

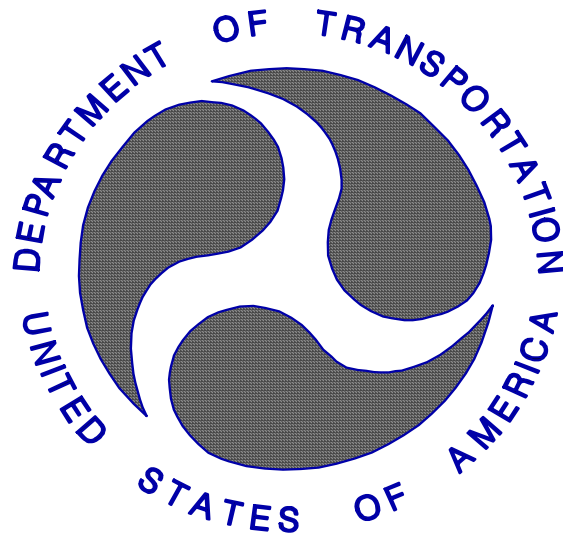
REPORT NO. MCW-DOT-05SN02

**NEW CAR ASSESSMENT PROGRAM
SIDE IMPACT TESTING**

MITSUBISHI MOTORS
2005 MITSUBISHI GALANT ES 4-DOOR SEDAN

NHTSA NUMBER: M5 5600

MEDICAL COLLEGE OF WISCONSIN
5000 WEST NATIONAL AVENUE
MILWAUKEE, WI 53295



02 DECEMBER 2004

FINAL REPORT

U.S. DEPARTMENT OF TRANSPORTATION
NATIONAL HIGHWAY TRAFFIC SAFETY ADMINISTRATION
RULEMAKING
OFFICE OF CRASHWORTHINESS STANDARDS
ROOM 5307, NVS-111
400 SEVENTH STREET, SW
WASHINGTON, DC 20590

This Final Report was prepared for the U.S. Department of Transportation, National Highway Traffic Safety Administration, under Contract No. DTNH22-01-D-02003. This document is disseminated under the sponsorship of the U. S. Department of Transportation in the interest of information exchange. The United States Government assumes no liability for its content or use thereof.

Prepared By:

John R. Humm, Project Engineer

Approved By:

Frank A. Pintar, Facility Director

Approval Date:

FINAL REPORT ACCEPTANCE BY:

Accepted By:

Acceptance Date:

TECHNICAL REPORT STANDARD TITLE PAGE

1. Report No. Final Copy	2. Government Accession No.	3. Recipient's Catalog No. 05SN02																			
4. Title and Subtitle Final Report of New Car Assessment Program Side Impact Test of a 2005 Mitsubishi Galant ES 4-Door Sedan NHTSA No. M5 5600		5. Report Date 02 December 2004																			
		6. Performing Organization Code MCW																			
7. Author(s) John Humm		8. Performing Organization Report No. 05SN02																			
9. Performing Organization Name and Address Medical College of Wisconsin 5000 W. National Avenue Milwaukee, WI 53295		10. Work Unit No.																			
		11. Contract or Grant No. DTNH22-03-D-42005																			
12. Sponsoring Agency Name and Address U.S. Department of Transportation National Highway Traffic Safety Administration Rulemaking Office of Crashworthiness Standards Room 5307, NVS-111 400 Seventh Street, SW Washington, DC 20590		13. Type of Report and Period Covered																			
		14. Sponsoring Agency Code NVS-111																			
15. Supplementary Notes																					
16. Abstract A 55/28 km/h 90° Impact Moving Deformable Barrier NCAP Side Impact Test was conducted on the subject 2005 Mitsubishi Galant ES in accordance with the specifications of the Office of Crashworthiness Standards Test Procedure for generation of consumer information on vehicle side crash protection. This test was conducted at the Medical College of Wisconsin Vehicle Crashworthiness Lab in Milwaukee, Wisconsin, on 02 December 2004. The impact velocity of the Moving Deformable Barrier (MDB) was 62.1 km/h, and the ambient temperature at the struck side (driver's) of the target vehicle at the time of impact was 22.4° C. The target vehicle post-test maximum crush was 230 mm at Level 2. The test vehicle's performance follows: <table border="1" style="margin-left: auto; margin-right: auto;"> <thead> <tr> <th></th> <th><u>DRIVER</u></th> <th><u>PASSENGER</u></th> </tr> </thead> <tbody> <tr> <td>Left Upper Rib Acceleration G</td> <td>30.9</td> <td>48.1</td> </tr> <tr> <td>Left Lower Rib Acceleration G</td> <td>30.1</td> <td>49.9</td> </tr> <tr> <td>Lower Spine Acceleration G</td> <td>45.8</td> <td>50.5</td> </tr> <tr> <td>Thoracic Trauma Index TTI</td> <td>38</td> <td>50</td> </tr> <tr> <td>Pelvis Acceleration G</td> <td>47</td> <td>47</td> </tr> </tbody> </table> The doors on the struck side of the vehicle did not separate from the body at the hinges or latches, and the opposite doors did not open during the side impact event.					<u>DRIVER</u>	<u>PASSENGER</u>	Left Upper Rib Acceleration G	30.9	48.1	Left Lower Rib Acceleration G	30.1	49.9	Lower Spine Acceleration G	45.8	50.5	Thoracic Trauma Index TTI	38	50	Pelvis Acceleration G	47	47
	<u>DRIVER</u>	<u>PASSENGER</u>																			
Left Upper Rib Acceleration G	30.9	48.1																			
Left Lower Rib Acceleration G	30.1	49.9																			
Lower Spine Acceleration G	45.8	50.5																			
Thoracic Trauma Index TTI	38	50																			
Pelvis Acceleration G	47	47																			
17. Key Words New Car Assessment Program (NCAP) Side Impact MDB Side Impact Dummy (SID H3) NHTSA No. M5 5600		18. Distribution Statement <u>Copies of this report are available from:</u> National Highway Traffic Safety Administration Rulemaking Office of Crashworthiness Standards Room 5307, NVS-111 400 Seventh Street, SW Washington, DC 20590																			
19. Security Classif.(of this report) Unclassified	20. Security Classif.(of this page) Unclassified	21. No. of Pages 248	22. Price																		

TABLE OF CONTENTS

Section		Page No.
1	PURPOSE AND TEST PROCEDURE	1-1
2	SUMMARY OF SIDE IMPACT TEST	2-1
3	SUMMARY OF TEST RESULTS	3-1
	Data Sheet 1 – General Vehicle Test Parameter Data	3-2
	Data Sheet 2 – Test Vehicle Summary	3-5
	Data Sheet 3 – Moving Deformable Barrier (MDB) Summary	3-6
	Data Sheet 4 – Post-Test Observations	3-7
4	OCCUPANT AND VEHICLE INFORMATION	4-1
	Data Sheet 5 – SID H3 Instrumentation Data	4-2
	Data Sheet 6 – Vehicle Pre- and Post-Measurements	4-4
	Data Sheet 7 – SID H3 Longitudinal Clearance Dimensions	4-5
	Data Sheet 8 – SID H3 Lateral Clearance Dimensions	4-6
	Data Sheet 9 – Vehicle Side Measurements	4-7
	Data Sheet 10 – Vehicle Exterior Crush Profiles – All Levels	4-8
	Data Sheet 11 – Vehicle Damage Profile Distances	4-10
	Data Sheet 12 – Static Crush of Impactor Face	4-11
	Data Sheet 13 – Test Vehicle Accelerometer and Data Summary	4-13
	Data Sheet 14 – MDB Accelerometer Locations and Data Summary	4-16
	Data Sheet 15 – High-Speed Camera Locations and Data	4-17
5	VEHICLE FUEL SYSTEM INTEGRITY	5-1
	Data Sheet 16 – FMVSS 301 Fuel System Integrity Data	5-2
	Data Sheet 17 – FMVSS 301 Rollover Data	5-3
	APPENDIX A PHOTOGRAPHS	A-1
	APPENDIX B VEHICLE, MDB, AND SID H3 RESPONSE DATA	B-1
	APPENDIX C SID H3 CONFIGURATION AND VERIFICATION RESULTS	C-1
	APPENDIX D TEST EQUIPMENT LIST AND CALIBRATION INFORMATION	D-1

SECTION 1**PURPOSE AND TEST PROCEDURE**

This side impact test was part of the FY05 New Car Assessment Program Side Impact Test Program, sponsored by the National Highway Traffic Safety Administration (NHTSA), under Contract No. DTNH22-03-D-42005. The purpose of this test was to evaluate side impact protection of a 2005 Mitsubishi Galant ES 4-Door Sedan. This side impact test was conducted in accordance with the Office of Crashworthiness Standard's Laboratory Test Procedure dated November 2002.

The Medical College of Wisconsin does not endorse or certify products. The manufacturer's name appears solely for identification purposes only.

SECTION 2

SUMMARY OF SIDE IMPACT TEST

A 2005 Mitsubishi Galant ES 4-Door Sedan was impacted on the left or driver's side by a Moving Deformable Barrier (MDB) that was moving forward in a 27° crabbed position to the tow road guidance system at a velocity of 62.1 km/h (38.6 mph). The target vehicle was stationary and positioned at an angle of 63° to the line of forward motion. The side impact test was conducted by the Medical College of Wisconsin in Milwaukee, Wisconsin, on 02 December 2004.

Two restrained Side Impact Hybrid III Dummies (SID H3's) were placed in the driver and left rear designated seating positions, according to instructions specified in the OCWS Side Impact Laboratory Test Procedure, dated November 2002. The side impact event was documented by nine high-speed video cameras and one real-time camera. Camera locations and other pertinent camera information can be found in this report.

The SID H3s were instrumented with the following accelerometers.

1. Left Upper Rib (LUR) Primary and Redundant uniaxial accelerometers (Y-direction)
2. Left Lower Rib (LLR) Primary and Redundant uniaxial accelerometers (Y-direction)
3. Lower Thoracic Spine (T₁₂) Primary and Redundant uniaxial accelerometers (Y-direction)
4. Pelvic (PEV) section Primary and Redundant uniaxial accelerometers (Y-direction)
5. Head Center of Gravity triaxial accelerometers (X-, Y-, and Z-direction)
6. Upper Neck (NKU) six axis load cell (Fx, Fy, Fz, Mx, My, and Mz)

Pre- and post-test photographs of the test vehicle, the MDB, and the side impact dummies (SID H3s) are included in Appendix A. Appendix B contains the vehicle, MDB, and dummy response data traces. A summary of the side impact dummy configuration and performance verification test data is shown in Appendix C. Dummy and vehicle calibration data can be found in Appendix D of this report.

The following table summarizes the results of this test.

Injury Criteria	Front SID H3	Rear SID H3
TTI (G)	38.0	50.0
PELVIS (G)	46.6	47.4
HIC36	†	310.0

†Driver Head (X) Channel Failed ~58 msec after impact

The vehicle's airbag information is summarized in the following table

	Frontal	Side-Torso	Side-Torso/Head	Side-Head
Driver	Yes-Steering wheel	None	Yes - Seat	None
Front Passenger	Yes- Dashboard	None	Yes - Seat	None
Left Rear Passenger	None	None	None	None

SECTION 3
SUMMARY OF TEST RESULTS

DATA SHEET NO. 1**GENERAL VEHICLE TEST PARAMETER DATA**TEST VEHICLE INFORMATION

Year/ Make/ Model/ Body Style				2005 Mitsubishi Galant ES 4-Door Sedan			
Vehicle NHTSA NO.		M5 5600		VIN		4A3AB36F25E013738	
Vehicle Body Color		Blue		Build Date		August-04	
Engine Data	<u>4</u>	Cylinders	<u> </u>	CID	<u>2.4</u>	Liter	<u> </u> cc
Placement	<u> </u>	Longitudinal	<u>X</u>	Lateral			
Transmission	<u>4</u>	Speed	<u> </u>	Manual	<u> </u>	Automatic	<u>X</u> Overdrive
Final Drive	<u> </u>	Rear Wheel Drive	<u>X</u>	Front Wheel Drive	<u> </u>	Four Wheel Drive	
Odometer Reading	<u>30 Miles</u>	Date	<u>16-Nov-04</u>				
Options	<u>X</u>	A/C	<u>X</u>	Power Steering	<u>X</u>	Power Brakes	<u>X</u> Power Windows
	<u>X</u>	Cruise Control	<u>X</u>	Tilt Wheel	<u>X</u>	Power Locks	<u> </u> ADL's

DATA FROM TIRE PLACARD:

Tire Pressure (at Capacity)	<u>32</u>	PSI Front	
	<u>32</u>	PSI Rear	
Recommended Tire Size	<u>P215 60 R16</u>		
Tires on Test Vehicle	<u>P215 60 R16</u>	Manufacturer	<u>Yokohama</u>

TEST VEHICLE AIRBAG INFORMATION:

	<u>Frontal</u>	<u>Side-Torso</u>	<u>Side-Torso/Head</u>	<u>Side-Head</u>
Driver	Yes-Steering wheel	None	Yes -Seat	None
Front Passenger	Yes- Dashboard	None	Yes -Seat	None
Left Rear Passenger	None	None	None	None

VEHICLE CAPACITY DATA:

Number of Occupants:	<u>2</u>	Front	<u>3</u>	Rear	<u> </u>	3 rd Seat	<u>5</u>	Total
Type of Front Seats	<u>X</u>	Bucket	<u> </u>	Bench	<u> </u>	Split Bench		
Type of Front Seat Back	<u> </u>	Fixed	<u>X</u>	Adjustable w/	<u>X</u>	Lever	<u>X</u>	Knob
Vehicle Max Capacity Loading	<u>375.1</u>				kg	(A)		
No. of Occupants X 68.04 kg	<u>340.2</u>				kg	(B)		
Cargo Capacity (A) – (B)	<u>34.9</u>				kg			

TEST VEHICLE DELIVERED WEIGHT WITH MAXIMUM FLUIDS:

Left Front	=	<u>472.6</u>	kg	Left Rear	=	<u>302.1</u>	kg
Right Front	=	<u>440.5</u>	kg	Right Rear	=	<u>313.9</u>	kg
TOTAL FRONT	=	<u>913.1</u>	kg	TOTAL REAR	=	<u>616.0</u>	kg
% Total Weight	=	<u>59.7</u>	%	%Total Weight	=	<u>40.3</u>	%
TOTAL WEIGHT	=	<u>1529.1</u>	kg				

DATA SHEET 1 (continued)**GENERAL VEHICLE TEST PARAMETER DATA**CALCULATION OF VEHICLE'S TARGET TEST WEIGHT:

Total Test Vehicle Delivered Weight with Max Fluids	=	<u>1529.1</u>	kg	(A)
Maximum Cargo Carrying Capacity of Test Vehicle	=	<u>34.9</u>	kg	(B)
Weight of (2) instrumented Side Impact Dummies	=	<u>161.0</u>	kg	(C)
TEST VEHICLE TARGET WEIGHT	=	<u>1725.0</u>	kg	(A+B+C)

FULLY LOADED TEST VEHICLE (UDVW + 1 OR 2 SID H3(s) + CARGO)

Left Front	=	<u>497.1</u>	kg	Left Rear	=	<u>400.5</u>	kg
Right Front	=	<u>460.4</u>	kg	Right Rear	=	<u>367.0</u>	kg
TOTAL FRONT	=	<u>957.5</u>	kg	TOTAL REAR	=	<u>767.5</u>	kg
% Total Weight	=	<u>55.5</u>	%	%Total Weight	=	<u>44.5</u>	%
TOTAL WEIGHT	=	<u>1725.0</u>	kg				

AS TESTED WEIGHT OF TEST VEHICLE (UDVW+ SID H3(s)+CARGO+EQUIPMENT & INSTRUMENTATION)

Left Front	=	<u>494.9</u>	kg	Left Rear	=	<u>399.6</u>	kg
Right Front	=	<u>458.6</u>	kg	Right Rear	=	<u>365.1</u>	kg
TOTAL FRONT	=	<u>953.5</u>	kg	TOTAL REAR	=	<u>764.7</u>	kg
% Total Weight	=	<u>55.5</u>	%	%Total Weight	=	<u>44.5</u>	%
TOTAL WEIGHT	=	<u>1718.2</u>	kg				

TEST VEHICLE ATTITUDE (all dimensions in millimeters):

AS DELIVERED

Left Front	<u>753</u>	Right Front	<u>761</u>	Left Rear	<u>734</u>	Right Rear	<u>734</u>
------------	------------	-------------	------------	-----------	------------	------------	------------

FULLY LOADED

Left Front	<u>740</u>	Right Front	<u>752</u>	Left Rear	<u>696</u>	Right Rear	<u>707</u>
------------	------------	-------------	------------	-----------	------------	------------	------------

AS TESTED

Left Front	<u>744</u>	Right Front	<u>757</u>	Left Rear	<u>700</u>	Right Rear	<u>712</u>
------------	------------	-------------	------------	-----------	------------	------------	------------

Test Vehicle Wheelbase 2752 mm

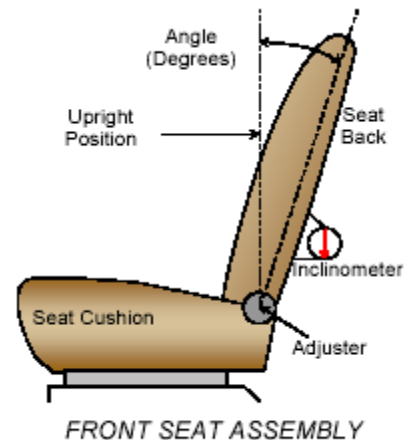
As Tested CG = 1225 mm rearward of front wheel centerline

TOTAL VEHICLE LENGTH:

Right Side	=	<u>4364</u>	mm
Left Side	=	<u>4364</u>	mm
Centerline	=	<u>4843</u>	mm

DATA SHEET 1 (continued)**GENERAL TEST VEHICLE PARAMETER DATA**

Nominal Design Riding Position for adjustable driver and passenger seats. Please describe how to position the inclinometer to measure the seat back angle. Include a description of the adjustment latch detent if applicable

FRONT SEAT CUSHION PLACEMENT:

Total Length of Adjustment Travel		224 mm
Total Number of Detents	23	Test Position 12 th notch rearward (Mid-Position)

FRONT SEAT BACK ADJUSTMENT:

Seat Back Angle	7th Step from 1st locking position
-----------------	------------------------------------

REAR SEAT POSITION:

Total Length Fore/Aft Adjustment	Fixed
Seat Back Adjustment Position	Fixed

ADJUSTABLE STEERING COLUMN POSITION:

20.5 degrees

WINDOW POSITIONS:

Left Front	Up	Right Front	Removed
Left Rear	Up	Right Rear	Removed

AMOUNT OF STODDARD SOLVENT IN FUEL TANK:

Fuel System usable Capacity	67.0 L	
Test Volume	62.31 L	93% usable capacity

LOCATIONS OF IMPACT POINT ON TEST VEHICLE SIDE TO BE IMPACTED:

Wheelbase	2752 mm	
Impact Point is	436 mm rearward	of front axle centerline
Actual Impact Point is	424 mm rearward	of front axle centerline

DATA SHEET 2
TEST VEHICLE SUMMARY

VEHICLE IDENTIFICATION:

Year/Make/Model/Body Style	2005 Mitsubishi Galant ES 4-Door Sedan		
Body Color	Blue	VIN	4A3AB36F25E013738
NHTSA No.	M5 5600	Test Date	02 December 2004
Overall Length	4843 mm	Overall Width	1838 mm

VEHICLE TEST WEIGHT (Pre-Test):

Left Front	=	494.9	kg	Left Rear	=	399.6	kg
Right Front	=	458.6	kg	Right Rear	=	365.1	kg
TOTAL FRONT	=	953.5	kg	TOTAL REAR	=	764.7	kg
% Total Weight	=	55.5	%	%Total Weight	=	44.5	%
TOTAL WEIGHT	=	1718.2	kg				
Wheelbase				=		2752	mm
Longitudinal CG from Center of Front Axle				=		1225	mm
Impact Angle with Respect to Impactor				=		90	

ACTUAL IMPACT POINT

Actual Impact Point is 8 mm below and 12 mm forward of nominal impact point

MAXIMUM EXTERIOR STATIC CRUSH:

1. LEVEL 1	(263 mm above ground)	=	52	mm
2. LEVEL 2	(495 mm above ground)	=	230	mm
3. LEVEL 3	(605 mm above ground)	=	219	mm
4. LEVEL 4	(940 mm above ground)	=	118	mm
5. LEVEL 5	(1344 mm above ground)	=	2	mm

Maximum Post-Test intrusion at Level 2 is 230 mm

OCCUPANTSLeft Front PassengerLeft Rear Passenger

Dummy Identification

SID H3/056

SID H3/058

Restraints Used

3-Point Belt

3-Point Belt

INSTRUMENTATION:

Number of Vehicle Data Channels		26
Number of Cameras	Onboard	3
	Off board	4
	MDB	2
	Real Time	1
	TOTAL	10

DATA SHEET NO. 3**MOVING DEFORMABLE BARRIER (MDB) SUMMARY****MDB FACE MANUFACTURER AND SERIAL NUMBER:**

Plascore Serial Number C39A0304-C71A0404-1

POSITION OF IMPACT (MDB) ON TOW SYSTEM

Crabbed 27° to the left

MDB DETAILS:

Overall Width of Framework Carriage	=	1250 mm
Overall Length of MDB (incl. honeycomb impact face)	=	4116 mm
Wheelbase of Framework Carriage	=	2578 mm
Tread of Framework Carriage (Front & Rear)	=	1880 mm
C.G. Location Rearward of Front Axle	=	1135 mm
C.G. Location From Center Line	=	-10 mm
C.G. Location Above Ground Level	=	480 mm

MDB WEIGHT:

Left Front	=	458.0	kg	Left Rear	=	228.9	kg
Right Front	=	307.2	kg	Right Rear	=	365.6	kg
TOTAL FRONT	=	765.2	kg	TOTAL REAR	=	594.5	kg
% Total Weight	=	56.3	%	%Total Weight	=	43.7	%
TOTAL WEIGHT	=	1359.7	kg				

MDB IMPACT:

Impact Angle (MDB C/L to Target Vehicle)		270°	
Impact Speed	Primary	62.1 km/h	38.6 mph
	Secondary	62.0 km/h	38.5 mph

MAXIMUM STATIC CRUSH OF HONEYCOMB IMPACT FACE:

1. Row A Center of Bumper	=	240	mm
2. Row B Top of Bumper	=	153	mm
3. Row C Mid-Level	=	153	mm
4. Row D Top of Stack	=	175	mm

INSTRUMENTATION:

Number of MDB Data Channels	=	5
-----------------------------	---	---

DATA SHEET NO. 4**POST-TEST OBSERVATIONS**VISIBLE DUMMY CONTACT POINTS:

	<u>LEFT FRONT SID H3</u>	<u>LEFT REAR SID H3</u>
Head	To side airbag	To side header at C-Pillar
Upper Torso	To side airbag	To left rear door panel ~ 160 mm below window sill
Lower Torso	To side airbag	To left rear door panel ~40 mm above arm rest
Left Knee	To left front door panel ~50 mm below arm rest	To left rear door panel at arm rest
Left Leg	To left front door panel ~100 mm below arm rest	To left rear door panel ~30 mm below arm rest

DOOR OPENING:

	<u>LEFT DOOR</u>	<u>RIGHT DOOR</u>
Front	Closed/latched/Inoperable	Closed/Latched/Operable
Rear	Closed/latched/Inoperable	Closed/Latched/Operable

MDB DISTANCE FROM TARGET IMPACT POINT:

Horizontal	8 mm below	Vertical	12 mm forward
------------	------------	----------	---------------

ARM REST LOCATIONS:

Front	298 mm below window sill
Rear	345 mm below window sill

SEAT MOVEMENT:

Front	Seat crush ~ 20 mm, Seat back crush ~50 mm
Rear	Seat crush ~50 mm, Seat back crush ~40 mm

GLAZING DAMAGE

Windshield	None
Window	Left rear door window shattered on impact

PILLAR PERFORMANCE:

None noted

SILL SEPARATION

None noted

DOOR LOCK INFORMATION

Test vehicle was equipped with Automatic Door Locks as standard equipment.

LEFT FRONT DOOR	Unlocked	RIGHT FRONT DOOR	Unlocked
LEFT REAR DOOR	Unlocked	RIGHT REAR DOOR	Unlocked

AIRBAG DEPLOYMENT STATUS:

	<u>DRIVER</u>	<u>FRONT PASSENGER</u>	<u>REAR PASSENGER</u>
FRONT	Did not deploy	Did not deploy	N/A
SIDE	Deployed	Did not deploy	N/A

OTHER NOTABLE IMPACT EFFECTS:

Left rear door skin separated from bottom of door

SECTION 4
OCCUPANT AND VEHICLE INFORMATION

DATA SHEET 5**SID H3 INSTRUMENTATION DATA**

	Front Dummy ID SID H3/056				Rear Dummy ID SID H3/058			
	Max		Min		Max		Min	
	G's	msec	G's	msec	G's	msec	G's	msec
HEAD ACCELERATIONS								
Longitudinal (X)	4.9†	11.6†	-11.9†	57.9†	11.8	62.3	-32.3	72.4
Lateral (Y)	25.5	56.5	-3.6	196.0	72.7	50.5	-7.5	86.2
Vertical (Z)	29.2	57.0	-3.6	16.1	21.2	50.8	-39.3	61.9
Resultant (R)	40.2†	57.0†			75.9	50.6		
HIC36	†				310.0			
RIB ACCELERATIONS								
Upper Rib Lateral (Y)	30.9	42.5	-4.8	7.5	48.1	46.9	-3.1	184.4
Upper Rib Lateral (Y _R)	30.9	42.5	-4.7	6.9	48.4	46.9	-3.0	185.0
Lower Rib Lateral (Y)	30.1	43.1	-6.8	15.0	49.9	55.0	-2.7	192.5
Lower Rib Lateral (Y _R)	30.2	43.1	-9.2	15.0	49.9	55.0	-3.0	193.1
TTI	38				50			
SPINE ACCELERATIONS								
Lower Lateral (Y)	45.8	37.5	-6.6	76.3	50.5	49.4	-7.0	80.6
Lower Lateral (Y _R)	46.5	37.5	-7.1	76.9	49.8	49.4	-6.8	80.6
PELVIS ACCELERATIONS								
Lateral (Y)	46.6	41.3	-7.9	62.5	47.4	43.8	-3.0	113.1
Lateral (Y _R)	46.5	40.6	-8.0	63.1	47.1	43.8	-3.1	-111.9

† Driver Head (X) Acceleration channel failed ~58 msec after impact

REFERENCE:

Positive Direction -	Anterior/Posterior	+(X) = anterior
	Lateral	+(Y)= right
	Superior/Inferior	+(Z)= inferior
Negative Direction	Anterior/Posterior	-(X) = posterior
	Lateral	-(Y)= left
	Superior/Inferior	-(Z)= superior

All the above data (except head accelerations) has been filtered using FIR (Version 1.0; July 16, 1990)

Head Accelerations have been filtered at SAE Class 1000

Y_R denotes redundant Y-direction accelerometer

DATA SHEET 5 (continued)**SID H3 INSTRUMENTATION DATA**

	Front Dummy ID SID H3/056				Rear Dummy ID SID H3/058			
	Max		Min		Max		Min	
NECK FORCES								
	N	msec	N	msec	N	msec	N	msec
Longitudinal (X)	24.6	16.0	-507.1	67.1	986.9	85.4	-101.0	141.6
Lateral (Y)	346.7	77.8	-130.7	195.9	117.8	175.3	-969.1	86.6
Vertical (Z)	1560.7	57.0	-162.9	16.3	490.0	53.1	-1509.0	62.3
NECK MOMENTS								
	Nm	msec	Nm	msec	Nm	msec	Nm	msec
Lateral Bending (X)	20.7	67.7	-16.5	46.3	15.7	163.8	-137.3	56.2
Flexion/Extension (Y)	26.3	93.0	-15.0	50.1	17.9	156.7	-86.7	69.8
Rotation (Z)	16.9	79.3	-7.8	46.5	16.8	81.8	-7.7	62.5

REFERENCE:

Upper neck load cell polarity follows the dummy manipulation table A-1 in the NHTSA Test Reference Guide version 5

Force

- Fx positive response: Head rearward, chest forward
- Fy positive response: Head leftward, chest rightward
- Fz positive response: Head upward, chest downward

Moment

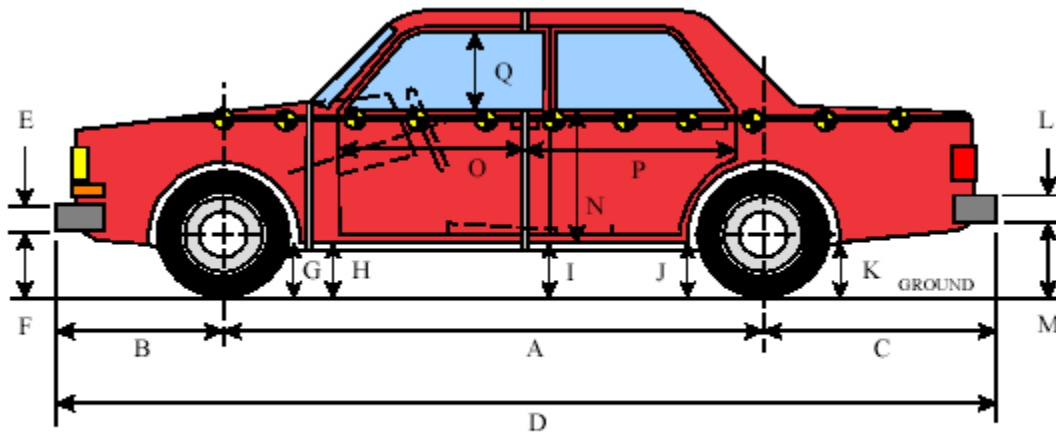
- Mx positive response: Left ear to left shoulder
- My positive response: Chin to sternum
- Mz positive response: Chin to left shoulder

Neck forces have been filtered at SAE Class 1000

Neck moments have been filtered at SAE Class 600

DATA SHEET 6

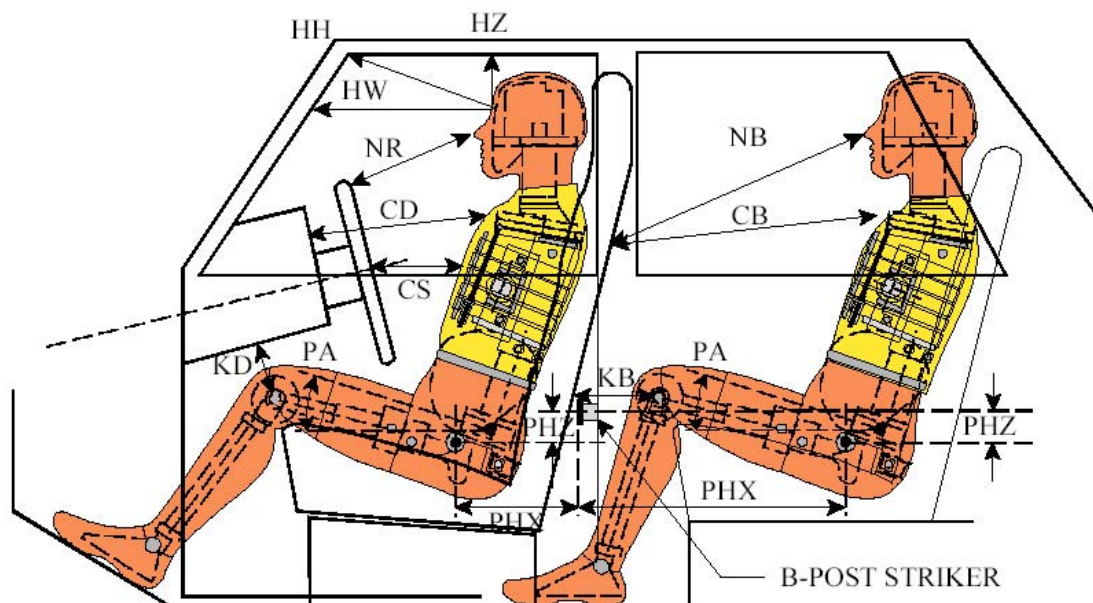
VEHICLE PRE- AND POST- MEASUREMENTS



	PRE-TEST As delivered (mm)	PRE-TEST As Tested (mm)	POST-TEST (mm)	Δ CHANGE (mm)
A	2752	-	2752	0
B	719	-	705	-14
C	893	-	898	5
D	4843	-	4843	0
E	257	-	257	0
F	285	287	301	14
G	195	182	186	4
H	205	182	200	18
I	221	204	220	16
J1	185	157	160	3
J2	213	185	194	9
K	271	232	232	0
L	290	-	290	0
M	420	376	372	-4
N	753	-	705	-48
O	1111	-	1085	-26
P	1015	-	988	-27
Q	415	-	406	-9
R	4364	-	4366	2
S	4364	-	4355	-9
T	1838	-	1624	-214

DATA SHEET 7

SID H3 LONGITUDINAL CLEARANCE DIMENSIONS

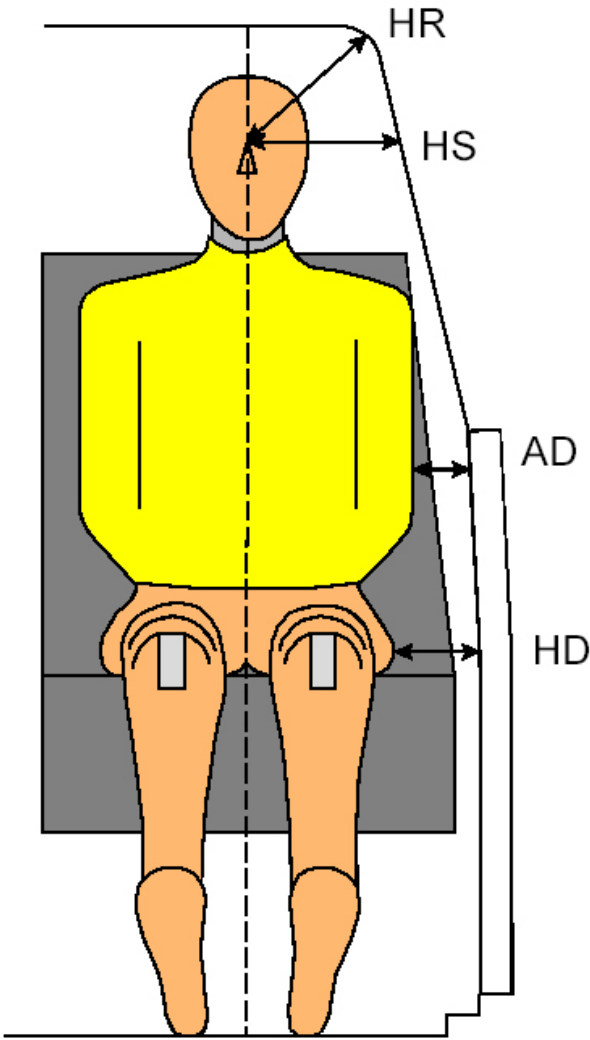


NOTE: All dimensions are in millimeters with tolerance of ± 3 mm

	DRIVER ID SID H3/056	LEFT REAR PASSENGER ID SID H3/058
HH	403	N/A
HW	693	N/A
HZ	141	150
NR/NB	464	724
CD/CB	608	549
CS	366	N/A
KDL(KDA°)/KBL(KDA°)	192/16.1	257/17.6
KDR(KDA°)/KBR(KDA°)	171/13.1	240/15.4
PA°	23.2	24.6
PHX	213	292
PHZ	169	334

NOTE: 2-door vehicle shown. Rear dummy PHX & PHZ measurements for 4-door vehicle would use the C-Post striker as a reference point.

DATASHEET 8
SID H3 LATERAL CLEARANCE DIMENSIONS

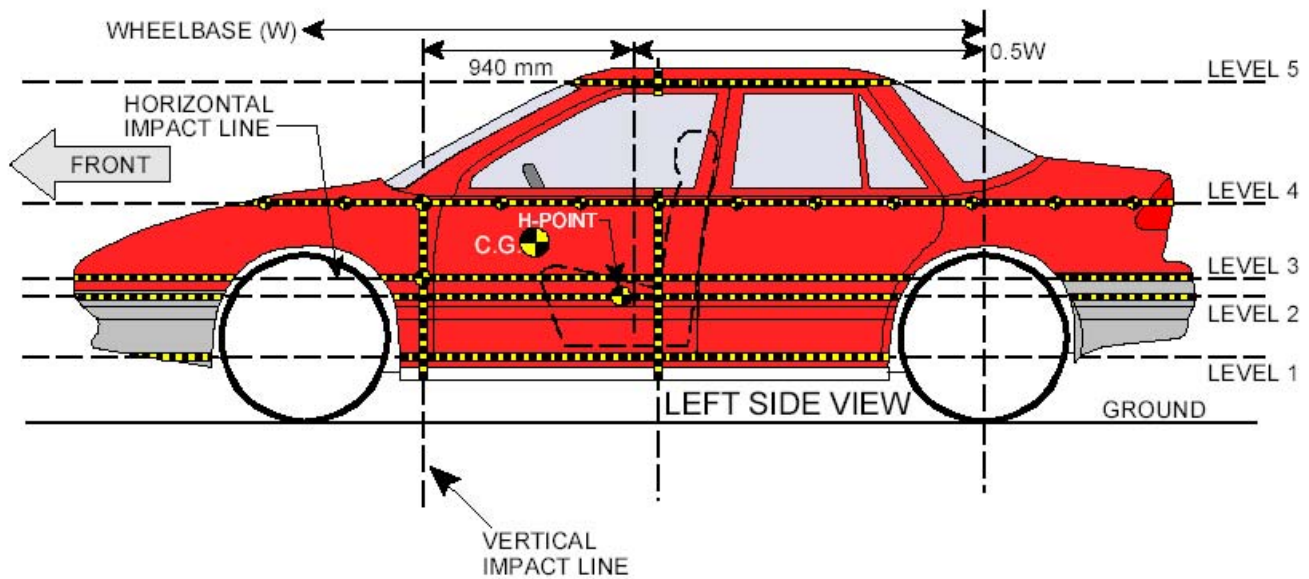


NOTE: All dimensions are in millimeters with tolerance of ± 3 mm

	DRIVER ID SID H3/056	LEFT REAR PASSENGER ID SID H3/058
HR	238	205
HS	348	341
AD	Upper 115 Lower 79	Upper 111 Lower 108
HD	160	180

DATA SHEET 9

VEHICLE SIDE MEASUREMENTS



LEVEL 5 = WINDOW TOP
 LEVEL 4 = WINDOW SILL
 LEVEL 3 = MID-DOOR
 LEVEL 2 = OCCUPANT H-POINT
 LEVEL 1 = AXLE CENTERLINE HEIGHT OR SILL TOP HEIGHT

MEASUREMENTS ARE TAKEN WHEN THE VEHICLE IS IN THE "AS TESTED" CONFIGURATION
 Measurements along the Vertical 750 mm line as shown

Level 5 @ Window Top	1344 mm
Level 4 @ Window Sill	940 mm
Level 3 @ Mid-Door	605 mm
Level 2 @ Occupant H-Point	495 mm
Level 1 @ Axle Centerline or Sill Top Height	263 mm

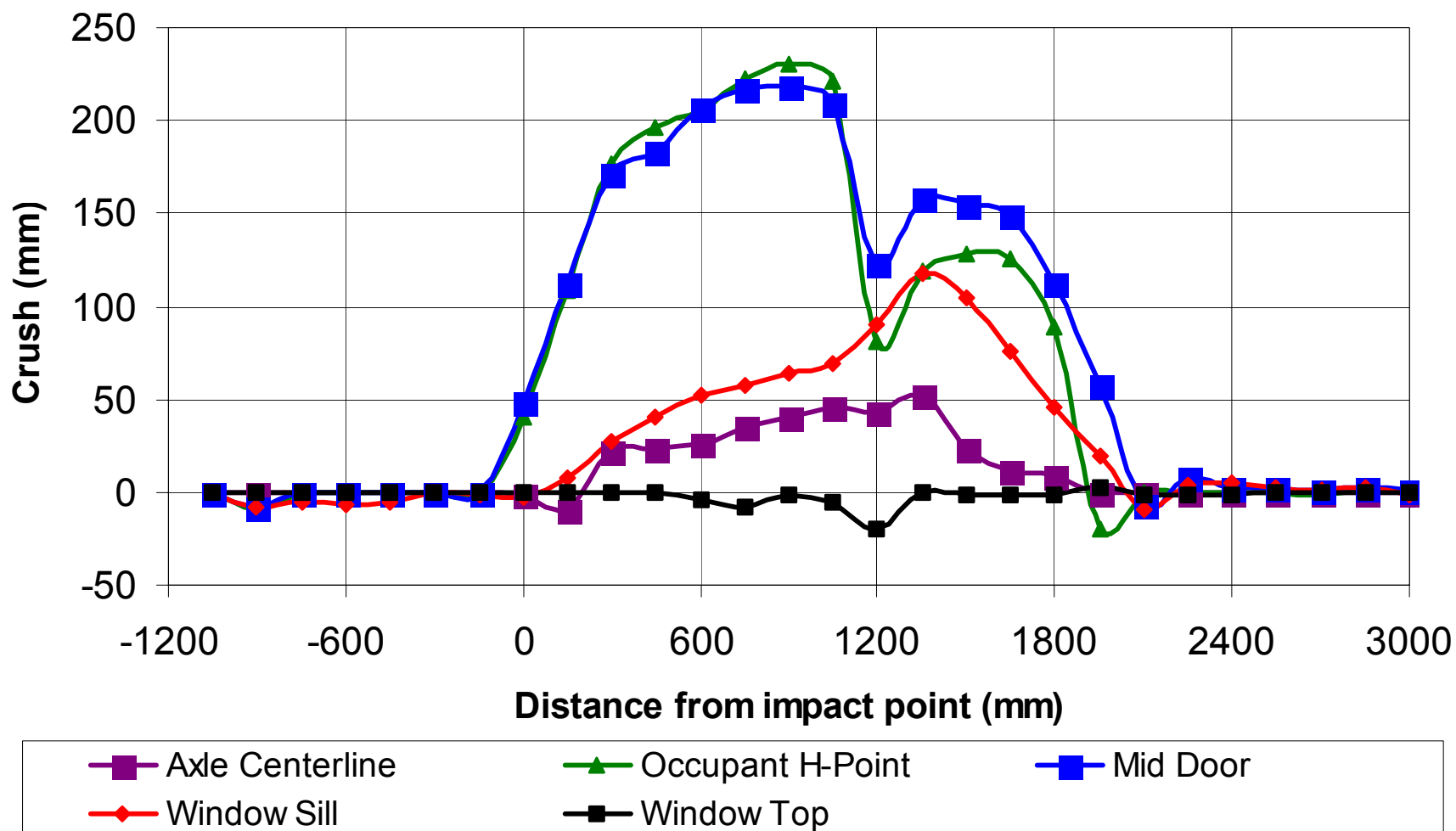
DATA SHEET 10

VEHICLE EXTERIOR CRUSH PROFILES – ALL LEVELS

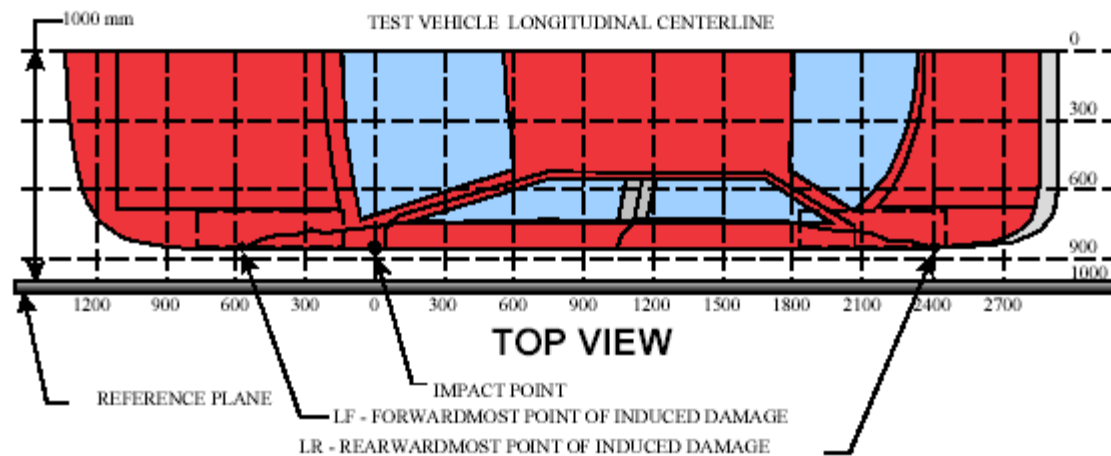
Note: All Dimensions are in millimeters with a tolerance of ± 3 mm

Level Height (mm)	1			2			3			4			5		
	263			495			605			940			1344		
	Pre	Post	Crus	Pre	Post	Crus	Pre	Post	Crush	Pre	Post	Crush	Pre	Post	Crush
DISTANCE IN MILLIMETERS (mm) FROM IMPACT POINT	-1050														
	-900			190	181	-9	192	184	-8	266	258	-8			
	-750									250	244	-6			
	-600									242	235	-7			
	-450									237	232	-5			
	-300									232	232	0			
	-150									230	228	-2			
	0	186	185	-1	158	198	40	150	198	48	225	222	-3		
	150	219	210	-9	157	265	108	152	264	112	238	246	8		
	300	220	242	22	156	332	176	151	323	172	239	266	27		
	450	220	243	23	155	351	196	150	333	183	238	278	40		
	600	219	245	26	155	360	205	149	356	207	239	291	52	412	408
	750	218	253	35	154	377	223	148	365	217	240	298	58	439	431
	900	218	259	41	154	384	230	148	367	219	241	305	64	454	452
	1050	218	263	45	154	375	221	148	357	209	243	312	69	473	468
	1200	219	262	43	154	235	81	149	272	123	245	335	90	482	462
	1350	220	272	52	155	274	119	150	308	158	250	368	118	489	489
	1500	220	243	23	156	284	128	151	306	155	254	359	105	492	490
	1650	220	232	12	158	284	126	153	302	149	260	336	76	492	490
	1800	206	215	9	158	247	89	154	266	112	265	310	45	490	488
	1950				158	138	-20	152	210	58	269	289	20	483	485
	2100							147	140	-7	275	265	-10	477	475
	2250							145	153	8	284	288	4	463	462
	2400							145	147	2	295	300	5	451	450
	2550							152	154	2	307	310	3		
	2700				165	164	-1	175	176	1	325	326	1		
	2850				191	192	1	201	203	2	342	344	2		
	3000				220	220	0	228	229	1	362	361	-1		

DATA SHEET 10 (continued)
VEHICLE EXTERIOR CRUSH PROFILES ALL LEVELS



DATA SHEET 11 VEHICLE DAMAGE PROFILE DISTANCES



DPD MEASUREMENTS (mm)		POST-TEST (mm)	PRE-TEST (mm)	STATIC CRUSH (mm)
1	-450	164	164	0
2	90	246	156	90
3	630	362	150	212
4	1170	367	140	227
5	1710	279	135	144
6	2250	142	142	0

DATA SHEET 12

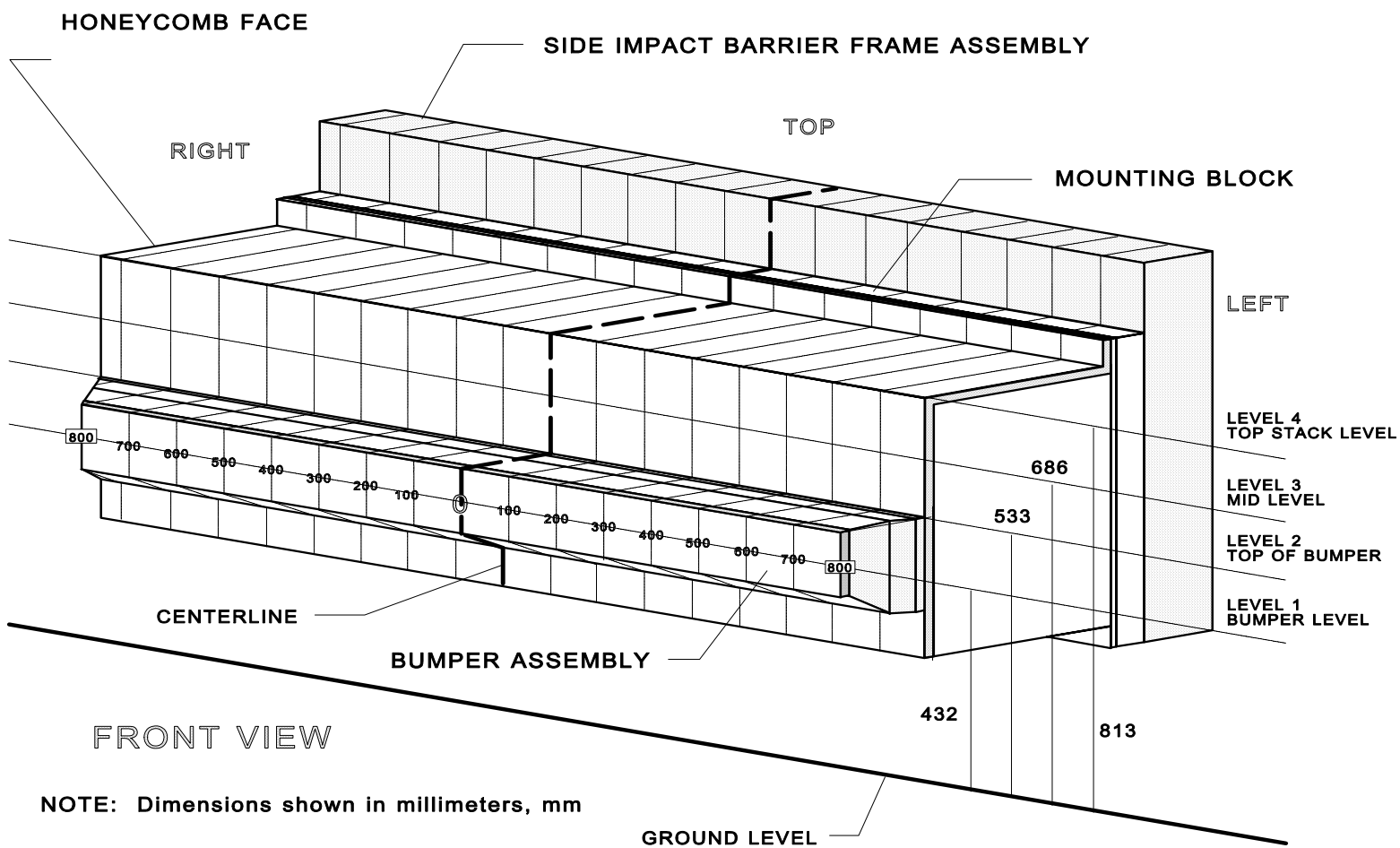
STATIC CRUSH OF IMPACTOR FACE
(Grid as looking at MDB from front)

Note: All Dimensions are in millimeters with a tolerance of ± 3 mm

LEVEL	HEIGHT AT CL (mm)		DISTANCE LEFT OF CENTER								0	DISTANCE RIGHT OF CENTER							
			800	700	600	500	400	300	200	100		100	200	300	400	500	600	700	800
LEVEL 4 TOP STACK	810	PRE-	533	532	531	531	531	530	530	530	530	529	529	529	529	528	529	528	528
		POST-	636	600	579	566	573	607	590	570	561	568	574	580	587	597	609	633	703
		CRUSH	103	68	48	35	42	77	60	40	31	39	45	51	58	69	80	105	175
LEVEL 3 MID- LEVEL	685	PRE-	531	531	530	530	530	529	529	529	528	528	528	527	528	527	527	528	527
		POST-	611	580	564	557	558	580	582	564	558	556	559	563	567	577	590	616	680
		CRUSH	80	49	34	27	28	51	53	35	30	28	31	36	39	50	63	88	153
LEVEL 2 TOP BUMPER	560	PRE-	528	528	528	527	527	527	527	526	526	526	526	526	526	526	526	525	525
		POST-	600	616	603	594	595	596	599	586	588	595	610	617	620	622	633	646	678
		CRUSH	72	88	75	67	68	69	72	60	62	69	84	91	94	96	107	121	153
LEVEL 1 MID- BUMPER	432	PRE-	440	425	424	424	424	424	424	424	424	424	424	423	423	423	423	423	432
		POST-	624	599	588	585	591	593	585	581	580	576	580	586	588	592	603	630	672
		CRUSH	184	174	164	161	167	169	161	157	156	152	156	163	165	169	180	207	240

Note: Top of Bumper static crush measurements made 560 mm above ground to avoid glue at bumper/barrier interface

DATA SHEET 12 (continued)
STATIC CRUSH OF IMPACTOR FACE

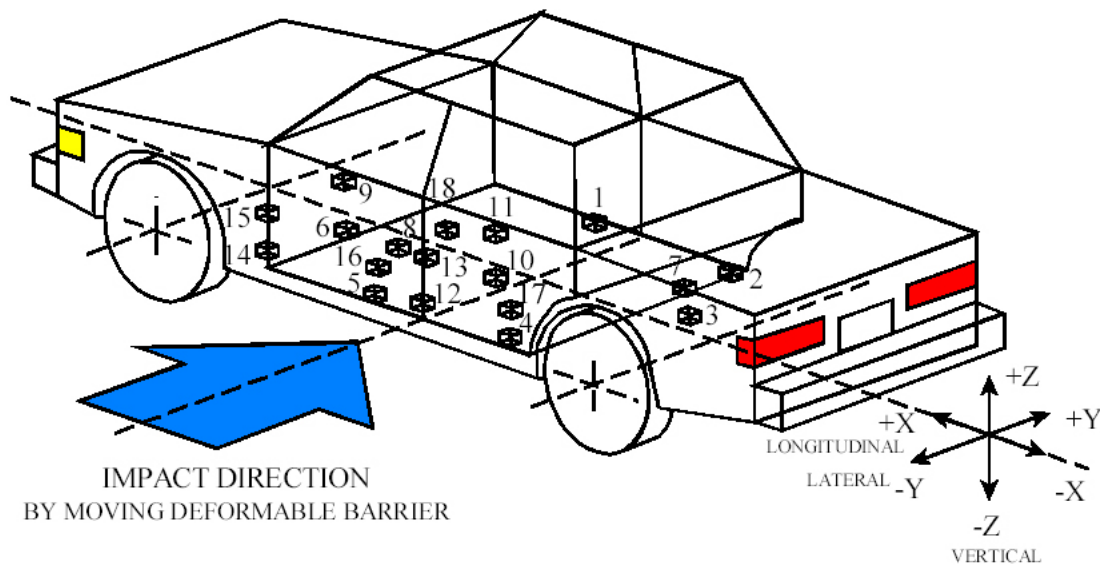


NOTE: Dimensions shown in millimeters, mm

Note: Top of Bumper static crush measurements made 560 mm above ground to avoid glue at bumper/barrier interface

DATA SHEET 13

TEST VEHICLE ACCELEROMETER LOCATIONS AND DATA SUMMARY



1. Right Side Sill at Front Seat	10. Mid-rear of Left Rear Door
2. Right Side Sill at Rear Seat	11. Left Rear Door Upper Centerline
3. Rear Floorpan Above Axle	12. Left Lower B-Pillar
4. Left Side Sill at Rear Seat	13. Left Middle B-Pillar
5. Left Side Sill at Front Seat	14. Left Lower A-Pillar
6. Left Front Door on Centerline	15. Left Middle A-Pillar
7. Right Rear Occupant Compartment	16. Front Seat Track
8. Mid-rear of Left Front Door	17. Rear Seat Track
9. Left Front Door Upper Centerline	18. Vehicle CG

DATASHEET 13 (continued)

VEHICLE ACCELEROMETER LOCATIONS AND SUMMARY DATA

Location		Coordinates			Longitudinal (X)				Lateral (Y)				Vertical (Z)				Resultant	
		X mm	Y mm	Z mm	Max		Min		Max		Min		Max		Min		Max	
					G's	msec	G's	msec	G's	msec	G's	msec	G's	msec	G's	msec	G's	msec
1	Right Side Sill at Front Seat	2766	688	462	3.7	57.8	-6.6	16.2	23.9	7.8	-2.5	79.5	4.5	48.5	-5.3	8.3	25.0	7.9
2	Right Side Sill at Rear Seat	1738	661	462	3.7	25.4	-5.6	16.1	23.9	8.2	-3.6	78.9	4.1	29.8	-6.9	16.5	24.6	8.2
3	Rear Floorpan Above Axle	1049	6	137	3.1	53.9	-9.8	8.4	22.7	24.0	-2.5	77.8	4.0	31.0	-4.5	54.1	23.8	30.6
4	Left Side Sill at Rear Seat	1708	-715	490					20.8	44.6	-5.0	80.0						
5	Left Side Sill at Front Seat	2781	-713	494					21.1	4.6	-18.0	27.8						
6	Left Front Door on Centerline	2770	-780	193					236.3	7.2	-159.5	13.9						
7	Right Rear Occupant Compartment	1897	324	311					24.0	7.4	-2.5	79.6						
8	Midrear of Left Front Door	2522	-796	185					181.5	7.0	-125.0	14.5						
9	Left Front Door Upper Centerline	2735	-768	-133					86.2	10.6	-88.4	24.9						
10	Midrear of Left Rear Door	1480	-776	-268					106.5	15.2	-42.1	44.9						

Axis Origin X – Point L
 Y – Point L
 Z – Point L

Axis Orientation

+(X) Forward where x axis is the vector from middle of rear bumper to mid front bumper
 +(Y) Right where y axis is parallel to ground reference plane
 +(Z) Down where z axis is cross product of +(X) and +(Y)

DATASHEET 13 (continued)

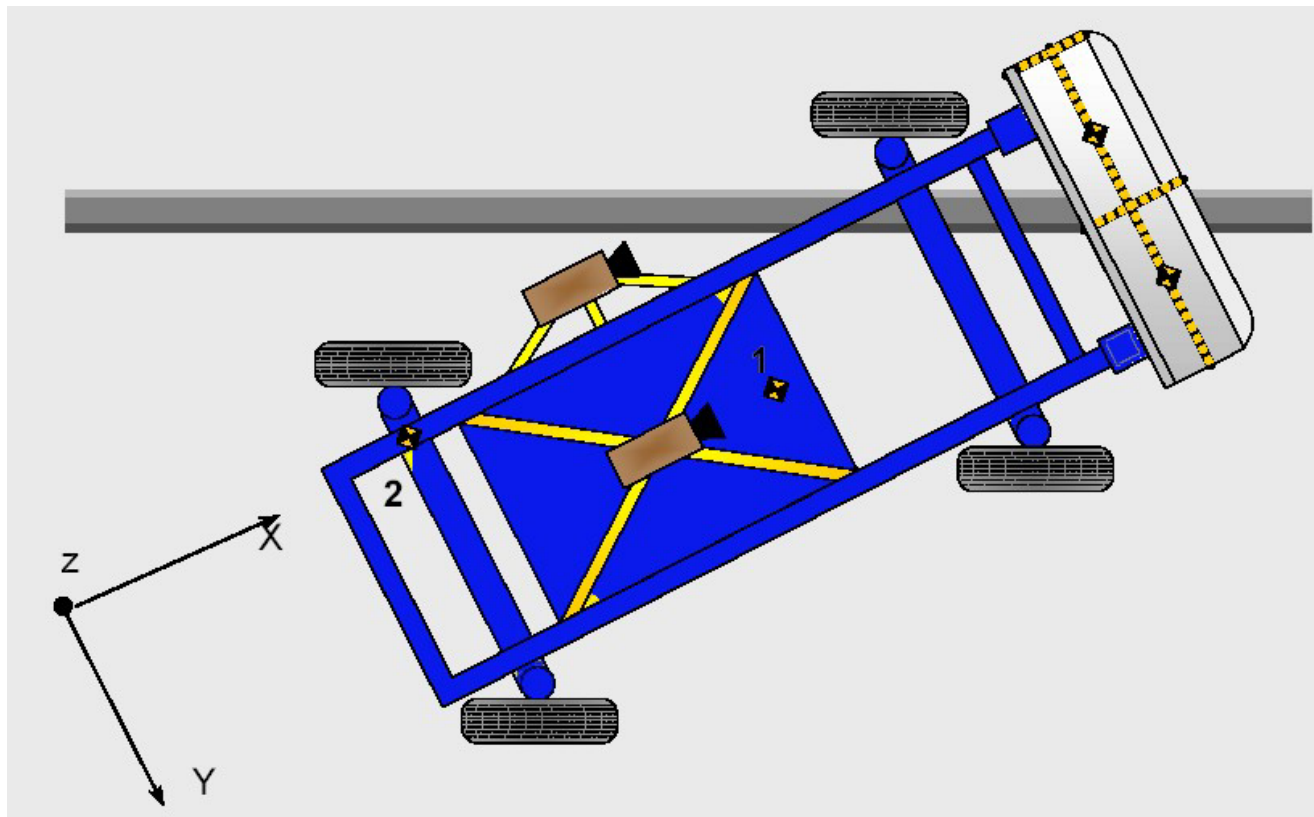
VEHICLE ACCELEROMETER LOCATIONS AND SUMMARY DATA

Location		Coordinates			Longitudinal (X)				Lateral (Y)				Vertical (Z)				Resultant	
		X mm	Y mm	Z mm	Max		Min		Max		Min		Max		Min		Max	
					G's	msec	G's	msec	G's	msec	G's	msec	G's	msec	G's	msec	G's	msec
11	Left Rear Door Upper Centerline	1780	-772	-185					152.3	9.4	-75.6	44.9						
12	Left Lower B-Pillar	2258	-748	82					150.9	5.4	-30.2	13.8						
13	Left Middle B-Pillar	2203	-758	-90					115.2	4.8	-20.2	27.4						
14	Left Lower A-Pillar	3272	-731	208					37.5	9.0	-31.1	13.7						
15	Left Middle A-Pillar	3213	-703	-111					29.4	12.2	-3.7	50.8						
16	Front Seat Track	2389	-425	338					34.8	5.6	-11.8	53.8						
17	Rear Seat Track	1911	-341	308					22.7	7.1	-2.0	79.9						
18	Vehicle CG	2604	14	295	1.9	59.5	-8.3	12.9	21.2	8.3	-2.2	81.6	9.0	27.9	-6.5	20.0	22.6	8.0

Axis Origin X – Point L
 Y – Point L
 Z – Point L

Axis Orientation +(X) Forward where x axis is the vector from middle of rear bumper to mid front bumper
 +(Y) Right where y axis is parallel to ground reference plane
 +(Z) Down where z axis is cross product of +(X) and +(Y)

DATA SHEET 14



MDB ACCELEROMETER LOCATIONS AND DATA SUMMARY

Location		Coordinates			Longitudinal (X)				Lateral (Y)				Vertical (Z)				Resultant	
		X mm	Y mm	Z mm	Max		Min		Max		Min		Max		Min		Max	
					G's	msec	G's	msec	G's	msec	G's	msec	G's	msec	G's	msec	G's	msec
1	MDB Center of Gravity	1113	-1	311	1.7	105.0	-23.2	17.7	1.2	61.8	-7.2	13.9	9.2	15.1	-9.6	23.0	24.2	40.8
2	MDB Rear Frame Member	2812	-614	585	3.1	104.0	-26.3	41.9	5.2	26.7	-1.7	145.4						

Axis Origin

X – Rear Bumper

Y – Vehicle Centerline

Z – Middle of rear bumper

Axis Orientation

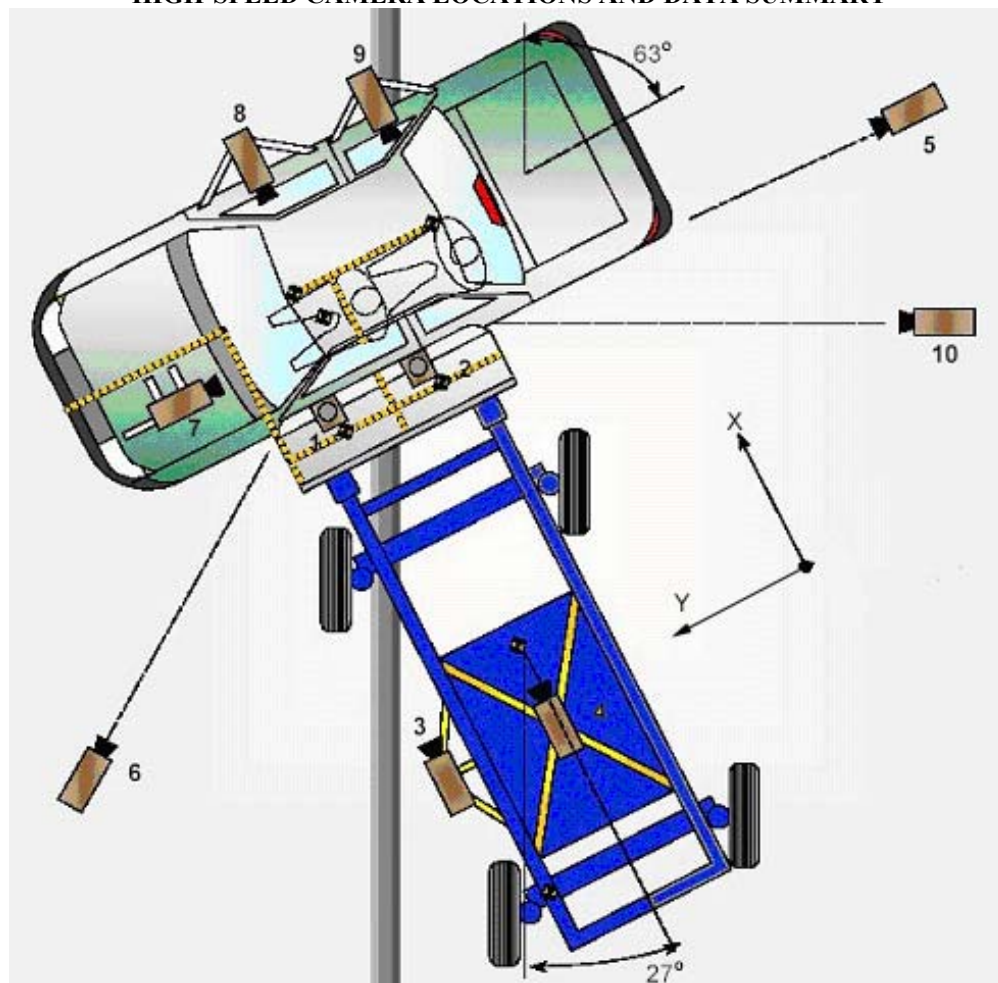
+(X) Forward

+(Y) Right

+(Z) Down

DATA SHEET 15

HIGH-SPEED CAMERA LOCATIONS AND DATA SUMMARY



Camera No.	View	Coordinates (mm)*			Angle wrt Horiz.	Lens (mm)	Video Speed (fps)
		X	Y	Z			
1	Overhead view of test vehicle	776	-1304	4535	90	8	1000
2	Overhead close-up view of impact plane	100	-975	3935	90	16	1000
3	MDB onboard close-up view of impact point	-1542	-1026	25	0	25	1000
4	MDB onboard view of driver dummy	-1415	-1891	780	5	13	1000
5	Right side ground level overall view	750	-13137	702	7	25	1000
6	Left side ground level overall view	594	4578	631	10	35	1000
7	Test vehicle onboard driver front view	522	357	514	15	25	1000
8	Test vehicle onboard driver side view	1730	-930	321	10	12.5	1000
9	Test vehicle onboard passenger side view	1703	-1722	388	10	12.5	1000
10	Real-time film coverage of test	-	-	-	-	-	-

* Reference: Impact Point on test vehicle

+ (X) Forward where y axis is the vector parallel to the longitudinal centerline of the MDB

+ (Y) Left where y axis is the vector from middle of rear bumper to mid front bumper

+ (Z) Up where z axis is cross product of + (X) and + (Y)

SECTION 5
FUEL SYSTEM INTEGRITY

DATA SHEET 16**FUEL SYSTEM INTEGRITY DATA**TEST REQUIREMENTS:

Drain the test vehicle's fuel system and operate the engine until the fuel system is dry. Add Stoddard solvent, which has been dyed purple, until 92-94% of the stated usable capacity is reached. Operate the engine to assure the Stoddard solvent is present throughout the entire fuel system.

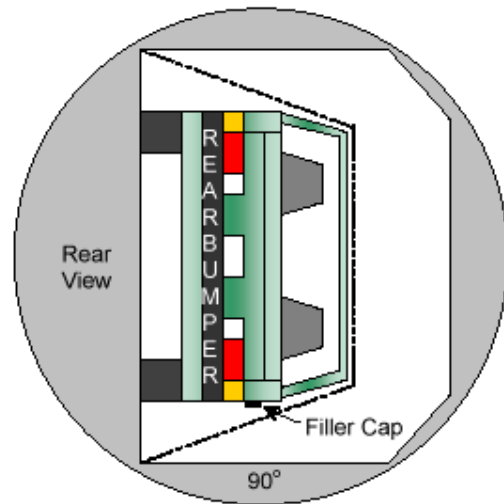
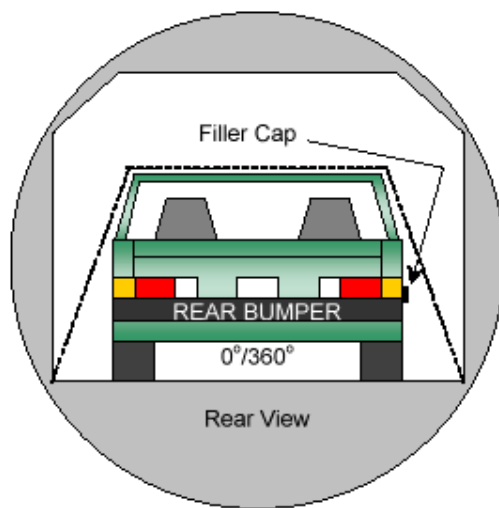
TEST VEHICLE IMPACT TYPE: Side impacting Moving Deformable Barrier contacting the driver side.

FUEL SPILLAGE MEASUREMENT:

POST IMPACT TEST	TEST RESULTS	MAXIMUM ALLOWABLE
1. From impact until vehicle motion ceases	0	1 oz.
2. For 5 minute period after vehicle motion ceases	0	5 oz.
3. For next 25 minutes	0	1 oz./minute

FUEL SPILLAGE LOCATION(S): None

DATA SHEET 17
ROLLOVER DATA



0° TO 90°

DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time	<u>1</u> minutes	<u>4</u> seconds
(Spec Range =1 to 3 minutes)		
FMVSS 301 Position Hold Time	<u>5</u> minutes	<u>0</u> seconds
TOTAL	<u>6</u> minutes	<u>4</u> seconds
Next whole minute interval	<u>7</u> minutes	

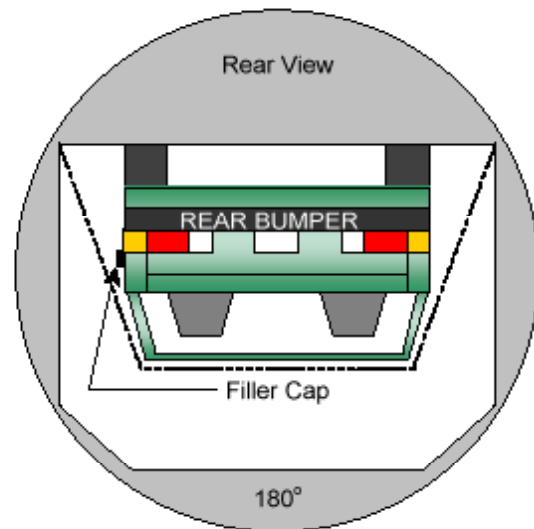
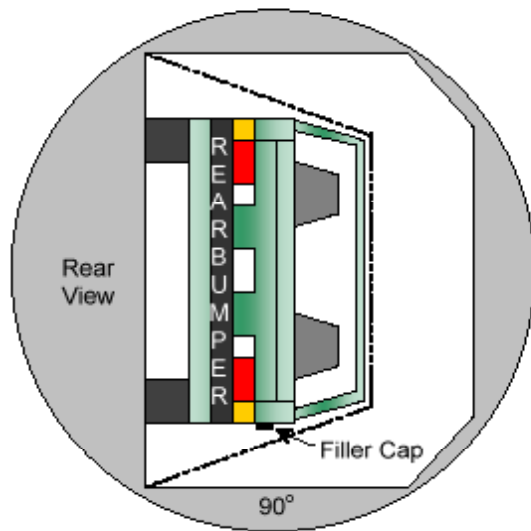
FUEL SPILLAGE MEASUREMENT:

0° TO 90° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0	5 oz.
2. Sixth Minute From Onset of Rotation	0	1 oz.
3. Seventh Minute From Onset of Rotation	0	1 oz.
4. Eighth Minute if Required	-	1 oz.

FUEL SPILLAGE LOCATION(S): None

DATA SHEET 17 (continued)

ROLLOVER VEHICLE



90° TO 180°

DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time	<u>1</u> minutes	<u>3</u> seconds
(Spec Range = 1 to 3 minutes)		
FMVSS 301 Position Hold Time	<u>5</u> minutes	<u>0</u> seconds
TOTAL	<u>6</u> minutes	<u>3</u> seconds
Next whole minute interval	<u>7</u> minutes	

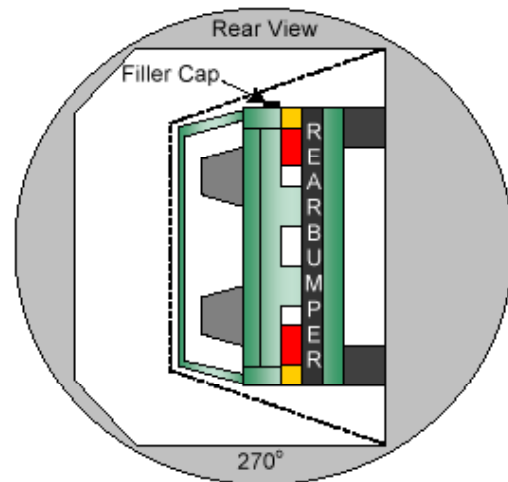
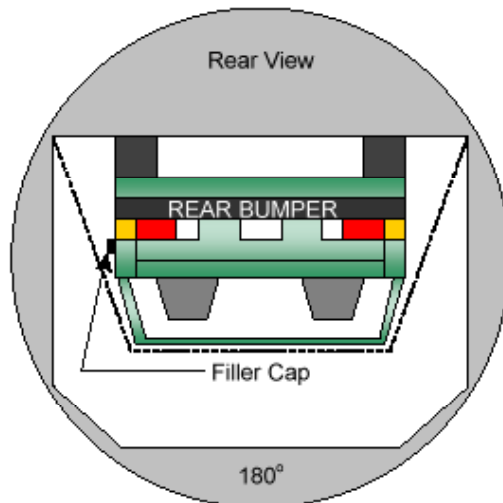
FUEL SPILLAGE MEASUREMENT:

90° TO 180° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0	5 oz.
2. Sixth Minute From Onset of Rotation	0	1 oz.
3. Seventh Minute From Onset of Rotation	0	1 oz.
4. Eighth Minute if Required	-	1 oz.

FUEL SPILLAGE LOCATION(S): None

DATA SHEET 17 (continued)

ROLLOVER VEHICLE



180° TO 270°

DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time	<u>1</u> minutes	<u>5</u> seconds
(Spec Range =1 to 3 minutes)		
FMVSS 301 Position Hold Time	<u>5</u> minutes	<u>0</u> seconds
TOTAL	<u>6</u> minutes	<u>5</u> seconds
Next whole minute interval	<u>7</u> minutes	

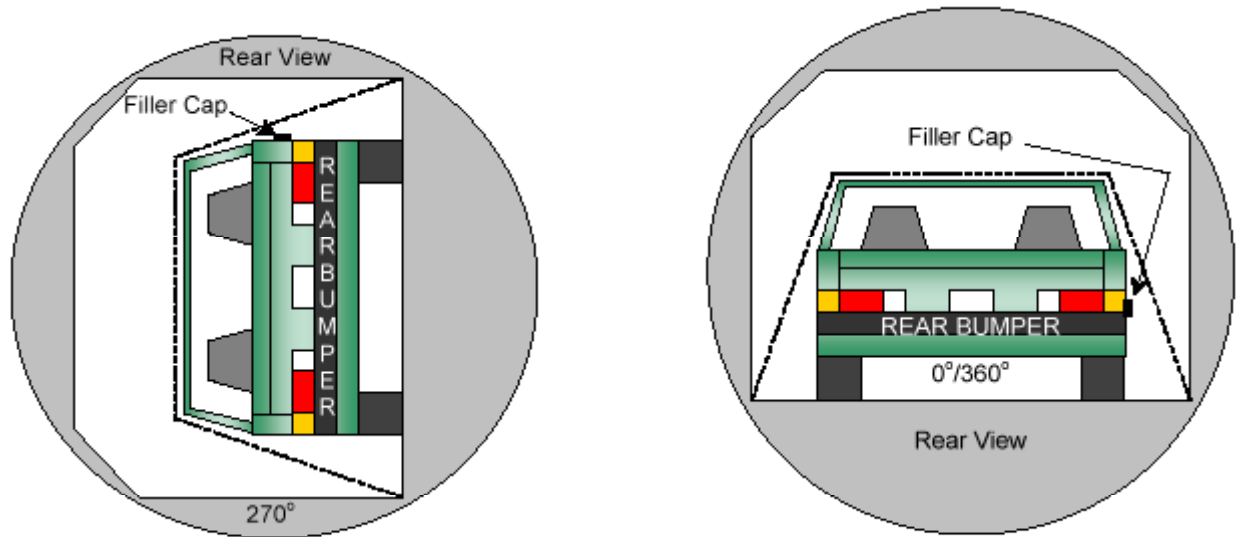
FUEL SPILLAGE MEASUREMENT:

180° TO 270° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0	5 oz.
2. Sixth Minute From Onset of Rotation	0	1 oz.
3. Seventh Minute From Onset of Rotation	0	1 oz.
4. Eighth Minute From Onset of Rotation	-	1 oz.

FUEL SPILLAGE LOCATION(S): None

DATA SHEET 17 (continued)

ROLLOVER VEHICLE



270° TO 360°

DETERMINATION OF SOLVENT COLLECTION TIME PERIOD:

Rollover Fixture 90° Rotation Time	<u>1</u> minutes	<u>6</u> seconds
(Spec Range =1 to 3 minutes)		
FMVSS 301 Position Hold Time	<u>5</u> minutes	<u>0</u> seconds
TOTAL	<u>6</u> minutes	<u>6</u> seconds
Next whole minute interval	<u>7</u> minutes	

FUEL SPILLAGE MEASUREMENT:

270° TO 360° ROTATION	TEST RESULTS	MAXIMUM ALLOWABLE
1. First 5 Minutes From Onset of Rotation	0	5 oz.
2. Sixth Minute From Onset of Rotation	0	1 oz.
3. Seventh Minute From Onset of Rotation	0	1 oz.
4. Eighth Minute if Required	-	1 oz.

FUEL SPILLAGE LOCATION(S): None

APPENDIX A
PHOTOGRAPHS

TABLE OF PHOTOGRAPHS

<u>Figure</u>	<u>Photograph Title</u>	<u>Page</u>
A-1	PRE-TEST FRONTAL VIEW OF TEST VEHICLE	A-3
A-2	POST-TEST FRONTAL VIEW OF TEST VEHICLE	A-4
A-3	PRE-TEST LEFT FRONT VIEW OF TEST VEHICLE	A-5
A-4	POST-TEST LEFT FRONT VIEW OF TEST VEHICLE	A-6
A-5	PRE-TEST LEFT (IMPACTED) SIDE VIEW OF TEST VEHICLE	A-7
A-6	POST-TEST LEFT (IMPACTED) SIDE VIEW OF TEST VEHICLE	A-8
A-7	PRE-TEST LEFT REAR VIEW OF TEST VEHICLE	A-9
A-8	POST-TEST LEFT REAR VIEW OF TEST VEHICLE	A-10
A-9	PRE-TEST REAR VIEW OF TEST VEHICLE	A-11
A-10	POST-TEST REAR VIEW OF TEST VEHICLE	A-12
A-11	PRE-TEST RIGHT REAR OF TEST VEHICLE	A-13
A-12	POST-TEST RIGHT REAR OF TEST VEHICLE	A-14
A-13	PRE-TEST RIGHT SIDE VIEW OF TEST VEHICLE	A-15
A-14	POST-TEST RIGHT SIDE VIEW OF TEST VEHICLE	A-16
A-15	PRE-TEST RIGHT FRONT VIEW OF TEST VEHICLE	A-17
A-16	POST-TEST RIGHT FRONT VIEW OF TEST VEHICLE	A-18
A-17	PRE-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF FRONT SID H3	A-19
A-18	POST-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF FRONT SID H3	A-20
A-19	PRE-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF REAR SID H3	A-21
A-20	POST-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF REAR SID H3	A-22
A-21	PRE-TEST LEFT OCCUPANT COMPARTMENT VIEW OF FRONT SID H3	A-23
A-22	POST-TEST LEFT OCCUPANT COMPARTMENT VIEW OF FRONT SID H3	A-24
A-23	PRE-TEST LEFT OCCUPANT COMPARTMENT VIEW OF REAR SID H3	A-25
A-24	POST-TEST LEFT OCCUPANT COMPARTMENT VIEW OF REAR SID H3	A-26
A-25	PRE-TEST INTERIOR OF FRONT DOOR	A-27
A-26	POST-TEST INTERIOR OF FRONT DOOR SHOWING SID H3 IMPACT LOCATIONS	A-28
A-27	POST-TEST INTERIOR OF FRONT DOOR SHOWING SID H3 IMPACT LOCATIONS 2	A-29
A-28	PRE-TEST INTERIOR OF REAR PASSENGER COMPARTMENT	A-30
A-29	POST-TEST INTERIOR OF REAR DOOR SHOWING SID H3 IMPACT LOCATIONS	A-31
A-30	POST-TEST INTERIOR OF REAR DOOR SHOWING SID H3 IMPACT LOCATIONS 2	A-32
A-31	PRE-TEST LEFT SIDE VIEW OF MDB IN IMPACT POSITION	A-33
A-32	POST-TEST LEFT SIDE VIEW OF MDB	A-34
A-33	PRE-TEST RIGHT SIDE VIEW OF MDB IN IMPACT POSITION	A-35
A-34	POST-TEST RIGHT SIDE VIEW OF MDB	A-36
A-35	PRE-TEST OVERHEAD VIEW OF MDB IN IMPACT POSITION	A-37
A-36	POST-TEST OVERHEAD VIEW OF MDB	A-38
A-37	PRE-TEST CLOSE UP OF IMPACT POINT TARGET SHOWING WELDING ROD	A-39
A-38	POST-TEST CLOSE-UP OF IMPACT POINT TARGET	A-40
A-39	VEHICLE TIRE PLACARD	A-41
A-40	VEHICLE CERTIFICATION LABEL	A-42
A-41	IMPACT	A-43
A-42	ROLLOVER 0 DEGREES	A-44
A-43	ROLLOVER 90 DEGREES	A-45
A-44	ROLLOVER 180 DEGREES	A-46
A-45	ROLLOVER 270 DEGREES	A-47
A-46	ROLLOVER 360 DEGREES	A-48
A-47	PRE-TEST ALUMINUM BARRIER FRONT	A-49
A-48	POST-TEST ALUMINUM BARRIER FRONT	A-50
A-49	PRE-TEST ALUMINUM BARRIER LEFT SIDE	A-51
A-50	POST-TEST ALUMINUM BARRIER LEFT SIDE	A-52
A-51	PRE-TEST ALUMINUM BARRIER RIGHT SIDE	A-53
A-52	POST-TEST ALUMINUM BARRIER RIGHT SIDE	A-54
A-53	PRE-TEST ALUMINUM BARRIER OVERHEAD	A-55
A-54	POST-TEST ALUMINUM BARRIER OVERHEAD	A-56



Figure A-1: PRE-TEST FRONTAL VIEW OF TEST VEHICLE

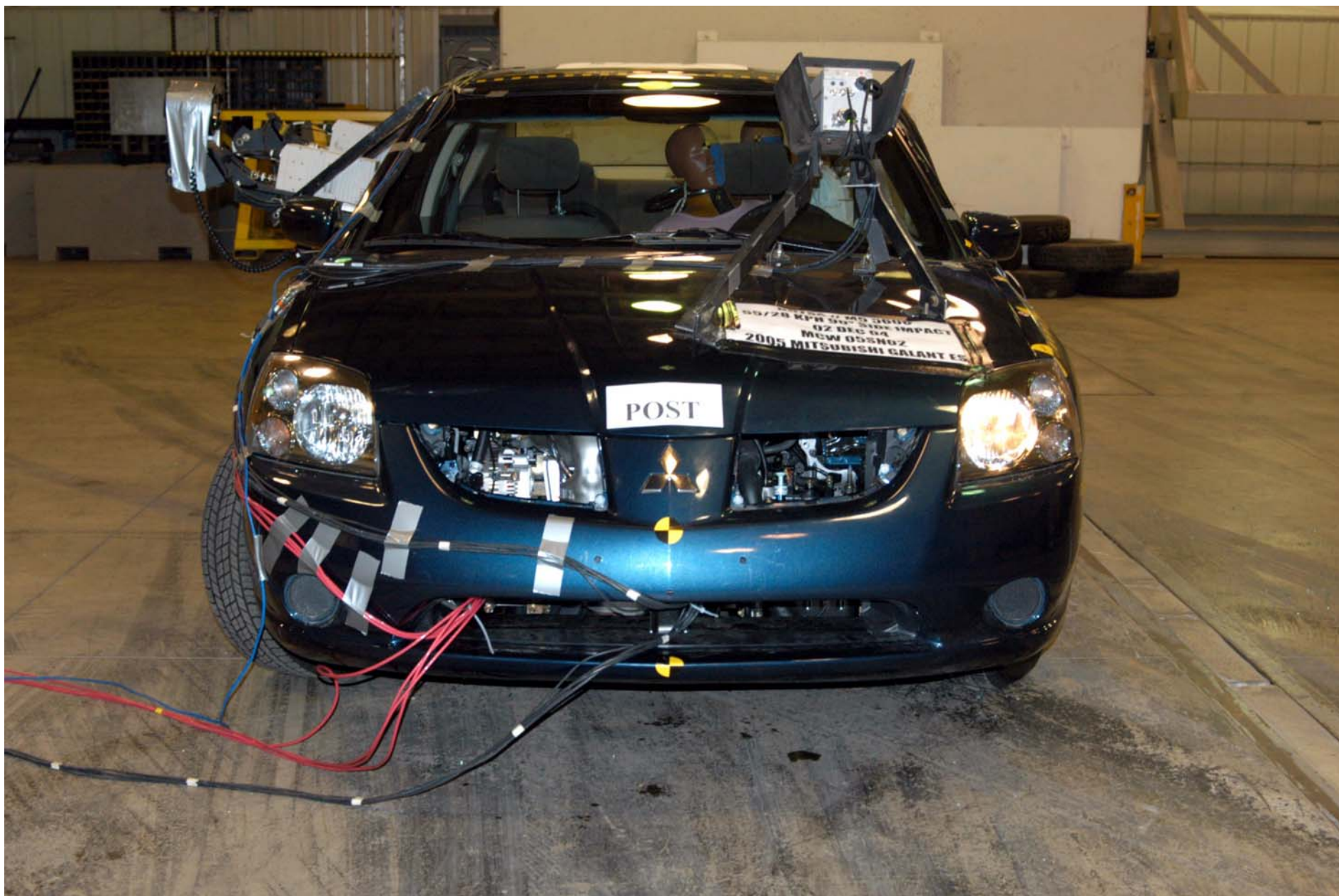


Figure A-2: POST-TEST FRONTAL VIEW OF TEST VEHICLE



Figure A-3: PRE-TEST LEFT FRONT VIEW OF TEST VEHICLE



Figure A-4: POST-TEST LEFT FRONT VIEW OF TEST VEHICLE



Figure A-5: PRE-TEST LEFT SIDE VIEW OF TEST VEHICLE



Figure A-6: POST-TEST LEFT SIDE VIEW OF TEST VEHICLE



Figure A-7: PRE-TEST LEFT REAR VIEW OF TEST VEHICLE

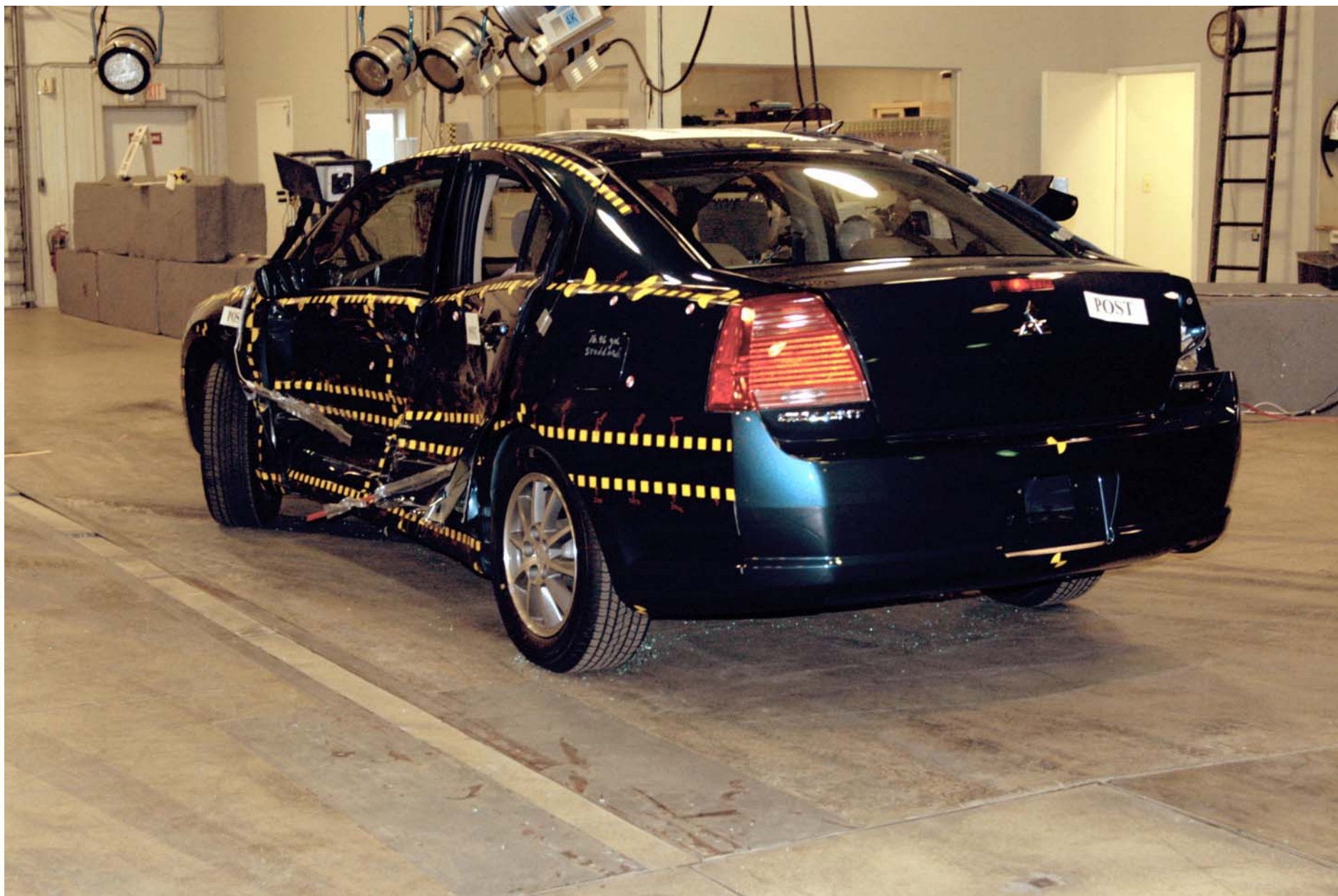


Figure A-8: POST-TEST LEFT REAR VIEW OF TEST VEHICLE

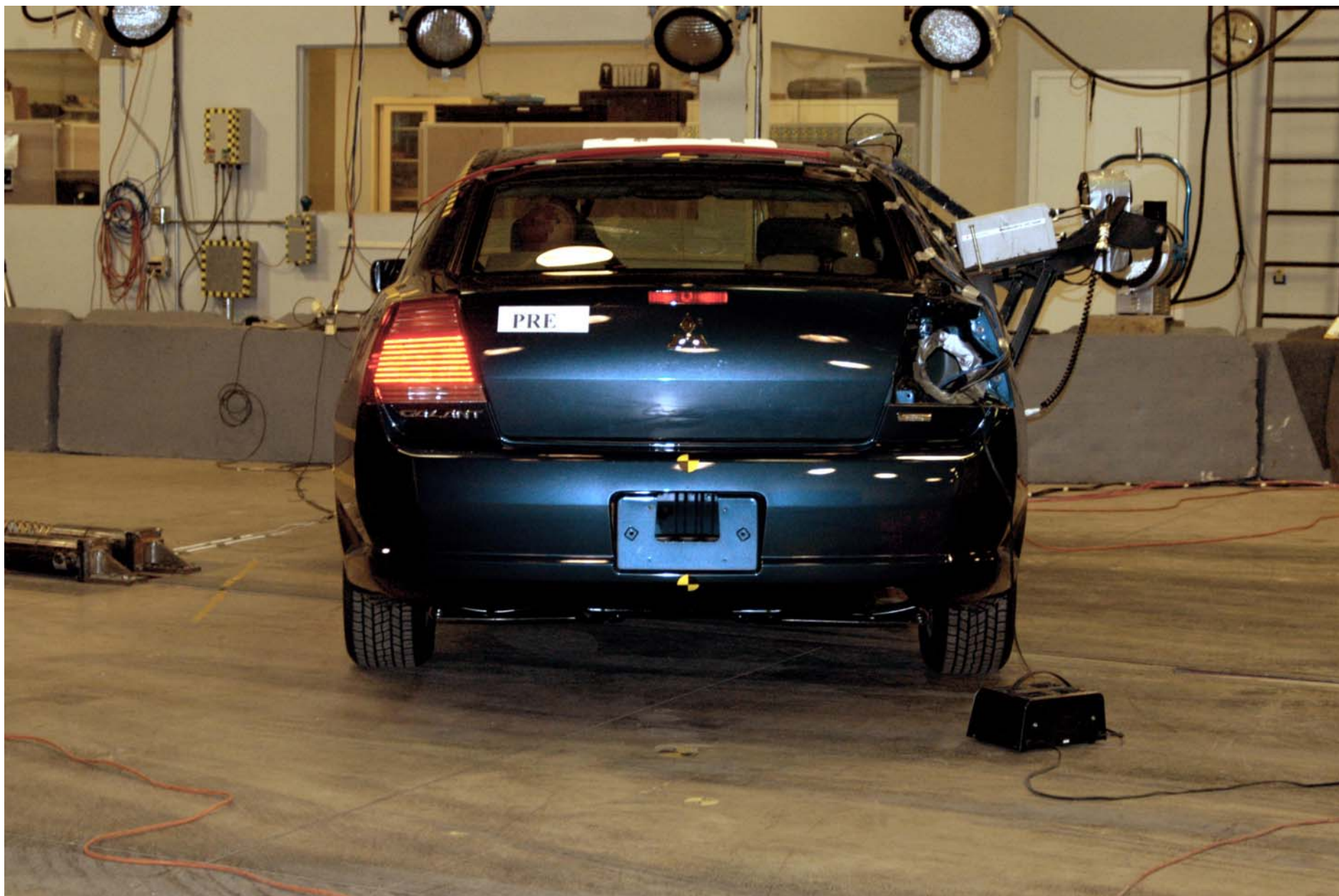


Figure A-9: PRE-TEST REAR VIEW OF TEST VEHICLE

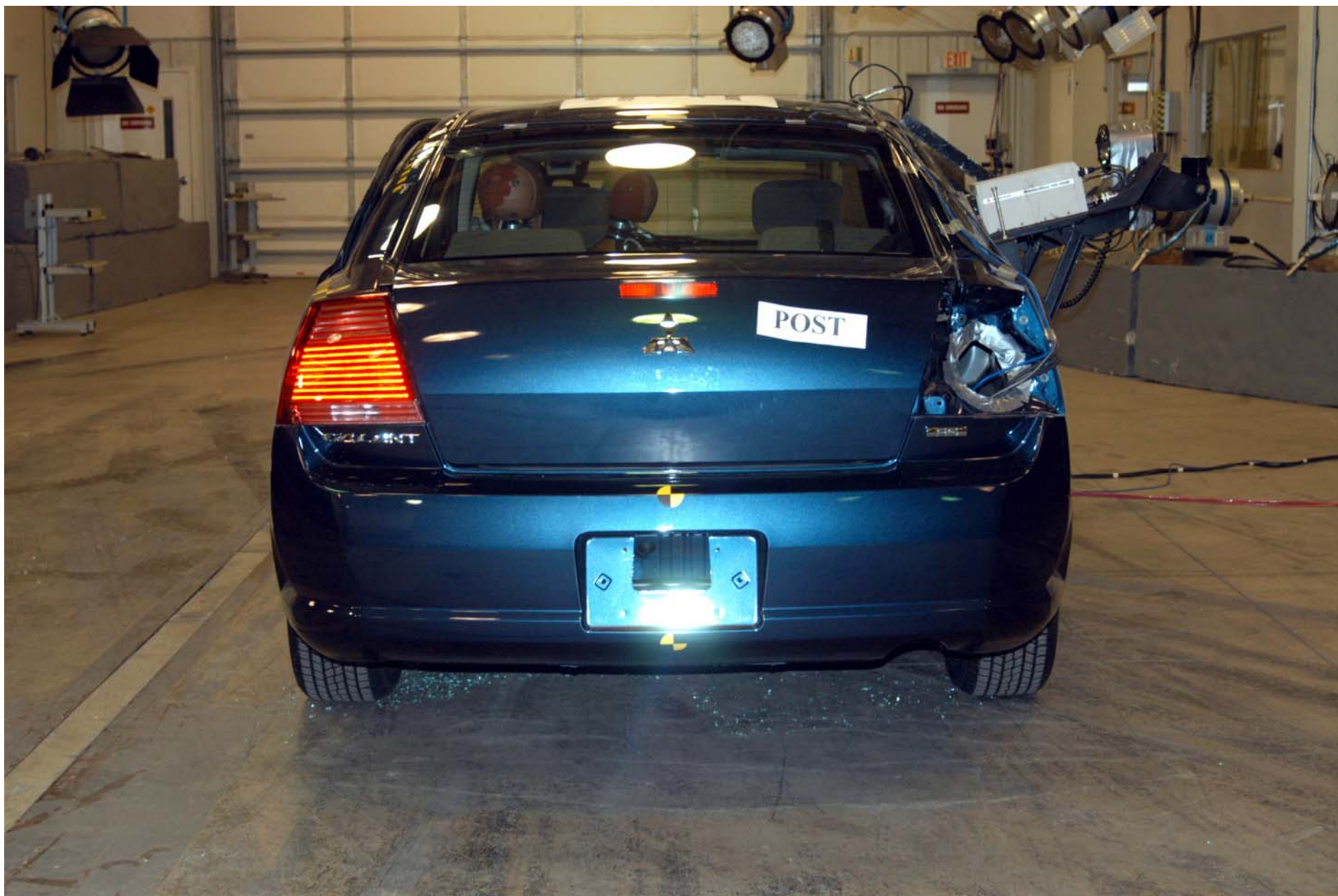


Figure A-10: POST-TEST REAR VIEW OF TEST VEHICLE



Figure A-11 PRE-TEST RIGHT REAR VIEW OF TEST VEHICLE



Figure A-12 POST-TEST RIGHT REAR VIEW OF TEST VEHICLE



Figure A-13: PRE-TEST RIGHT SIDE VIEW OF TEST VEHICLE



Figure A-14: POST-TEST RIGHT SIDE VIEW OF TEST VEHICLE



Figure A-15: PRE-TEST FRONT RIGHT VIEW OF TEST VEHICLE



Figure A-16: POST-TEST FRONT RIGHT VIEW OF TEST VEHICLE



Figure A-17: PRE-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF FRONT SID H3



Figure A-18: POST-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF FRONT SID H3



Figure A-19: PRE-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF REAR SID H3



Figure A-20: POST-TEST RIGHT OCCUPANT COMPARTMENT VIEW OF REAR SID H3



Figure A-21: PRE-TEST LEFT OCCUPANT COMPARTMENT VIEW OF FRONT SID H3



Figure A-22: POST-TEST LEFT OCCUPANT COMPARTMENT VIEW OF FRONT SID H3

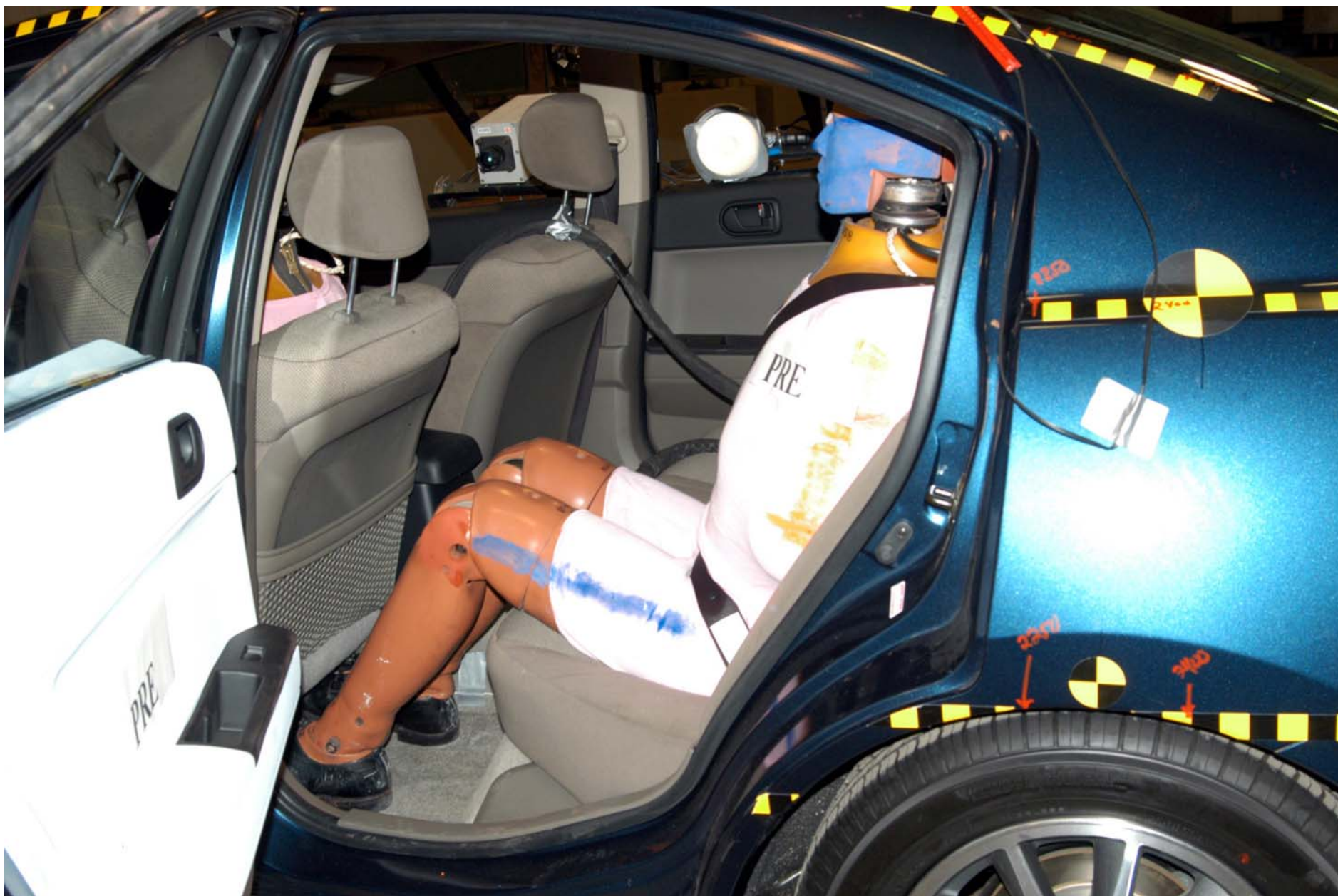


Figure A-23: PRE-TEST LEFT OCCUPANT COMPARTMENT VIEW OF REAR SID H3

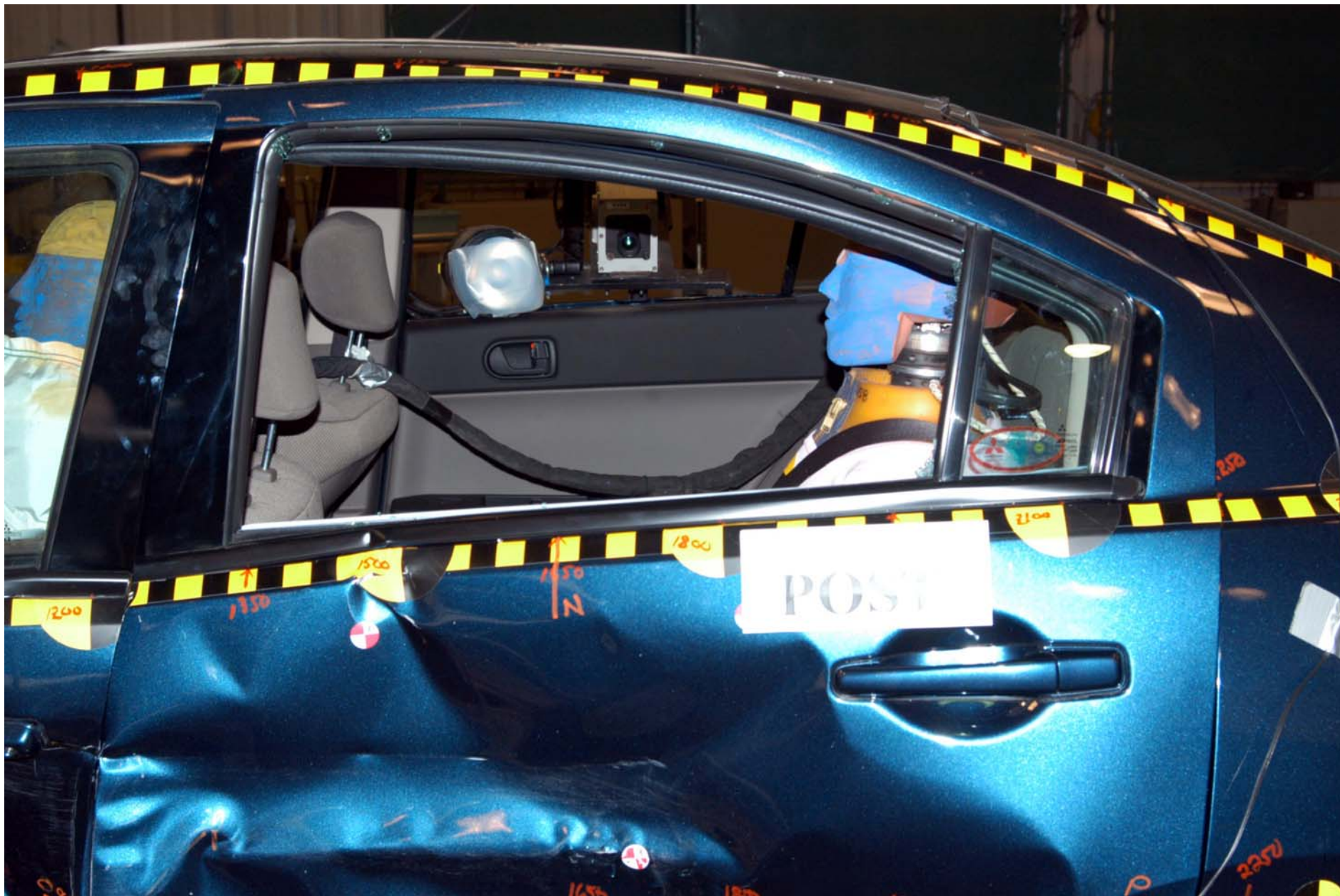


Figure A-24: POST-TEST LEFT OCCUPANT COMPARTMENT VIEW OF REAR SID H3



Figure A-25: PRE-TEST INTERIOR OF FRONT DOOR



Figure A-26: POST-TEST INTERIOR OF FRONT DOOR SHOWING SID H3 IMPACT LOCATIONS



Figure A-27: POST-TEST INTERIOR OF FRONT DOOR SHOWING SID H3 IMPACT LOCATIONS 2



Figure A-28: PRE-TEST INTERIOR OF REAR PASSENGER COMPARTMENT



Figure A-29: POST-TEST INTERIOR OF REAR DOOR SHOWING SID H3 IMPACT LOCATIONS



Figure A-30: POST-TEST INTERIOR OF REAR DOOR SHOWING SID H3 IMPACT LOCATIONS 2



Figure A-31: PRE TEST LEFT SIDE VIEW OF MDB IN IMPACT POSITION

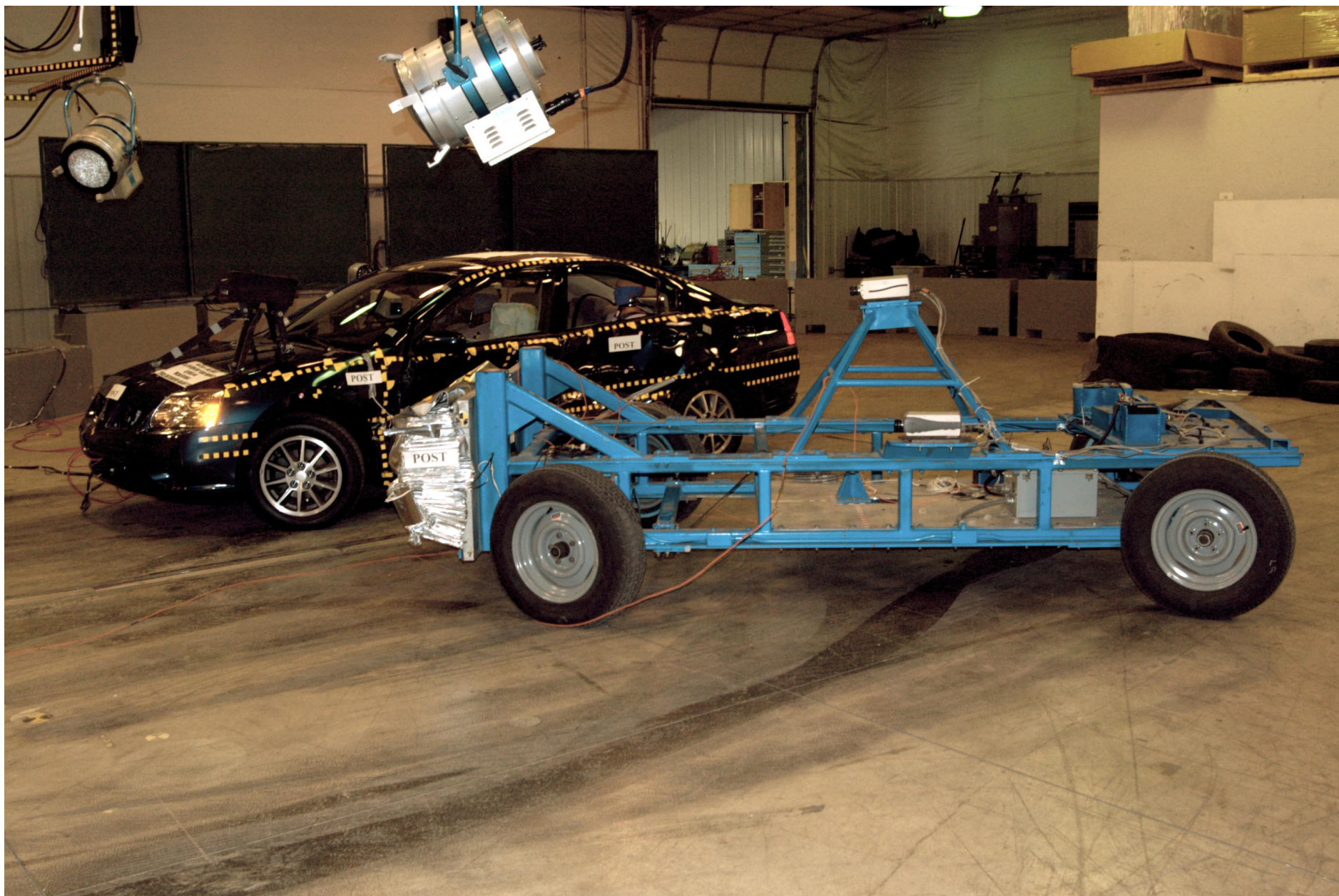


Figure A-32: POST TEST LEFT SIDE VIEW OF MDB



Figure A-33: PRE TEST RIGHT SIDE VIEW OF MDB IN IMPACT POSITION



Figure A-34: POST TEST RIGHT SIDE VIEW OF MDB

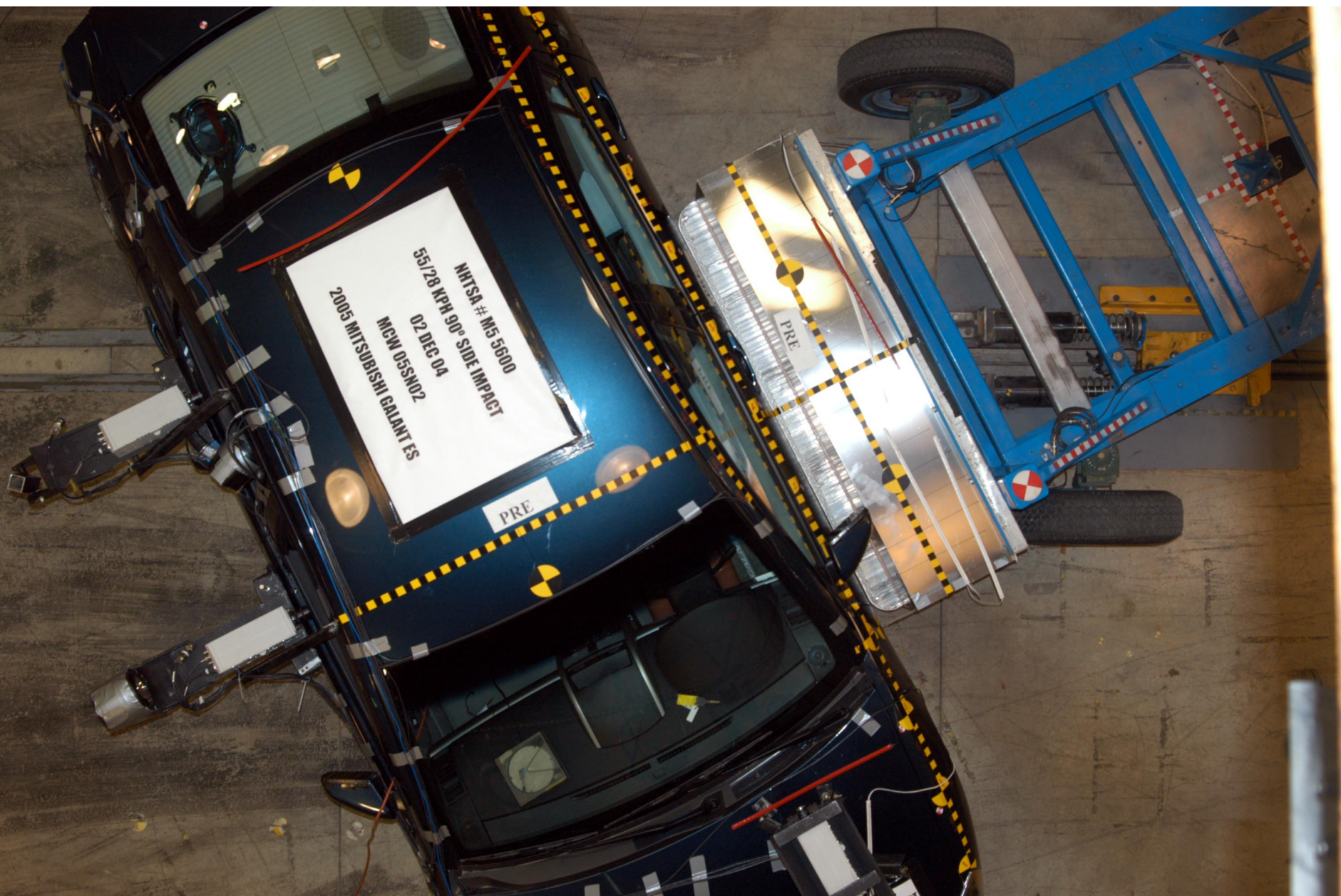


Figure A-35: PRE TEST OVERHEAD VIEW OF MDB IN IMPACT POSITION



Figure A-36: POST TEST OVERHEAD VIEW OF MDB



Figure A-37: PRE TEST CLOSE-UP OF IMPACT POINT TARGET SHOWING WELDING ROD



Figure A-38: POST TEST CLOSE-UP OF IMPACT POINT TARGET

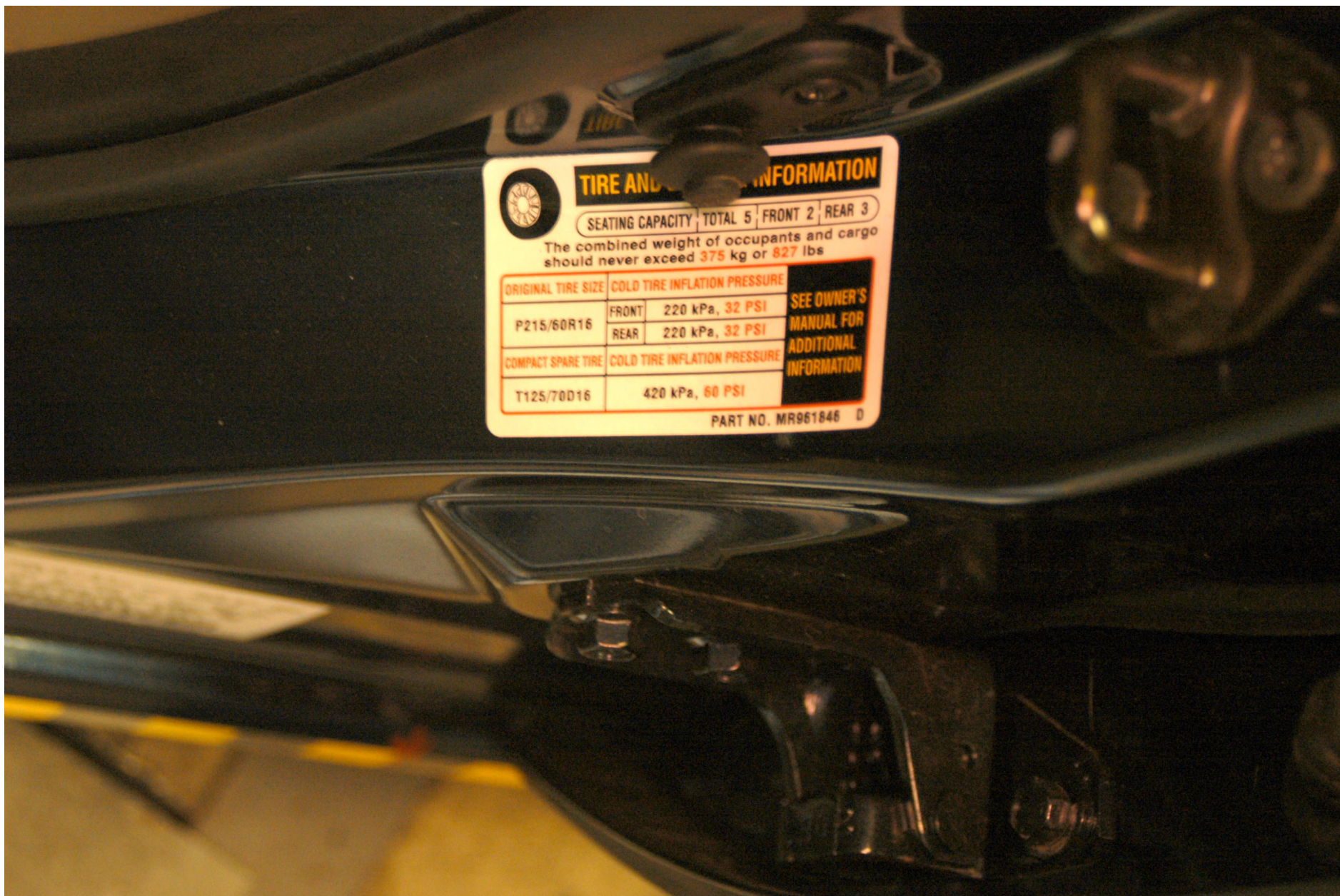


Figure A-39: VEHICLE TIRE PLACARD



Figure A-40: VEHICLE CERTIFICATION LABEL



Figure A-41: IMPACT



Figure A-42: ROLLOVER 0 DEGREES

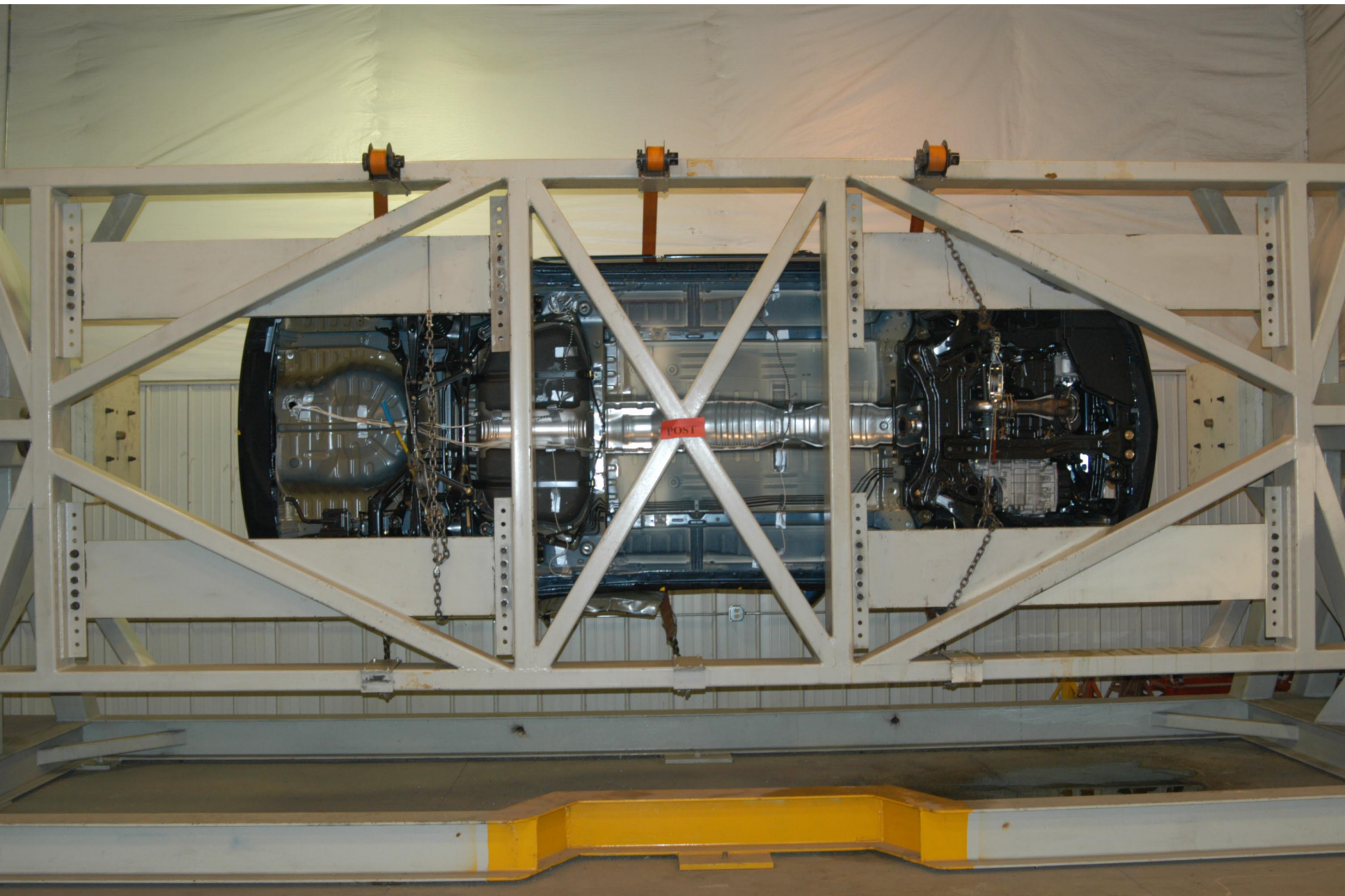


Figure A-43: ROLLOVER 90 DEGREES

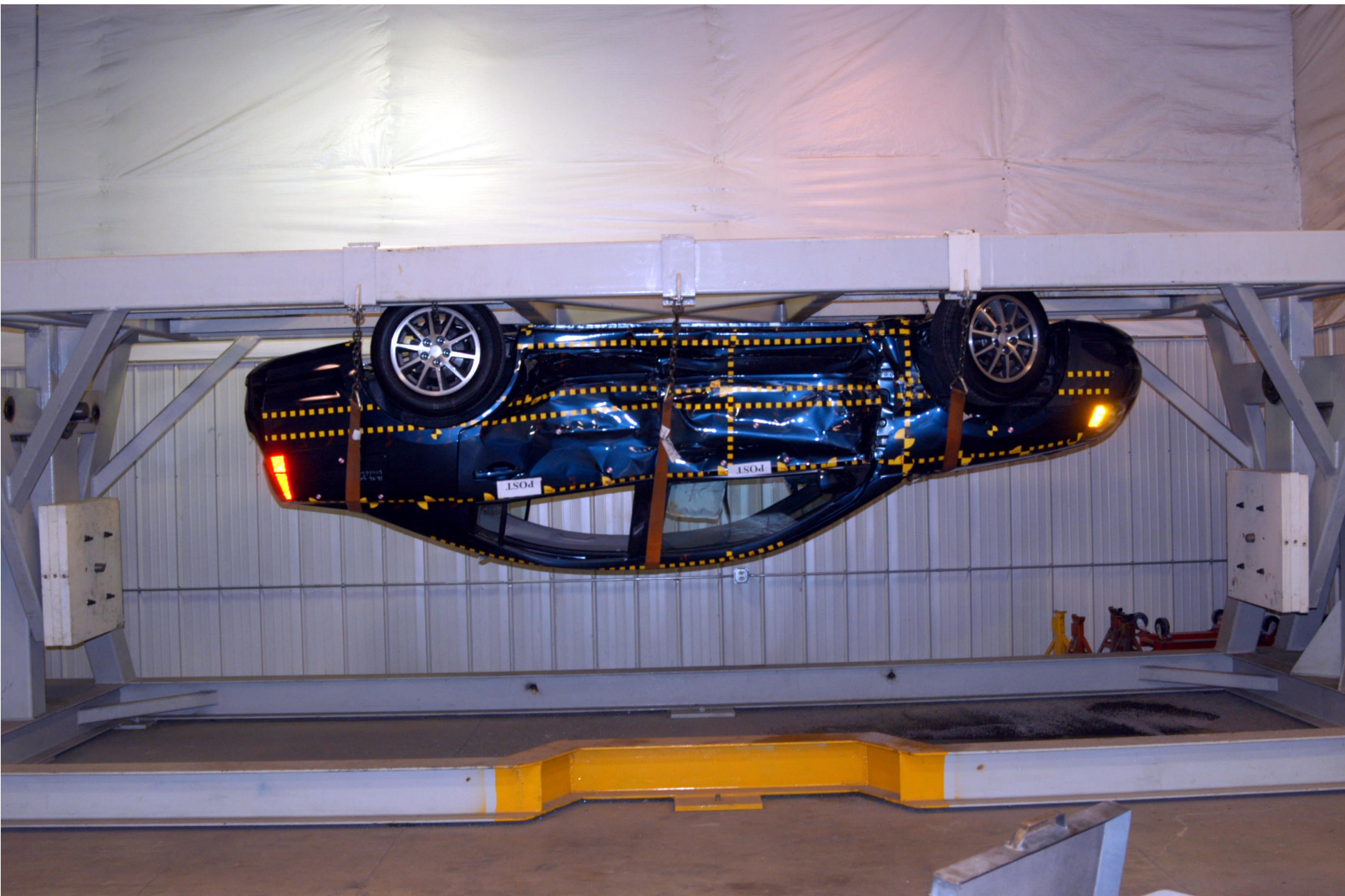


Figure A-44: ROLLOVER 180 DEGREES



Figure A-45: ROLLOVER 270 DEGREES



Figure A-46: ROLLOVER 360 DEGREES



Figure A-47: PRE-TEST ALUMINUM BARRIER FRONT



Figure A-48: POST-TEST ALUMINUM BARRIER FRONT

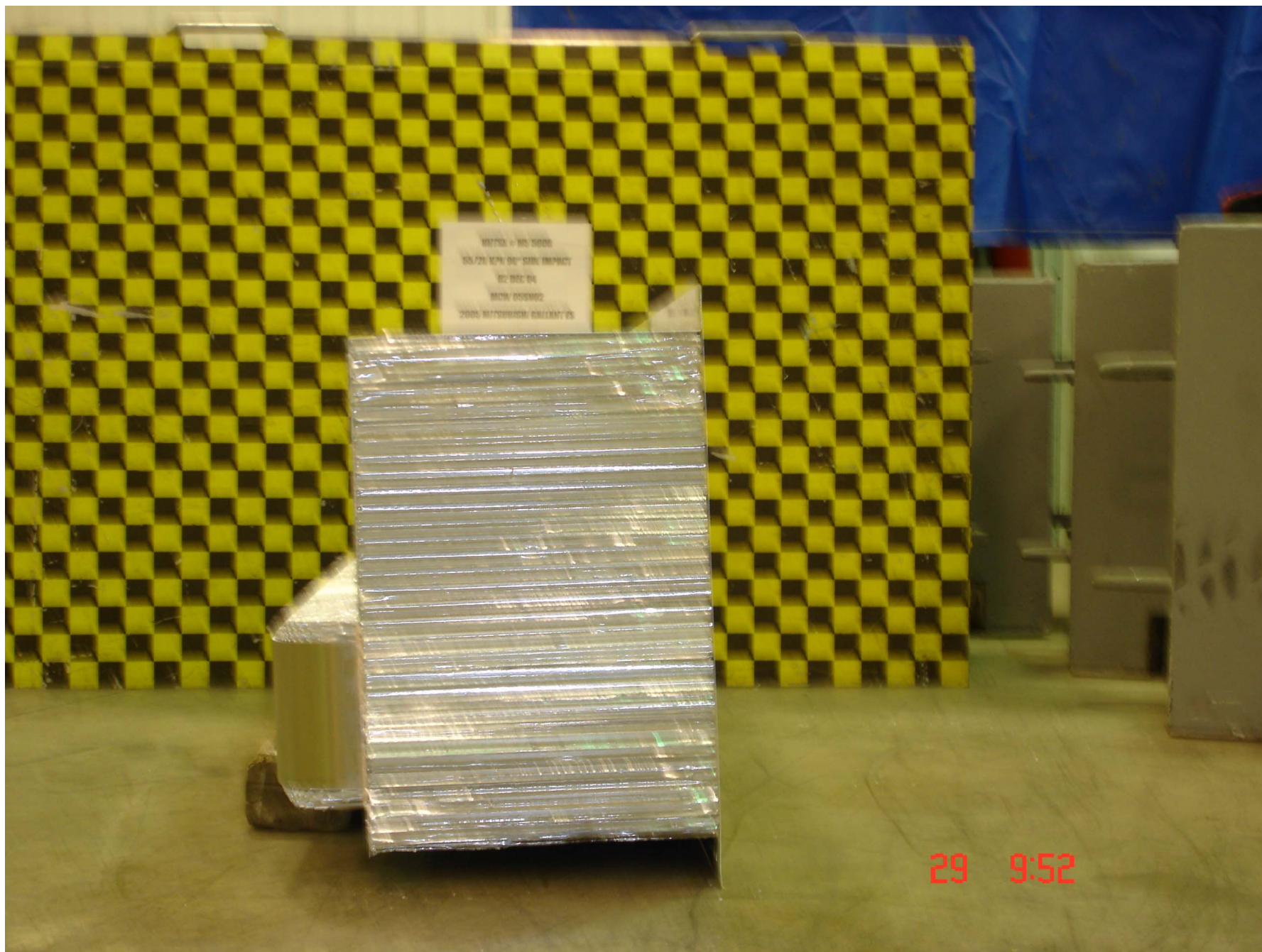


Figure A-49: PRE-TEST ALUMINUM BARRIER LEFT SIDE



Figure A-50: POST-TEST ALUMINUM BARRIER LEFT SIDE

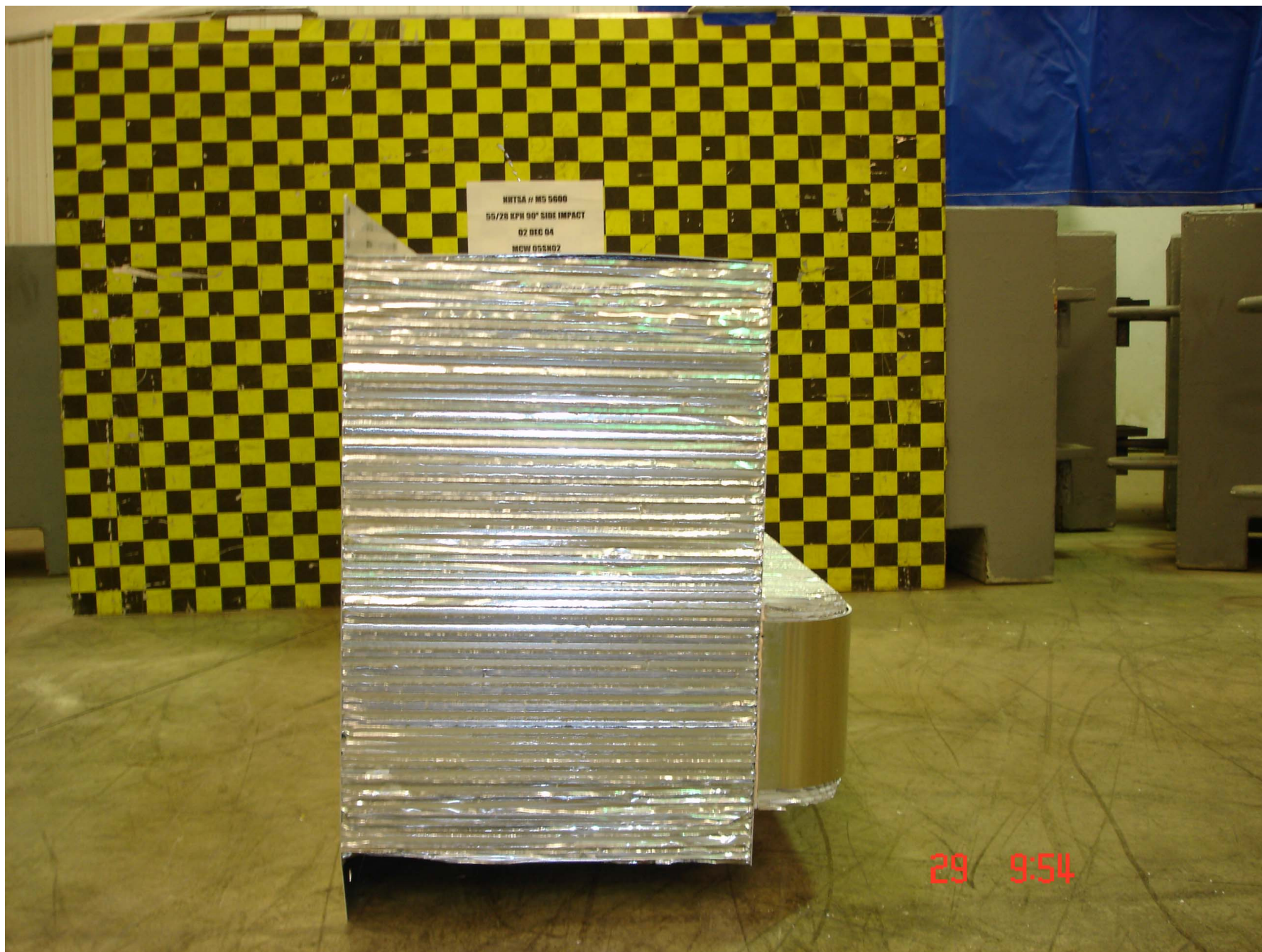


Figure A-51: PRE-TEST ALUMINUM BARRIER RIGHT SIDE



Figure A-52: POST-TEST ALUMINUM BARRIER RIGHT SIDE



Figure A-53: PRE-TEST ALUMINUM BARRIER TOP



Figure A-54: POST-TEST ALUMINUM BARRIER TOP

APPENDIX B

VEHICLE, MDB, AND SID RESPONSE DATA

TABLE OF CONTENTS**DRIVER AND PASSENGER DUMMY INSTRUMENTATION PLOTS**

ACCELERATION DATA – FILTER CLASS 1000, LOWER SPINE FILTER CLASS 180
 UPPER NECK FORCES – FILTER CLASS 1000; UPPER NECK MOMENTS FILTER CLASS 600
 INTEGRATION DATA FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
1	DRIVER HEAD (X) ACCELERATION	B-6
2	DRIVER HEAD (X) VELOCITY	B-7
3	DRIVER HEAD (Y) ACCELERATION	B-8
4	DRIVER HEAD (Y) VELOCITY	B-9
5	DRIVER HEAD (Z) ACCELERATION	B-10
6	DRIVER HEAD (Z) VELOCITY	B-11
7	DRIVER HEAD RESULTANT ACCELERATION	B-12
8	DRIVER NECK (X) FORCE	B-13
9	DRIVER NECK (Y) FORCE	B-14
10	DRIVER NECK (Z) FORCE	B-15
11	DRIVER NECK (X) MOMENT	B-16
12	DRIVER NECK (Y) MOMENT	B-17
13	DRIVER NECK (Z) MOMENT	B-18
14	DRIVER UPPER RIB (Y) ACCELERATION	B-19
15	DRIVER UPPER RIB (Y) VELOCITY	B-20
16	DRIVER LOWER RIB (Y) ACCELERATION	B-21
17	DRIVER LOWER RIB (Y) VELOCITY	B-22
18	DRIVER LOWER SPINE (Y) ACCELERATION	B-23
19	DRIVER LOWER SPINE (Y) VELOCITY	B-24
20	DRIVER PELVIC (Y) ACCELERATION	B-25
21	DRIVER PELVIC (Y) VELOCITY	B-26
22	PASSENGER HEAD (X) ACCELERATION	B-27
23	PASSENGER HEAD (X) VELOCITY	B-28
24	PASSENGER HEAD (Y) ACCELERATION	B-29
25	PASSENGER HEAD (Y) VELOCITY	B-30
26	PASSENGER HEAD (Z) ACCELERATION	B-31
27	PASSENGER HEAD (Z) VELOCITY	B-32
28	PASSENGER HEAD RESULTANT ACCELERATION	B-33
29	PASSENGER NECK (X) FORCE	B-34
30	PASSENGER NECK (Y) FORCE	B-35
31	PASSENGER NECK (Z) FORCE	B-36
32	PASSENGER NECK (X) MOMENT	B-37
33	PASSENGER NECK (Y) MOMENT	B-38
34	PASSENGER NECK (Z) MOMENT	B-39
35	PASSENGER UPPER RIB (Y) ACCELERATION	B-40
36	PASSENGER UPPER RIB (Y) VELOCITY	B-41
37	PASSENGER LOWER RIB (Y) ACCELERATION	B-42
38	PASSENGER LOWER RIB (Y) VELOCITY	B-43
39	PASSENGER LOWER SPINE (Y) ACCELERATION	B-44
40	PASSENGER LOWER SPINE (Y) VELOCITY	B-45
41	PASSENGER PELVIC (Y) ACCELERATION	B-46
42	PASSENGER PELVIC (Y) VELOCITY	B-47

DRIVER AND PASSENGER DUMMY INSTRUMENTATION PLOTS

ACCELERATION DATA – FIR FILTERED

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
43	DRIVER UPPER RIB (Y) ACCELERATION	B-48
44	DRIVER LOWER RIB (Y) ACCELERATION	B-49
45	DRIVER LOWER SPINE (Y) ACCELERATION	B-50
46	DRIVER PELVIC (Y) ACCELERATION	B-51
47	PASSENGER UPPER RIB (Y) ACCELERATION	B-52
48	PASSENGER LOWER RIB (Y) ACCELERATION	B-53
49	PASSENGER LOWER SPINE (Y) ACCELERATION	B-54
50	PASSENGER PELVIC (Y) ACCELERATION	B-55

TEST VEHICLE INSTRUMENTATION PLOTS
ACCELERATION DATA – FILTER CLASS 60
INTEGRATION DATA – FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
51	RIGHT SIDE SILL AT FRONT SEAT (X) ACCELERATION	B-56
52	RIGHT SIDE SILL AT FRONT SEAT (X) VELOCITY	B-57
53	RIGHT SIDE SILL AT FRONT SEAT (Y) ACCELERATION	B-58
54	RIGHT SIDE SILL AT FRONT SEAT (Y) VELOCITY	B-59
55	RIGHT SIDE SILL AT FRONT SEAT (Z) ACCELERATION	B-60
56	RIGHT SIDE SILL AT FRONT SEAT (Z) VELOCITY	B-61
57	RIGHT SIDE SILL AT FRONT SEAT RESULTANT ACCELERATION	B-62
58	RIGHT SIDE SILL AT REAR SEAT (X) ACCELERATION	B-63
59	RIGHT SIDE SILL AT REAR SEAT (X) VELOCITY	B-64
60	RIGHT SIDE SILL AT REAR SEAT (Y) ACCELERATION	B-65
61	RIGHT SIDE SILL AT REAR SEAT (Y) VELOCITY	B-66
62	RIGHT SIDE SILL AT REAR SEAT (Z) ACCELERATION	B-67
63	RIGHT SIDE SILL AT REAR SEAT (Z) VELOCITY	B-68
64	RIGHT SIDE SILL AT REAR SEAT RESULTANT ACCELERATION	B-69
65	REAR FLOORPAN ABOVE AXLE (X) ACCELERATION	B-70
66	REAR FLOORPAN ABOVE AXLE (X) VELOCITY	B-71
67	REAR FLOORPAN ABOVE AXLE (Y) ACCELERATION	B-72
68	REAR FLOORPAN ABOVE AXLE (Y) VELOCITY	B-73
69	REAR FLOORPAN ABOVE AXLE (Z) ACCELERATION	B-74
70	REAR FLOORPAN ABOVE AXLE (Z) VELOCITY	B-75
71	REAR FLOORPAN ABOVE AXLE (Z) RESULTANT ACCELERATION	B-76
72	LEFT SIDE SILL AT REAR SEAT (Y) ACCELERATION	B-77
73	LEFT SIDE SILL AT REAR SEAT (Y) VELOCITY	B-78
74	LEFT SIDE SILL AT FRONT SEAT (Y) ACCELERATION	B-79
75	LEFT SIDE SILL AT FRONT SEAT (Y) VELOCITY	B-80
76	LEFT FRONT DOOR ON CENTERLINE (Y) ACCELERATION	B-81
77	LEFT FRONT DOOR ON CENTERLINE (Y) VELOCITY	B-82
78	RIGHT REAR OCCUPANT COMPARTMENT (Y) ACCELERATION	B-83
79	RIGHT REAR OCCUPANT COMPARTMENT (Y) VELOCITY	B-84
80	MIDREAR OF LEFT FRONT DOOR (Y) ACCELERATION	B-85
81	MIDREAR OF LEFT FRONT DOOR (Y) VELOCITY	B-86
82	LEFT FRONT DOOR UPPER CENTERLINE (Y) ACCELERATION	B-87
83	LEFT FRONT DOOR UPPER CENTERLINE (Y) VELOCITY	B-88
84	MID-REAR OF LEFT REAR DOOR (Y) ACCELERATION	B-89
85	MID-REAR OF LEFT REAR DOOR (Y) VELOCITY	B-90
86	LEFT REAR DOOR UPPER CENTERLINE (Y) ACCELERATION	B-91
87	LEFT REAR DOOR UPPER CENTERLINE (Y) VELOCITY	B-92
88	LOWER B-PILLAR (Y) ACCELERATION	B-93
89	LOWER B-PILLAR (Y) VELOCITY	B-94
90	MIDDLE B-PILLAR (Y) ACCELERATION	B-95
91	MIDDLE B-PILLAR (Y) VELOCITY	B-96
92	LOWER A-PILLAR (Y) ACCELERATION	B-97
93	LOWER A-PILLAR (Y) VELOCITY	B-98
94	MIDDLE A-PILLAR (Y) ACCELERATION	B-99
95	MIDDLE A-PILLAR (Y) VELOCITY	B-100
96	FRONT SEAT TRACK (Y) ACCELERATION	B-101
97	FRONT SEAT TRACK (Y) VELOCITY	B-102
98	REAR SEAT TRACK (Y) ACCELERATION	B-103
99	REAR SEAT TRACK (Y) VELOCITY	B-104
100	VEHICLE CENTER OF GRAVITY (X) ACCELERATION	B-105
101	VEHICLE CENTER OF GRAVITY (X) VELOCITY	B-106
102	VEHICLE CENTER OF GRAVITY (Y) ACCELERATION	B-107
103	VEHICLE CENTER OF GRAVITY (Y) VELOCITY	B-108
104	VEHICLE CENTER OF GRAVITY (Z) ACCELERATION	B-109
105	VEHICLE CENTER OF GRAVITY (Z) VELOCITY	B-110
106	VEHICLE CENTER OF GRAVITY RESULTANT ACCELERATION	B-111

MDB INSTRUMENTATION PLOTS
ACCELERATION DATA – FILTER CLASS 60
INTEGRATION DATA – FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
107	MDB CENTER OF GRAVITY (X) ACCELERATION	B-112
108	MDB CENTER OF GRAVITY (X) VELOCITY	B-113
109	MDB CENTER OF GRAVITY (Y) ACCELERATION	B-114
110	MDB CENTER OF GRAVITY (Y) VELOCITY	B-115
111	MDB CENTER OF GRAVITY (Z) ACCELERATION	B-116
112	MDB CENTER OF GRAVITY (Z) VELOCITY	B-117
113	MDB CENTER OF GRAVITY RESULTANT ACCELERATION	B-118
114	MDB REAR (X) ACCELERATION	B-119
115	MDB REAR (X) VELOCITY	B-120
116	MDB REAR (X) ACCELERATION	B-121
117	MDB REAR (X) VELOCITY	B-122

DRIVER AND PASSENGER DUMMY INSTRUMENTATION PLOTS (REDUNDANT)
 ACCELERATION DATA – FILTER CLASS 1000, LOWER SPINE FILTER CLASS 180
 INTEGRATION DATA FILTER CLASS 180

<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
118	DRIVER UPPER RIB (Y) ACCELERATION-REDUNDANT	B-123
119	DRIVER UPPER RIB (Y) VELOCITY-REDUNDANT	B-124
120	DRIVER LOWER RIB (Y) ACCELERATION-REDUNDANT	B-125
121	DRIVER LOWER RIB (Y) VELOCITY-REDUNDANT	B-126
122	DRIVER LOWER SPINE (Y) ACCELERATION-REDUNDANT	B-127
123	DRIVER LOWER SPINE (Y) VELOCITY-REDUNDANT	B-128
124	DRIVER PELVIC (Y) ACCELERATION-REDUNDANT	B-129
125	DRIVER PELVIC (Y) VELOCITY-REDUNDANT	B-130
126	PASSENGER UPPER RIB (Y) ACCELERATION-REDUNDANT	B-131
127	PASSENGER UPPER RIB (Y) VELOCITY-REDUNDANT	B-132
128	PASSENGER LOWER RIB (Y) ACCELERATION-REDUNDANT	B-133
129	PASSENGER LOWER RIB (Y) VELOCITY-REDUNDANT	B-134
130	PASSENGER LOWER SPINE (Y) ACCELERATION-REDUNDANT	B-135
131	PASSENGER LOWER SPINE (Y) VELOCITY-REDUNDANT	B-136
132	PASSENGER PELVIC (Y) ACCELERATION-REDUNDANT	B-137
133	PASSENGER PELVIC (Y) VELOCITY-REDUNDANT	B-138

DRIVER AND PASSENGER DUMMY INSTRUMENTATION PLOT (REDUNDANT)
 ACCELERATION DATA – FIR FILTERED

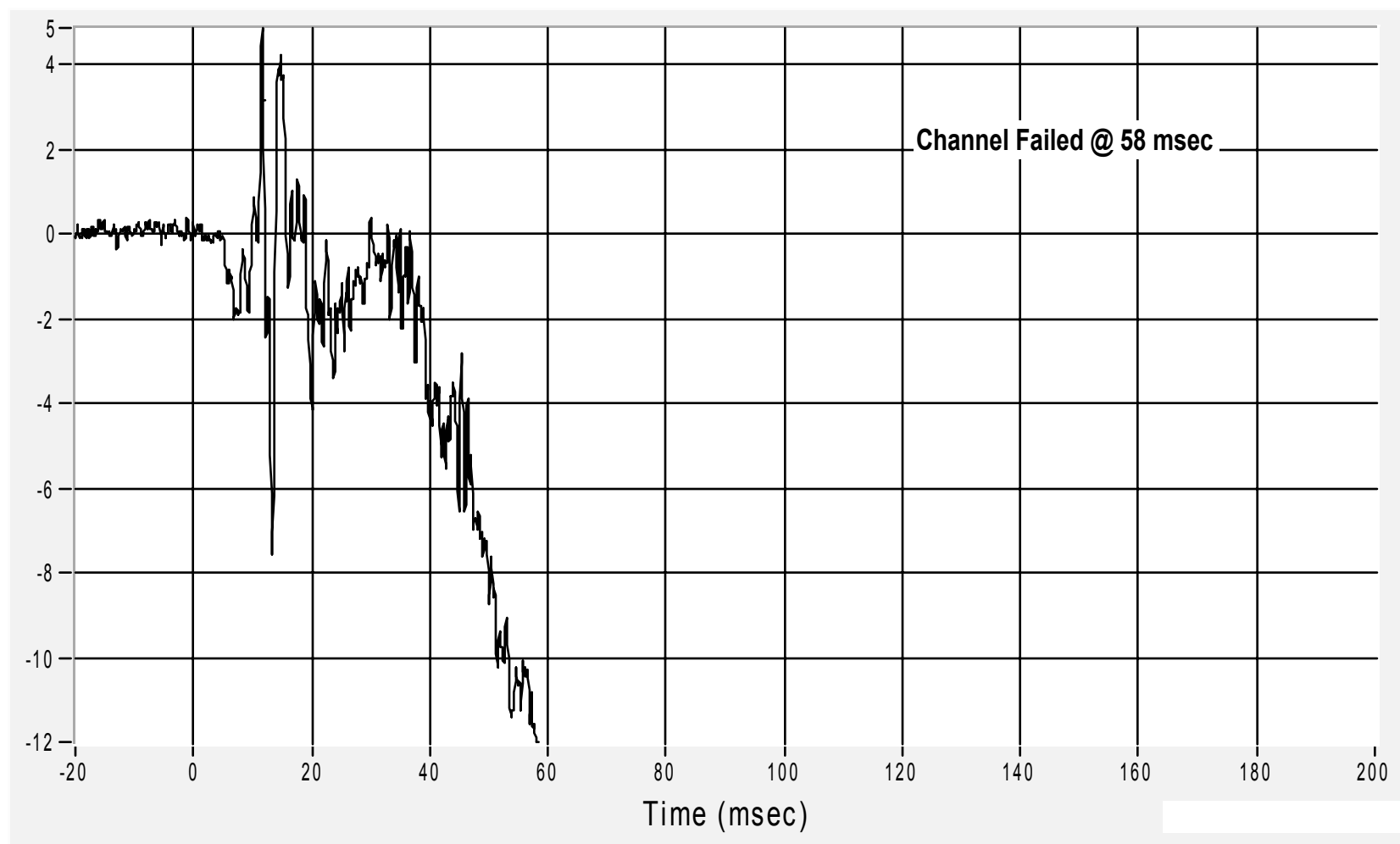
<u>Plot No.</u>	<u>Data Plot Title</u>	<u>Page</u>
134	DRIVER UPPER RIB (Y) ACCELERATION-REDUNDANT	B-139
135	DRIVER LOWER RIB (Y) ACCELERATION-REDUNDANT	B-140
136	DRIVER LOWER SPINE (Y) ACCELERATION-REDUNDANT	B-141
137	DRIVER PELVIC (Y) ACCELERATION-REDUNDANT	B-142
138	PASSENGER UPPER RIB (Y) ACCELERATION-REDUNDANT	B-143
139	PASSENGER LOWER RIB (Y) ACCELERATION-REDUNDANT	B-144
140	PASSENGER LOWER SPINE (Y) ACCELERATION-REDUNDANT	B-145
141	PASSENGER PELVIC (Y) ACCELERATION-REDUNDANT	B-146

Driver Head CG (X) Acceleration

Acceleration (G's) CFC1000

Max 4.9 G at 11.6 msec

Min -11.9 G at 57.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

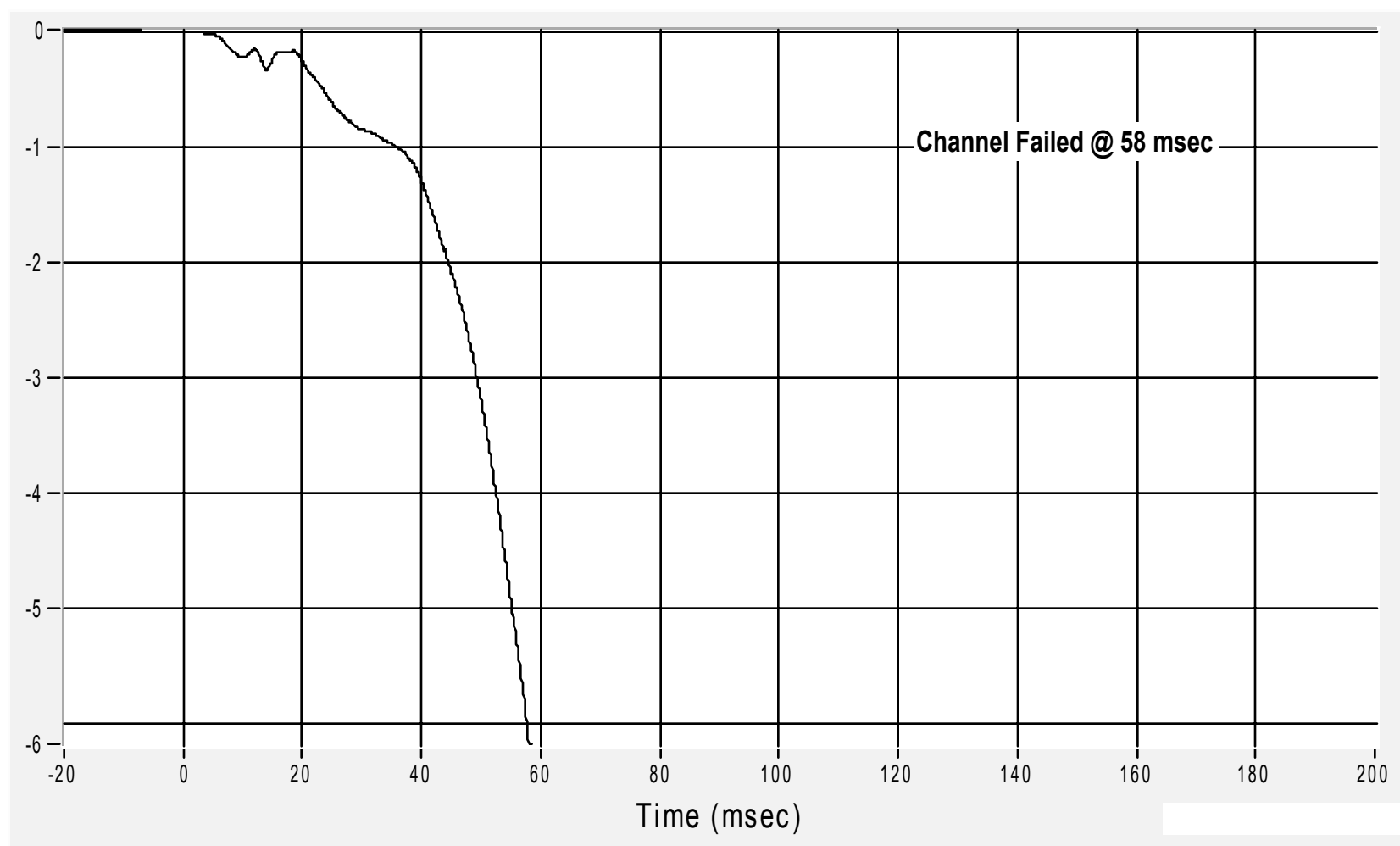
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Head CG (X) Velocity

Velocity (km/h) CFC180

Max 0.0 km/h at 1.2 msec

Min -6.1 km/h at 57.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

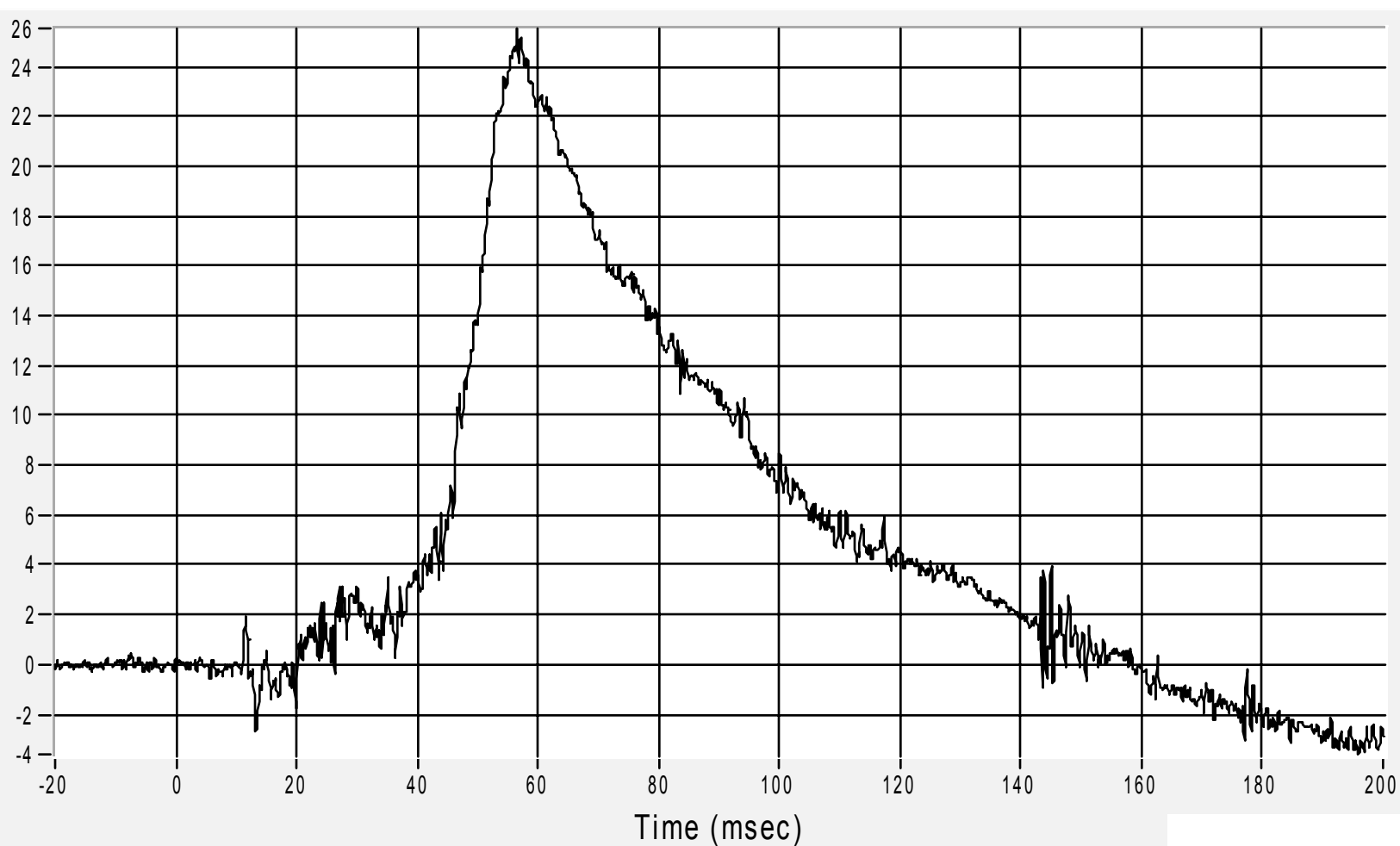
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Head CG (Y) Acceleration

Acceleration (G's) CFC1000

Max 25.5 G at 56.5 msec

Min -3.6 G at 196.0 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

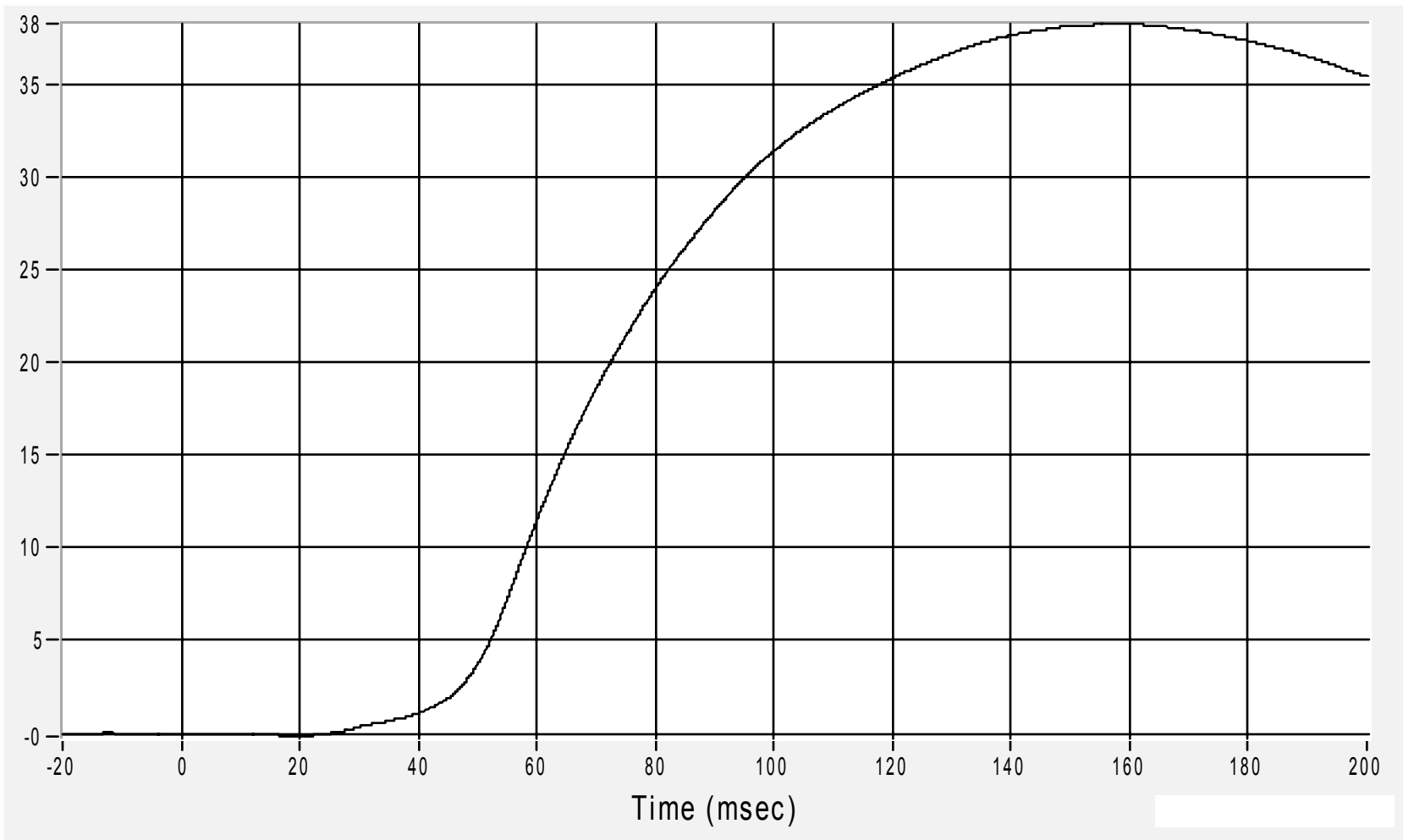
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Head CG (Y) Velocity

Velocity (km/h) CFC180

Max 38.2 km/h at 158.5 msec

Min -0.2 km/h at 20.2 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

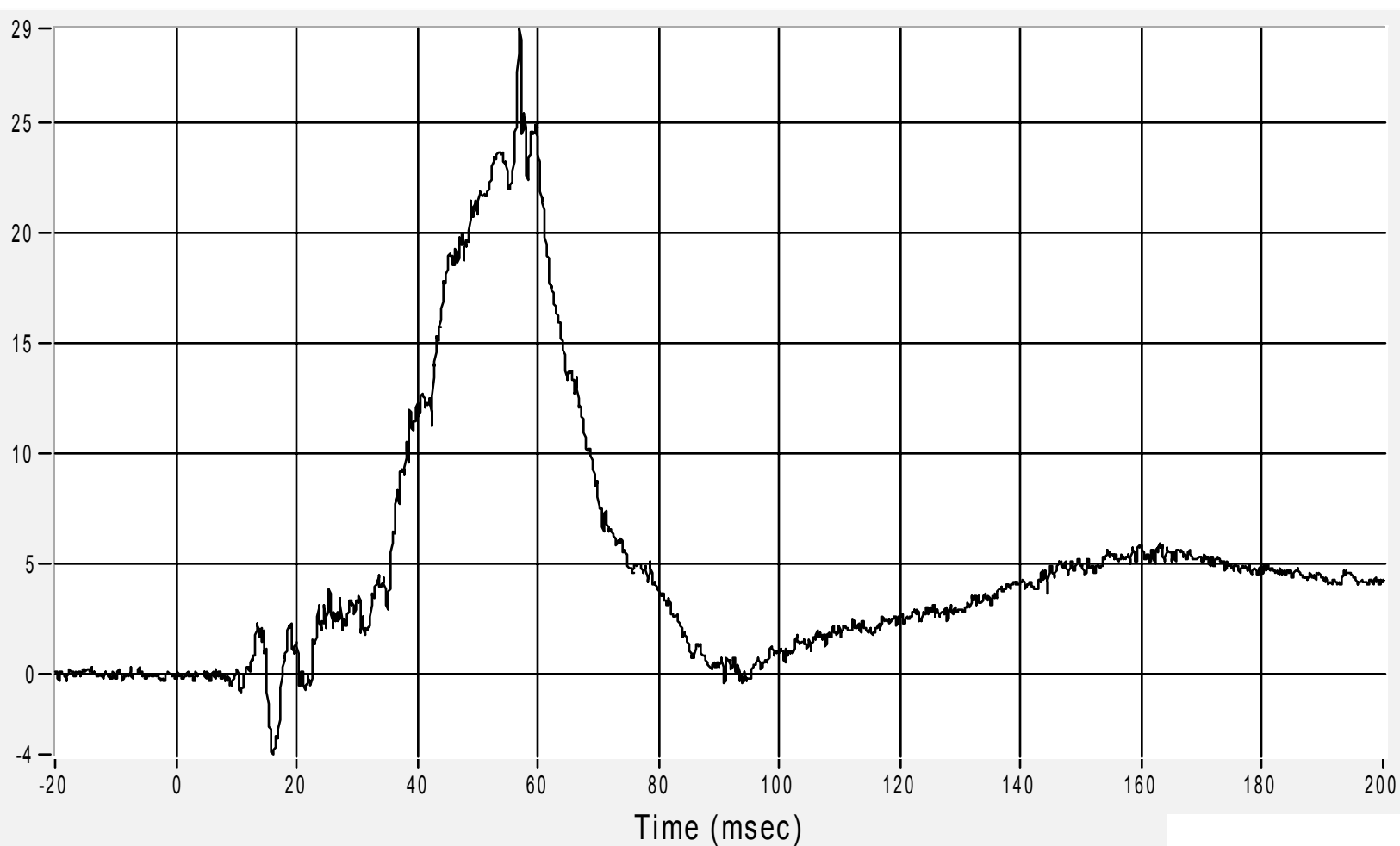
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Head CG (Z) Acceleration

Acceleration (G's) CFC1000

Max 29.2 G at 57.0 msec

Min -3.6 G at 16.1 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

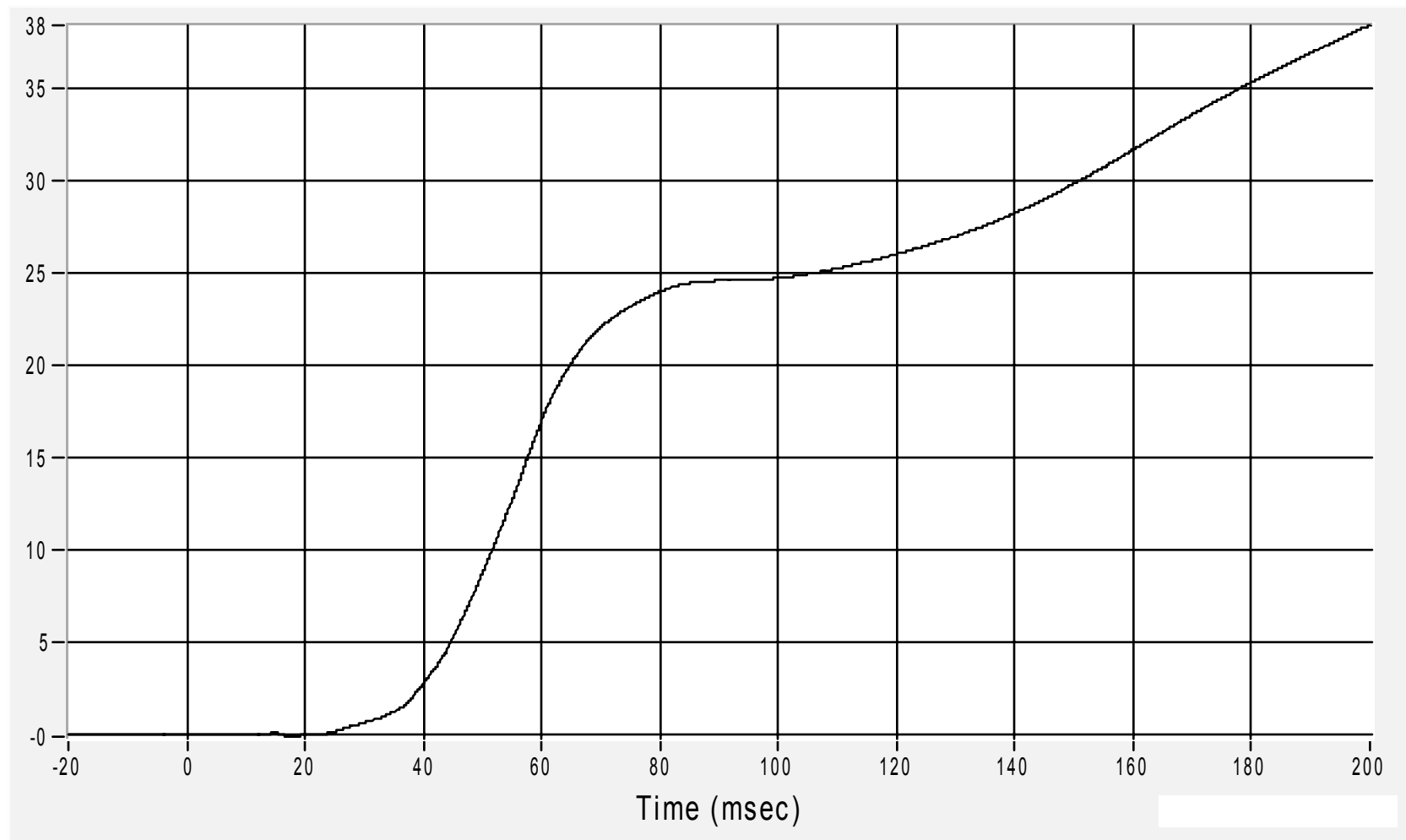
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Head CG (Z) Velocity

Velocity (km/h) CFC180

Max 38.4 km/h at 199.9 msec

Min -0.1 km/h at 17.7 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

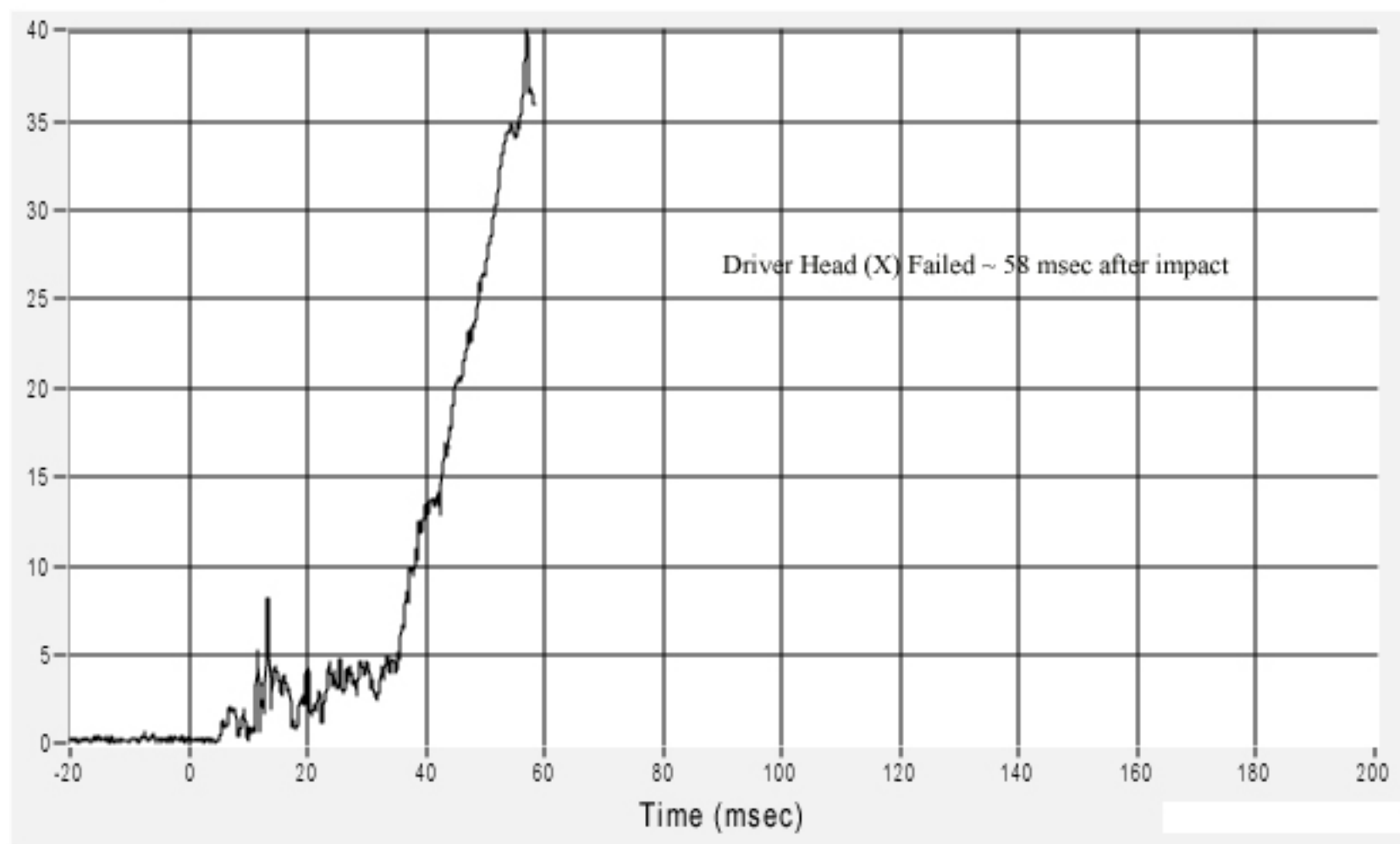
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Head Resultant Acceleration

Acceleration (G's) CFC1000

Max 40.2 G's at 57.0 msec

Min 0.1 G's at 3.7 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

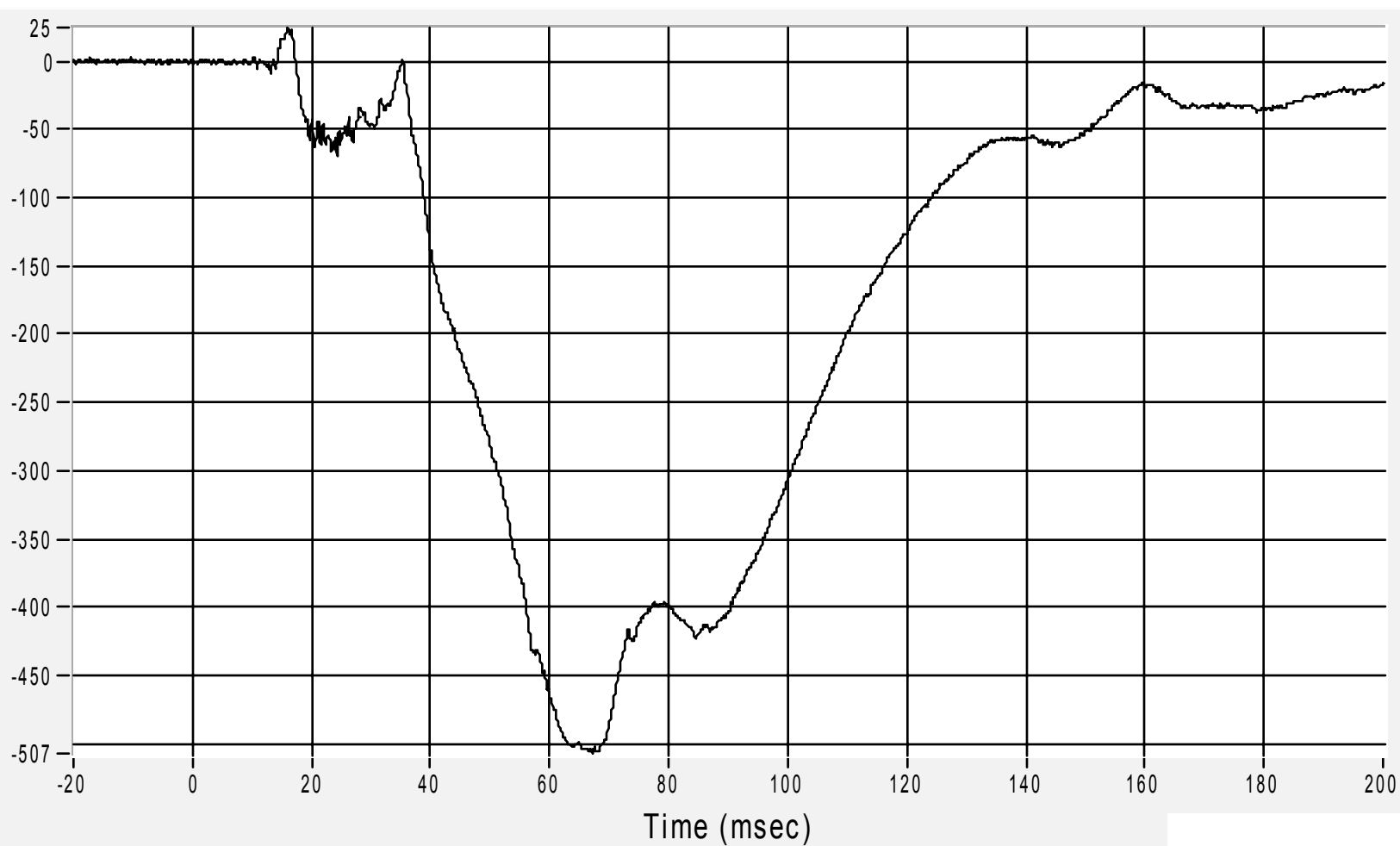
Driver Upper Neck (X) Force

Force (N)

CFC1000

Max 24.6 N at 16.0 msec

Min -507.1 N at 67.1 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

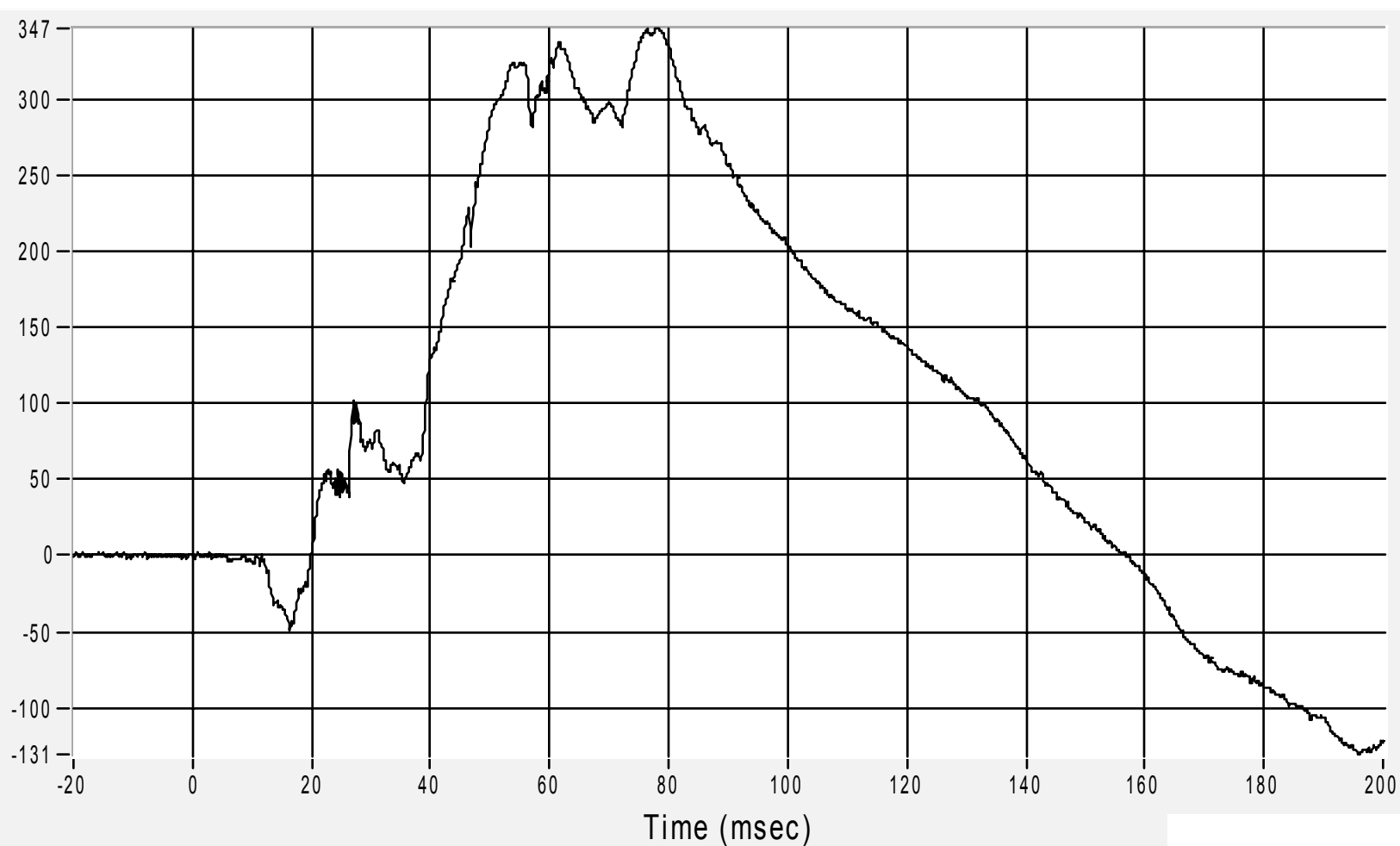
Driver Upper Neck (Y) Force

Force (N)

CFC1000

Max 346.7 N at 77.8 msec

Min -130.7 N at 195.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

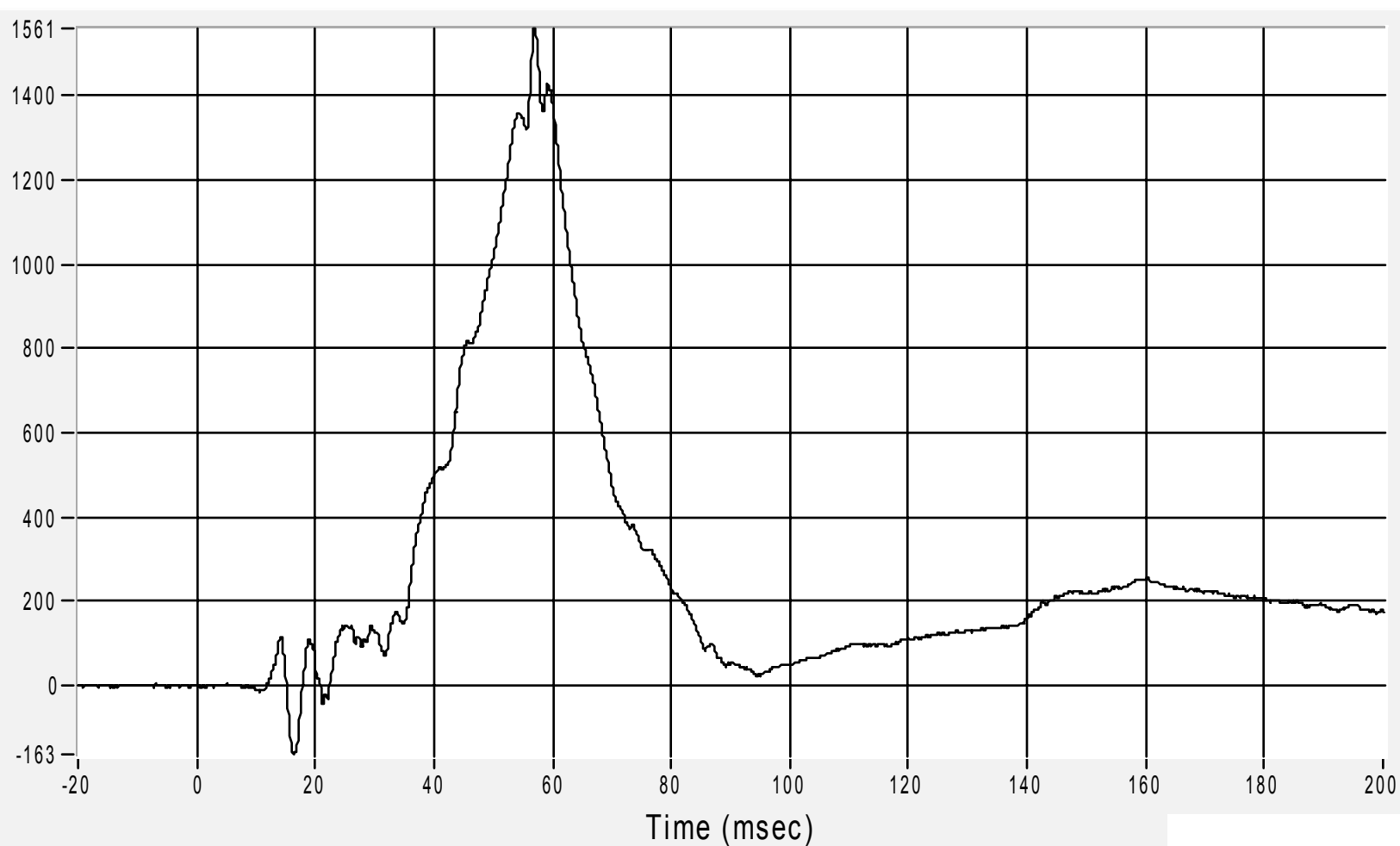
Driver Upper Neck (Z) Force

Force (N)

CFC1000

Max 1560.7 N at 57.0 msec

Min -162.9 N at 16.3 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

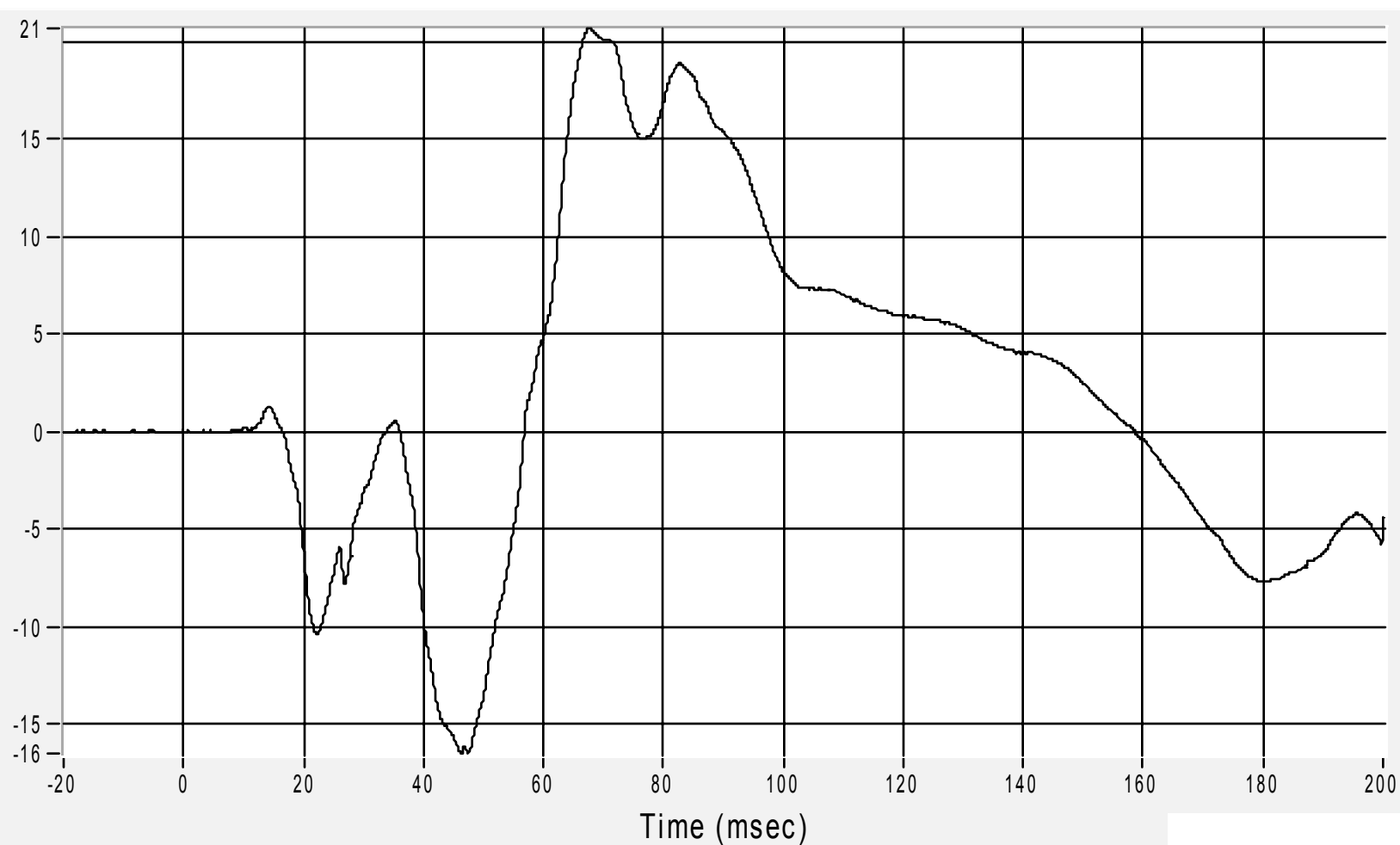
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Upper Neck (X) Moment

Moment (Nm) CFC600

Max 20.7 Nm at 67.7 msec

Min -16.5 Nm at 46.3 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

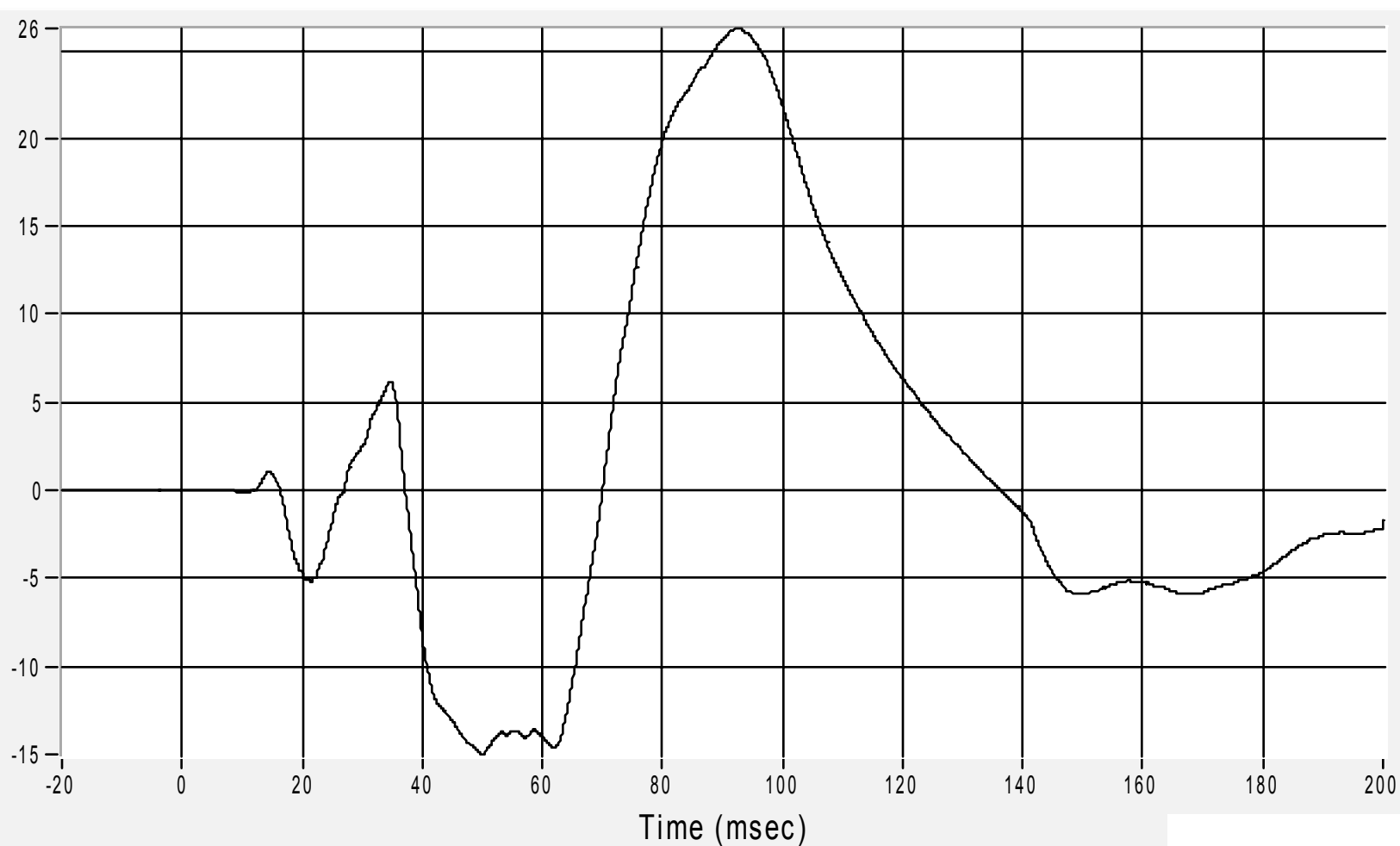
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Upper Neck (Y) Moment

Moment (Nm) CFC600

Max 26.3 Nm at 93.0 msec

Min -15.0 Nm at 50.1 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

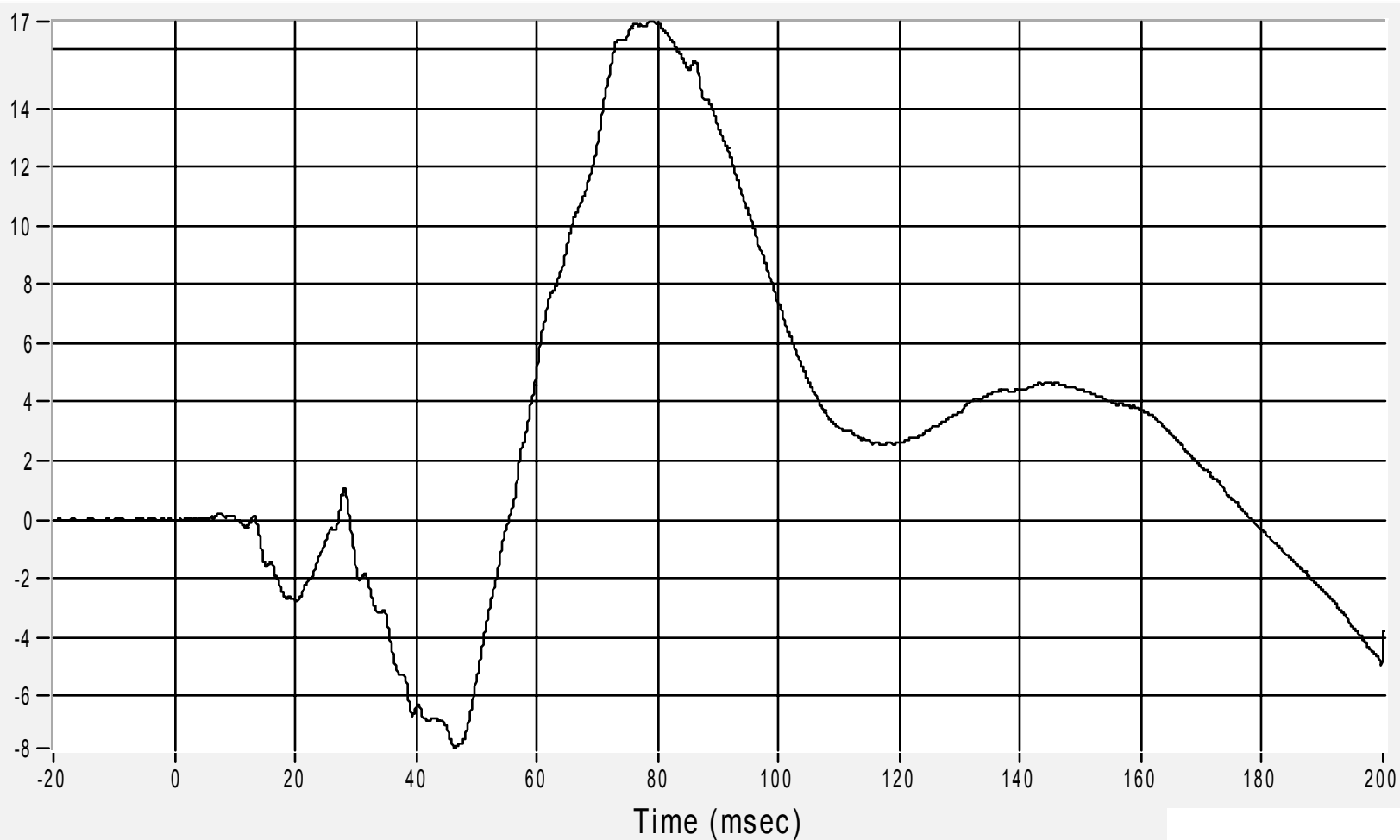
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Upper Neck (Z) Moment

Moment (Nm) CFC600

Max 16.9 Nm at 79.3 msec

Min -7.8 Nm at 46.5 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

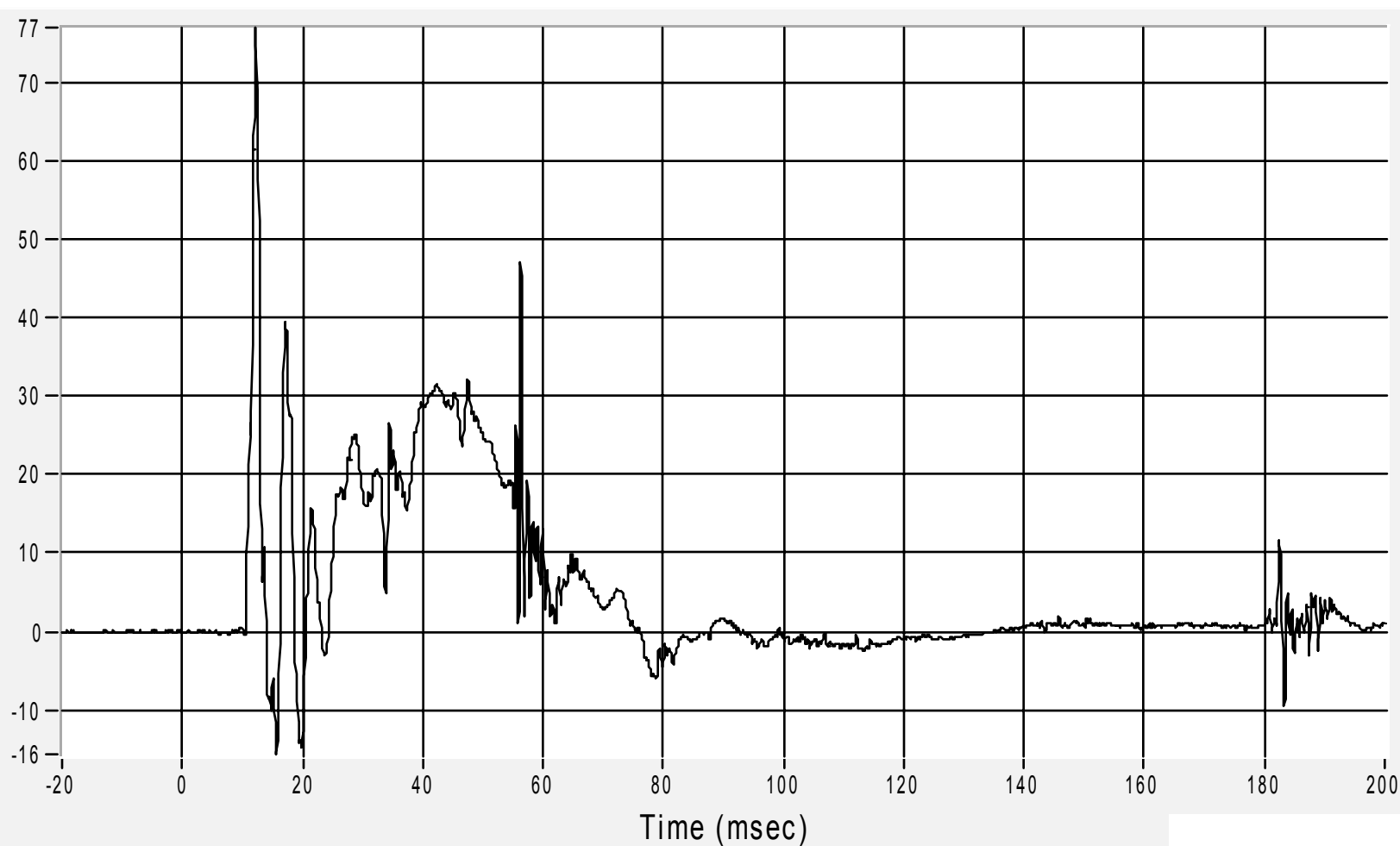
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Upper Rib (Y) Acceleration

Acceleration (G's) CFC1000

Max 77.1 G at 12.2 msec

Min -15.7 G at 15.7 msec



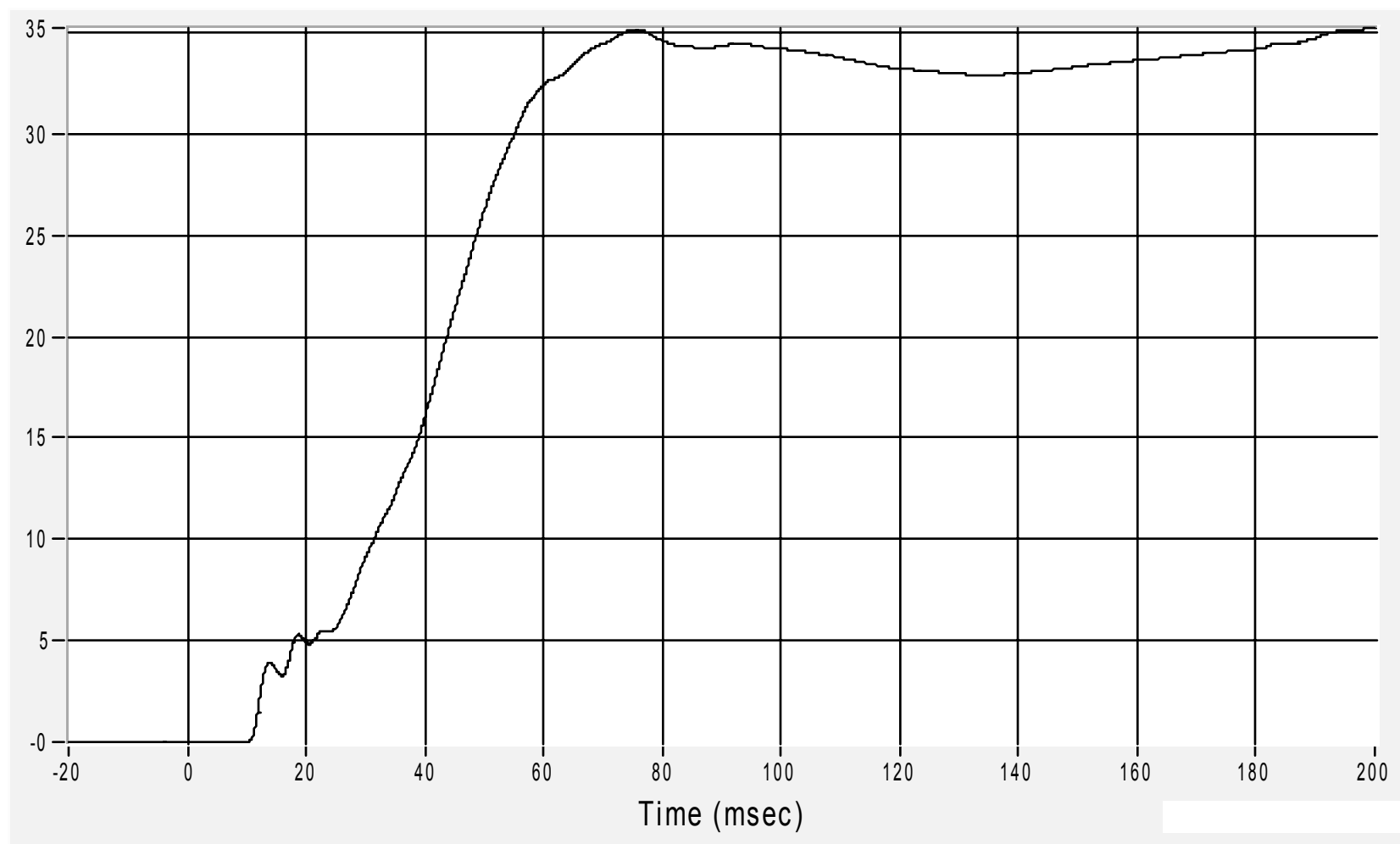
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Upper Rib (Y) Velocity

Velocity (km/h) CFC180

Max 35.3 km/h at 199.9 msec**Min 0.0 km/h at 10.0 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

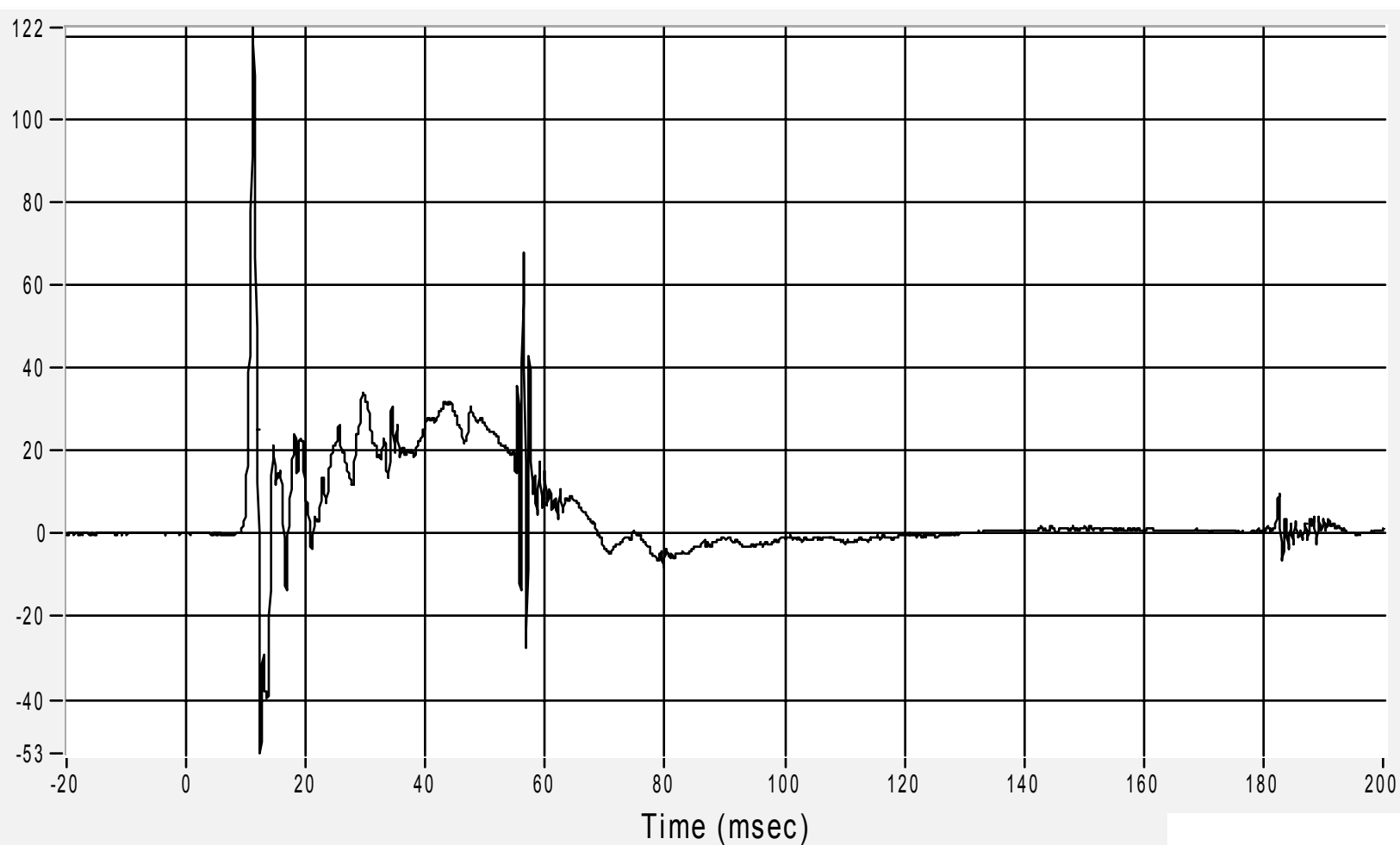
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Driver Lower Rib (Y) Acceleration

Acceleration (G's) CFC1000

Max 122.2 G at 11.2 msec

Min -53.0 G at 12.4 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

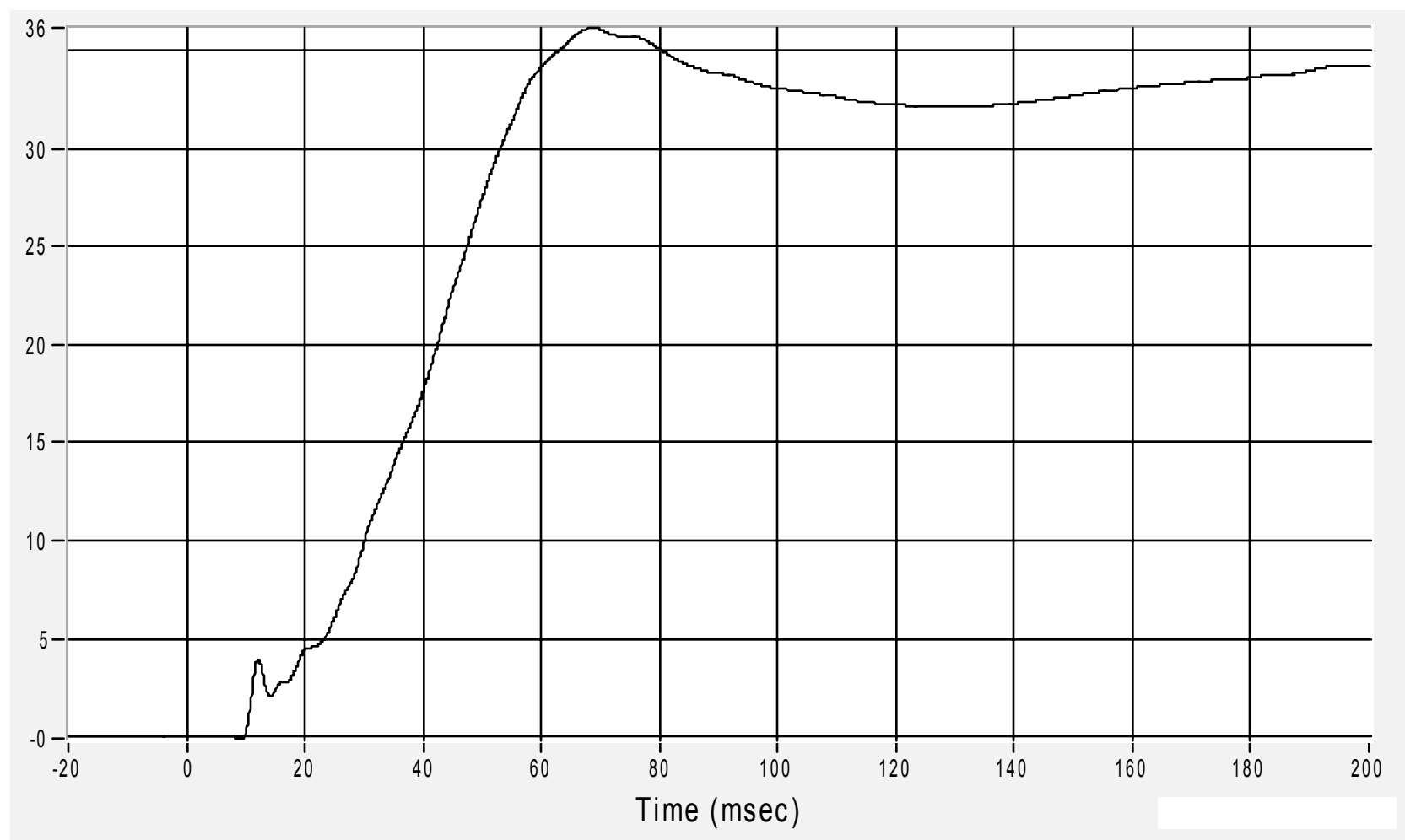
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Driver Lower Rib (Y) Velocity

Velocity (km/h) CFC180

Max 36.1 km/h at 68.8 msec

Min -0.1 km/h at 9.1 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

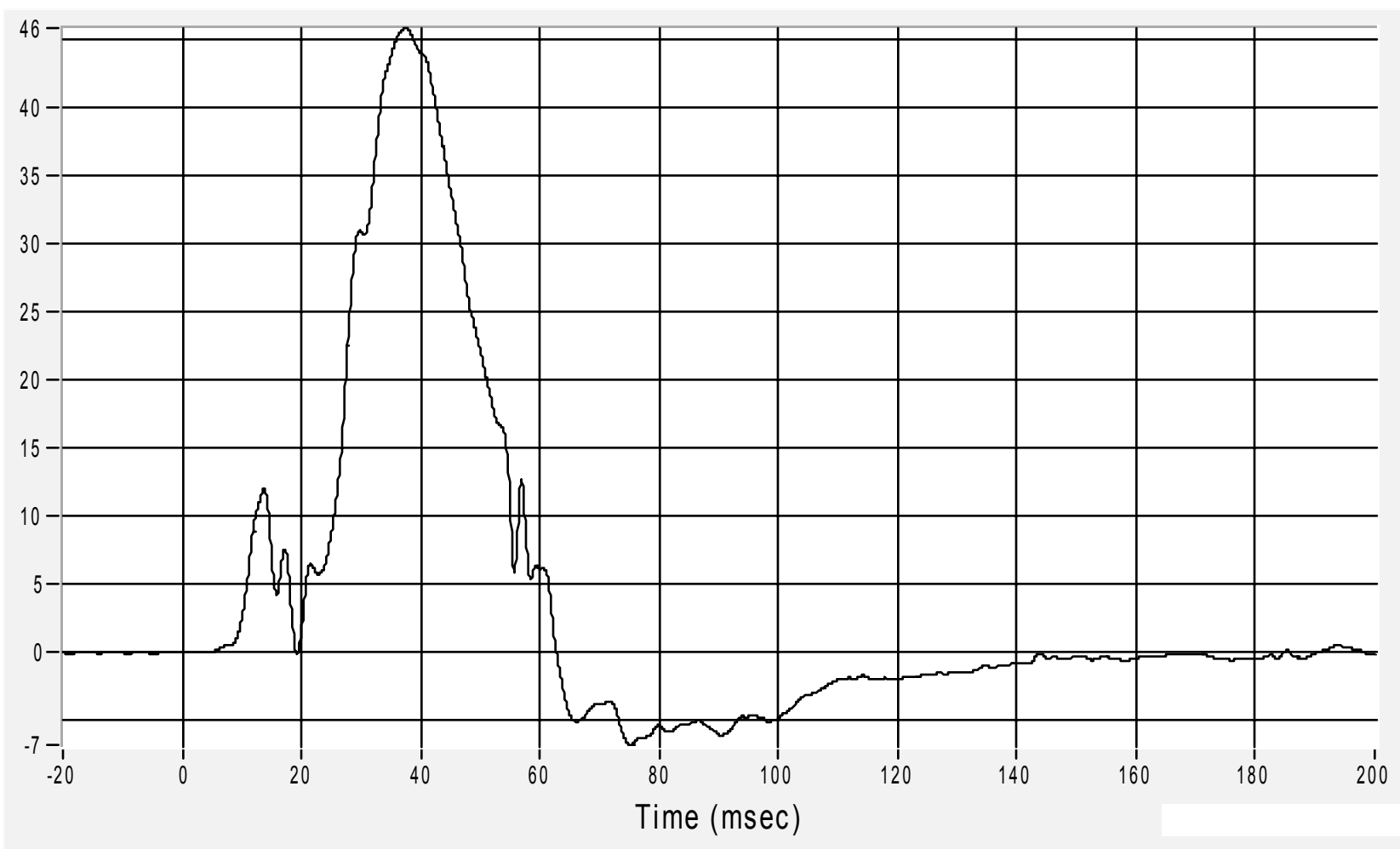
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Lower Spine (Y) Acceleration

Acceleration (G's) CFC180

Max 45.7 G at 37.5 msec

Min -6.7 G at 75.3 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

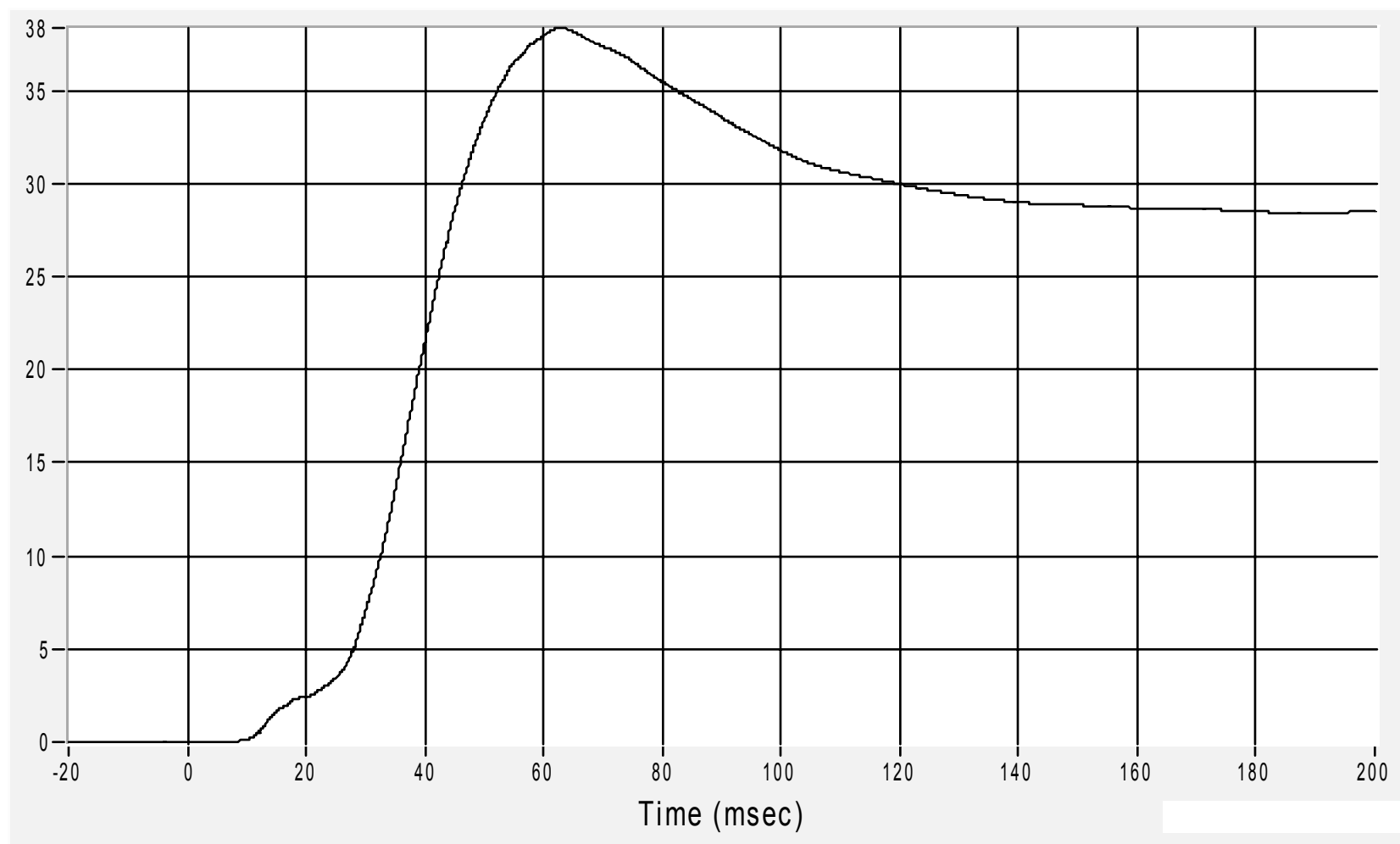
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Lower Spine (Y) Velocity

Velocity (km/h) CFC180

Max 38.3 km/h at 62.7 msec

Min 0.0 km/h at 0.0 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

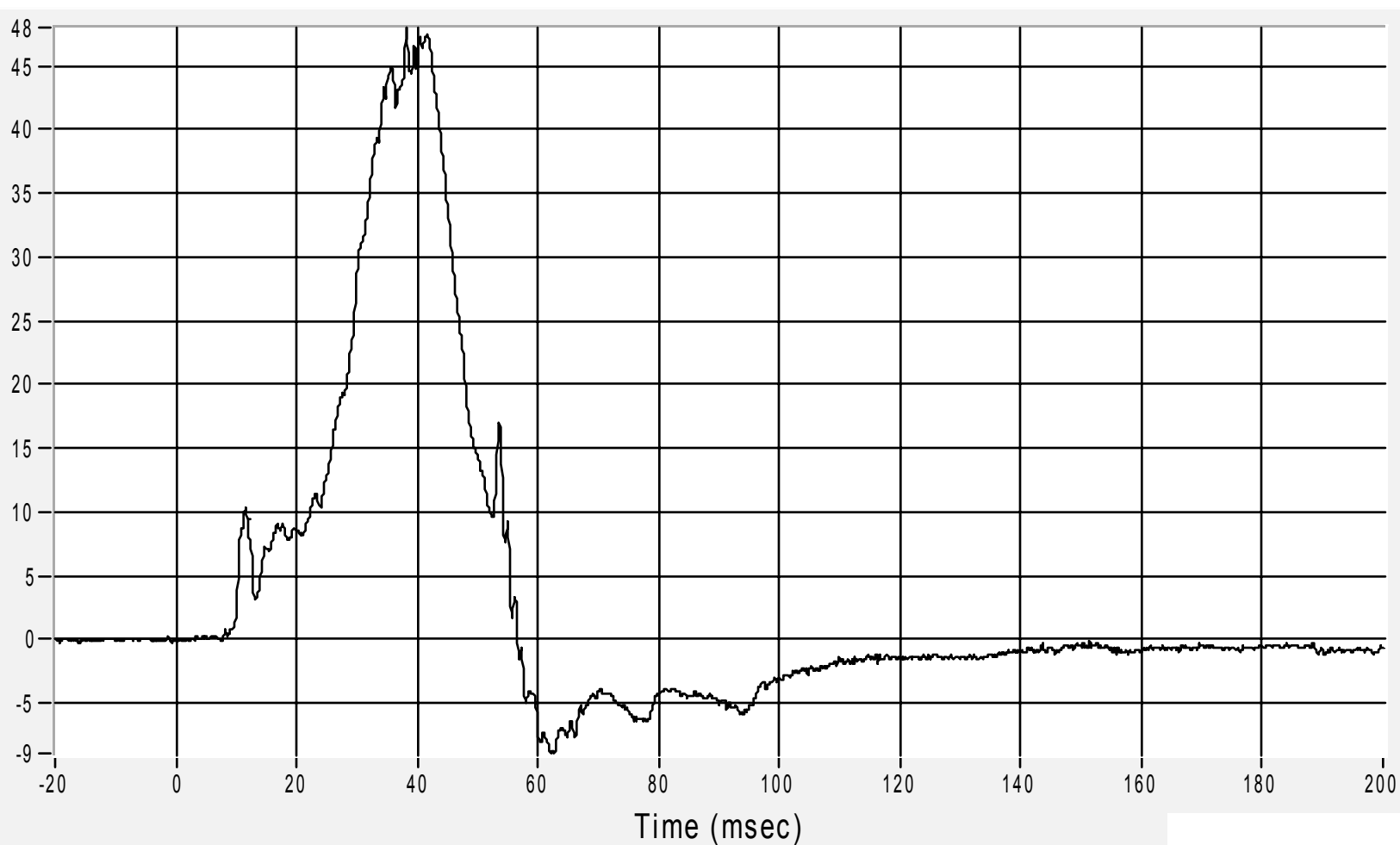
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Pelvic (Y) Acceleration

Acceleration (G's) CFC1000

Max 48.0 G at 38.2 msec

Min -8.9 G at 62.2 msec



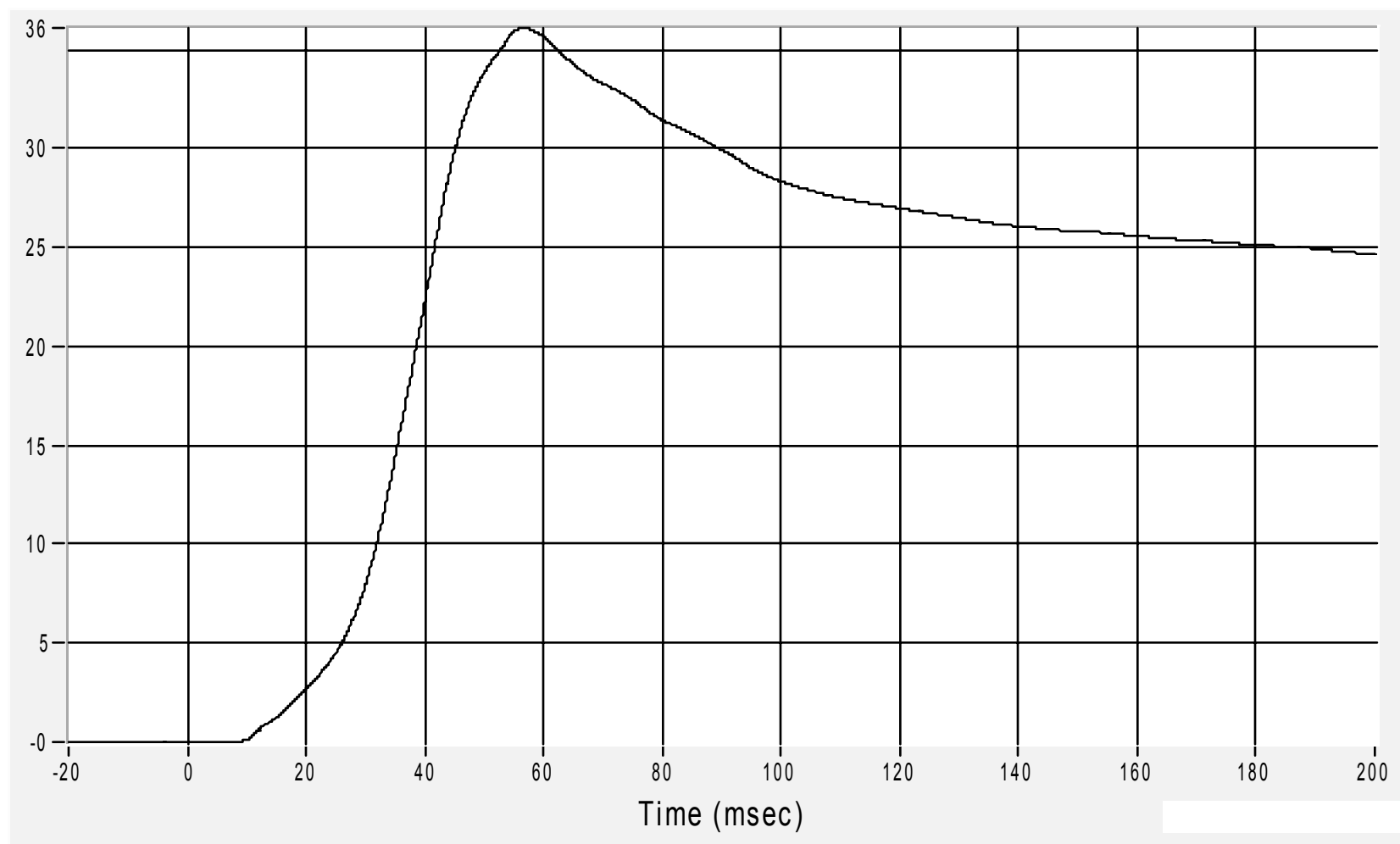
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Driver Pelvic (Y) Velocity

Velocity (km/h) CFC180

Max 36.1 km/h at 56.6 msec**Min 0.0 km/h at 2.0 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

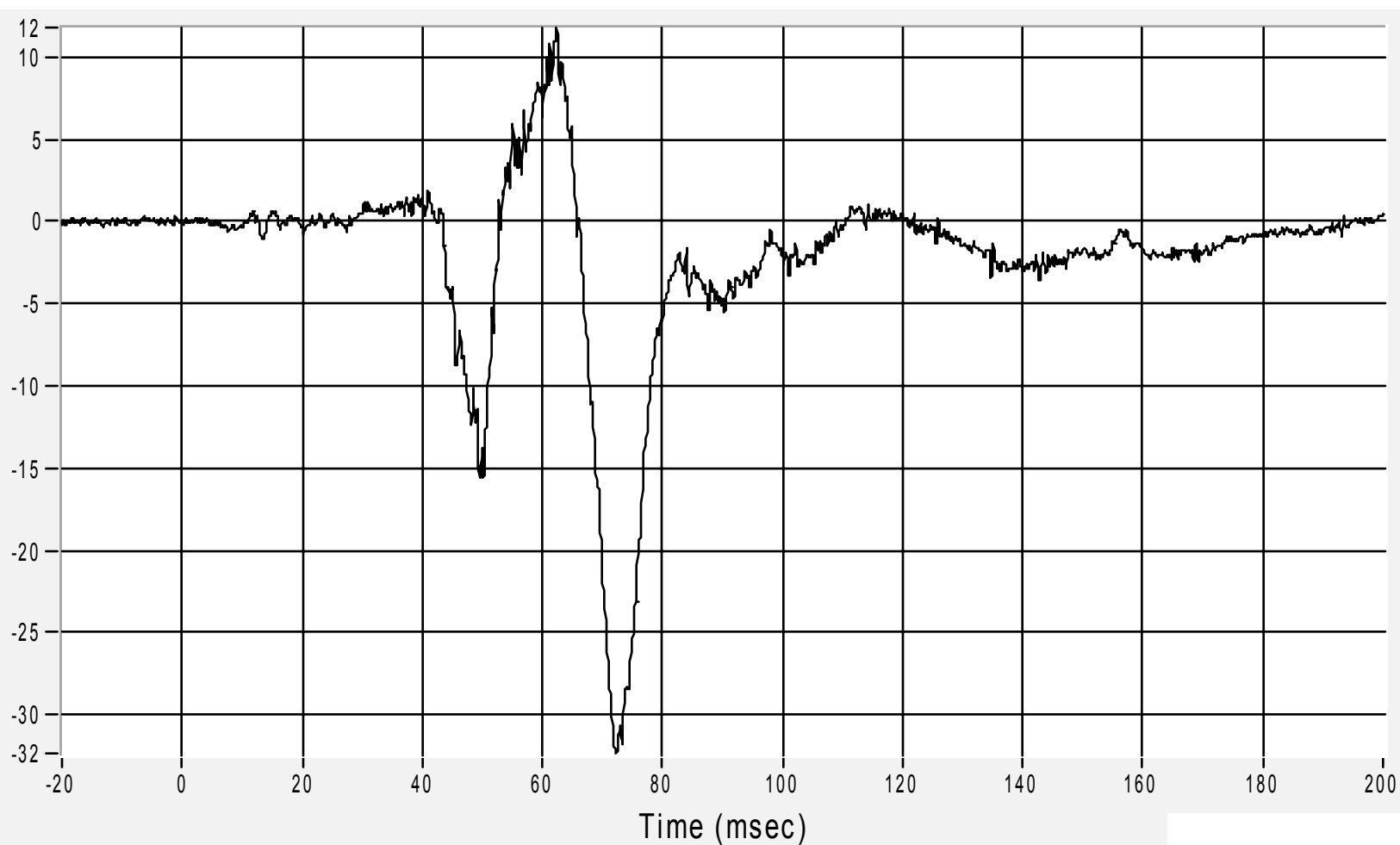
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Passenger Head CG (X) Acceleration

Acceleration (G's) CFC1000

Max 11.8 G at 62.3 msec

Min -32.3 G at 72.4 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

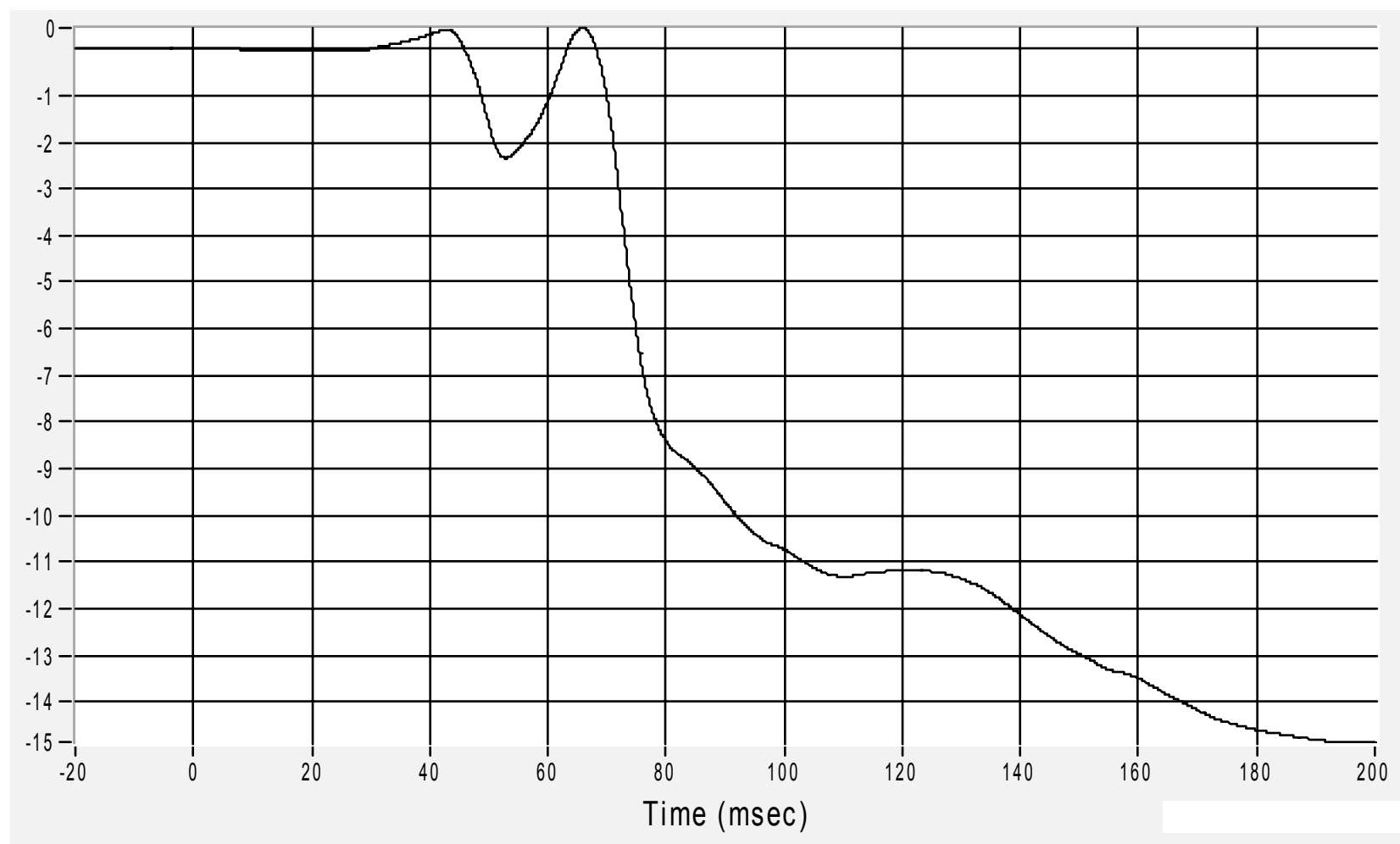
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Head CG (X) Velocity

Velocity (km/h) CFC180

Max 0.4 km/h at 65.8 msec

Min -14.9 km/h at 194.7 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

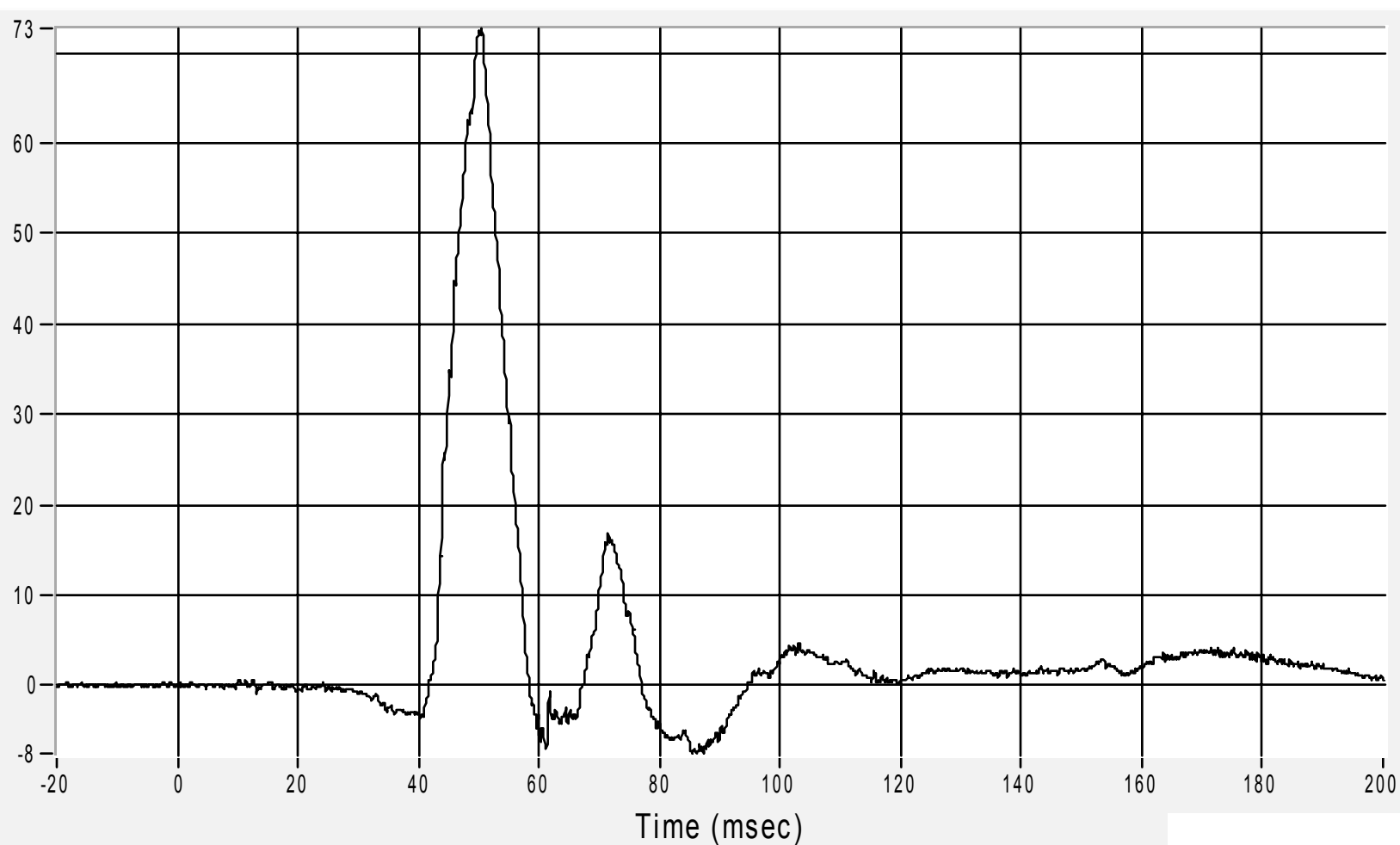
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Head CG (Y) Acceleration

Acceleration (G's) CFC1000

Max 72.7 G at 50.5 msec

Min -7.5 G at 86.2 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

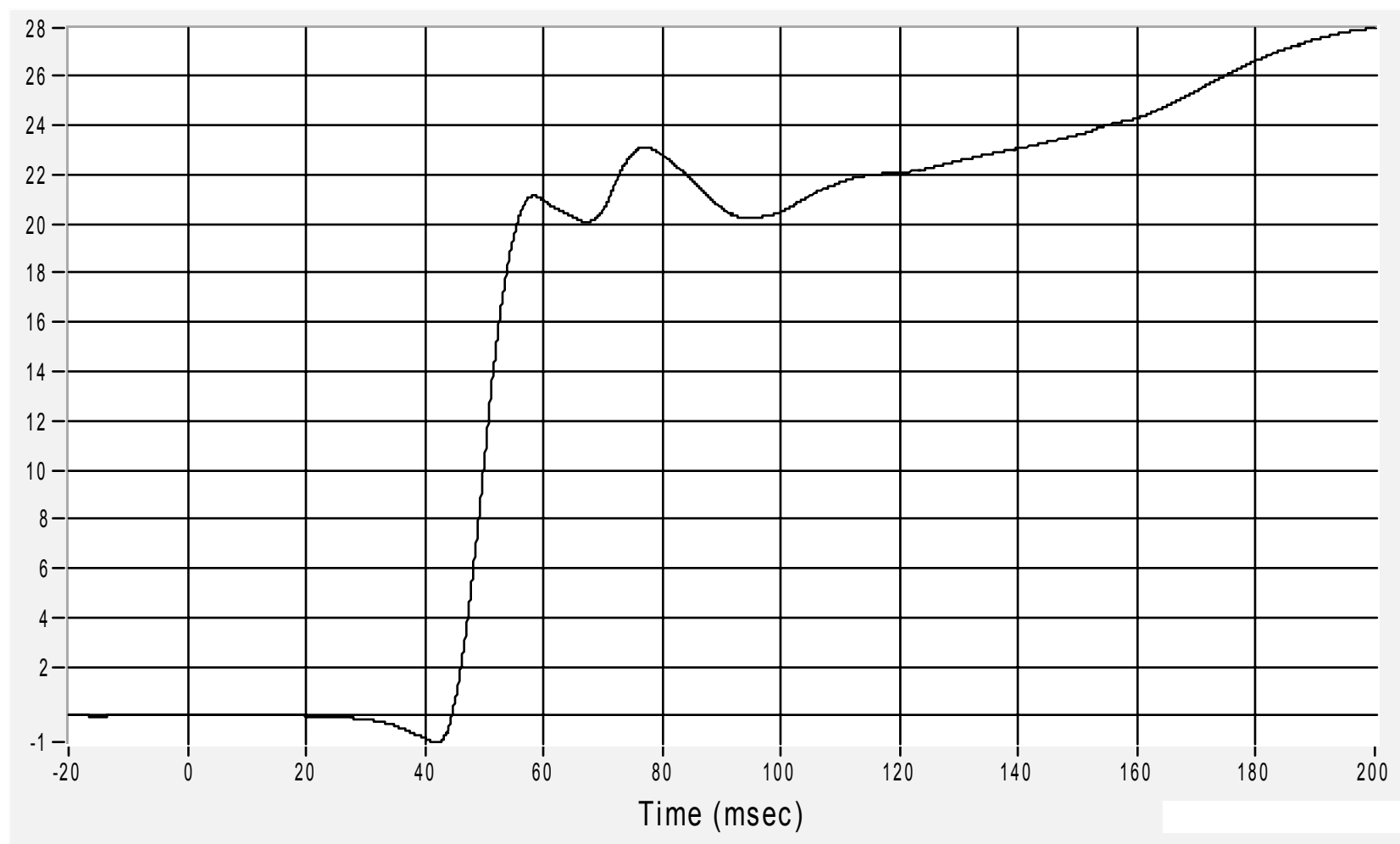
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Head CG (Y) Velocity

Velocity (km/h) CFC180

Max 28.0 km/h at 199.9 msec

Min -1.1 km/h at 41.8 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

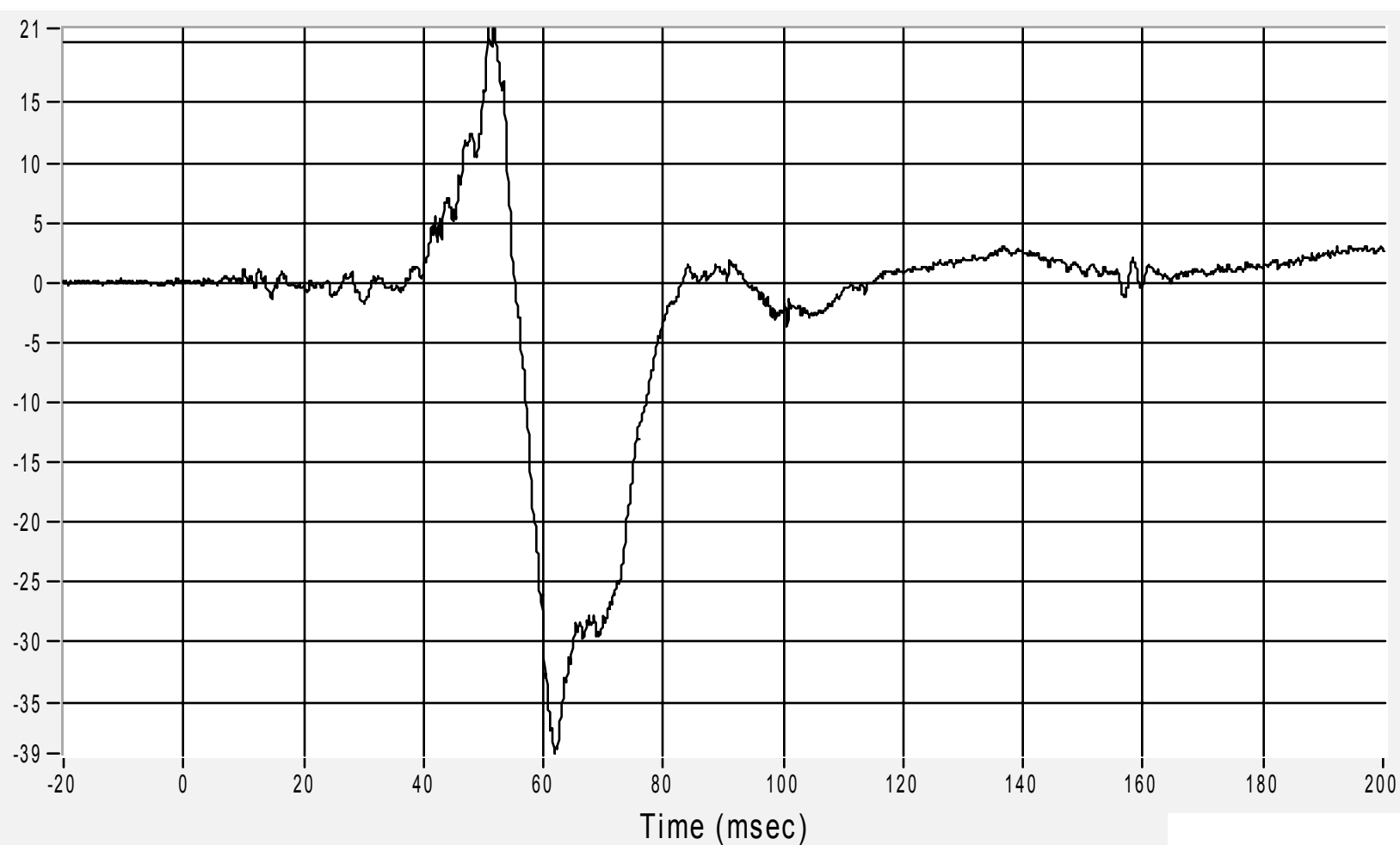
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Head CG (Z) Acceleration

Acceleration (G's) CFC1000

Max 21.2 G at 50.8 msec

Min -39.3 G at 61.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

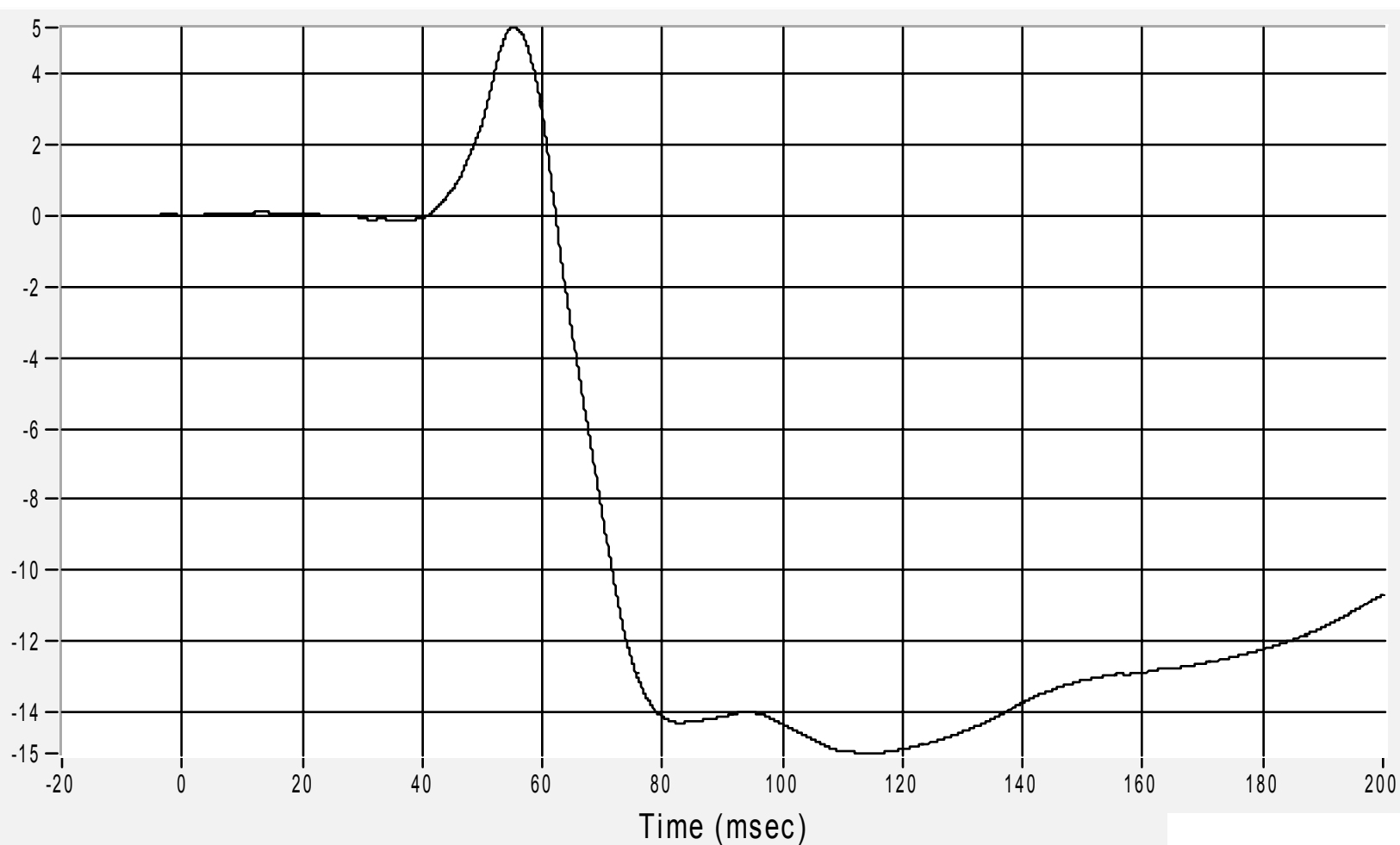
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Head CG (Z) Velocity

Velocity (km/h) CFC180

Max 5.3 km/h at 55.2 msec

Min -15.1 km/h at 114.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

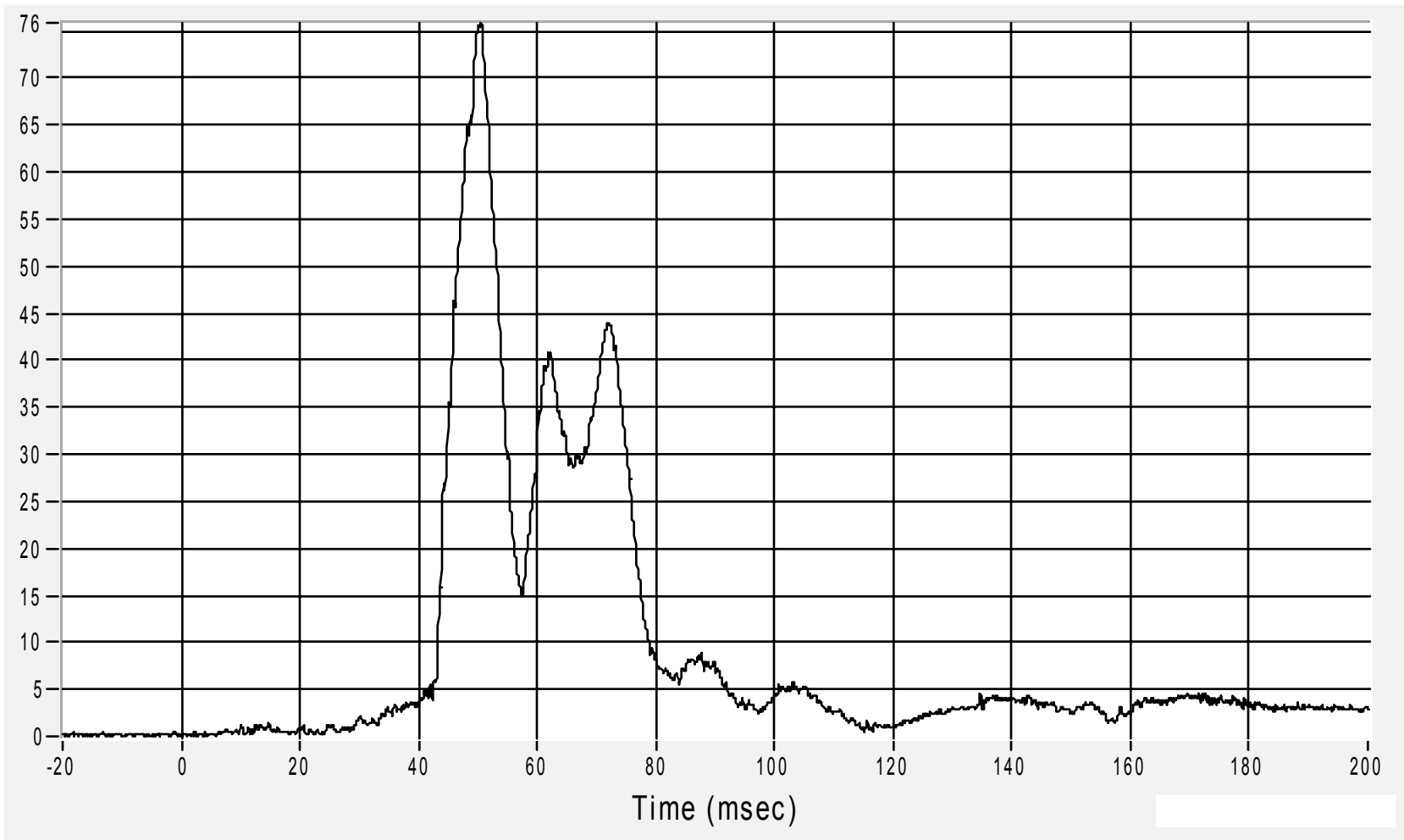
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Head Resultant Acceleration

Acceleration (G's) CFC1000

Max 75.9 G's at 50.6 msec

Min 0.0 G's at 2.8 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

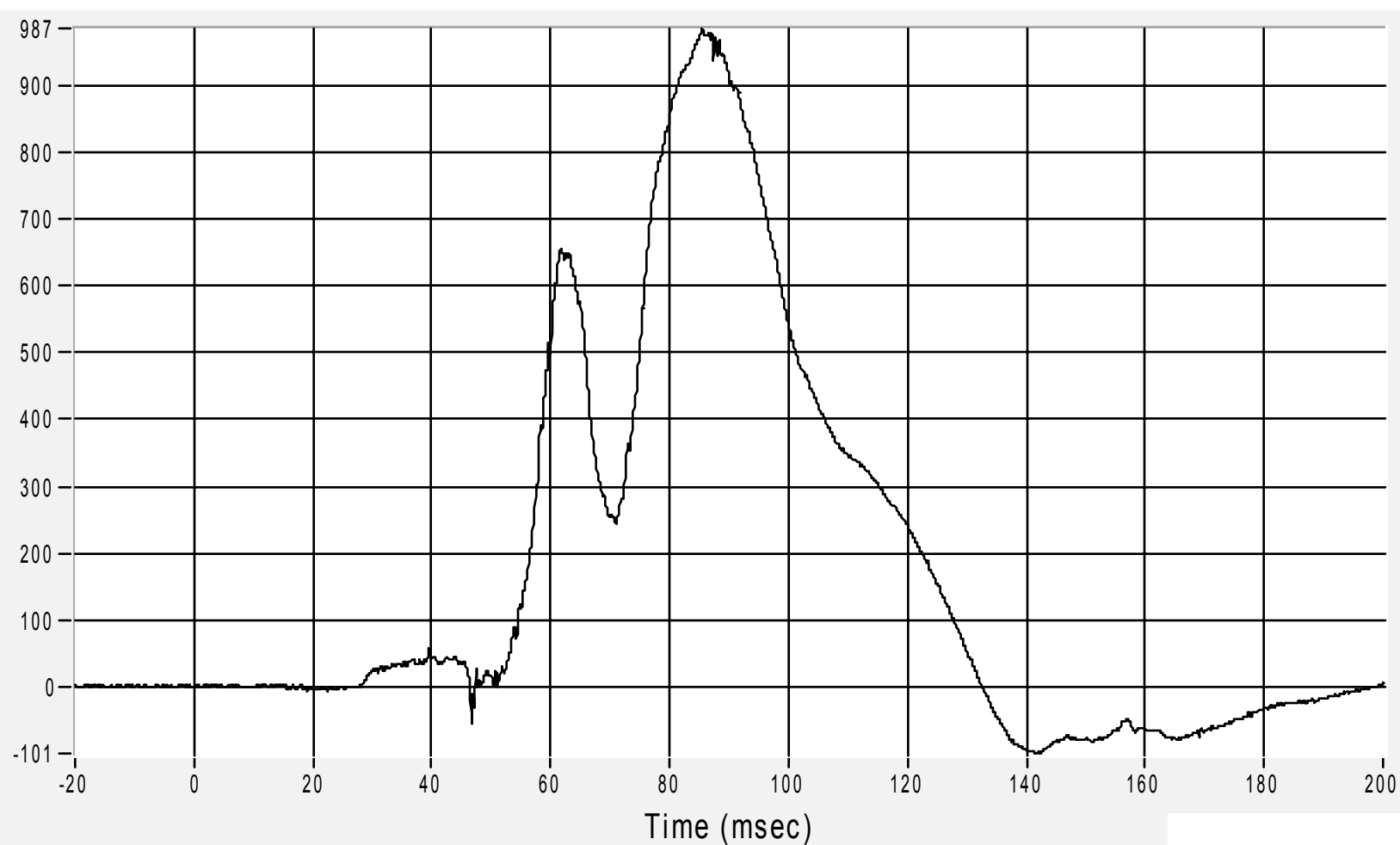
Passenger Upper Neck (X) Force

Force (N)

CFC1000

Max 986.9 N at 85.4 msec

Min -101.0 N at 141.6 msec



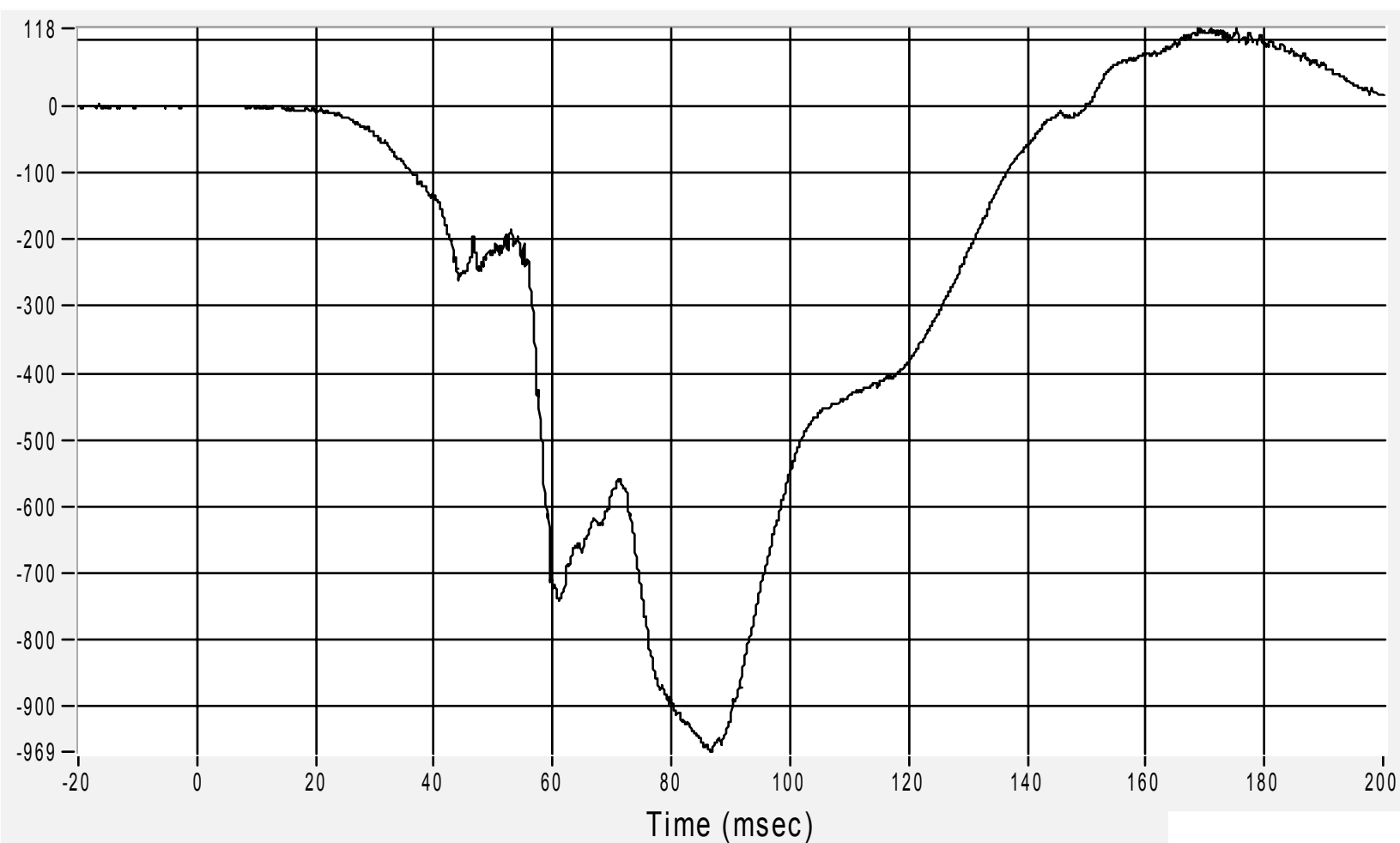
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Upper Neck (Y) Force
Force (N) CFC1000

Max 117.8 N at 175.3 msec
Min -969.1 N at 86.6 msec

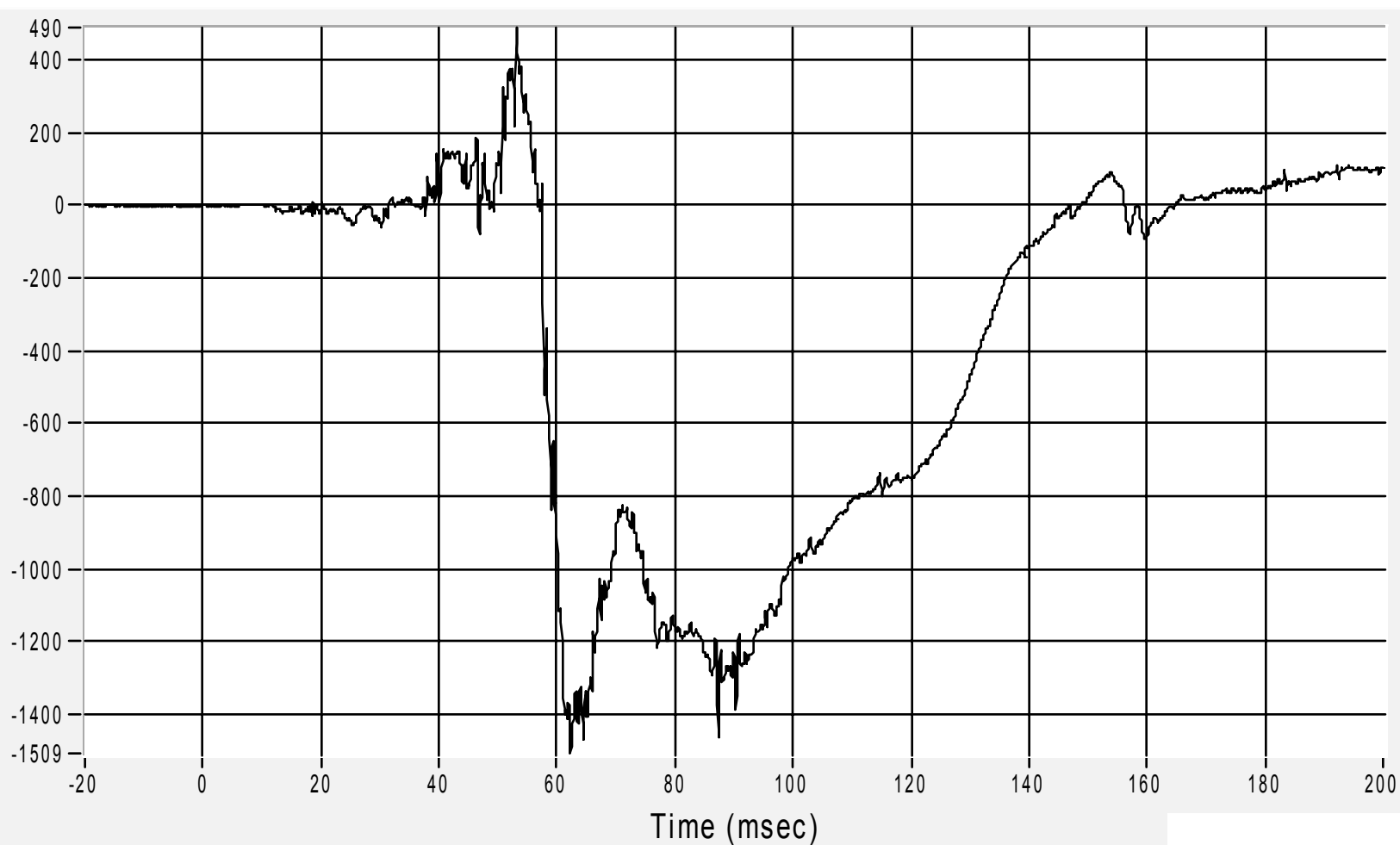


05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN
2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Upper Neck (Z) Force
Force (N) CFC1000

Max 490.0 N at 53.1 msec
Min -1509.0 N at 62.3 msec

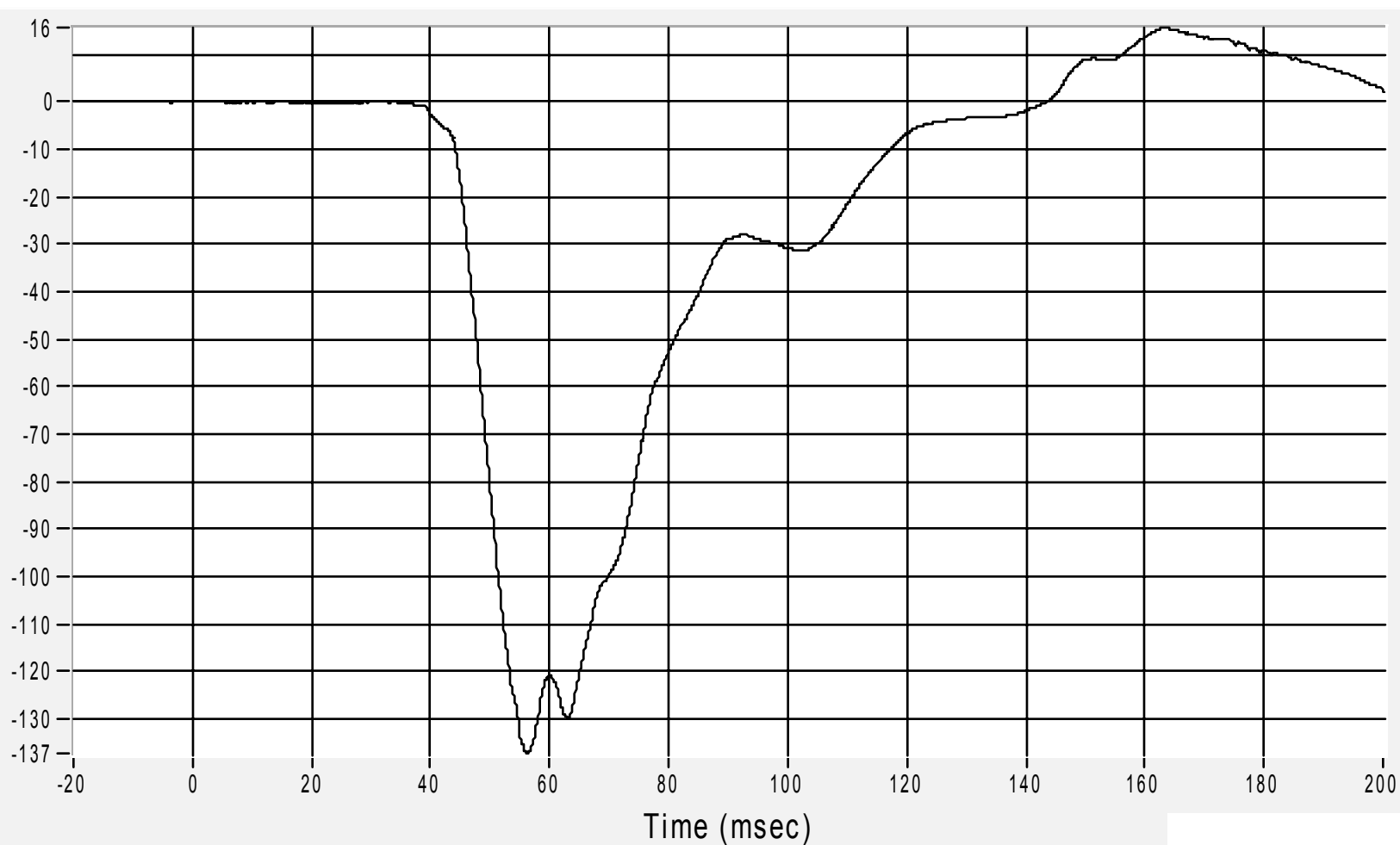


05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN
2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Upper Neck (X) Moment
Moment (Nm) CFC600

Max 15.7 Nm at 163.8 msec
Min -137.3 Nm at 56.2 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN
2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

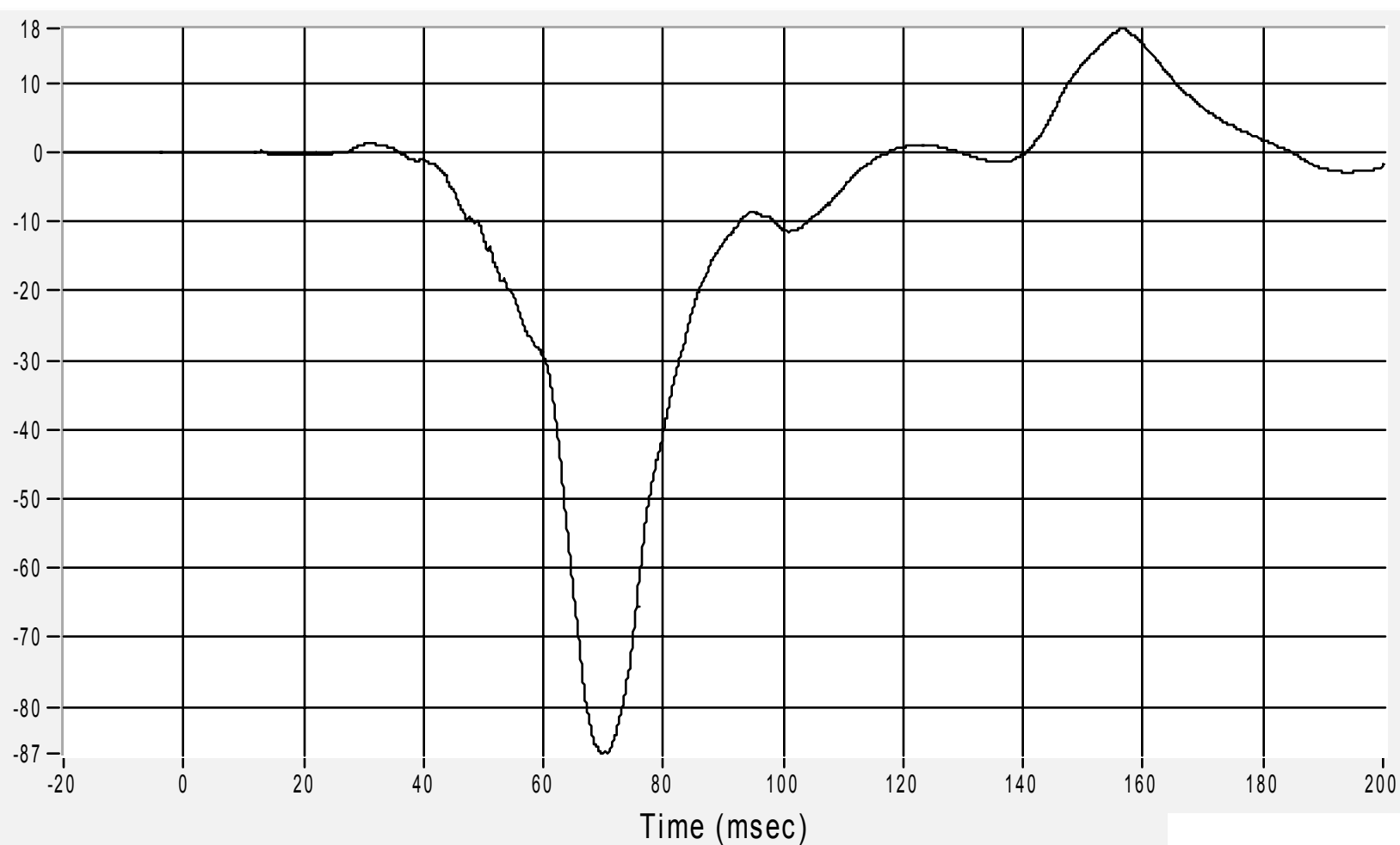
Passenger Upper Neck (Y) Moment

Moment (Nm)

CFC600

Max 17.9 Nm at 156.7 msec

Min -86.7 Nm at 69.8 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

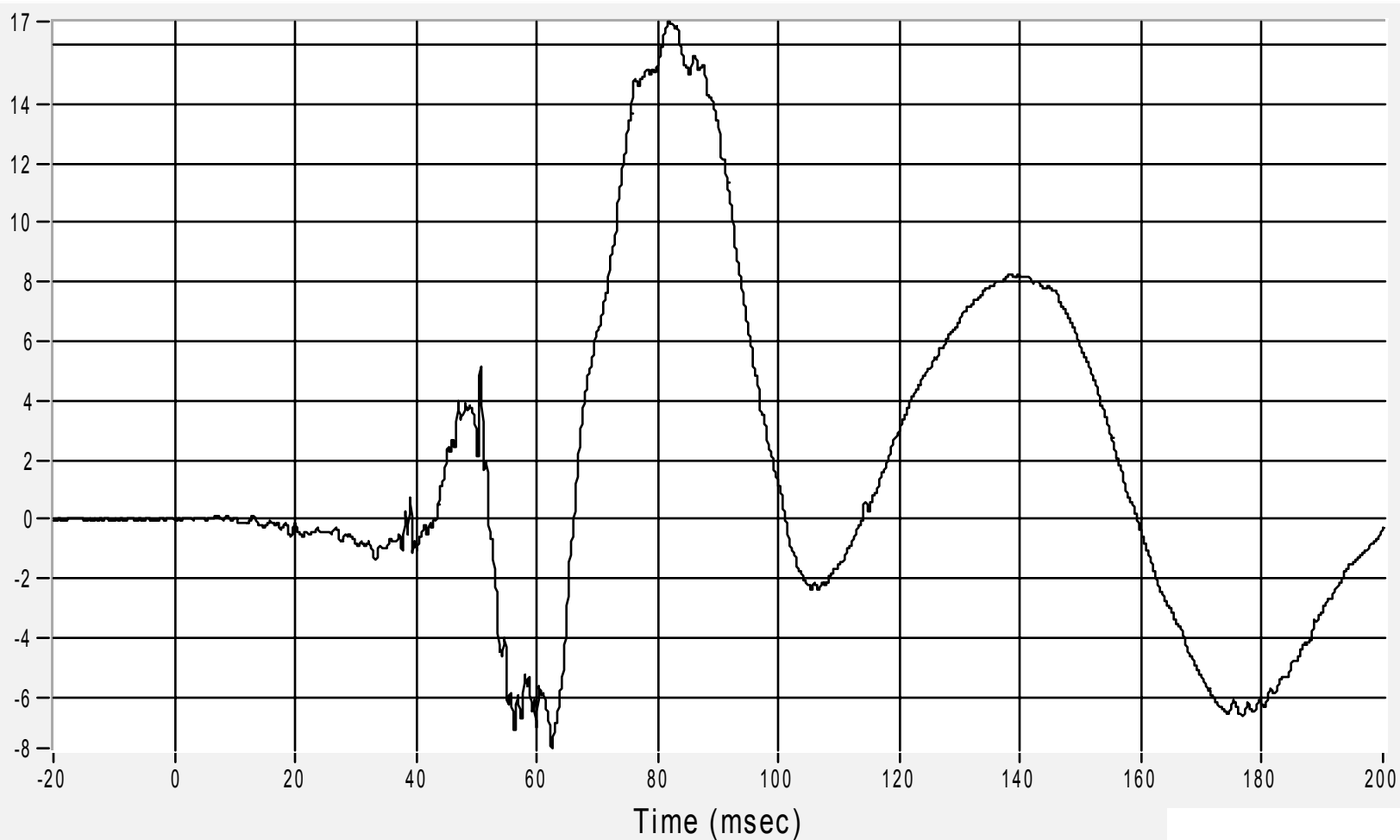
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Upper Neck (Z) Moment

Moment (Nm) CFC600

Max 16.8 Nm at 81.8 msec

Min -7.7 Nm at 62.5 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

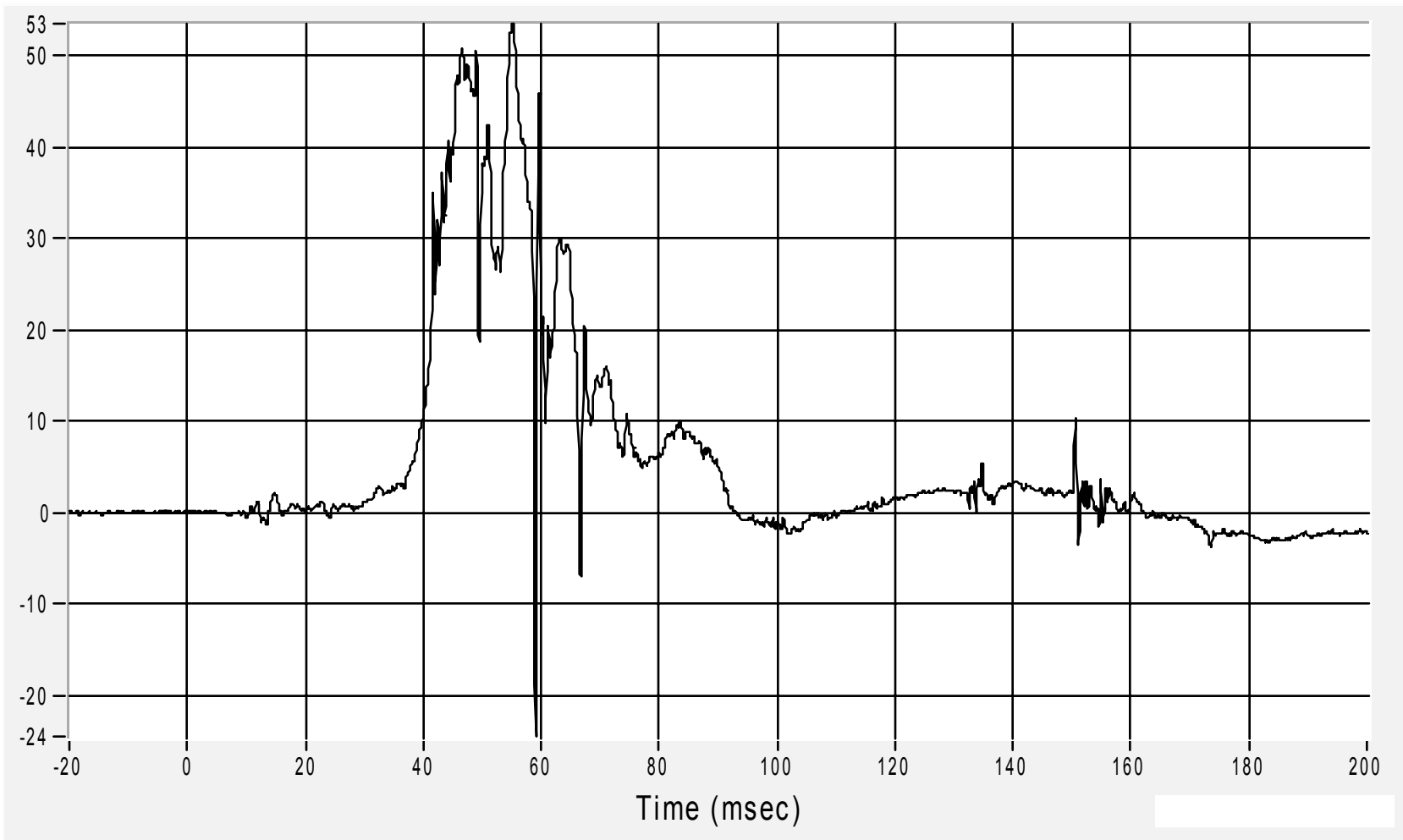
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Upper Rib (Y) Acceleration

Acceleration (G's) CFC1000

Max 53.4 G at 55.2 msec

Min -24.5 G at 59.0 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

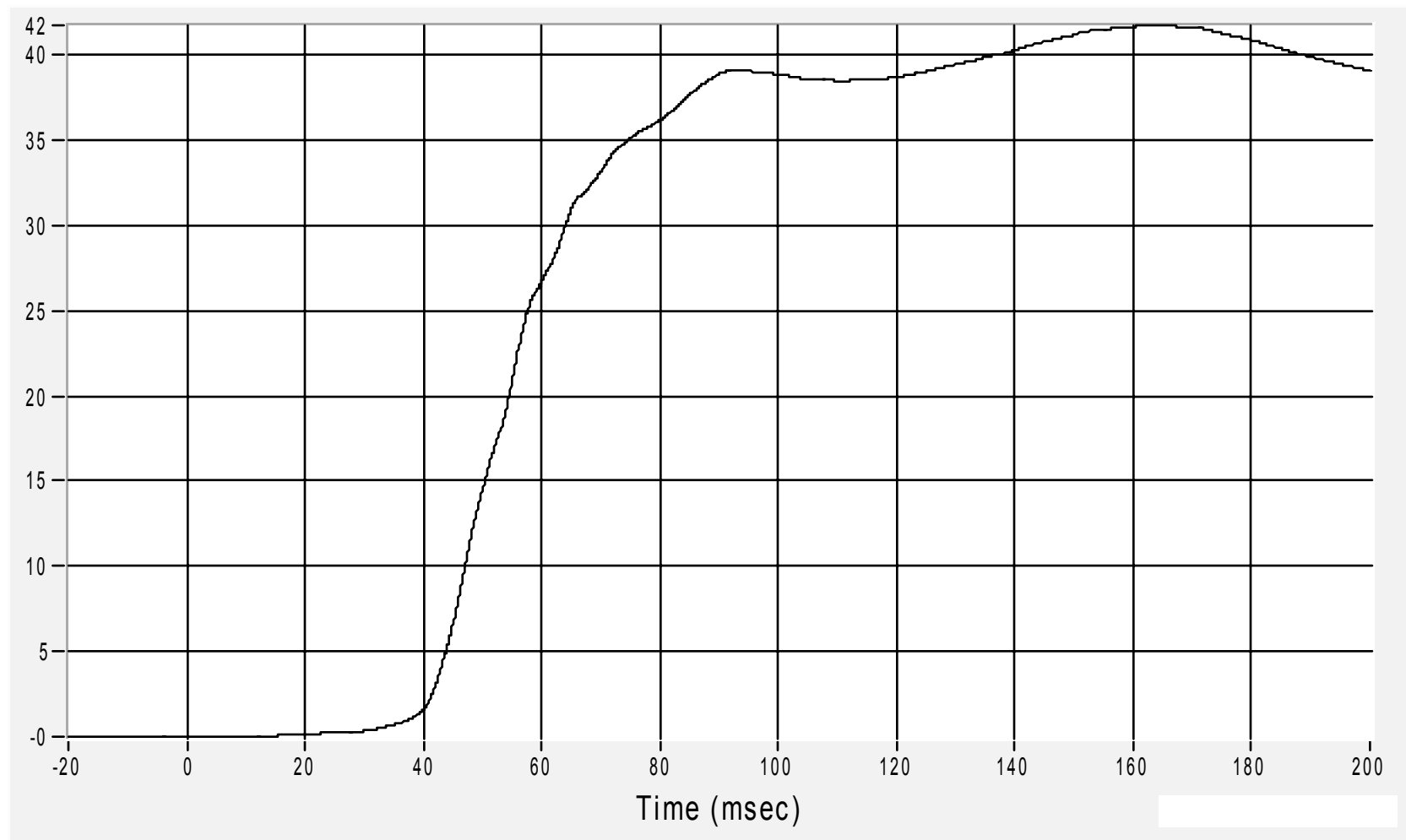
B-40

Passenger Upper Rib (Y) Velocity

Velocity (km/h) CFC180

Max 41.8 km/h at 162.2 msec

Min 0.0 km/h at 13.7 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

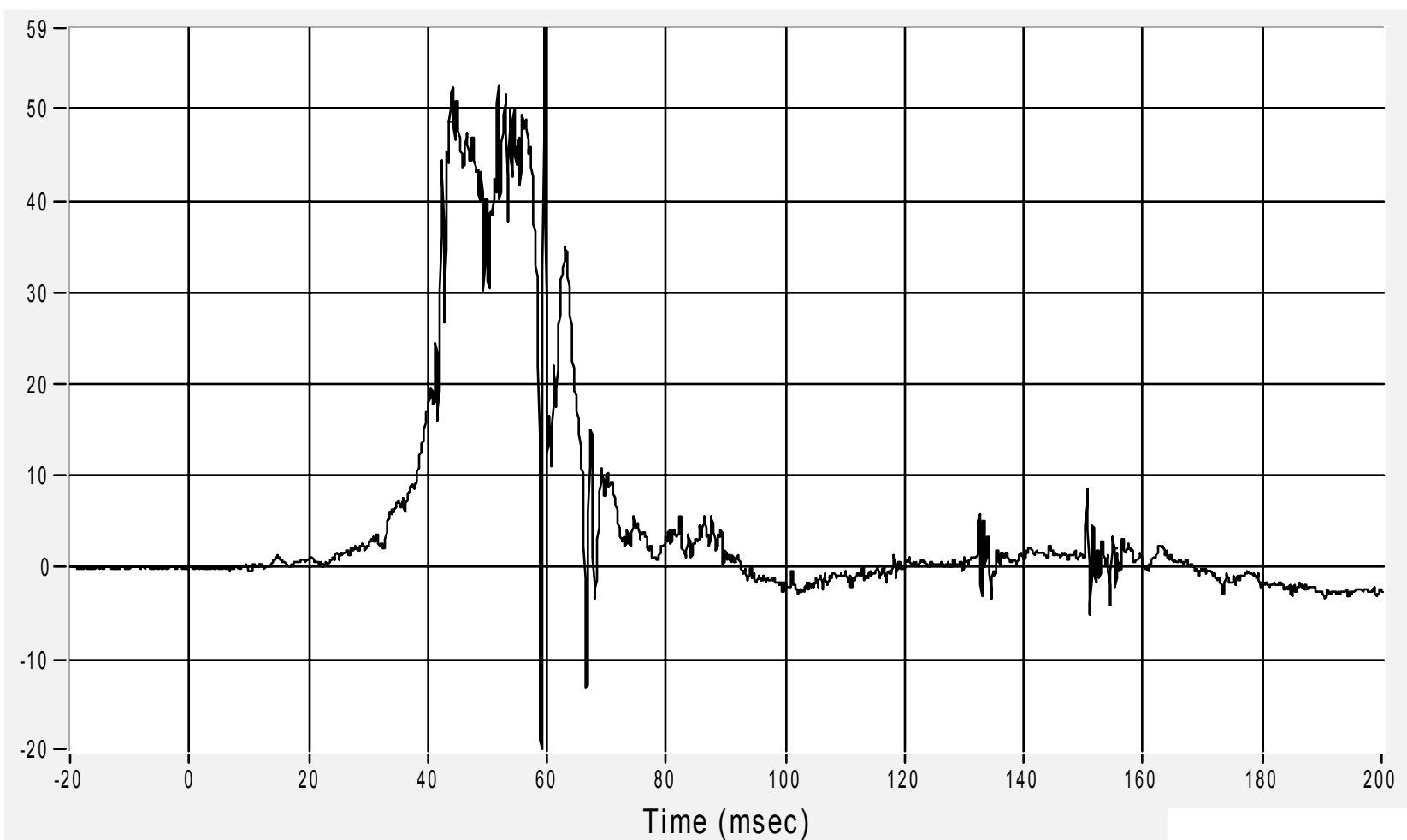
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Lower Rib (Y) Acceleration

Acceleration (G's) CFC1000

Max 58.8 G at 59.6 msec

Min -19.8 G at 59.0 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

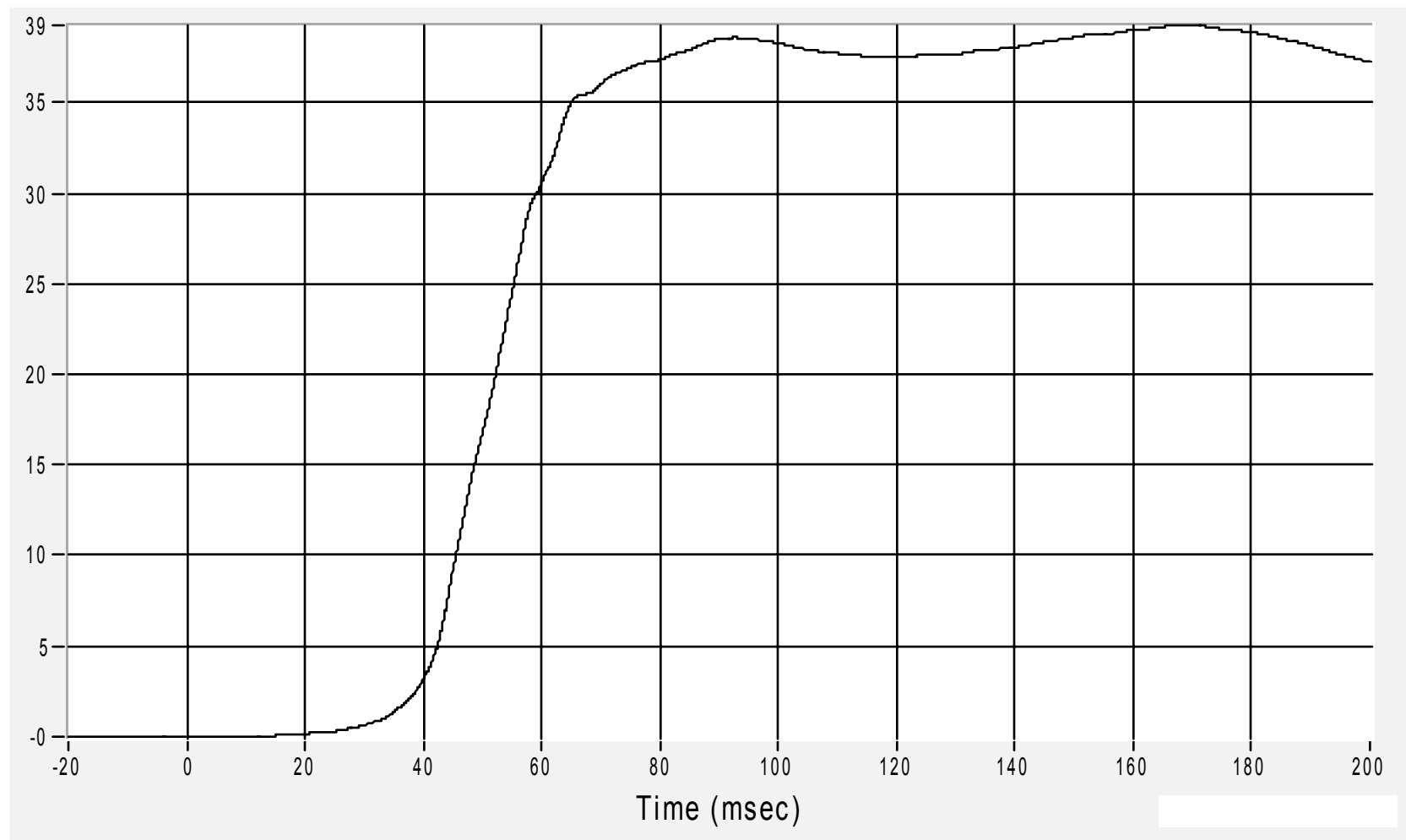
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Lower Rib (Y) Velocity

Velocity (km/h) CFC180

Max 39.3 km/h at 168.4 msec

Min 0.0 km/h at 10.6 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

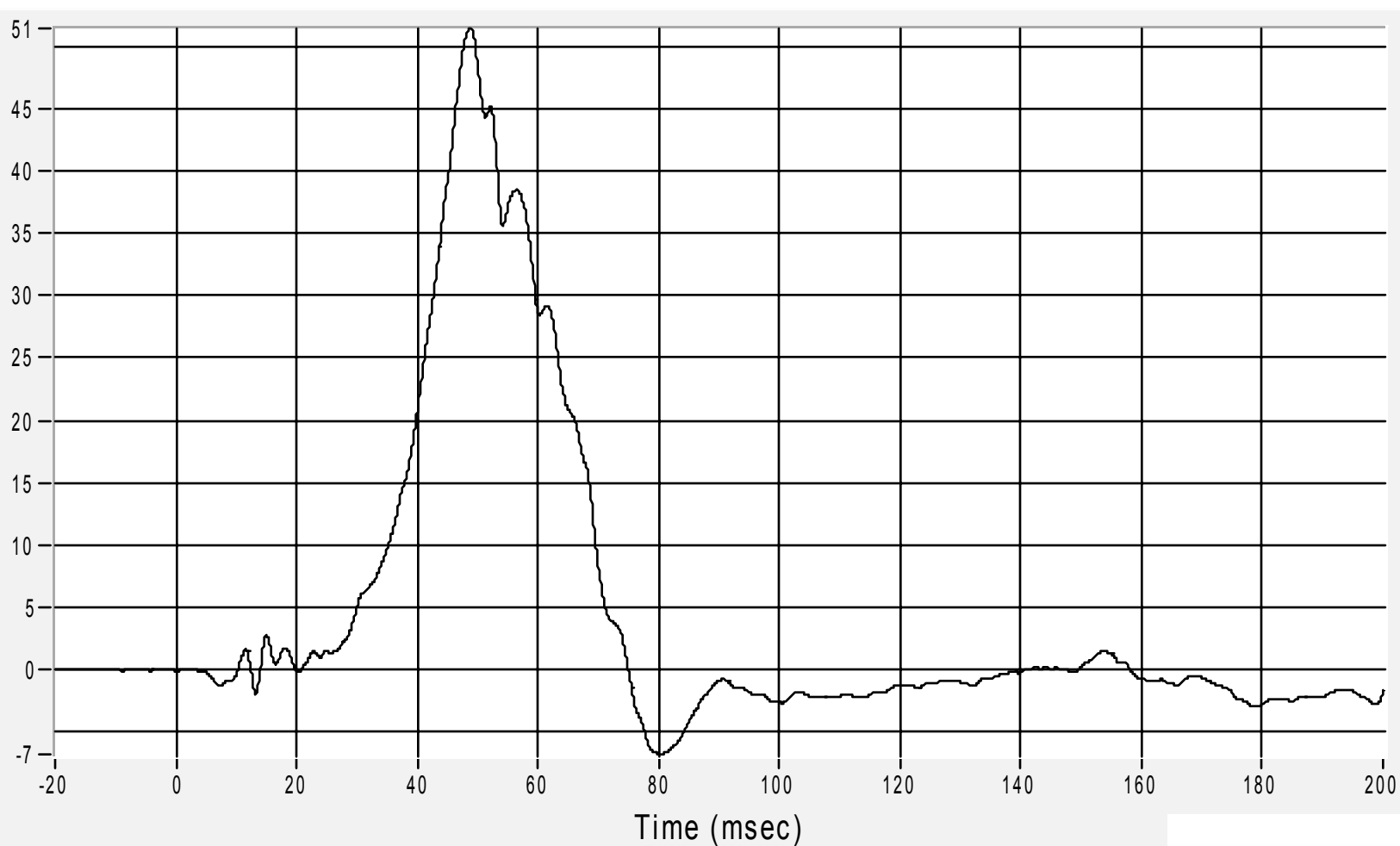
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Lower Spine (Y) Acceleration

Acceleration (G's) CFC180

Max 51.4 G at 48.8 msec

Min -6.8 G at 80.3 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

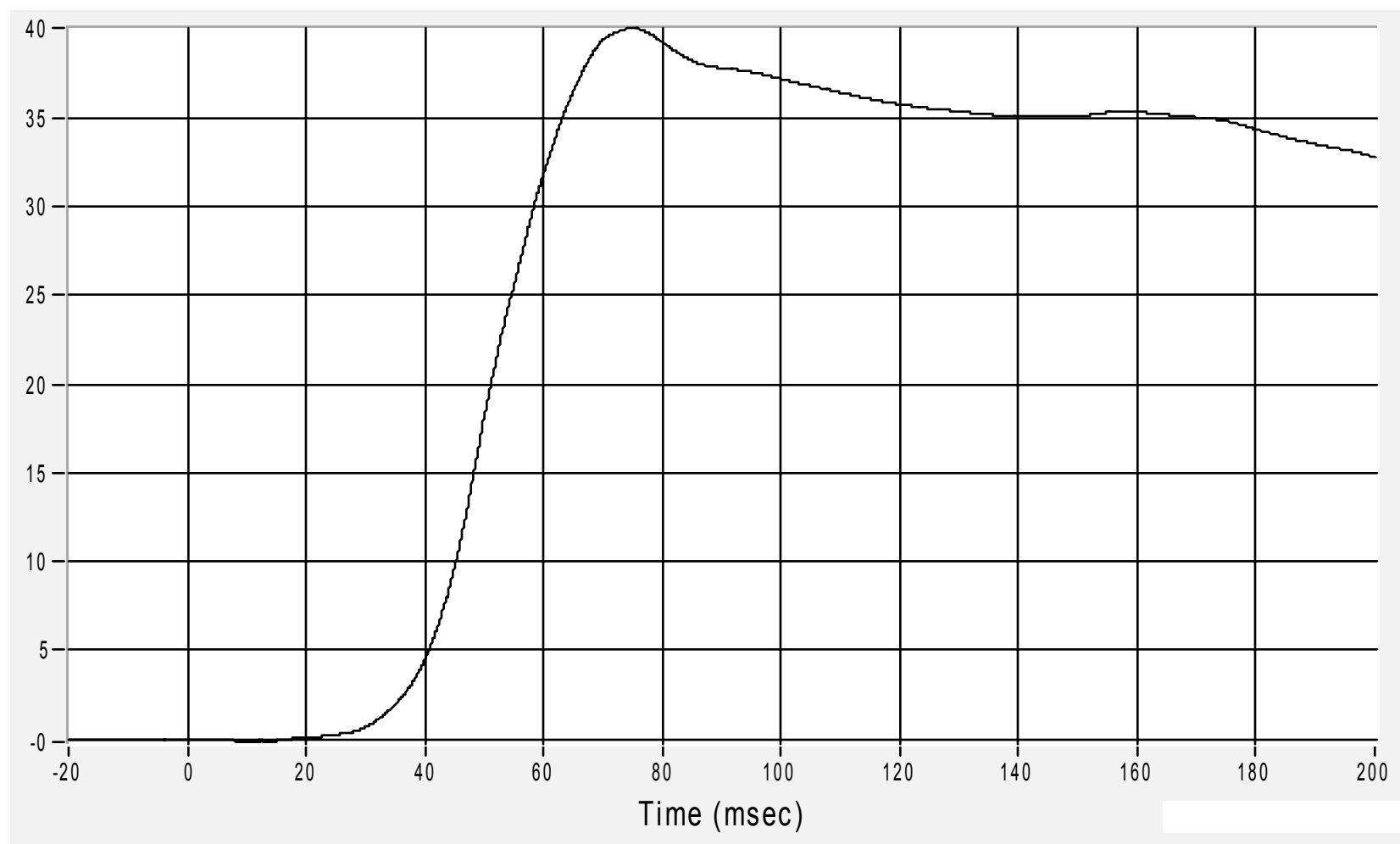
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Lower Spine (Y) Velocity

Velocity (km/h) CFC180

Max 40.1 km/h at 75.0 msec

Min -0.2 km/h at 10.3 msec



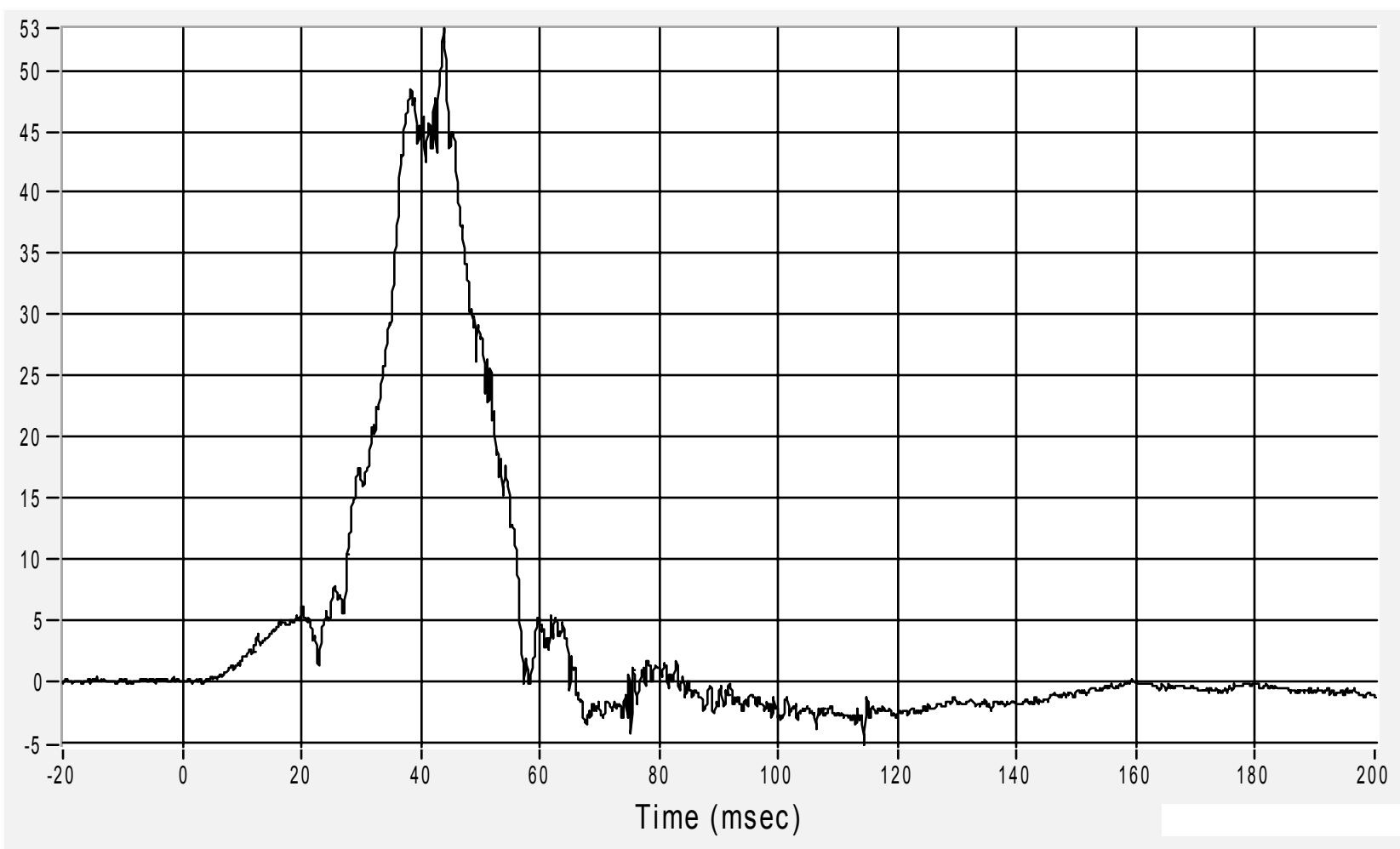
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Pelvic (Y) Acceleration
Acceleration (G's) CFC1000

Max 53.5 G at 43.8 msec
Min -5.2 G at 114.3 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN
2 December 2004

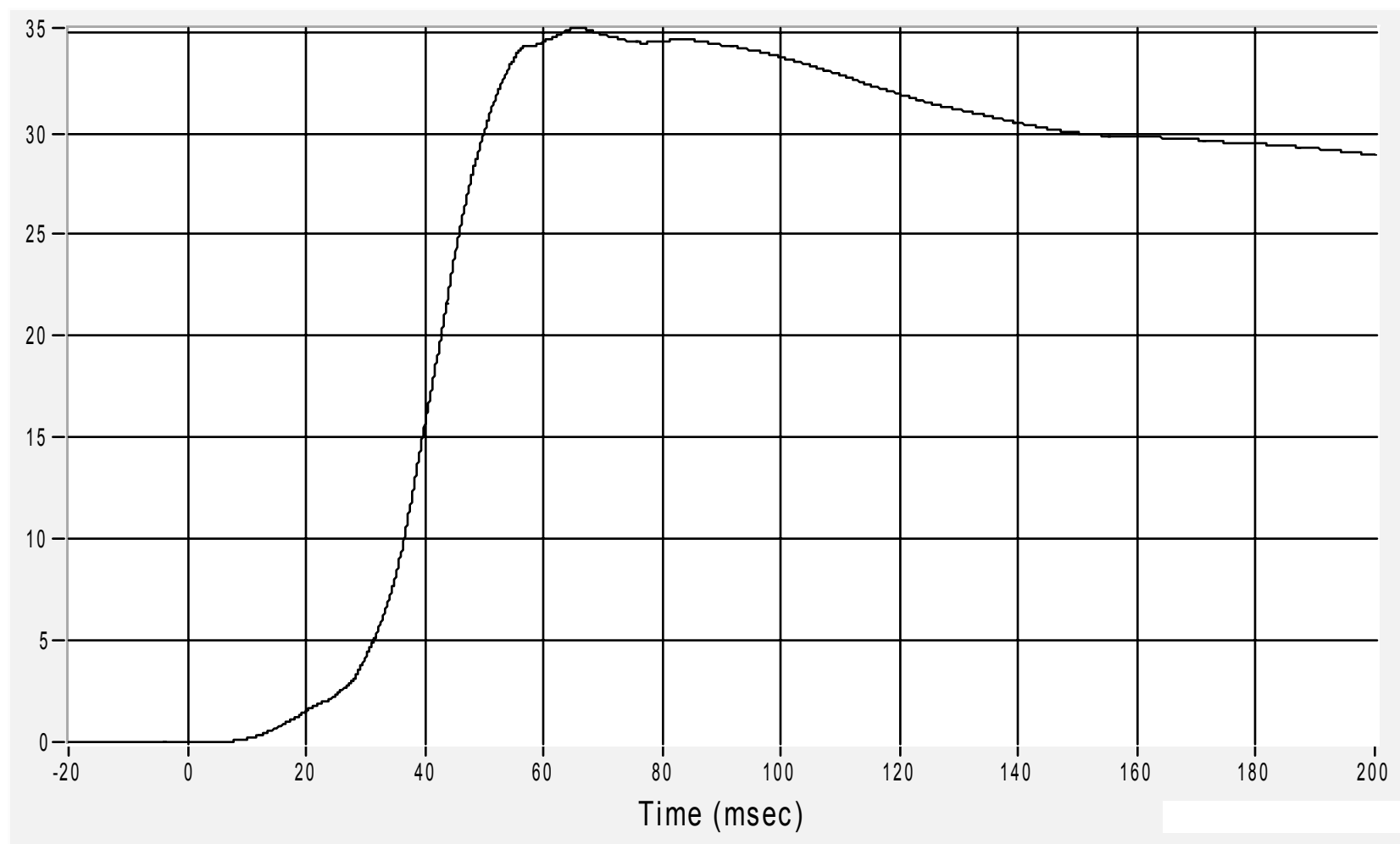
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Pelvic (Y) Velocity

Velocity (km/h) CFC180

Max 35.2 km/h at 65.8 msec

Min 0.0 km/h at 0.0 msec



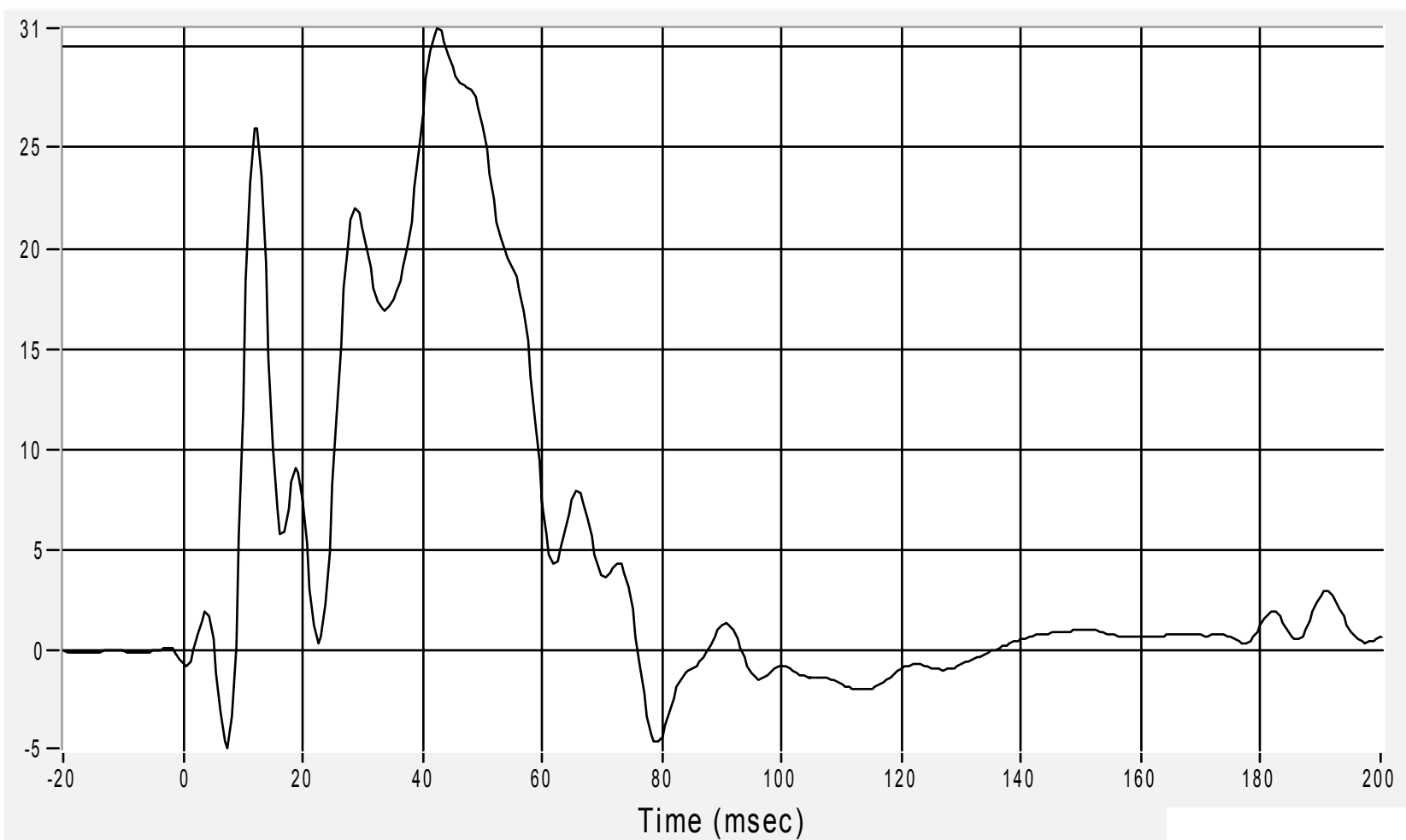
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Driver Upper Rib (Y) Acceleration

Acceleration (G's) FIR100

Max 30.9 G at 42.5 msec**Min -4.8 G at 7.5 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

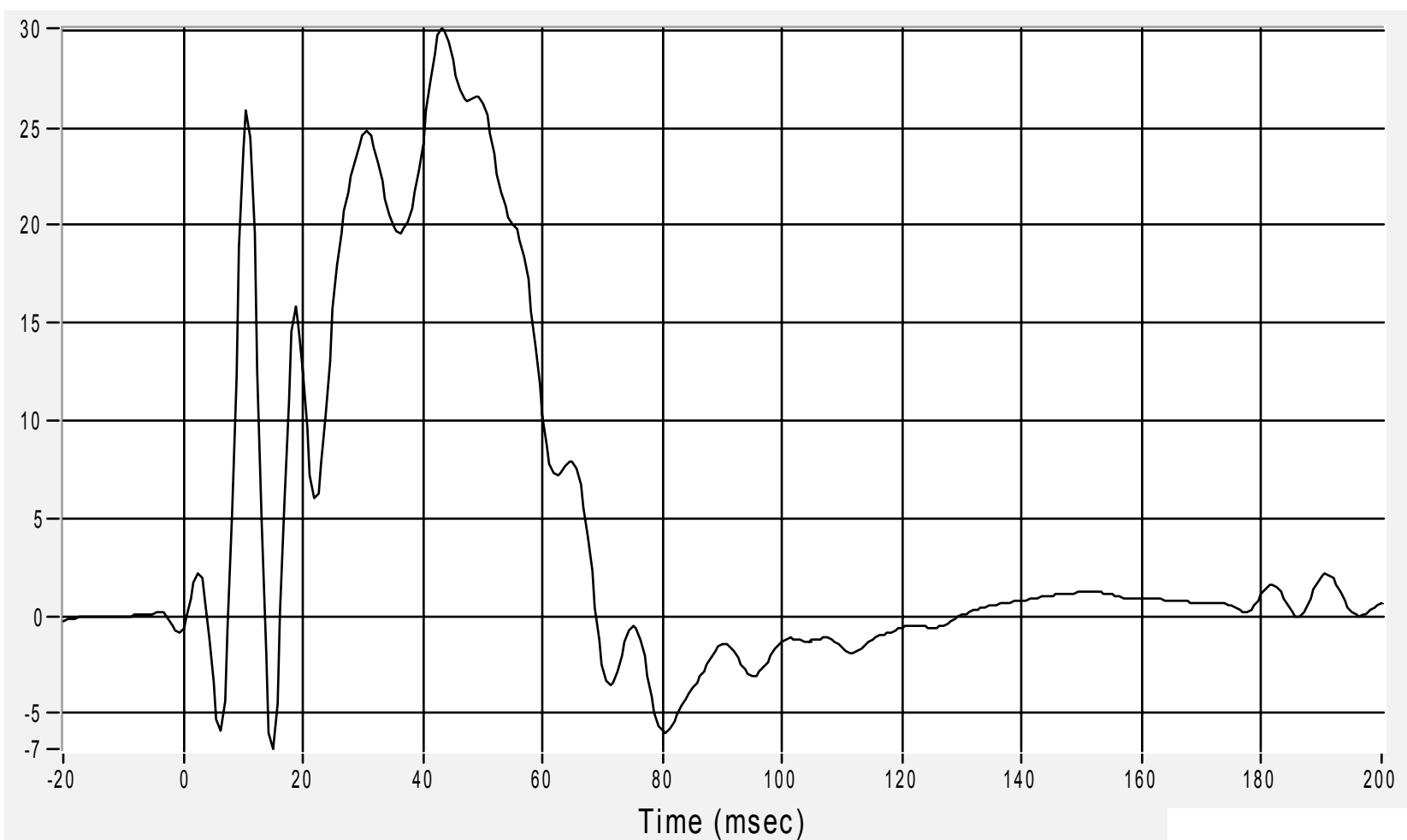
2 December 2004

*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

B-48

Driver Lower Rib (Y) Acceleration

Acceleration (G's) FIR100

Max 30.1 G at 43.1 msec**Min -6.8 G at 15.0 msec**

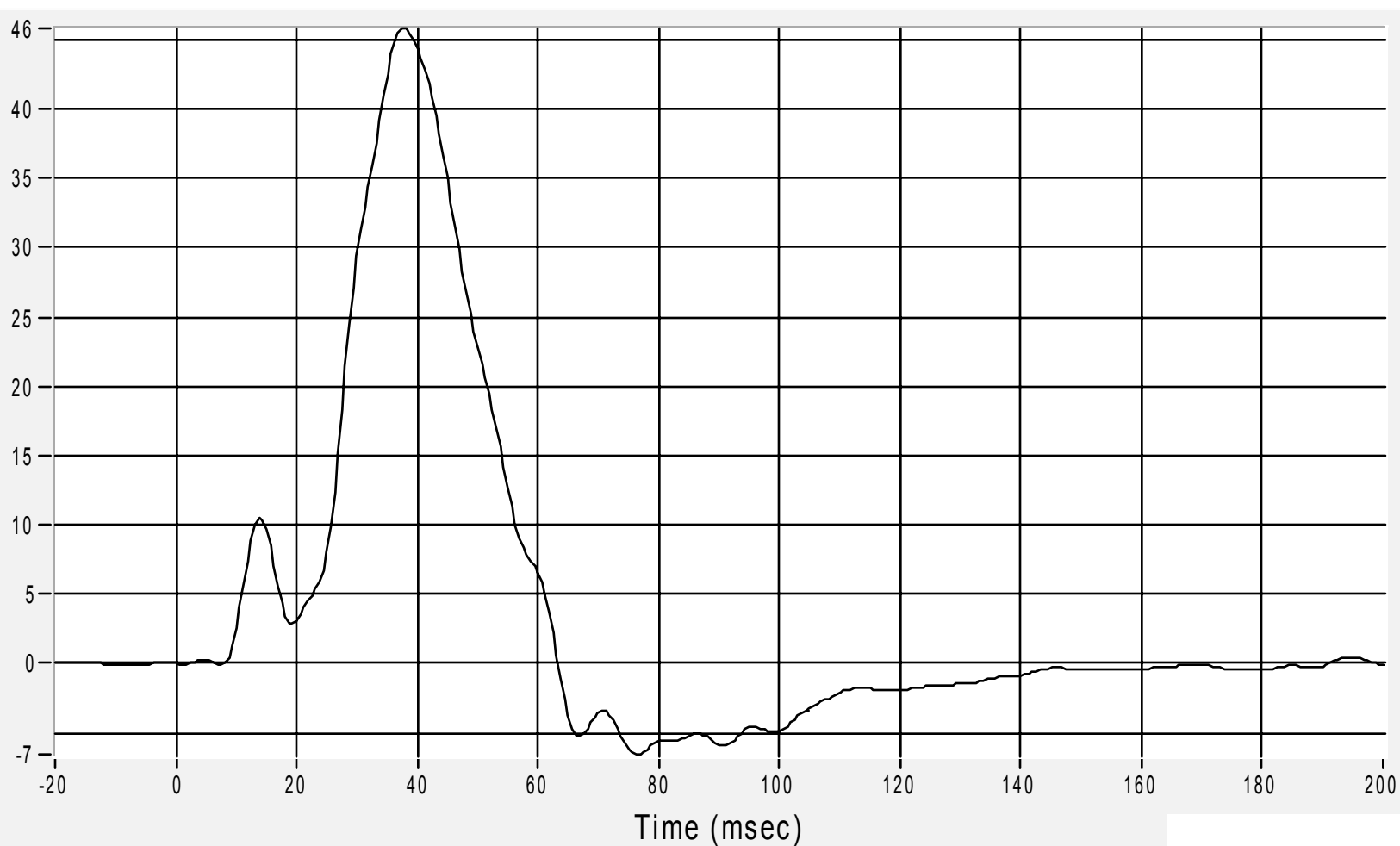
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Driver Lower Spine (Y) Acceleration

Acceleration (G's) FIR100

Max 45.8 G at 37.5 msec**Min -6.6 G at 76.2 msec**

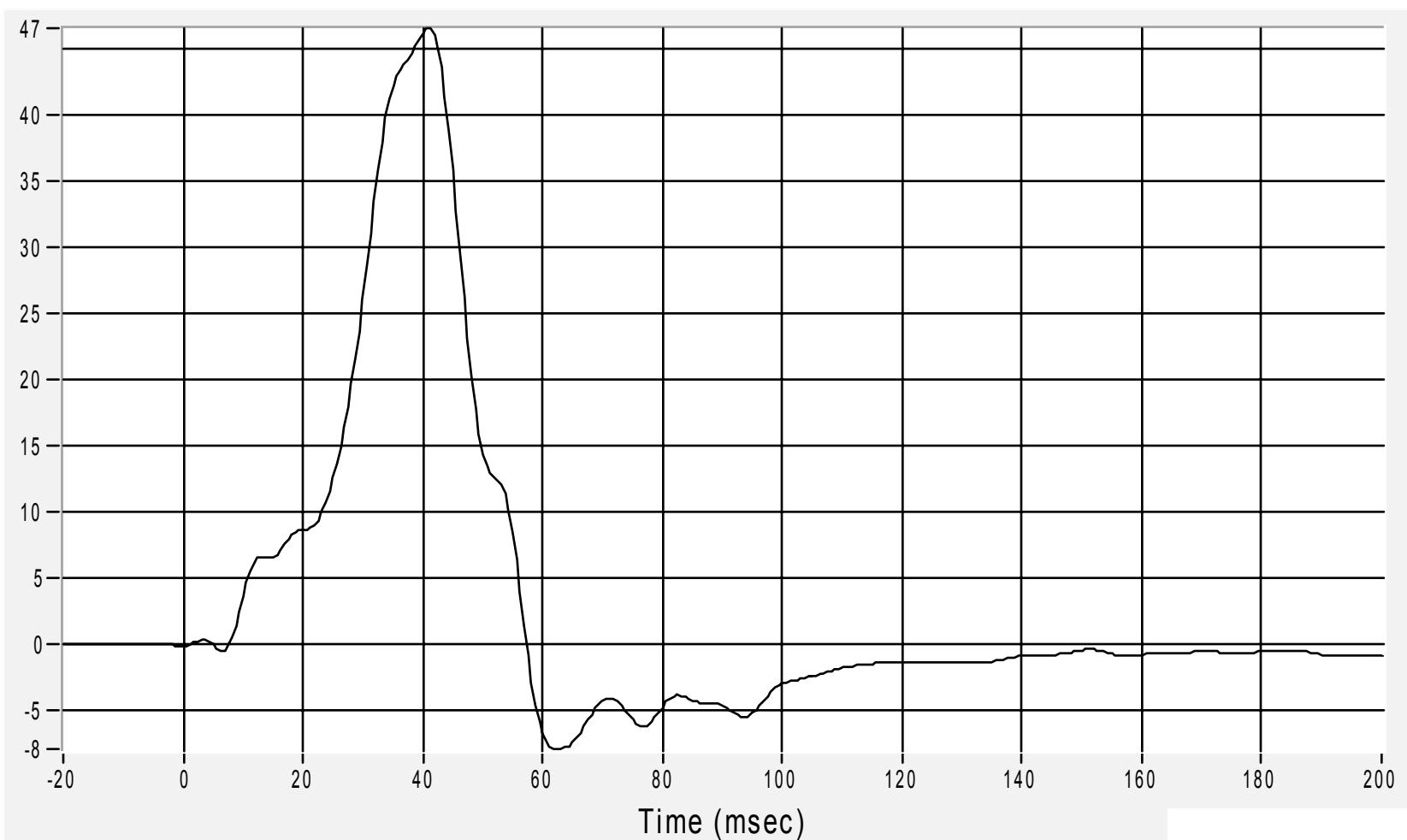
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Driver Pelvic (Y) Acceleration

Acceleration (G's) FIR100

Max 46.6 G at 41.2 msec**Min -7.9 G at 62.5 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

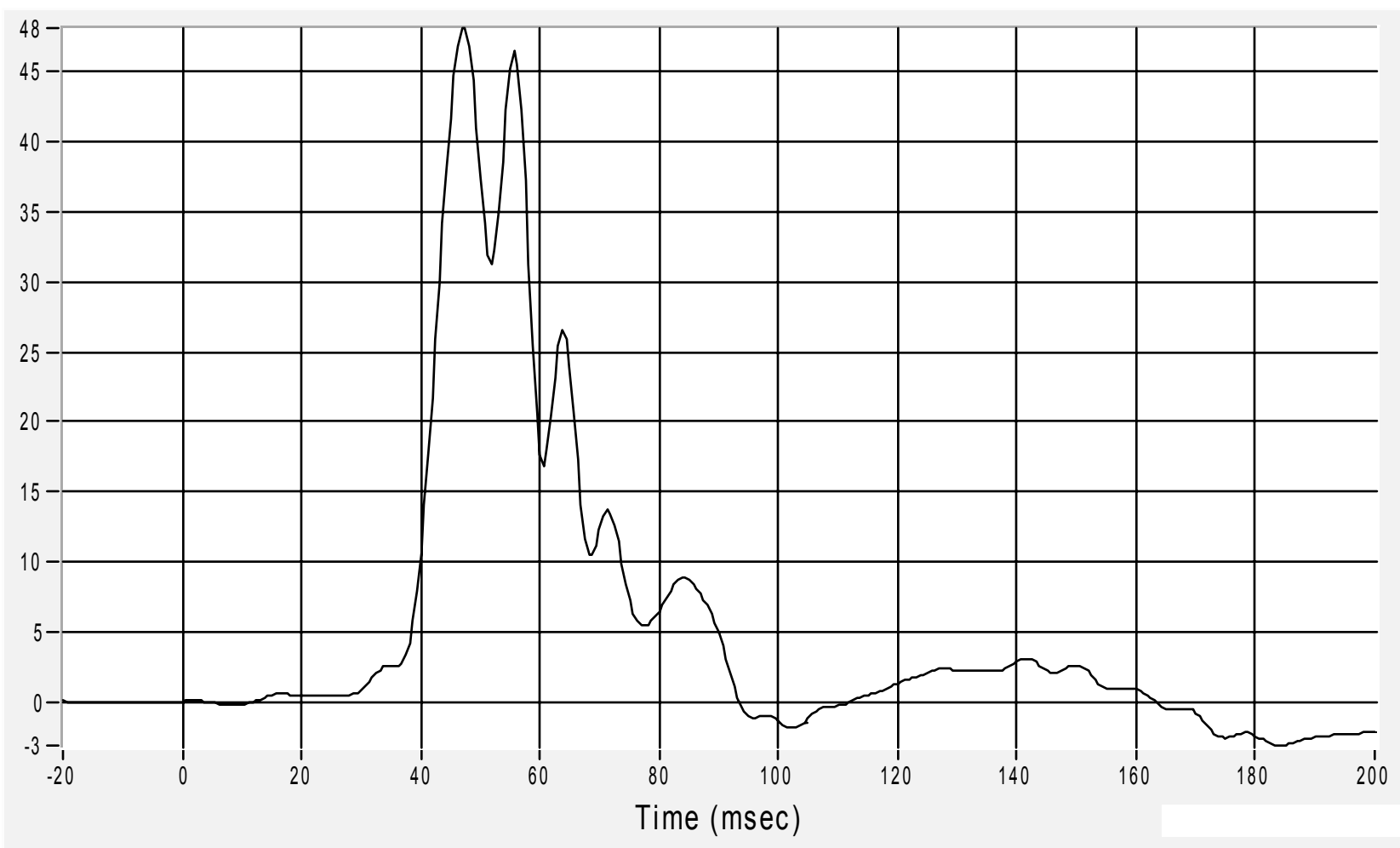
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Passenger Upper Rib (Y) Acceleration

Acceleration (G's) FIR100

Max 48.1 G at 46.9 msec

Min -3.1 G at 184.4 msec



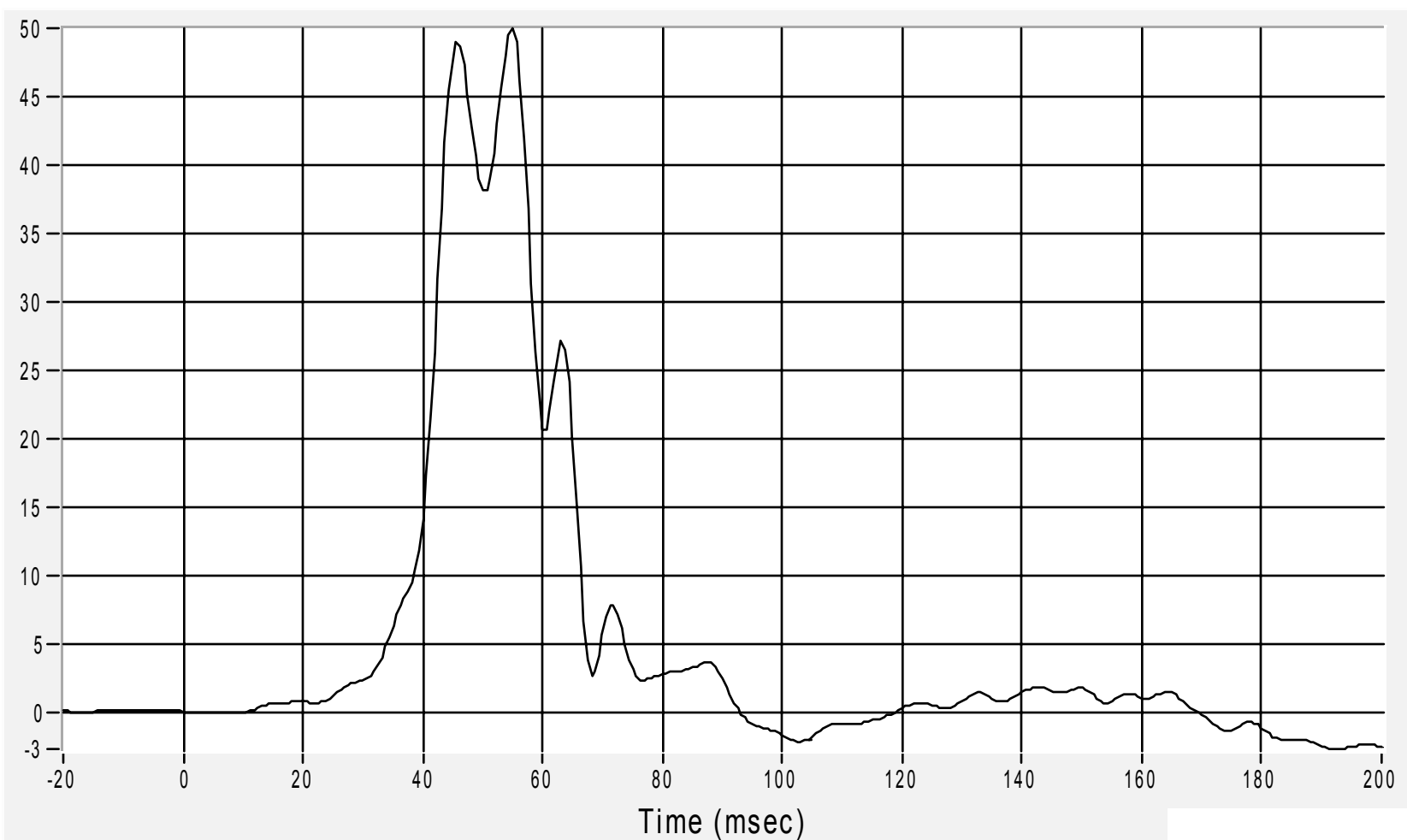
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Passenger Lower Rib (Y) Acceleration

Acceleration (G's) FIR100

Max 49.9 G at 55.0 msec**Min -2.7 G at 192.5 msec**

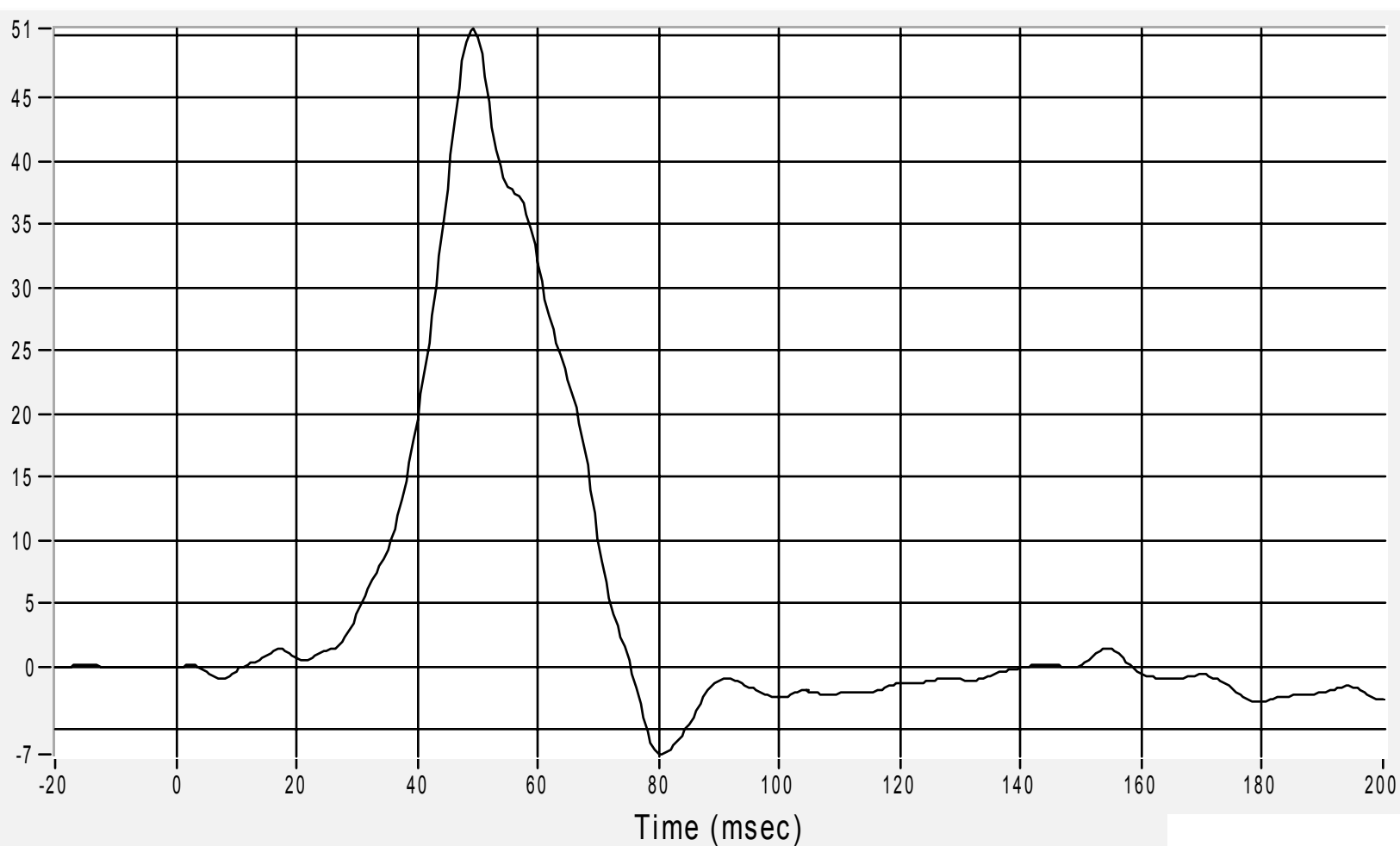
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Passenger Lower Spine (Y) Acceleration

Acceleration (G's) FIR100

Max 50.5 G at 49.4 msec**Min -7.0 G at 80.6 msec**

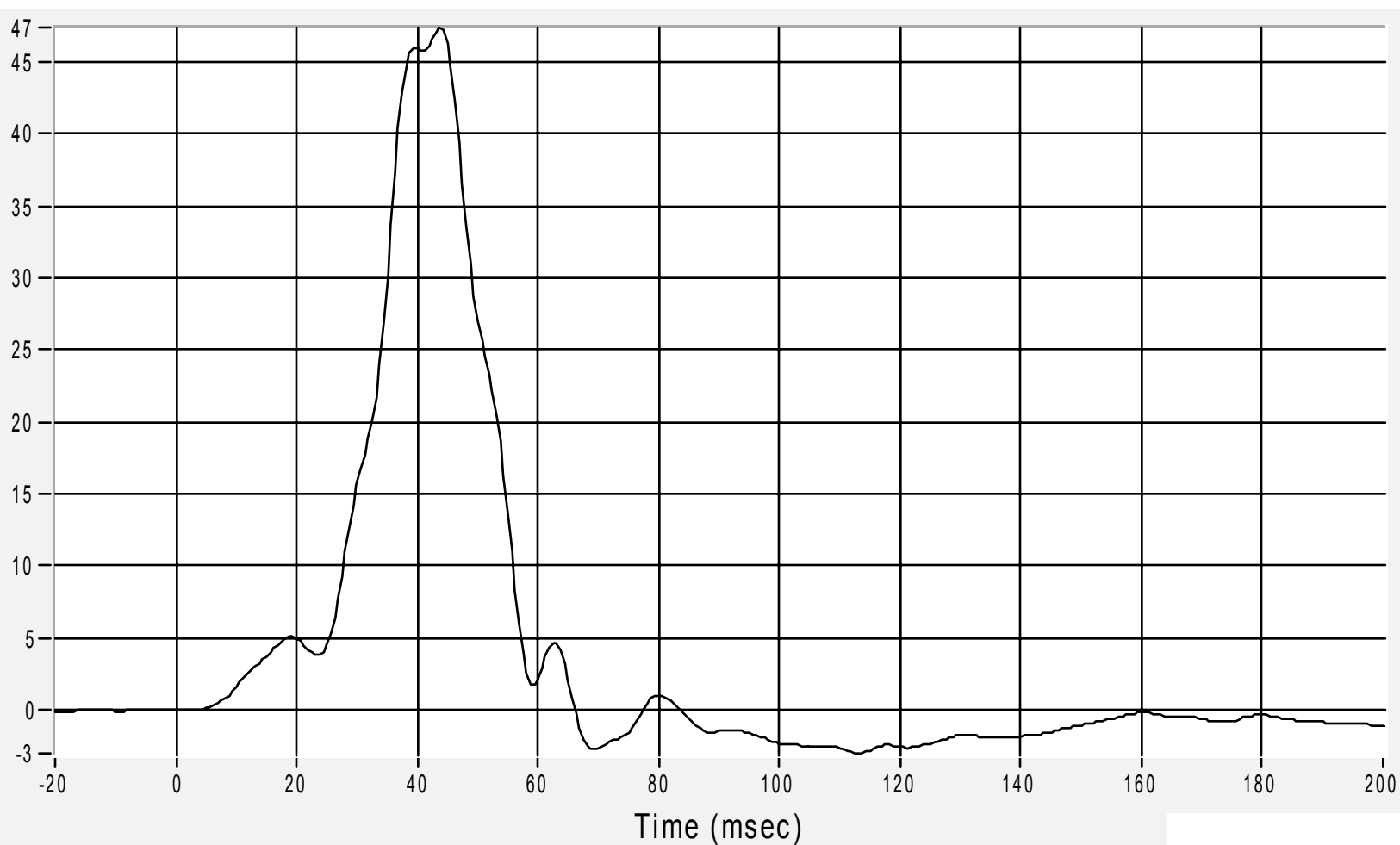
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Passenger Pelvic (Y) Acceleration

Acceleration (G's) FIR100

Max 47.4 G at 43.8 msec**Min -3.0 G at 113.1 msec**

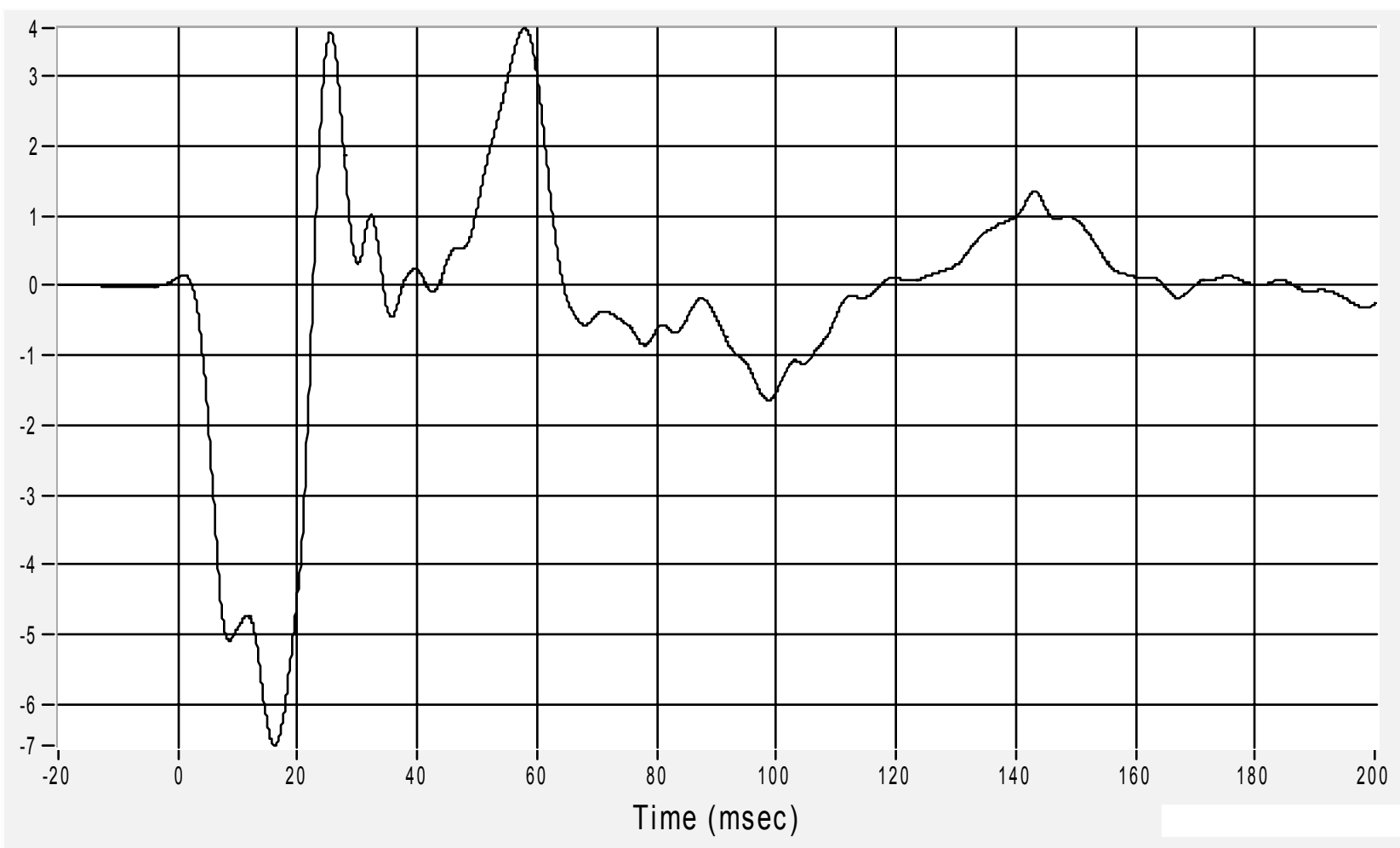
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Right Side Sill at Front Seat (X) Acceleration

Acceleration (G's) CFC60

Max 3.7 G at 57.8 msec**Min -6.6 G at 16.2 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

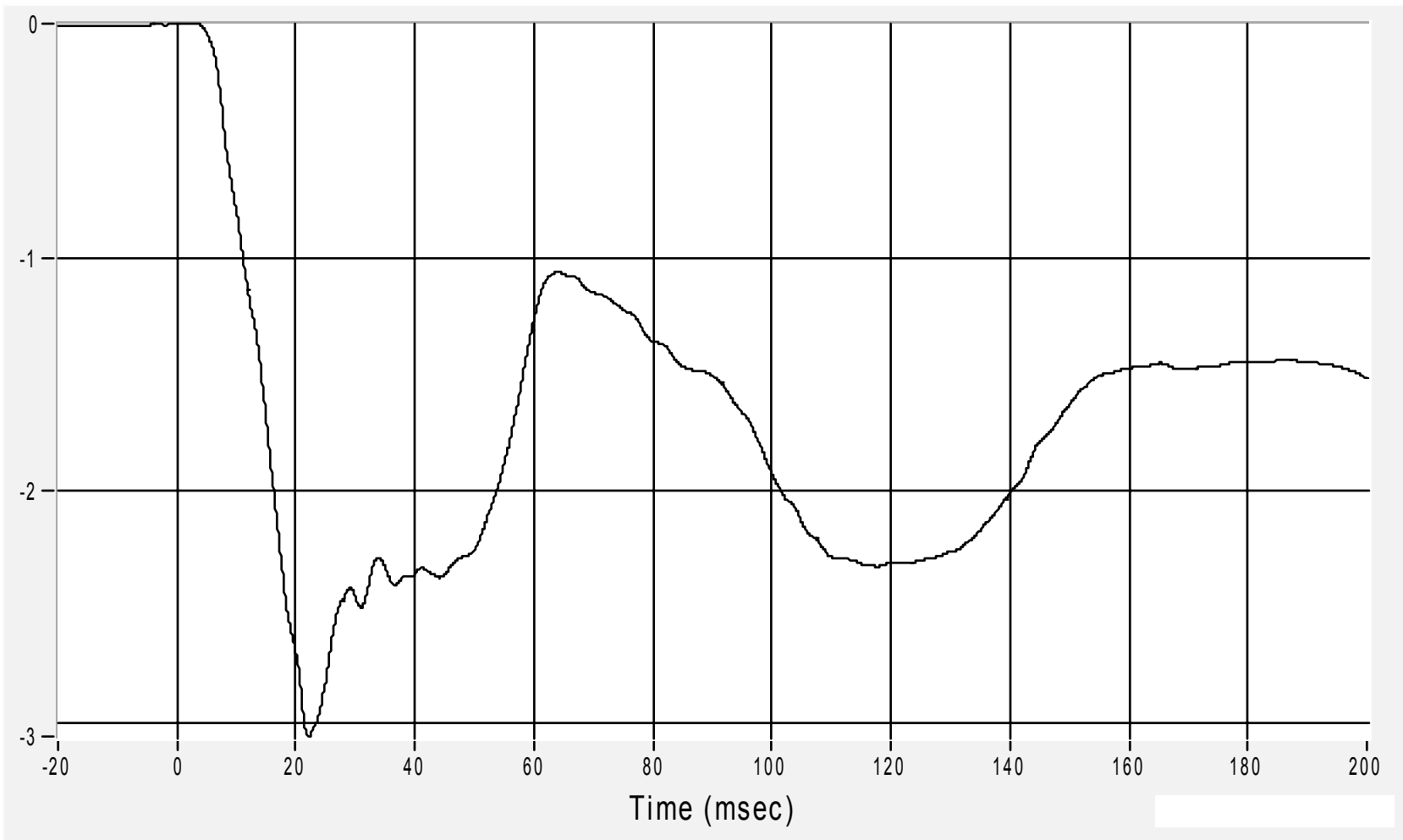
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Right Side Sill at Front Seat (X) Velocity

Velocity (km/h) CFC180

Max 0.0 km/h at 3.2 msec

Min -3.1 km/h at 22.1 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

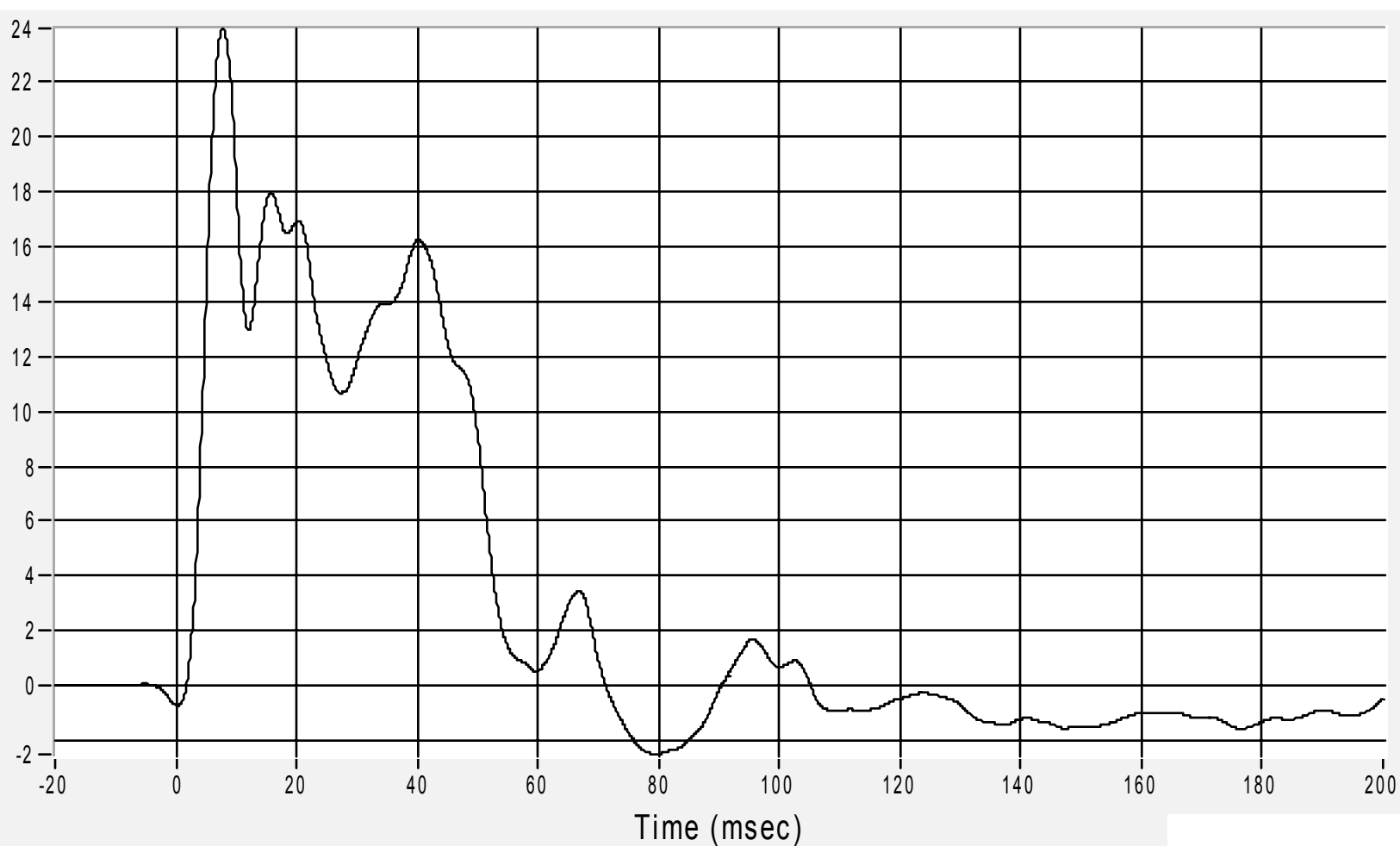
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Front Seat (Y) Acceleration

Acceleration (G's) CFC60

Max 23.9 G at 7.8 msec

Min -2.5 G at 79.5 msec



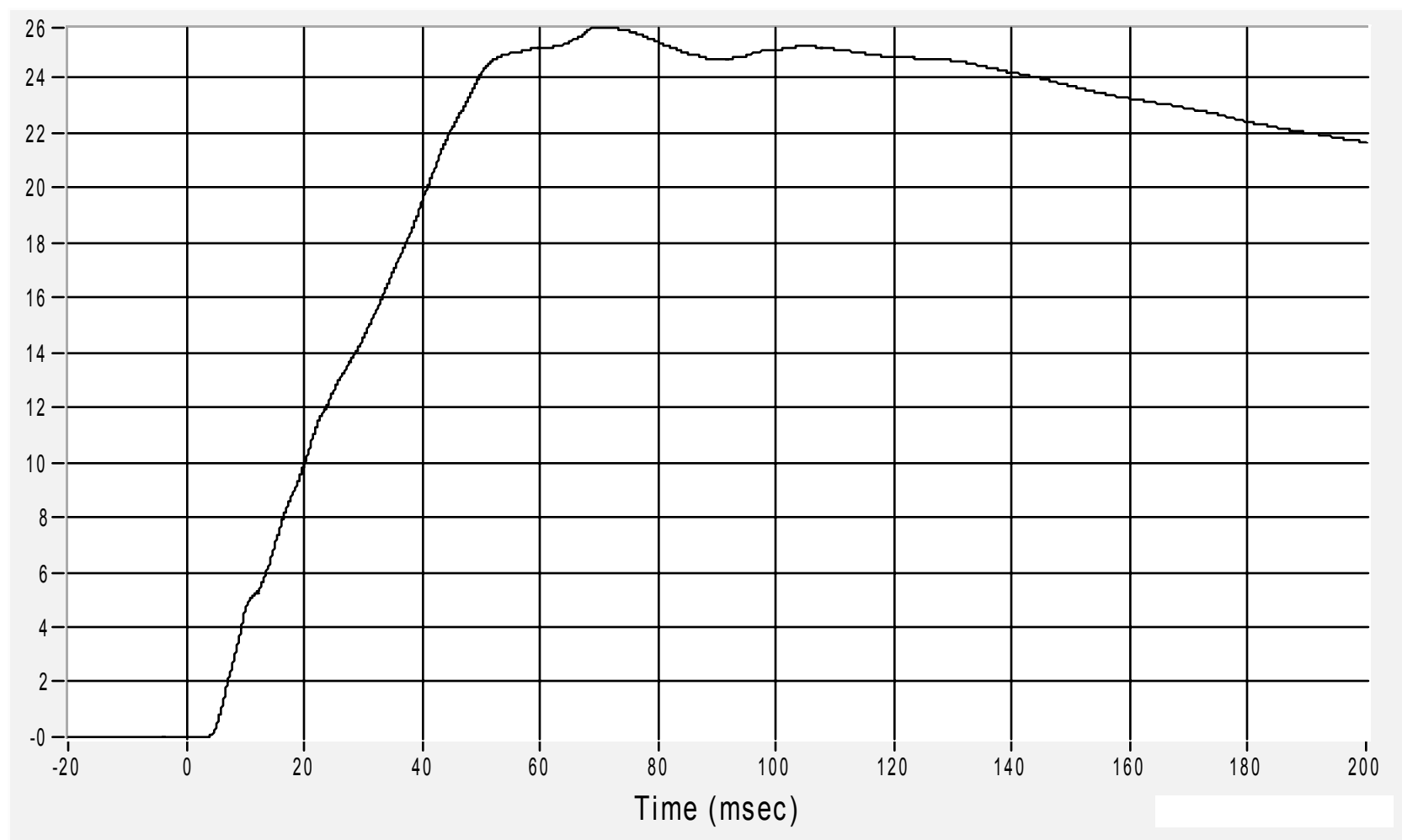
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Front Seat (Y) Velocity

Velocity (km/h) CFC180

Max 25.8 km/h at 69.4 msec**Min 0.0 km/h at 3.3 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

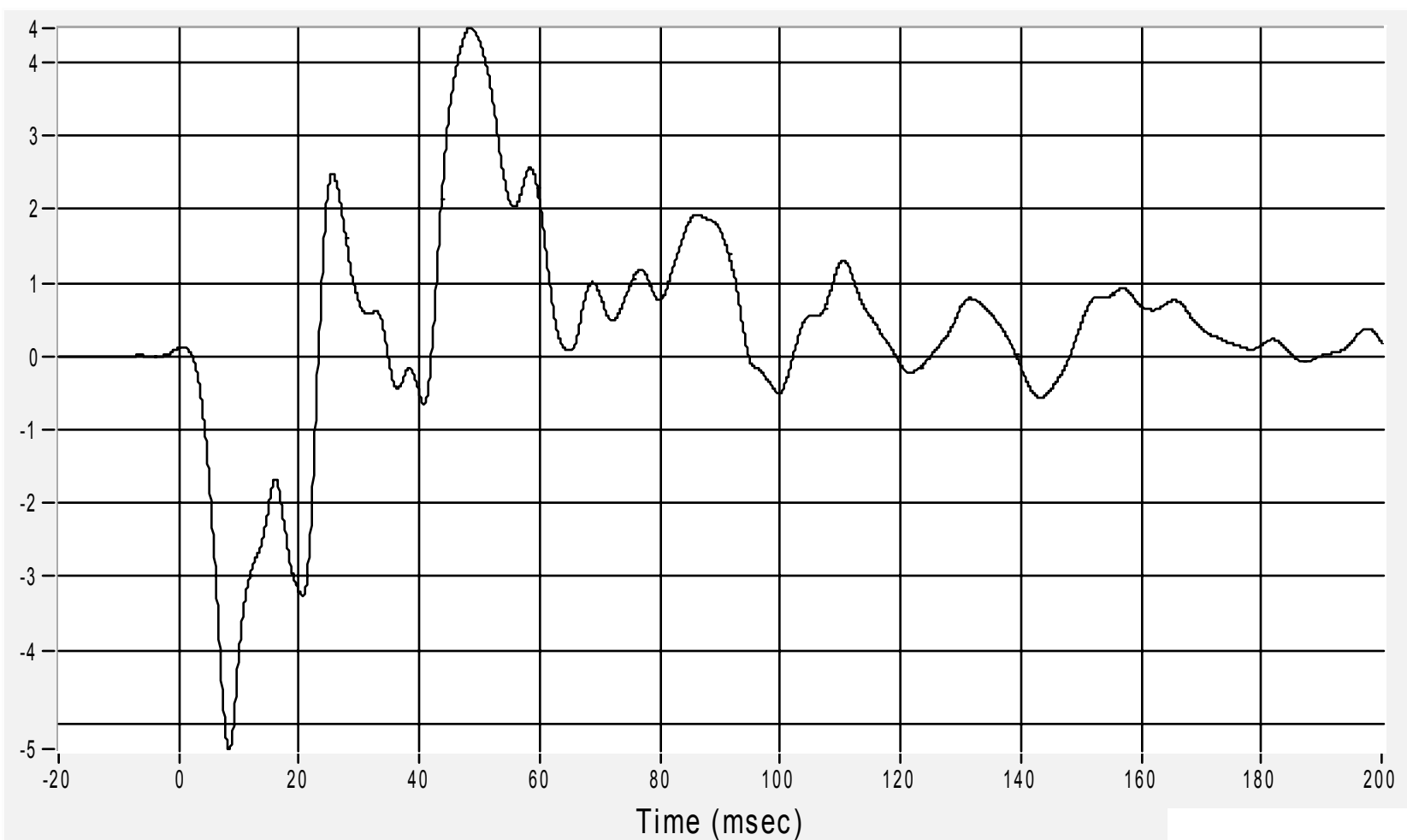
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Right Side Sill at Front Seat (Z) Acceleration

Acceleration (G's) CFC60

Max 4.5 G at 48.5 msec

Min -5.3 G at 8.3 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

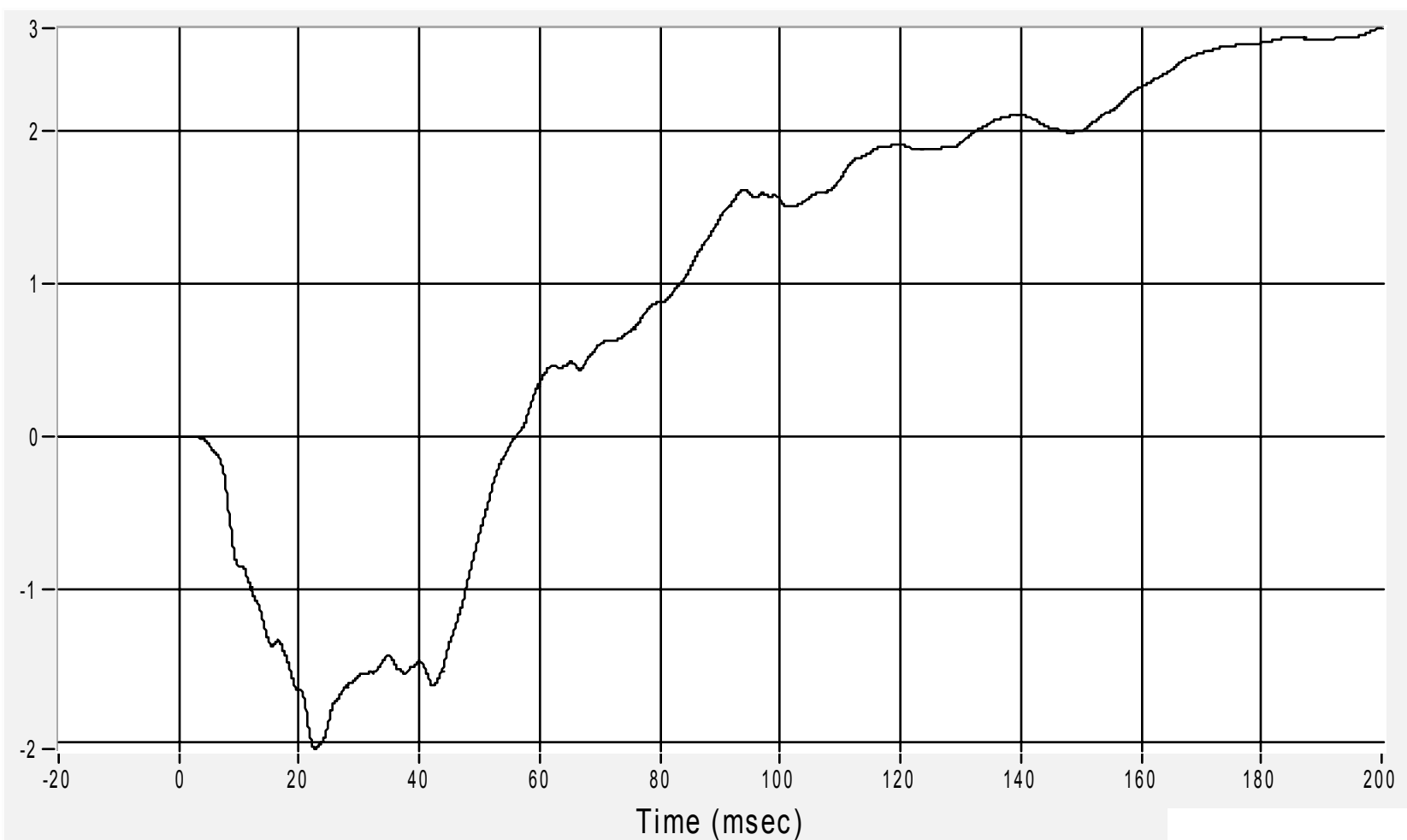
2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

B-60

Right Side Sill at Front Seat (Z) Velocity

Velocity (km/h) CFC180

Max 2.7 km/h at 199.9 msec**Min -2.0 km/h at 22.6 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

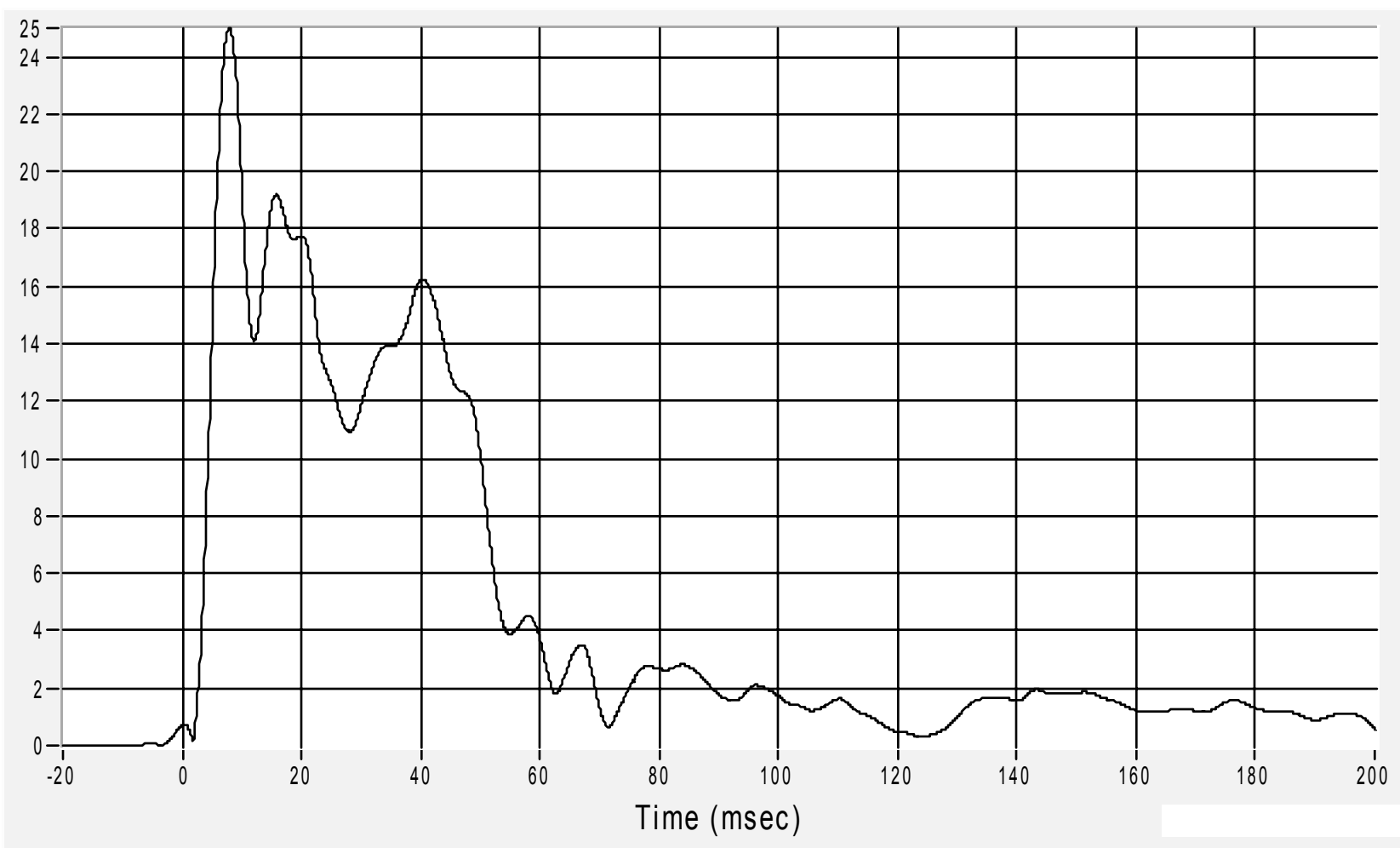
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Right Side Sill at Front Seat Resultant Acceleration

Acceleration (G's) CFC60

Max 25.0 G's at 7.9 msec

Min 0.1 G's at 1.8 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

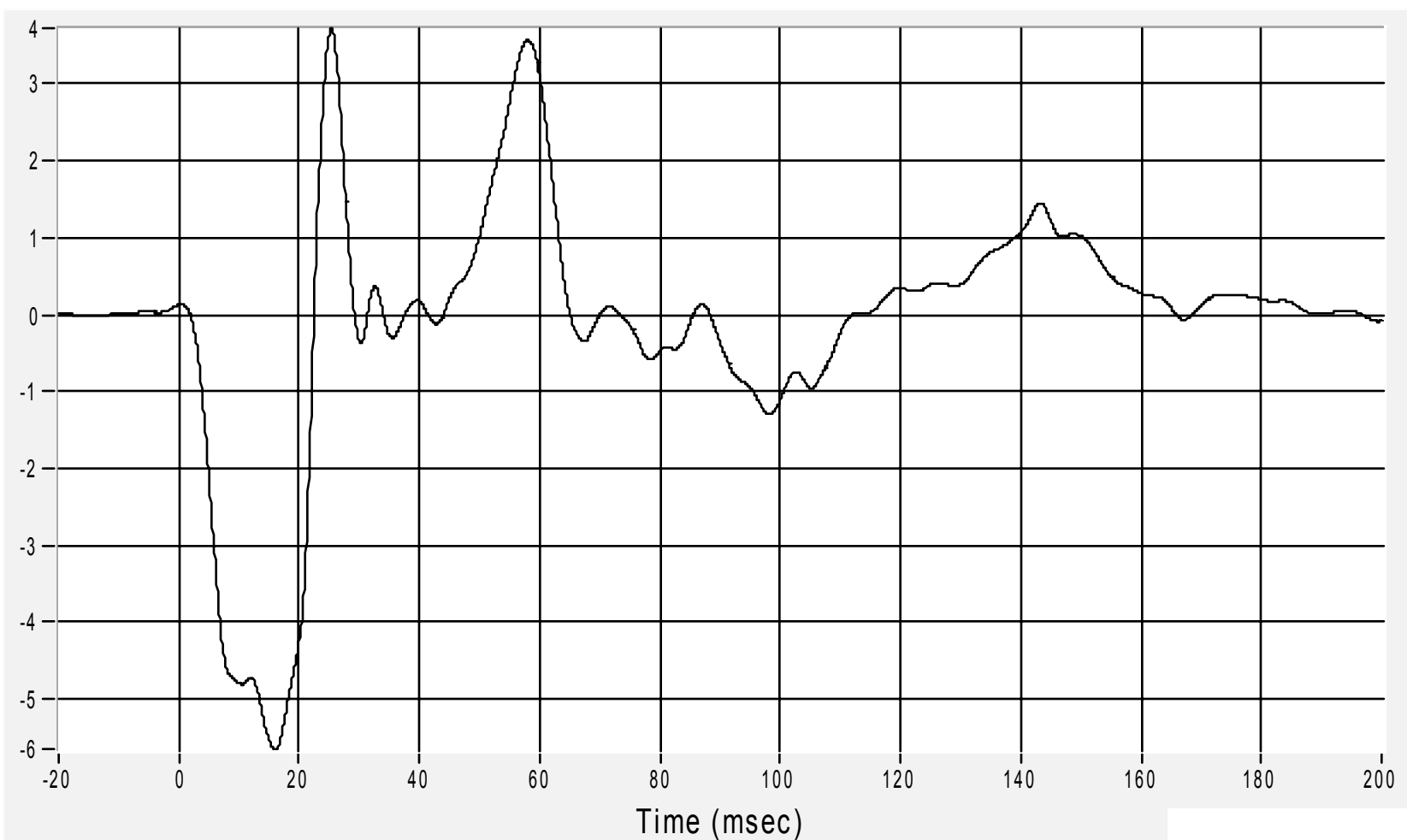
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Rear Seat (X) Acceleration

Acceleration (G's) CFC60

Max 3.7 G at 25.4 msec

Min -5.6 G at 16.1 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

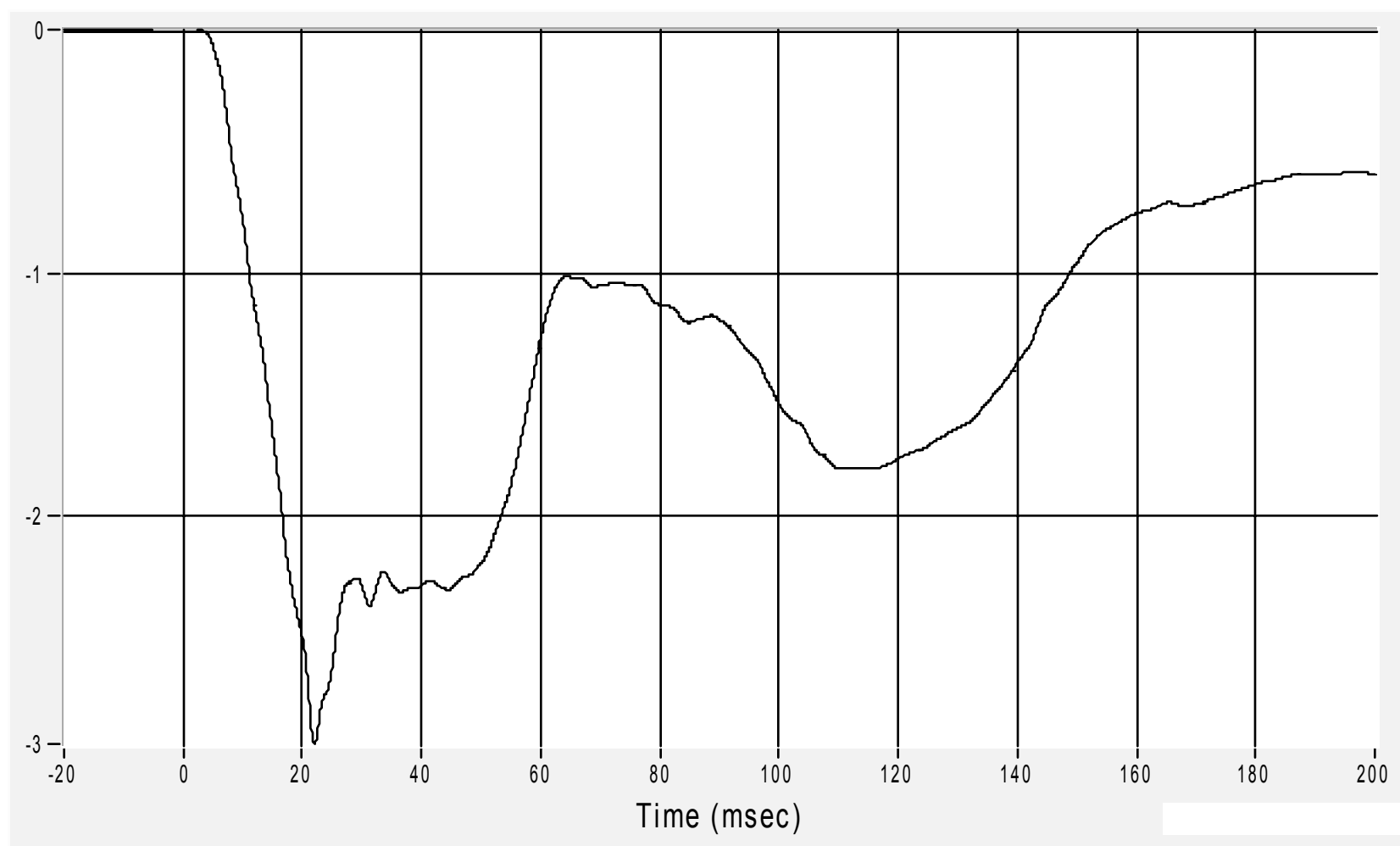
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Rear Seat (X) Velocity

Velocity (km/h) CFC180

Max 0.0 km/h at 3.0 msec

Min -2.9 km/h at 22.0 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

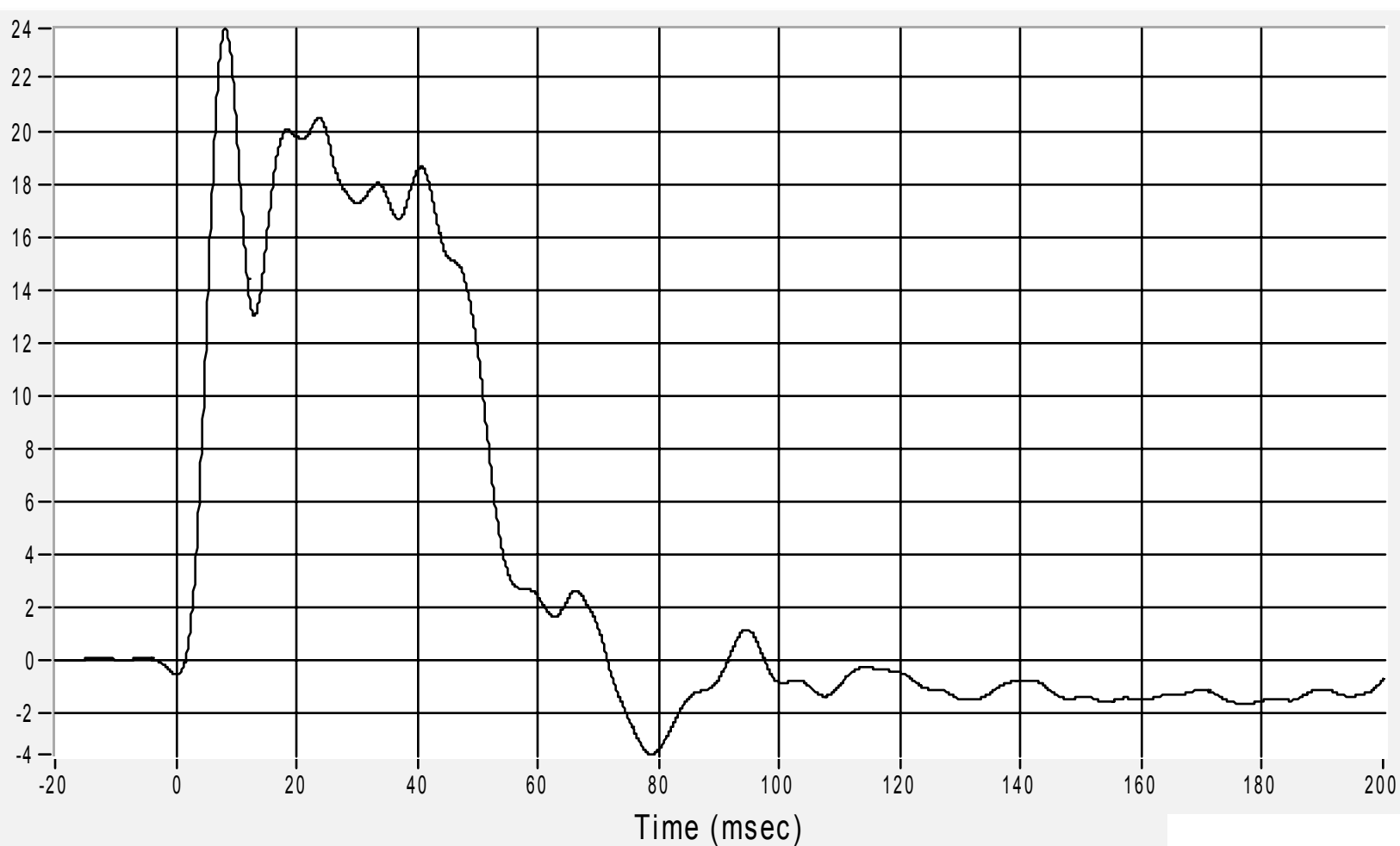
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Rear Seat (Y) Acceleration

Acceleration (G's) CFC60

Max 23.9 G at 8.2 msec

Min -3.6 G at 78.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

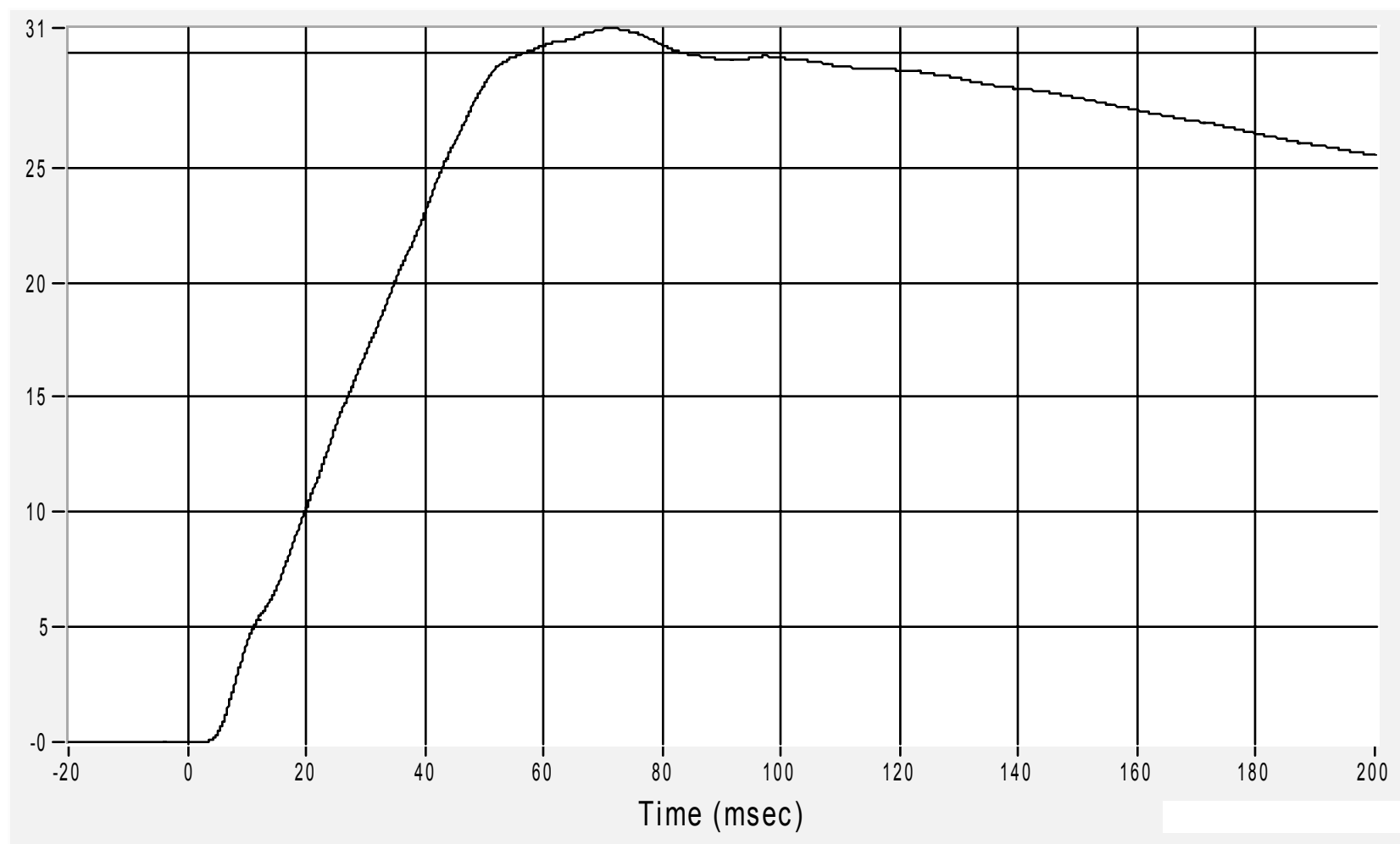
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Rear Seat (Y) Velocity

Velocity (km/h) CFC180

Max 31.1 km/h at 71.3 msec

Min 0.0 km/h at 2.2 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

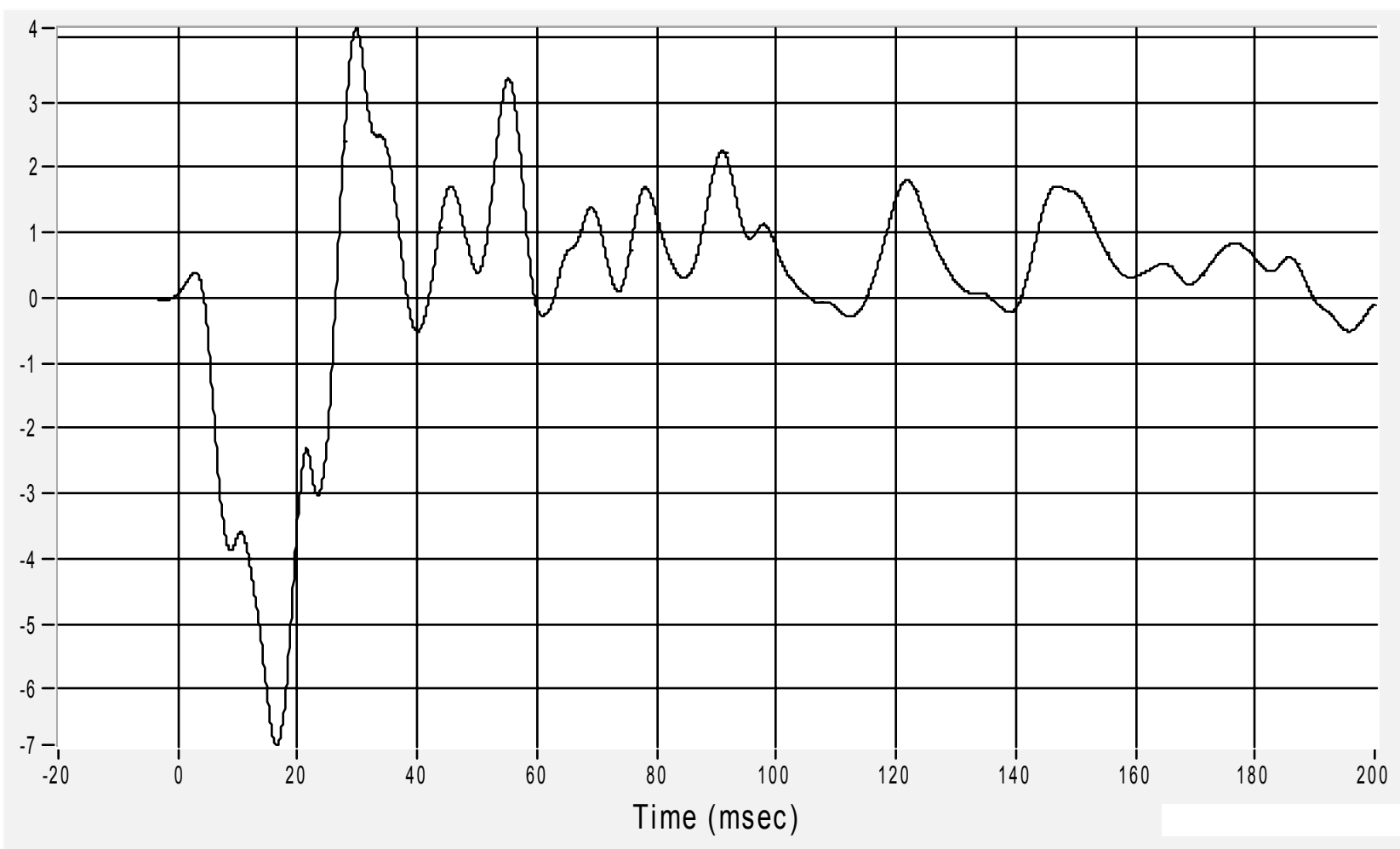
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Rear Seat (Z) Acceleration

Acceleration (G's) CFC60

Max 4.1 G at 29.8 msec

Min -6.9 G at 16.5 msec



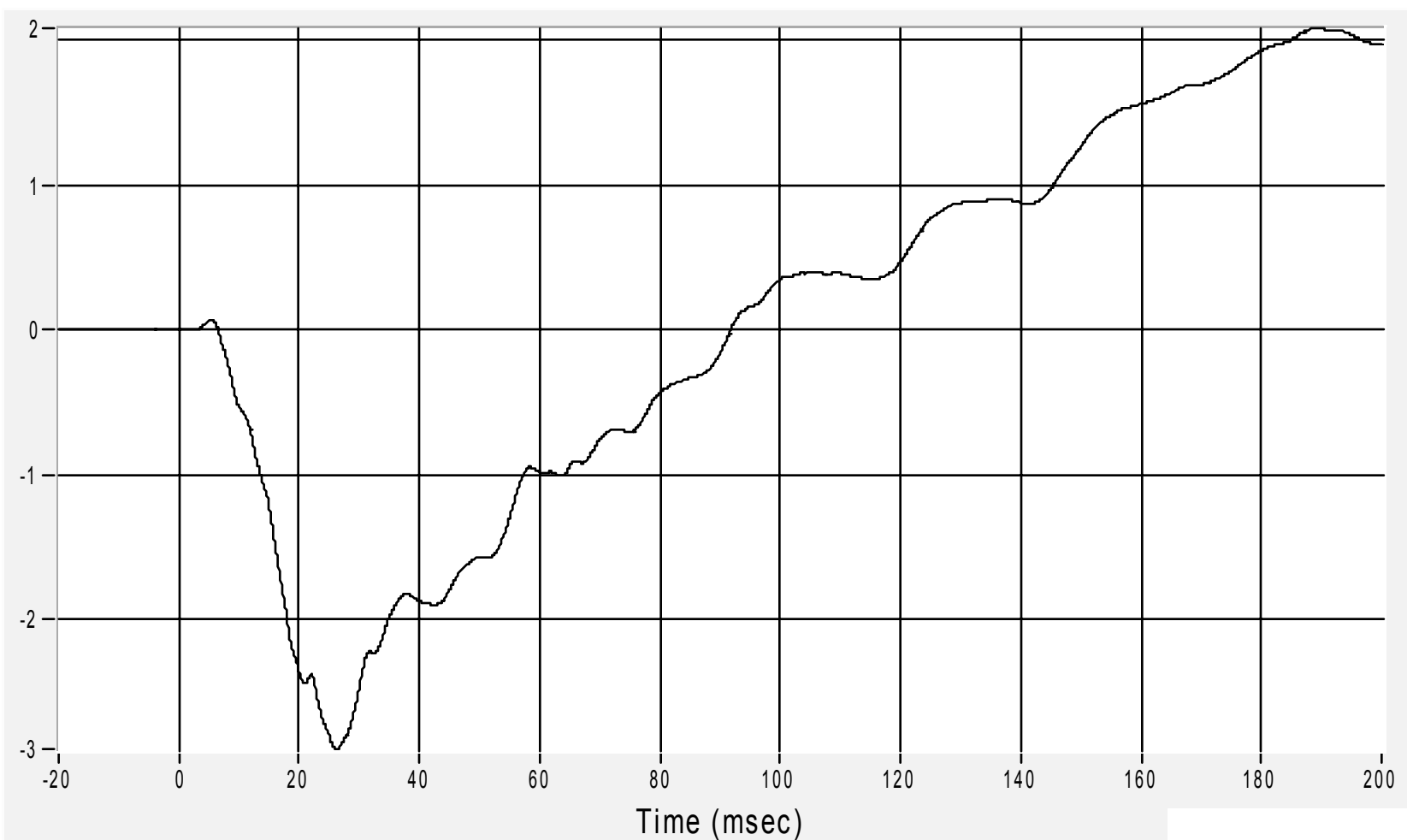
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Side Sill at Rear Seat (Z) Velocity

Velocity (km/h) CFC180

Max 2.1 km/h at 189.2 msec**Min -2.9 km/h at 26.2 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

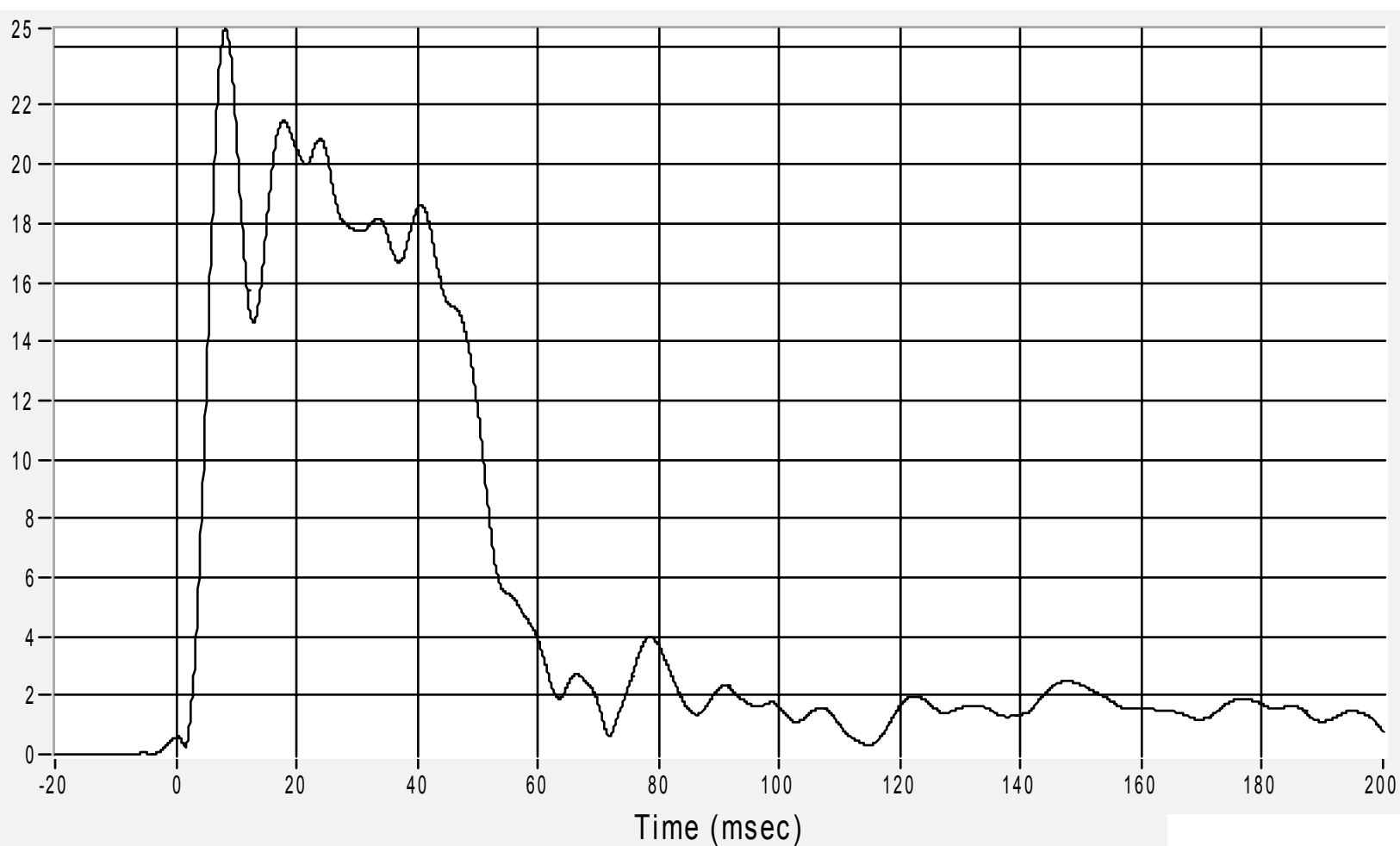
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Right Side Sill at Rear Seat Resultant Acceleration

Acceleration (G's) CFC60

Max 24.6 G's at 8.2 msec

Min 0.3 G's at 1.6 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

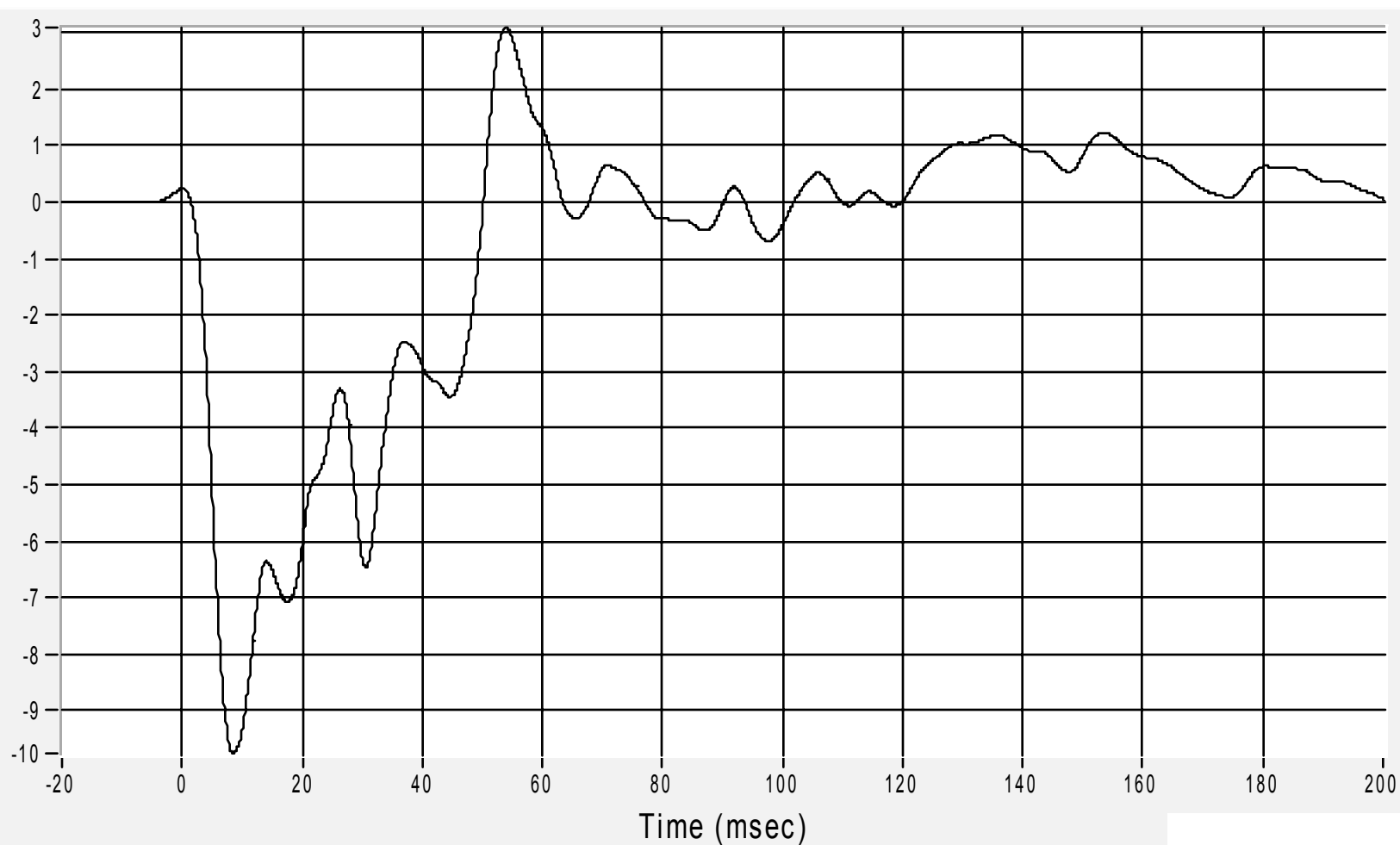
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Rear Floorpan Above Axle (X) Acceleration

Acceleration (G's) CFC60

Max 3.1 G at 53.9 msec

Min -9.8 G at 8.4 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

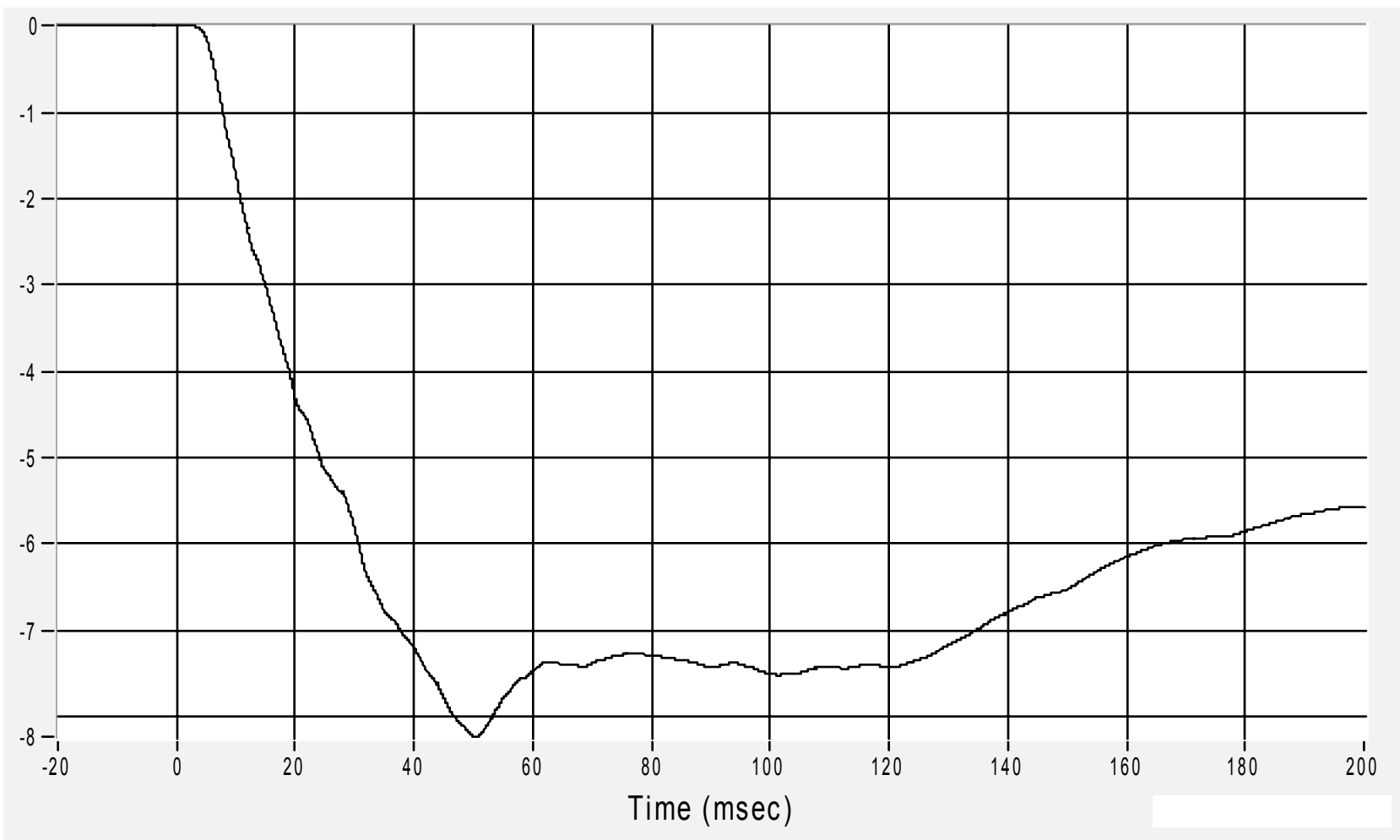
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Rear Floorpan Above Axle (X) Velocity

Velocity (km/h) CFC180

Max 0.0 km/h at 1.8 msec

Min -8.2 km/h at 50.3 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

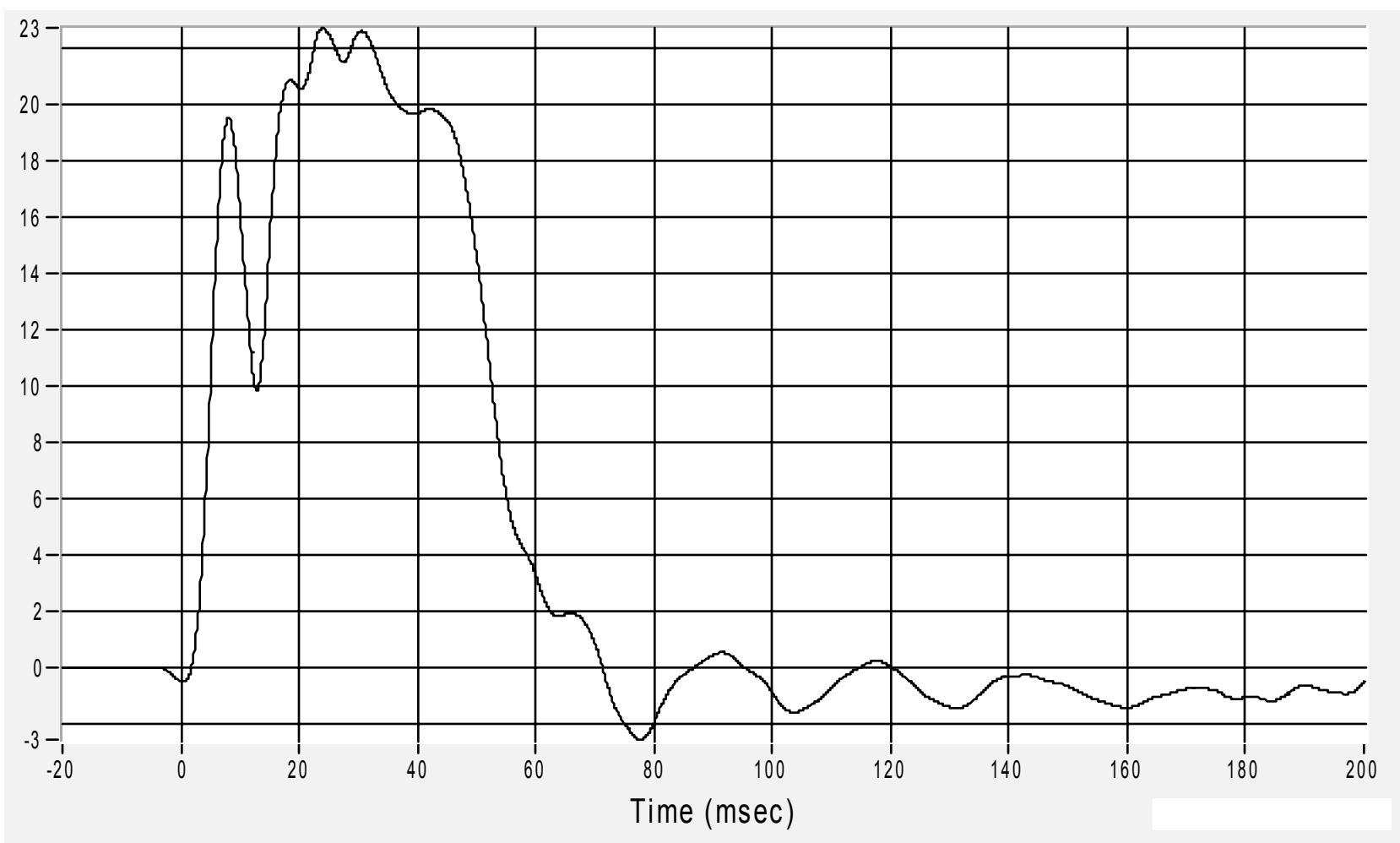
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Rear Floorpan Above Axle (Y) Acceleration

Acceleration (G's) CFC60

Max 22.7 G at 24.0 msec

Min -2.5 G at 77.8 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

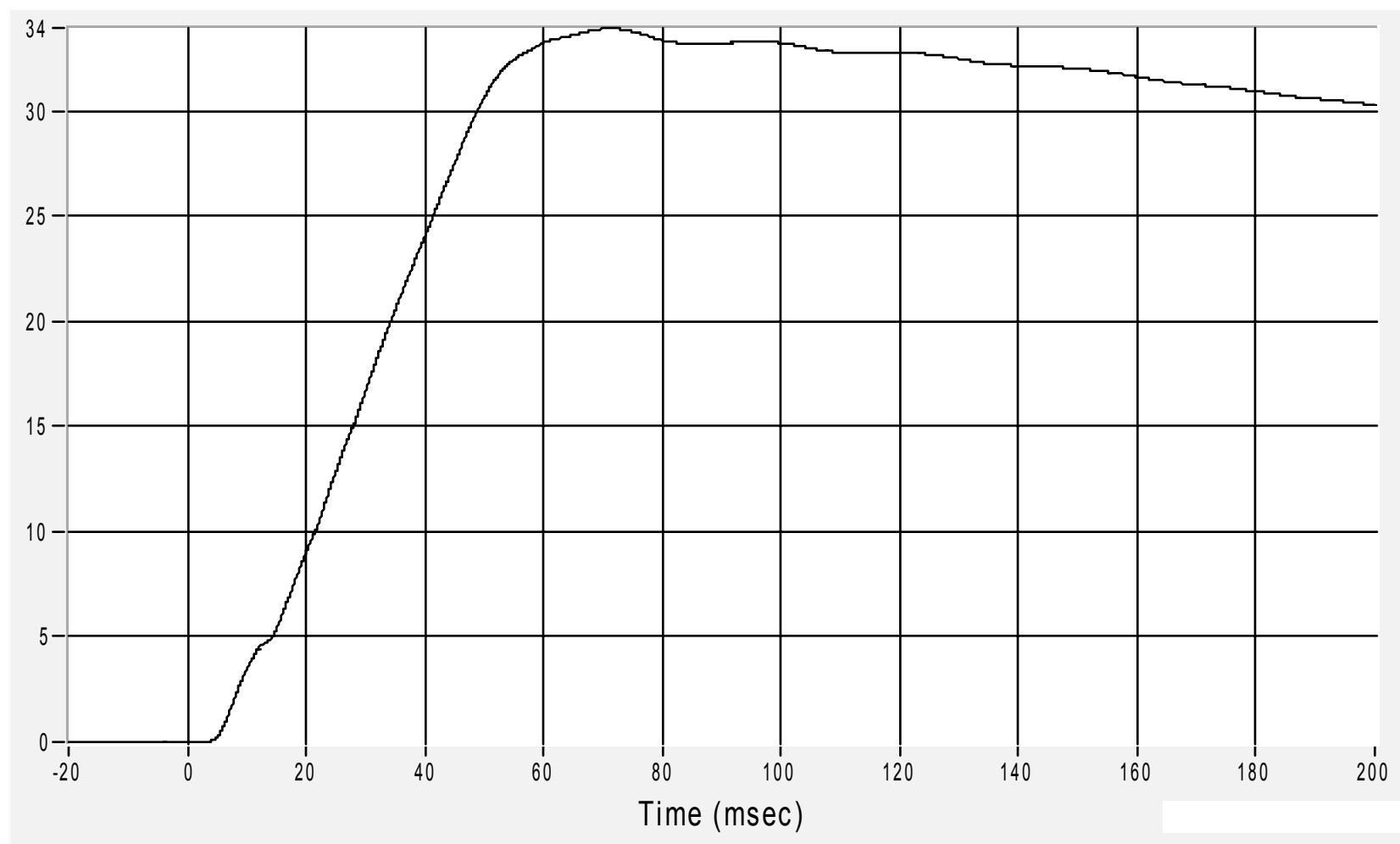
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Rear Floorpan Above Axle (Y) Velocity

Velocity (km/h) CFC180

Max 33.9 km/h at 71.4 msec

Min 0.0 km/h at 0.0 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

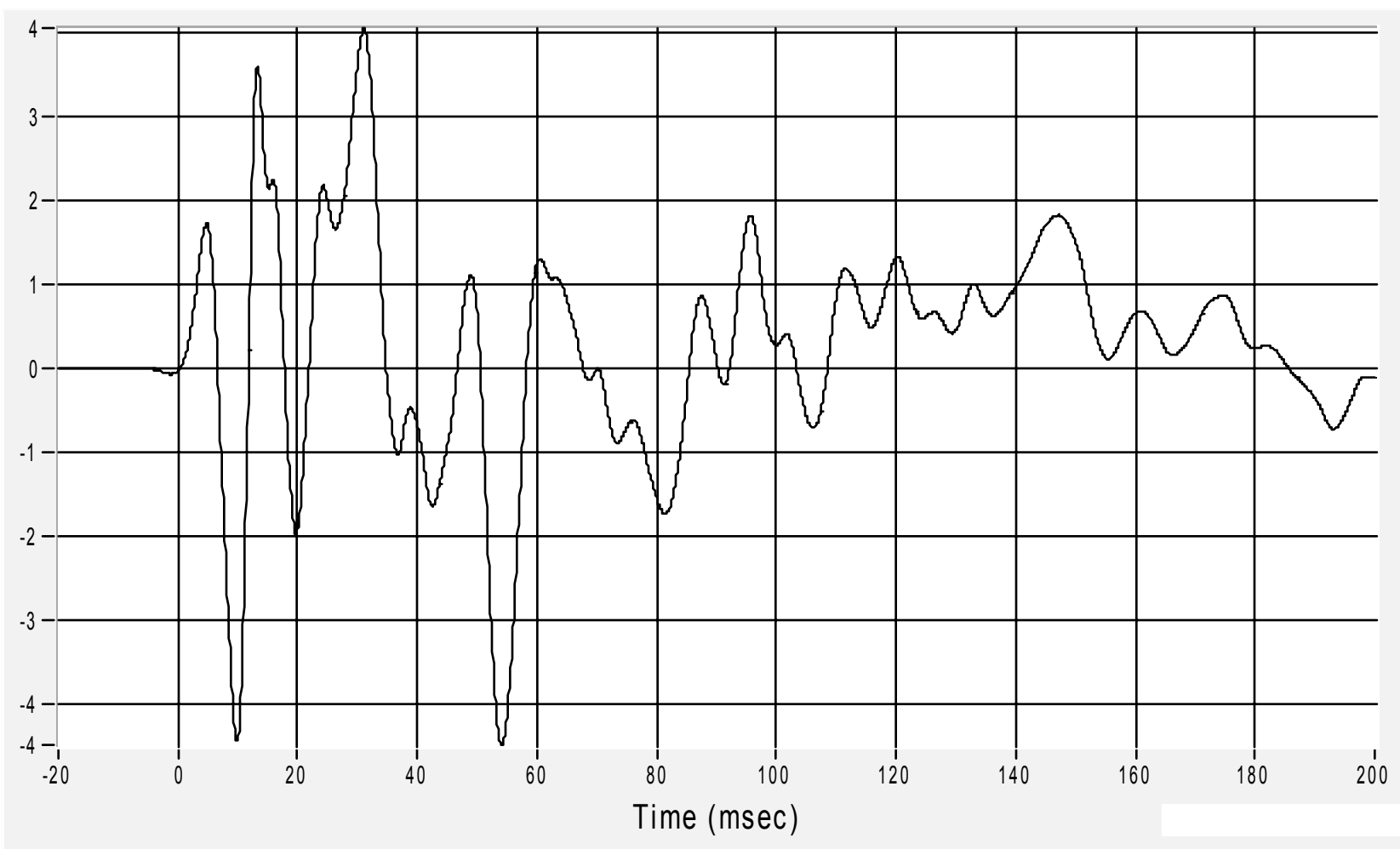
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Rear Floorpan Above Axle (Z) Acceleration

Acceleration (G's) CFC60

Max 4.0 G at 31.0 msec

Min -4.5 G at 54.1 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

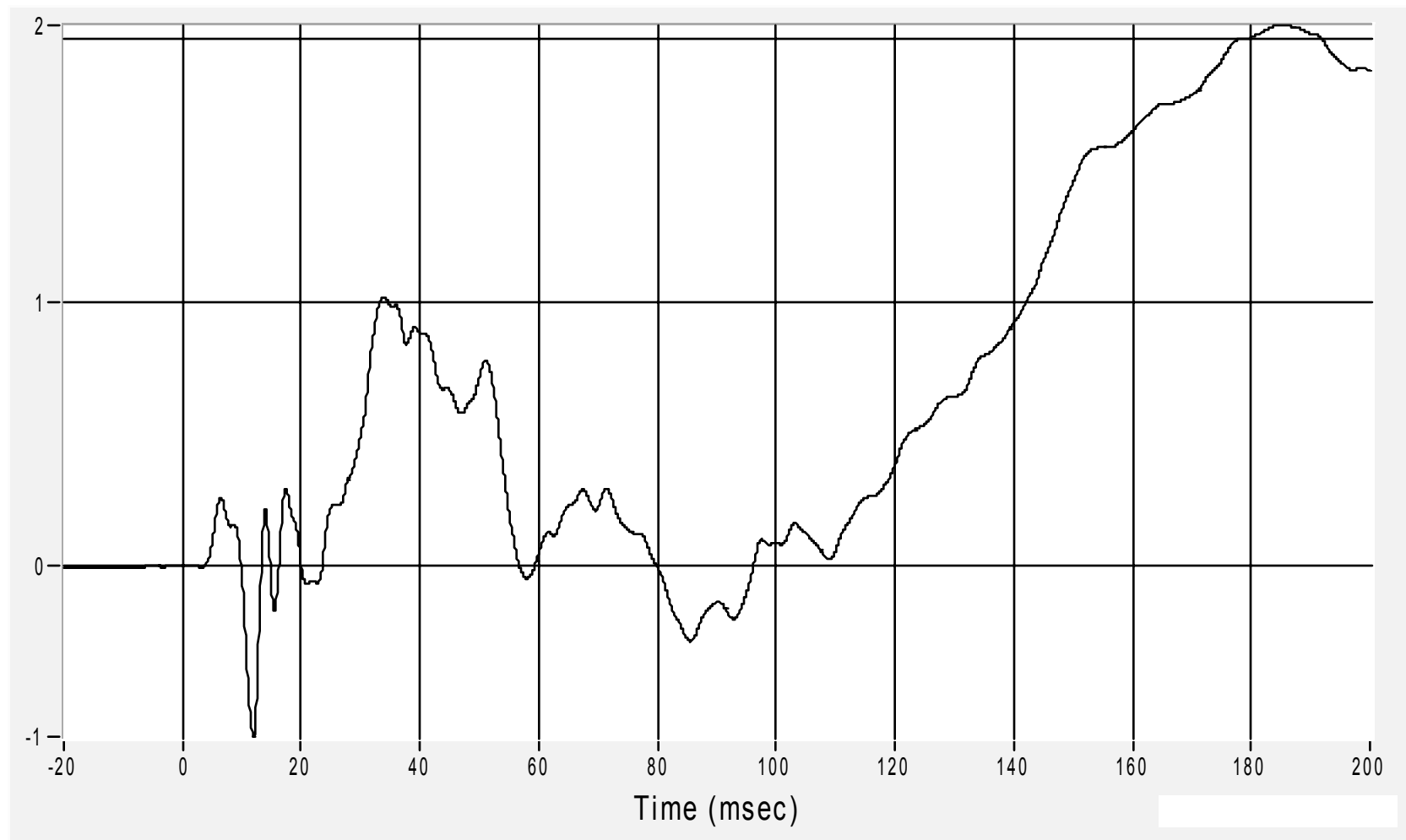
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Rear Floorpan Above Axle (Z) Velocity

Velocity (km/h) CFC180

Max 2.1 km/h at 184.6 msec

Min -0.6 km/h at 11.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

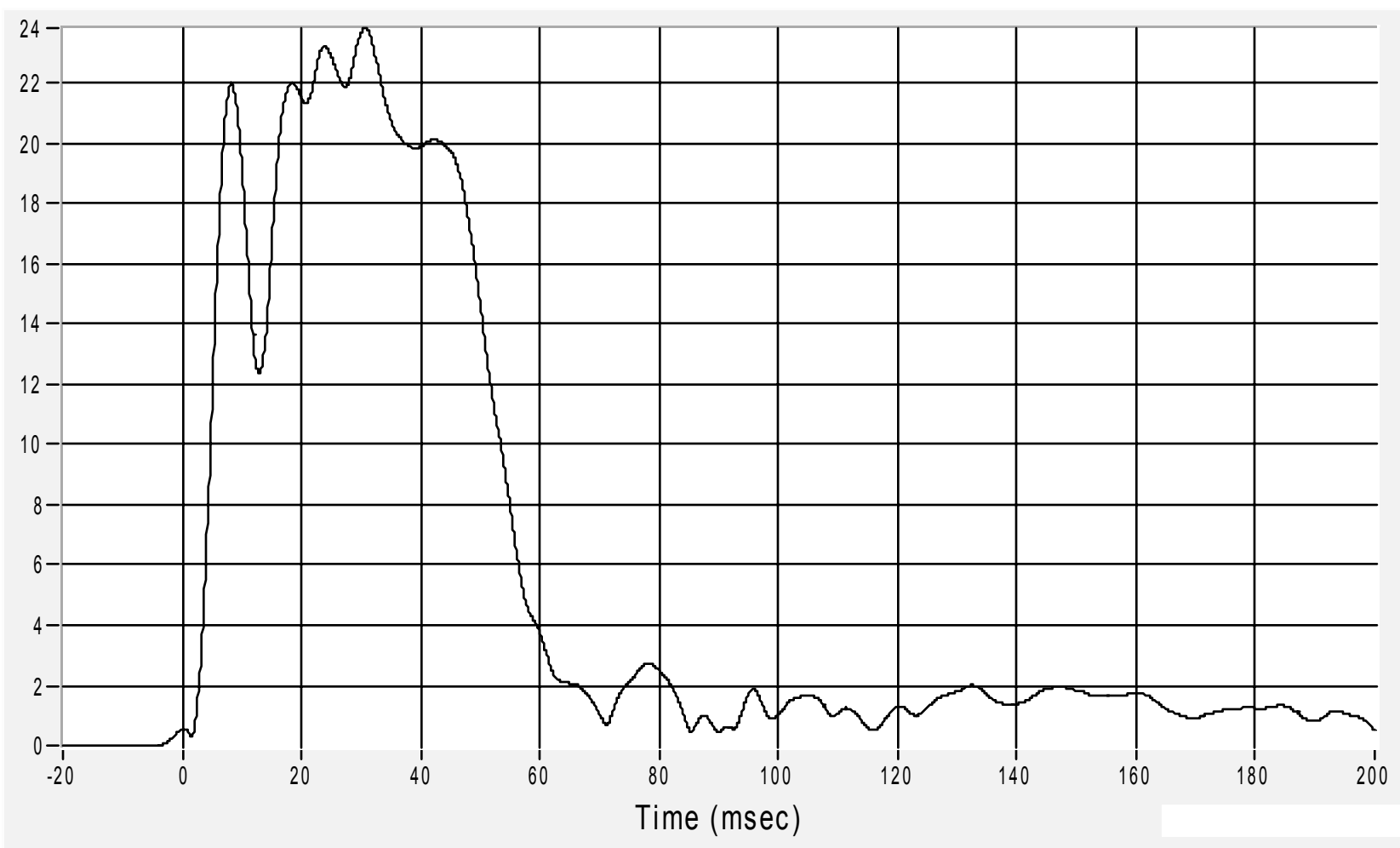
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Rear Floorpan Above Axle Resultant Acceleration

Acceleration (G's) CFC60

Max 23.8 G's at 30.6 msec

Min 0.3 G's at 1.6 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

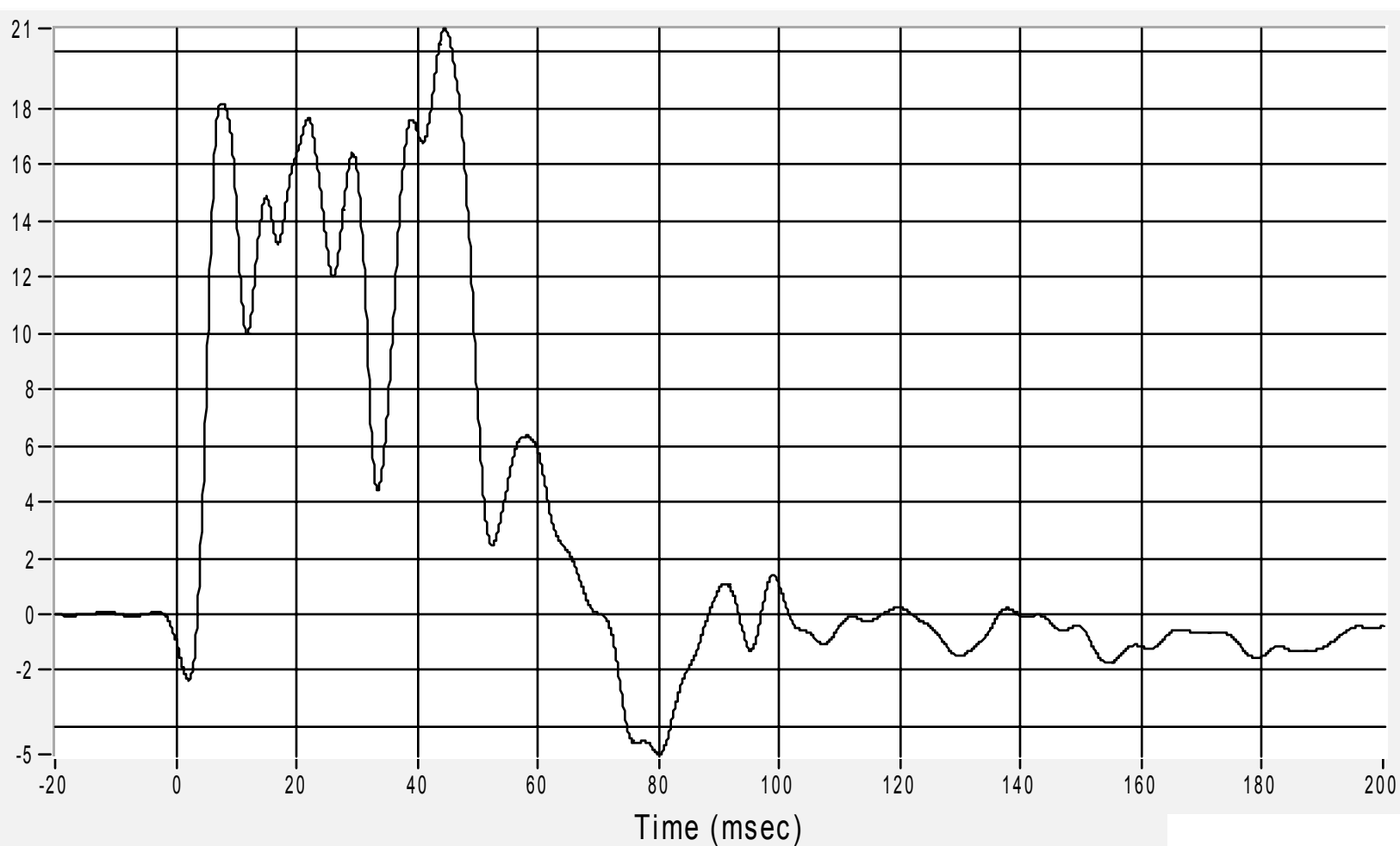
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Left Side Sill at Rear Seat (Y) Acceleration

Acceleration (G's) CFC60

Max 20.8 G at 44.6 msec

Min -5.0 G at 80.0 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

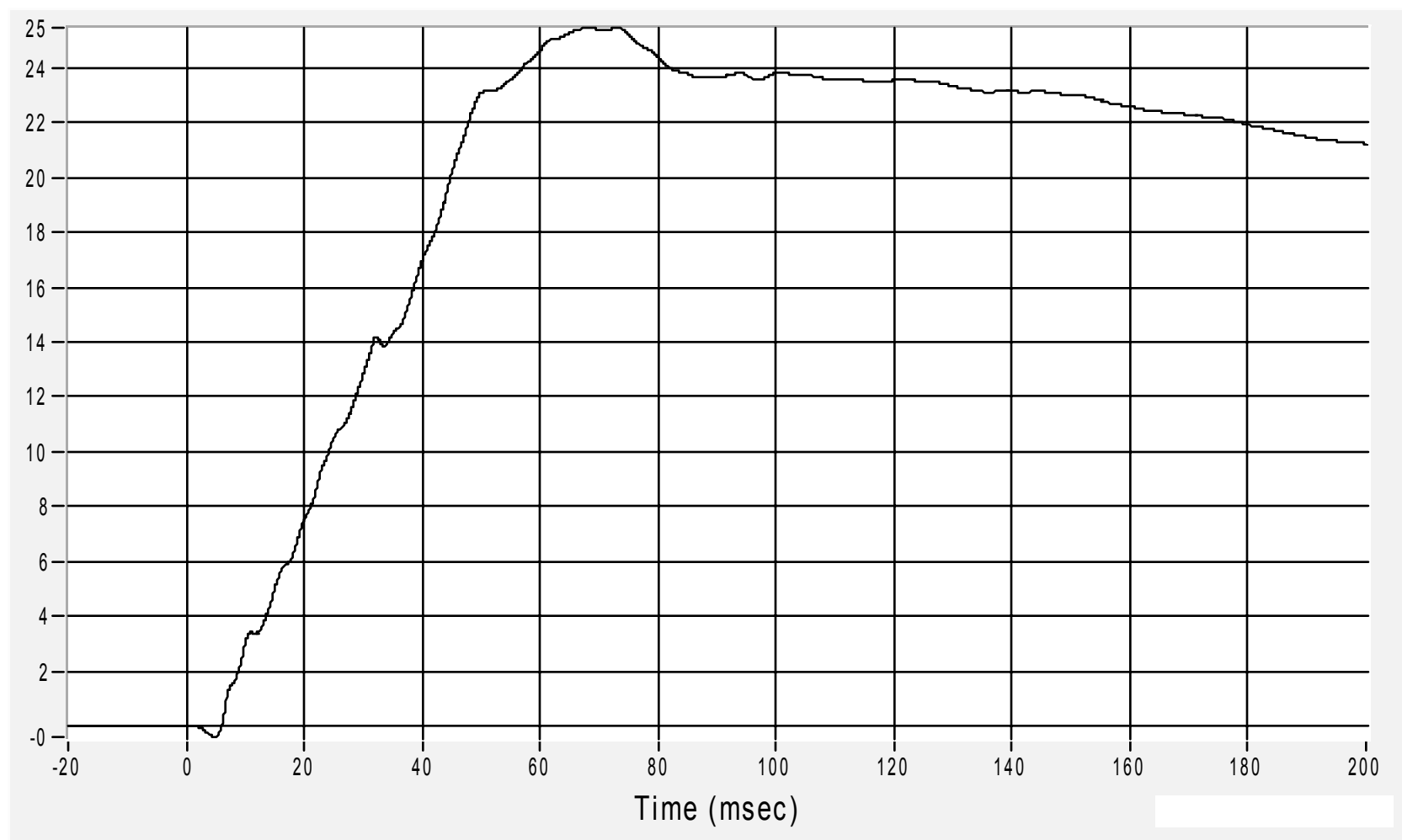
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Left Side Sill at Rear Seat (Y) Velocity

Velocity (km/h) CFC180

Max 25.4 km/h at 73.1 msec

Min -0.4 km/h at 4.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

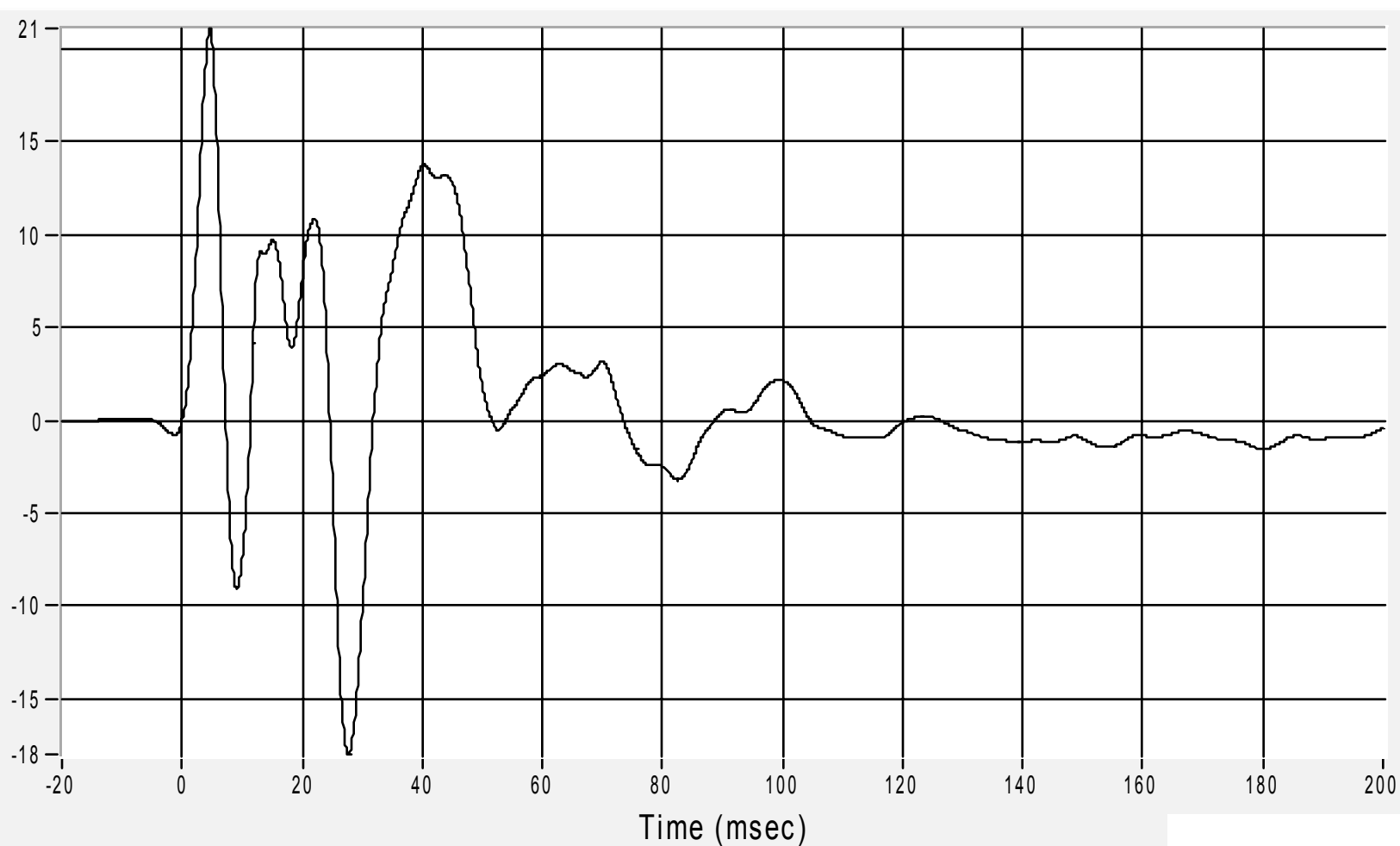
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Left Side Sill at Front Seat (Y) Acceleration

Acceleration (G's) CFC60

Max 21.1 G at 4.6 msec

Min -18.0 G at 27.8 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

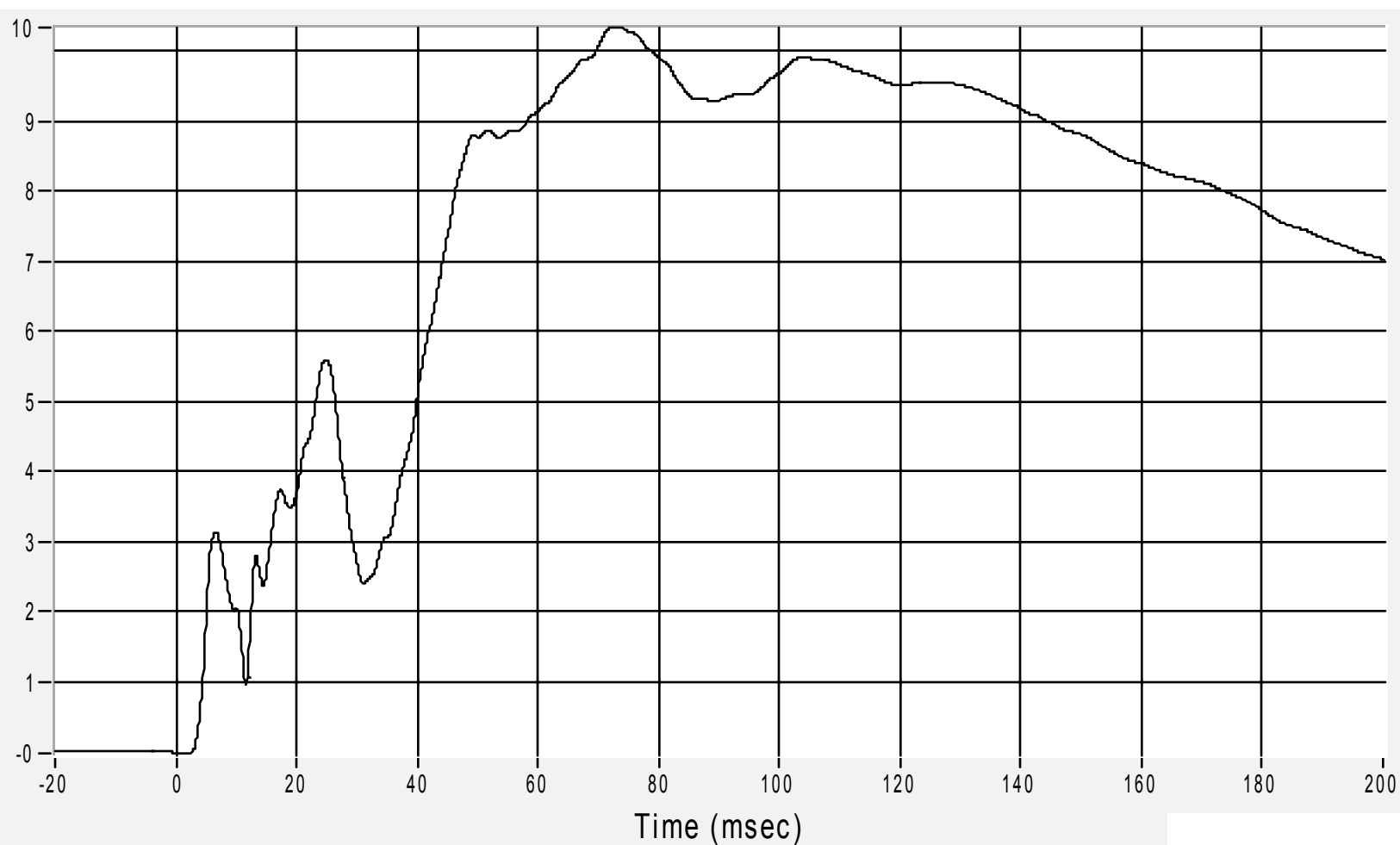
B-79

Left Side Sill at Front Seat (Y) Velocity

Velocity (km/h) CFC180

Max 10.3 km/h at 72.2 msec

Min 0.0 km/h at 2.2 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

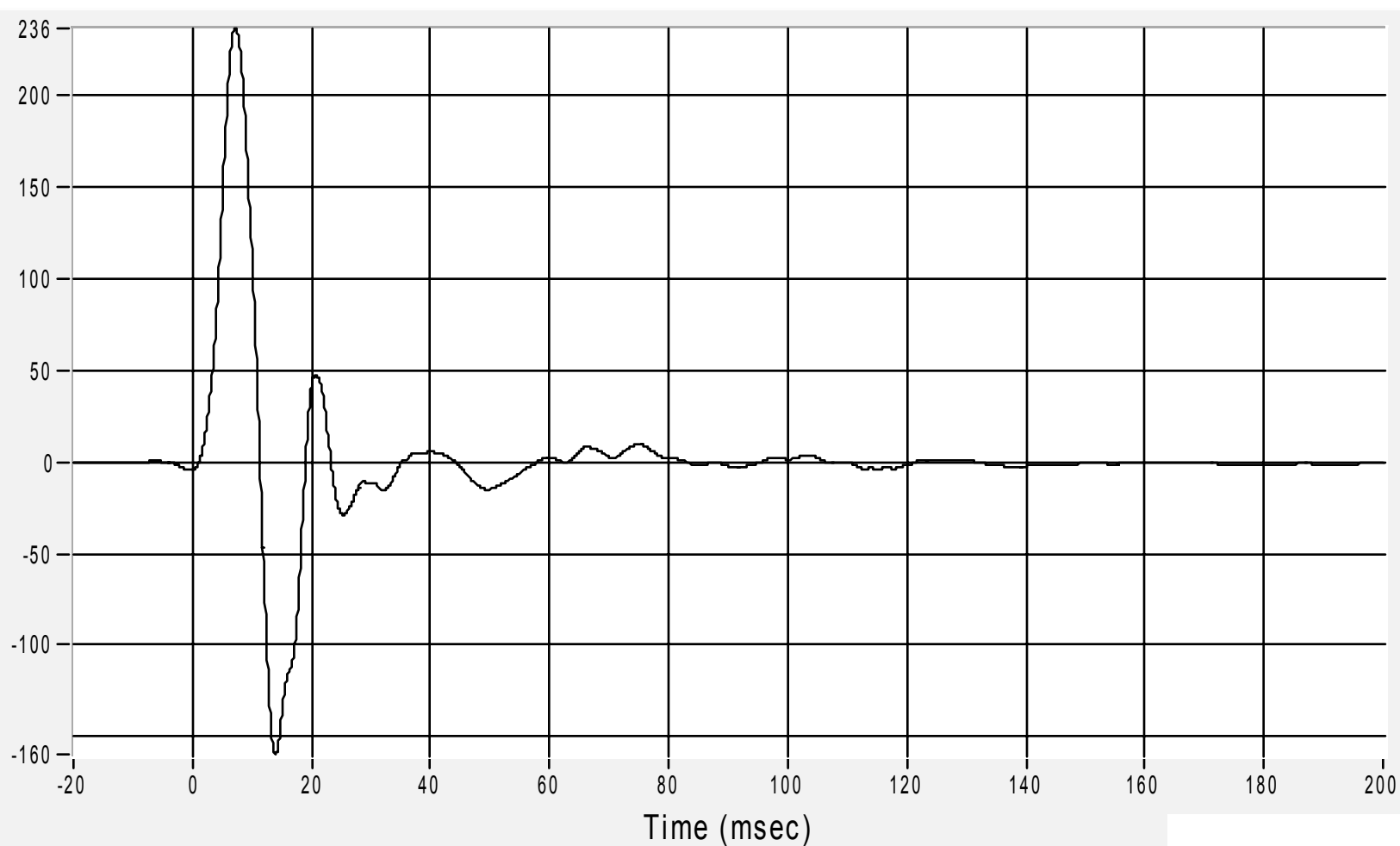
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Left Front Door on Centerline (Y) Acceleration

Acceleration (G's) CFC60

Max 236.3 G at 7.2 msec

Min -159.5 G at 13.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

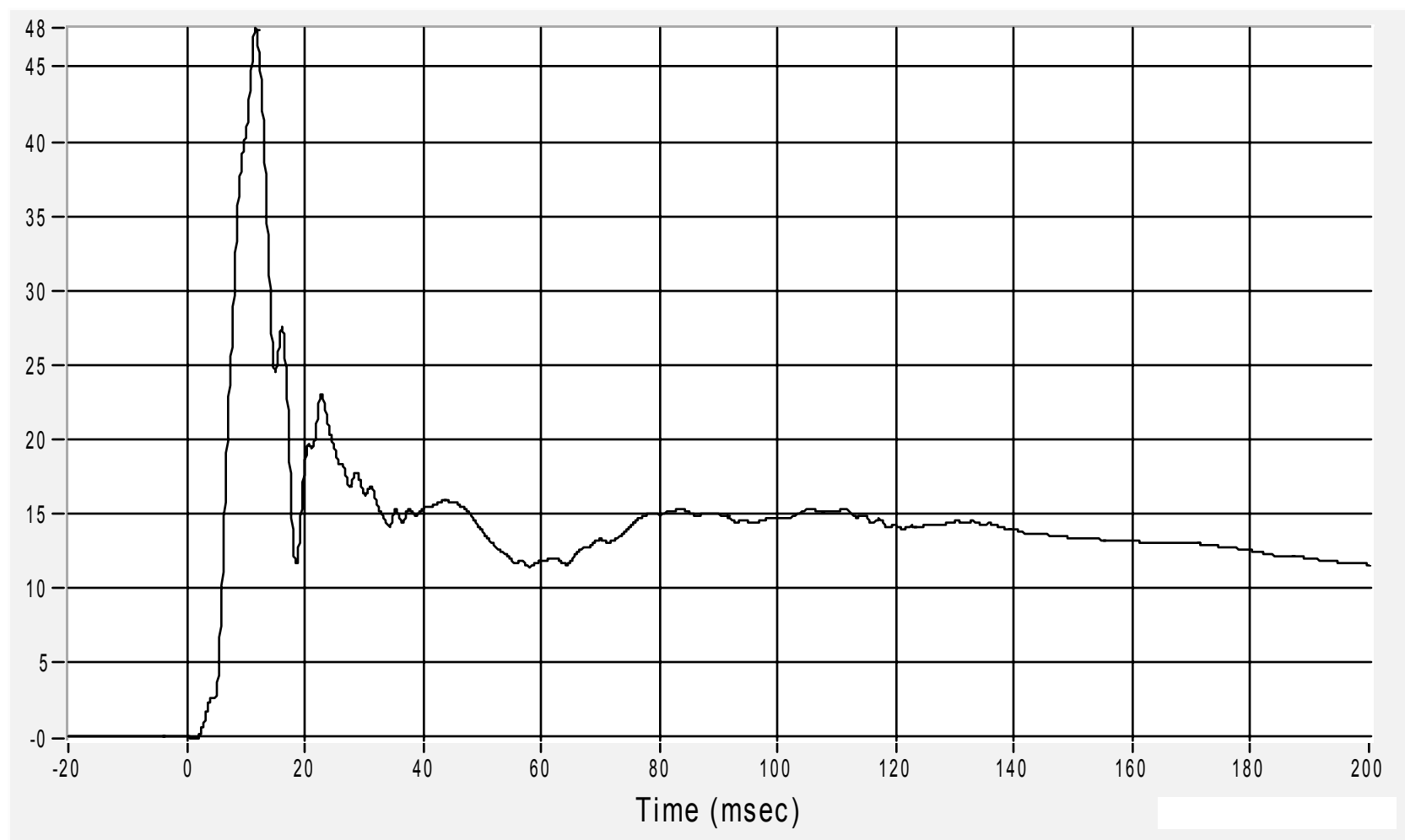
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Left Front Door on Centerline (Y) Velocity

Velocity (km/h) CFC180

Max 47.6 km/h at 11.7 msec

Min -0.1 km/h at 1.5 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

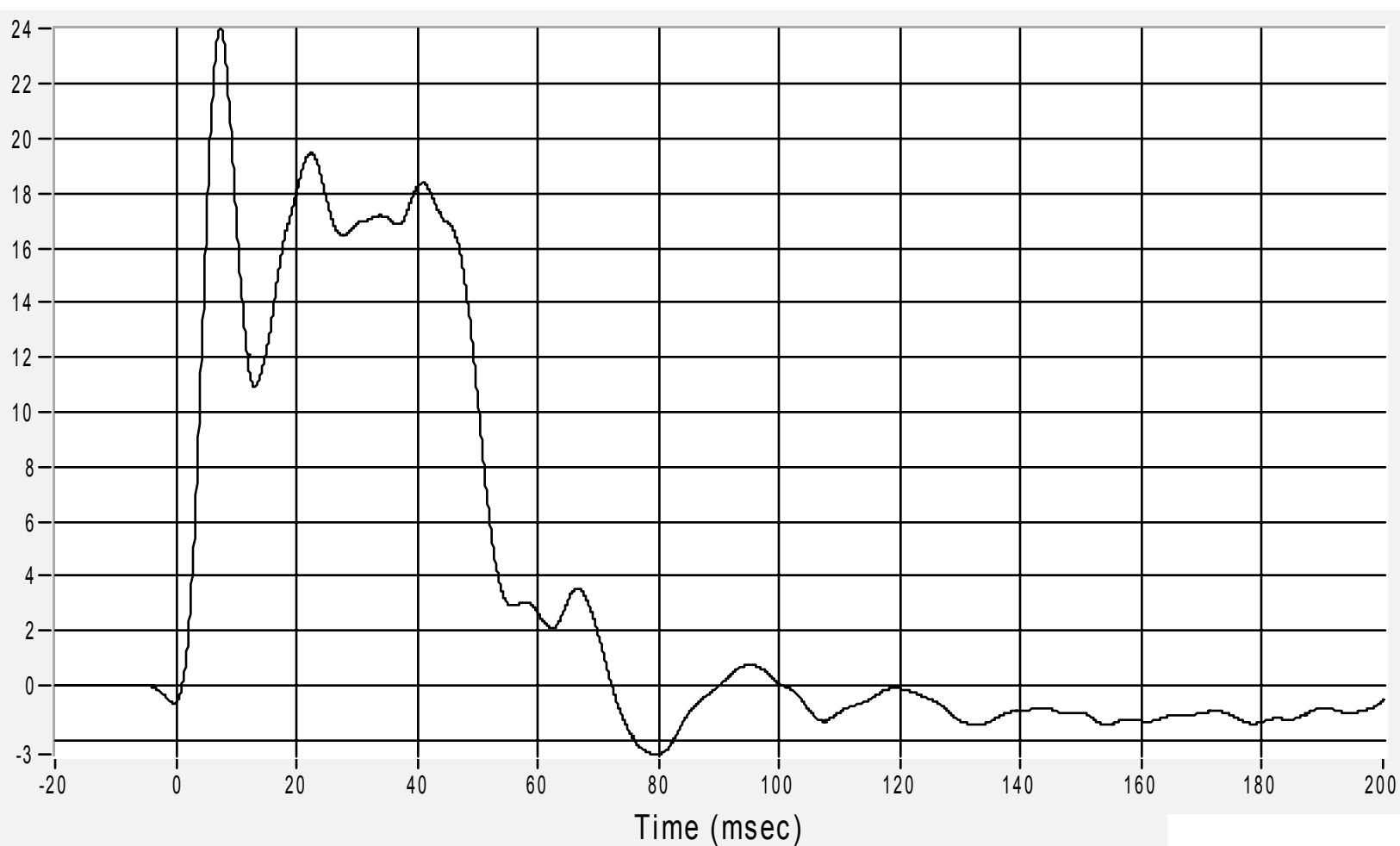
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Rear Occupant Compartment (Y) Acceleration

Acceleration (G's) CFC60

Max 24.0 G at 7.4 msec

Min -2.5 G at 79.6 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

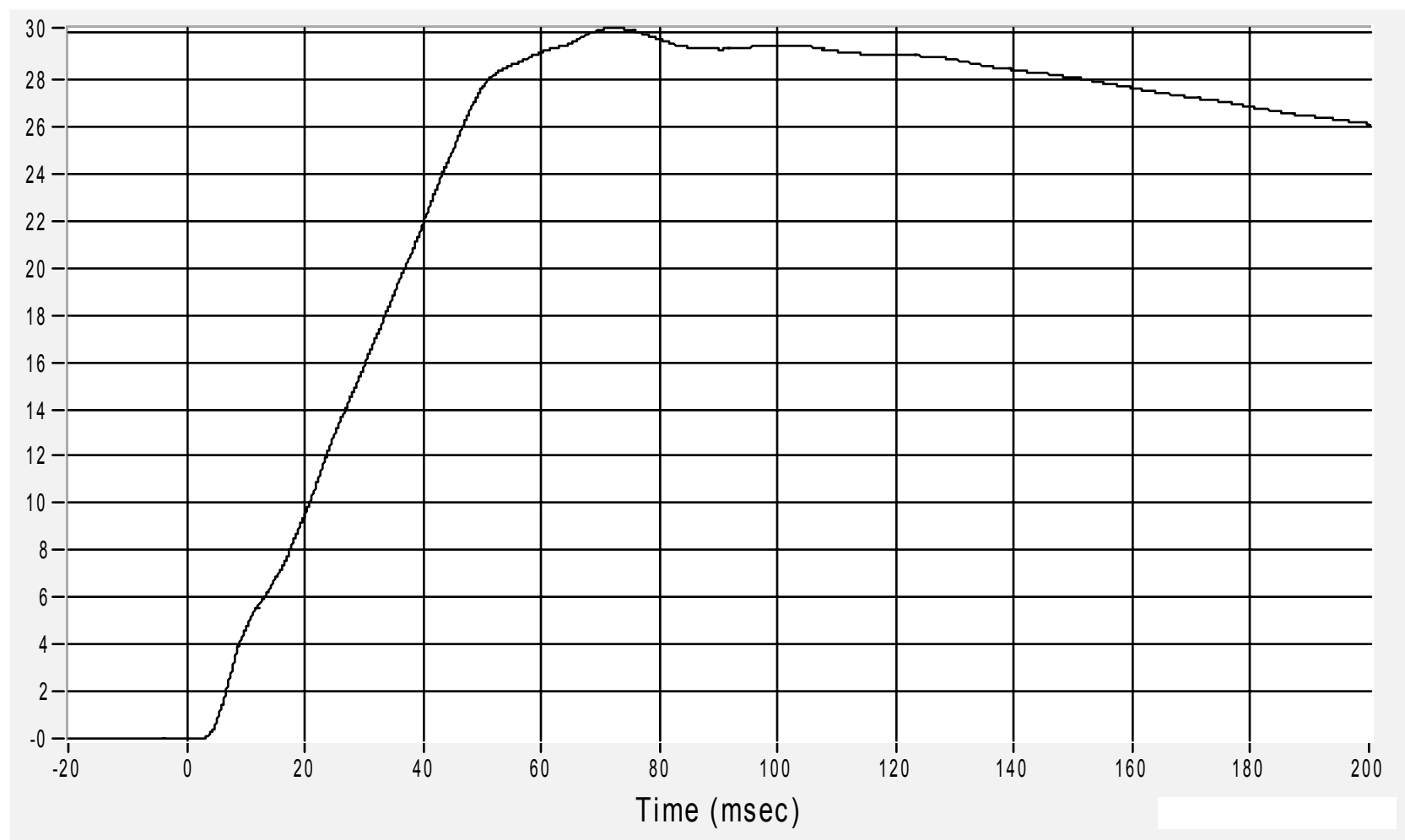
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Right Rear Occupant Compartment (Y) Velocity

Velocity (km/h) CFC180

Max 30.2 km/h at 71.8 msec

Min 0.0 km/h at 2.2 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

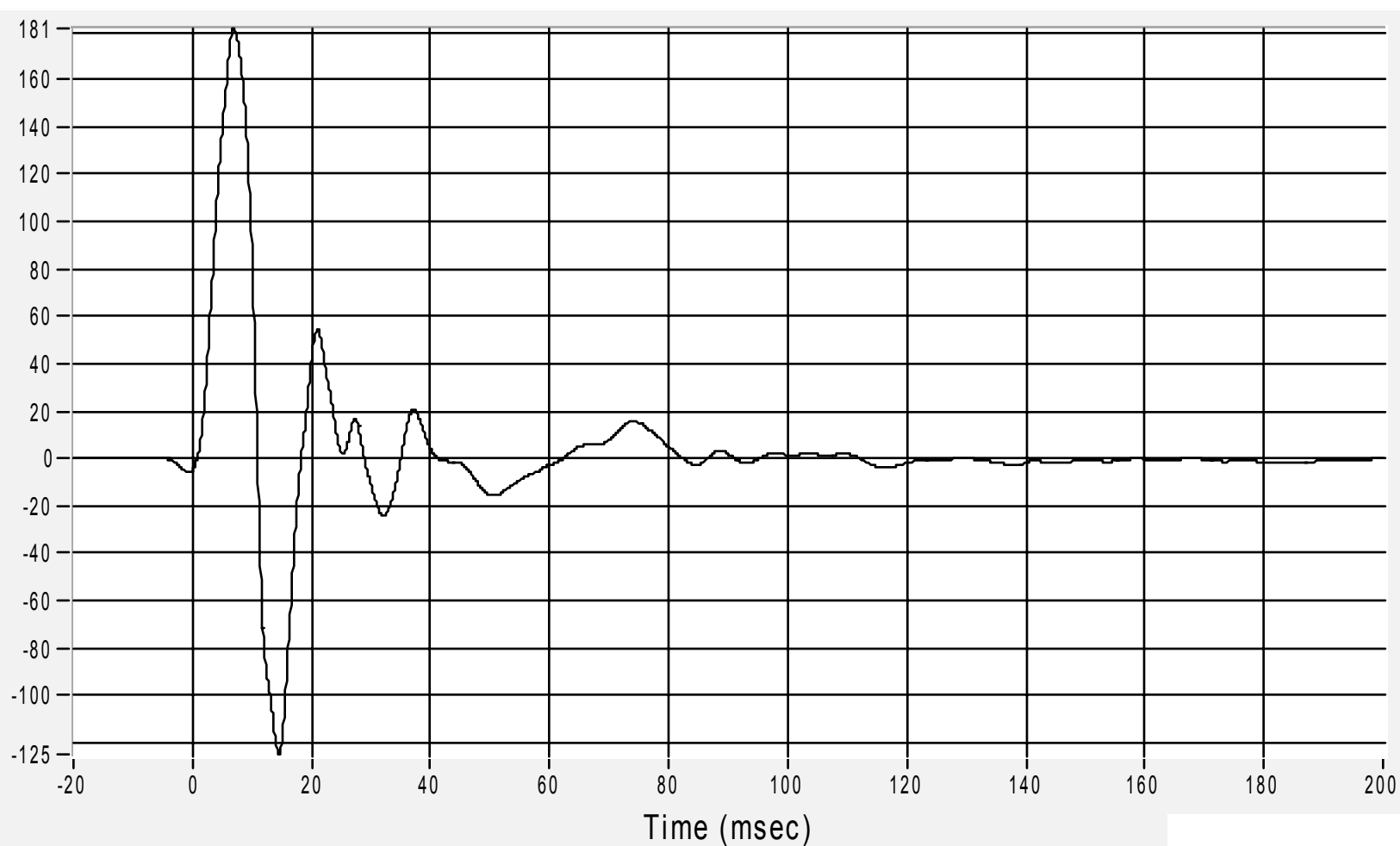
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Mid-Rear of Left Front Door (Y) Acceleration

Acceleration (G's) CFC60

Max 181.5 G at 7.0 msec

Min -125.0 G at 14.5 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

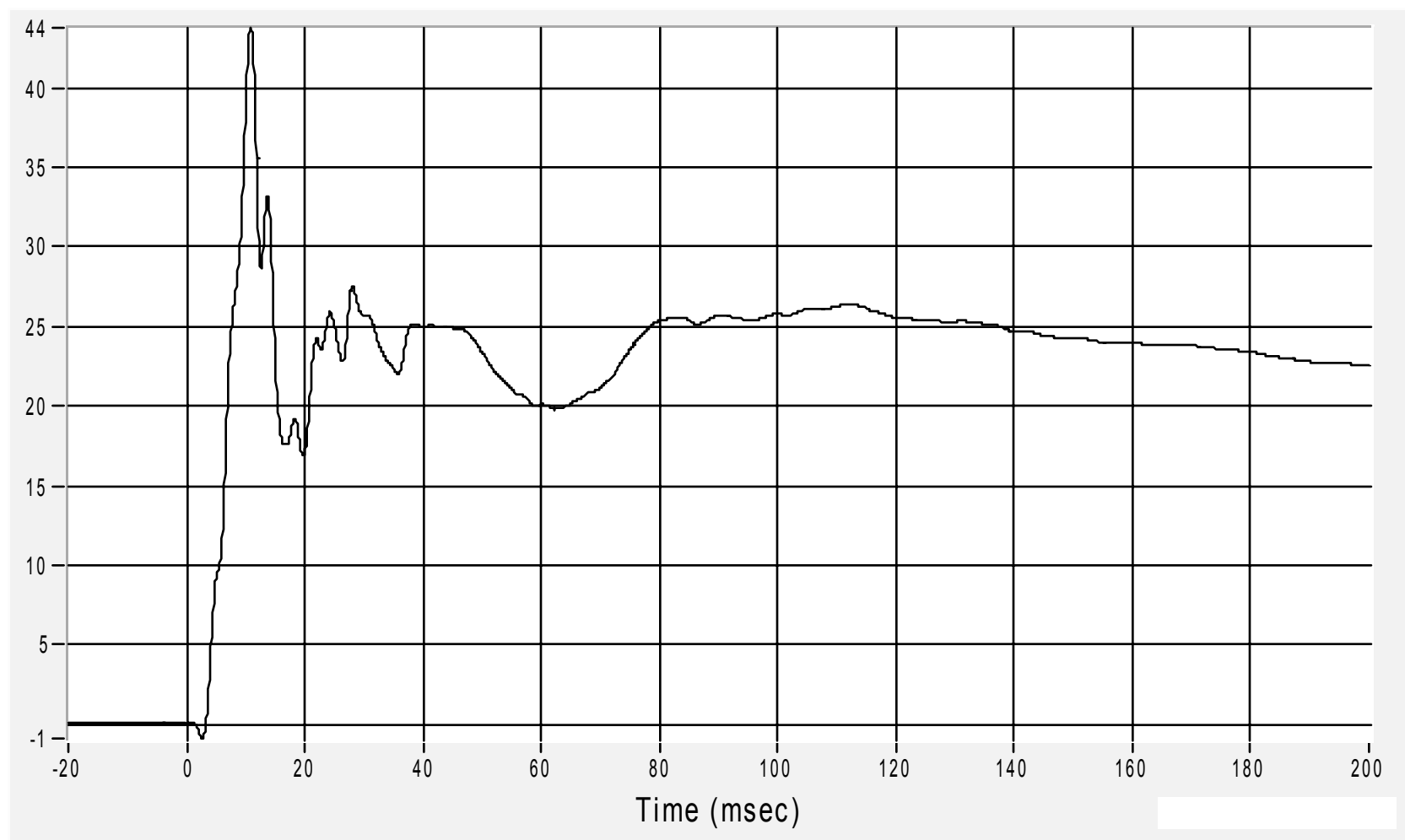
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Mid-Rear of Left Front Door (Y) Velocity

Velocity (km/h) CFC180

Max 43.8 km/h at 10.9 msec

Min -0.9 km/h at 2.6 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

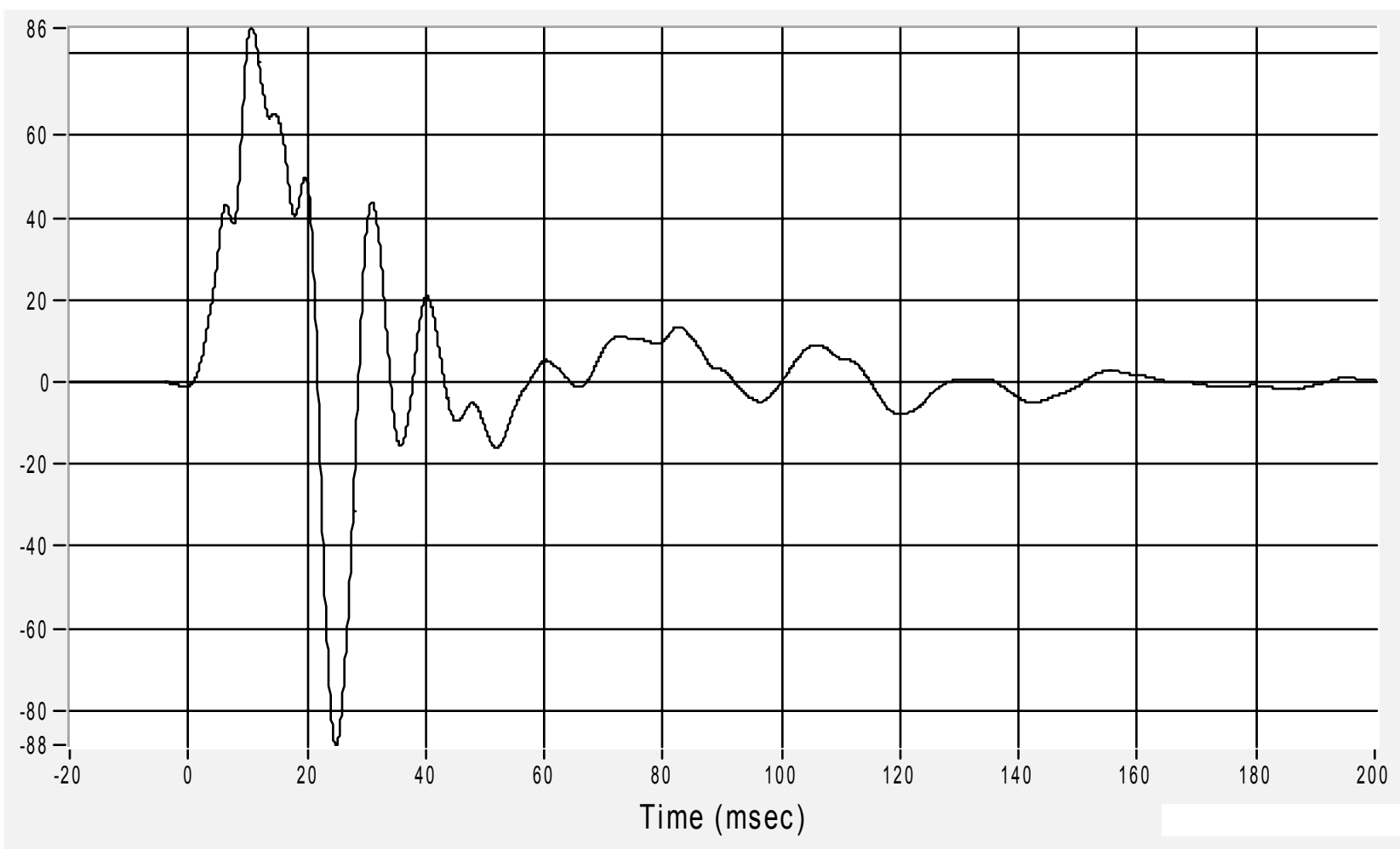
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Left Front Door Upper Centerline (Y) Acceleration

Acceleration (G's) CFC60

Max 86.2 G at 10.6 msec

Min -88.4 G at 24.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

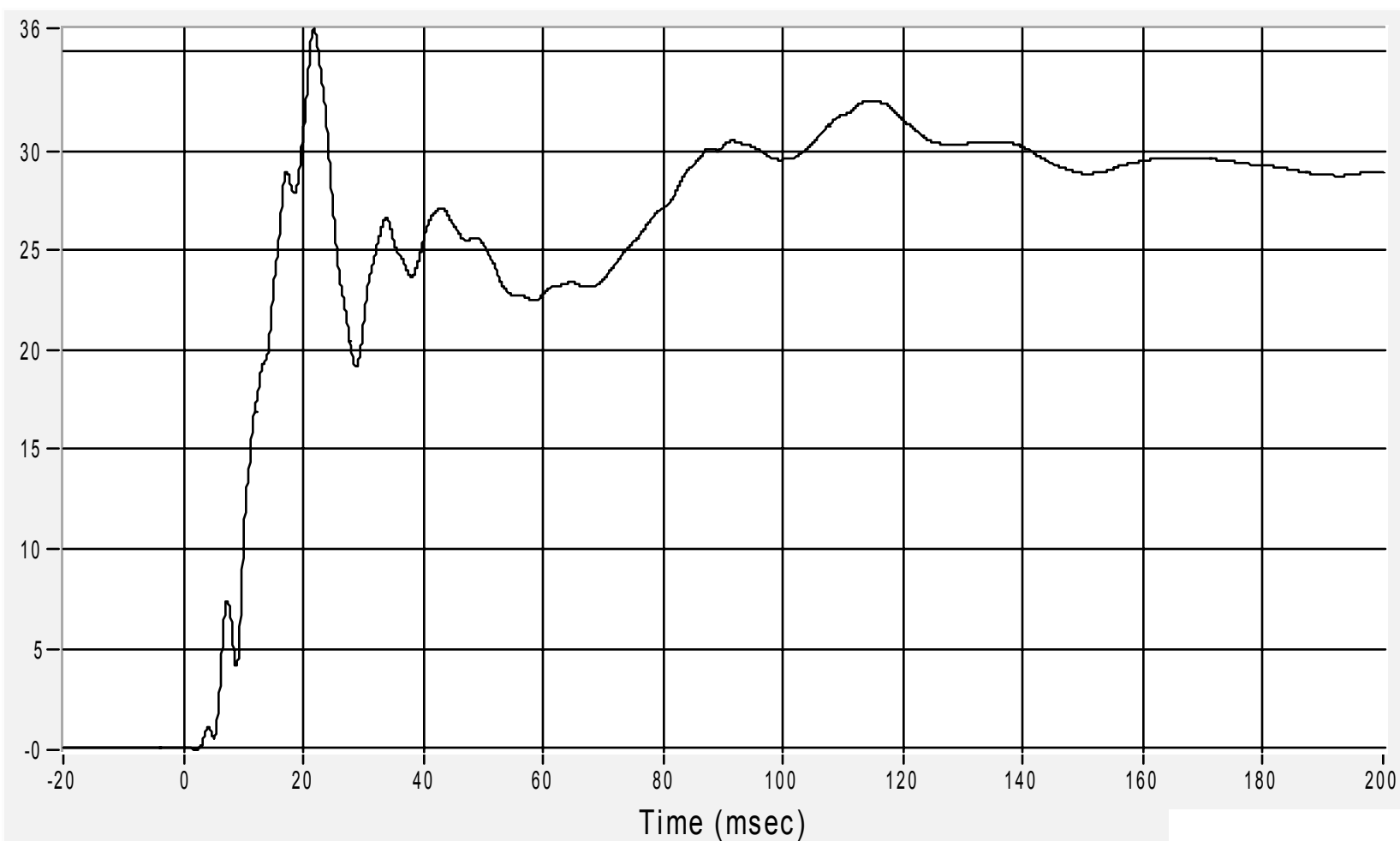
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Left Front Door Upper Centerline (Y) Velocity

Velocity (km/h) CFC180

Max 36.2 km/h at 21.8 msec

Min -0.1 km/h at 2.2 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

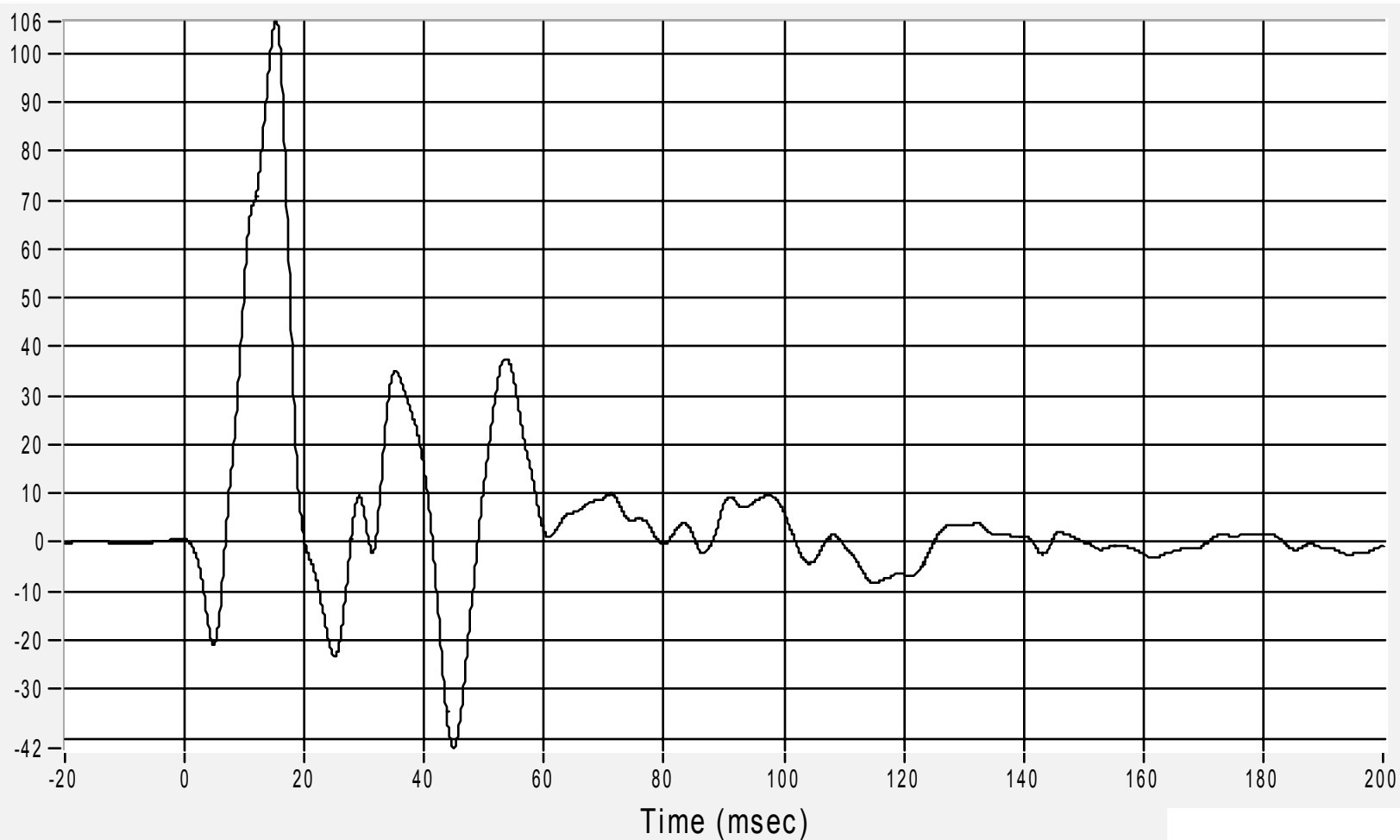
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Mid-Rear of Left Rear Door (Y) Acceleration

Acceleration (G's) CFC60

Max 106.5 G at 15.2 msec

Min -42.1 G at 44.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

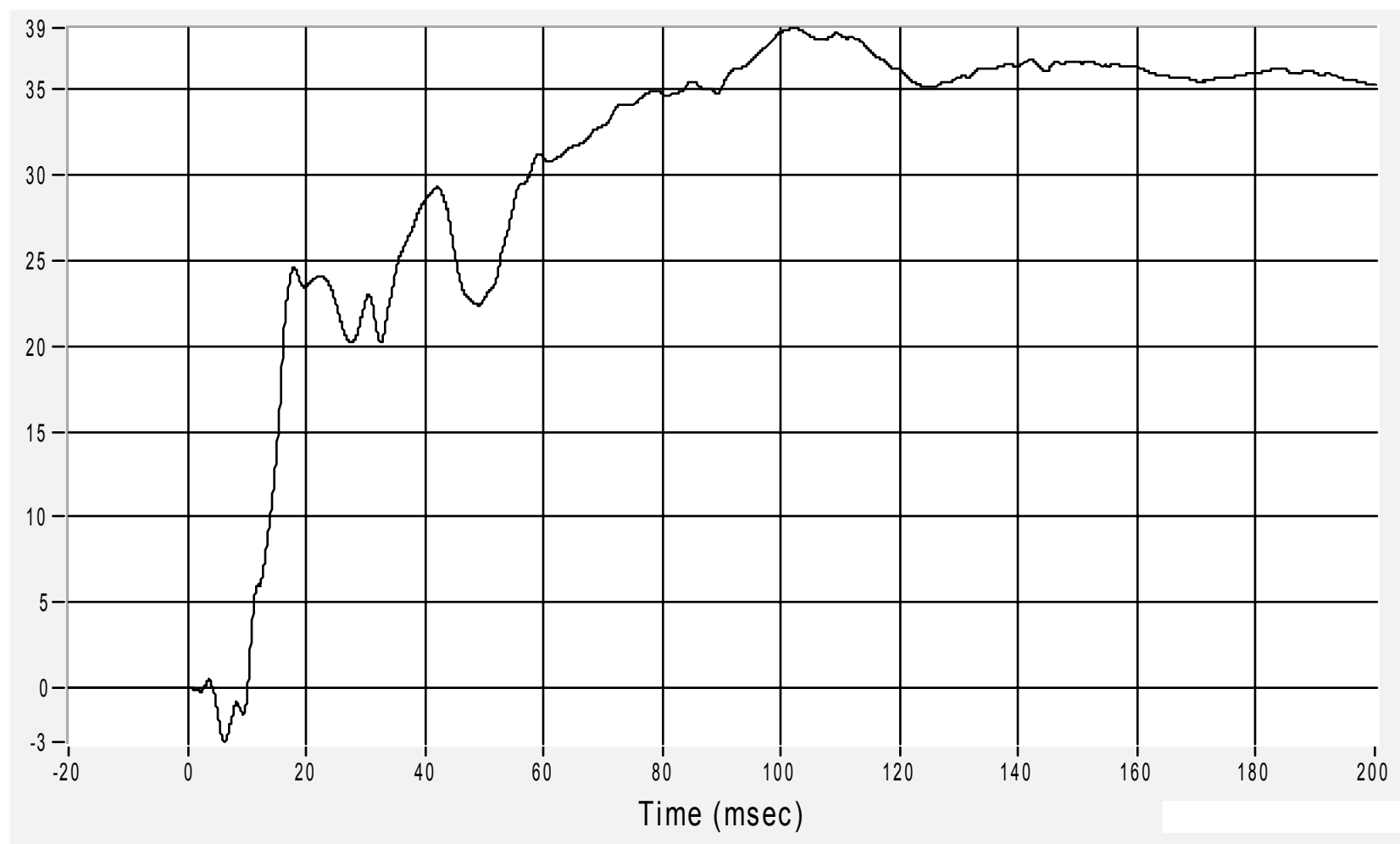
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Mid-Rear of Left Rear Door (Y) Velocity

Velocity (km/h) CFC180

Max 38.5 km/h at 102.2 msec

Min -3.1 km/h at 6.2 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

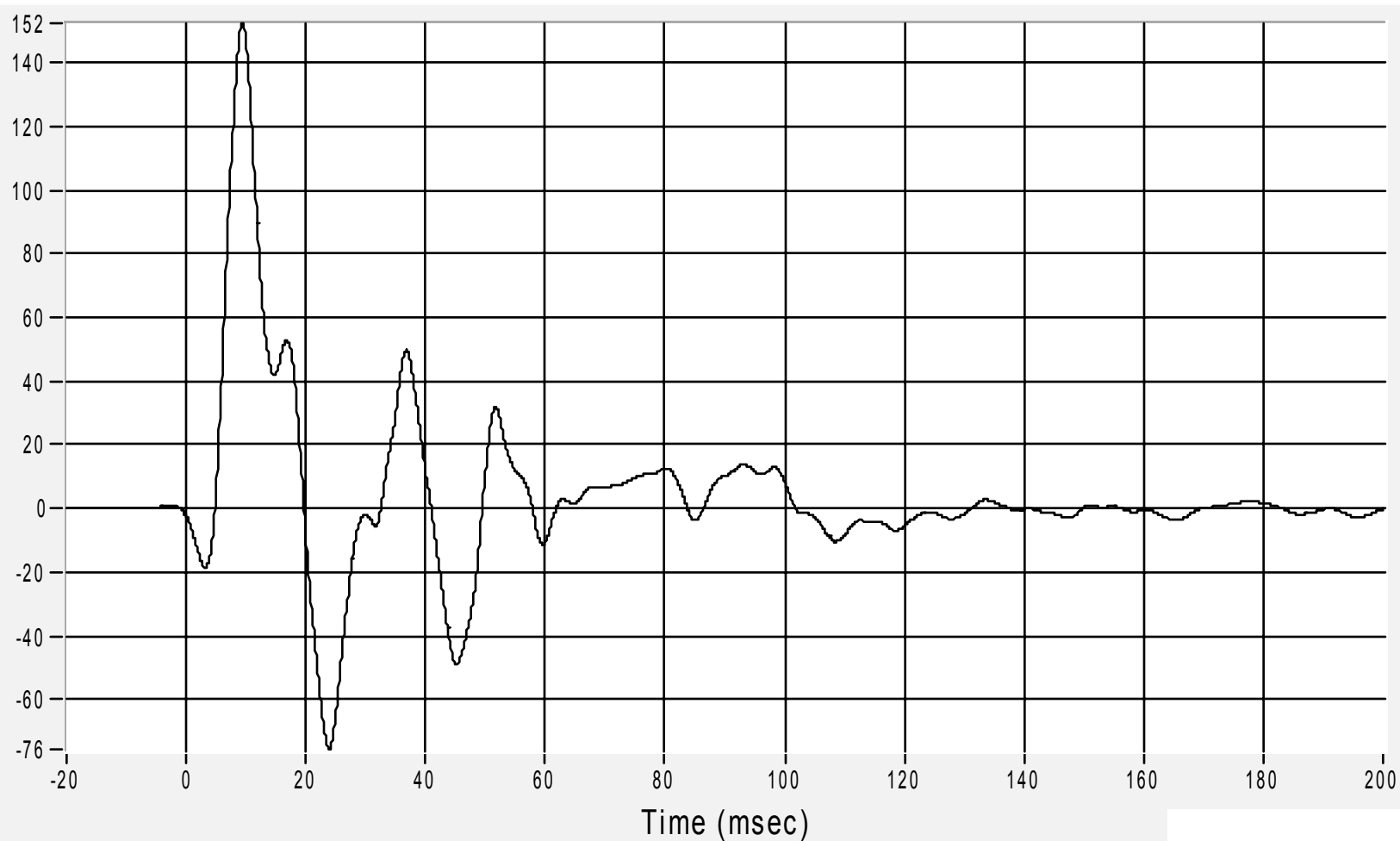
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Left Rear Door Upper Centerline (Y) Acceleration

Acceleration (G's) CFC60

Max 152.3 G at 9.4 msec

Min -75.6 G at 23.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

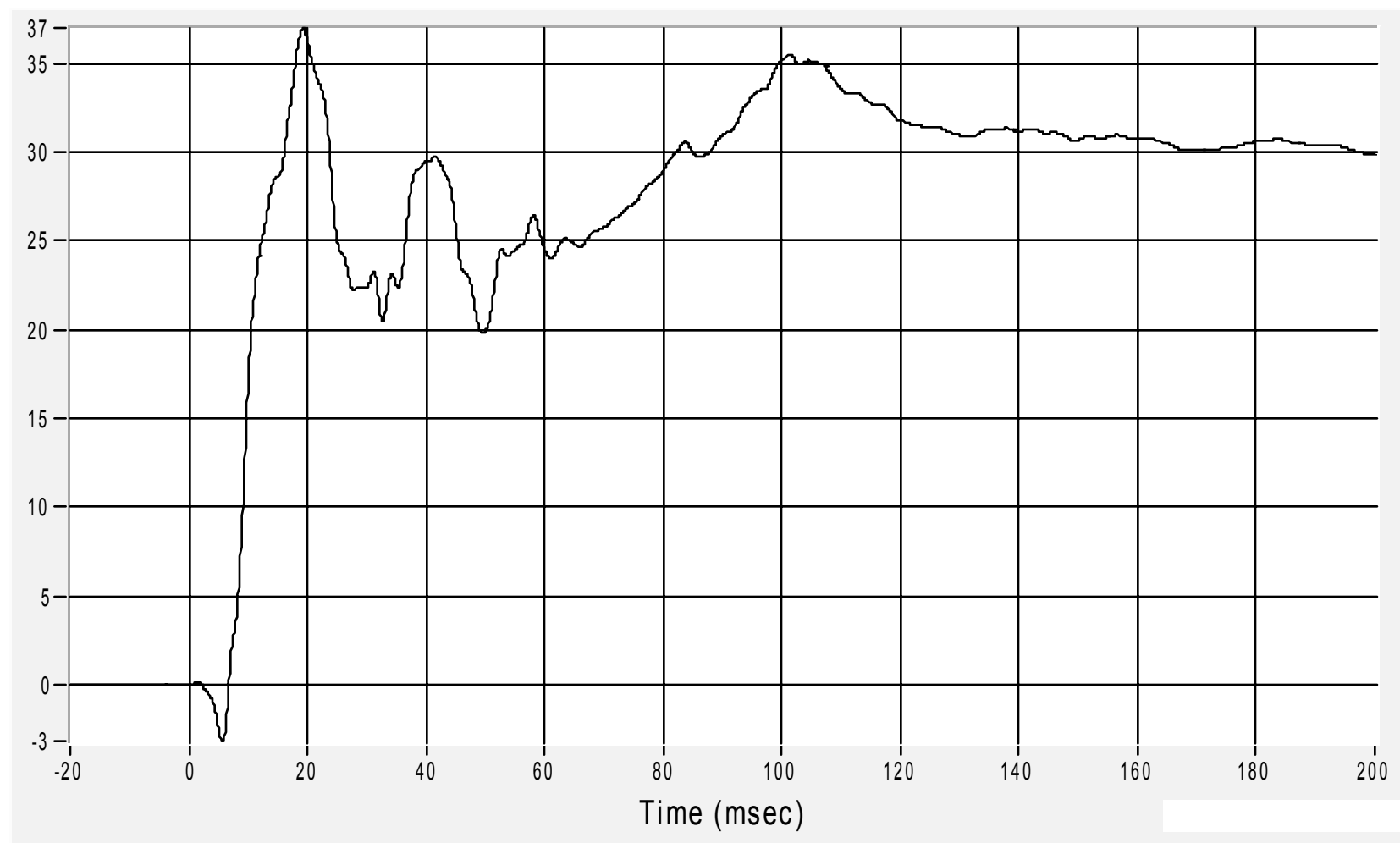
B-91

Left Rear Door Upper Centerline (Y) Velocity

Velocity (km/h) CFC180

Max 37.0 km/h at 19.3 msec

Min -3.2 km/h at 5.7 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

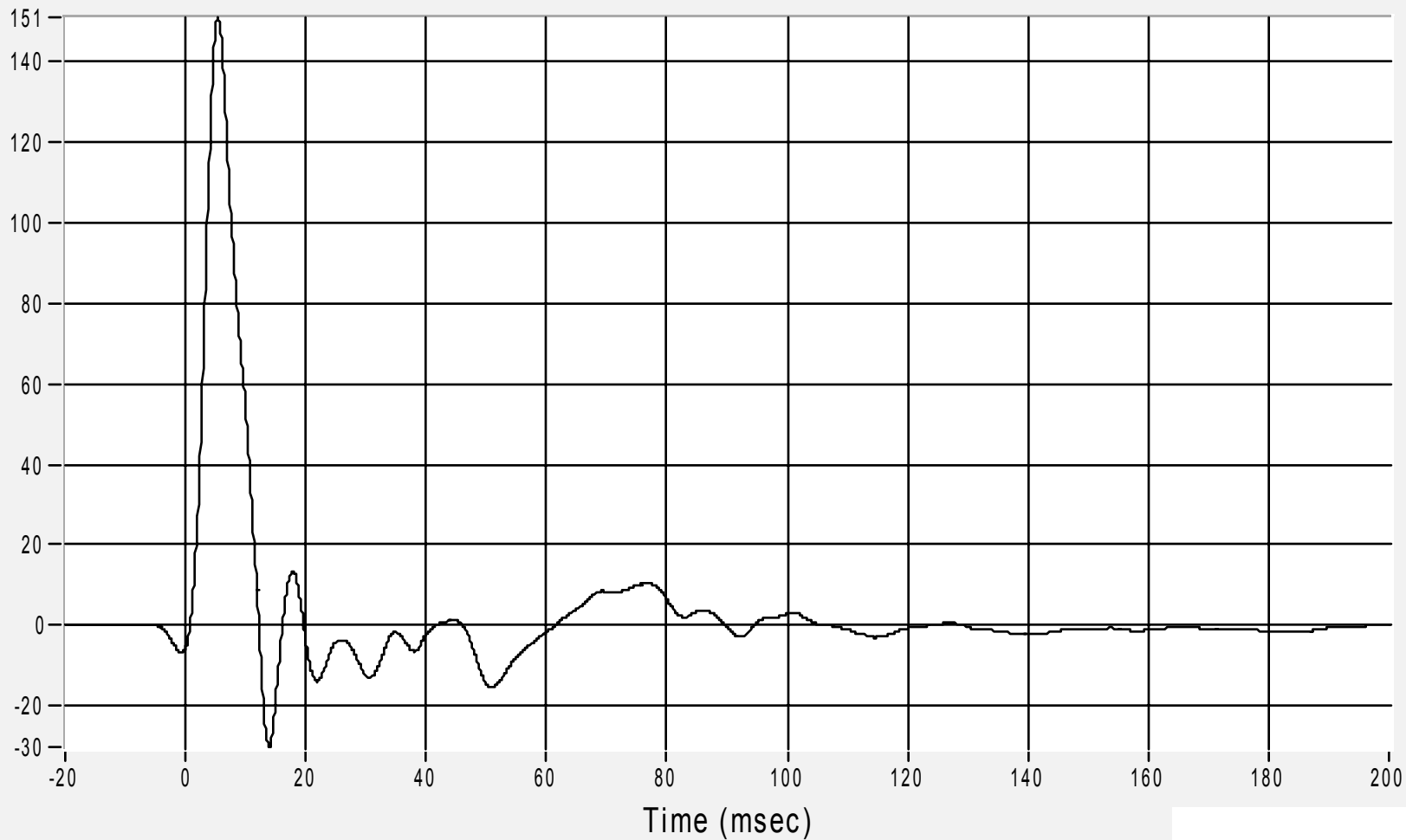
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Left Lower B-Pillar (Y) Acceleration

Acceleration (G's) CFC60

Max 150.9 G at 5.4 msec

Min -30.2 G at 13.8 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

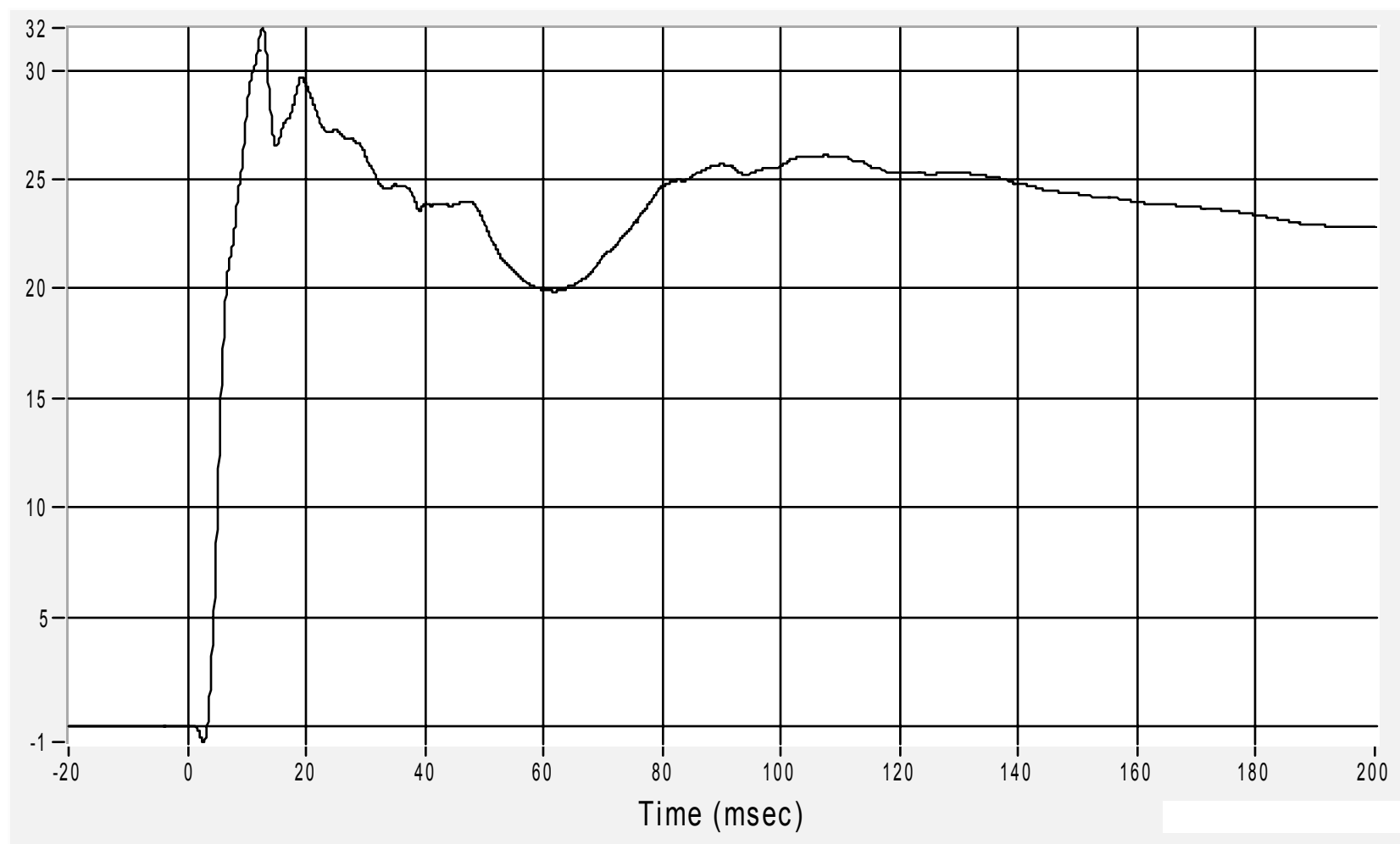
B-93

Left Lower B-Pillar (Y) Velocity

Velocity (km/h) CFC180

Max 31.9 km/h at 12.6 msec

Min -0.7 km/h at 2.7 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

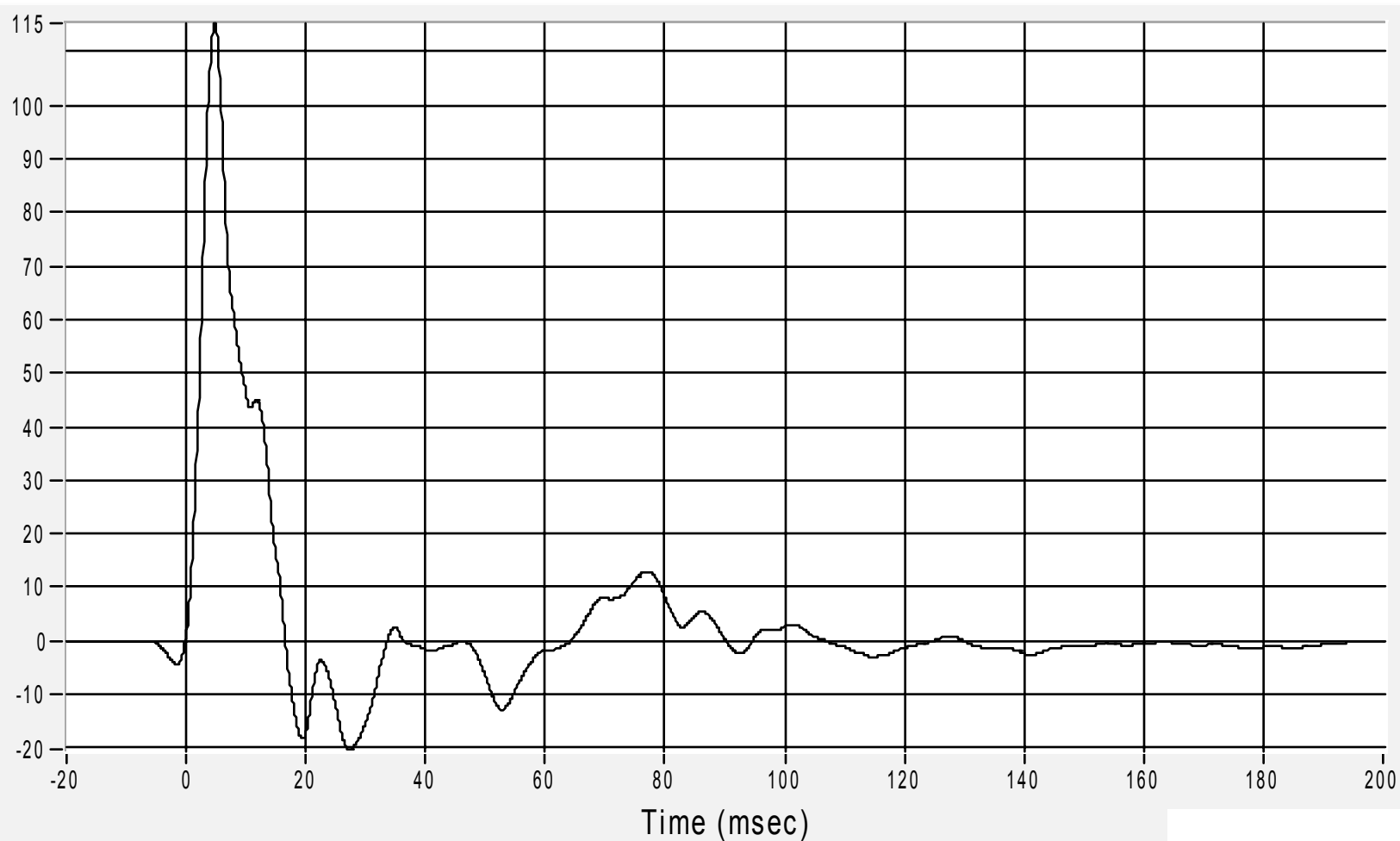
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Left Middle B-Pillar (Y) Acceleration

Acceleration (G's) CFC60

Max 115.2 G at 4.8 msec

Min -20.2 G at 27.4 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

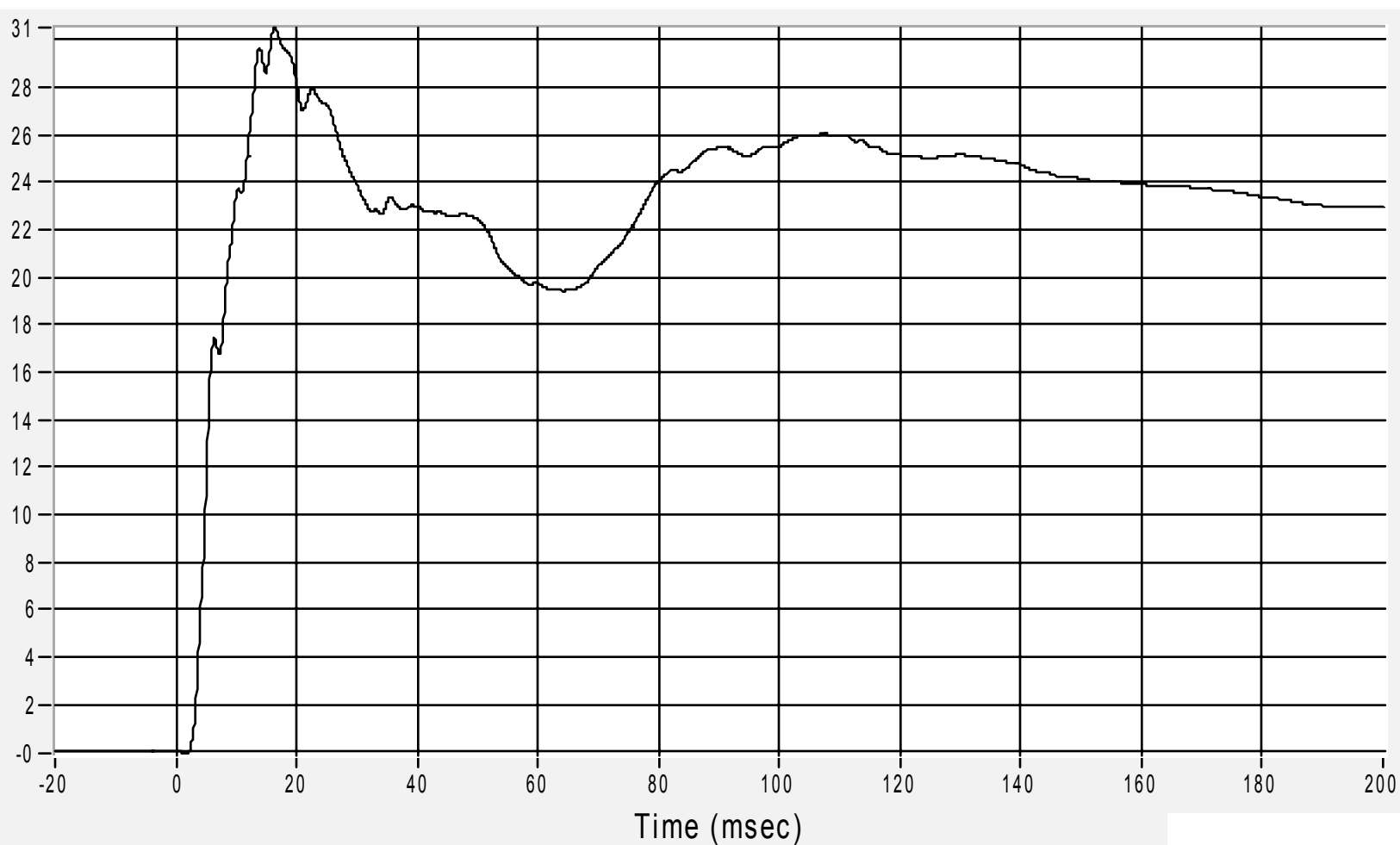
B-95

Left Middle B-Pillar (Y) Velocity

Velocity (km/h) CFC180

Max 30.5 km/h at 16.4 msec

Min 0.0 km/h at 1.8 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

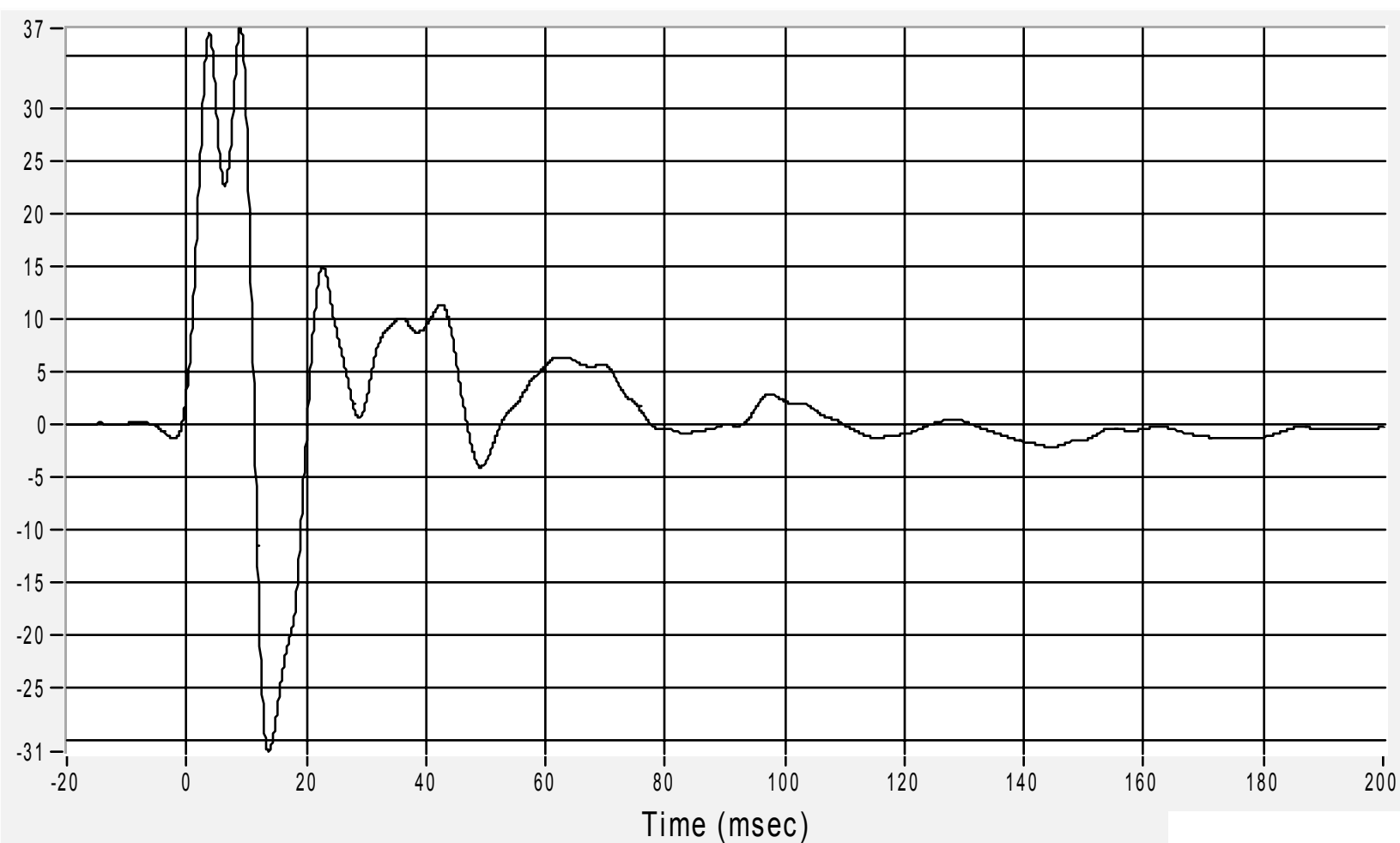
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Left Lower A-Pillar (Y) Acceleration

Acceleration (G's) CFC60

Max 37.5 G at 9.0 msec

Min -31.1 G at 13.7 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

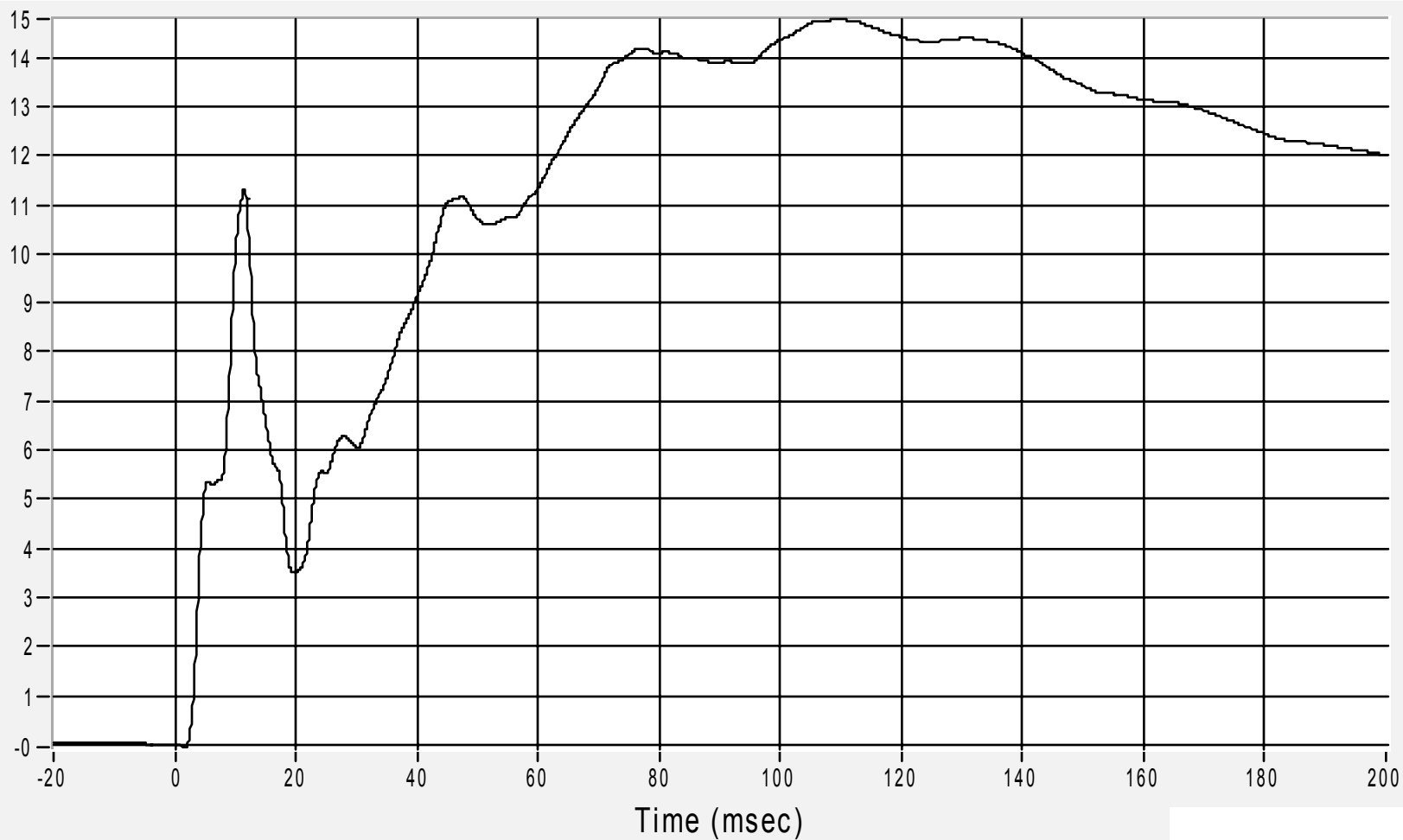
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Left Lower A-Pillar (Y) Velocity

Velocity (km/h) CFC180

Max 14.8 km/h at 109.5 msec

Min 0.0 km/h at 1.7 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

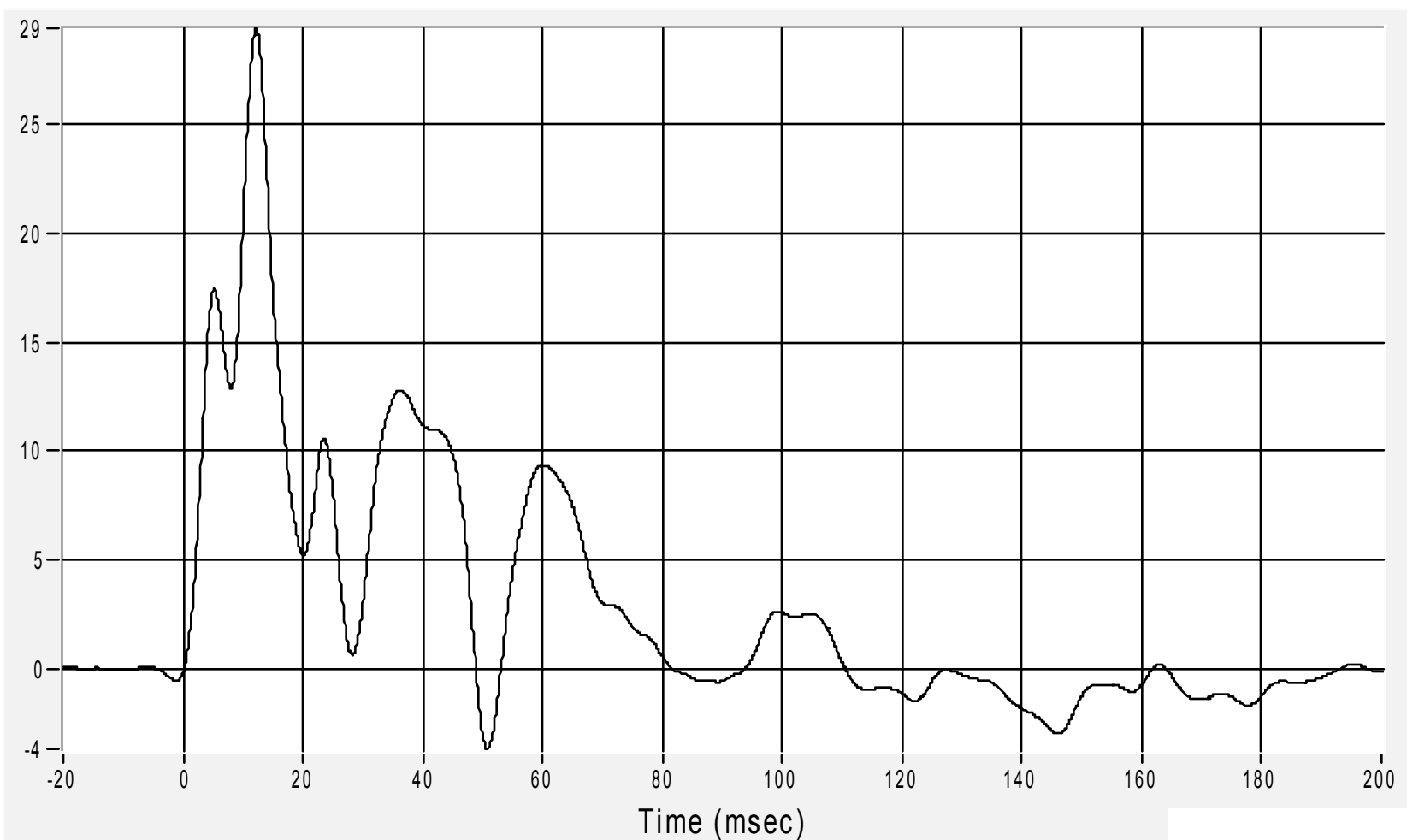
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Left Middle A-Pillar (Y) Acceleration

Acceleration (G's) CFC60

Max 29.4 G at 12.2 msec

Min -3.7 G at 50.8 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

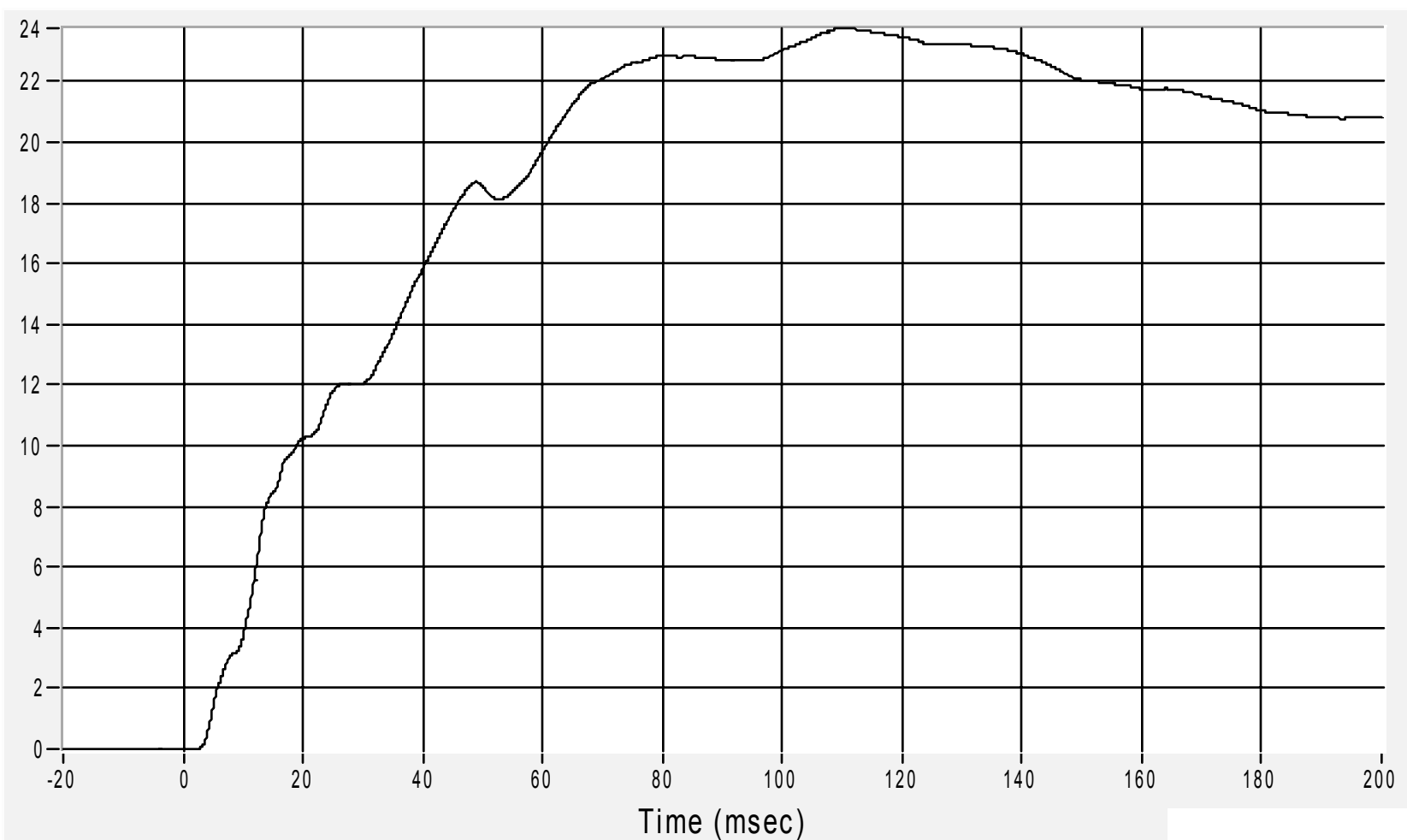
B-99

Left Middle A-Pillar (Y) Velocity

Velocity (km/h) CFC180

Max 23.8 km/h at 110.2 msec

Min 0.0 km/h at 0.0 msec



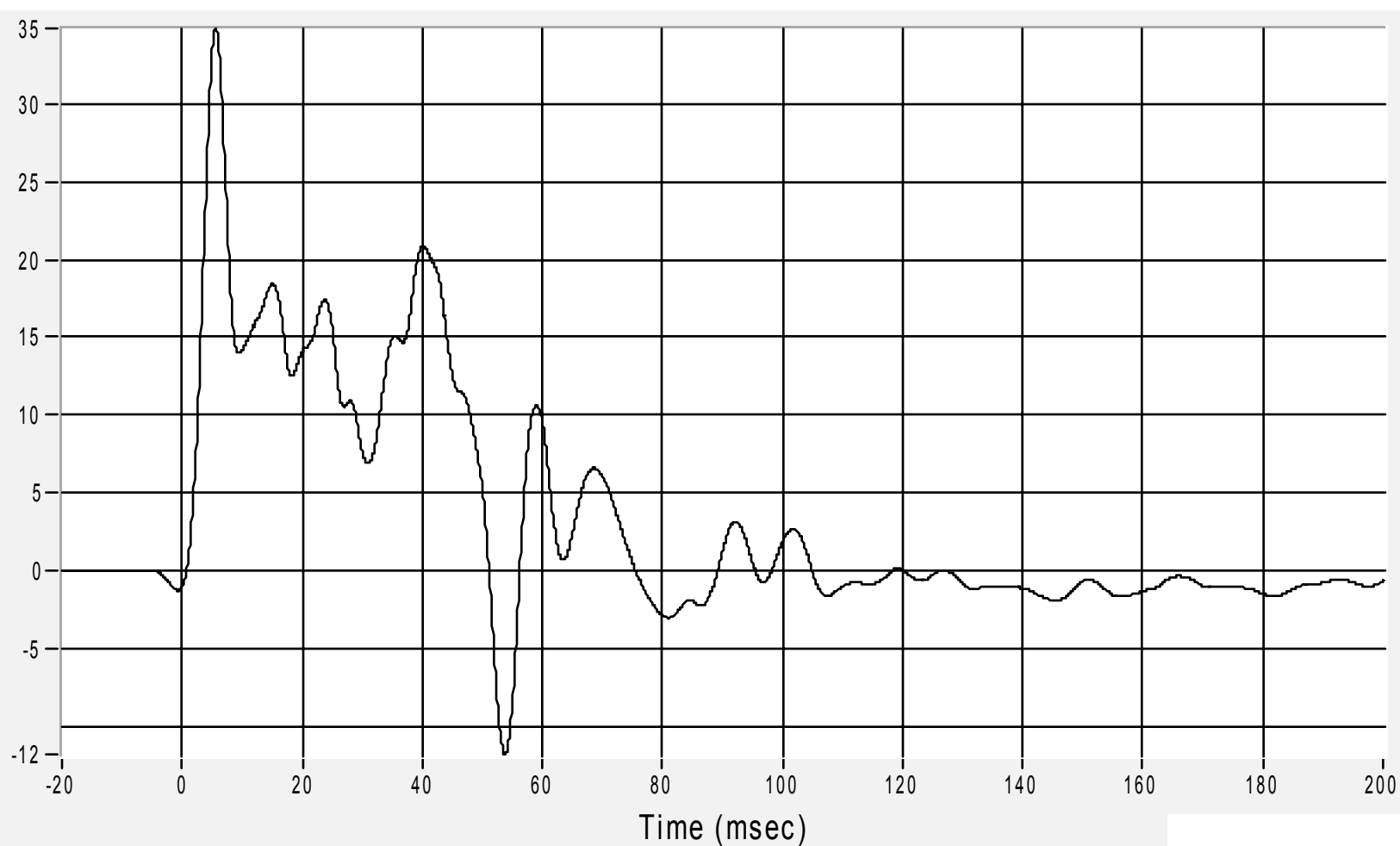
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Front Seat Track (Y) Acceleration

Acceleration (G's) CFC60

Max 34.8 G at 5.6 msec**Min -11.8 G at 53.8 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

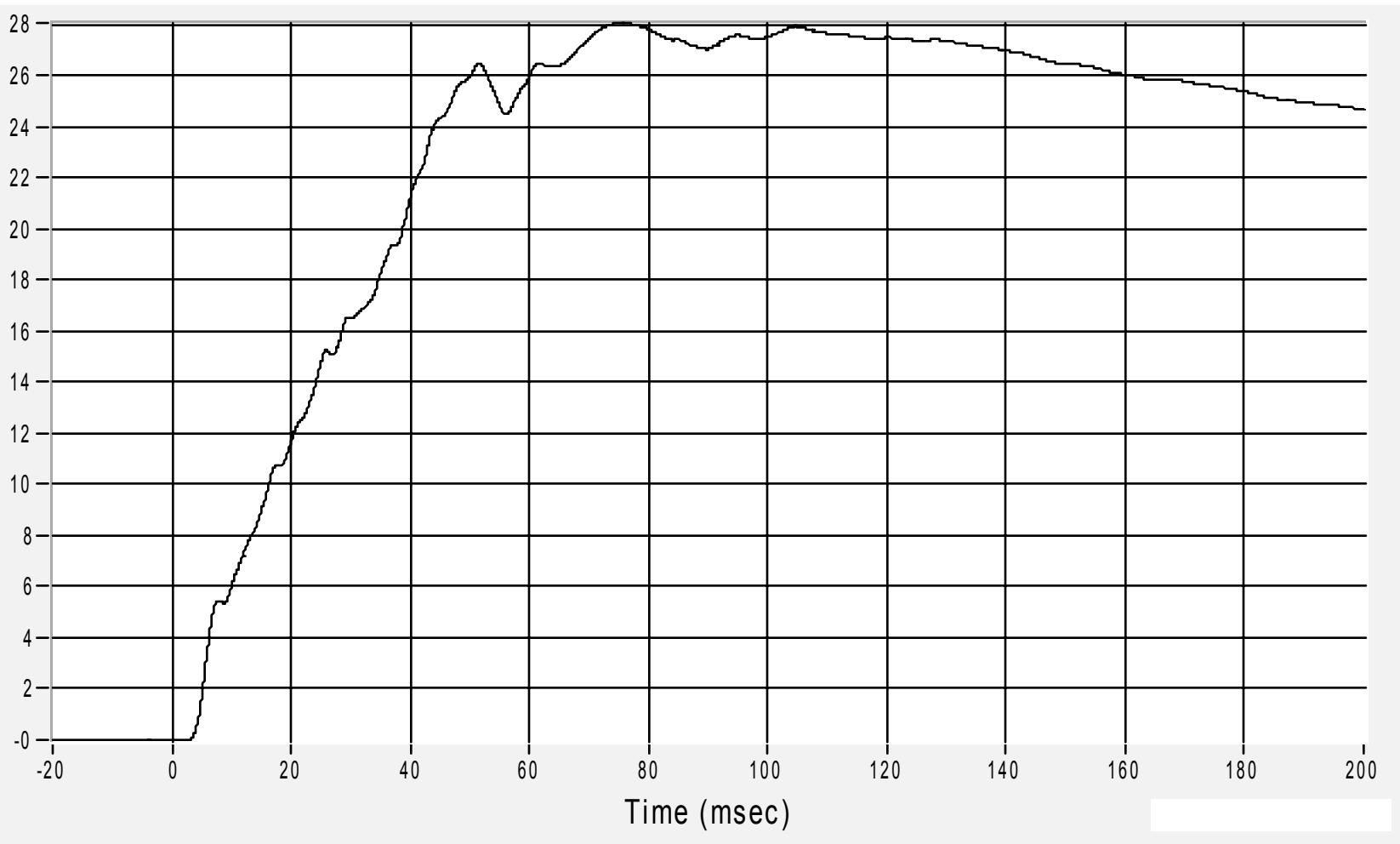
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Front Seat Track (Y) Velocity

Velocity (km/h) CFC180

Max 28.1 km/h at 75.2 msec

Min 0.0 km/h at 2.7 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

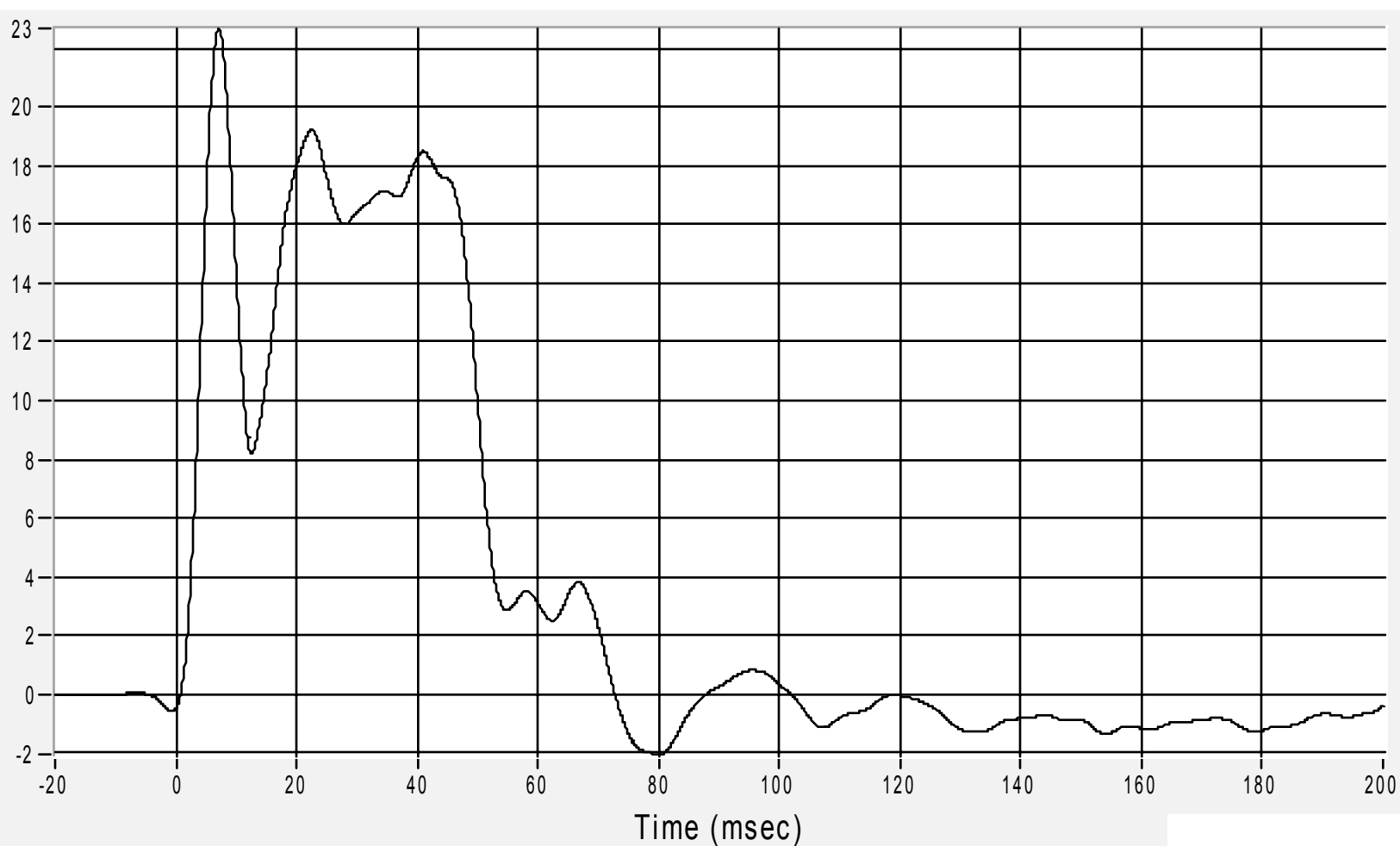
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Rear Seat Track (Y) Acceleration

Acceleration (G's) CFC60

Max 22.7 G at 7.1 msec

Min -2.0 G at 79.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

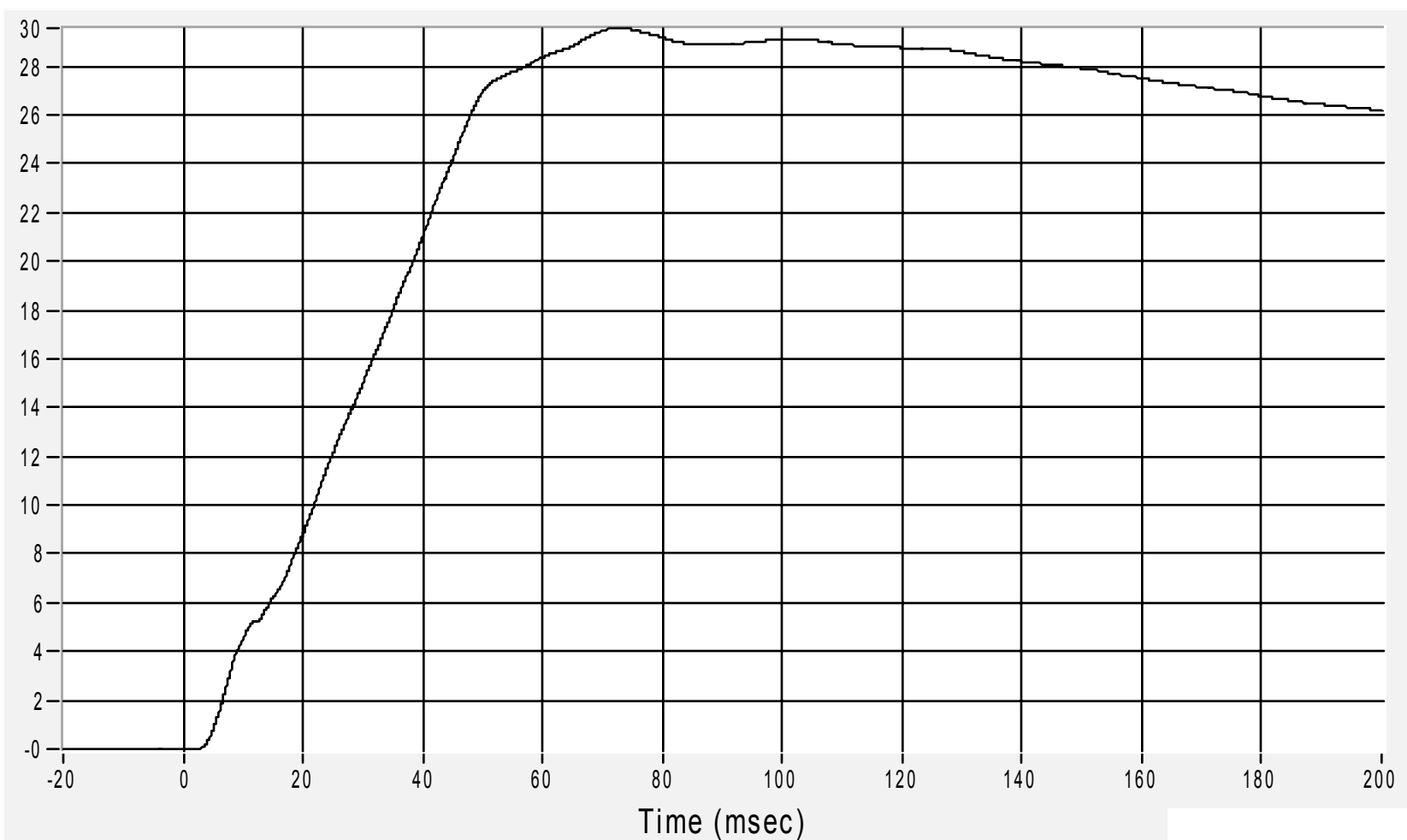
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Rear Seat Track (Y) Velocity

Velocity (km/h) CFC180

Max 29.6 km/h at 72.2 msec

Min 0.0 km/h at 1.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

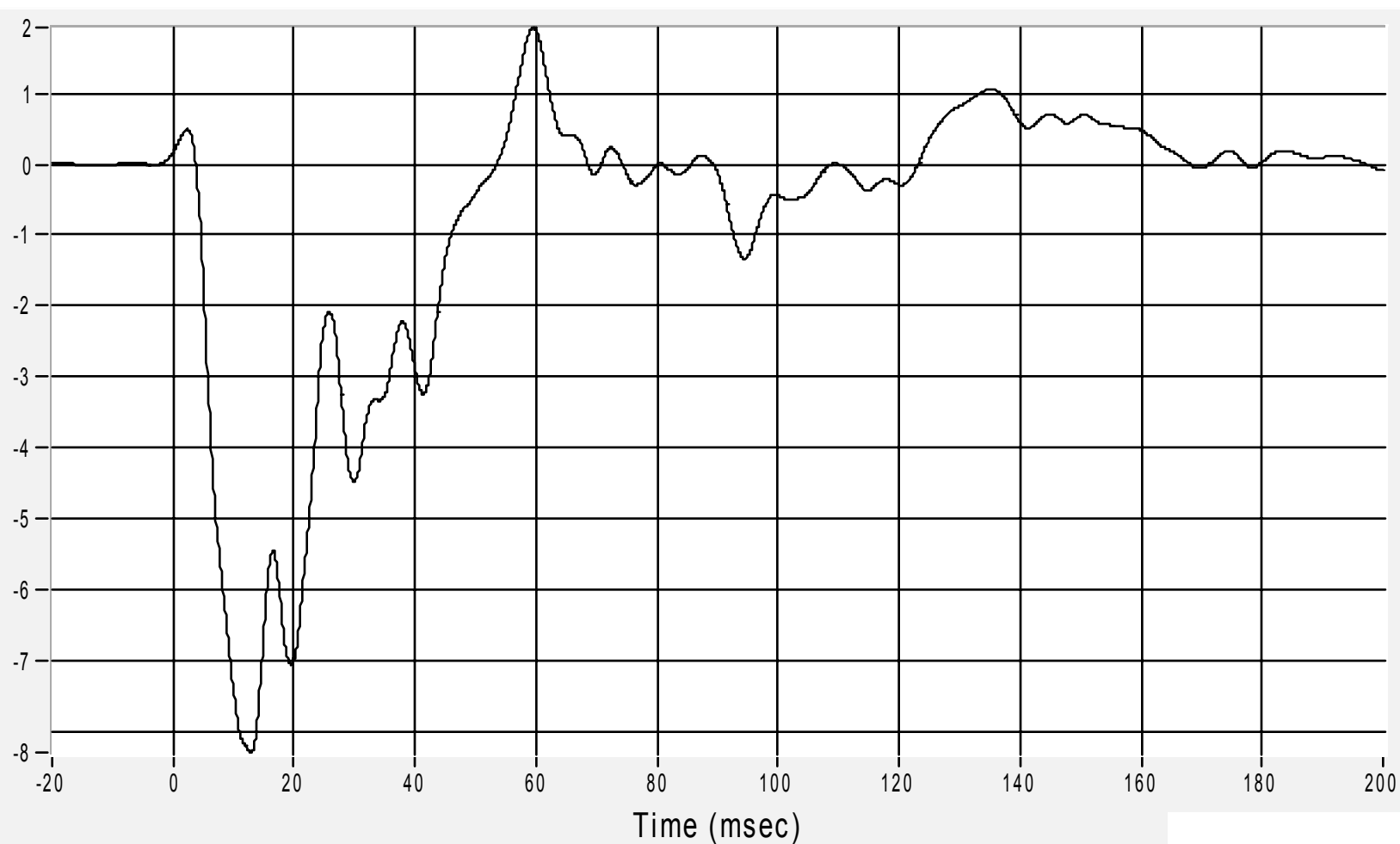
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Vehicle Center of Gravity (X) Acceleration

Acceleration (G's) CFC60

Max 1.9 G at 59.5 msec

Min -8.3 G at 12.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

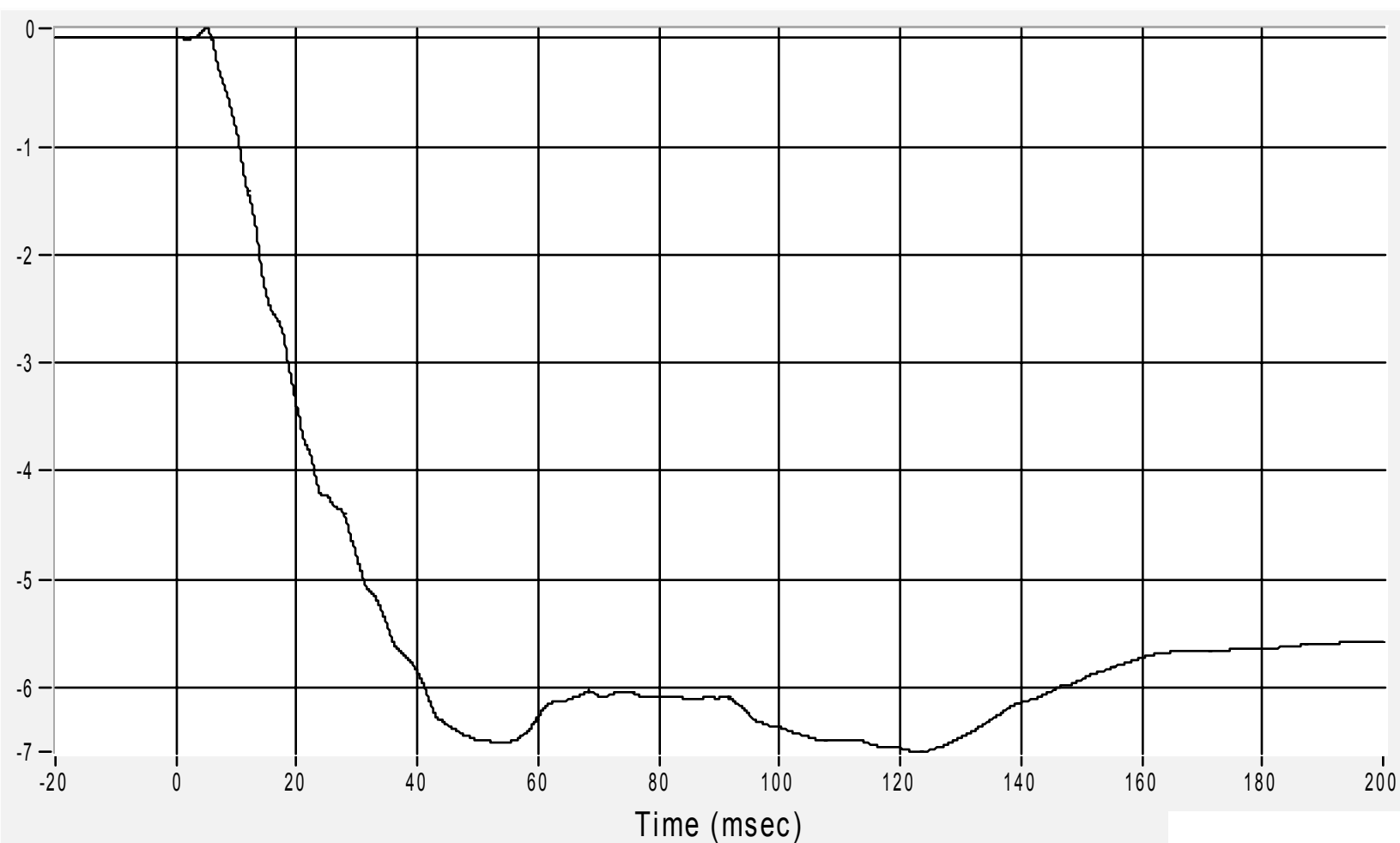
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Vehicle Center of Gravity (X) Velocity

Velocity (km/h) CFC180

Max 0.1 km/h at 5.0 msec

Min -6.6 km/h at 123.4 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

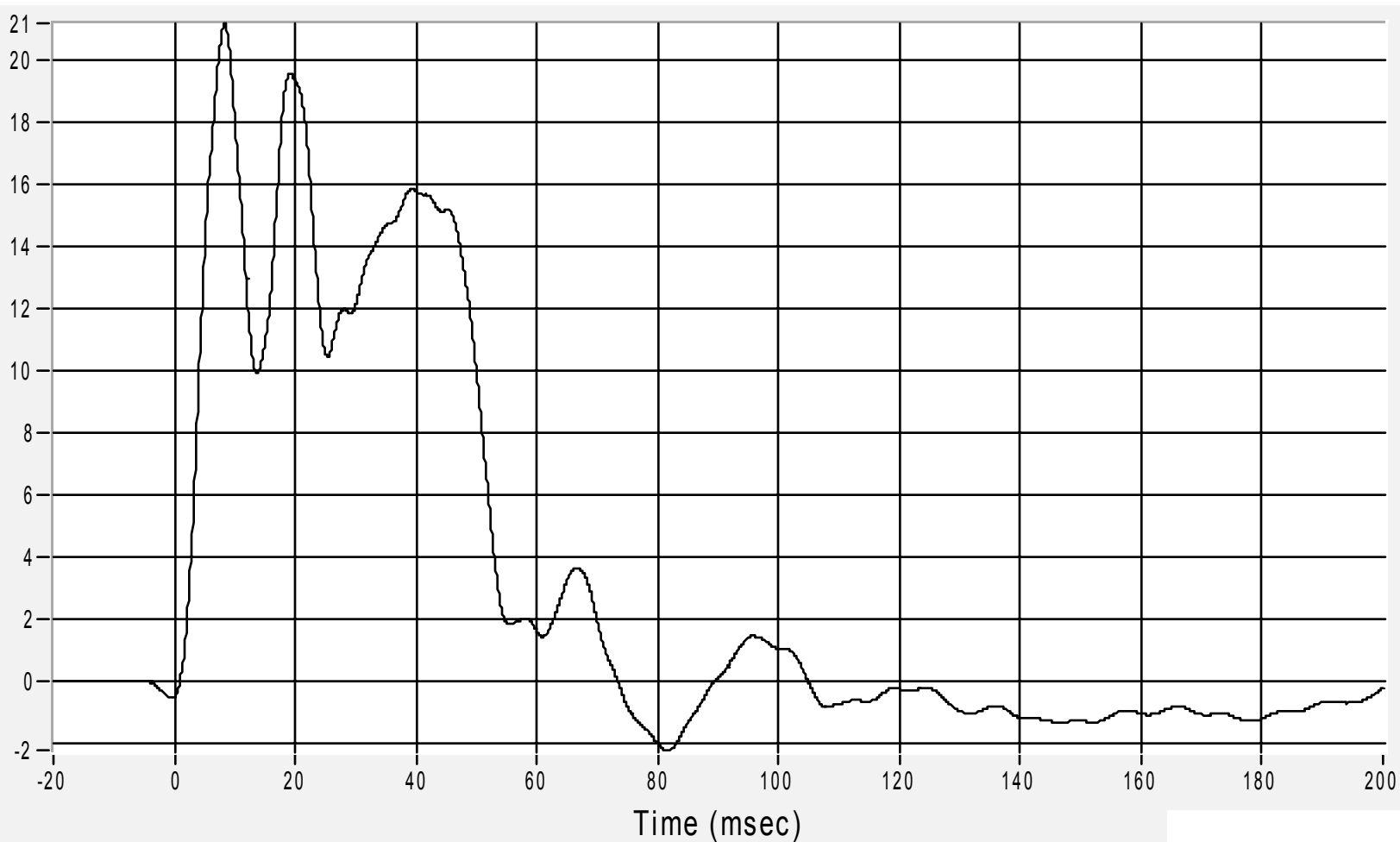
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Vehicle Center of Gravity (Y) Acceleration

Acceleration (G's) CFC60

Max 21.2 G at 8.3 msec

Min -2.2 G at 81.6 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

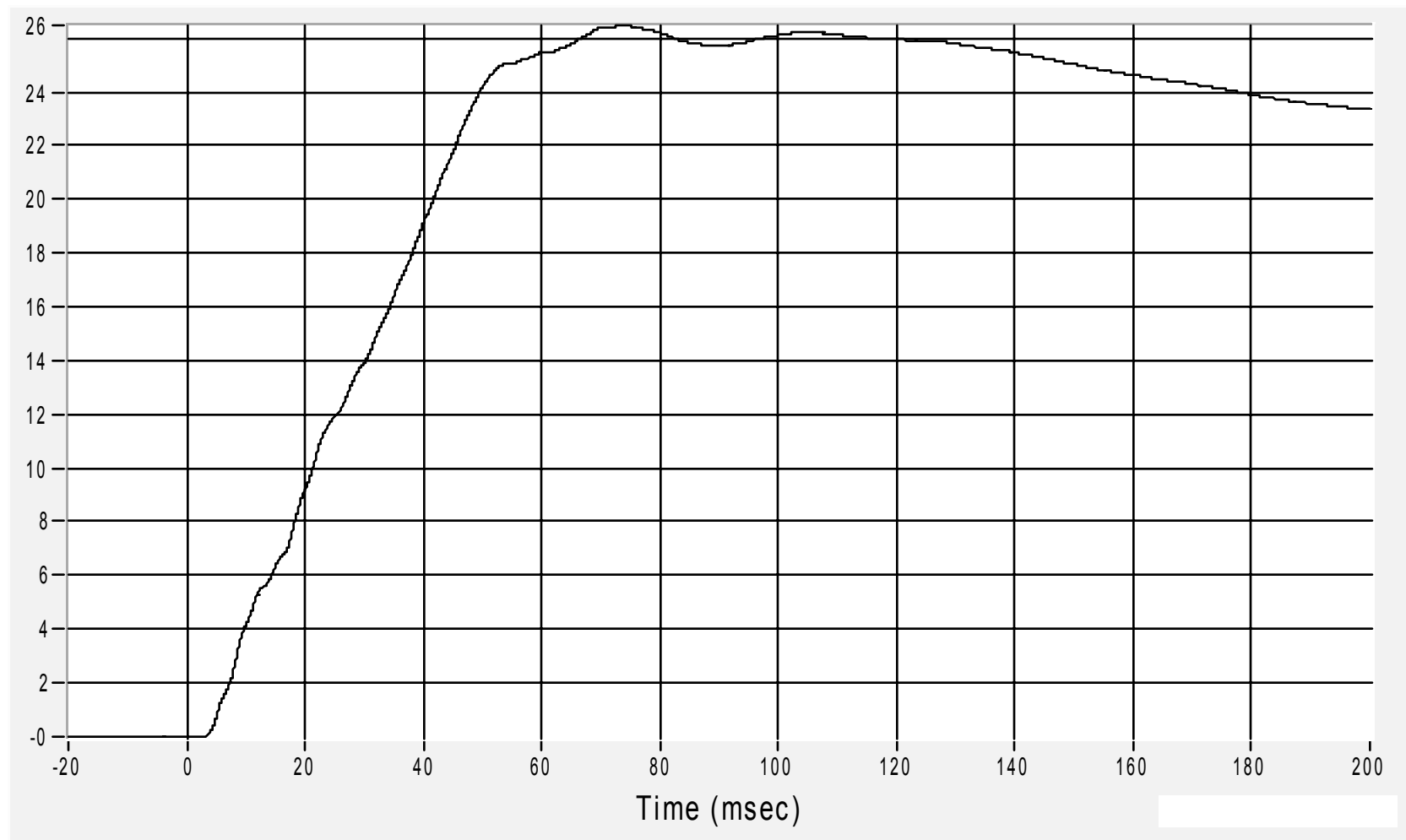
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Vehicle Center of Gravity (Y) Velocity

Velocity (km/h) CFC180

Max 26.5 km/h at 73.8 msec

Min 0.0 km/h at 2.6 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

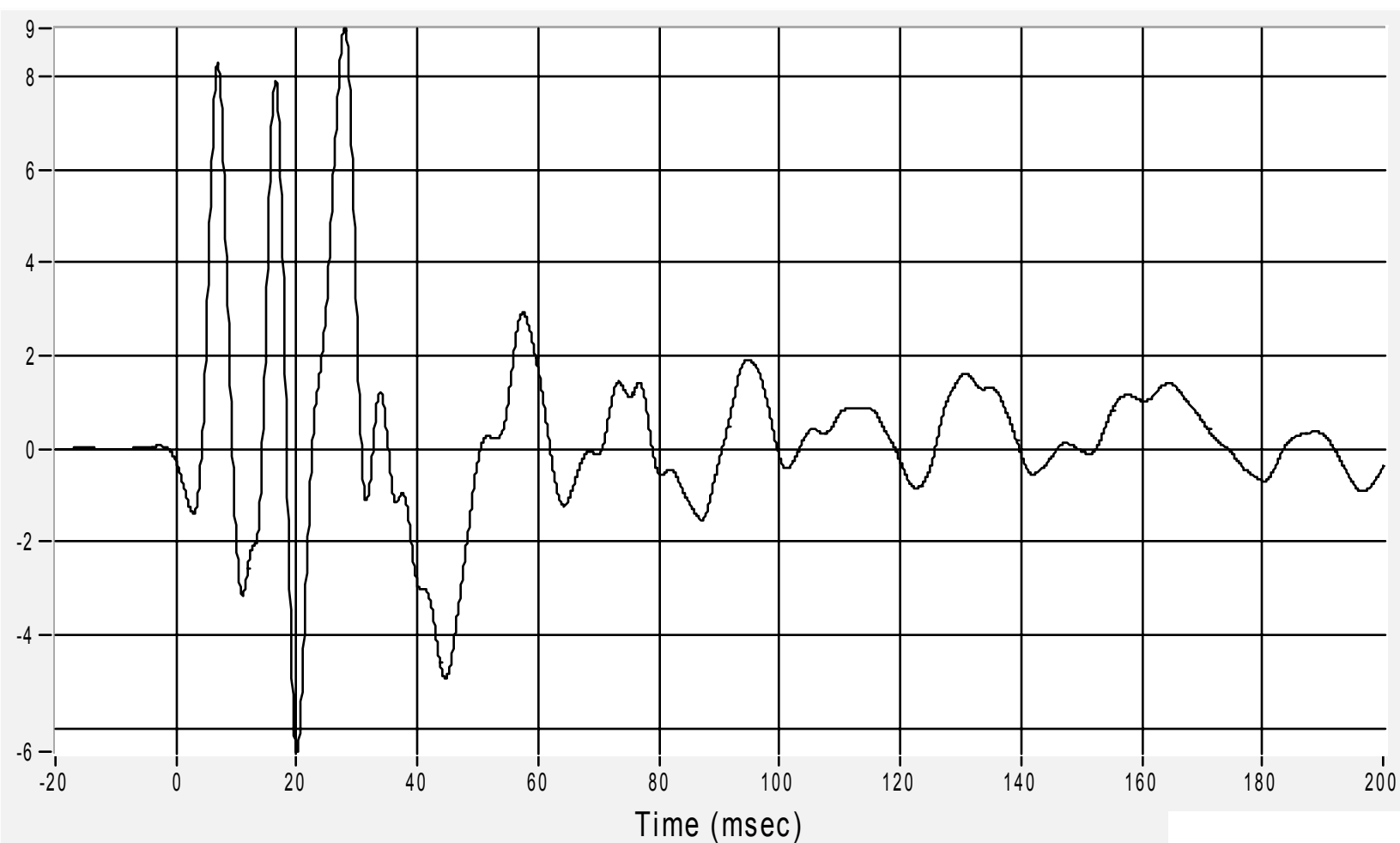
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Vehicle Center of Gravity (Z) Acceleration

Acceleration (G's) CFC60

Max 9.0 G at 27.9 msec

Min -6.5 G at 20.0 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

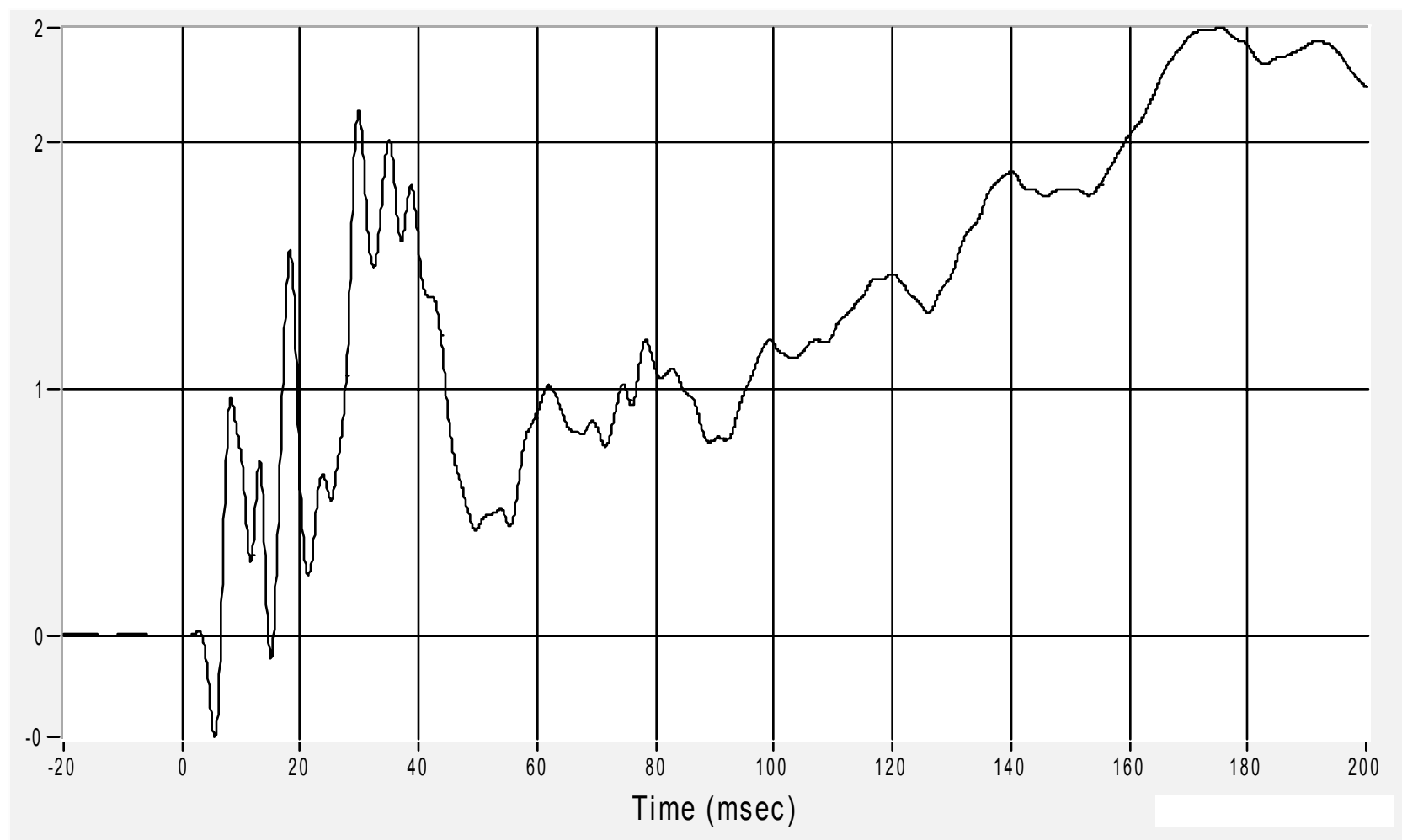
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Vehicle Center of Gravity (Z) Velocity

Velocity (km/h) CFC180

Max 2.5 km/h at 175.4 msec

Min -0.4 km/h at 5.5 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

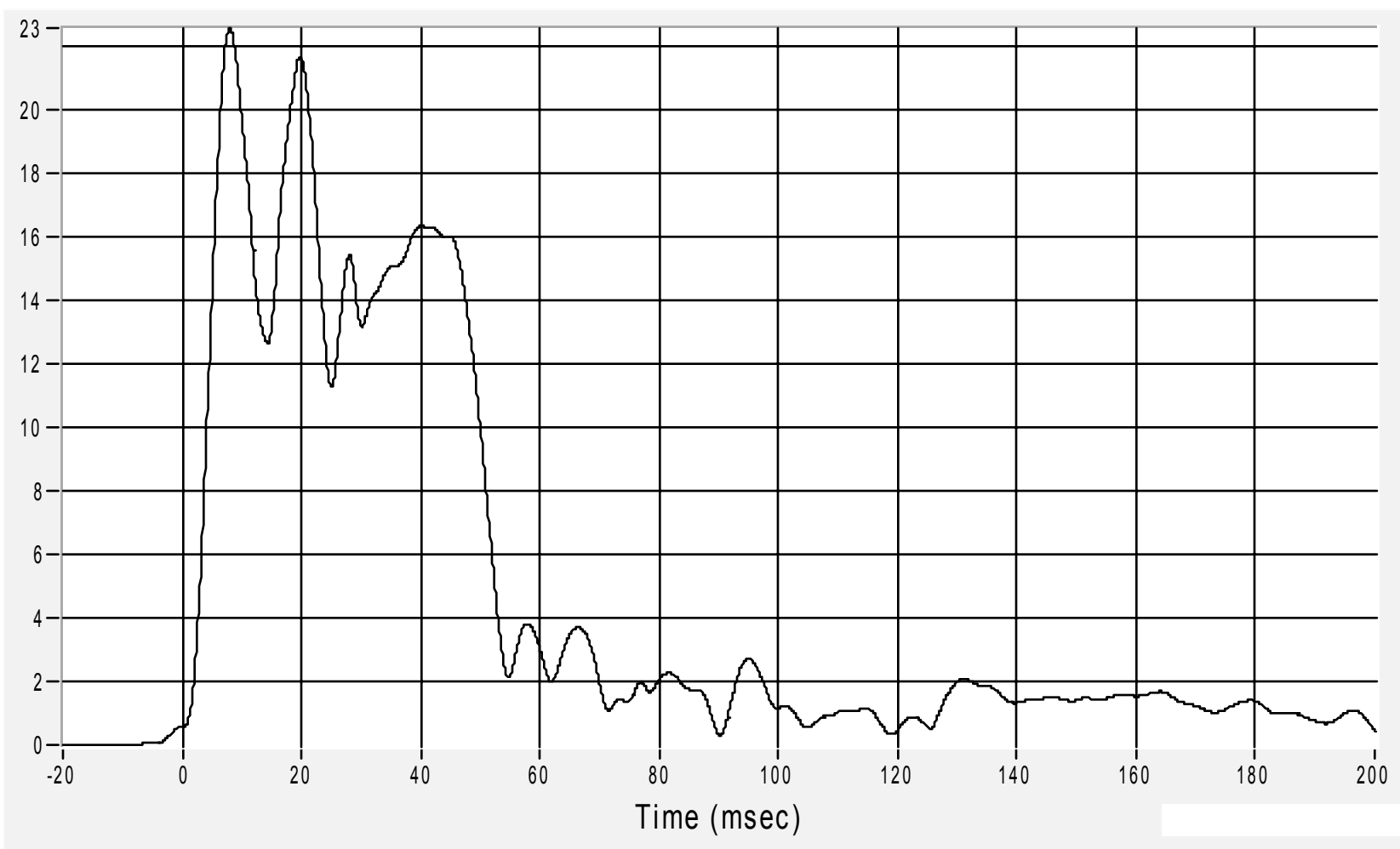
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Vehicle Center of Gravity Resultant Acceleration

Acceleration (G's) CFC60

Max 22.6 G's at 8.0 msec

Min 0.3 G's at 90.2 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

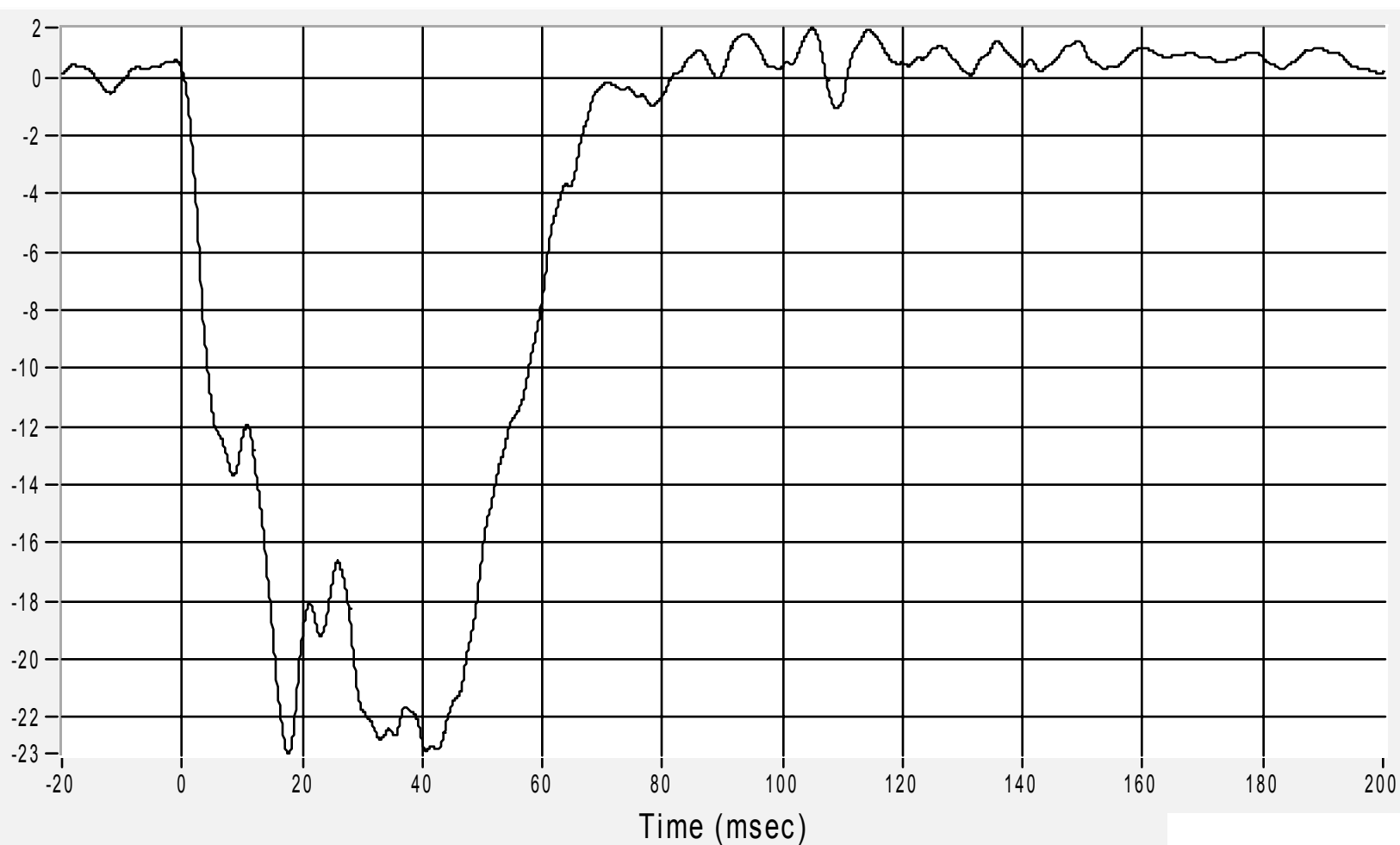
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

MDB Center of Gravity (X) Acceleration

Acceleration (G's) CFC60

Max 1.7 G at 105.0 msec

Min -23.2 G at 17.7 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

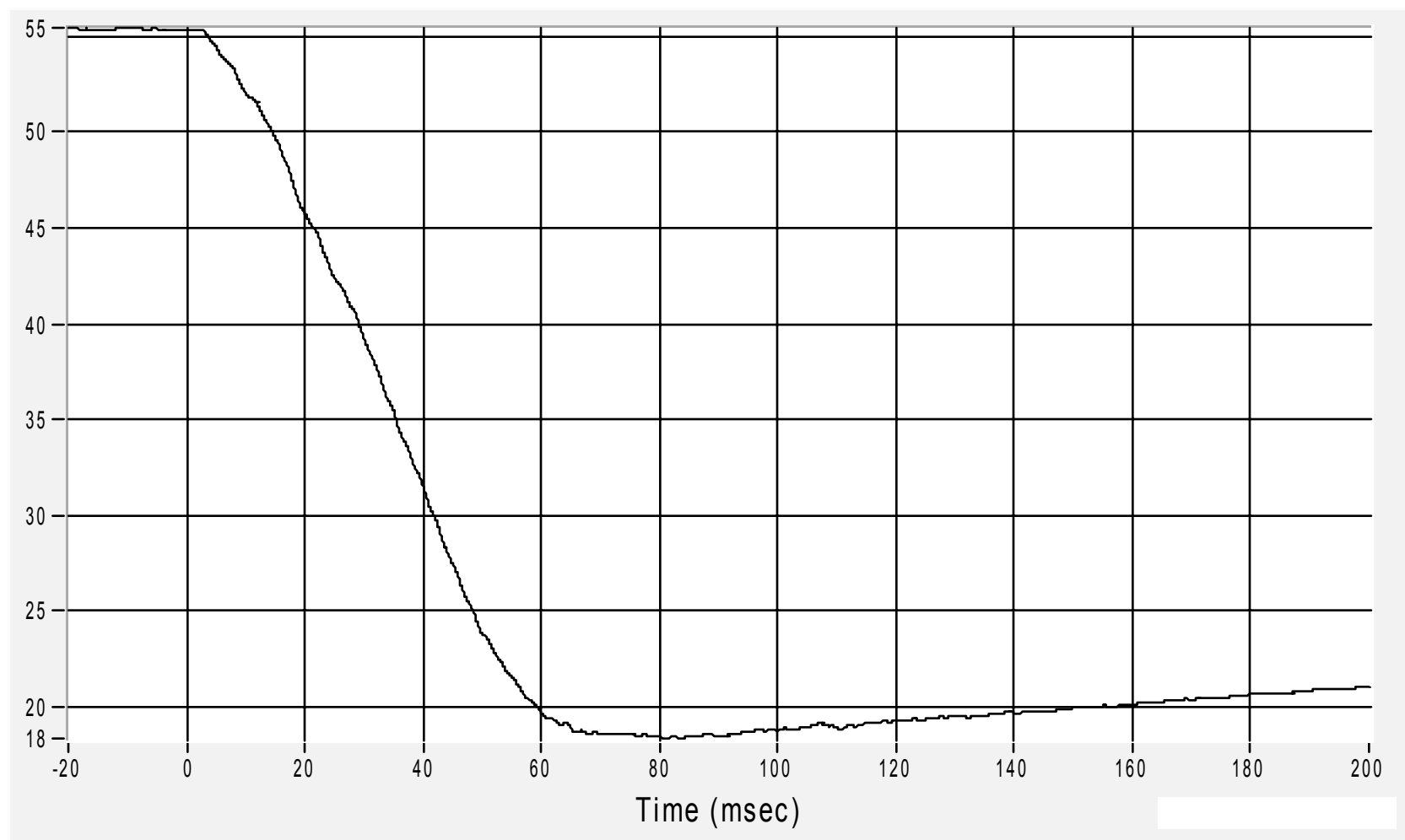
Medical College of Wisconsin
Vehicle Crashworthiness Lab

MDB Center of Gravity (X) Velocity

Velocity (km/h) CFC180

Max 55.4 km/h at 1.8 msec

Min 18.3 km/h at 81.1 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

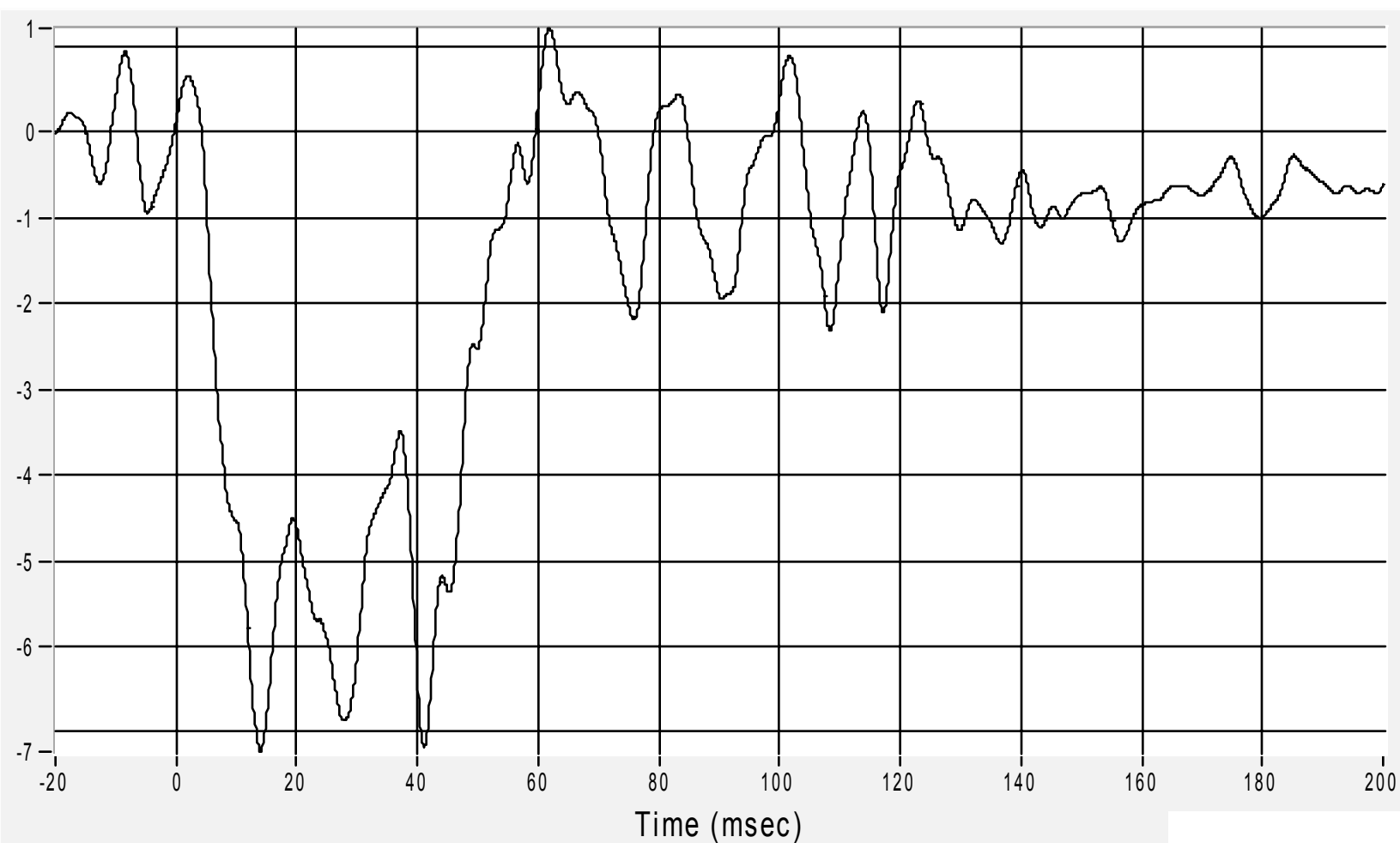
Medical College of Wisconsin
Vehicle Crashworthiness Lab

MDB Center of Gravity (Y) Acceleration

Acceleration (G's) CFC60

Max 1.2 G at 61.8 msec

Min -7.2 G at 13.9 msec



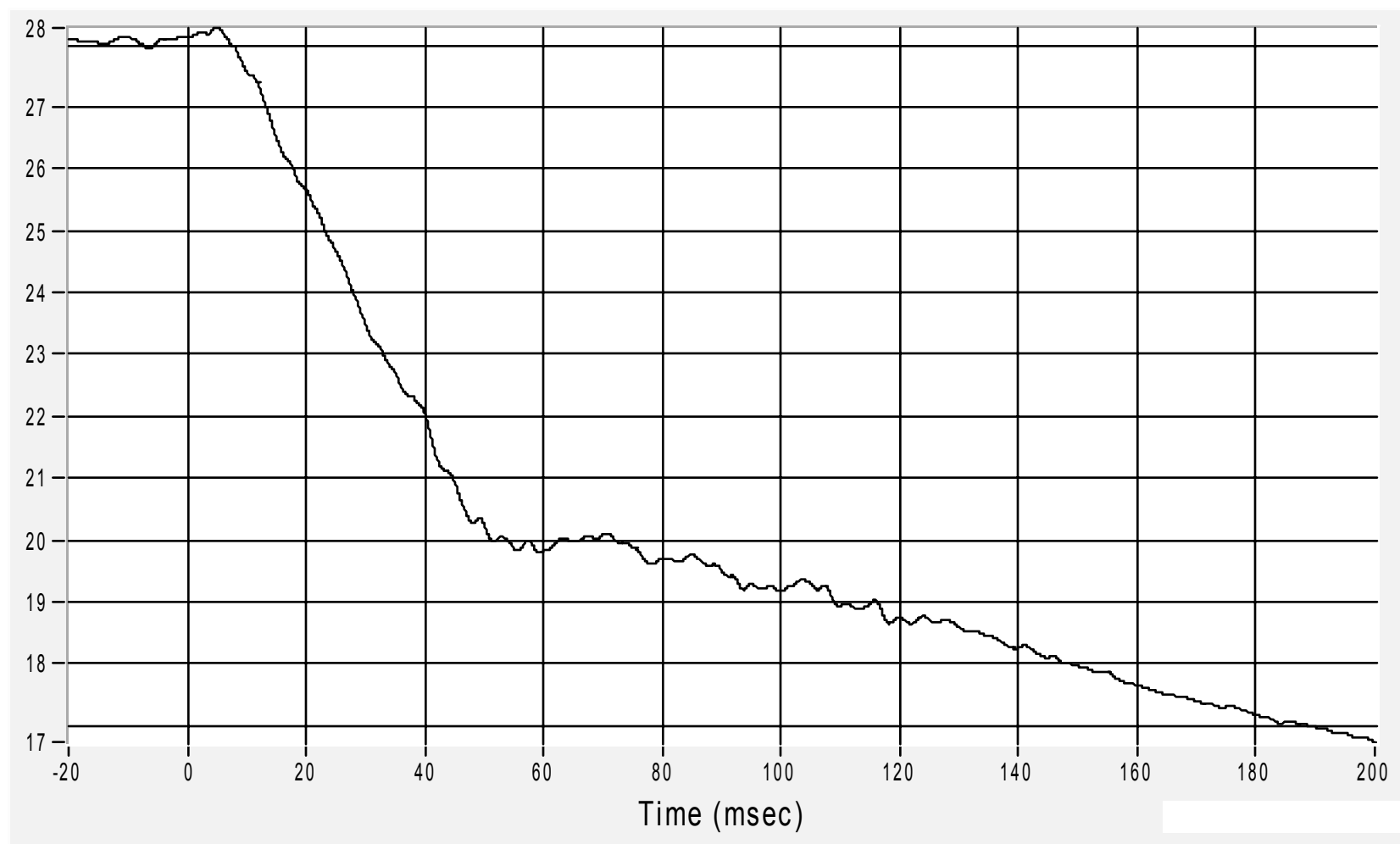
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

MDB Center of Gravity (Y) Velocity

Velocity (km/h) CFC180

Max 28.3 km/h at 5.0 msec**Min 16.7 km/h at 199.9 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

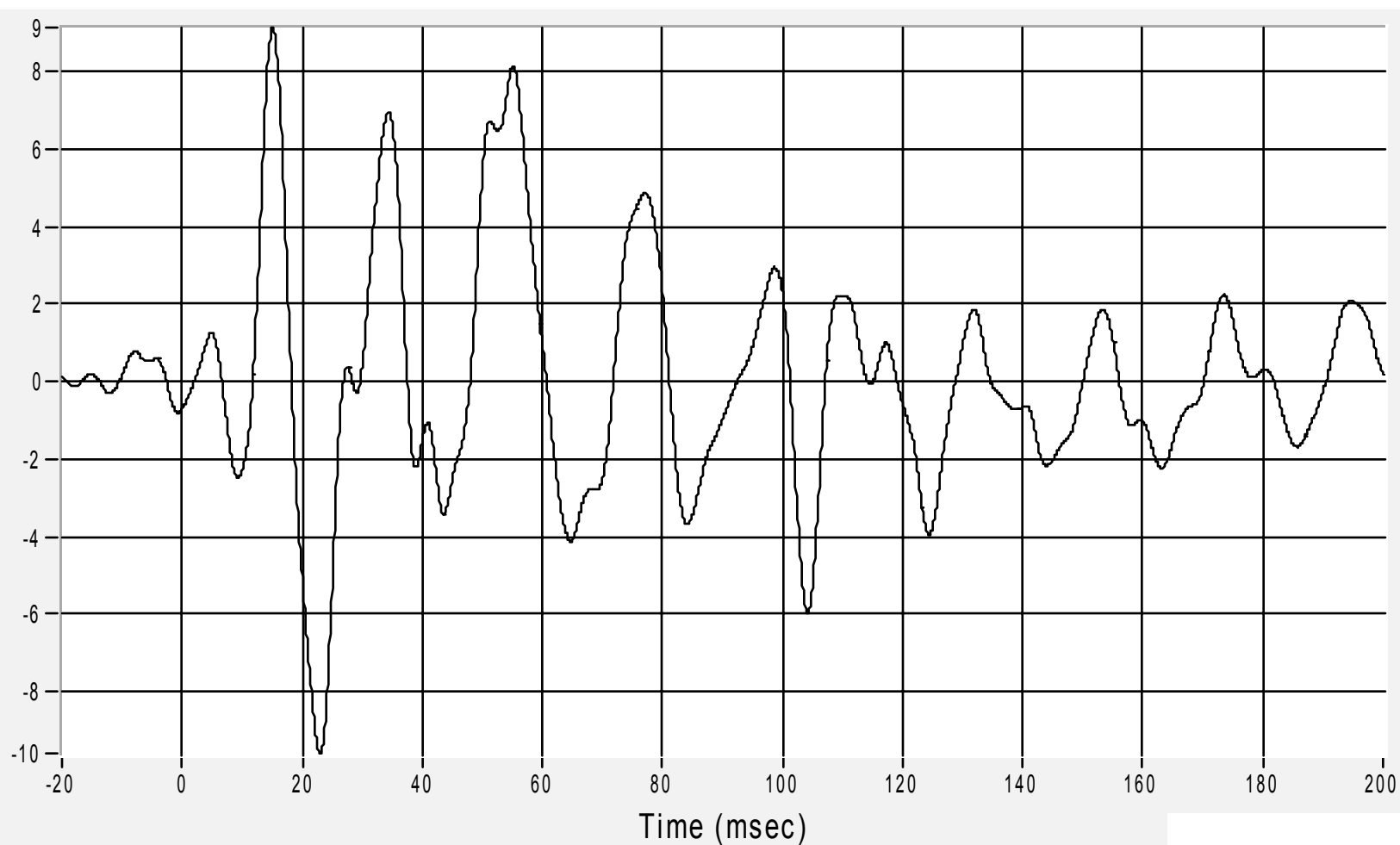
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

MDB Center of Gravity (Z) Acceleration

Acceleration (G's) CFC60

Max 9.2 G at 15.1 msec

Min -9.6 G at 23.0 msec



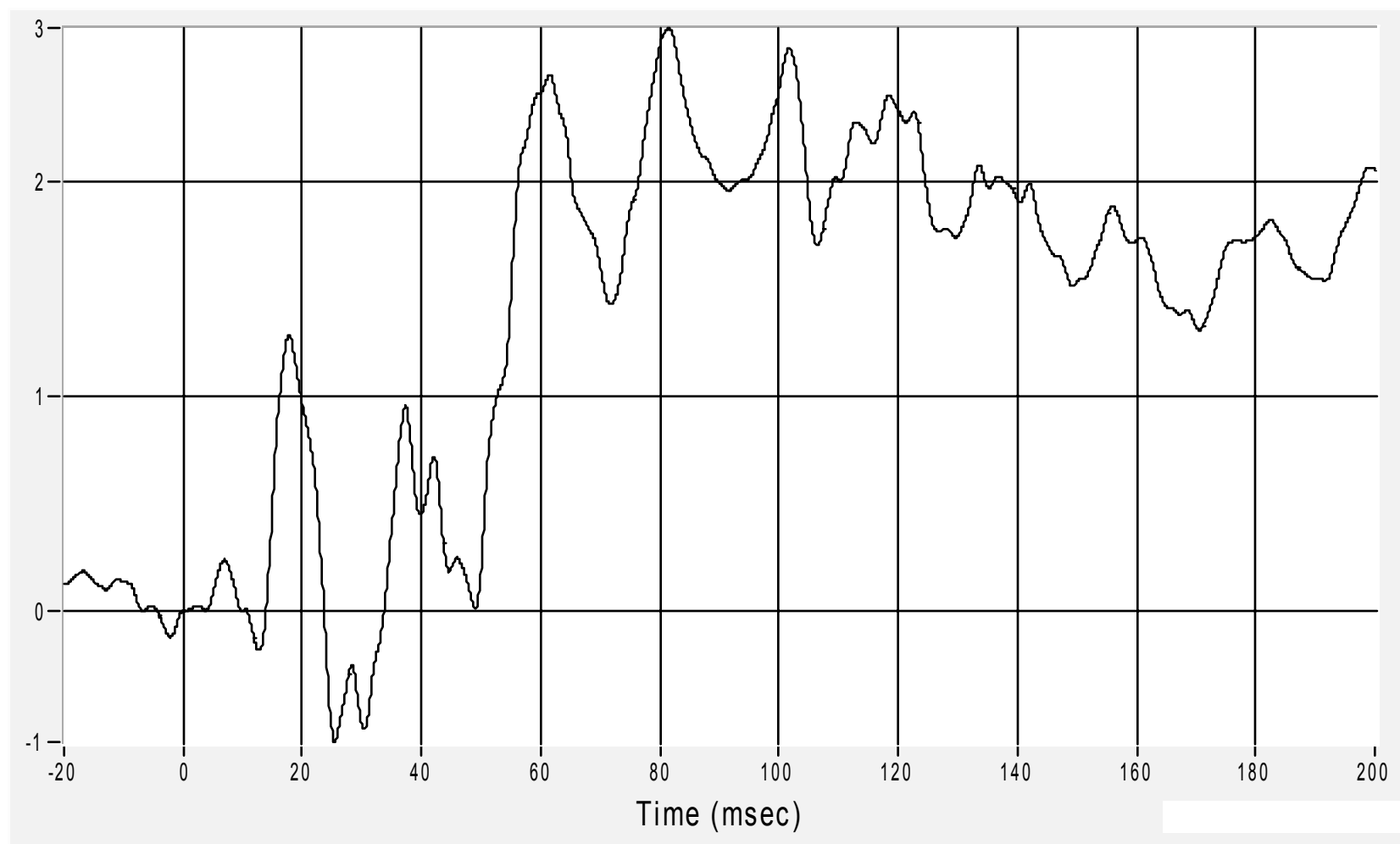
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

MDB Center of Gravity (Z) Velocity

Velocity (km/h) CFC180

Max 2.7 km/h at 81.4 msec**Min -0.6 km/h at 25.4 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

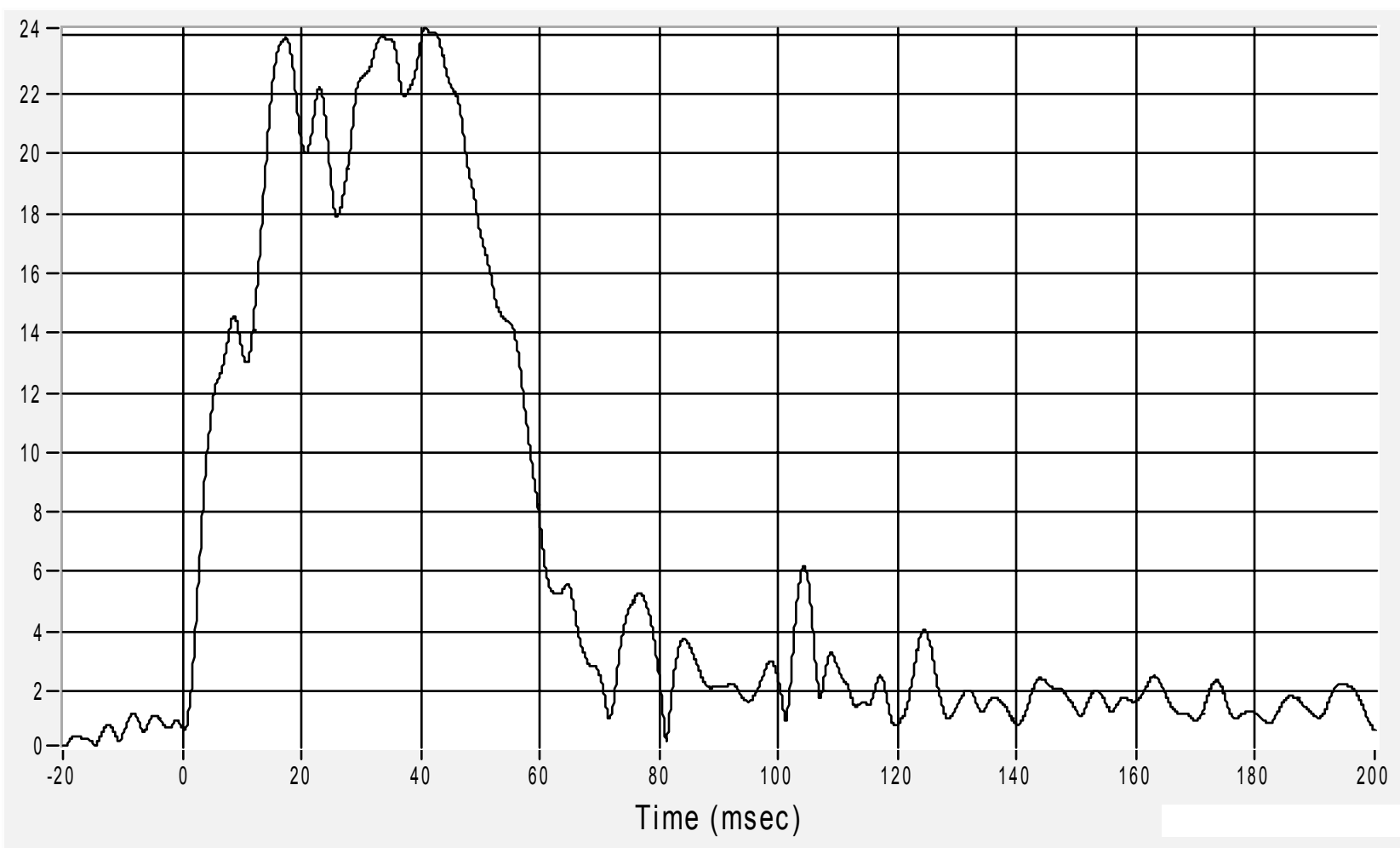
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

MDB Center of Gravity Resultant Acceleration

Acceleration (G's) CFC60

Max 24.2 G's at 40.8 msec

Min 0.3 G's at 81.2 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

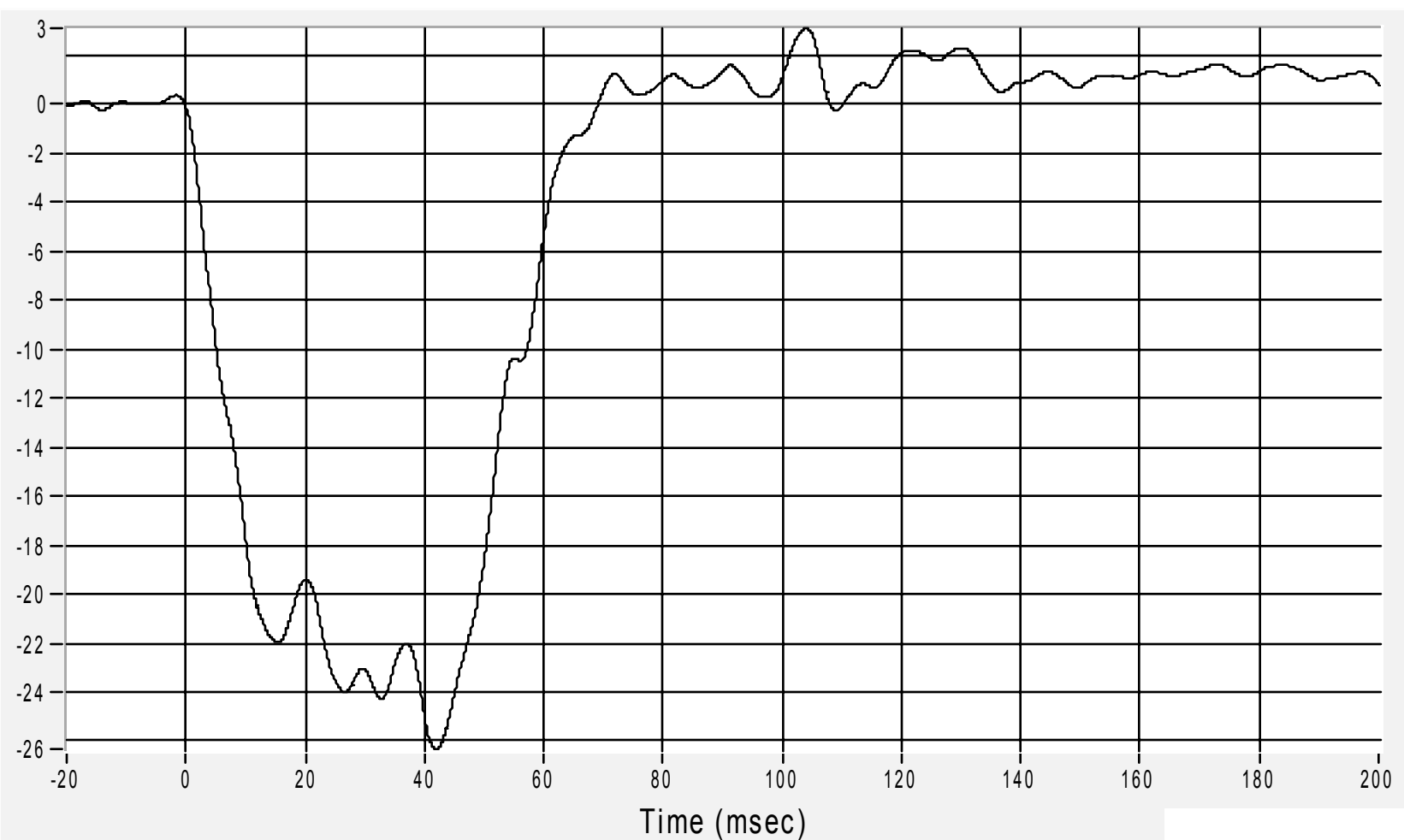
Medical College of Wisconsin
Vehicle Crashworthiness Lab

MDB Rear (X) Acceleration

Acceleration (G's) CFC60

Max 3.1 G at 104.0 msec

Min -26.3 G at 41.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

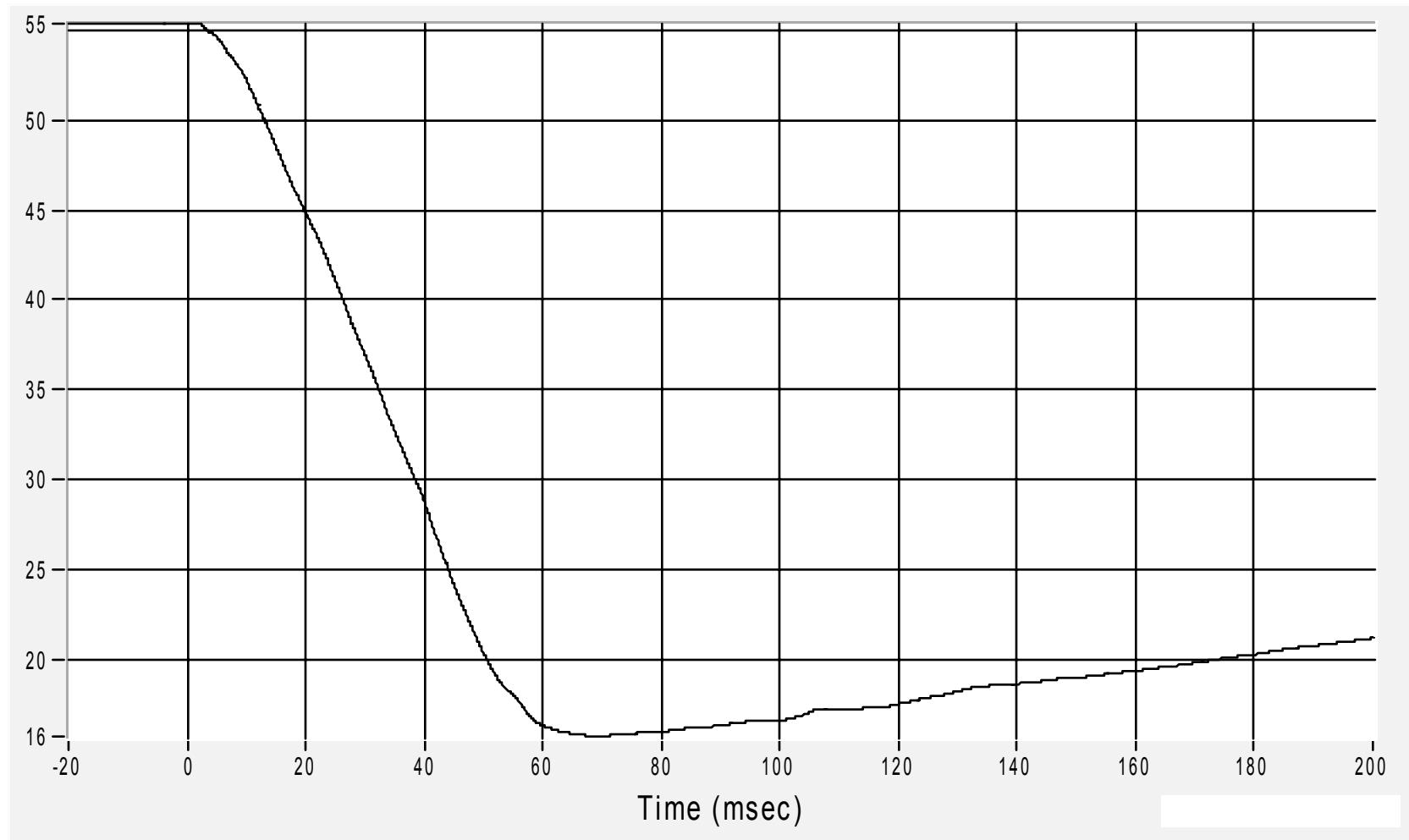
Medical College of Wisconsin
Vehicle Crashworthiness Lab

MDB Rear (X) Velocity

Velocity (km/h) CFC180

Max 55.4 km/h at 1.5 msec

Min 15.7 km/h at 68.6 msec



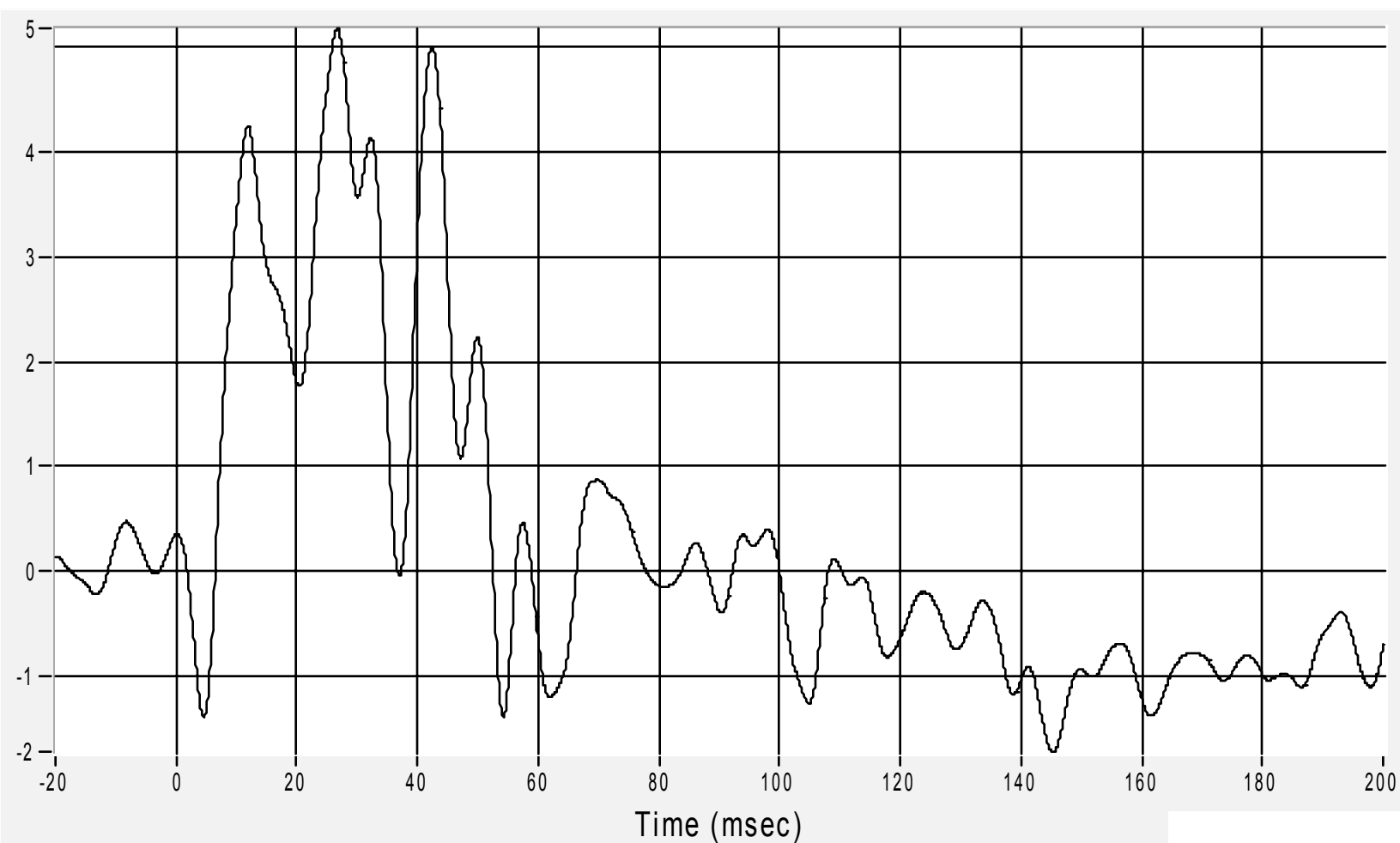
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

MDB Rear (Y) Acceleration

Acceleration (G's) CFC60

Max 5.2 G at 26.7 msec**Min -1.7 G at 145.4 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

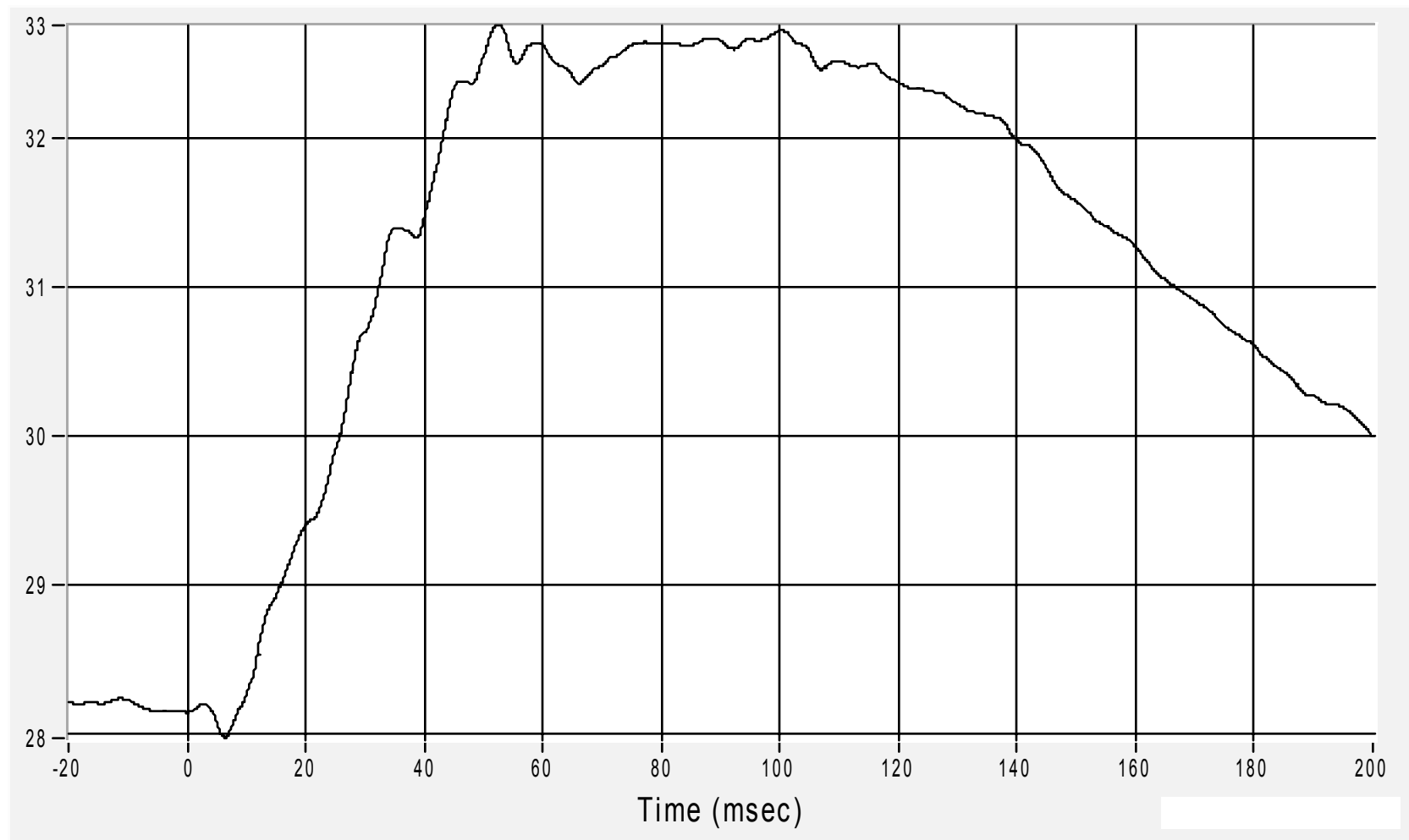
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

MDB Rear (Y) Velocity

Velocity (km/h) CFC180

Max 32.8 km/h at 52.5 msec

Min 28.0 km/h at 6.4 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

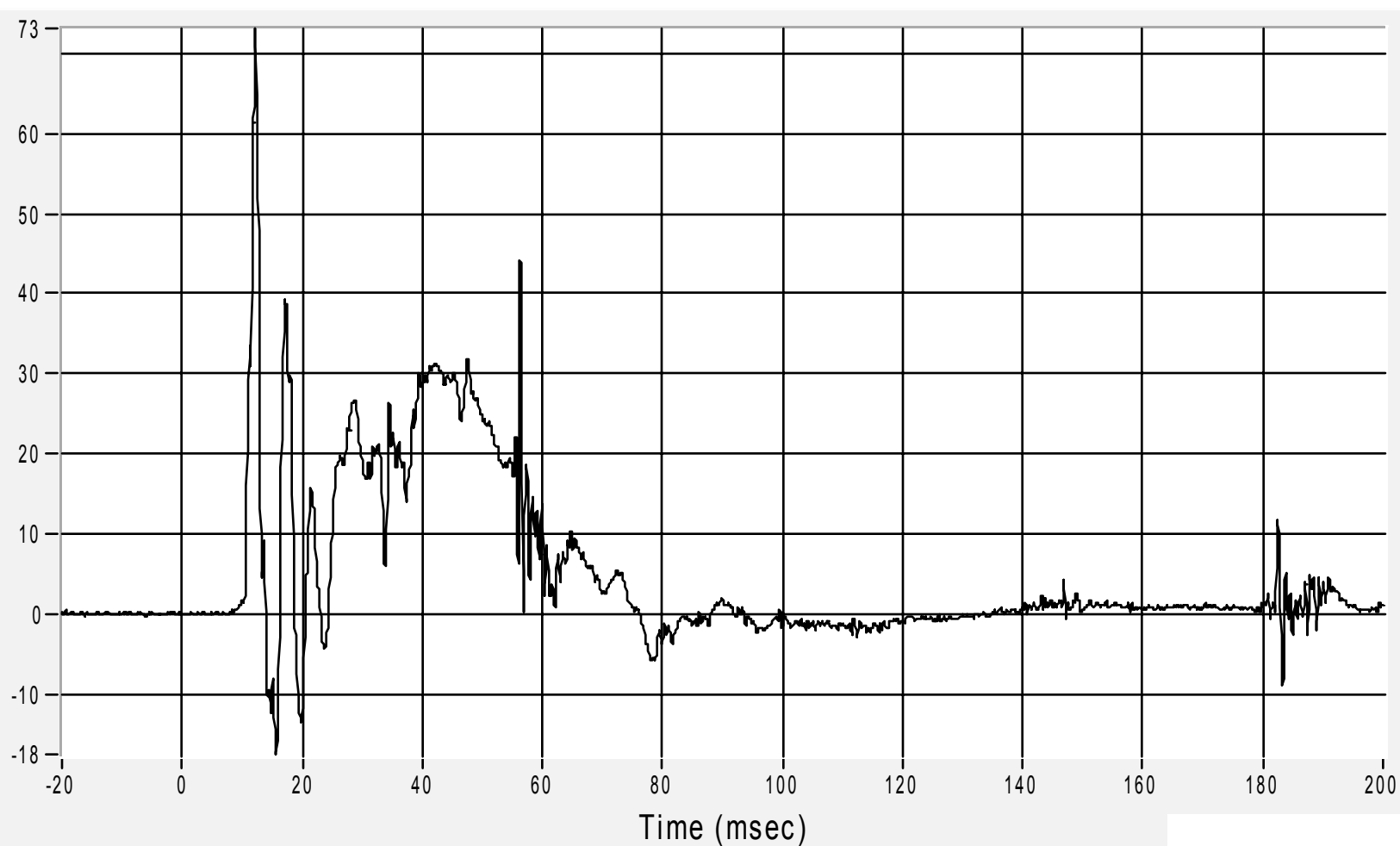
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Upper Rib (Y) - Redundant Acceleration

Acceleration (G's) CFC1000

Max 73.1 G at 12.2 msec

Min -17.5 G at 15.7 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

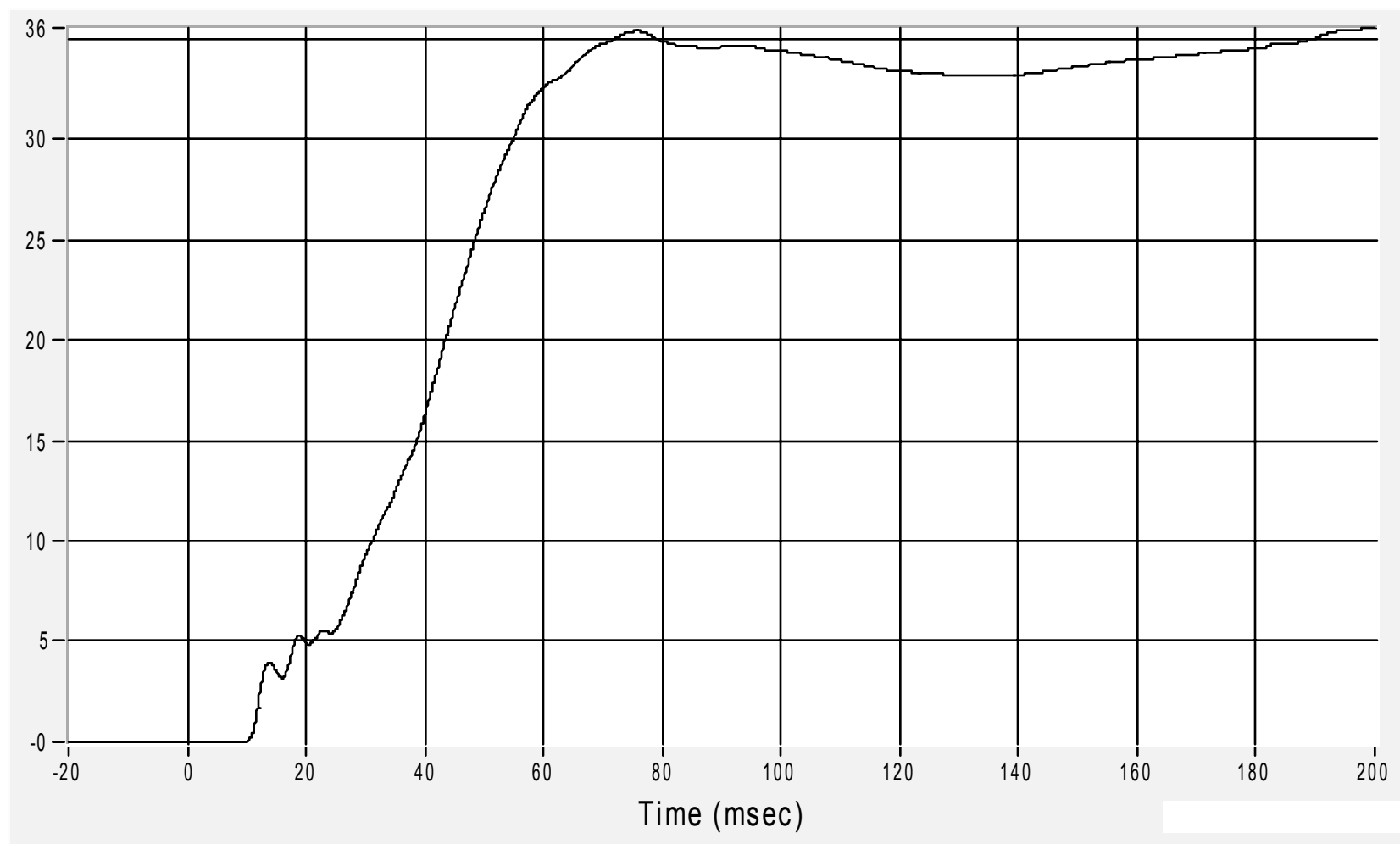
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Upper Rib (Y) Velocity - Redundant

Velocity (km/h) CFC180

Max 35.5 km/h at 199.9 msec

Min 0.0 km/h at 9.6 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

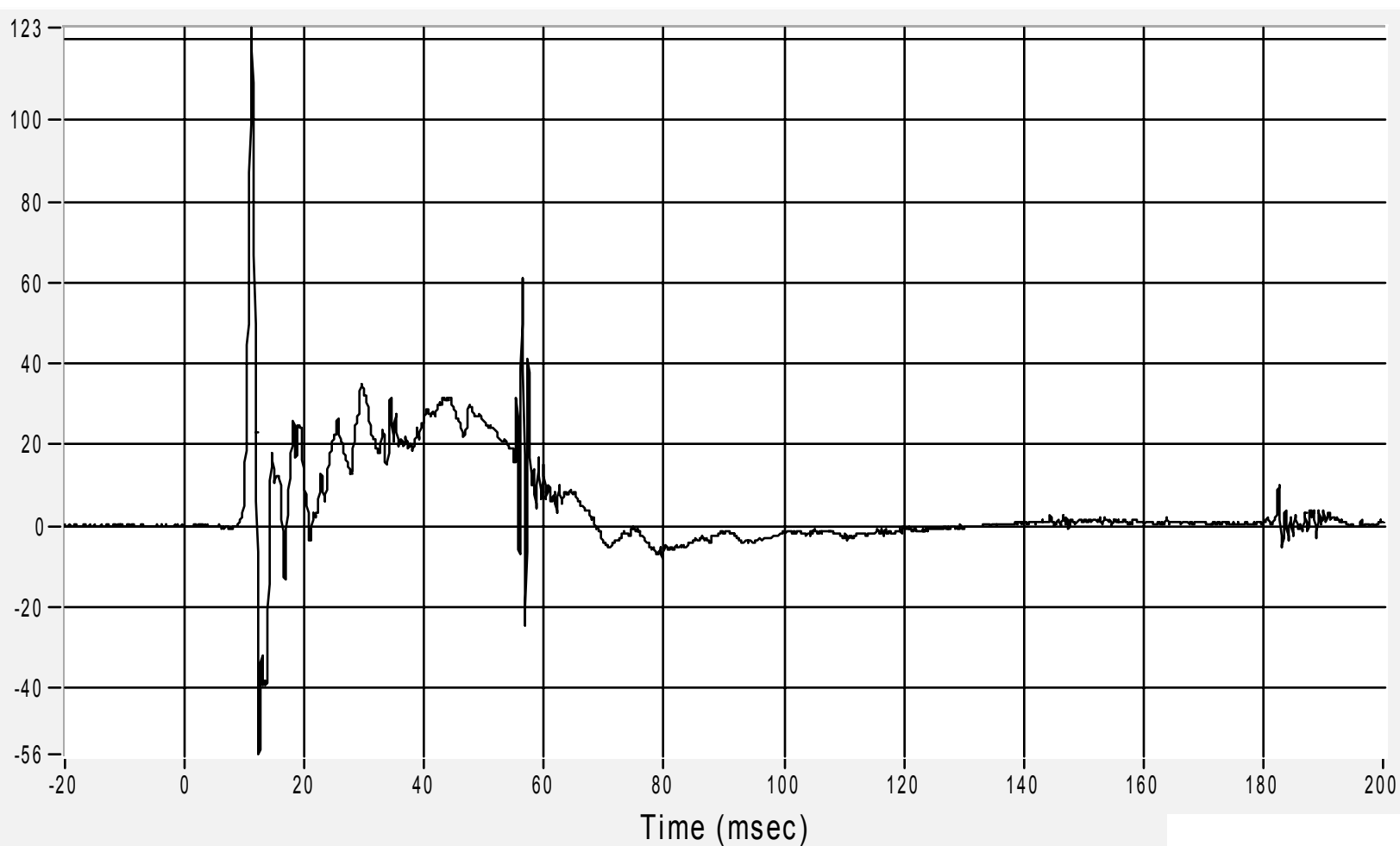
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Lower Rib (Y) - Redundant Acceleration

Acceleration (G's) CFC1000

Max 122.9 G at 11.2 msec

Min -56.3 G at 12.4 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

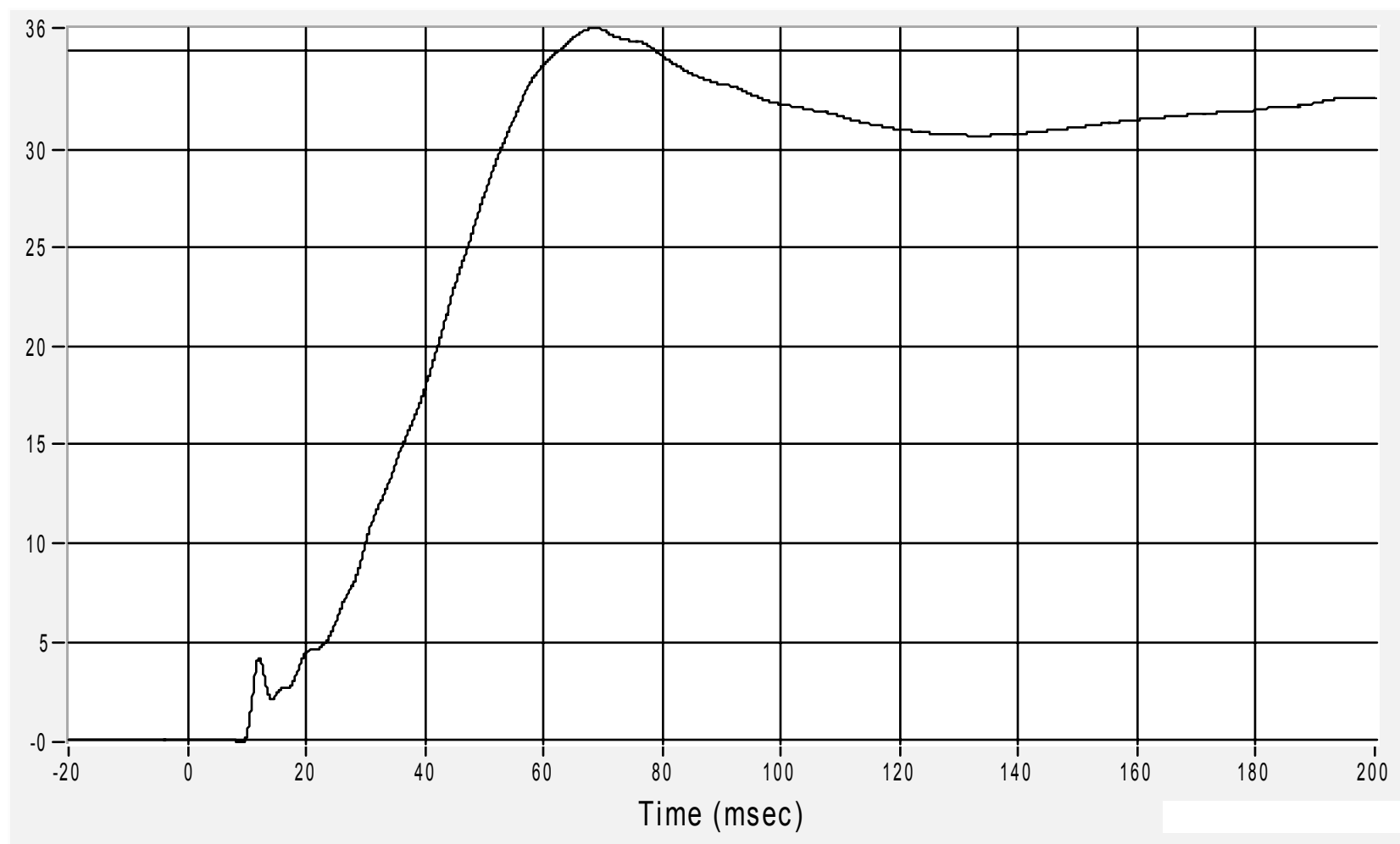
B-125

Driver Lower Rib (Y) Velocity - Redundant

Velocity (km/h) CFC180

Max 36.2 km/h at 68.6 msec

Min -0.1 km/h at 9.1 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

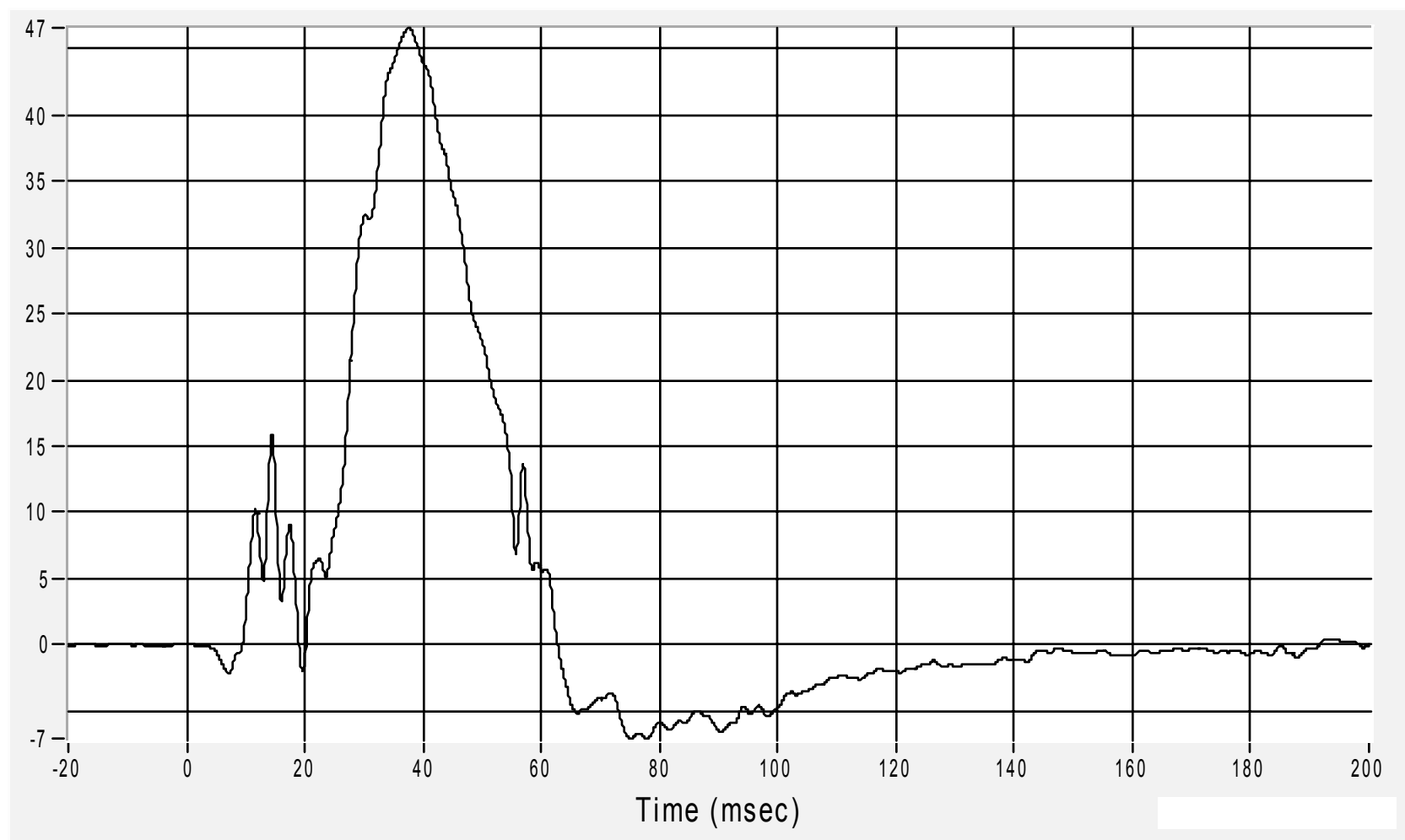
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Lower Spine (Y) - Redundant Acceleration

Acceleration (G's) CFC180

Max 46.6 G at 37.6 msec

Min -7.1 G at 77.9 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

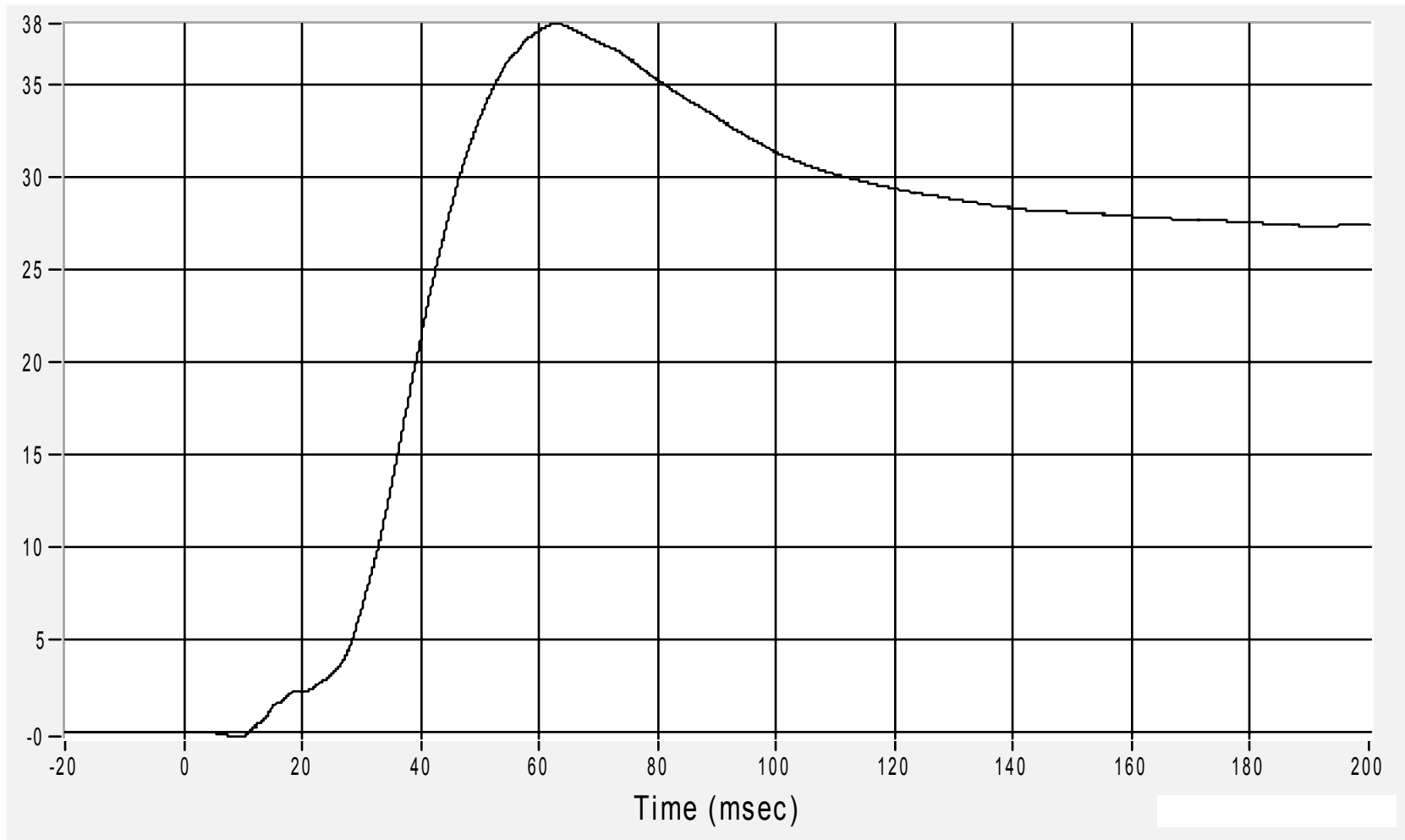
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Lower Spine (Y) Velocity - Redundant

Velocity (km/h) CFC180

Max 38.3 km/h at 62.7 msec

Min -0.2 km/h at 9.4 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

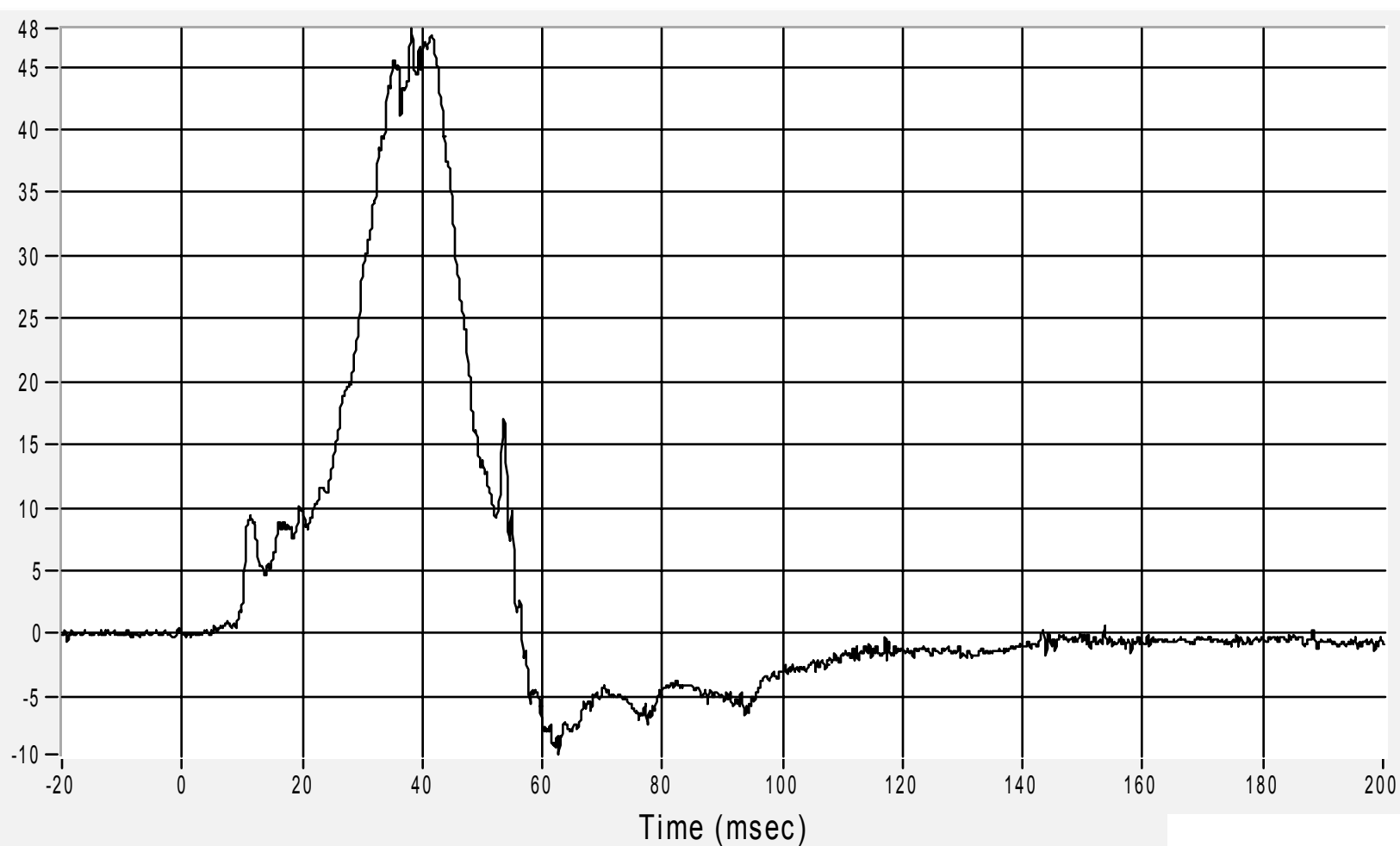
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Pelvic (Y) - Redundant Acceleration

Acceleration (G's) CFC1000

Max 48.0 G at 38.2 msec

Min -9.6 G at 62.7 msec



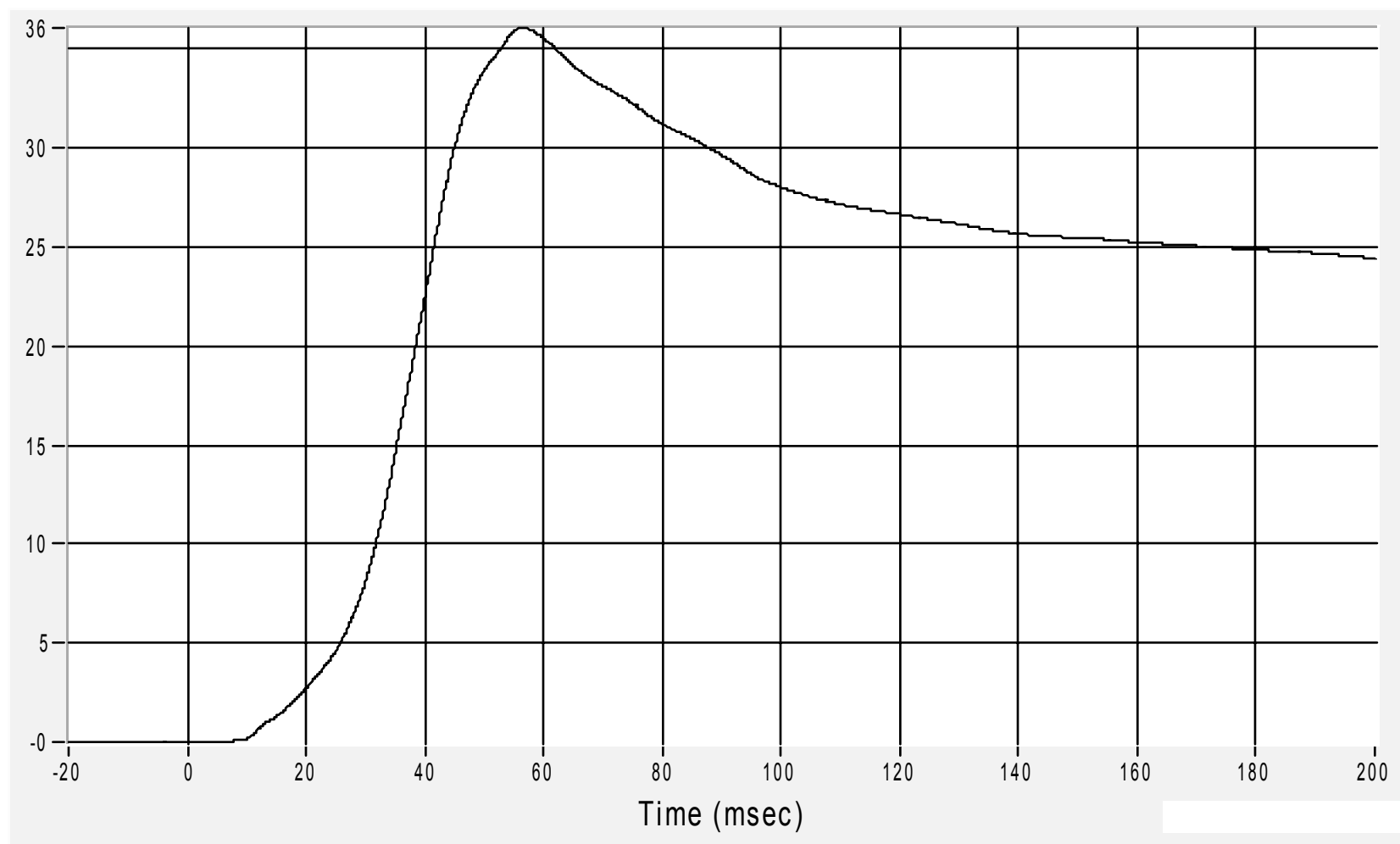
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Pelvic (Y) Velocity - Redundant

Velocity (km/h) CFC180

Max 36.1 km/h at 56.5 msec**Min 0.0 km/h at 3.1 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

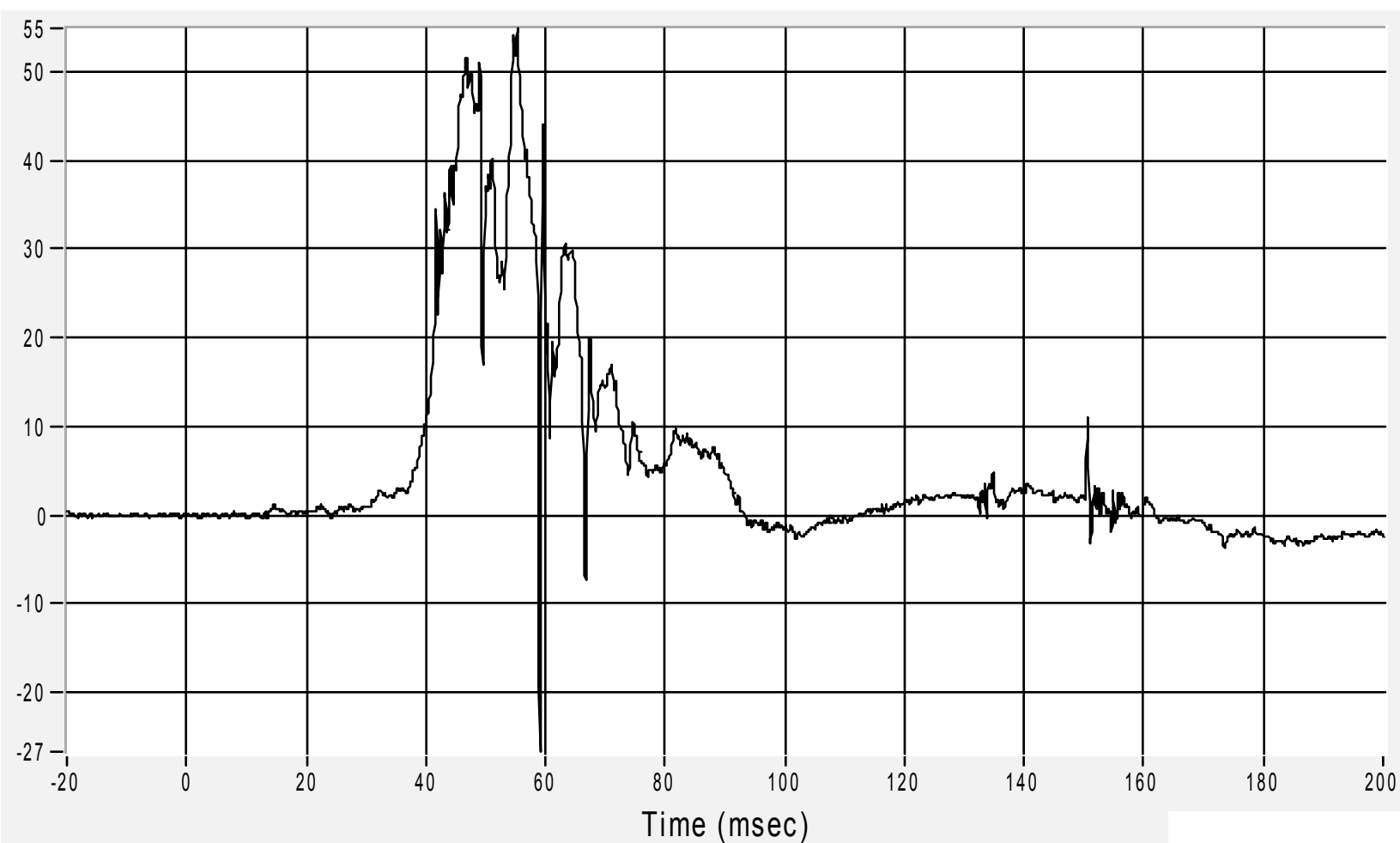
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Passenger Upper Rib (Y) - Redundant Acceleration

Acceleration (G's) CFC1000

Max 54.9 G at 55.3 msec

Min -26.7 G at 59.0 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

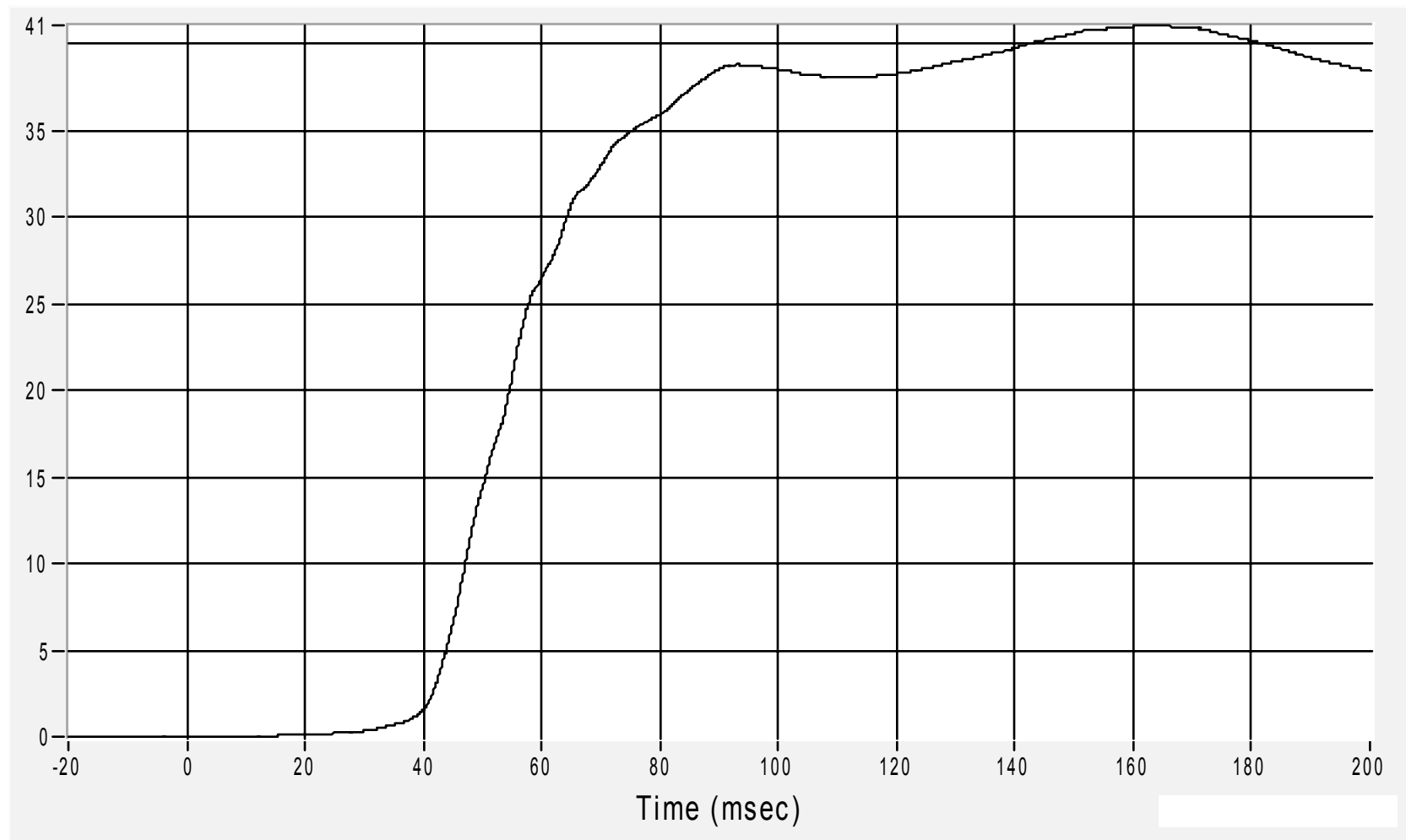
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Upper Rib (Y) Velocity - Redundant

Velocity (km/h) CFC180

Max 41.1 km/h at 162.0 msec

Min 0.0 km/h at 0.0 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

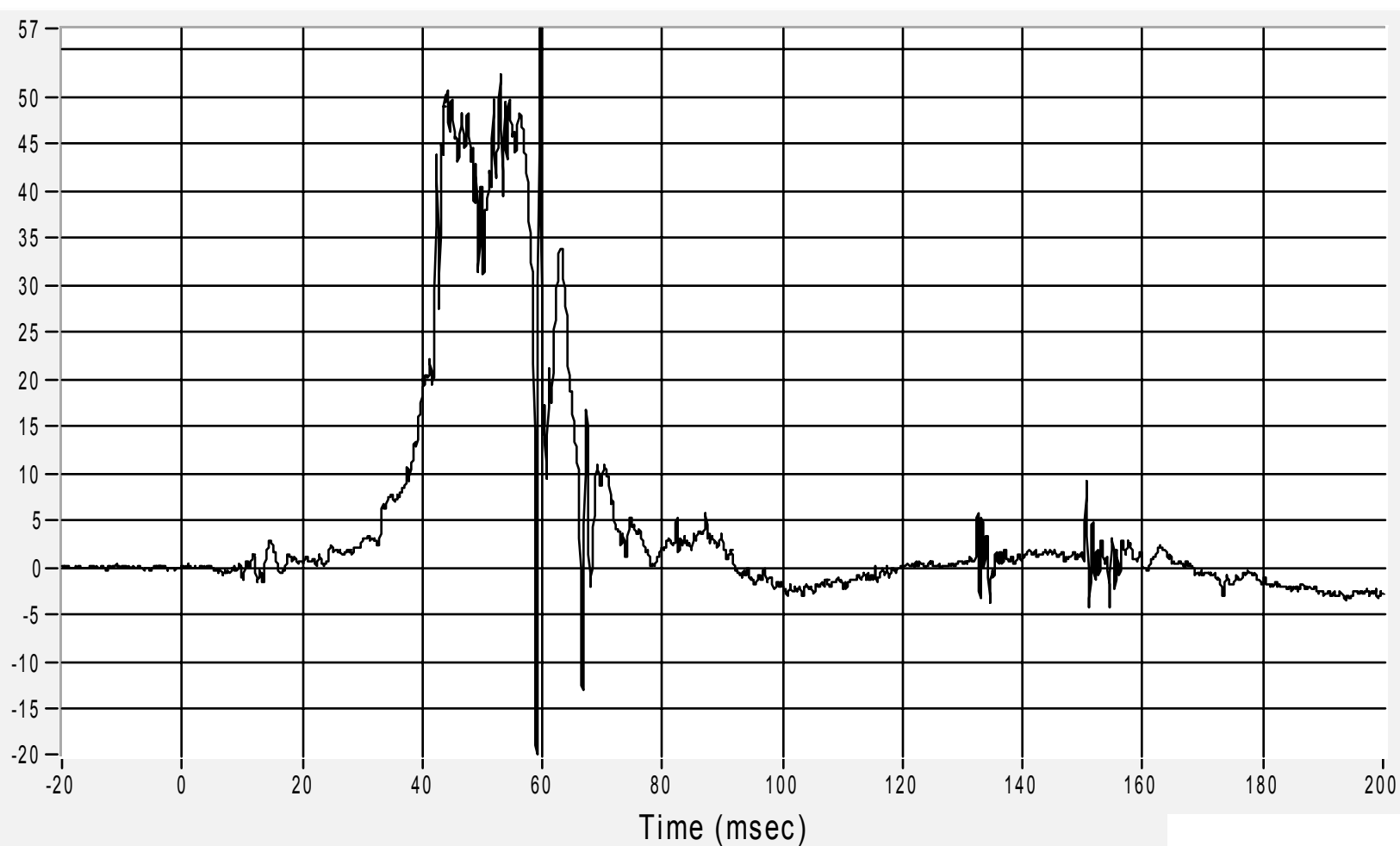
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Lower Rib (Y) - Redundant Acceleration

Acceleration (G's) CFC1000

Max 57.3 G at 59.6 msec

Min -19.8 G at 59.0 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

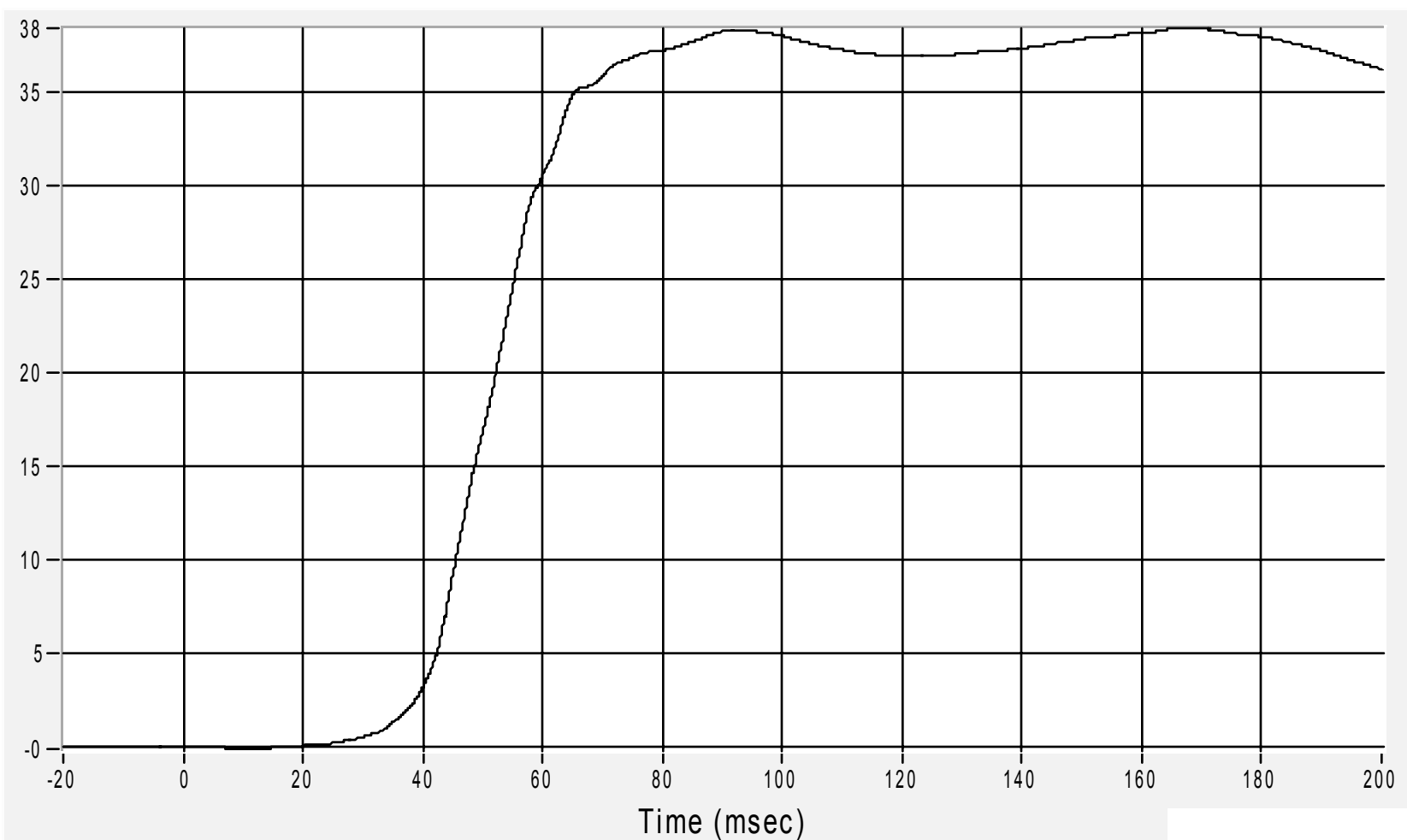
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Lower Rib (Y) Velocity - Redundant

Velocity (km/h) CFC180

Max 38.4 km/h at 168.0 msec

Min -0.1 km/h at 13.6 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

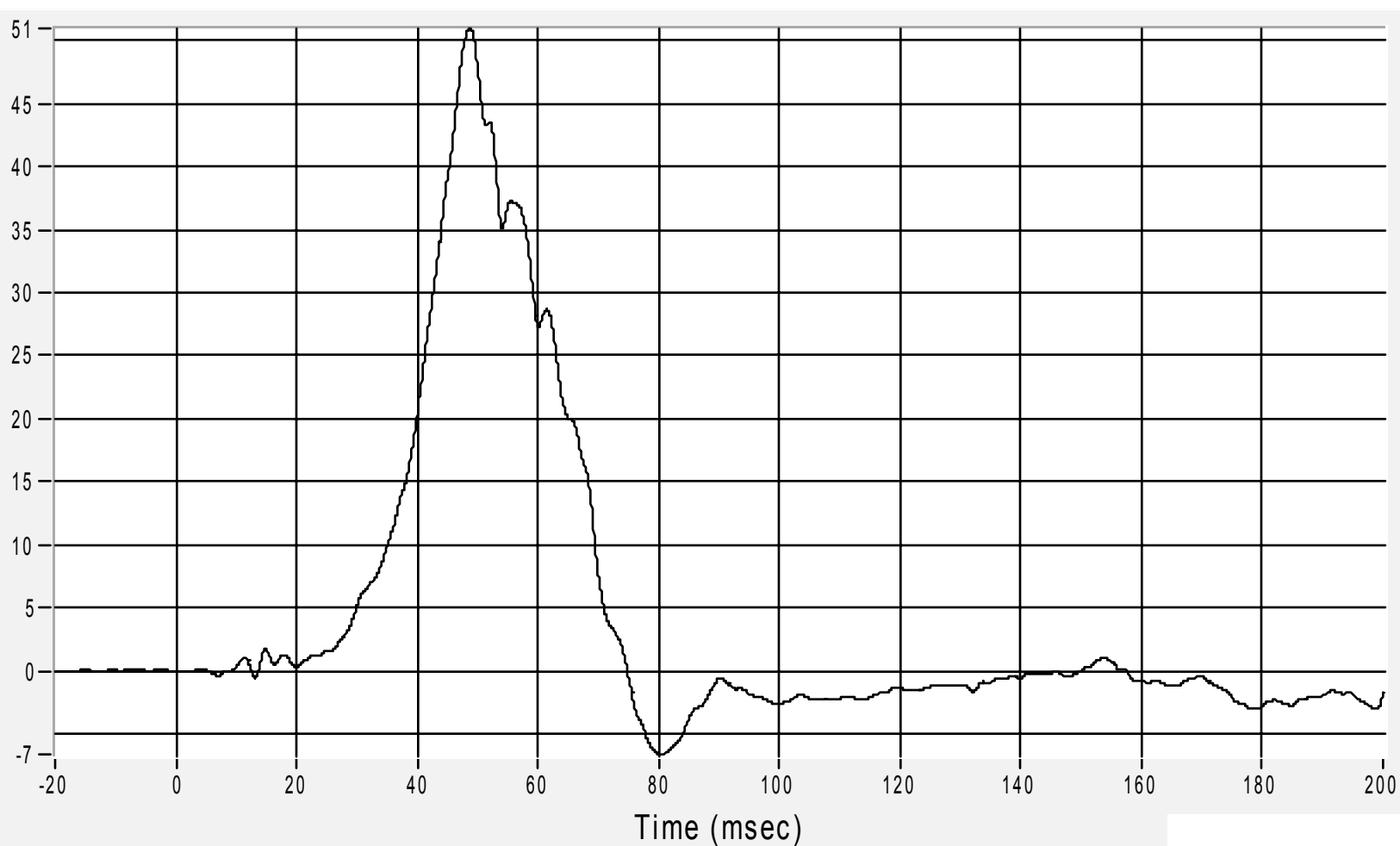
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Passenger Lower Spine (Y) - Redundant Acceleration

Acceleration (G's) CFC180

Max 51.0 G at 48.8 msec

Min -6.6 G at 80.4 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

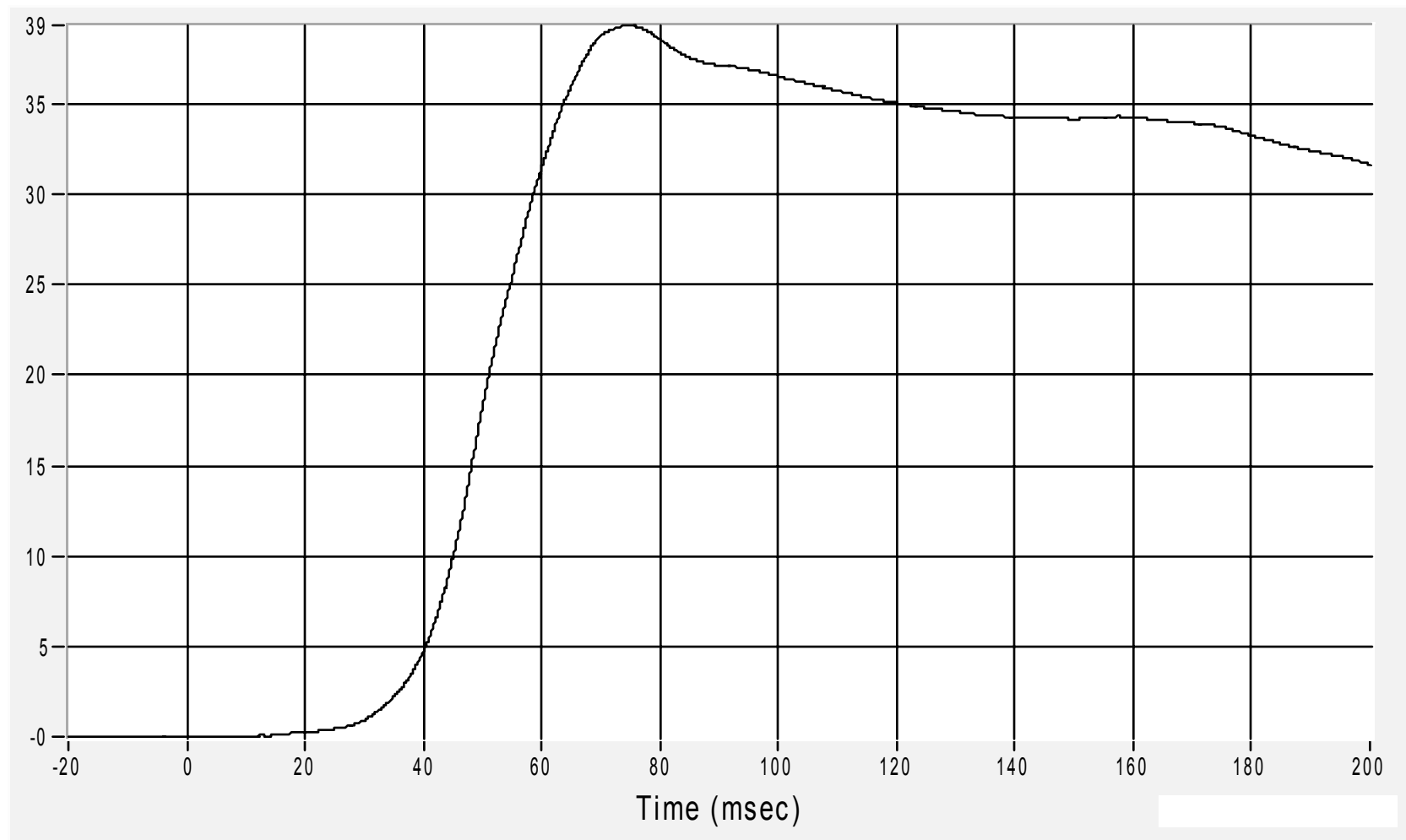
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Lower Spine (Y) Velocity - Redundant

Velocity (km/h) CFC180

Max 39.4 km/h at 74.8 msec

Min 0.0 km/h at 9.2 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

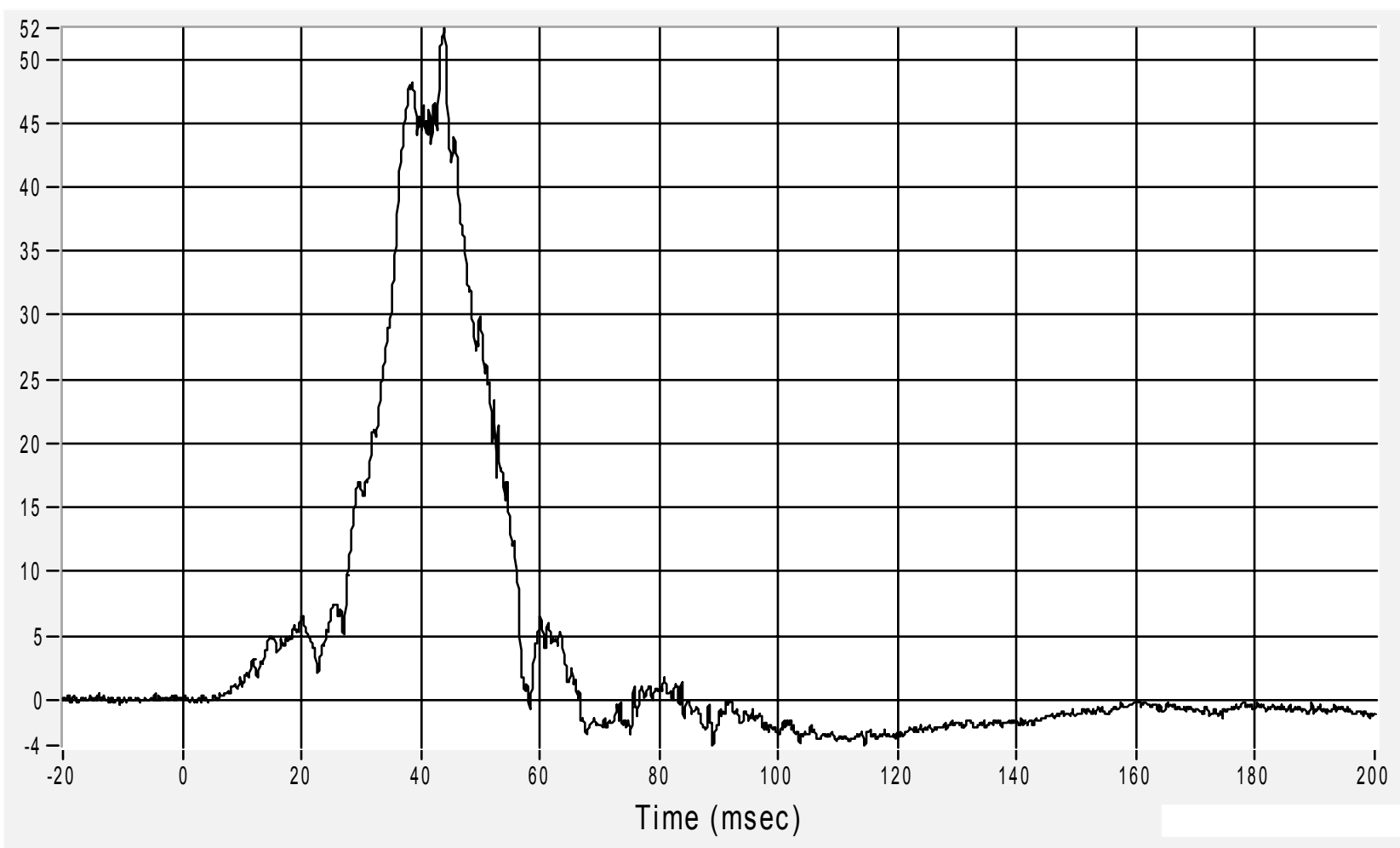
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Pelvic (Y) - Redundant Acceleration

Acceleration (G's) CFC1000

Max 52.4 G at 43.9 msec

Min -3.6 G at 114.5 msec



05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

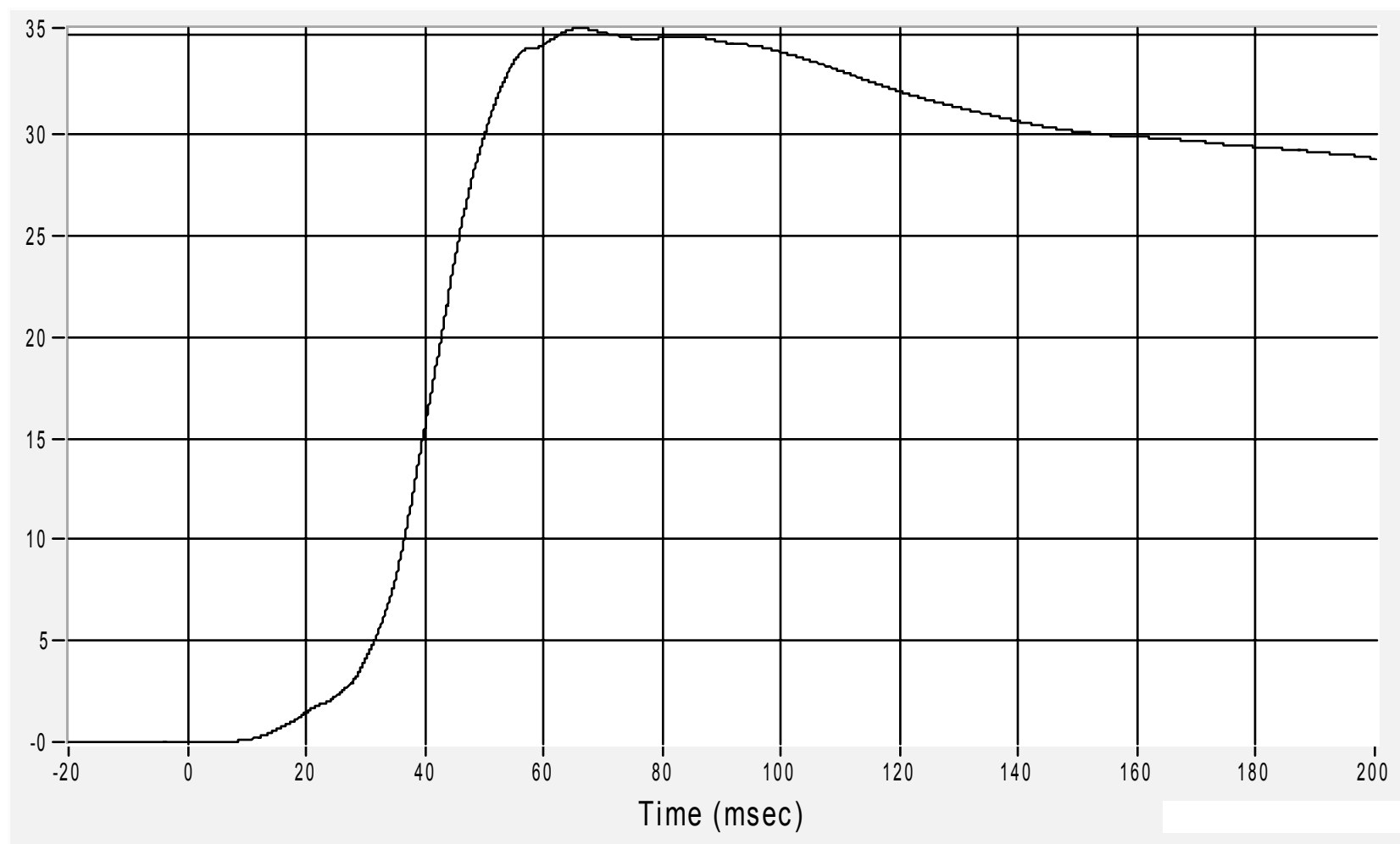
Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Pelvic (Y) Velocity - Redundant

Velocity (km/h) CFC180

Max 35.3 km/h at 66.4 msec

Min 0.0 km/h at 2.9 msec



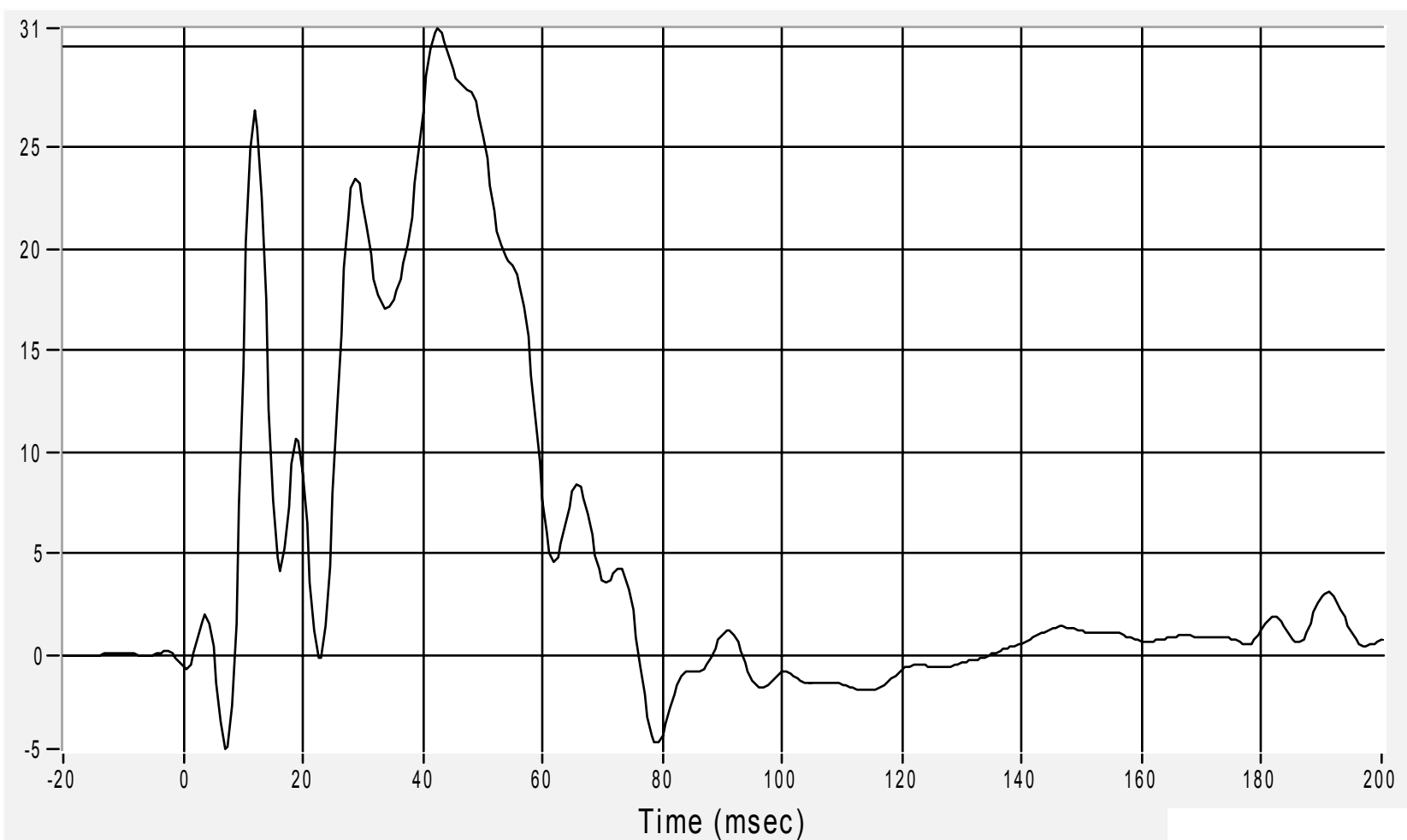
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Driver Upper Rib (Y) - Redundant Acceleration

Acceleration (G's) FIR100

Max 30.9 G at 42.5 msec**Min -4.7 G at 6.9 msec**

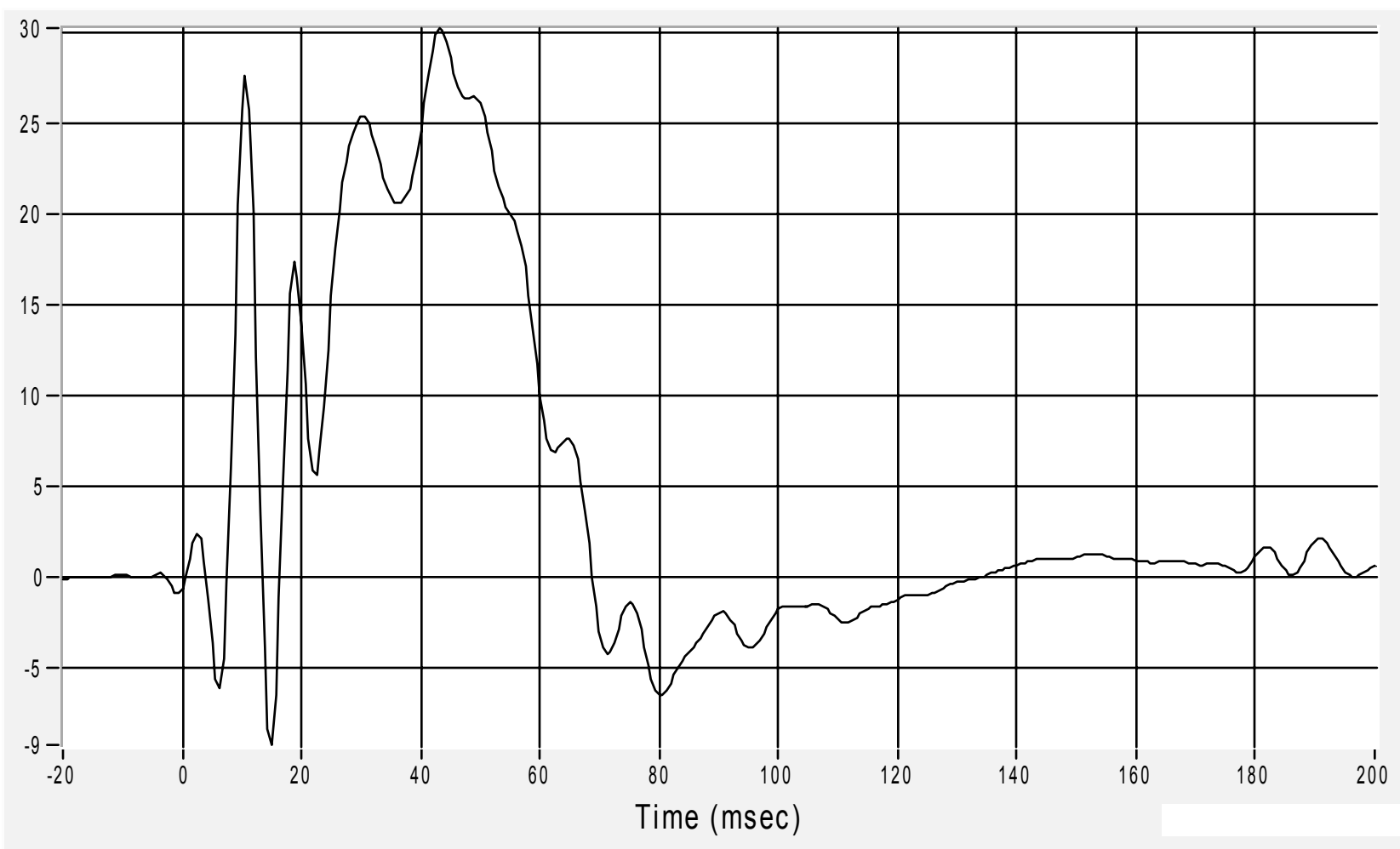
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Driver Lower Rib (Y) - Redundant Acceleration

Acceleration (G's) FIR100

Max 30.2 G at 43.1 msec**Min -9.2 G at 15.0 msec**

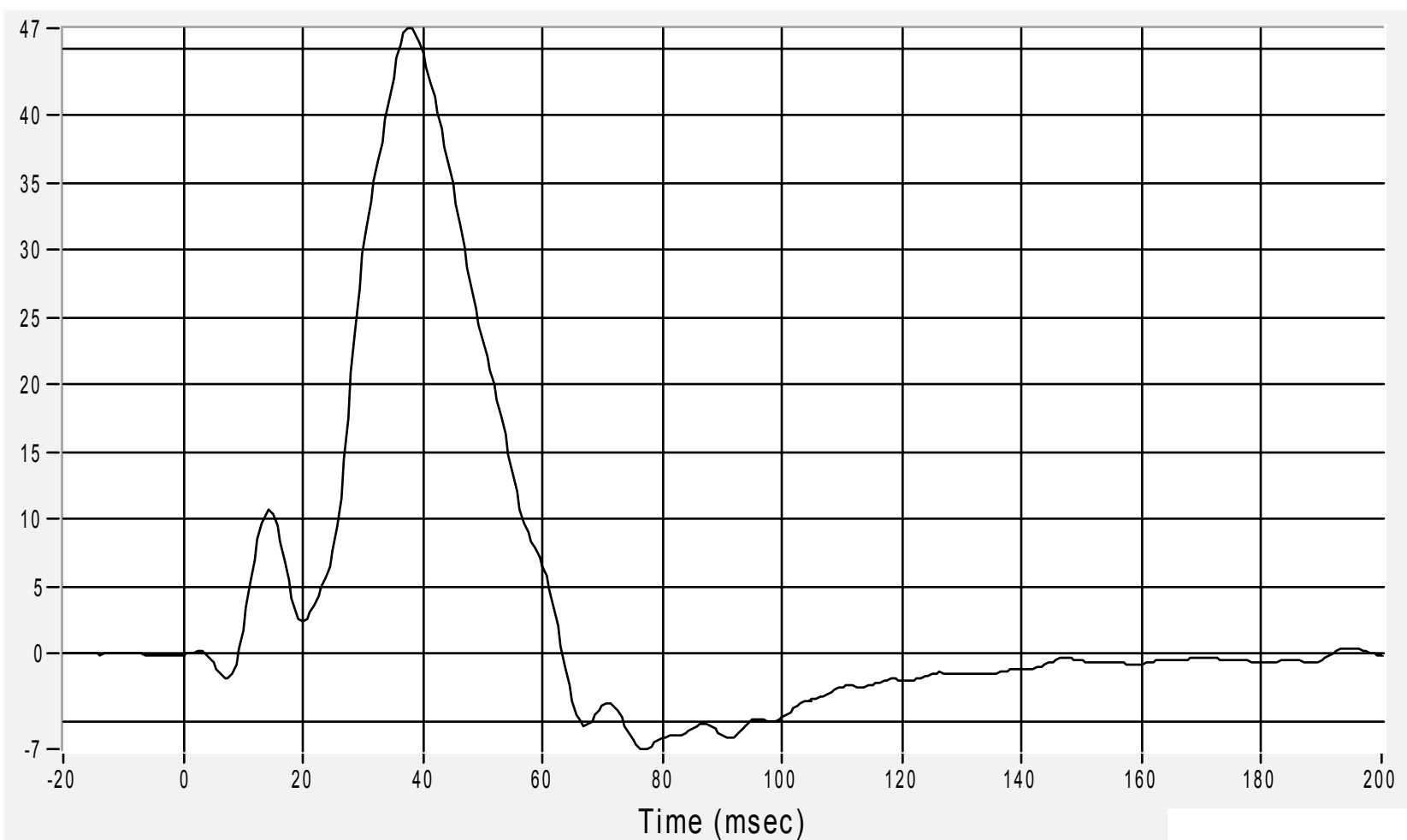
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Driver Lower Spine (Y) - Redundant Acceleration

Acceleration (G's) FIR100

Max 46.5 G at 37.5 msec**Min -7.1 G at 76.9 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

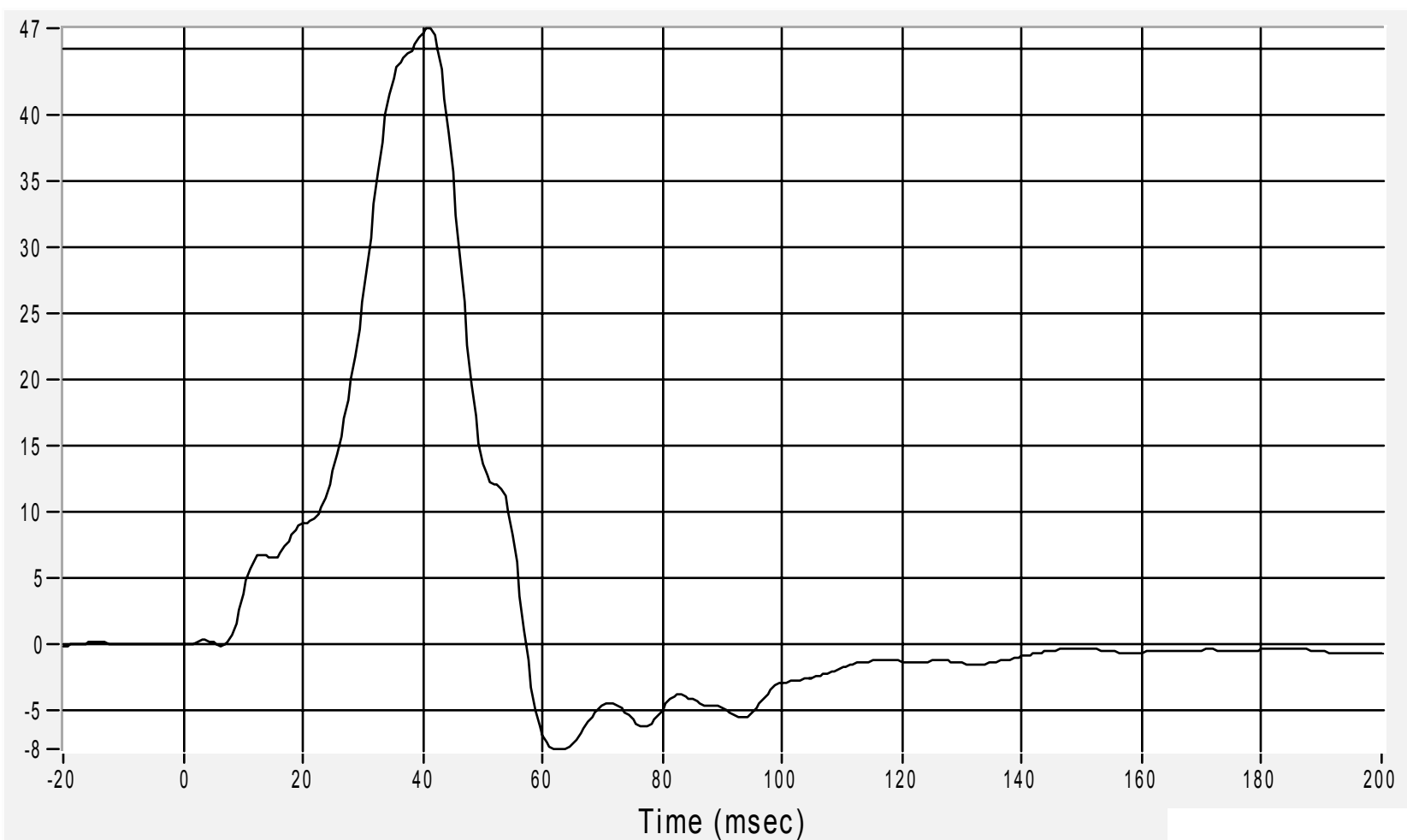
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Driver Pelvic (Y) - Redundant Acceleration

Acceleration (G's) FIR100

Max 46.5 G at 40.6 msec

Min -8.0 G at 63.1 msec



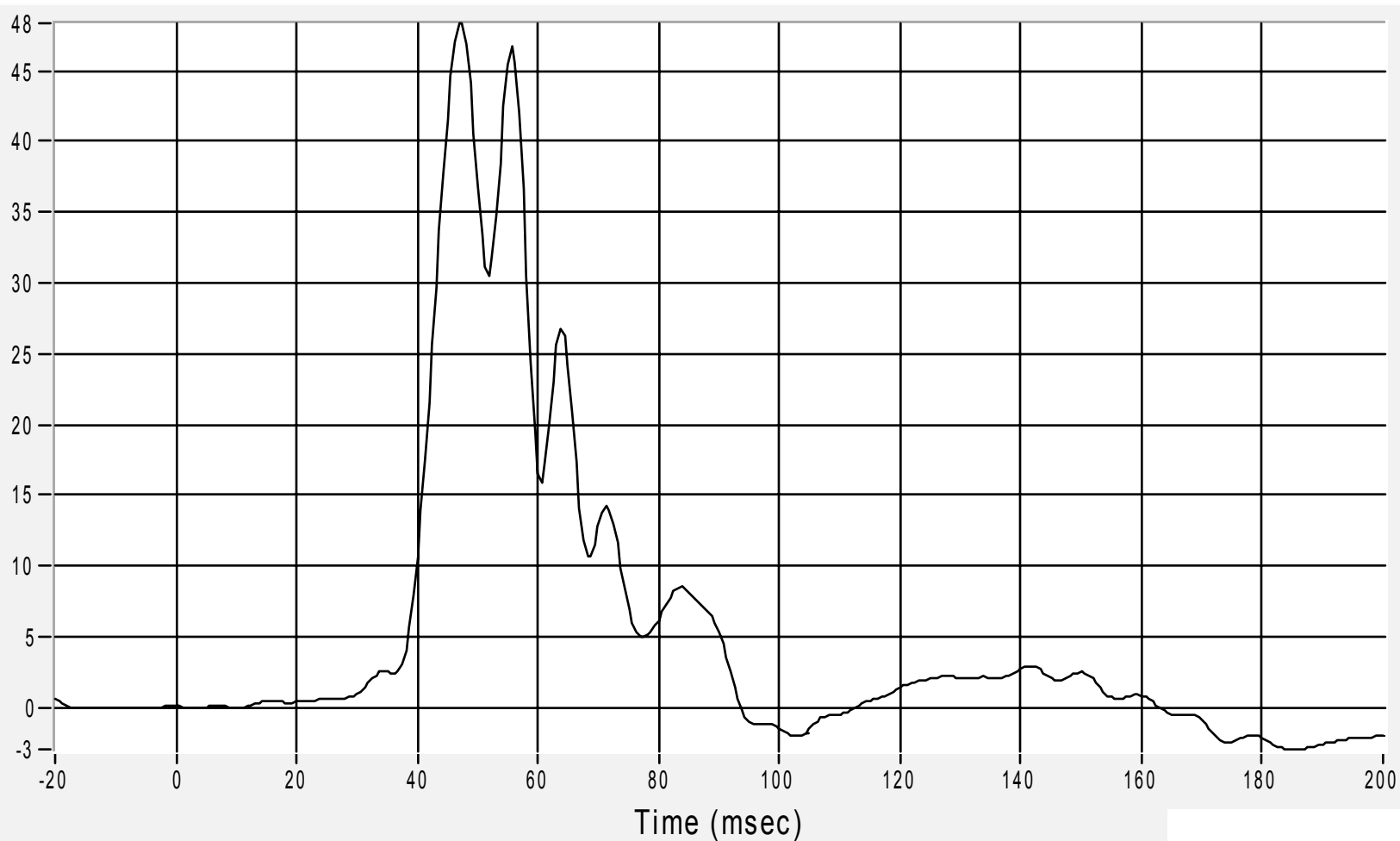
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Upper Rib (Y) - Redundant Acceleration

Acceleration (G's) FIR100

Max 48.4 G at 46.9 msec**Min -3.0 G at 185.0 msec**

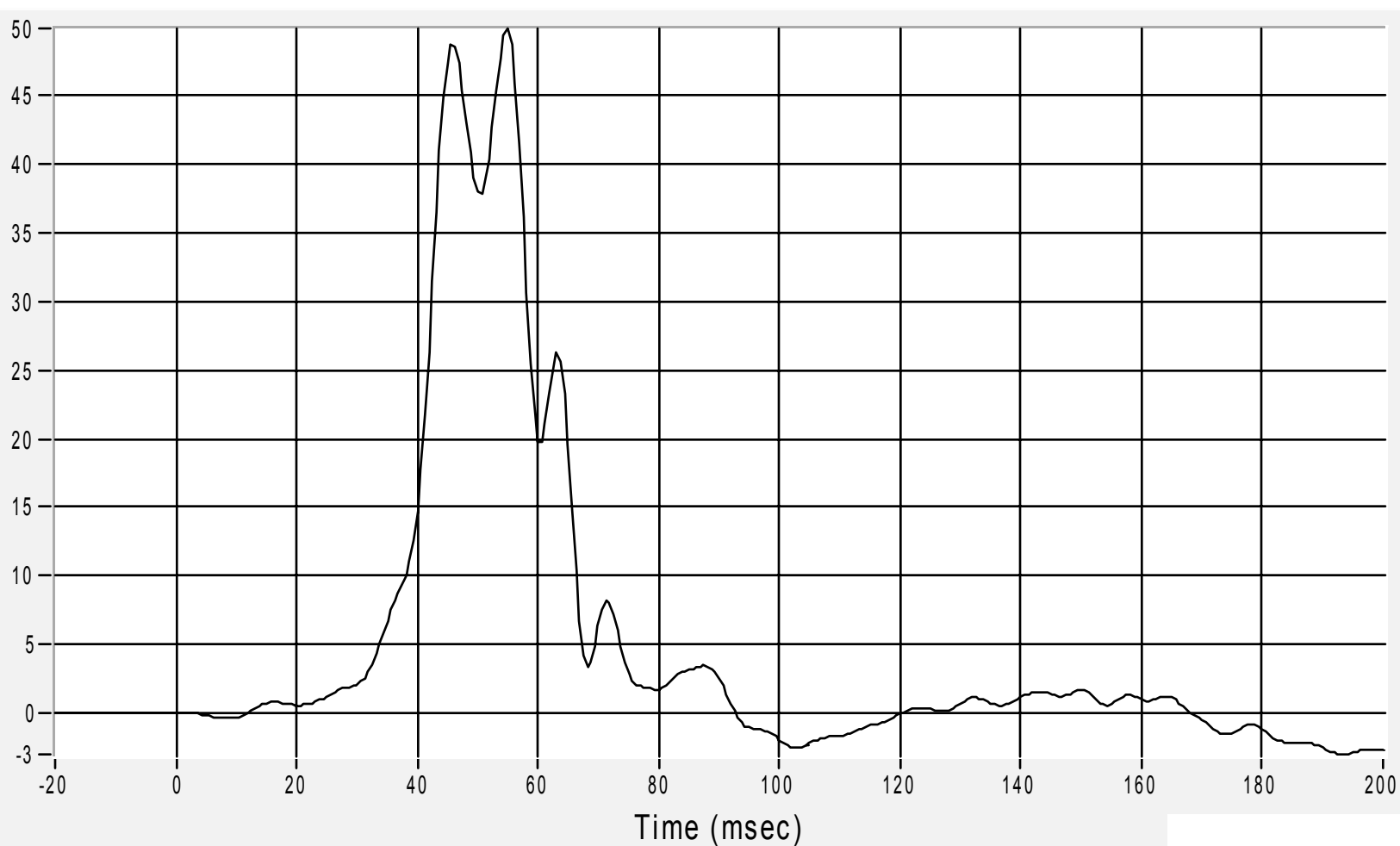
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Passenger Lower Rib (Y) - Redundant Acceleration

Acceleration (G's) FIR100

Max 49.9 G at 55.0 msec**Min -3.0 G at 193.1 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

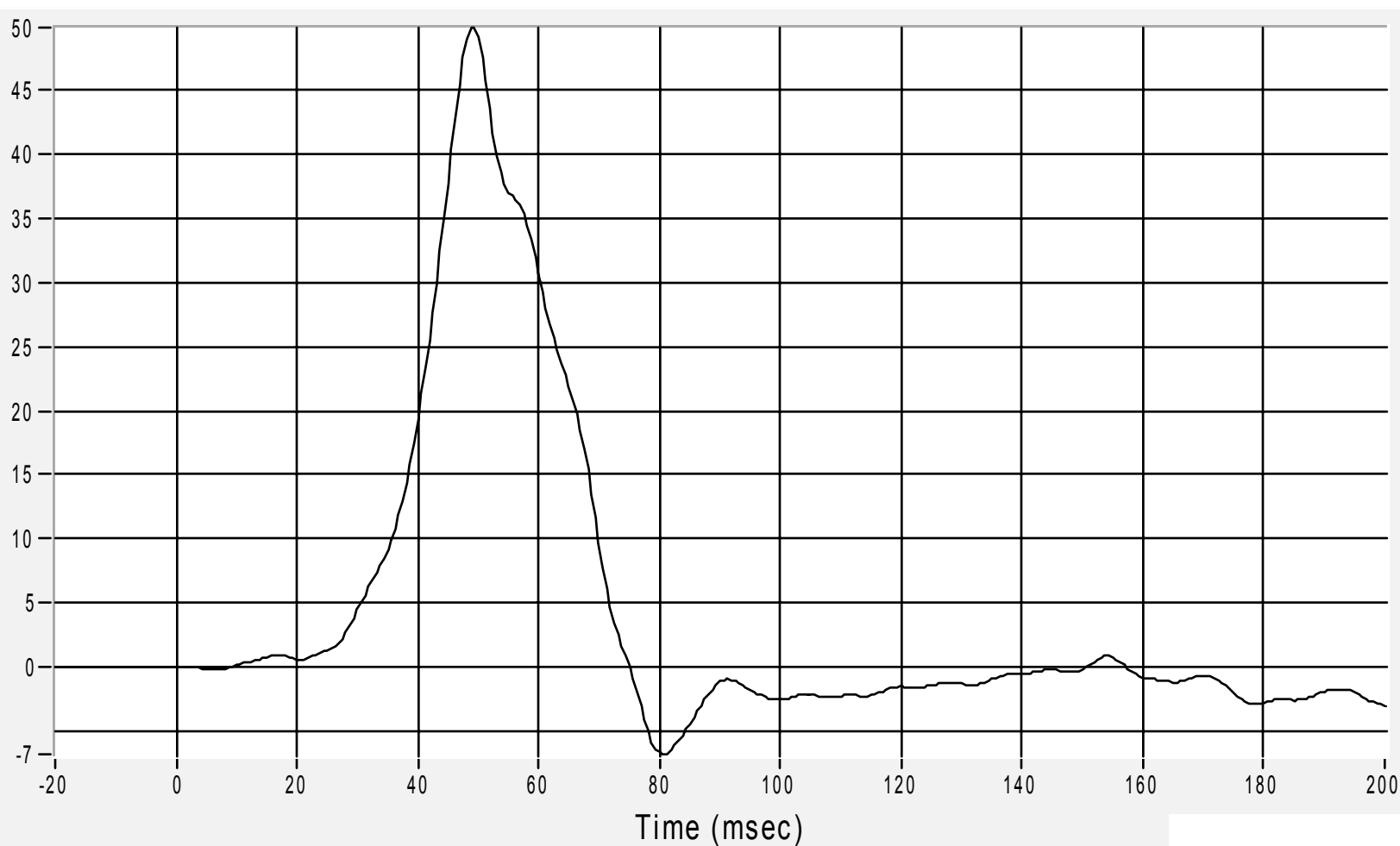
*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

Passenger Lower Spine (Y) - Redundant Acceleration

Acceleration (G's) FIR100

Max 49.8 G at 49.4 msec

Min -6.8 G at 80.6 msec



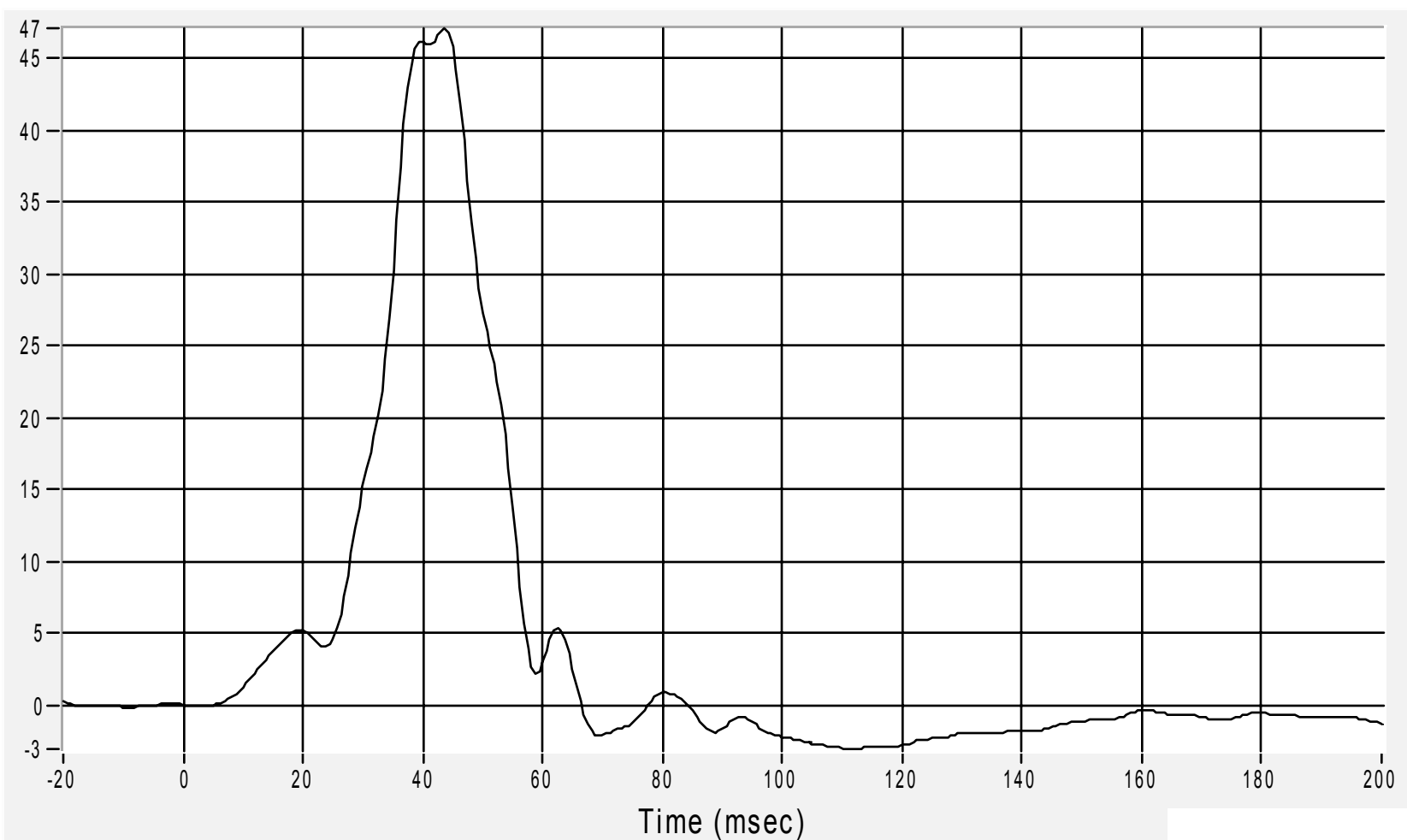
05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

Medical College of Wisconsin
Vehicle Crashworthiness Lab

Passenger Pelvic (Y) - Redundant Acceleration

Acceleration (G's) FIR100

Max 47.1 G at 43.8 msec**Min -3.1 G at 111.9 msec**

05SN02 - 2005 MITSUBISHI GALANT 4-DOOR SEDAN

2 December 2004

*Medical College of Wisconsin
Vehicle Crashworthiness Lab*

APPENDIX C

SID H3 CONFIGURATION AND VERIFICATION RESULTS

TABLE OF CONTENTS

	Page No.
VERIFICATION TEST RESULTS SUMMARY PRE AND POST TEST	C-3
SUMMARY SID H3 PRE AND POST VERIFICATION	C-4
DUMMY INSPECTION LIST PRE AND POST TEST	C-6

**VERIFICATION TEST RESULTS SUMMARY
PRE AND POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial Number SID H3 056 Test Sequences 02 and 03

TEST	PRE		POST	
	COMMENTS	BY	COMMENTS	BY
EXTERNAL DIMENSIONS	Pass all requirements	Mark Meyer	Pass all requirements	Mark Meyer
THORACIC SHOCK ABSORBER TEST	Pass all requirements	Mark Meyer	N/A	N/A
LATERAL THORAX IMPACT TEST	Pass all requirements	Mark Meyer	Pass all requirements	Mark Meyer
LATERAL PELVIS IMPACT TEST	Pass all requirements	Mark Meyer	Pass all requirements	Mark Meyer
ABDOMINAL COMPRESSION	Pass all requirements	Mark Meyer	Pass all requirements	Mark Meyer
LUMBAR FLEXION	Pass all requirements	Mark Meyer	Pass all requirements	Mark Meyer
HYBRID III LATERAL NECK TEST	Pass all requirements	Mark Meyer	Pass all requirements	Mark Meyer
HYBRID III LATERAL HEAD DROP	Pass all requirements	Mark Meyer	Pass all requirements	Mark Meyer

SID Serial Number SID H3 058 Test Sequences 02 and 03

TEST	PRE		POST	
	COMMENTS	BY	COMMENTS	BY
EXTERNAL DIMENSIONS	Pass all requirements	Mark Meyer	Pass all requirements	Mark Meyer
THORACIC SHOCK ABSORBER TEST	Pass all requirements	Mark Meyer	N/A	N/A
LATERAL THORAX IMPACT TEST	Pass all requirements	Mark Meyer	Pass all requirements	Mark Meyer
LATERAL PELVIS IMPACT TEST	Pass all requirements	Mark Meyer	Pass all requirements	Mark Meyer
ABDOMINAL COMPRESSION	Pass all requirements	Mark Meyer	Pass all requirements	Mark Meyer
LUMBAR FLEXION	Pass all requirements	Mark Meyer	Pass all requirements	Mark Meyer
HYBRID III LATERAL NECK TEST	Pass all requirements	Mark Meyer	Pass all requirements	Mark Meyer
HYBRID III LATERAL HEAD DROP	Pass all requirements	Mark Meyer	Pass all requirements	Mark Meyer

SUMMARY
SID H3 PRE AND POST VERIFICATION
CONFIGURED FOR LEFT SIDE IMPACT

SID Serial Number	SID H3 056 SID H3 058	Test Sequences	02 and 03 (SID H3 056) 02 and 03 (SID H3 058)
-------------------	--------------------------	----------------	--

TEST PARAMETER	SPECIFICATION	SID H3 056		SID H3 058	
		PRE	POST	PRE	POST
MEASUREMENTS					
Date	-	24Nov04	08Dec04	24Nov04	08Dec04
Sequential Test Number	-	2	3	2	3
Temperature (°C)	18.9-25.5	19.5	20.1	20.2	20.5
Relative Humidity (%)	10-70	28.4	28.9	27.9	29.7
SH – Seated Height (mm)	889-909	906	908	908	907
RH – Rib Height (mm)	501-521	502	509	508	509
HP – Hip Pivot Height (mm)	99	99/99	99/99	99/99	99/99
RD – Rib From Back Line (mm)	229-241	229	229	229	229
KH – Knee Pivot from Back Line (mm)	511-526	525/520	521/521	525/522	525/523
KV – Knee Pivot to Floor (mm)	490-505	500/498	505/495	498/497	497/495
HW – Hip Width (mm)	356-391	366	365	363	363
THORAX IMPACTS					
Date	-	24Nov04	08Dec04	24Nov04	08Dec04
Sequential Test Number	-	2	3	2	3
Temperature (°C)	18.9-25.5	20.0	20.3	20.2	20.3
Relative Humidity (%)	10-70	28.2	29.0	27.4	29.8
Probe Speed (m/s)	4.21-4.33	4.24	4.29	4.22	4.23
Upper Rib Acceleration (G)	37-46	42.1	43.1	45.2	45.5
Lower Rib Acceleration (G)	37-46	41.5	42.2	44.2	42.3
Lower Spine Acceleration (G)	15-22	19.4	19.6	20.7	20.3
PELVIS IMPACTS					
Date	-	24Nov04	08Dec04	24Nov04	08Dec04
Sequential Test Number	-	2	3	2	3
Temperature (°C)	18.9-25.5	20.0	20.2	20.3	20.5
Relative Humidity (%)	10-70	27.9	29.0	27.5	29.9
Probe Speed (m/s)	4.21-4.33	4.24	4.29	4.22	4.23
Pelvis Acceleration (G)	40-60	57.7	58.7	47.6	43.4
THORACIC SHOCK ABSORBER					
Shock Absorber ID Number	-	1746	N/A	3130164	N/A
Damper Setting	1-10	6.25		5	
Date	-	10Nov04		09Nov04	
Sequential Test Number	-	1		1	
Temperature	18.9-25.5	21.3		22.4	
Relative Humidity	10-70	33.2		31.3	
Probe Speed (m/s) Low	3.05	3.05		3.05	
Force (N)	836 – 1125	927.5		1051.7	
Displacement (mm)	30 – 35	32.2		30.6	
Probe Speed (m/s) Middle	4.27	4.27		4.26	
Force (N)	1730 – 2099	2041.8		1910.0	
Displacement (mm)	32 – 37	35.7		35.7	
Probe Speed (m/s) High	6.10	6.14		6.08	
Force (N)	3741 – 4448	3795		4438.8	
Displacement (mm)	33 - 40	39.1		36.0	

TEST PARAMETER	SPECIFICATION	SID H3 056		SID H3 058	
		PRE	POST	PRE	POST
ABDOMINAL COMPRESSION					
Date	-	19Nov04	03Dec04	19Nov04	03Dec04
Sequential Test Number	-	2	3	2	3
Temperature (°C)	18.9-25.5	21.9	20.2	21.9	20.3
Relative Humidity (%)	10-70	39.5	22.2	39.5	23.0
Force at 13 mm (N)	104-162	125.0	126.0	127.3	132.5
Force at 19 mm (N)	163-221	174.9	193.7	181.5	184.5
Force at 25 mm (N)	222-280	232.2	269.9	237.9	238.7
Force at 33 mm (N)	325-391	334.5	369.8	334.3	330.5
LUMBAR FLEXION					
Date	-	22Nov04	06Dec04	22Nov04	06Dec04
Sequential Test Number	-	2	3	2	3
Temperature (°C)	18.9-25.5	20.8	19.7	19.7	20.6
Relative Humidity (%)	10-70	29.7	32.3	30.9	30.8
Force at 0° (N)	0-26.7	0	0	0	0
Force at 0° (N)	97.8-151.2	126.2	119.3	126.3	106.0
Force at 0° (N)	151.2-204.6	169.9	151.0	159.5	154.8
Force at 0° (N)	204.6-258	221.7	221.2	218.4	216.6
Return Angle	12° Maximum	3.8	8.1	10.1	6.4
HYBRID III LATERAL NECK					
Date	-	23Nov04	07Dec04	23Nov04	08Dec04
Sequential Test Number	-	2	3	2	3
Temperature (°C)	18.9-25.5	22.2	22.2	21.4	20.3
Relative Humidity (%)	10-70	31.3	31.6	30.4	29.4
Pendulum Speed (m/s)	6.89-7.13	7.08	7.10	7.05	7.05
Pendulum Pulse 10ms (m/s)	1.96-2.55	2.48	2.48	1.98	2.04
Pendulum Pulse 20ms (m/s)	4.12-5.10	4.99	4.91	4.20	4.28
Pendulum Pulse 30ms (m/s)	5.73-7.01	6.90	6.93	6.18	6.42
Pendulum Pulse 40 –70 ms (m/s)	6.27-7.64	6.85	6.93	6.75	7.60
Max Head rotation (deg)	66-82	73.8	72.3	69.7	80.2
Head angle crosses zero (ms)	58-67	65.4	58.1	58.8	58.0
Peak Moment (Nm)	73-88	76.6	79.9	74.3	73.1
Moment crosses zero (ms)	49-64	49.5	49.5	53.5	53.5
Max rotation wrt peak moment (ms)	2-15	10.2	6.4	8.6	9.8
HYBRID III LATERAL HEAD DROP					
Date	-	19Nov04	07Dec04	19Nov04	06Dec04
Sequential Test Number	-	2	3	2	3
Temperature (°C)	18.9-25.5	22.0	20.2	21.0	20.7
Relative Humidity (%)	10-70	40.0	35.2	39.5	32.2
Resultant Max (G)	120-150	121.2	127.6	141.0	134.0
Longitudinal Max (G)	<15	9.7	7.0	13.7	9.0

**DUMMY INSPECTION LIST
PRE AND POST TEST**

CONFIGURED FOR LEFT SIDE IMPACT

SID Serial Number

SID H3 056

Test Sequences

02 and 03 (SID H3 056)

SID H3 058

02 and 03 (SID H3 058)

		SID H3 056		SID H3 058	
		PRE	POST	PRE	POST
	Date	11Nov04	22Nov04	11Nov04	22Nov04
	Performed By	Mark Meyer	Mark Meyer	Mark Meyer	Mark Meyer
PART	INSPECTION				
Skin	Visual	Pass	Pass	Pass	Pass
Head	Visual, Ballast, Accelerometer Mount	Pass	Pass	Pass	Pass
Neck	Visual and Palpated, Cable Torque	Pass	Pass	Pass	Pass
Spine Box	Visual, Ballast, Weldment, Accelerometer Mount	Pass	Pass	Pass	Pass
Rib Cage	Visual, Palpated, Measured, Stiffness	Pass	Pass	Pass	Pass
Sternum	Visual	Pass	Pass	Pass	Pass
Lumbar Spine	Visual	Pass	Pass	Pass	Pass
Abdomen	Visual	Pass	Pass	Pass	Pass
Pelvis	Visual, Palpated, Accelerometer Mount	Pass	Pass	Pass	Pass
Upper Legs	Visual	Pass	Pass	Pass	Pass
Knees	Visual, Stops, Inserts	Pass	Pass	Pass	Pass
Lower Legs	Visual, Range of Motion	Pass	Pass	Pass	Pass
Ankles	Visual, Range of Motion	Pass	Pass	Pass	Pass
Feet	Visual, Range of Motion	Pass	Pass	Pass	Pass
Joints	1 to 2 G Range	Pass	Pass	Pass	Pass
Other		N/A	N/A	N/A	N/A

APPENDIX D
TEST EQUIPMENT LIST AND CALIBRATION INFORMATION

TABLE OF CONTENTS

Section	Page No.
SID INSTRUMENTATION	D-3
VEHICLE INSTRUMENTATION	D-4
MDB INSTRUMENTATION	D-4

SID INSTRUMENTATION**FRONT SID H3 NO. 056**

	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD X ACCELERATION	J35839	ENDEVCO	01Sep04
HEAD Y ACCELERATION	J22318	ENDEVCO	01Sep04
HEAD Z ACCELERATION	J36659	ENDEVCO	27Aug04
SIX AXIS UPPER NECK LOAD CELL (FX, FY, FZ, MX, MY, MZ)	1591	DENTON ATD	10Aug04
UPPER RIB ACCELERATION	J43512	ENDEVCO	27Aug04
LOWER RIB ACCELERATION	J43445	ENDEVCO	27Aug04
LOWER SPINE ACCELERATION	J44021	ENDEVCO	27Aug04
PELVIS ACCELERATION	J43810	ENDEVCO	27Aug04
UPPER RIB REDUNDANT ACCELERATION	J43798	ENDEVCO	27Aug04
LOWER RIB REDUNDANT ACCELERATION	J43434	ENDEVCO	26Aug04
LOWER SPINE REDUNDANT ACCELERATION	J43485	ENDEVCO	31Aug04
PELVIS REDUNDANT ACCELERATION	J43739	ENDEVCO	27Aug04

REAR SID H3 NO. 058

	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
HEAD X ACCELERATION	J35932	ENDEVCO	26Aug04
HEAD Y ACCELERATION	J43481	ENDEVCO	27Aug04
HEAD Z ACCELERATION	J43442	ENDEVCO	27Aug04
SIX AXIS UPPER NECK LOAD CELL (FX, FY, FZ, MX, MY, MZ)	0452	DENTON	10Aug04
UPPER RIB ACCELERATION	J43444	ENDEVCO	27Aug04
LOWER RIB ACCELERATION	J44018	ENDEVCO	27Aug04
LOWER SPINE ACCELERATION	J43479	ENDEVCO	27Aug04
PELVIS ACCELERATION	J43708	ENDEVCO	27Aug04
UPPER RIB REDUNDANT ACCELERATION	J43809	ENDEVCO	27Aug04
LOWER RIB REDUNDANT ACCELERATION	J43480	ENDEVCO	31Aug04
LOWER SPINE REDUNDANT ACCELERATION	J43468	ENDEVCO	27Aug04
PELVIS REDUNDANT ACCELERATION	J43441	ENDEVCO	27Aug04

VEHICLE INSTRUMENTATION

	SERIAL NUMBER	MANUFACTURER	CALIBRATION DATE
RIGHT FRONT SILL X	P22993	ENDEVCO	27Aug04
RIGHT FRONT SILL Y	P22312	ENDEVCO	26Aug04
RIGHT FRONT SILL Z	P21738	ENDEVCO	27Aug04
RIGHT REAR SILL X	98L98L11-N01	ENTRAN	01Sep04
RIGHT REAR SILL Y	98L98H31-Z05	ENTRAN	31Aug04
RIGHT REAR SILL Z	98G98D22-Z15	ENTRAN	31Aug04
REAR FLOORPAN ABOVE AXLE X	P22323	ENDEVCO	26Aug04
REAR FLOORPAN ABOVE AXLE Y	P14135	ENDEVCO	31Aug04
REAR FLOORPAN ABOVE AXLE Z	P22539	ENDEVCO	26Aug04
LEFT REAR SILL Y	P22041	ENDEVCO	27Aug04
LEFT FRONT SILL Y	P12746	ENDEVCO	26Aug04
LEFT FRONT DOOR CENTERLINE Y	P13836	ENDEVCO	26Aug04
RIGHT REAR OCCUPANT COMP Y	B13036	ENDEVCO	31Aug04
MID-REAR OF LEFT FRONT DOOR Y	P13838	ENDEVCO	26Aug04
LEFT FRONT DOOR UPPER C/L Y	98F98C27-B04	ENDEVCO	31Aug04
MID-REAR OF LEFT REAR DOOR Y	P22315	ENDEVCO	01Sep04
LEFT REAR DOOR UPPER C/L Y	ET08J	ENTRAN	01Sep04
LEFT LOWER B-PILLAR Y	P21661	ENDEVCO	26Aug04
LEFT MIDDLE B-PILLAR Y	P22965	ENDEVCO	26Aug04
LEFT LOWER A-PILLAR Y	P22314	ENDEVCO	31Aug04
LEFT UPPER A-PILLAR	P14223	ENTRAN	26Aug04
FRONT SEAT TRACK Y	P22322	ENDEVCO	31Aug04
REAR SEAT TRACK Y	P19311	ENDEVCO	27Aug04
VEHICLE CG X	P22230	ENDEVCO	26Aug04
VEHICLE CG Y	P22298	ENDEVCO	26Aug04
VEHICLE CG Z	B13038	ENDEVCO	31Aug04

MDB INSTRUMENTATION

MDB CG X	P25041	ENDEVCO	07Sep04
MDB CG Y	P23595	ENDEVCO	07Sep04
MDB CG Z	P24733	ENDEVCO	03Sep04
MDB REAR FRAME MEMBER X	P21608	ENDEVCO	07Sep04
MDB REAR FRAME MEMBER Y	P24089	ENDEVCO	07Sep04