARTMENT  
5320

PLANT/OFFICE  
CIC

SIMS NUMBER  
481-00-27

SUBJECT:

REAR UNDERBODY MOTION ANALYSIS  
VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4276R  
2002 MYSS 301 REAR IMPACT DEVELOPMENT.  
TEST DATE 12/13/99

TEST PURPOSE

PRIMARY: 2002 USA 301 DEVELOPMENT.  
DETERMINE FUEL SYSTEM INTEGRITY.

IMPACT TYPE

TARGET SPEED: 30.1 MPH  
DAMAGE LOCATION: REAR  
BARRIER TYPE: REAR TYPE IV  
BARRIER SURFACE: PLYWOOD

VEHICLE

BODY CLASS: KJ  
CAR LINE: J  
BODY: 74  
ENGINE: 2.4 LITRE  
ENGINE NOTE: ELECTRONIC FUEL INJECTION  
TRANSMISSION: 4 SPEED AUTO 4x4  
TRANS. NOTE:  
VIN AS TESTED: 1J4FF581X2A [REDACTED] MOD.  
VIN AS BUILT: 1J4FF581X2A [REDACTED] MOD.

TEST SPEED

30.2 MPH ELECTRONIC SPEED TRAP SYSTEM

TEST WEIGHT (LBS)

4578 TOTAL, 2487 FRONT, 2091 REAR

OCCUPANTS

LEFT FRONT, HYBRID II BALLAST. 00-47  
RESTRAINT-BELTS ONLY.  
RIGHT FRONT, HYBRID II BALLAST. 90-70  
RESTRAINT-BELTS ONLY.

BUILD CONDITION

TEST VC08023

02/17/00 13143

PAGE 1 OF 2

TARGET WEIGHT (LBS) 3938 TOTAL, 2195 FRONT, 1803 REAR REP BASE OPT. WT  
FOR A 3.7L 4X4 VEH. (CHART DATE 3/17/99) W/OUT  
LUGGAGE OR OCCUPANTS.

FUEL AND BALLAST 17 GALLONS OF STODDARD SOLVENT,  
500 LBS.  
BALLAST ADDED (350LBS REAR SEAT) (200 FRONT)

DATA FOR THIS ANALYSIS WAS DIGITIZED BY C. M. DURST.

THE RELATIVE MOTIONS OF SELECTED REAR UNDERBODY TARGETS HAVE BEEN  
DETERMINED BY FILM ANALYSIS. TIME WAS BASED ON CAMERA TIMING DATA.

*Michael O. Lubi*  
-----  
O. O. ANALYST

*Steph Fletcher*  
-----  
S. P. FLETCHER

GRAPHS - 21

G L O S S A R Y O F T E R M S

U S E D I N S T A N D A R D R E P O R T S

AD	ANTHROPOMORPHIC DEVICE
ATD	ANTHROPOMORPHIC TEST DEVICE
BASE COORD	BASE COORDINATE SYSTEM
C/L	CENTERLINE
CAR COORD	CAR COORDINATE SYSTEM
CCW	COUNTER CLOCKWISE
CORR-IN	SEPARATION IN INCHES (MINUS INITIAL LENGTH)
CORR-MM	SEPARATION IN MM (MINUS INITIAL LENGTH)
CORR-P	CORRECTED (ZEROED) PITCH
CORR-R	CORRECTED (ZEROED) ROLL
CORR-Y	CORRECTED (ZEROED) YAW
CH	CLOCKWISE
EFI	ELECTRONIC FUEL INJECTOR
ENG	ENGINE
ENOPY	ENGINE PITCH AND YAW
FSM	FRONT END SHEET METAL
FIDUCIAL	REFERENCE POINT ON TARGET
FS	FRONT SILL TARGET
FWD	FORWARD
IP	INSTRUMENT PANEL TARGET
LBS	POUNDS
LCP, LQP	LEFT C-POST & QUARTER PANEL TARGETS
LFS, LMS, LRS	LEFT FRONT SILL, MID SILL, & REAR SILL TARGETS
LT	LEFT
MS	MID SILL TARGET
NORMALIZE	PUT ON A COMMON BASIS
NOSE-DOWN	LEADING END BELOW TRAILING
NOSE-UP	LEADING END ABOVE TRAILING
PERF	PERFORMANCE
REF	REFERENCE
REL	RELATIVE TO (TWO-DIMENSIONAL)
RCP, RQP	RIGHT C-POST & QUARTER PANEL TARGETS
RFS, RMS, RRS	RIGHT FRONT, MID, & REAR SILL TARGETS
ROLL-LEFT	LEFT SIDE LOWER THAN RIGHT
ROLL-RIGHT	RIGHT SIDE LOWER THAN LEFT
RS	REAR SILL TARGET
RT	RIGHT
SEP	SEPARATION OF (THREE-DIMENSIONAL)
SYS	SYSTEM
TBI	THROTTLE BODY INJECTOR
TIME, MS	TIME IN MILLISECONDS
U/B	UNDERBODY
VS	VERSUS
X	LONGITUDINAL AXIS (INCREASING TOWARD TRAILING EDGE)
XF	X-FILTERED
Y	LATERAL AXIS (INCREASING TO THE RIGHT)
YAW-LEFT	LEADING EDGE TO LEFT
YAW-RIGHT	LEADING EDGE TO RIGHT
Z	VERTICAL AXIS (INCREASING UPWARD)
ZEROED	SHIFTED TO START AT ZERO
ZERO-IN	ZEROED INCHES
ZERO-MM	ZEROED MILLIMETERS

IMPACT ANALYSIS  
DEPARTMENT. 5320  
02/17/00 13:43  
TEST VC08023

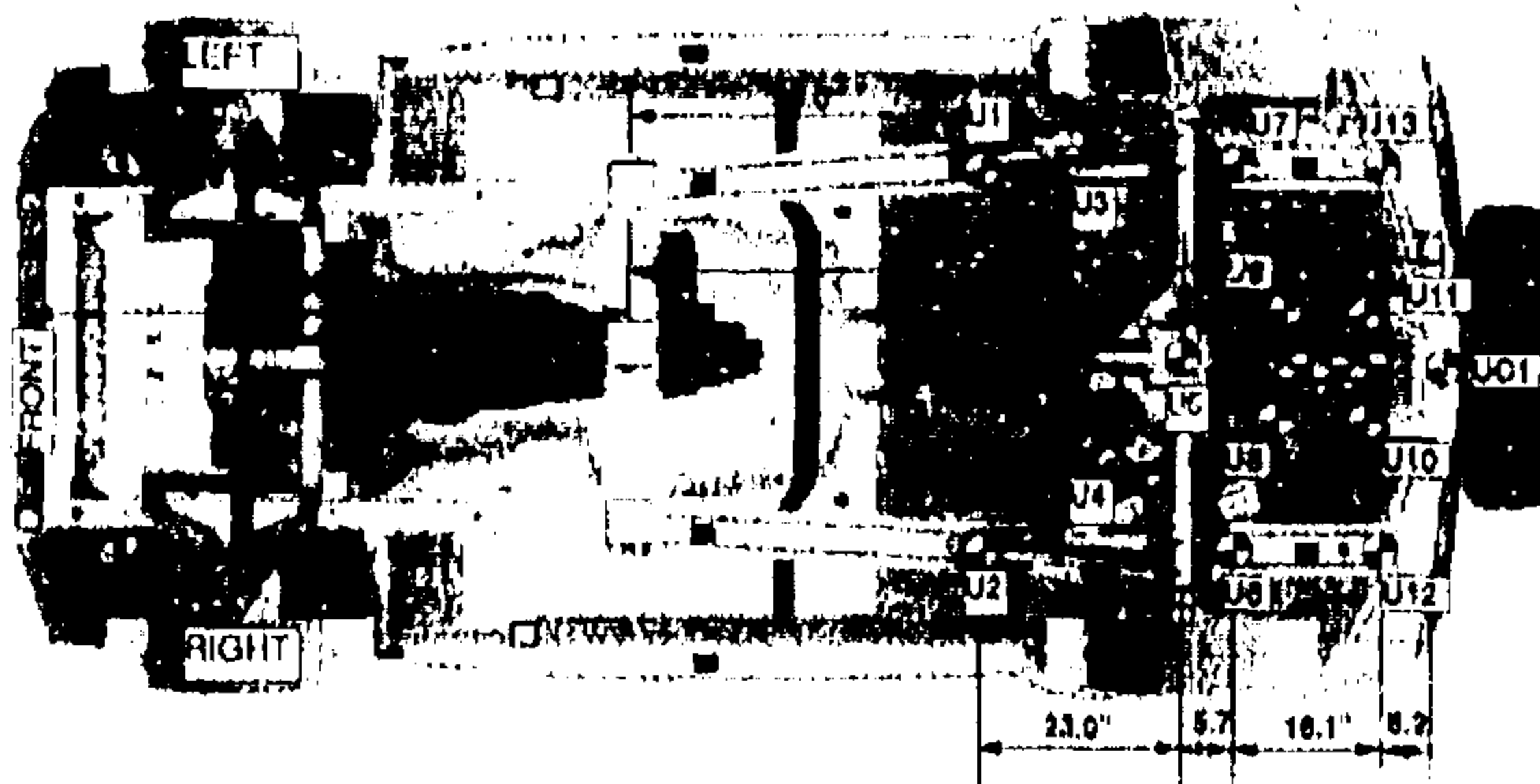


# VC08023 30 MPH REAR MOVING BARRIER, KJJ-74 ITEM KJ4278R 2002 FMVSS 301 REAR IMPACT DEVELOPMENT.

Third Wheel Item ..... VC .....

Jeep Cherokee 4x4 KJ

Target and Accelerometer Locations  
For Rear Impact



- 🔊 Underbody
- 👁️ Side View
- 📏 Single Axis (X) Accelerometer
- Biaxial (K & Z) Accelerometer

## TARGET NAME

## TARGET DESCRIPTION

*UC1	CENTER TARGET, REAR BUMPER CROSSMEMBER
U1	LEFT FOREMOST RAIL TARGET
U2	RIGHT FOREMOST RAIL TARGET
U3	LEFT UPPER SWING-ARM TARGET
U4	RIGHT UPPER SWING-ARM TARGET
U5	REAR DIFFERENTIAL TARGET
*U6	RIGHT RAIL TARGET -RWD OF AXLE
*U7	LEFT RAIL TARGET -RWD OF AXLE
U8	RIGHT FRONT CORNER FUEL TANK TARGET
U9	LEFT FRONT CORNER FUEL TANK TARGET
U10	RIGHT AFT FUEL TANK TARGET
U11	LEFT AFT FUEL TANK TARGET
U12	RIGHT AFTMOST RAIL TARGET -NEAR REAR RIGHT CORNER FUEL TANK
U13	LEFT AFTMOST RAIL TARGET - NEAR REAR LEFT CORNER FUEL TANK

\* TARGET IS NOT VISIBLE FOR THIS ANALYSIS

VC08023 30 MPH REAR MOVING BARRIER. KJJ-74 ITEM KJ4275R  
 2002 MVSS 301 REAR IMPACT DEVELOPMENT.

ZEROED X OF B1 RELATIVE TO U1 IN BASE COORD  
 VERSUS TIME IN MILLISECONDS

REAR UNDERBODY MOTION ANALYSIS

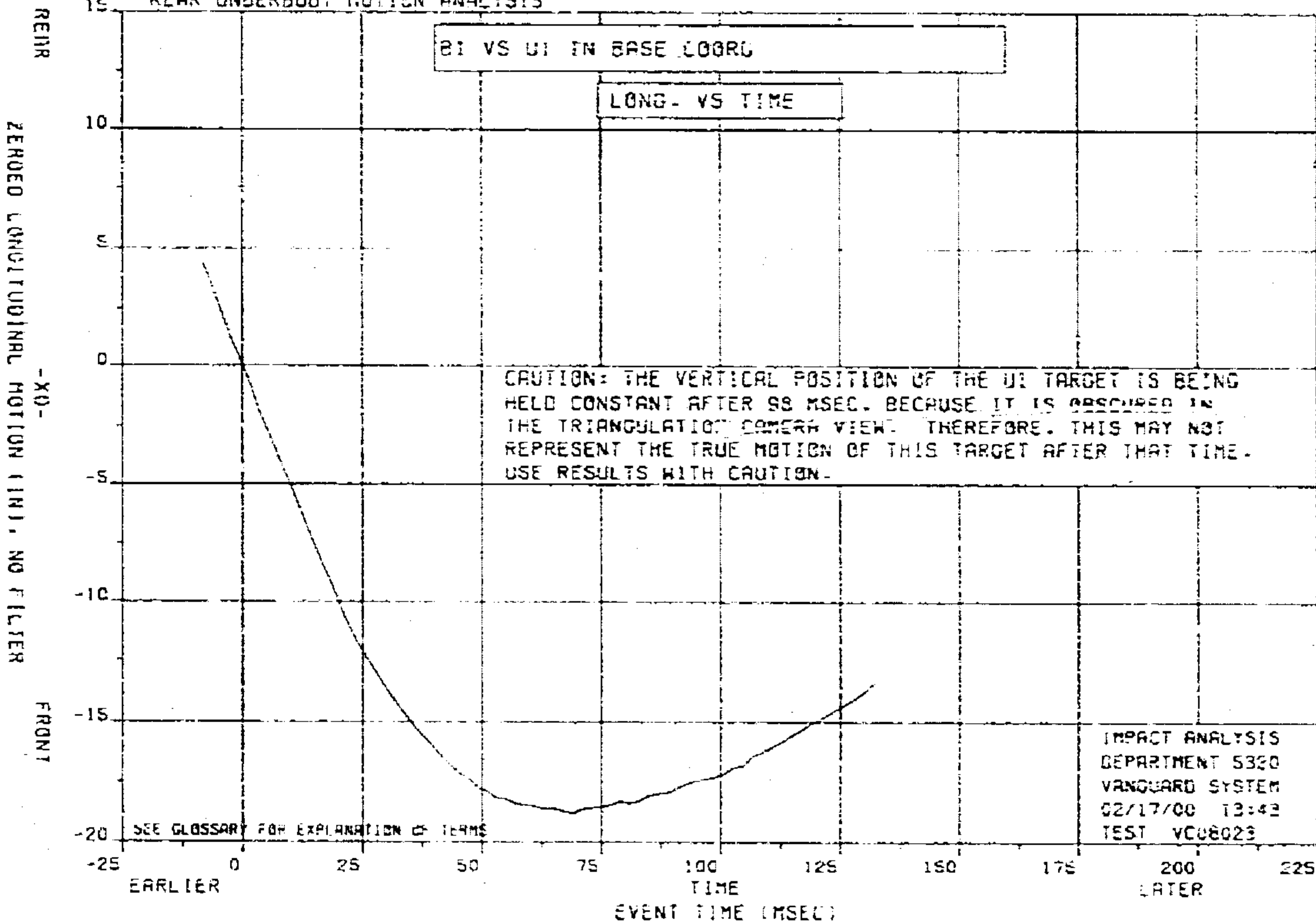


FIGURE 1

VC08023 30 MPH REAR MOVING BARRIER. KJJ-74 ITEM KJ4275R  
2002 MVSS 301 REAR IMPACT DEVELOPMENT.

ZEROED X OF BI RELATIVE TO U13 IN CAR COORD  
VERSUS TIME IN MILLISECONDS

REAR UNDERBODY MOTION ANALYSIS

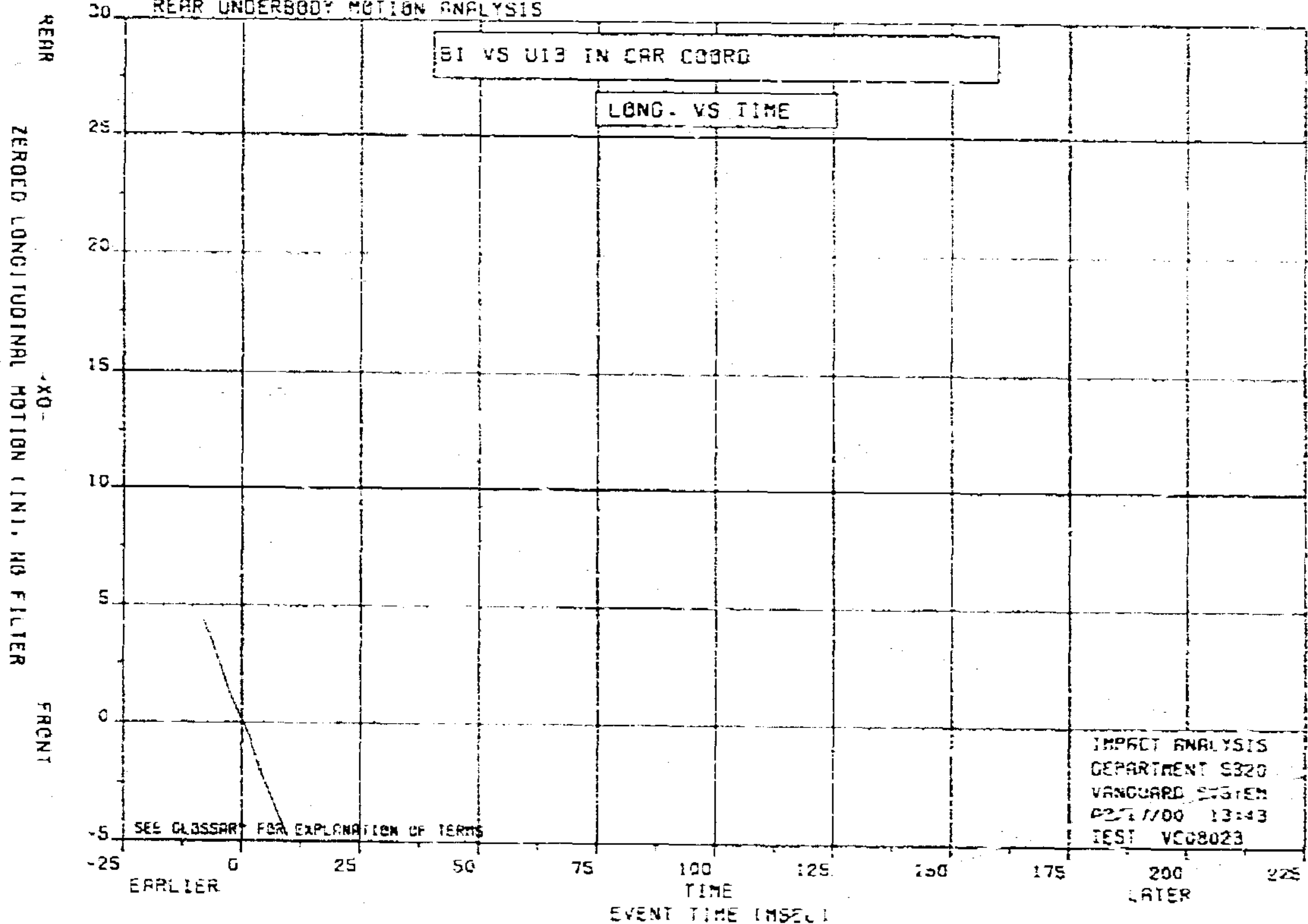


FIGURE 2

VC08023 30 MPH REAR MOVING BARRIER, KJU-74 ITEM KJ4276R  
2002 MVSS 301 REAR IMPACT DEVELOPMENT.

ZERGED X OF U13 RELATIVE TO U1 IN CAR COORD  
VERSUS TIME IN MILLISECONDS

REAR UNDERSHOY MOTION ANALYSIS

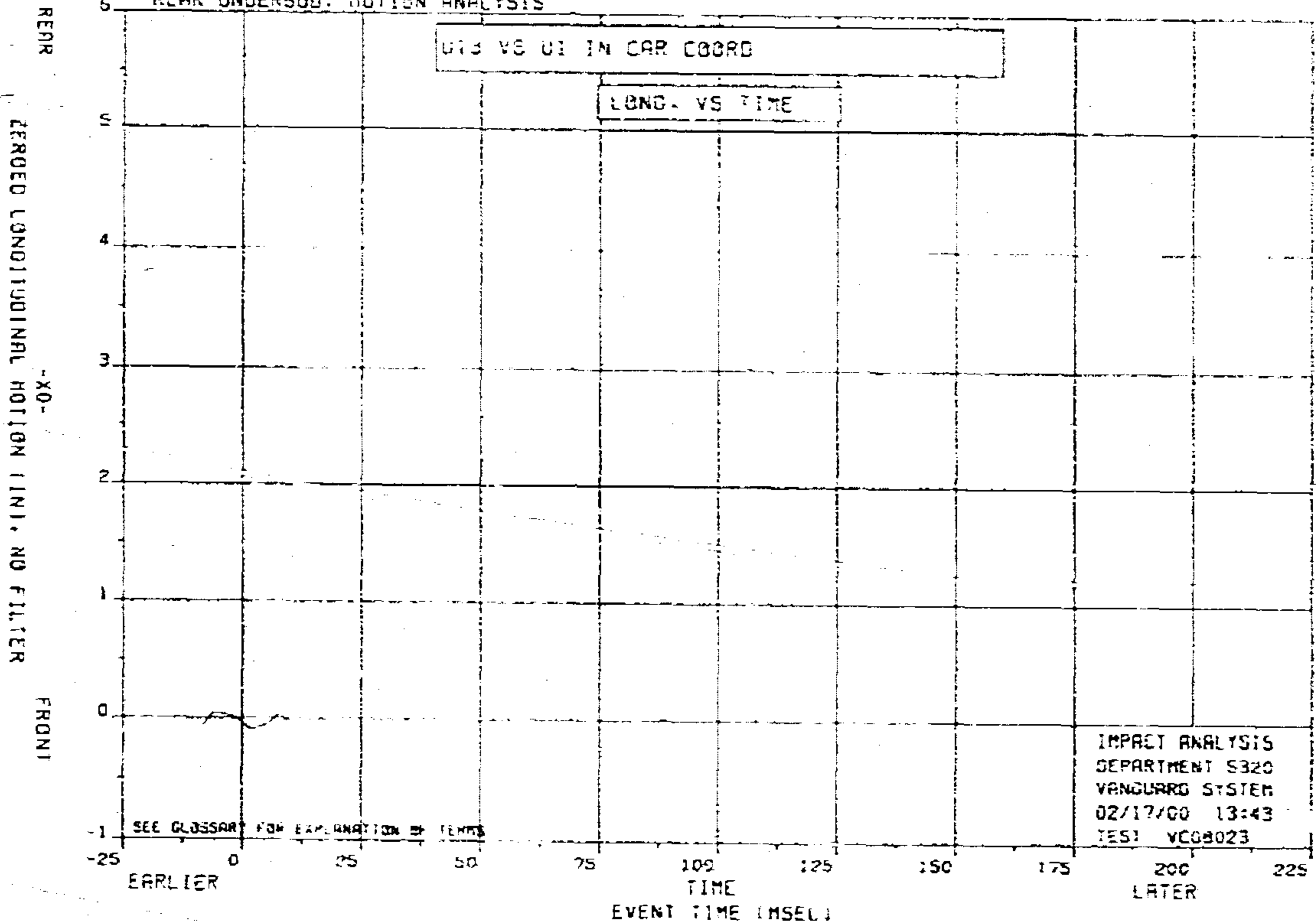


FIGURE 3

ZERGED LONGITUDINAL MOTION (X), NO FILTER



VC08023 30 MPH REAR MOVING BARRIER. KJ4276 174M KJ4276R  
 2002 MVSS 301 REAR IMPACT DEVELOPMENT.

ZERGED X OF B2 RELATIVE TO U2 IN BASE COORD  
 VERSUS TIME IN MILLISECONDS

REAR UNDERBODY MOTION ANALYSIS

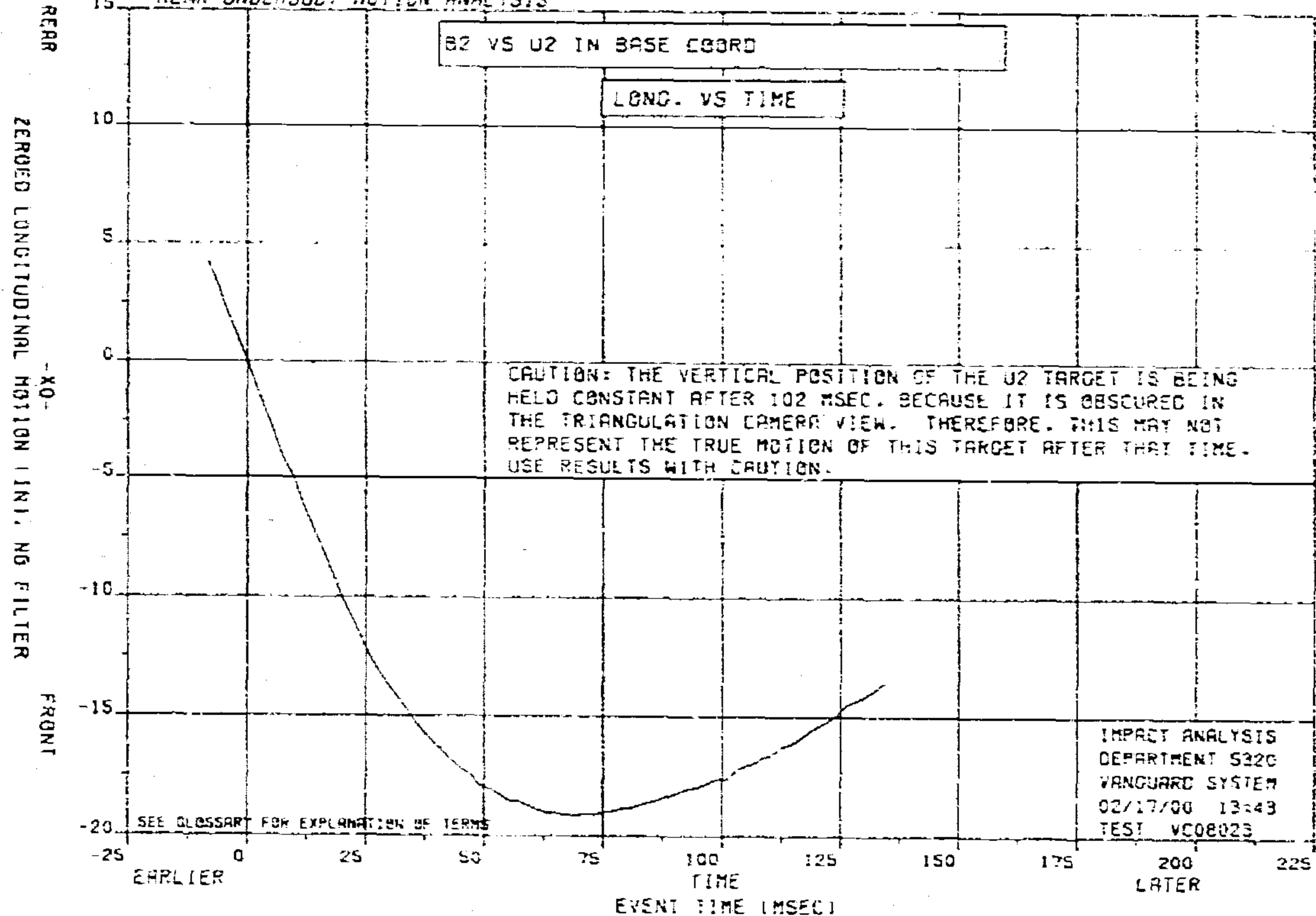


FIGURE 4

VC08023 30 MPH REAR MOVING BARRIER. KJ4-74 ITEM KJ4278R  
2002 MYSS 301 REAR IMPACT DEVELOPMENT.

ZERGED X OF B2 RELATIVE TO U12 IN CAR COORD  
VERSUS TIME IN MILLISECONDS

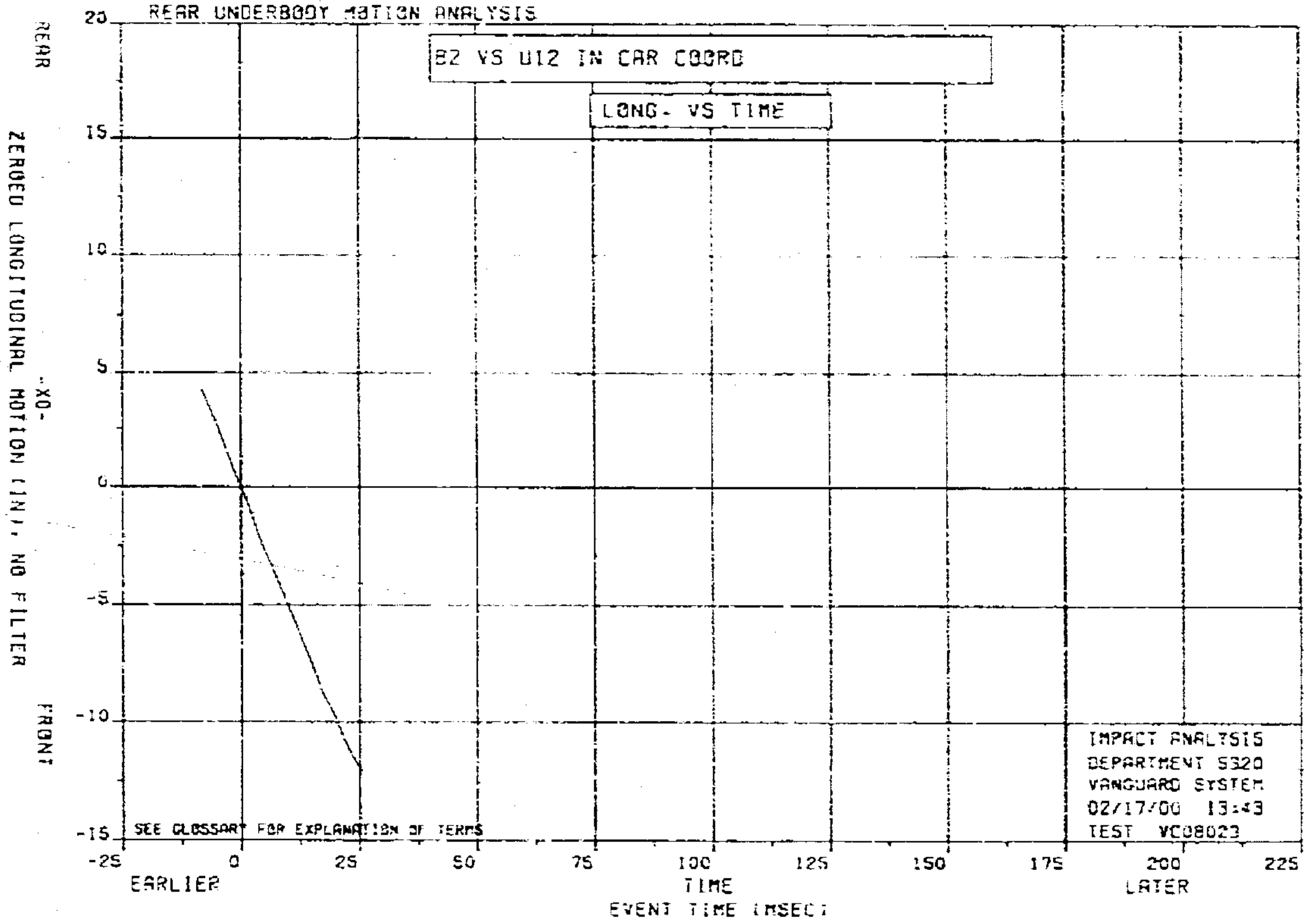


FIGURE 5

VCG8023 30 MPH REAR MOVING BARRI... KJJ-74 ITEM KJ4276R  
2002 MYSS 301 REAR IMPACT DEVELOPMENT.

ZERGED X OF U12 RELATIVE TO U2 IN CAR COORD  
VERSUS TIME IN MILLISECONDS

REAR UNDERBODY MOTION ANALYSIS

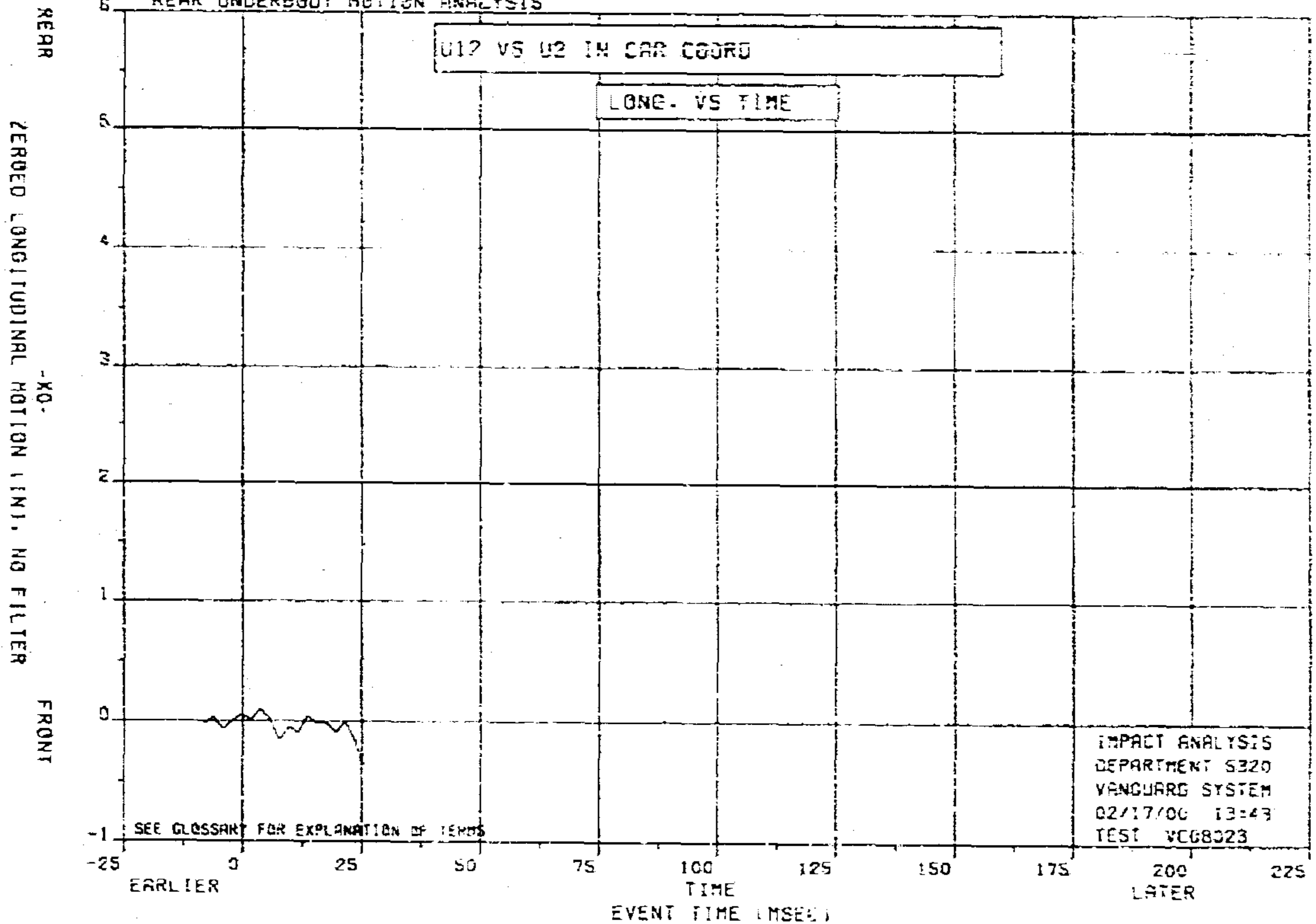


FIGURE 6

VC08023 30 MPH REAR MOVING BARRIER. KJJ-74 ITEM KJ4276R  
 2002 MVSS 301 REAR IMPACT DEVELOPMENT.

ZERGED X OF US RELATIVE TO U1 IN CAR COORD  
 VERSUS TIME IN MILLISECONDS

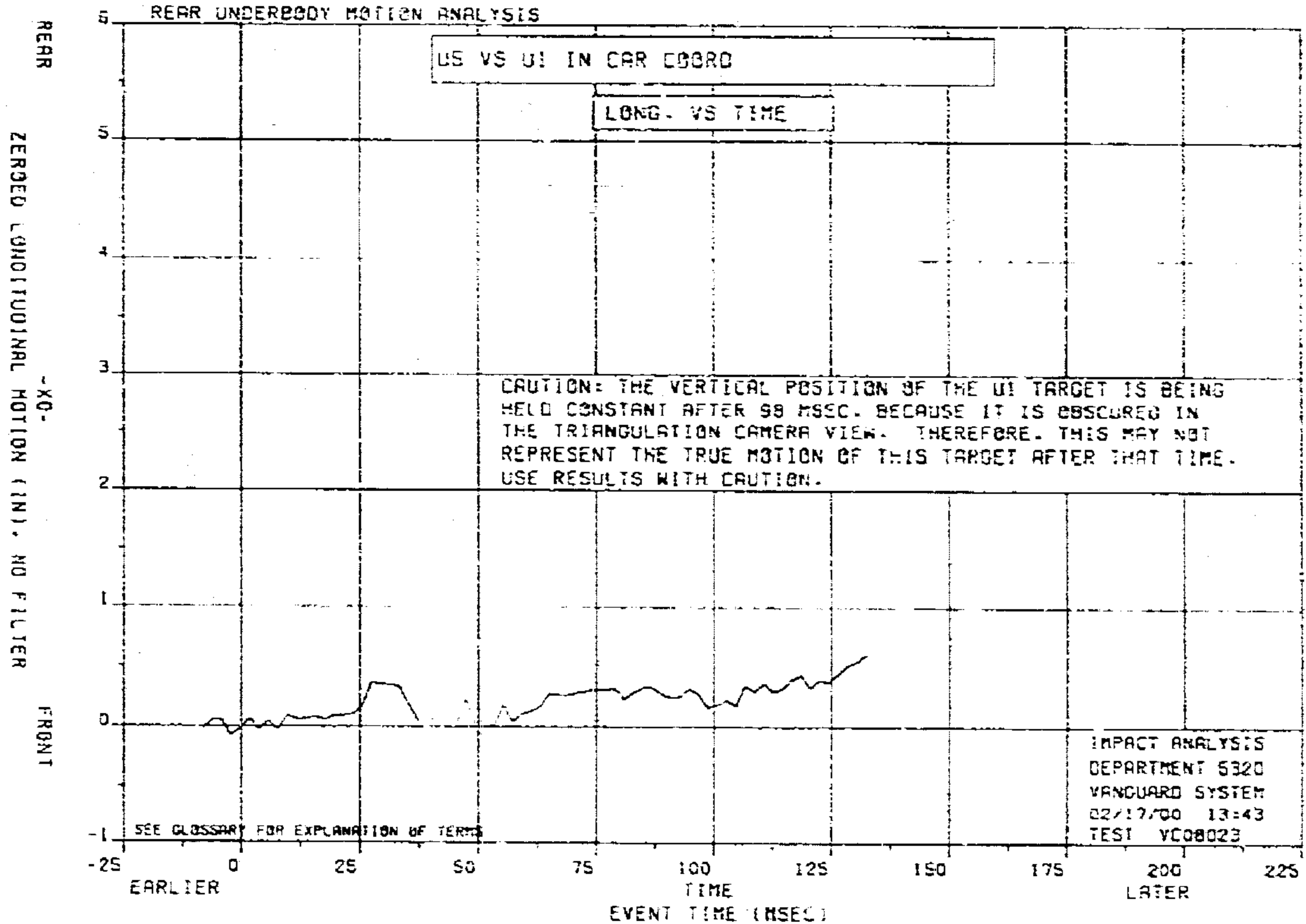


FIGURE 7





VC08023 30 MPH REAR MOVING BARRIER. FULL 74 ITEM ASSEMBLY  
 2002 MVSS 201 REAR IMPACT DEVELOPMENT.

ZEREO X OF US RELATIVE TO U1 IN CAR COORD  
 VERSUS TIME IN MILLISECONDS

REAR UNDERBODY MOTION ANALYSIS

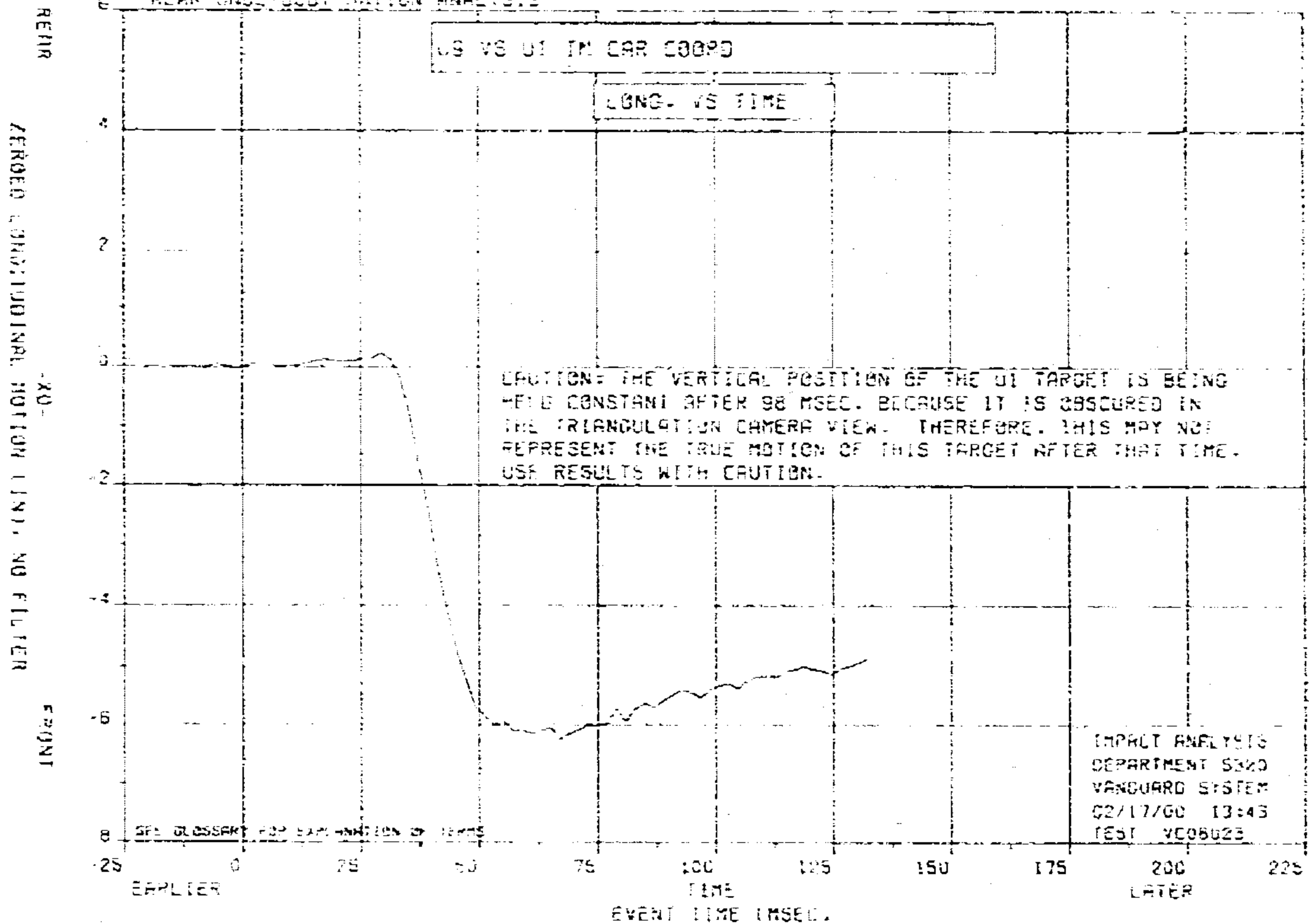


FIGURE 9

V008029 30 MPH REAR MOVING BARRIER. KJ3-74 ITEM KJ4276R  
 2002 MVSS 301 REAR IMPACT DEVELOPMENT.

ZERDED X OF U2 RELATIVE TO U2 IN CAR COORD  
 VERSUS TIME IN MILLISECONDS

REAR UNDERBODY MOTION ANALYSIS

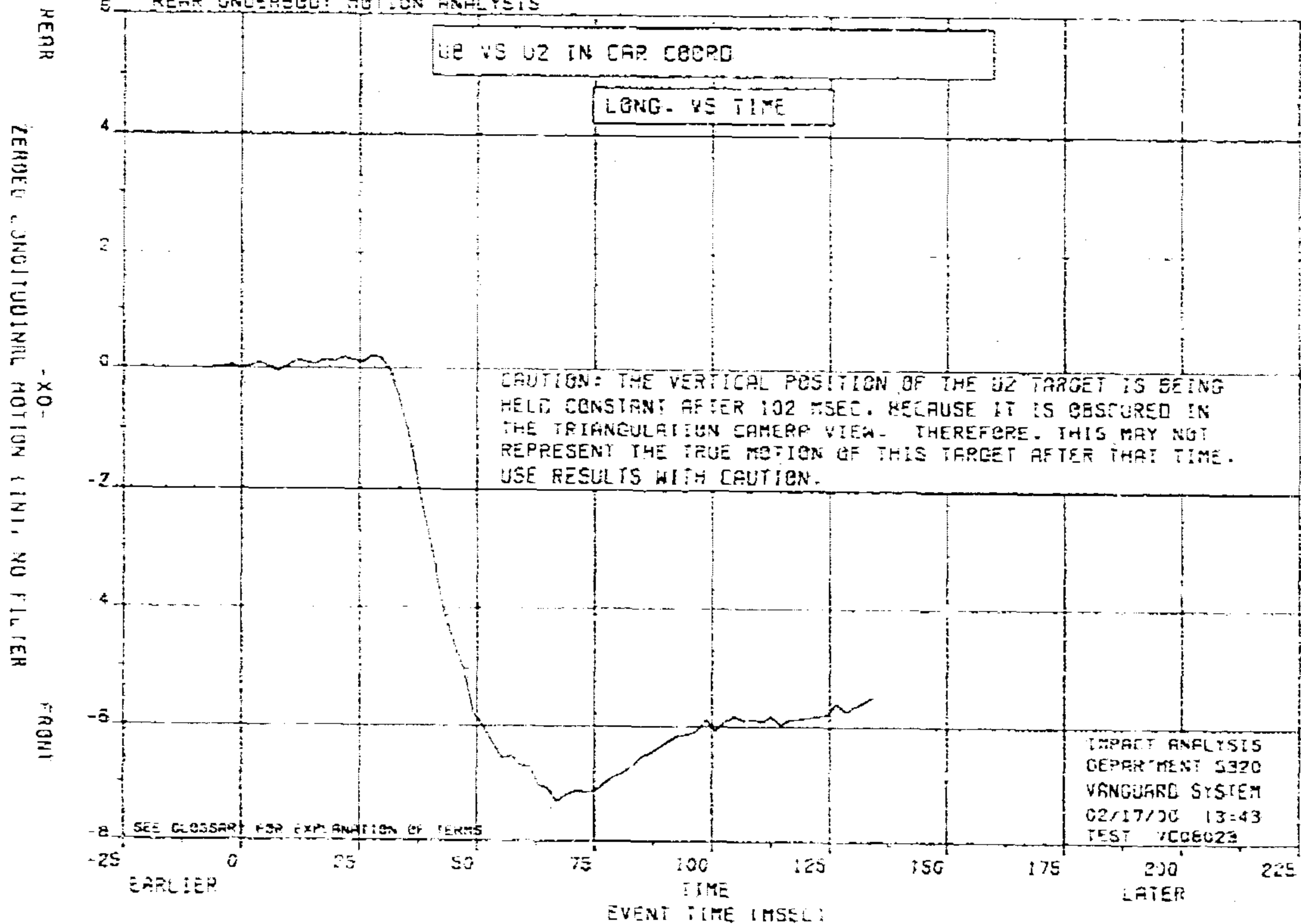


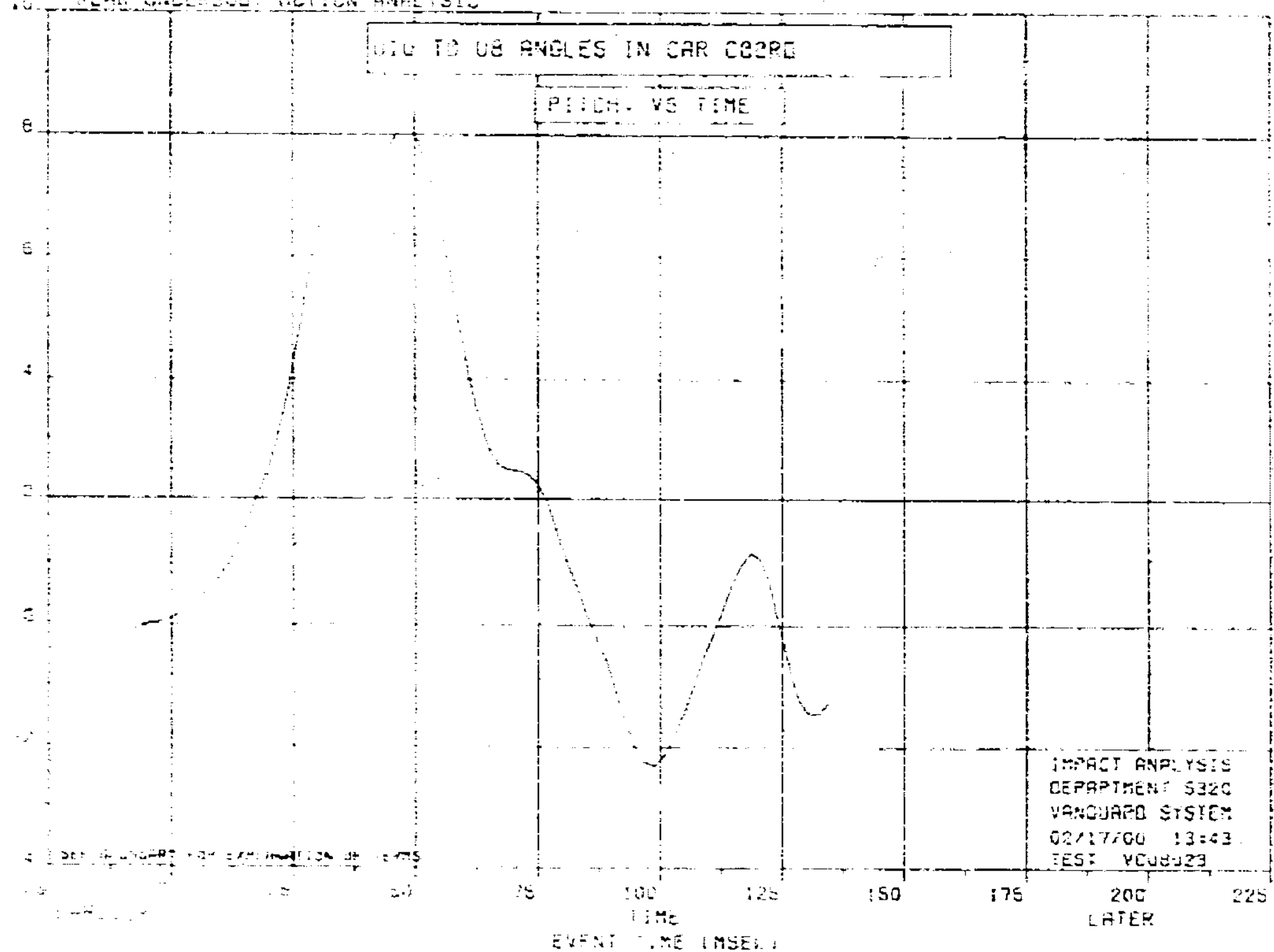
FIGURE 10

VC08029 30 MPH REAR MOVING BARRIER. R33-74 ITEM 804276R  
 2002 NVSS 301 REAR IMPACT DEVELOPMENT.

ZERGED FITCH OF U10 TO U8 IN CAR COORD SYSTEM  
 VERSUS TIME IN MILLISECONDS

REAR UNDERBODY MOTION ANALYSIS

NOSH  
 GREEN CON GRUND X RELATIVE TO X RT SIDE VIEW) SONG VILTR  
 CORR P  
 MORE DOWN



IMPACT ANALYSIS  
 DEPARTMENT 5320  
 VANGUARD SYSTEM  
 02/17/00 13:43  
 TEST VC08029

FIGURE 11





VC08003 30 MPH REAR MOVING BARRIER - KJ4-74 ITEM KJ4275R  
 2002 MYSS 301 REAR IMPACT DEVELOPMENT.

REAR PITCH OF U11 TO US IN CAR COORD SYSTEM  
 VERSUS TIME IN MILLISECONDS

REAR UNDERBODY MOTION ANALYSIS

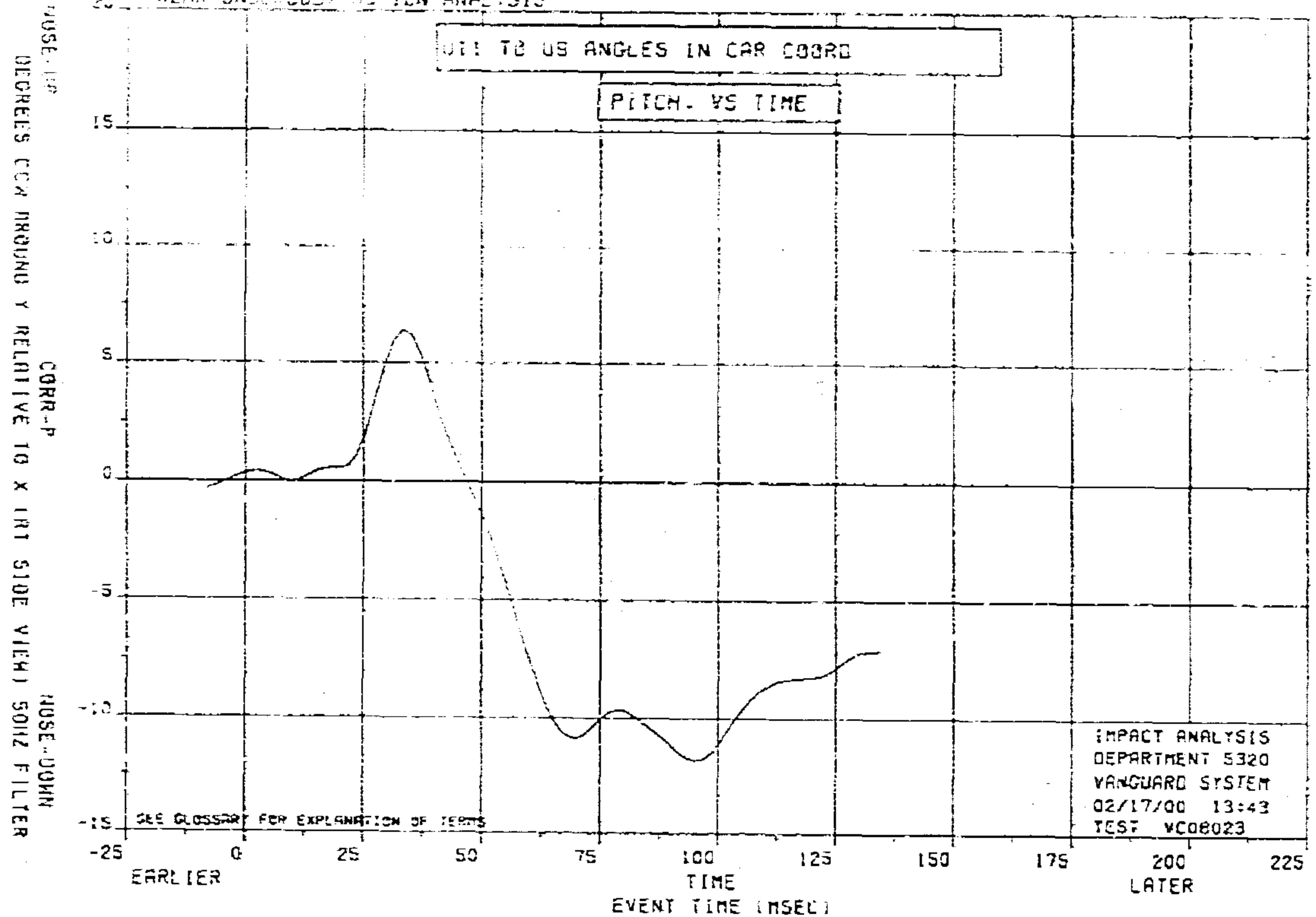


FIGURE 13

VC05023 30 MPH REAR MOVING CARRIER, MJJ-74 ITEM KJ4276R  
 2002 MVSS 301 REAR IMPACT DEVELOPMENT.

ZERGED SEPARATION OF UII AND US (IN)  
 VERSUS TIME IN MILLISECOND

REAR UNDERBODY MOTION ANALYSIS

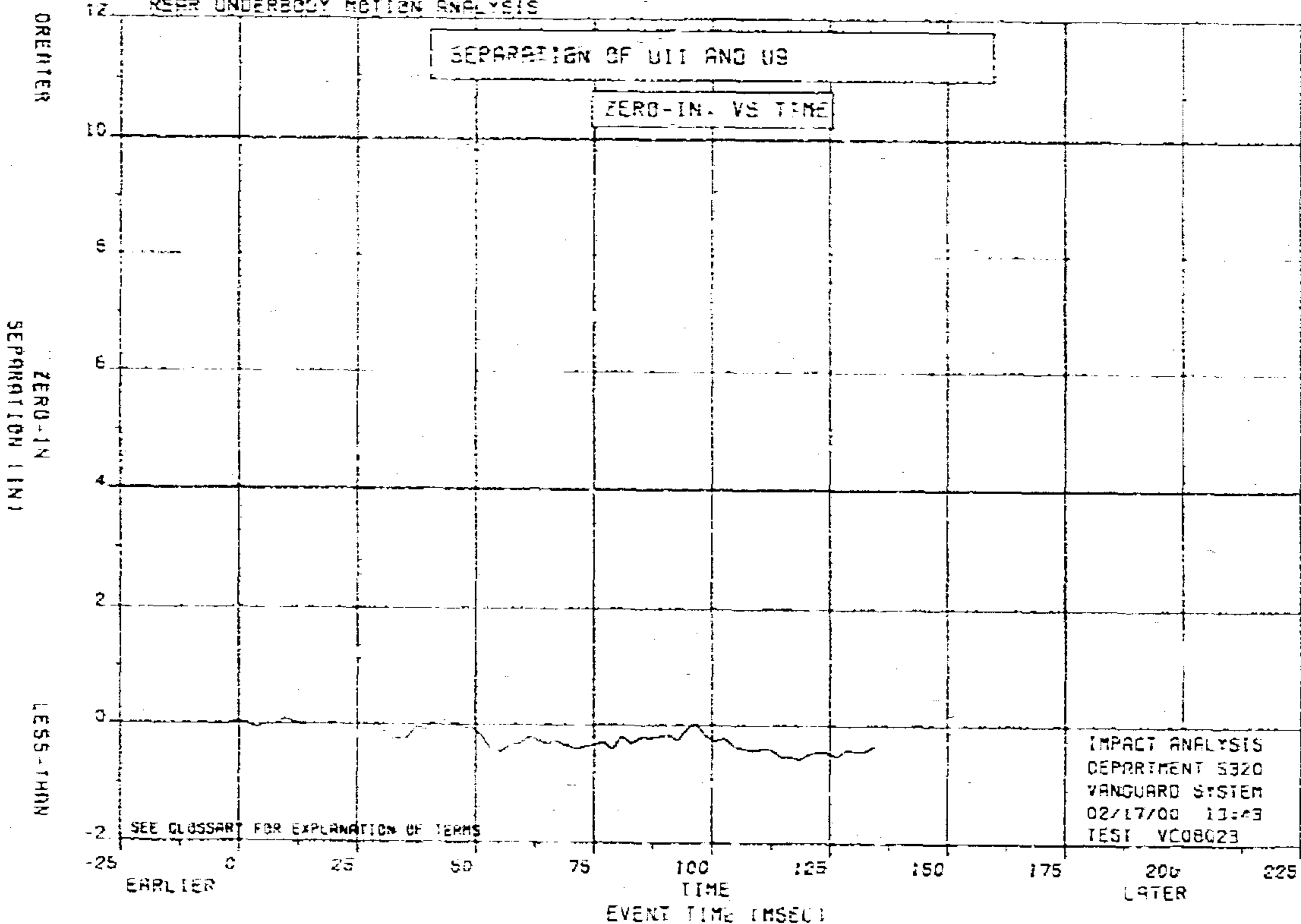


FIGURE 14  
 ZERGED SEPARATION (IN)

VC08023 30 MPH REAR MOVING BARRIER. KJU-74 ITEM MJ4276R  
 2002 MYSS 301 REAR IMPACT DEVELOPMENT.

ZEROED X OF U3 RELATIVE TO U1 IN CAR COORD  
 VERSUS TIME IN MILLISECOND

REAR UNDERBODY MOTION ANALYSIS

REAR

ZEROED LONGITUDINAL MOTION (IN), NO FILTER

-XO-

FRONT

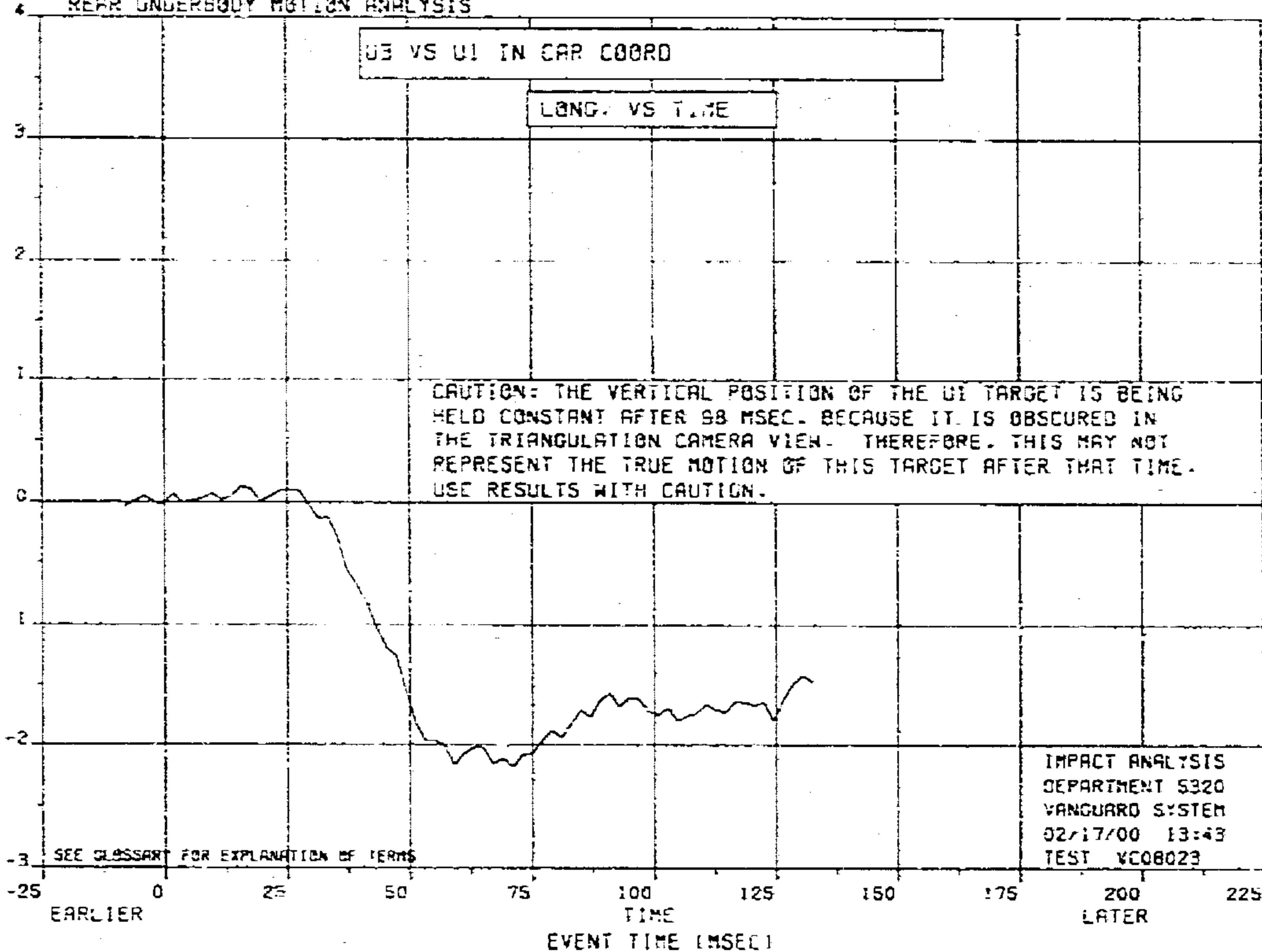


FIGURE 16

VC08023 30 MPH REAR MOVING BARRIER, RUC-74 ITEM KJ4275R  
 2002 MVSS 301 REAR IMPACT DEVELOPMENT.

ZEROED X OF U4 RELATIVE TO U2 IN CAR COORD  
 VERSUS TIME IN MILLISECONDS

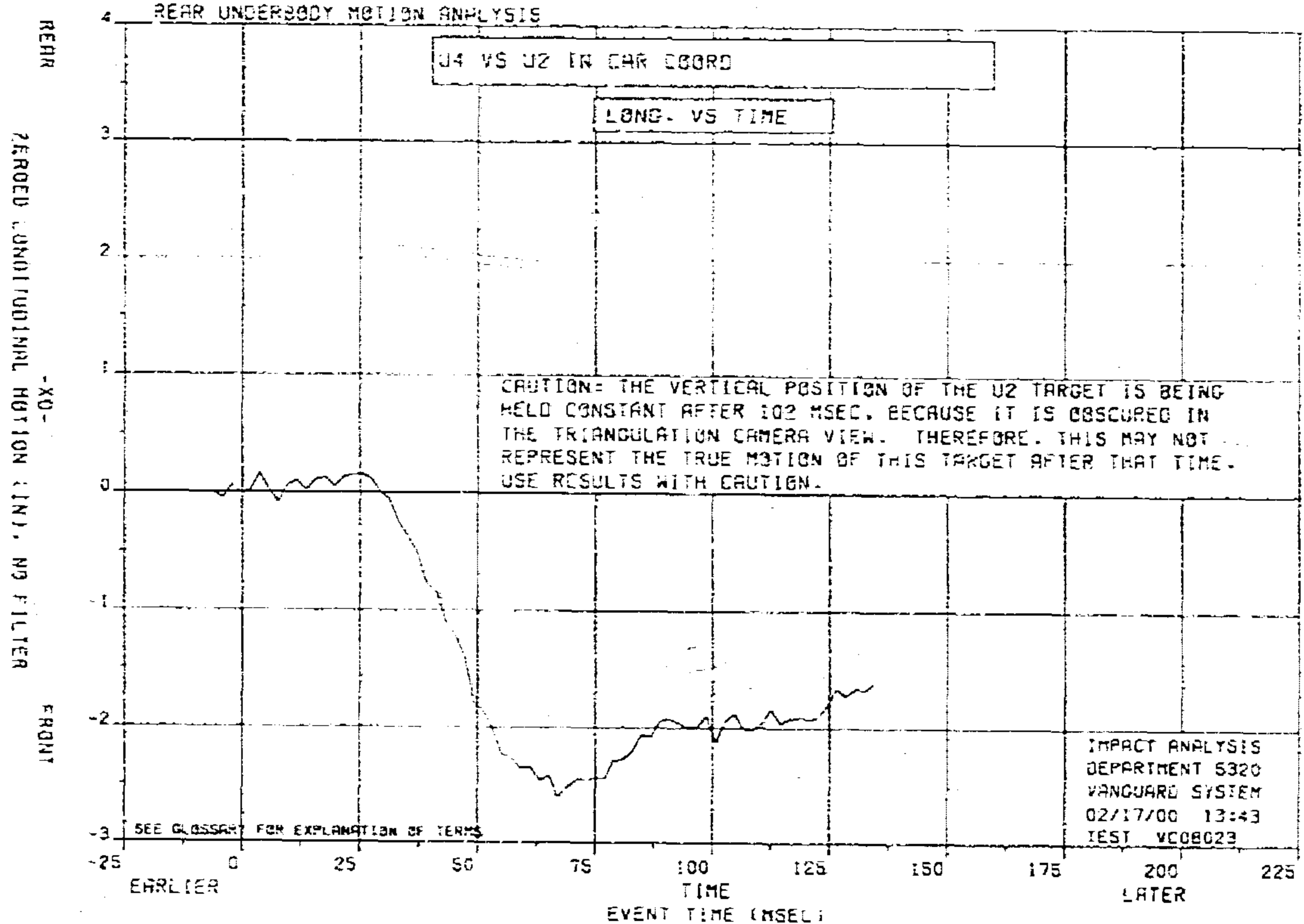


FIGURE 16

VC08023 30 MPH REAR MOVING BARRIER. KJU-74 ITEM KJ4276P  
 2002 MVSS 301 REAR IMPACT DEVELOPMENT.

ZERGED YAW OF U1 TO U2 IN BASE COORD SYSTEM  
 VERSUS TIME IN MILLISECONDS

REAR UNDERBODY MOTION ANALYSIS

YAW-LEFT  
 DEGREES CCM AROUND Z RELATIVE TO X (PLRN VIEW) 50HZ FILTER  
 CORR-Y  
 YAW-RIGHT

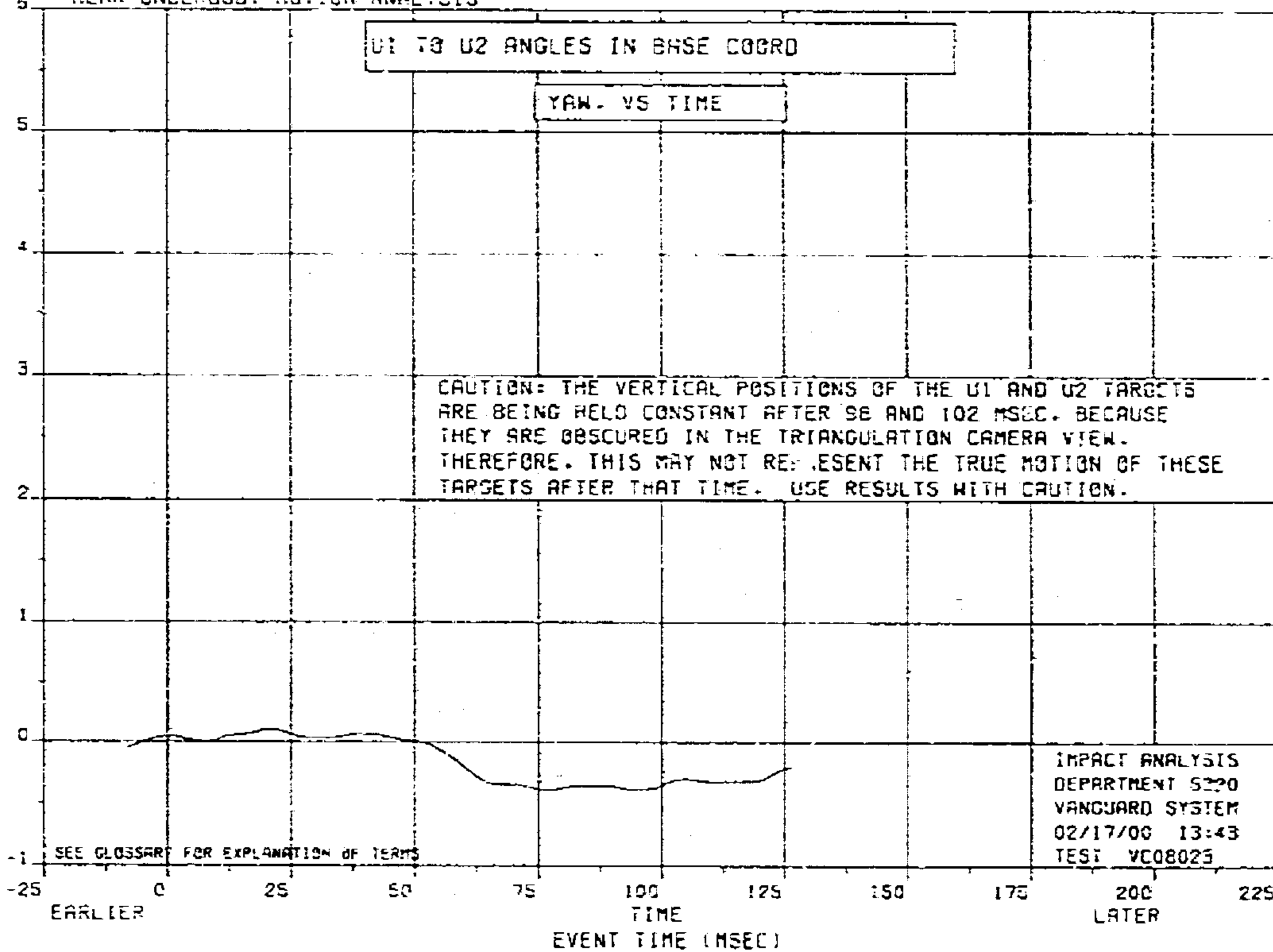


FIGURE 17



VC08023 30 MPH REAR MOVING BARRIER. KJ0074 ITEM KJ4275R  
 2002 MYSS 301 REAR IMPACT DEVELOPMENT.

B1 TO B2 DISTANCE -37.66 INCHES (INITIAL DIST) CON.  
 VERSUS TIME IN MILLISECOND

REAR UNDERBODY MOTION ANALYSIS

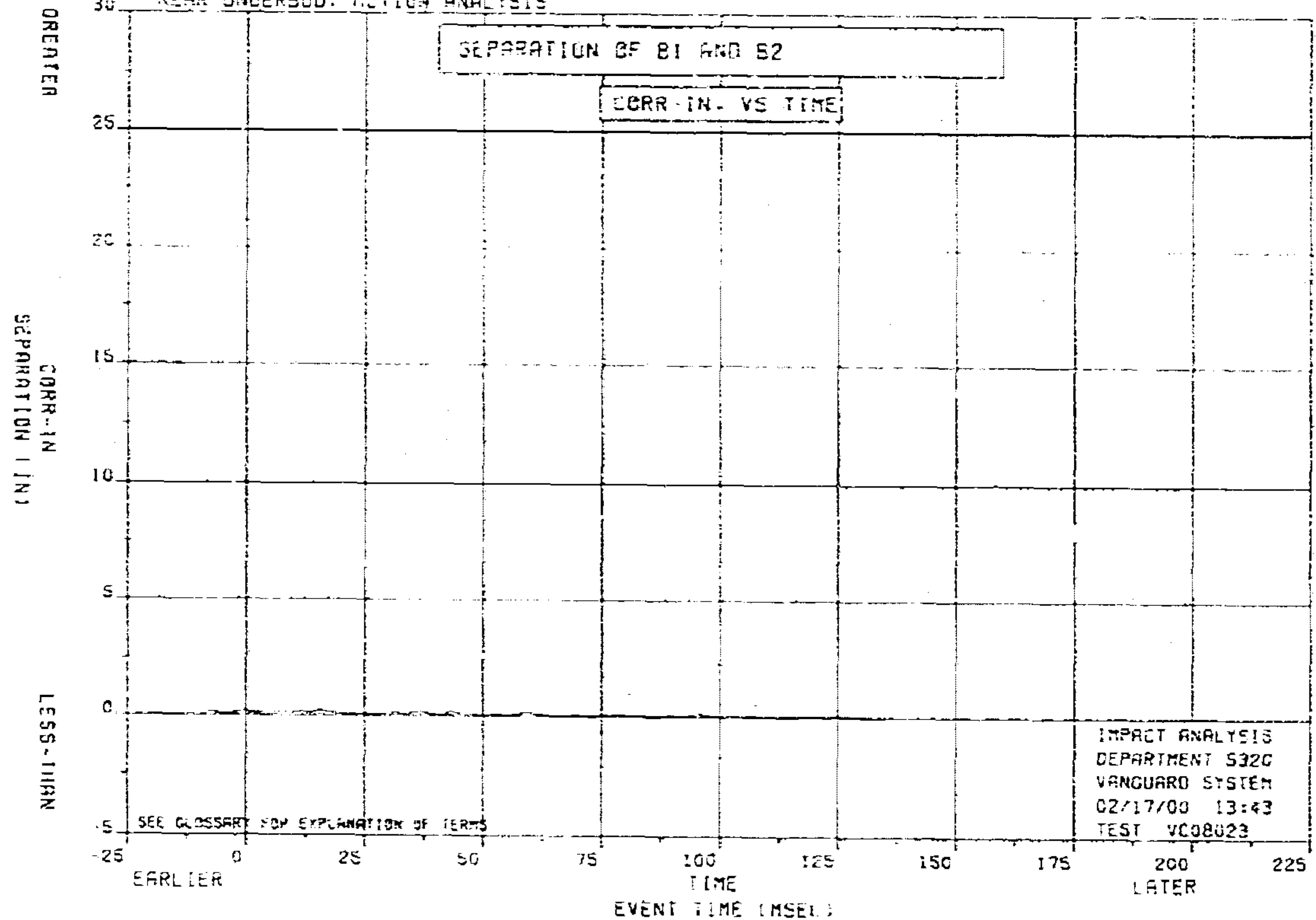
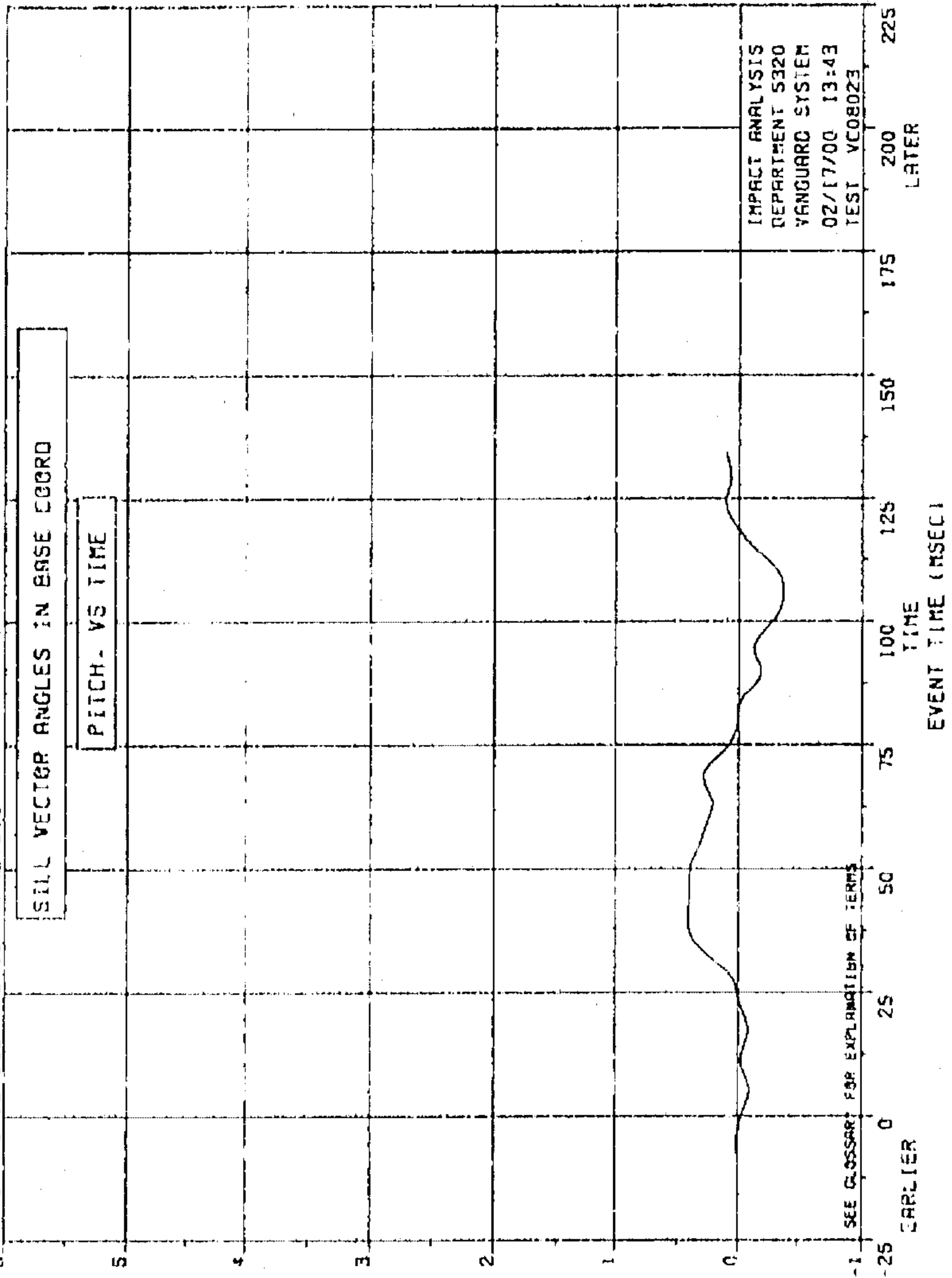


FIGURE 19

VC08023 30 MPH REAR MOVING BARRIER. KJJ-74 ITEM KJ-276R  
 2002 MVSS 301 REAR IMPACT DEVELOPMENT.

ZERGED PITCH OF SILL VECTOR IN BASE COORD SYSTEM  
 VERSUS TIME IN MILLISECONDS

REAR UNDERBODY MOTION ANALYSIS



NOSE-UP

CORR-P

NOSE-DOWN

DEGREES CCH AROUND Y RELATIVE TO X (RT SIDE VIEW) 50HZ FILTER

FIGURE 19

VC08023 30 MPH REAR MOVING BARRIER. KJU-74 ITEM KJ4276R  
 2002 MVSS 301 REAR IMPACT DEVELOPMENT.

U1 TO U2 DISTANCE .37.23 INCHES (INITIAL DIST) (IN)  
 VERSUS TIME IN MILLISECONDS

REAR UNDERBODY MOTION ANALYSIS

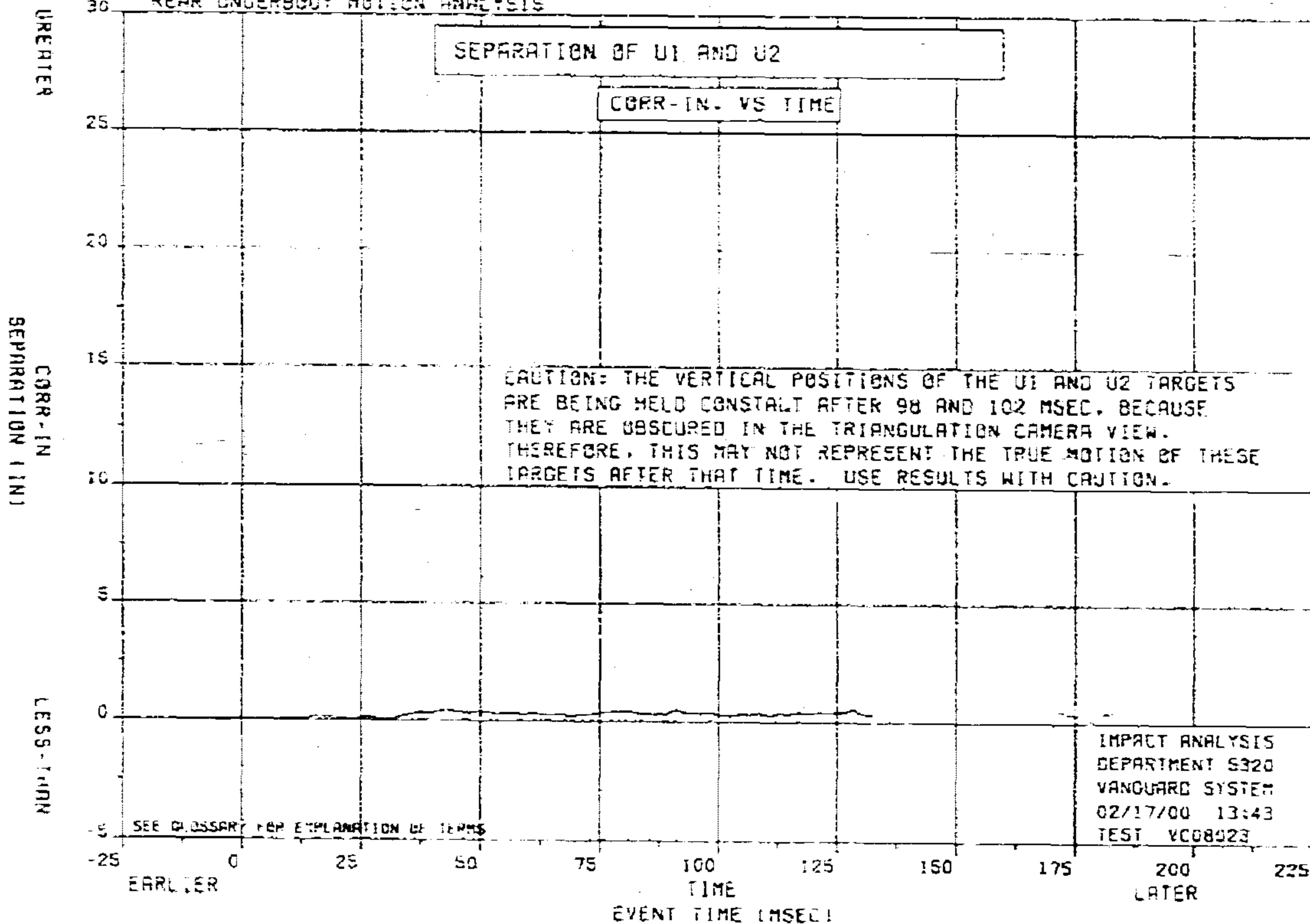


FIGURE 20

VC08023 30 MPH REAR MOVING BARRIER. KJ3-74 ITEM KJ4276R  
2002 MYSS 301 REAR IMPACT DEVELOPMENT.

LFS TO LMS DISTANCE -23.79 INCHES (INITIAL DIST) (IN)  
VERSUS TIME IN MILLISECONDS

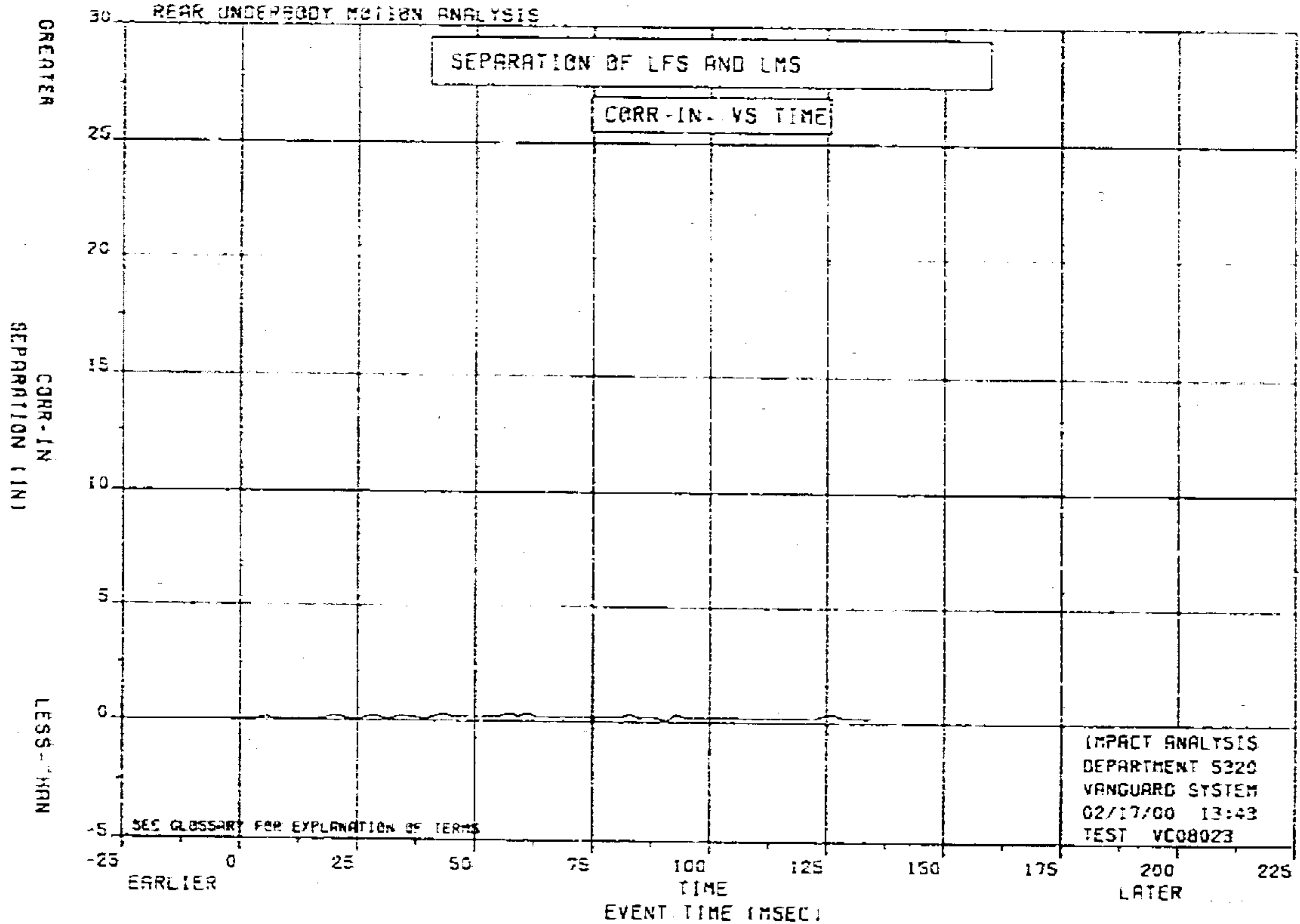
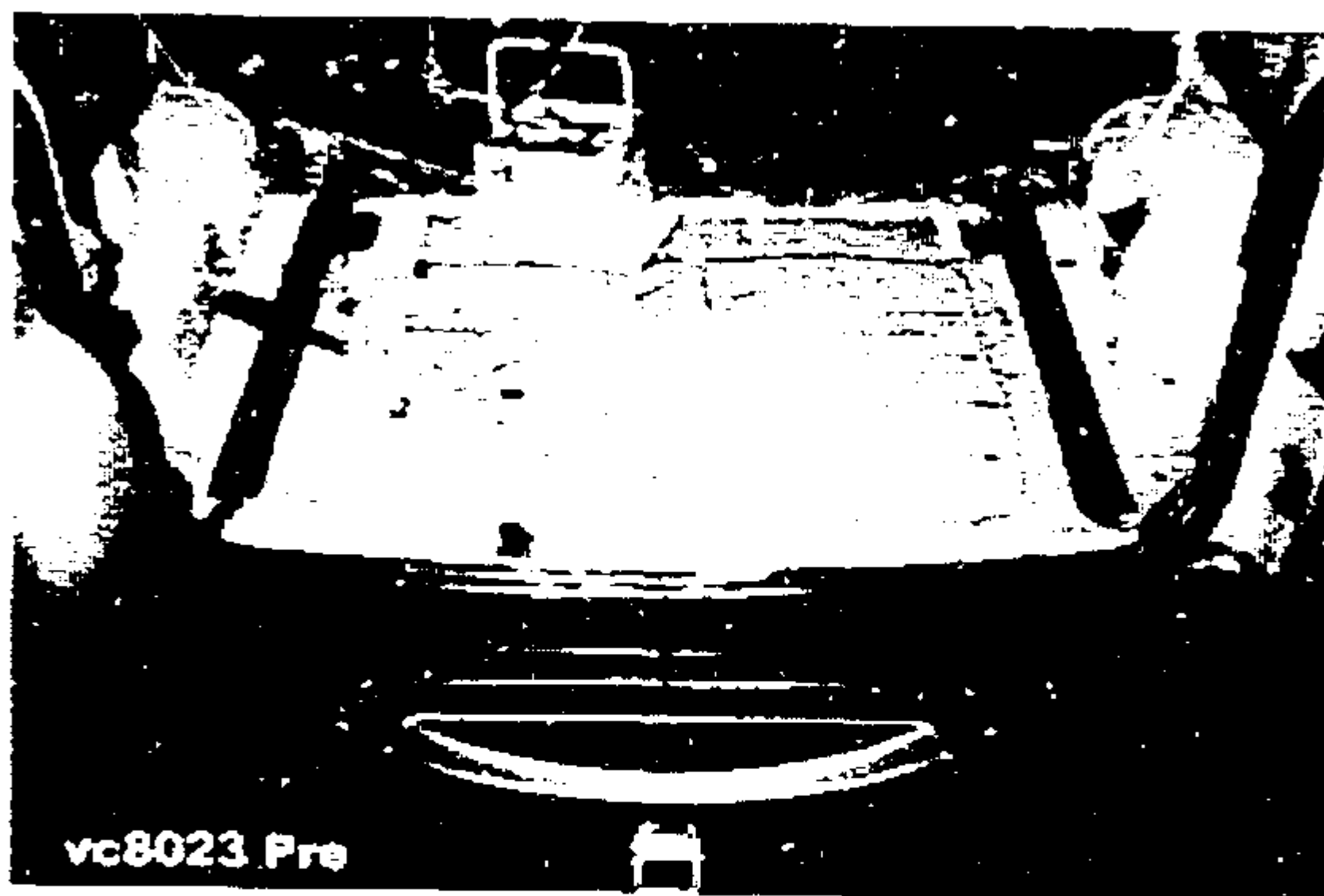
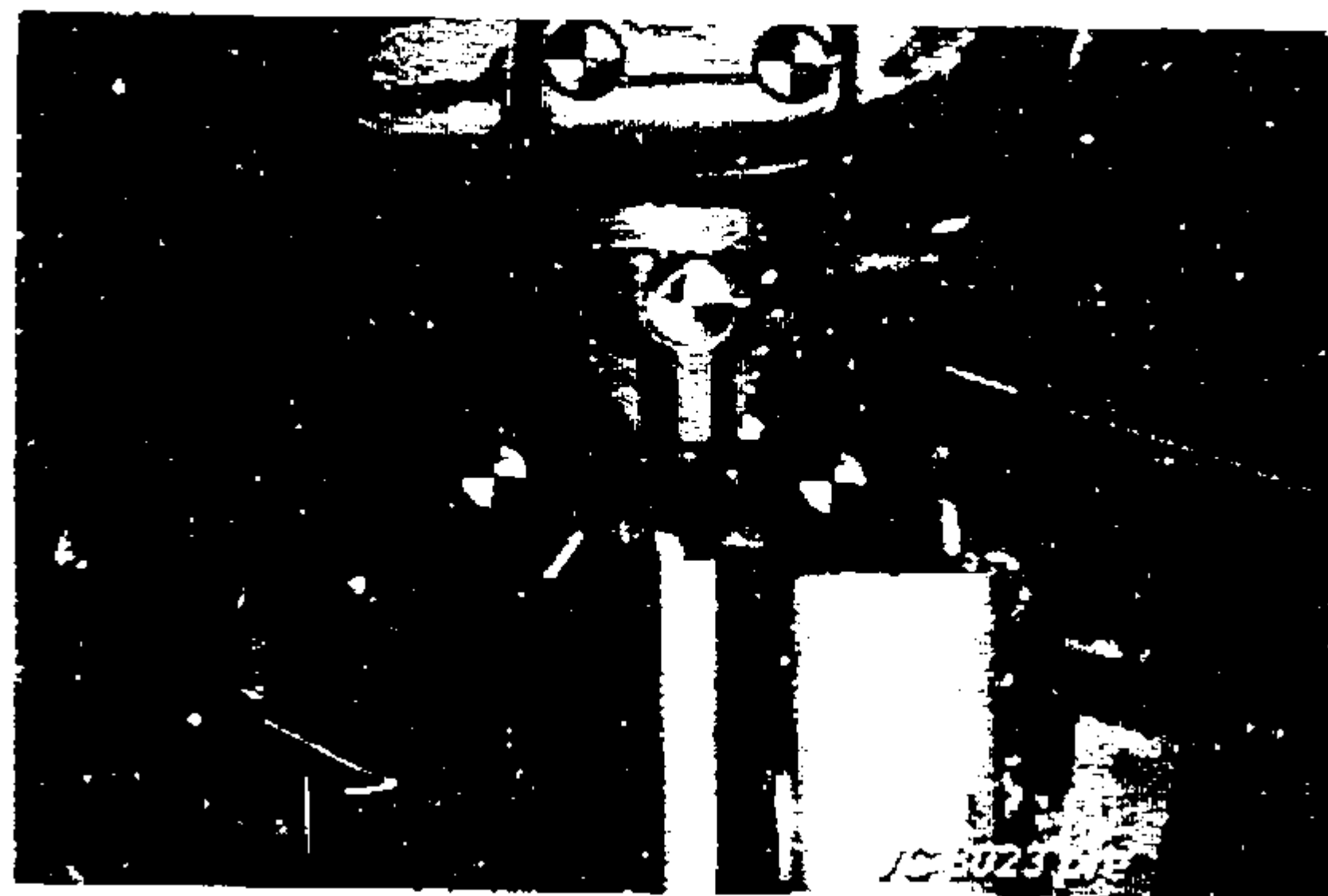
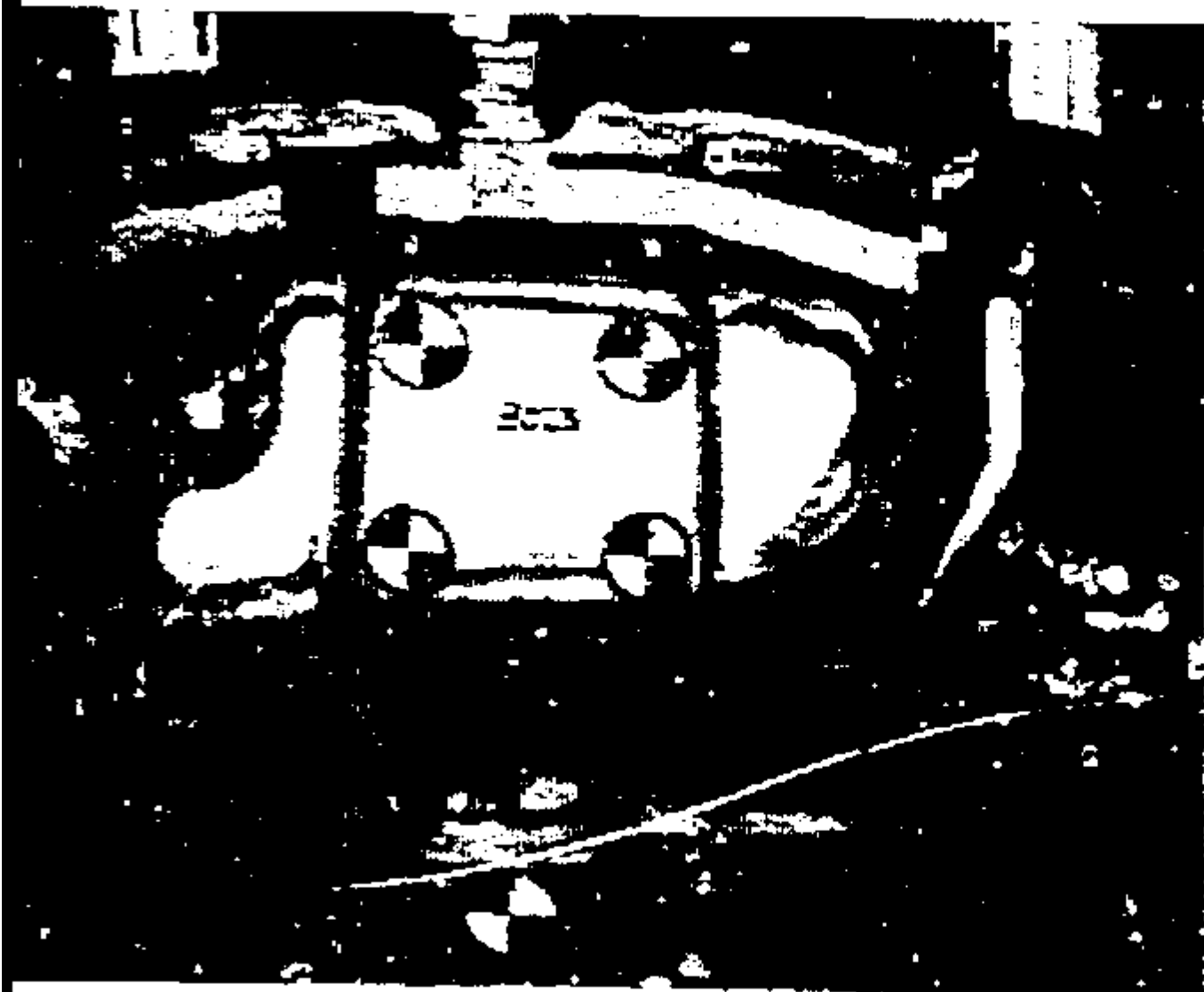


FIGURE 21



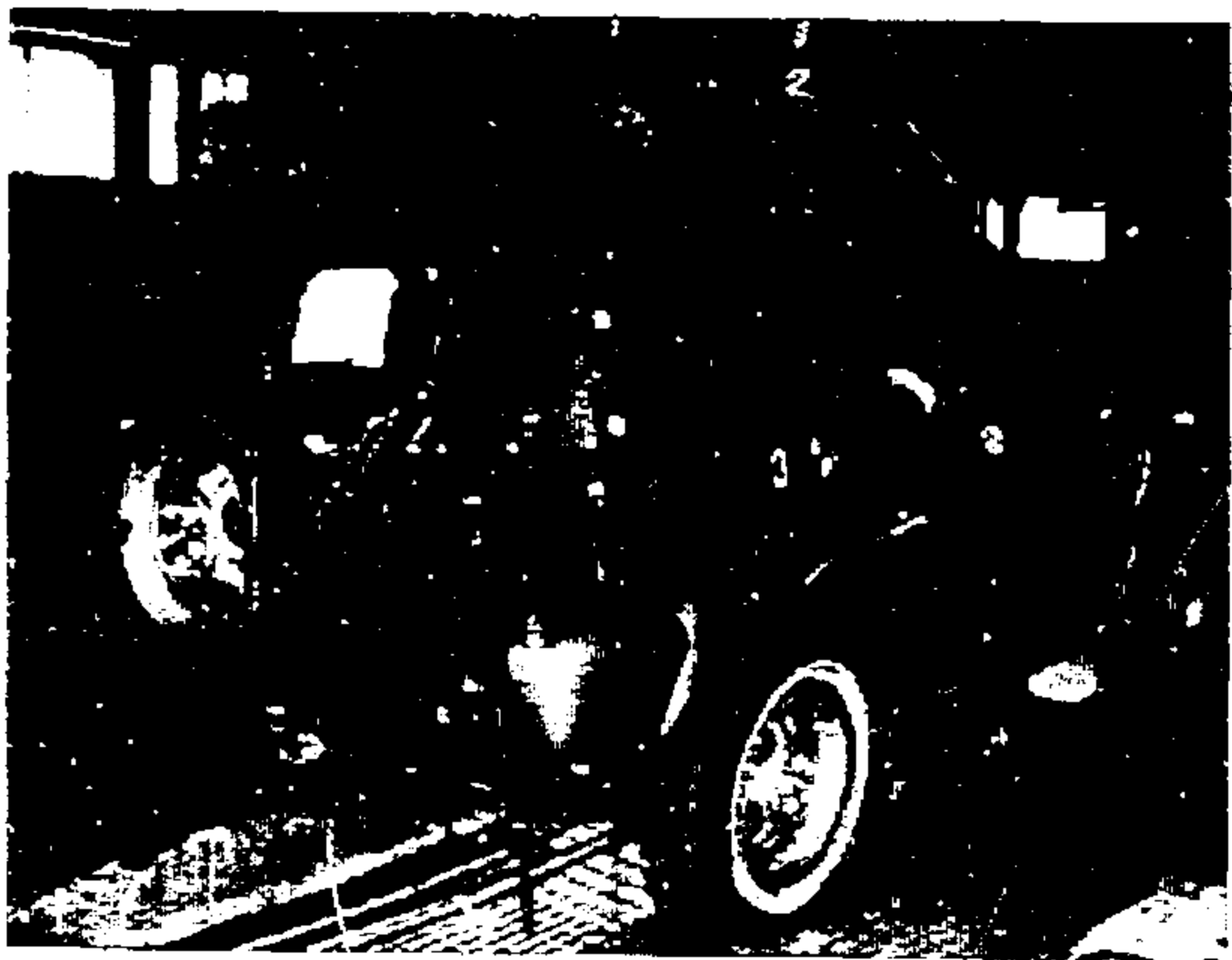




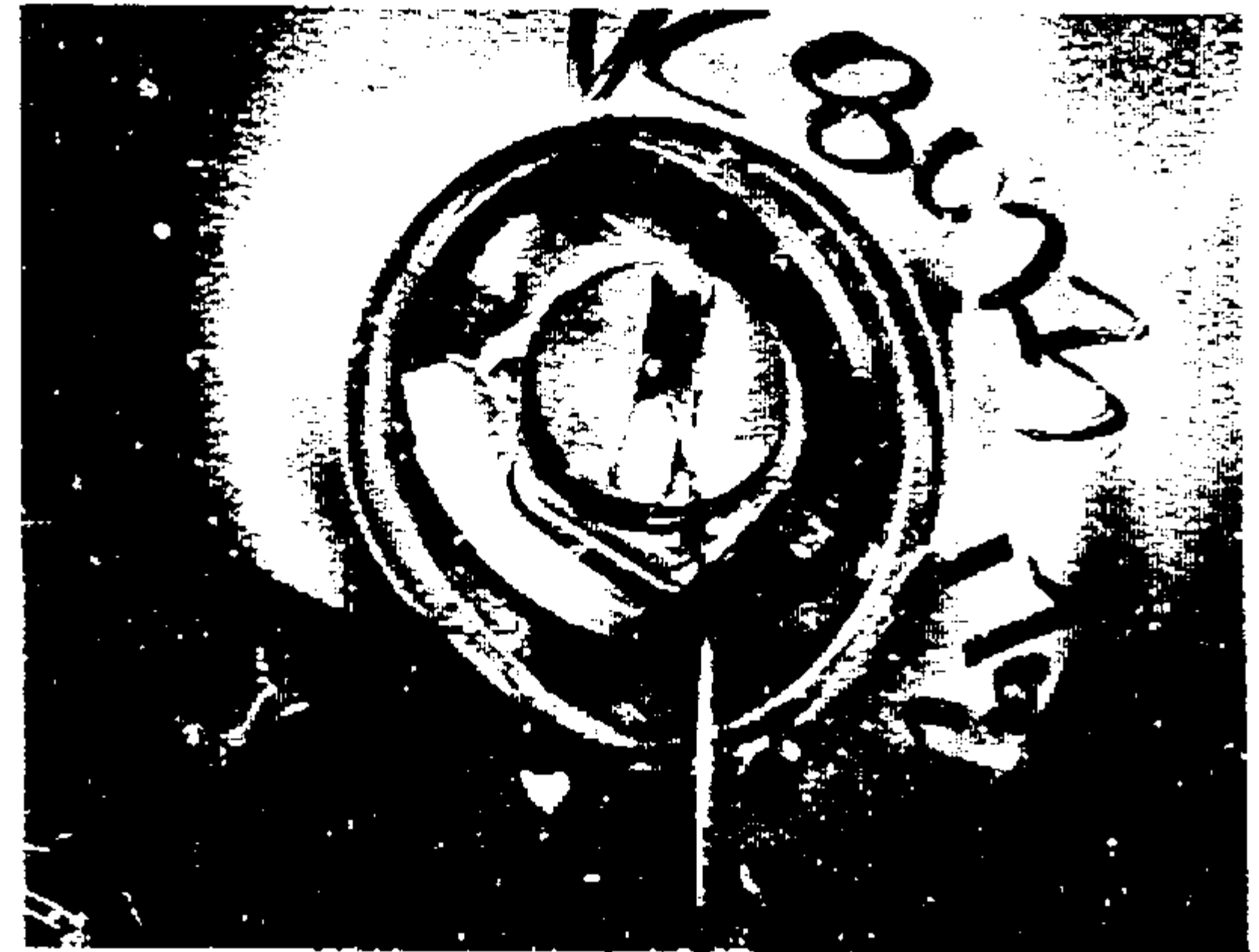
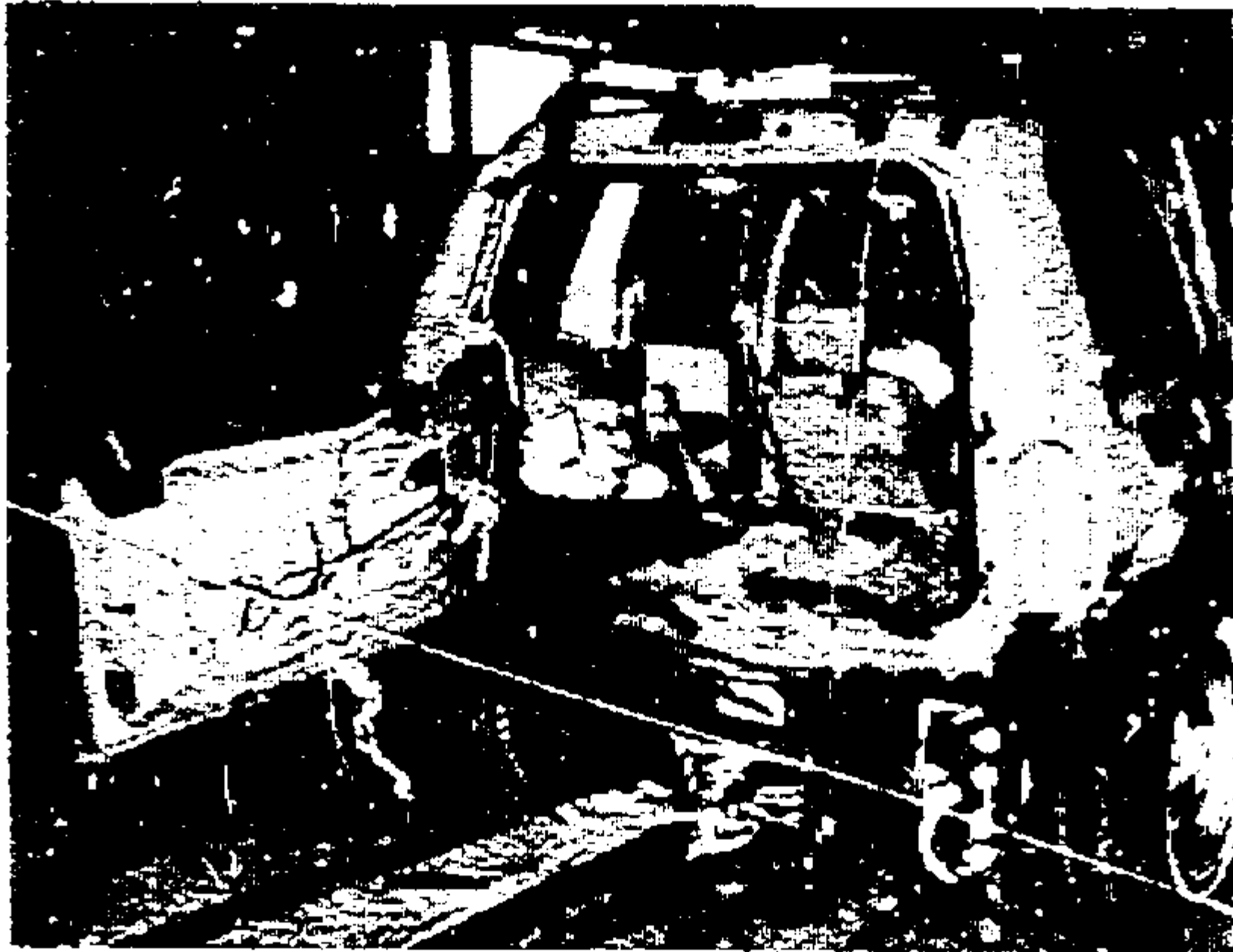
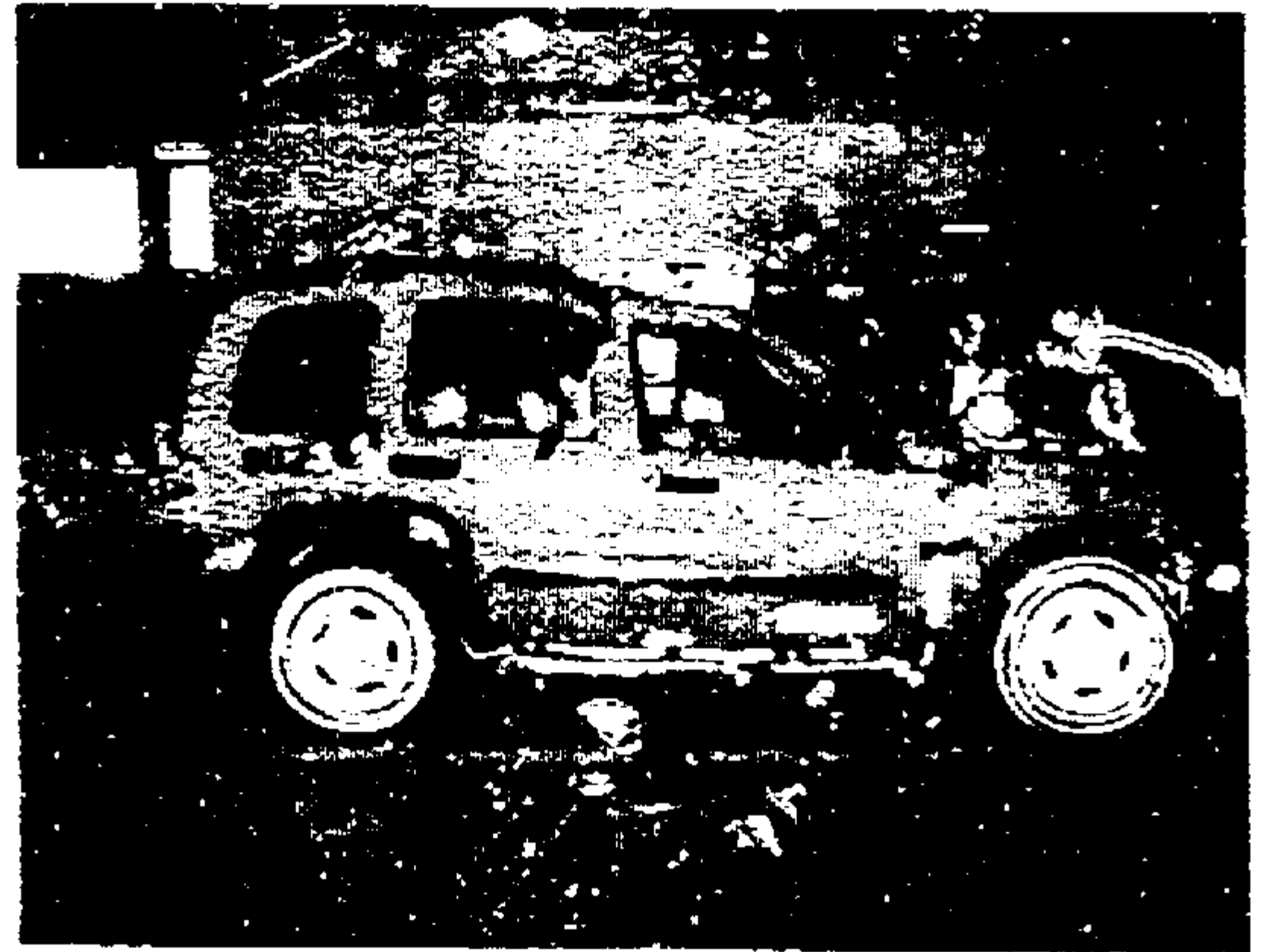
v08023ax.jpg



v08023aw.jpg



v08023ax.jpg

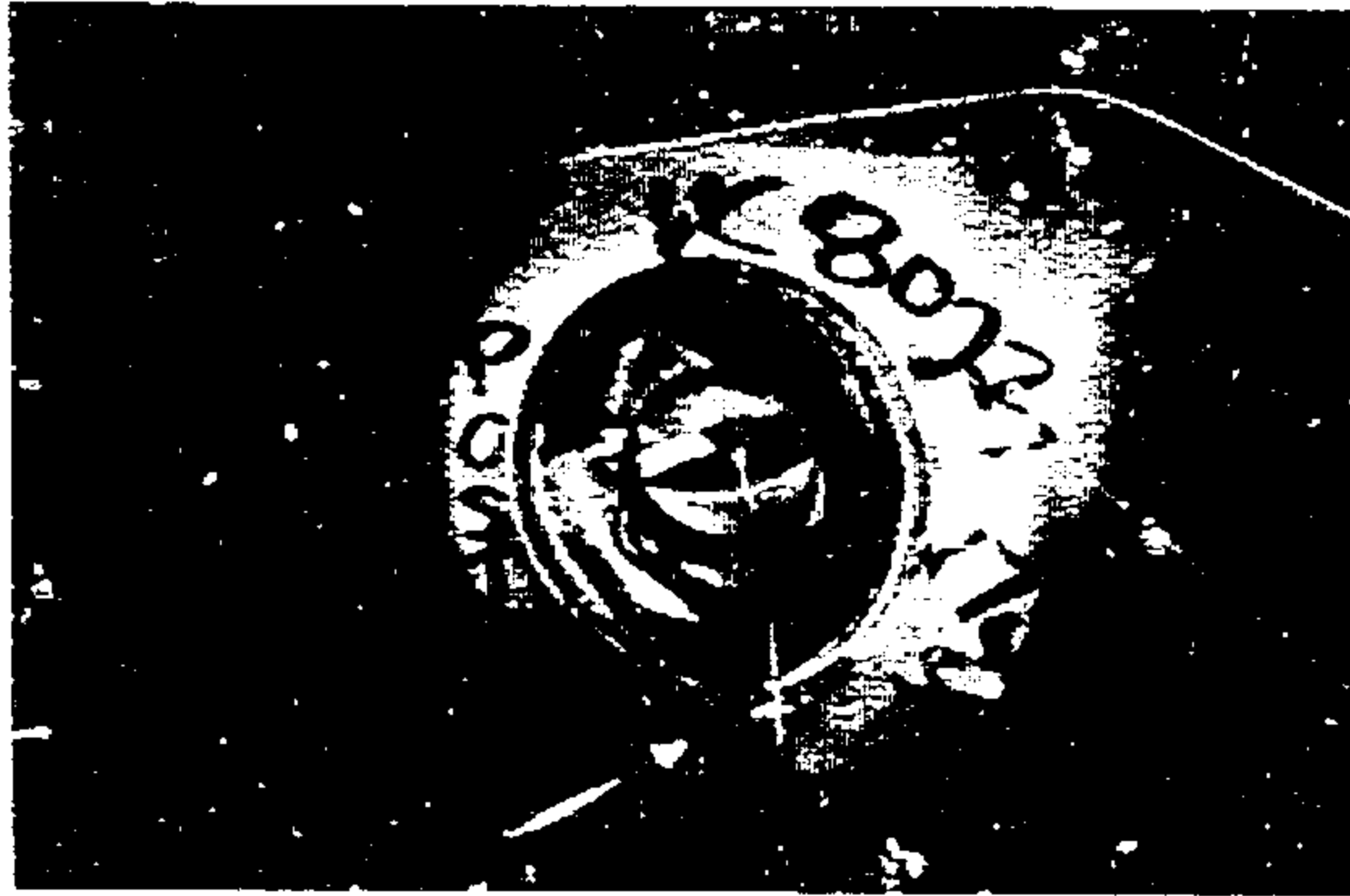




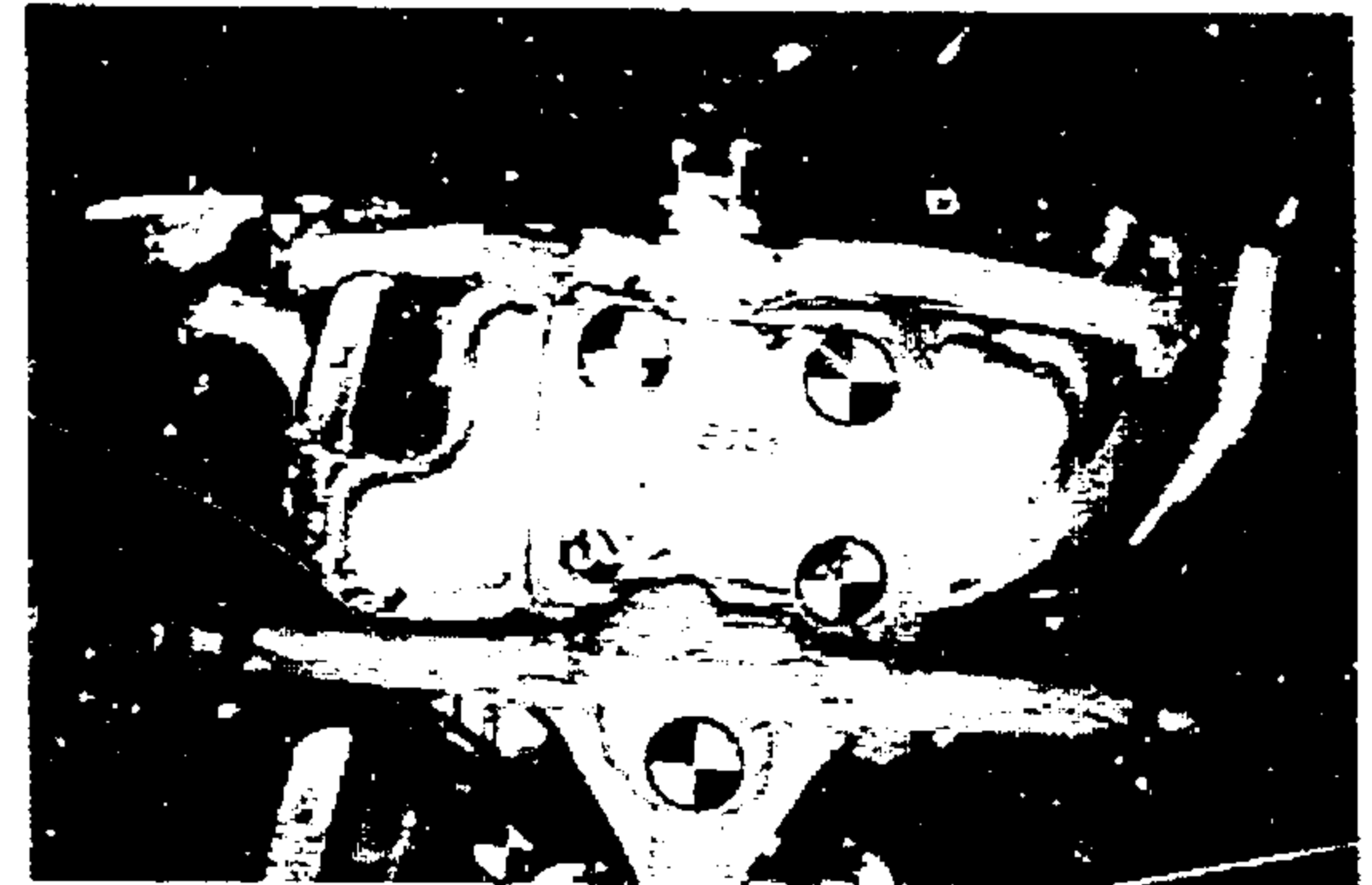
VC-080235c.jpg



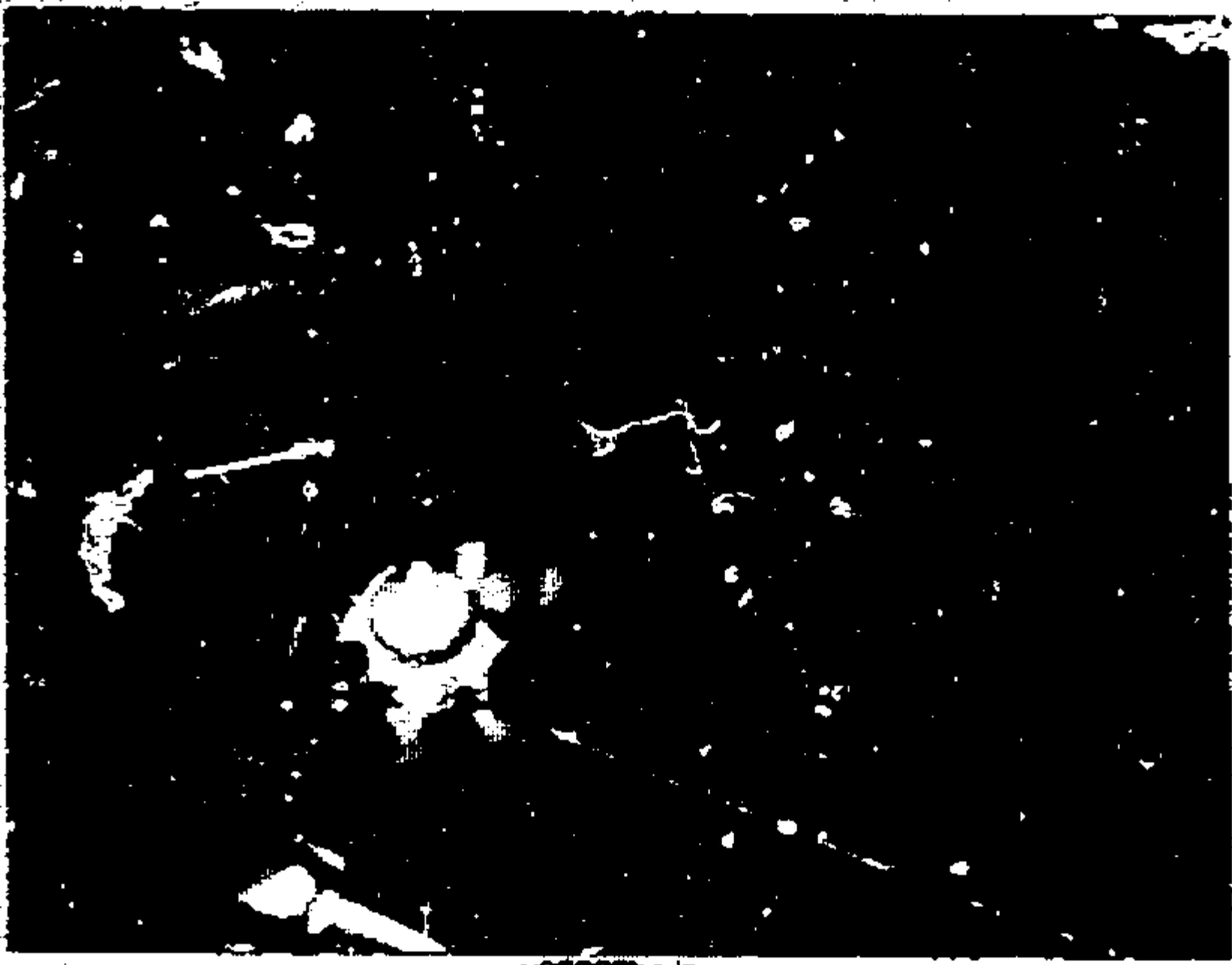
VC-080235d.jpg



VC-080235e.jpg



VC-080235f.jpg



14-00000

**Retrieval Methods Inc.**  
**1142 E. Big Beaver Rd.**  
**Troy, MI 48083**

## **Declaration of Intent and Purpose**

**RANDALL WHYTE**

Employed by Retrieval Methods Inc., do hereby declare that the records microfiched herein are actual records of DaimlerChrysler Corp. created during its normal course of business and that it is the express intent and purpose of this organization to return all original records microphotographed herein.

Date: 05-01-2003

Microfiche Operator

Randall Whyte