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RESEARCH RABBIT (MIV) Modified Integrated Vehicle

Phase 1



VOLKSWAGENWERK
Aktiengesellschaft
WOLFSBURG

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Final Report

Volume III/2 Side Impact

PREPARED FOR:

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The Test Results belong to the specified NHTSA Test Configuration for Side Impacts with the Crabbed Barrier and HSRI-SID-Dummies both of which are currently under development.

NHTSA Project DTNH 22-81-C-17085

Volume III/ 2

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 - B.2.1 Driver
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1. Introduction

The Objective of the MIV project was to optimize the contradictory design aspects of a high degree of passive safety and low fuel consumption.

The project was arranged in Phase I and II. The results of Phase I are the basis of this report. Phase II was redefined by NHTSA. According to this, the three engine/transmission concepts that were to be newly developed are no longer part of Phase II.

Possibilities were to be found for a 4 door Rabbit for further increasing occupant protection in specified side and frontal impacts. The Rabbit Modifications should be possible to implement on the production line. NHTSA's design goals were the 35 mph frontal fixed barrier impact and the 30, 35 or 40 mph side impact with the new 1.565 kg (3,450 lbs) deformable Crabbed Barrier and the new HSRI Dummy which were specially conceived for the side impact and are presently still under development.

Modifications for the 4 door Rabbit were derived from Crabbed Barrier/Production Rabbit baseline tests.

NHTSA contract specifications called for a maximum weight increase of 20 lbs for the modified 4 door Rabbit.

The NHTSA goal to achieve the greatest possible reduction in dummy loads, in keeping with the objective of lowest possible weight together with the prerequisite that the design be suited to mass production at the lowest possible cost, required the development of a new "Integrated Structure" for the 4 Door Modified Rabbit. This concept requires that the greatest number of components be effective during a frontal and a side impact. The "Integrated Structure" approach, rather than the Budd strategy to use add-on parts, is necessary to achieve the goals established by NHTSA.

2. Method

- 2.1 Test Devices and Test Configuration
- 2.2 List of Accelerometer Location
 - 2.2.1 Target Vehicle Instrumentation
 - 2.2.2 Side Impactor Instrumentation
 - 2.2.3 Dummy Instrumentation
- 2.3 Camera Location and Frame Rate

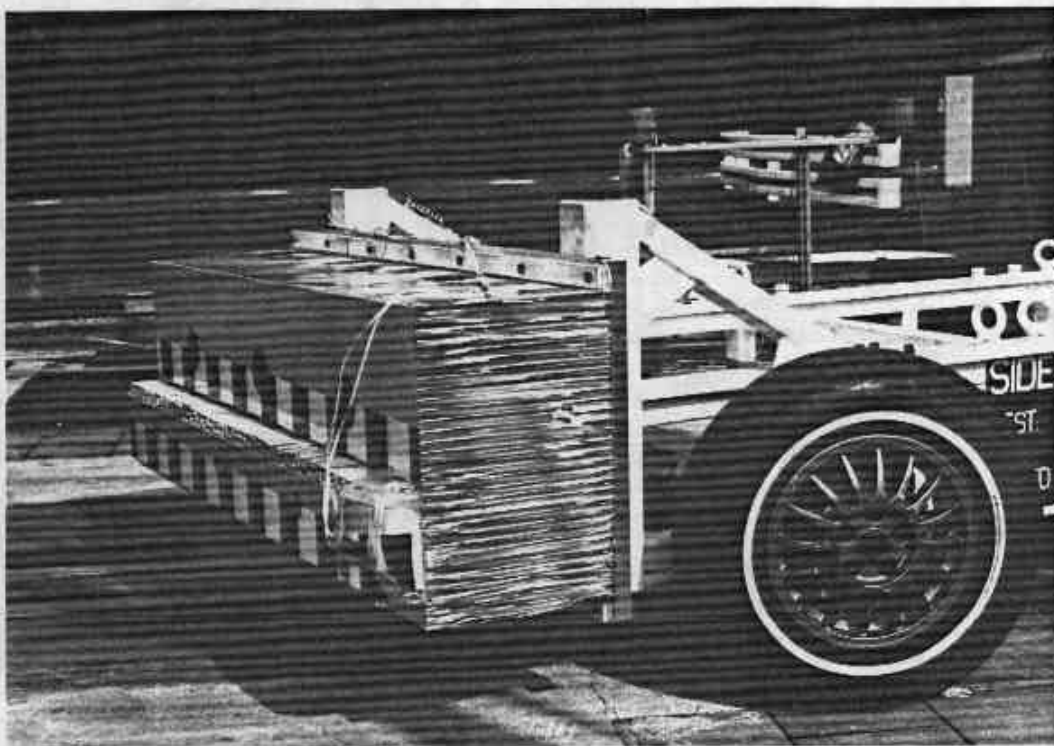


FIGURE 1 : 19° CRABBED BARRIER TEST DEVICE

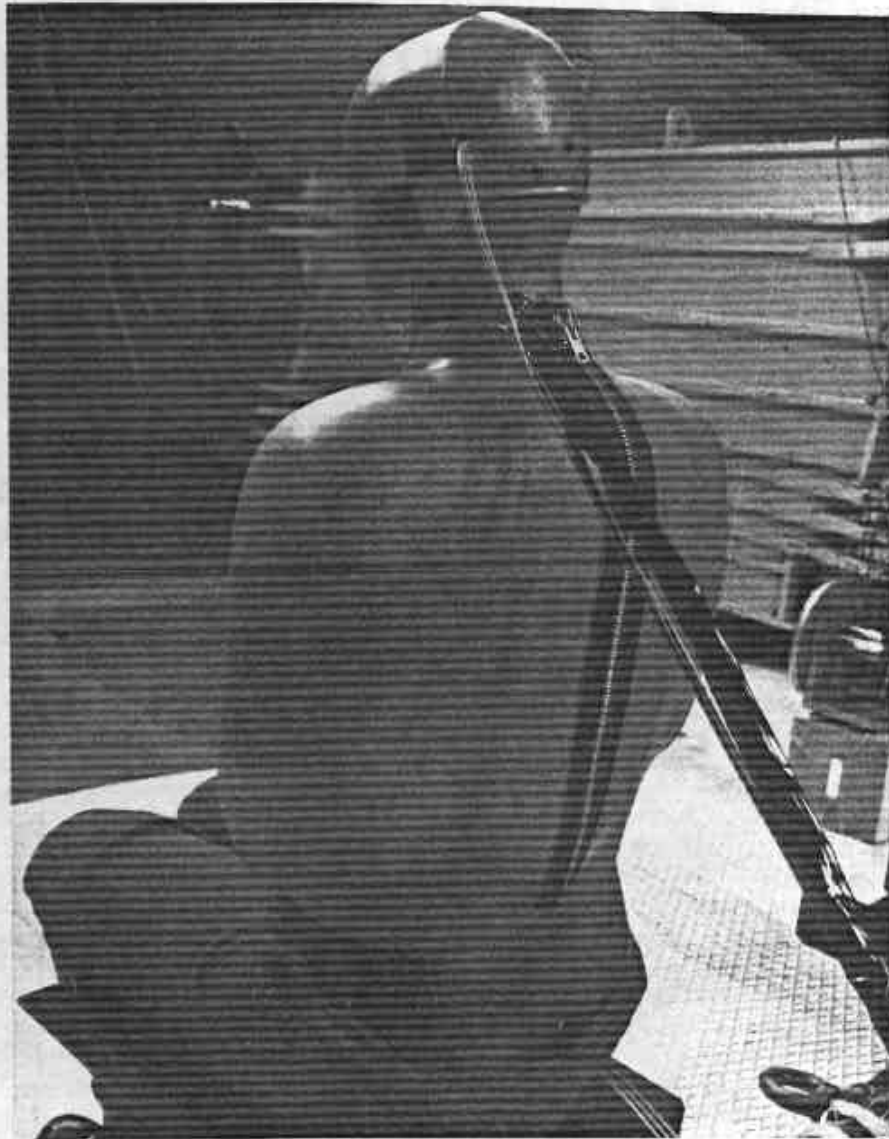
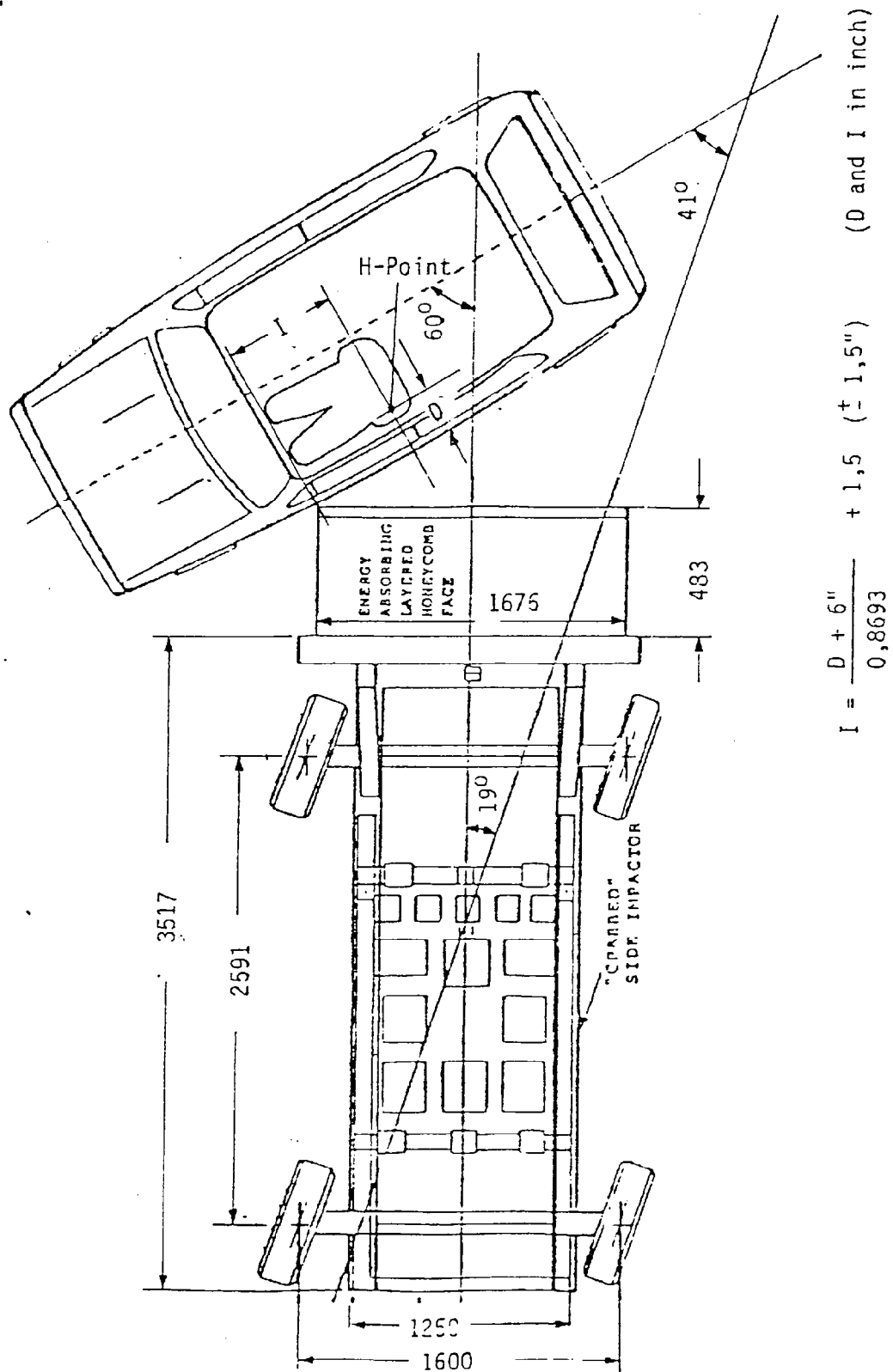


FIGURE 2 : HSRI SIDE IMPACT DUMMY



Remarks: I = Impact-Point

D = Distance H-Point - Door Exterior

Figure 3: Test Configuration

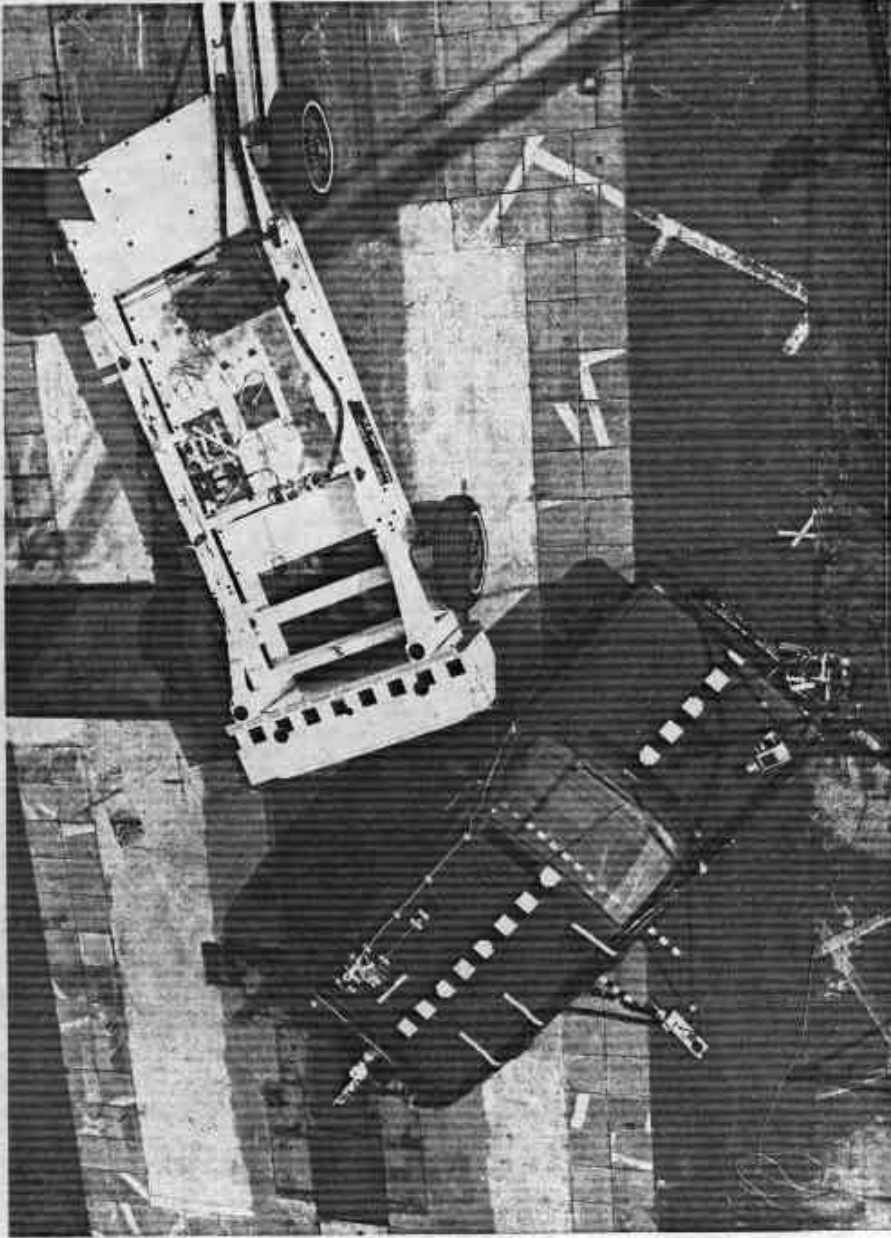


FIGURE 4 : SIDE IMPACT TEST CONFIGURATION
CRABBED BARRIER / VW RABBIT

Location of Accelerometer for the HSRI Side Impact Dummies

<u>Location</u>	<u>Shortened Form</u>	<u>Direction</u>
<u>D R I V E R</u>		
Head Triaxial	K001	X, Y, Z
Upper Sternum	B001	X
Lower Sternum	BU01	X
Left upper Rib	L001	Y
Left lower Rib	LU01	Y
Right upper Rib	R001	Y
Right lower Rib	RU01	Y
Upper Thorax (T 1)	T001	X, Y, Z
Lower Thorax (T 12)	TU01	X, Y, Z
Pelvis Triaxial	BE01	X, Y, Z
Chest Deflection	WE01	Y
Shoulder Beltforce	GU01SA	

R E A R L E F T P A S S E N G E R

Head Triaxial	K003	X, Y, Z
Upper Sternum	B003	X
Lower Sternum	BU03	X
Left upper Rib	L003	Y
Left lower Rib	LU03	Y
Right upper Rib	R003	Y
Right lower Rib	RU03	Y
Upper Thorax (T 1)	T003	X, Y, Z
Lower Thorax (T 12)	TU03	X, Y, Z
Pelvis Triaxial	BE03	X, Y, Z
Chest Deflection	WE03	Y
Pelvis Beltforce	GU03BA	

Table 1: List of Accelerometer - Location

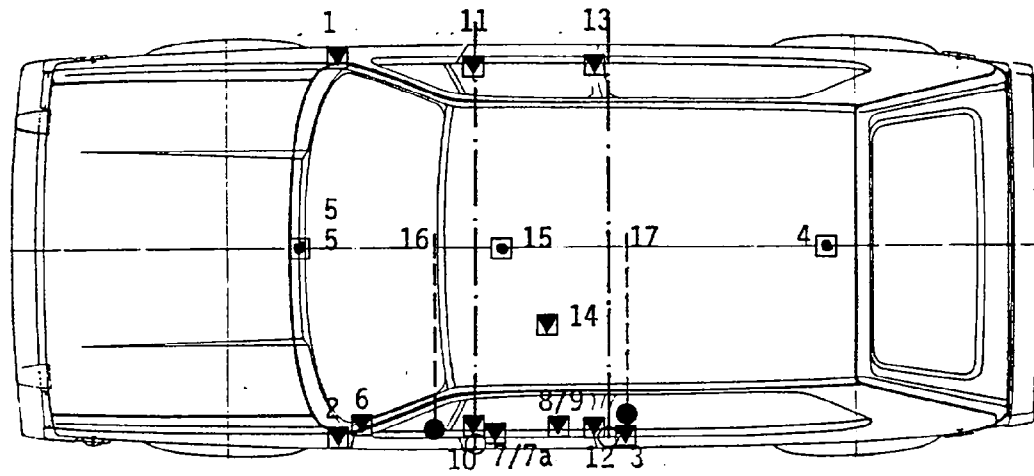
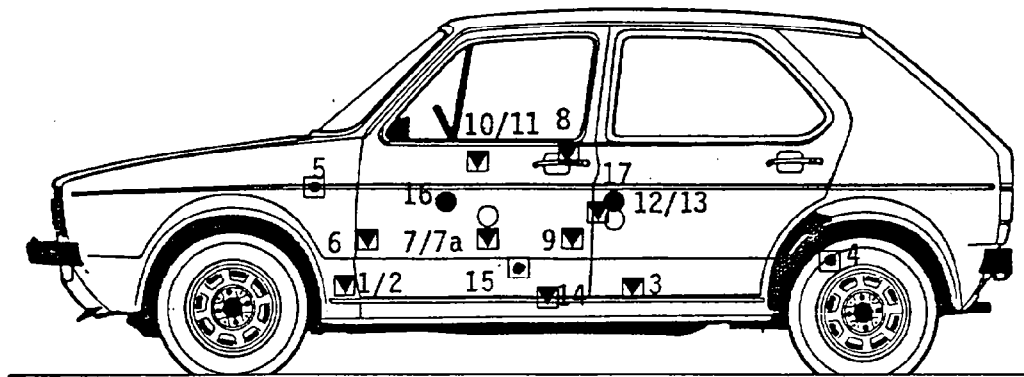
VEHICLE

No.	Location	Shortened Form	Direction
1	Right Front-Doorsill	TSVR	Y
2	Left Front-Doorsill	TSVL	Y
3	Left Rear-Doorsill	SHHL	Y
4	Rear Deck over Centerline	KOBO	X, Y, Z
5	Front Firewall over C _L	SWMI	X, Y, Z
6	Mid-front Edge of left Front-Door	TTRV	Y
7	Middle of left Front-Door	TTRM	Y
8	Shoulder Contact at Front-Door	SASL	Y
9	Pelvis Contact at Front-Door	BASL	Y
10	Left Front-Door on Windowsill	FBVL	Y
11	Right Front-Door on Windowsill, directly across No. 10	FBVR	Y
12	Left B-Pillar near Door Latch	BSLL	Y
13	Right B-Pillar across No. 12	BSLR	Y
14	Underneath left Front Seat attached to Seat	SGFA	Y
15	Vehicle Center of Gravity	RTMI	X, Y, Z
16	Left Front-Door Intrusion	FTWE	Y
17	B-Pillar Intrusion	THWE	Y
18	Shoulder Contact Driver	SK01K	
19	Pelvis Contact Driver	BK01K	
20	Shoulder Contact Left Rear Passenger	SK03K	
21	Pelvis Contact Left Rear Passenger	BK03K	

190 CRABBED SIDE IMPACTOR

1	Right Frame Rail	LTRR	X
2	Left Frame Rail	LTRL	X
3	Front Crossmember at C _L	QTVM	X
4	Right Rear Vertikal Frameraill	RHTR	X, Y
5	Center of Gravity	SPKT	X, Y, Z

Declaration: X = Longitudinal
Y = Lateral
Z = Vertikal



-  Axial Accelerometer (Y - Direction)
-  Biaxial Accelerometer (X, Y - Direction)
-  Triaxial Accelerometer (X, Y, Z -Direction)
-  Displacement Tube
-  Displacement Transducer

Note: See Table for Additional Information

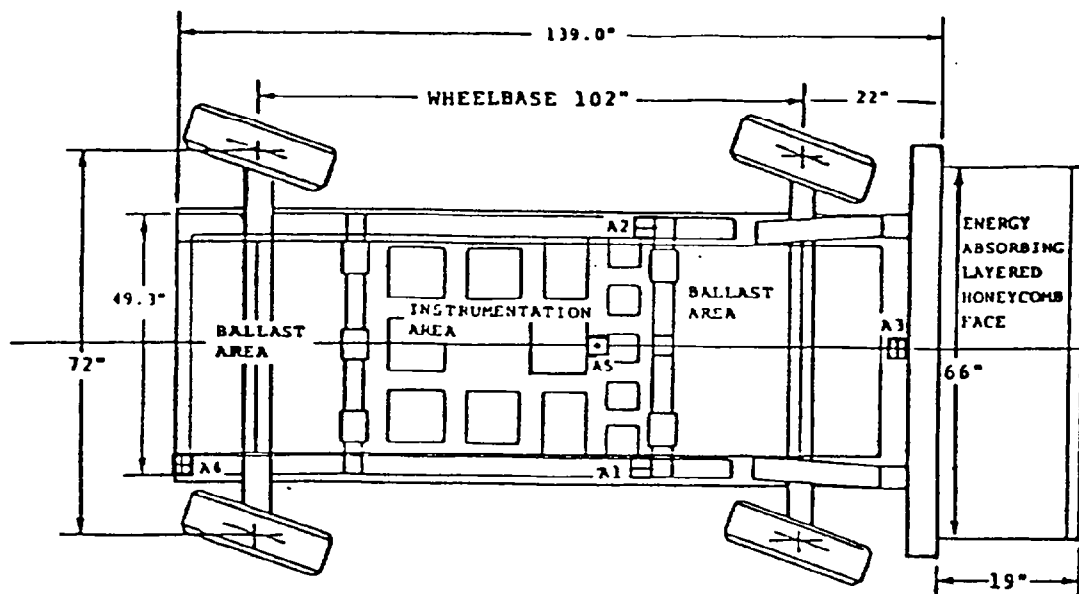
Figure 5 : Target Vehicle Instrumentation

No.	Accelerometer - Location	Coordinates [mm]			Results [g _{max}]		
		X *	Y *	Z *	X	Y	Z
1	Occupant Compartment, right Front-Doorsill	2630	620	300	-	20,1	-
2	Occupant Compartment, left Front-Doorsill	2630	-620	300	-	128,5	-
3	Occupant Compartment, left Rear-Doorsill	1410	-560	290	-	-	-
4	Rear Deck over Vehicle Centerline	910	0	440	12,2	17,1	16,1
5	Front Firewall over Vehicle Centerline	2890	0	650	25,2	8,4	6,8
6	Mid-front Edge of Left Front Door	2550	-620	457	-	-	-
7	Middle of left Front Door	2060	-620	630	-	68,6	-
8	Shoulder Contact Front Door	1775	-665	850	-	90	-
9	Pelvis Contact Front Door	1840	-660	480	-	-	-
10	Left Front Door on Windowsill, slightly forward of surrogate's	2050	-650	850	-	74,7	-
11	Right Front Door on Windowsill, directly across from Nr. 10	2050	650	850	-	23,4	-
12	Left B-Pillar near Door Latch	1480	-650	670	-	144,6	-
13	Right B-Pillar across from Nr. 12	1480	650	670	-	42,2	-
14	Underneath left Front Seat attached to Seat	1960	325	285	-	128,4	-
15	Vehicle Center of Gravity				28,6	44,4	33,8
16	Displacement Transducer Front Door	2235	-	670			
17	Displacement Transducer B-Pillar	1415	-	850			

* Reference Points: X - Rear Bumper
Y - Vehicle Centerline
Z - Ground Level

Table 2: Summary of Target Vehicle Instrumentation

TEST NO : 2



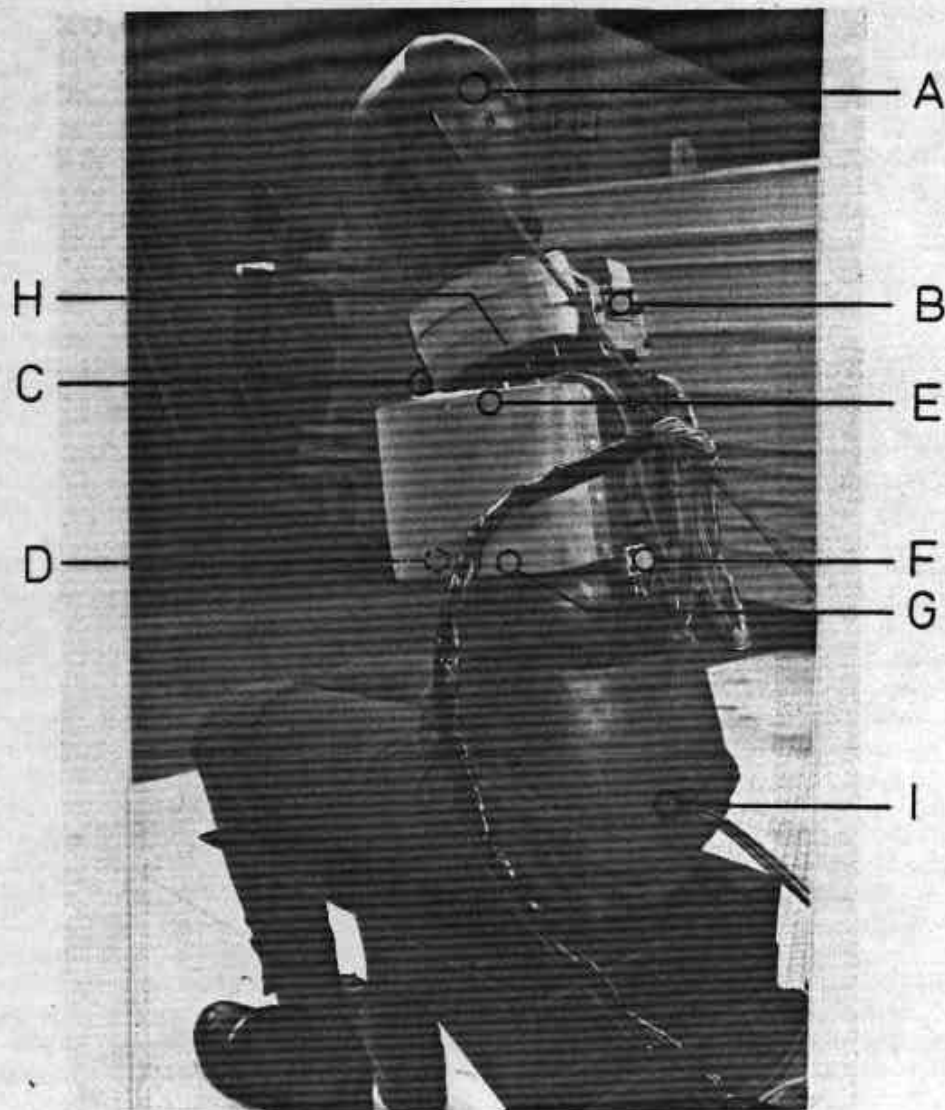
-  Axial Accelerometer, Longitudinal
-  Biaxial Accelerometer, Long., Lat.
-  Triaxial Accelerometer, Long., Lat., Vert.

No.	Accelerometer - Location	Coordinates [mm]			Results [G]		
		X	Y	Z	Long	Lat	Vert
A 1	Right Frame Rail	2134	584	508	8,5	-	-
A 2	Left Frame Rail	2134	-584	508	12,9	-	-
A 3	Front Crossmember at Centerline	3300	0	610	9,8	-	-
A 4	Right rear vertical Frame Rail	228	560	407	9,4	7,8	
A 5	Side Impactor Center of Gravity	1727	0	305	9,4	6,7	8,0

Reference Plane: X - Rear of Side Impactor
Y - Side Impactor Centerline
Z - Ground

FIGURE 6 : SIDE IMPACTOR INSTRUMENTATION

TEST NO : 2



- | | |
|---------------------------------|----------------------------------|
| A. Head Triaxial | F. Lower Thorax (T 12), Triaxial |
| B. Upper Thorax (T 1), Triaxial | G. Left Lower Rib, Lateral |
| C. Upper Sternum, Longitudinal | (also on right) |
| D. Lower Sternum, Longitudinal | H. Displacement Transducer |
| E. Left Upper Rib, Lateral | I. Pelvis, Triaxial |
| (also on right) | |

Figure 7 : Location of 18 Accelerometer for Side Impact Dummy

Test No: 2 Test Date: 09.03.1981

Test Type: 60° Side Impact Simulation

Vehicle A: Side Impactor

Vehicle B: VW-Rabbit

Comments: Side Impactor "Crabbed" 190°.

Camera Symbols

- Frame Rate
- 1. 1000 fr/sec
 - 2. 25 fr/sec
 - 3. 400 fr/sec

Timing Light, Speed

- 1. 100 Hz (10 msec/light)
- 2. Other

Camera	Yes
Stills	
Movie	
Slides	
Polaroid	

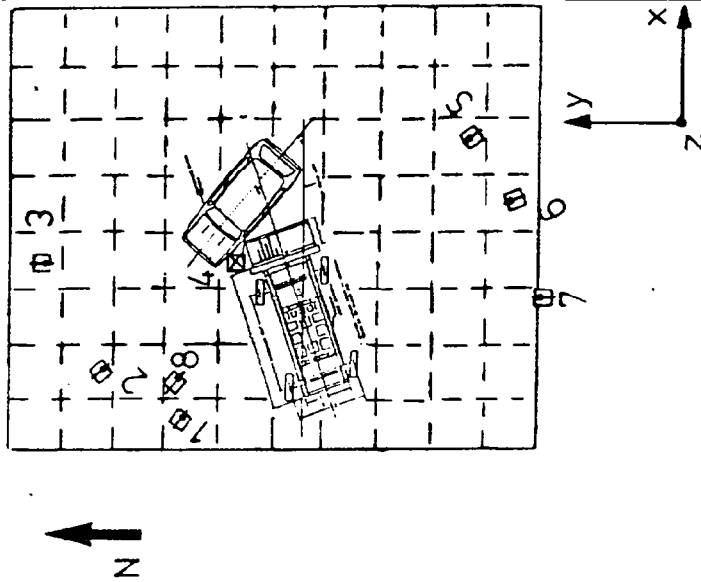
☐ Pit

☐ Ground

☐ Barrier

☒ Overhead

☐ On-Board



Loc. No.	Location	Field of View	Lens Size	Frm Rate	Tmng Spd	Real Fr.R.	Impact Dist-X	C. L. Dist-Y	Cam Dist-Z
1	North Side -Parallel To Bullet	Overall of Both Vehicles (Locam)	16	3	10	373	-7.0	4.0	1.3
2	North Side -Parallel to Target	Close-up of Both Vehicles at Impact (Locam)	10	3	10	320	-3.0	4.5	2.2
3	North Side-Perpendicular to Bullet	Overall of Both Vehicles (Locam)	28	3	10	306	-0.8	2.0	7.0
4	Overhead	Elevated - Looking Down at Impact Point (Locam)	10	3	10	346	10.0	-12.0	1.3
5	South Side -Parallel to Target	Close-up of Both Vehicles at Impact (Locam)	16	3	10	---	5.0	-12.0	1.0
6	South Side- Perpendicular to Target	Overall of Both Vehicles (GSMO)	16	2	-	400	2.0	-12.0	1.3
7	South Side	Overall of Both Vehicles (Locam)	16	3	10	---	-4.5	4.0	1.4
8	North Side	Overall of Both Vehicles (Mitchel)	50	2	-	---	---	---	---

Figure 8 :Camera Location - Ground based

Test No.: 2 Test Date: 09.03.1981

Test Type: 60° Side Impact Simulation

Vehicle A: Side Impactor

Vehicle B: VW-Rabbit

Comments: Side Impactor "Crabbed" 19°

Camera Symbols

☐ on-Board

☐ Ground

☐ Overhead

Frame Rate

1. 1000 fr/sec

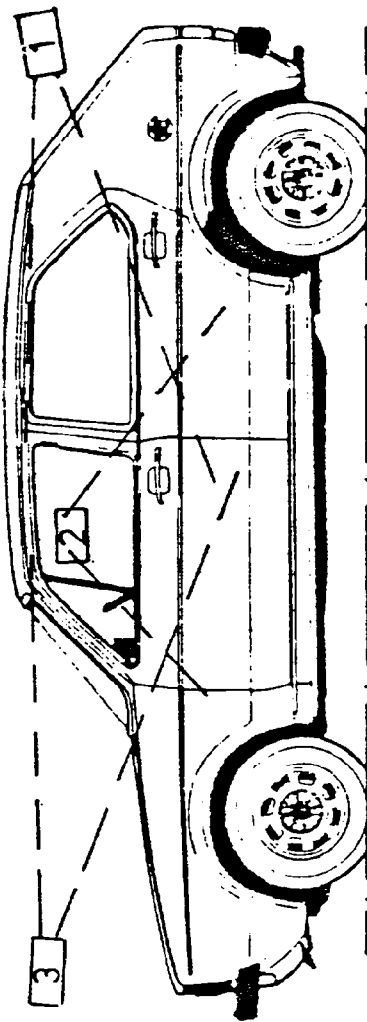
2. 400 fr/sec

3. Other _____ fr/sec

Timing Light, Speed

1. 100 Hz (10msec/light)

2. Other _____



Loc. No.	Location	Field of View	Lens Size	Frm Rate	Trng Spd	Real Fr.R.	Impact Dist-X	C. L. Dist-Y	CAM Dist-Z [m]
1	Vehicle Rear Hatch-back Door	Front and Rear Occupant Compartment (Photosonics)	8XXXXXX	XXXXXX	XXXXXX	XXXXXX			
2	Vehicle Right Front Door	Front Occupant Compartment (Photosonics)	8XXXXXX	XXXXXX	XXXXXX	XXXXXX			
3	Vehicle Front Right Side	Front and Rear Occupant Compartment (Photosonics)	8XXXXXX	XXXXXX	XXXXXX	XXXXXX			

Figure 9: Camera Locations - on Board

- 3. Test Parameter and Results
 - 3.1 Crash Test Summary
 - 3.1.1 Target Vehicle
 - 3.1.2 Side Impactor (19° Crabbed Barrier)
 - 3.2 Pre-Test Conditions
 - 3.2.1 Driver Pre-Test Position
 - 3.2.2 Rear Passenger Pre-Test Position
 - 3.3 Vehicle Pre- and Post-Test Position
 - 3.4 Post-Test Observations
 - 3.5 Dummy Test Response
 - 3.5.1 Dummy Test Response Summary - Driver
 - 3.5.2 Dummy Test Response Summary - Rear Passenger
 - 3.5.3 AIS and Coefficients
 - 3.6 Target Vehicle Test Response
 - 3.6.1 Pre- and Post-Test Measurements
 - 3.6.2 Exterior and Interior Vehicle Measurement
 - 3.6.3 Exterior and Interior Static Crush (Top View)
 - 3.6.4 Exterior and Interior Static Crush (Front View)
 - 3.7 Crabbed Barrier Test Response
 - 3.7.1 Pre- and Post-Test Frontal Profile
 - 3.7.2 Exterior Static Crush

Table 3 : Crash Test Summary for Target Vehicle

VEHICLE DATA		TEST 2	
Test Vehicle		VW- Rabbit	4-Door
Overall Length/Width (mm)		3920	/ 1612
Test Weight by Wheel (kp)		LR 275	RR 247
		LF 334	RF 303
Total Weight (kp)		1159	
Wheelbase (mm)		2405	
Longitudinal C.G. (from Center of Front Axle) (mm)		1083,2	
Impact Angle (deg) *		60	
Impact Speed (mph)		0 (stationary)	
Maximum C.G. Resultant Velocity Change (mph // msec)			
Maximum C.G. Resultant Acceleration (G // msec)			
Maximum Door Acceleration (G // msec)**			
Maximum Exterior Static Crush (mm)			
• Level 4 (32.0")		325	
• Level 3 (26.0")		341	
• Level 2 (20.0")		403	
• Level 1 (12.0")		254	
Maximum Post-test Intrusion (mm)		332	
<u>OCCUPANTS</u>		SID	SID
Type		Driver	Left Rear Pass.
Location		RA	Pelvis Belt
Restraints			
<u>INSTRUMENTATION</u>			
Number of Data Channels		66	
Number of cameras (On Board)		3	

* With respect to bullet vehicle.

**At mid-rear edge of left front door.

Table 4 : Crash Test Summary for Side Impactor

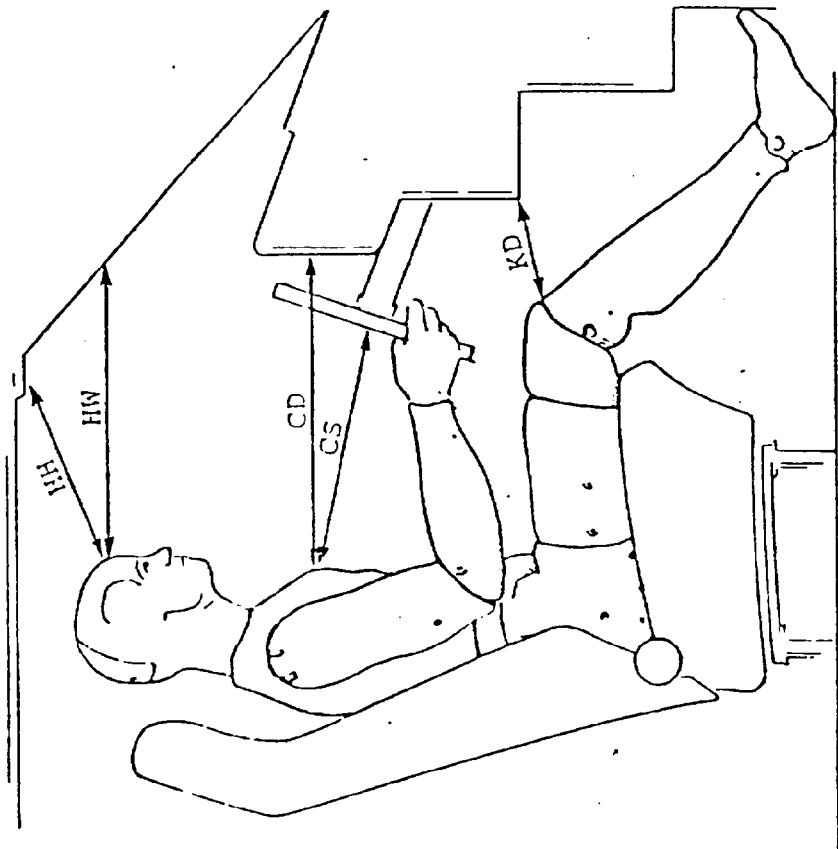
VEHICLE DATA		TEST	2
Test Vehicle	19° Crabbed Side Impactor		
Overall Length/Width (mm)	4000 / 2155		
Test Weight by Axle (kp)	LR	398	RR 383
	LF	390	RF 401
Total Weight (kp)	1572		
Wheelbase (mm)	2591		
Longitudinal C.G. (from Center of Front Axle) (mm)	1266		
Impact Angle (deg)	60		
Impact Speed (mph)	30,88		
Maximum C.G. Resultant Velocity Change (mph //msec)			
Maximum C.G. Average Resultant Compartment Acceleration (G //msec)			
Maximum Static Crush (mm)			
• Row C (Top of Stack Level)	109		
• Row B (Mod-Stack Level)	91		
• Row A (Bumper Level)	98		
<u>OCCUPANTS</u>			
Type	-		
Location	-		
Restraints	-		
<u>INSTRUMENTATION</u>			
Number of Data Channels	10		
Number of Cameras (Ground Based)	7		

Test No.: 2 Vehicle: 2 LF 334 (kp) RF 303 (kp)

Test Date: 09.03.81 Total Test Wt. 1159 (kp) LR 275 (kp) RR 247 (kp)

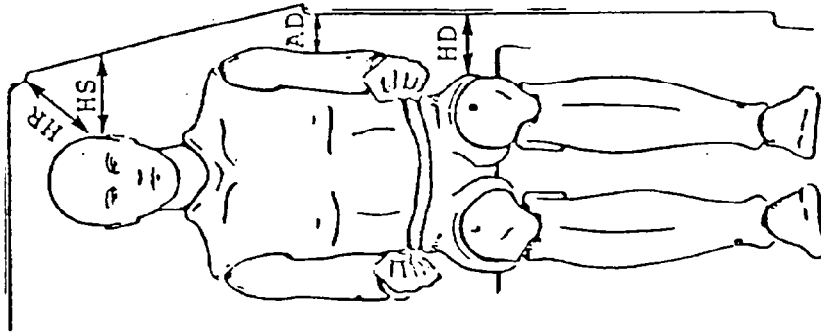
HEAD RESTS - up down other none
FRONT SEAT - forward midpoint rearward latched welded
FRONT SEAT TILT - forward midpoint back other 25° none
REAR SEAT - in place removed
STEERING WHEEL - up midpoint down not adjustable
SUN VISORS - up down removed
GLOVE COMPARTMENT - locked closed none
SEAT BELT - fastened unfastened removed none
SHOULDER HARNESSSES - fastened unfastened removed
VENT WINDOW - closed open removed none stationary
LEFT FRONT WINDOW - up down removed
RIGHT FRONT WINDOW - up down removed
LEFT REAR WINDOW - up down removed
RIGHT REAR WINDOW - up down removed
BACKLIGHT - in place removed
LEFT FRONT DOOR - closed locked removed
RIGHT FRONT DOOR - closed locked removed
LEFT REAR DOOR - closed locked removed
RIGHT REAR DOOR - closed locked removed
ENGINE - in place removed mounts modified
TRANSMISSION - neutral other removed
DRIVESHAFT - in place removed
PARKING BRAKE - off on disconnected
FRONT BUMPER - in place removed none
REAR BUMPER - in place removed none
HOOD - in place removed none
WINDSHIELD WIPERS - in place removed
FUEL TANK - 95 Percent full empty other
RADIATOR - full empty none removed
BATTERY - in place removed drained
SPARE TIRE - in place removed none
JACK - in place removed none
WHEEL COVERS - in place removed none
BALLAST - none kg
DUMMY LOCATION - LF RF LR RR none
DUMMY POSITIONING CRITERIA - FMVSS 208 side impact criteria other

Table 5 : Pre-Test Conditions



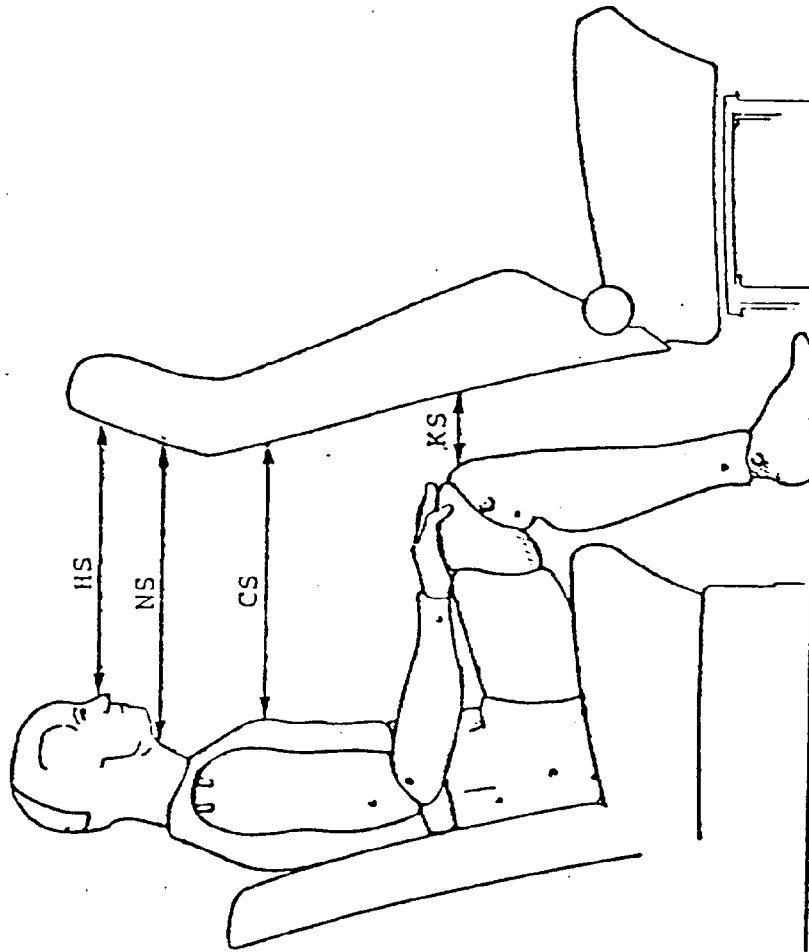
HH-	390	15.3
HW-	535	21.1
CD-	530	20.9
CS-	350	13.8
KD-	95	3.7

(ALL DIMENSION IN MM)

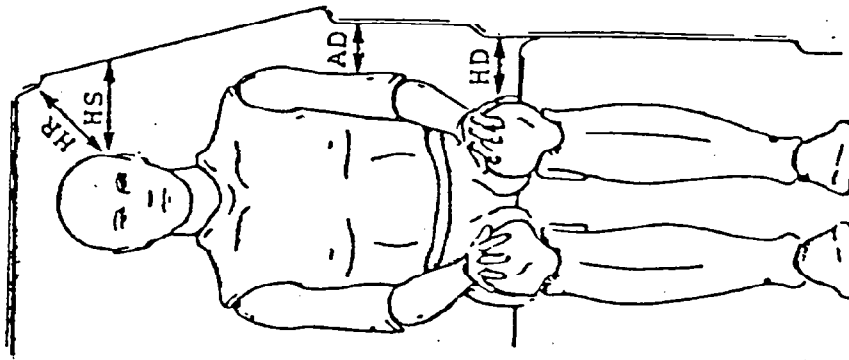


HR-	135	5.3
HS-	180	7.1
AD-	95	3.7
HD-	150	5.9

Table 6 : Driver Pre-Test Position



HS	465	<u>18.3</u>
NS	495	<u>19.5</u>
CS	400	<u>15.7</u>
KS	75	<u>2.9</u>



HR	105	<u>4.1</u>
HS	215	<u>8.5</u>
AD	150	<u>5.9</u>
HD	195	<u>7.7</u>

Table 7 : Rear Passenger Pre-Test Position

**Table 8 : Vehicle Pre- and Post-
Test Position**

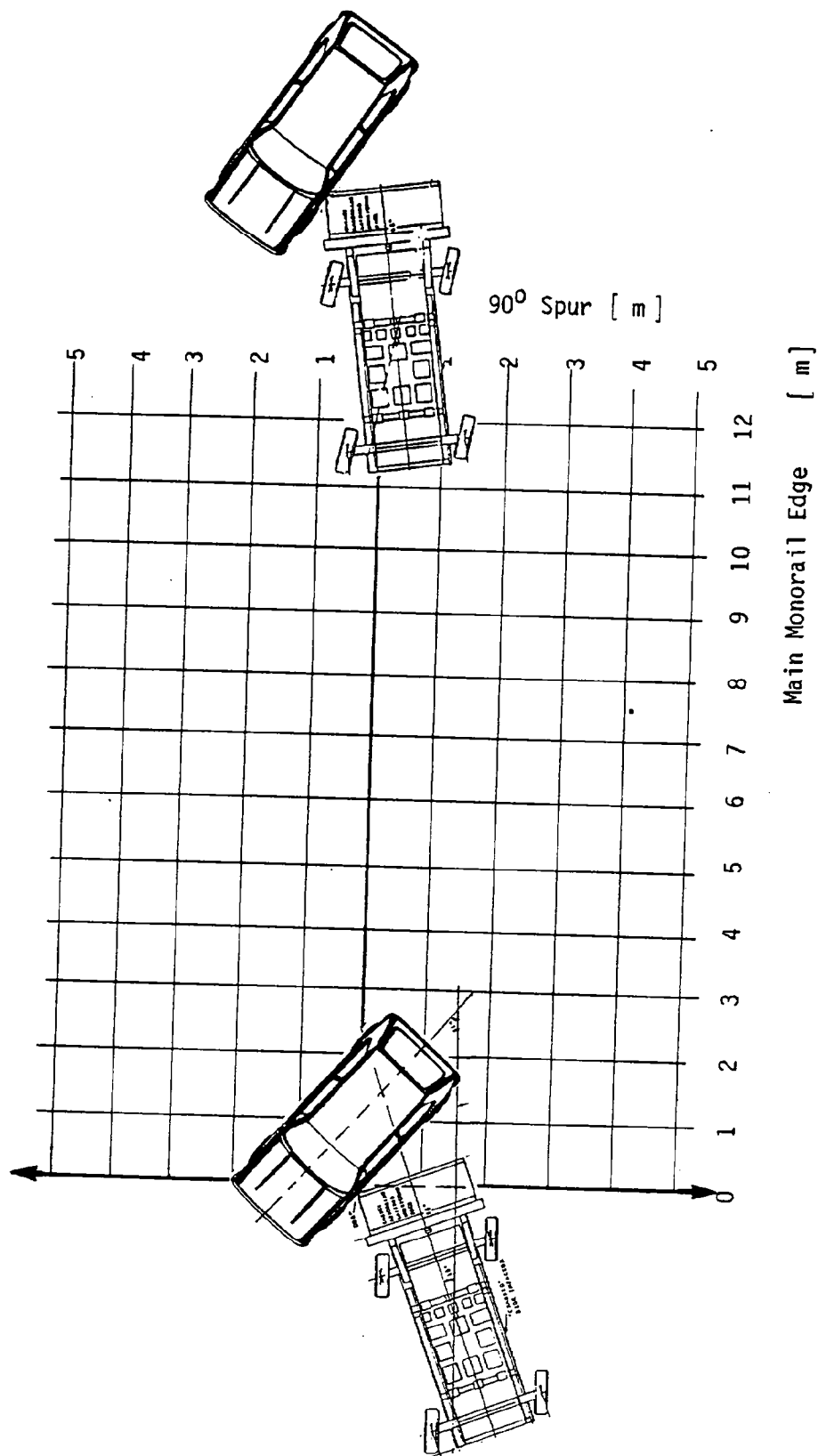


Table 9 : Summary of Post-Test Observations

VEHICLE: VW Rabbit 2

Test No. (Moving Test Device) 2

Dummy Contact Points:	<u>Left Front</u>	<u>Left Rear</u>
Head	<u>no Contact</u>	<u>no Contact</u>
Chest	<u>Upper Door Panel and</u> <u>lower Window-Sill</u>	<u>Upper Door Panel and</u> <u>lower Window-Sill</u>
Knees/Hip	<u>Lower Front-Door Panel</u>	<u>Lower Rear-Door Panel</u>

Glazing: Left Front- and Rear Side-Window shattered. Windshield was broken
but remained retained.

Doors: Left Front- and Rear Door damaged, would not open. Hinge Reinforcement
tore out from Door.

Seat Belt Anchorages : Left Seat Frame damaged, but Seat Anchorages
remained intact; Seat Legs and Seat-Runner fixed in the Floor-Rails.

Restraints: Driver (RA) and Left Rear (Lap-Belt) in use.

Fuel Leakage: None

General Observations: Impact point 650 mm from Front Axle.
Side Impactor Bumper impacted under the Door Beams. The Roof and the Floor
were damaged on the area of the B-Pillar. B-Pillar damaged and bended
on the Level of thw Window-Sill. Left Front-Door separated from lower
Sill.

Knee-Bolster supported the A-Pillar.

Driver- and Left Rear - Dummy no damage

TEST NO. 2TEST DATE 09.03.1981TEST CONFIGURATION:

Target Vehicle VW Rabbit 4-Door Speed 0 [mph]
 Bullet Vehicle 19° Crabbed Side Impactor Speed 30.88 [mph]
 Impact Location behind Front Axle 650 [mm] Angle 60 [deg]

PASSENGER: DRIVERHEAD RESPONSE:

Peak a_R 129.12 [g] Impacted Objekt none
 HIC 440.92 Time T1 40 [ms] T2 142 [ms]

CHEST RESPONSE:

Location	[g]	$\geq 3ms$ [g]	SI	Δv_y [mph]	Imp. Time [ms]	Time a-max [ms]
Upper Sternum (X)	48.51	31		-	45	60.6
Lower Sternum (X)	35.99	22.5		-	45	61
LUR (Y)	83.65	69		23.57	40	57.5
LLR (Y)	109.83	64.5		24.53	40	57
RUR (Y)	79.99	72		21.28	45	58.5
RLR (Y)	80	74		19.74	45	60

CHEST DEFLECTION: Damper - DY [mm]VERTEBRAL COLUMN RESPONSE:

Location	Pk a_y [g]	Pk a_R [g]	$> 3 ms$ [g]	SI	Δv_y [mph]	Imp. Time [ms]	Time a-max [ms]
Upper Thorax (T1)	84.33	85.68	78	543	22.63	38	61.5
Lower Thorax (T12)	75.04	77.38	75	517	23.39	40	54

PELVIS RESPONSE:

Pk a_R [g] 97.74 SI 705 $\geq 3 ms$ [g] 87.76 Impact Time [ms] 45

Table 10: Side Impact Dummy Test Response Summary

TEST NO. 2TEST DATE 09.03.1981TEST CONFIGURATION:

Target Vehicle VW Rabbit 4-Door Speed 0 [mph]
 Bullet Vehicle 19° Crabbed Side Impactor Speed 30.88 [mph]
 Impact Location behind Front Axle 650 [mm] Angle 60 [deg]

PASSENGER: LEFT REARHEAD RESPONSE:Peak a_R 89.22 [g]Impacted Objekt noneHIC 253.03Time T1 70 [ms] T2 180 [ms]CHEST RESPONSE:

Location	[g]	$\geq 3ms$ [g]	SI	Δv_y [mph]	Imp. Time [ms]	Time a-max [ms]
Upper Sternum (X)	27.58	26		-	60	95.5
Lower Sternum (X)	26.37	25		-	52	104
LUR (Y)	54.51	44.5		17.89	70	94
LLR (Y)	defect					
RUR (Y)	37.0	24		23.18	70	98
RLR (Y)	34.34	30.5		21.7	70	83.5

CHEST DEFLECTION: Damper - DY [mm]VERTEBRAL COLUMN RESPONSE:

Location	Pk a_y [g]	Pk a_R [g]	$> 3ms$ [g]	SI	Δv_y [mph]	Imp. Time [ms]	Time a-max [ms]
Upper Thorax (T1)	45.6	50.57	46	168	18.02	58	101.5
Lower Thorax (T12)	32.84	39.96	36	132	18.69	50	95.5

PELVIS RESPONSE:

Pk a_R [g] 65.16 SI 271 $\geq 3ms$ [g] 49.48 Impact Time [ms] 83

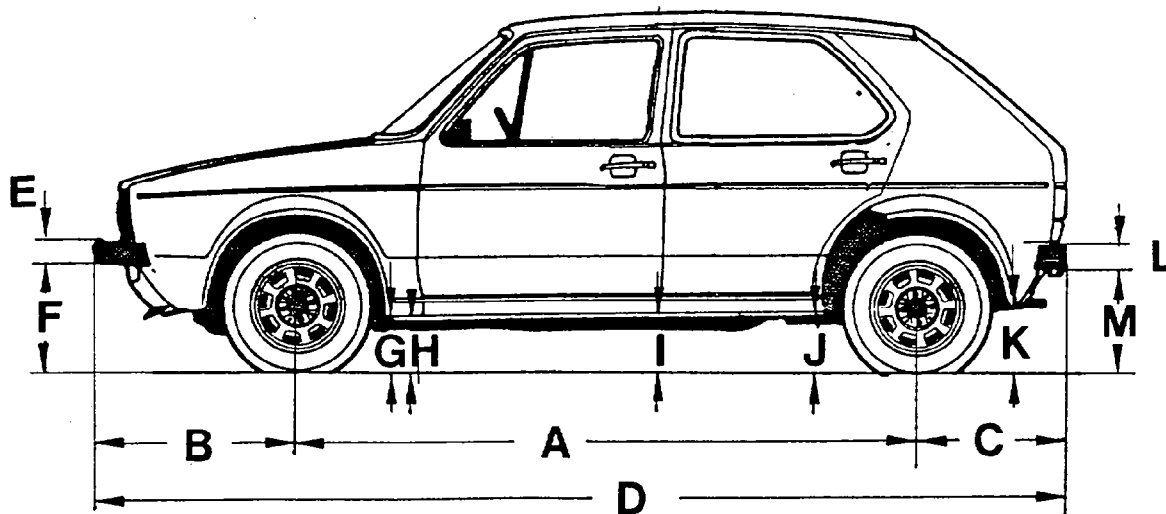
Table 11: Side Impact Dummy Test Response Summary

TEST NO. 2 TEST DATE 09.03.1981

COMPUTED COEFFICIENTS:

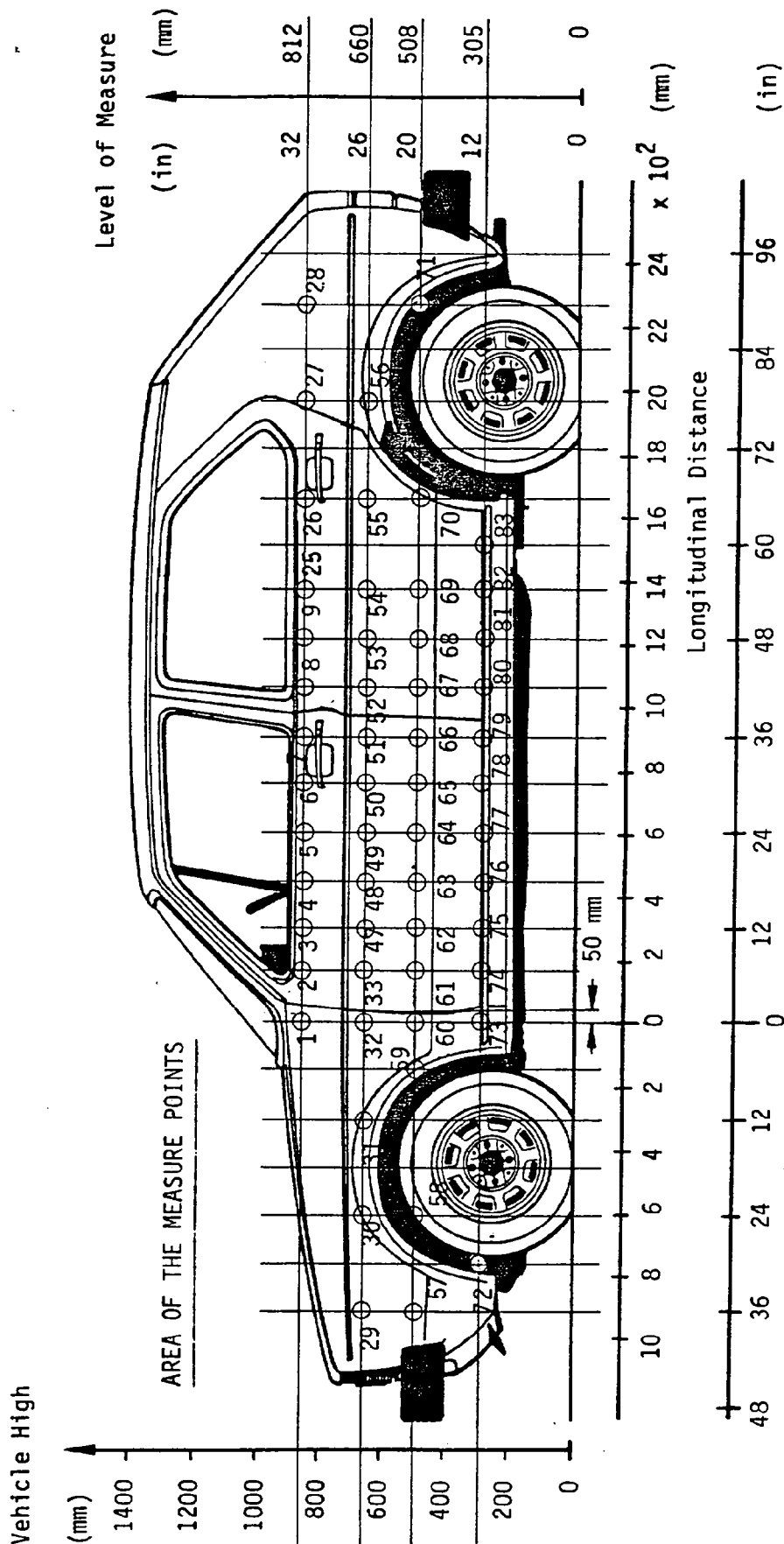
Location of Accelerometer	AIS B-Param.	AIS Av.Pow.	PAP TB / TE (ms)	B	Q	V ₁₀₅₀	V ₁₀₉₀	RVS
Left Upper Rib LUR	3.52	3.42	1584 45.6/ 56.9	6.8450	811.14	6.25	14.37	2.3000
Left Lower Rib LLR	3.57	3.62	1914 45.0/ 63.8 2305	6.8788	978.28	6.87	16.25	2.3636
Upper Thorax T 1 Y	3.68	3.83	50.0/ 67.5	6.9557	1002.2	6.25	13.75	2.2000
Lower Thorax T 12 Y	3.68	3.84	2295 46.9/ 62.5	6.9519	1006.6	6.87	13.75	2.0000

TABLE 12 : AIS AND COEFFICIENTS



	PRE - TEST	POST - TEST	Δ CHANGE
A	2405	2295	-110
B	820	825	5
C	695	705	10
D	3920	3825	- 95
E	125	125	0
F	365	428	63
G	175	200	25
H	175	198	23
I	160	190	30
J	155	200	45
K	185	220	35
L	125	125	0
M	290	316	26

Table 13: Pre - and Post- Test Measurements



TEST NO : 2

VEHICLE NO : 705 107

Figure 10: Vehicle Measurement Side (Exterior)

Table 14 : Exterior Static Crush for VW Rabbit

Location	Height [mm] *	Zero Distance Located at Door [mm]				
		(Front)	(Rear)			
Window-Sill	812	762 / 914	2286	32	-	32
		610	1981	13	4	-
		457	1829	-	-	-
		305	1676	23	49	87
		152	1524	-	-	-
		0	1372	143	376	299
		152	1220	227	240	258
		305	1067	298	304	309
		457	914	310	322	360
		610	762	325	341	403
		762 / 914	610	298	322	370
		812	457	250	294	343
		660	305	79	229	276
		508	152	80	117	157
		305	0	5	10	26
		23	152	-	-	22
		-	305	-	7	-
		-	457	-	-	23
		-	610	-	17	-
Mid-Door	508	305	2286	32	-	32
		152	1981	13	4	-
Rocker-Sill	305	0	1829	-	-	-
		152	1676	23	49	87

* All heights measured above ground level.

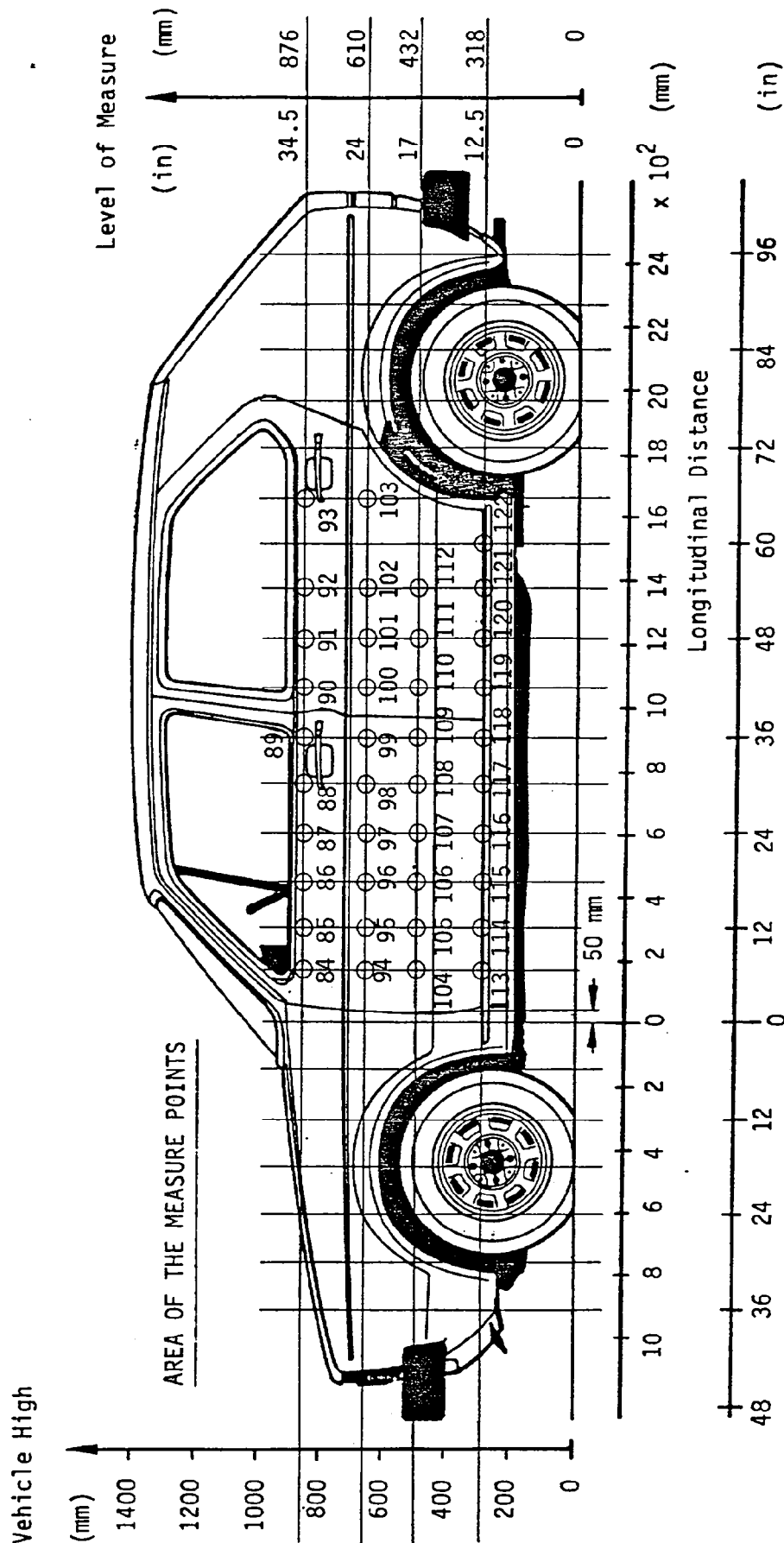


Figure 11: Vehicle Measurement Side (Interior)

Table 15: Interior Static Intrusion for VW - Rabbit

Location	Height [mm] *	Zero Distance Starting at Door [mm]											
		0	152	305	457	610	762	914	1067	1220	1372	1524	1676
Windowsill Level	876	-	70	135	202	241	266	291	309	227	148	-	2
Mid-door Level	610	-	101	188	250	287	309	330	289	195	143	-	33
Bullet Vehicle Bumper Level	432	-	121	215	301	332	328	309	268	180	-	-	-
Doorsill Level	305	-	71	101	129	170	195	233	184	90	-	-	-

* Heights measured above ground level.

Pre Test : _____

Post Test : -----

Test No: 2

Test No:

Test No:

Test No:

Test No:

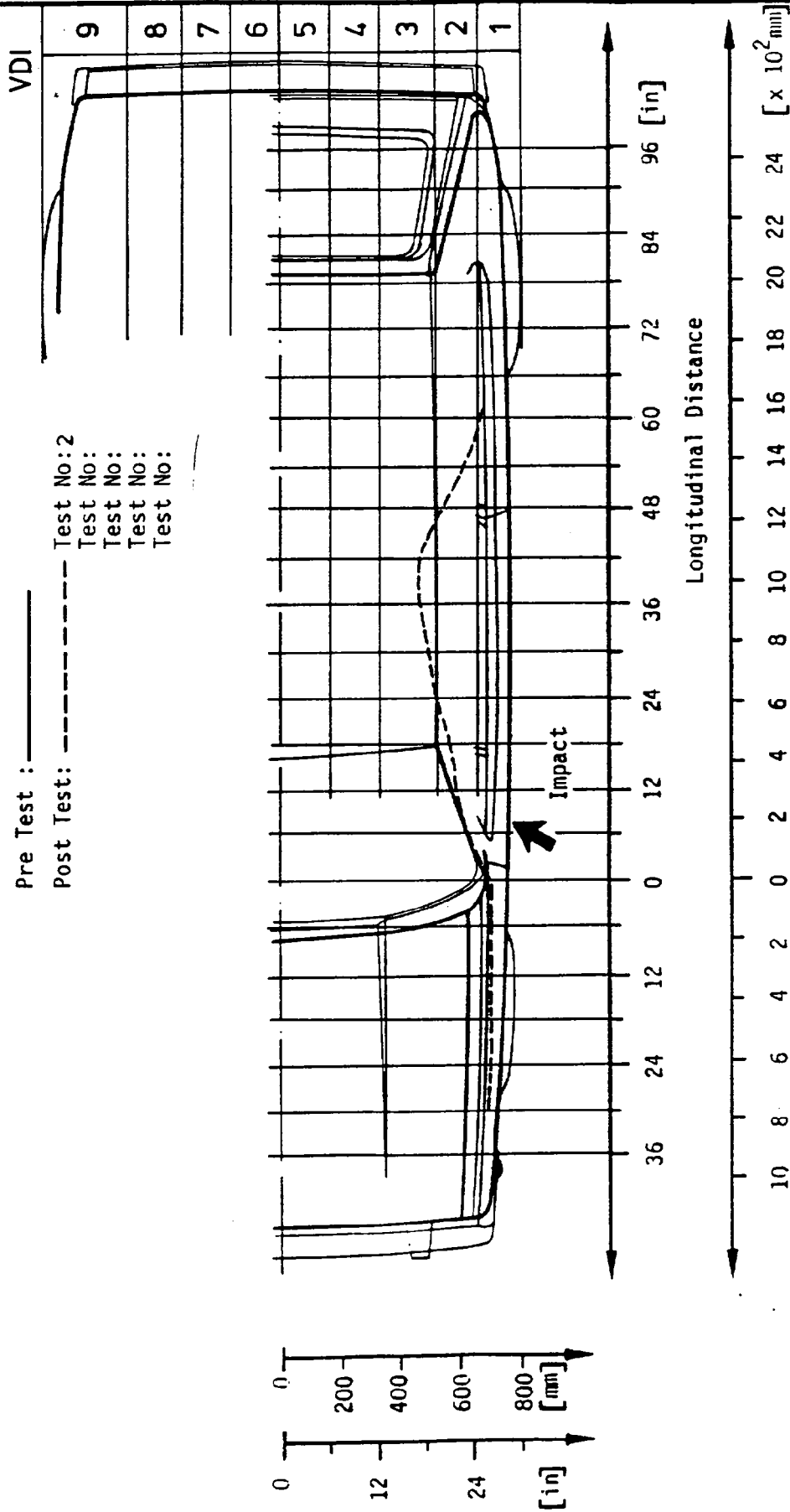
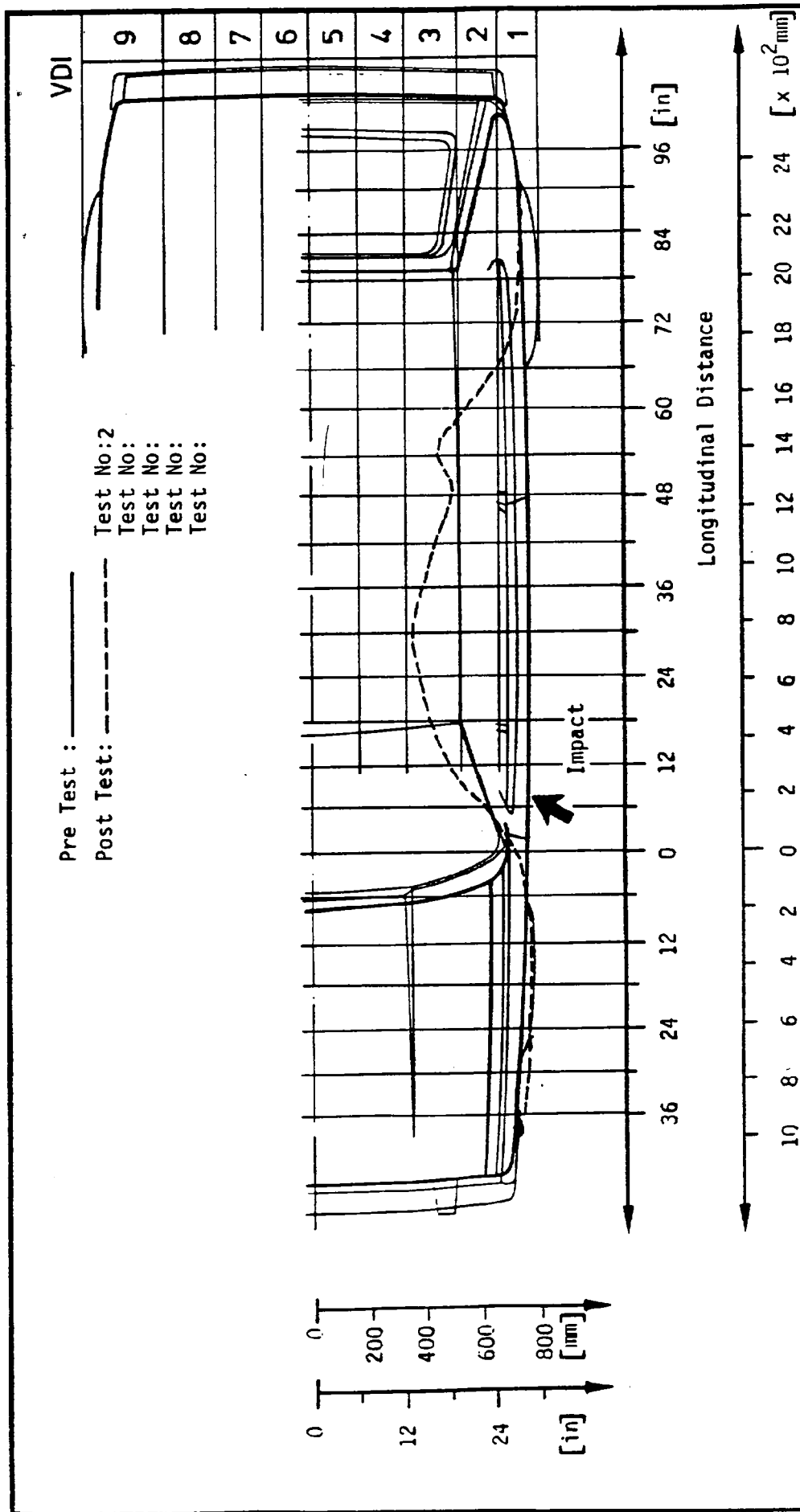


Table 16: Pre - and Post - Test Exterior Profiles at 305 mm above Ground Level



**Table 17: Pre - and Post - Test Exterior Profiles at 508 mm above
 Ground Level**

Pre Test : _____
 Test No: 2
 Post Test: - - - - -
 Test No:
 Test No:
 Test No:
 Test No:

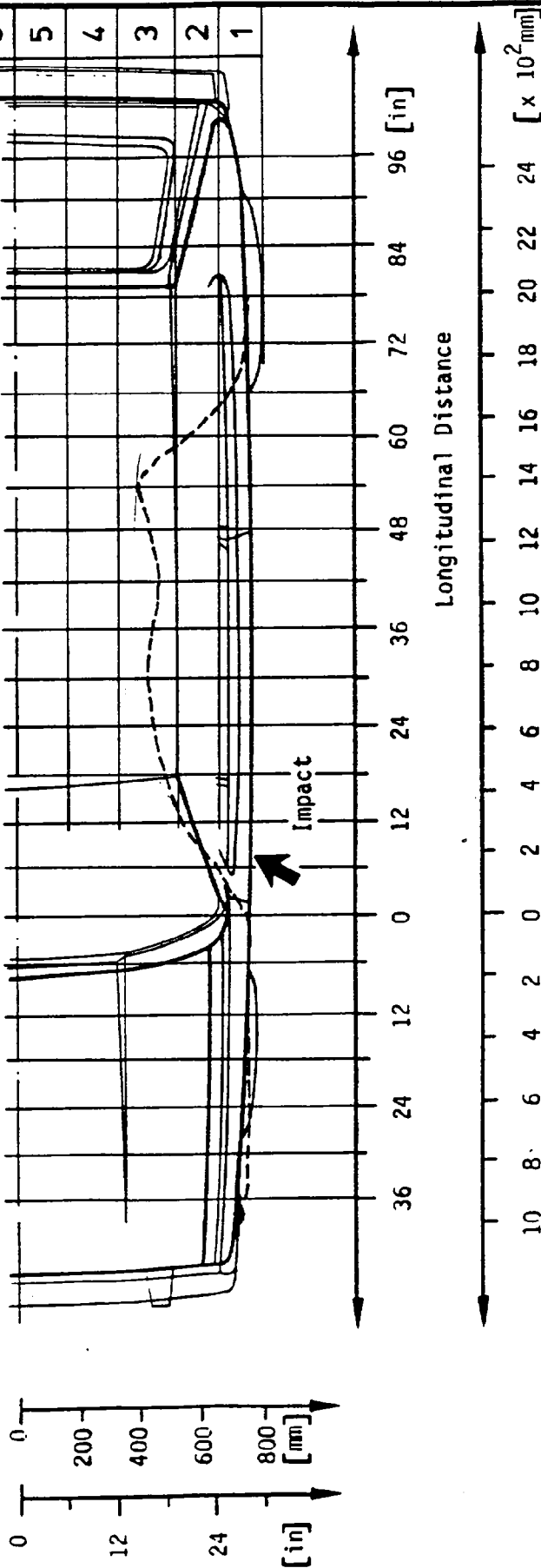


Table 18: Pre - and Post - Test Exterior Profiles at 660 mm above Ground Level

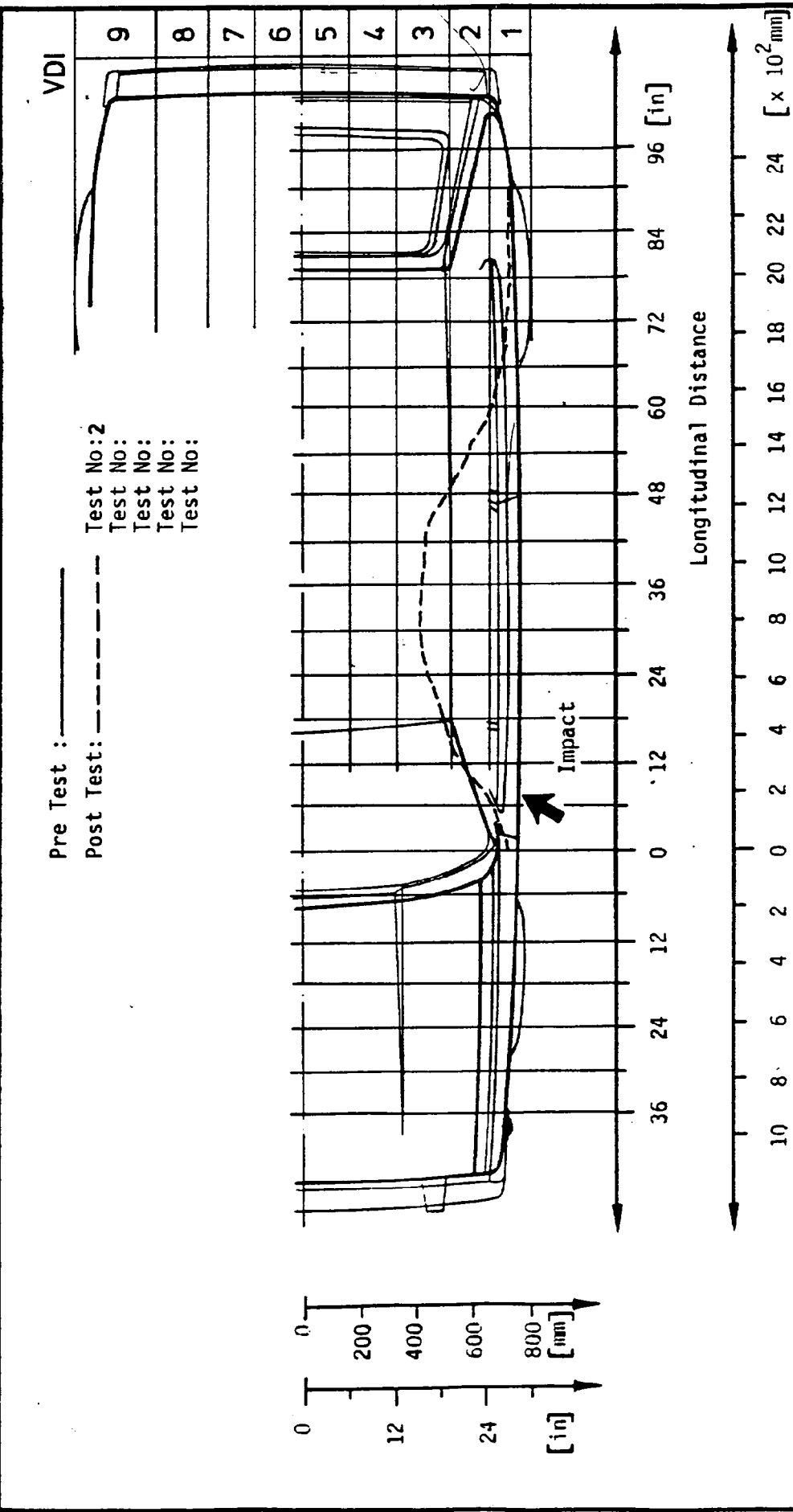


Table 19: Pre - and Post - Test Exterior Profiles at 812 mm above Ground Level

Pre Test : _____
 Post Test : - - - - -
 Test No: 2
 Test No:
 Test No:
 Test No:
 Test No:

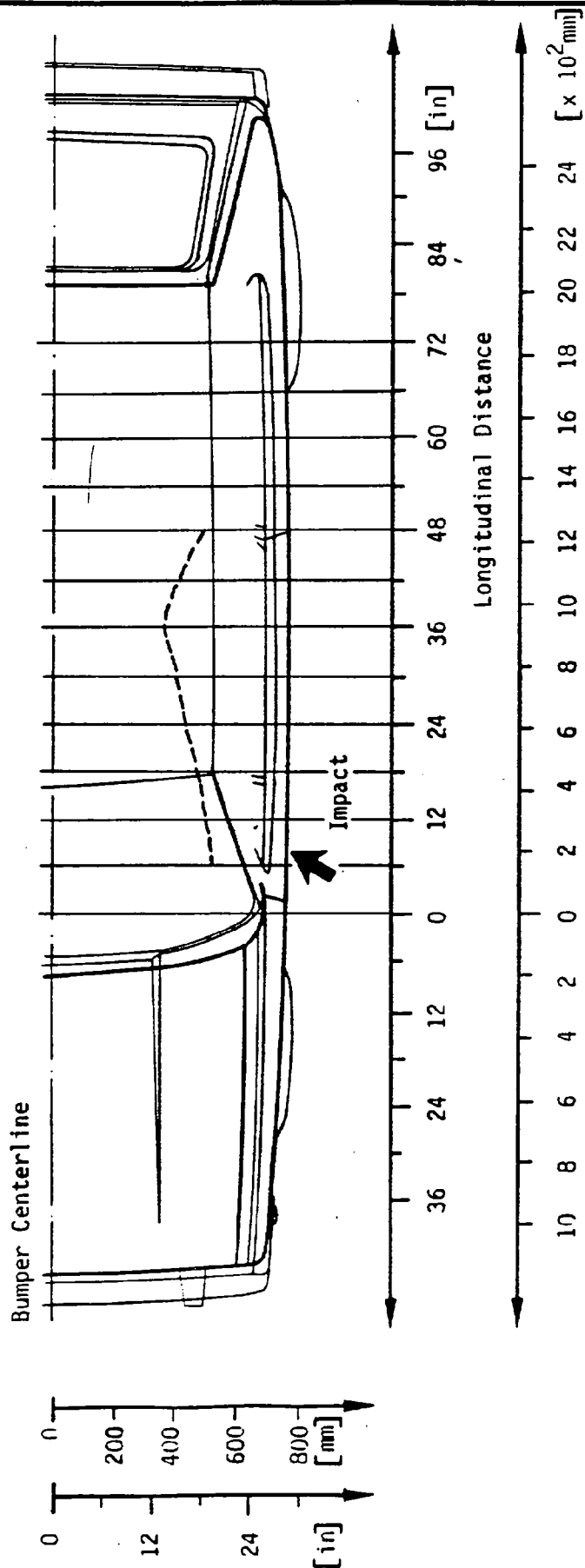


Table 20: Pre - and Post - Test Interior Profiles at 318 mm above Ground Level

Pre Test : _____
 Post Test: - - - - -
 Test No: 2
 Test No:
 Test No:
 Test No:
 Test No:

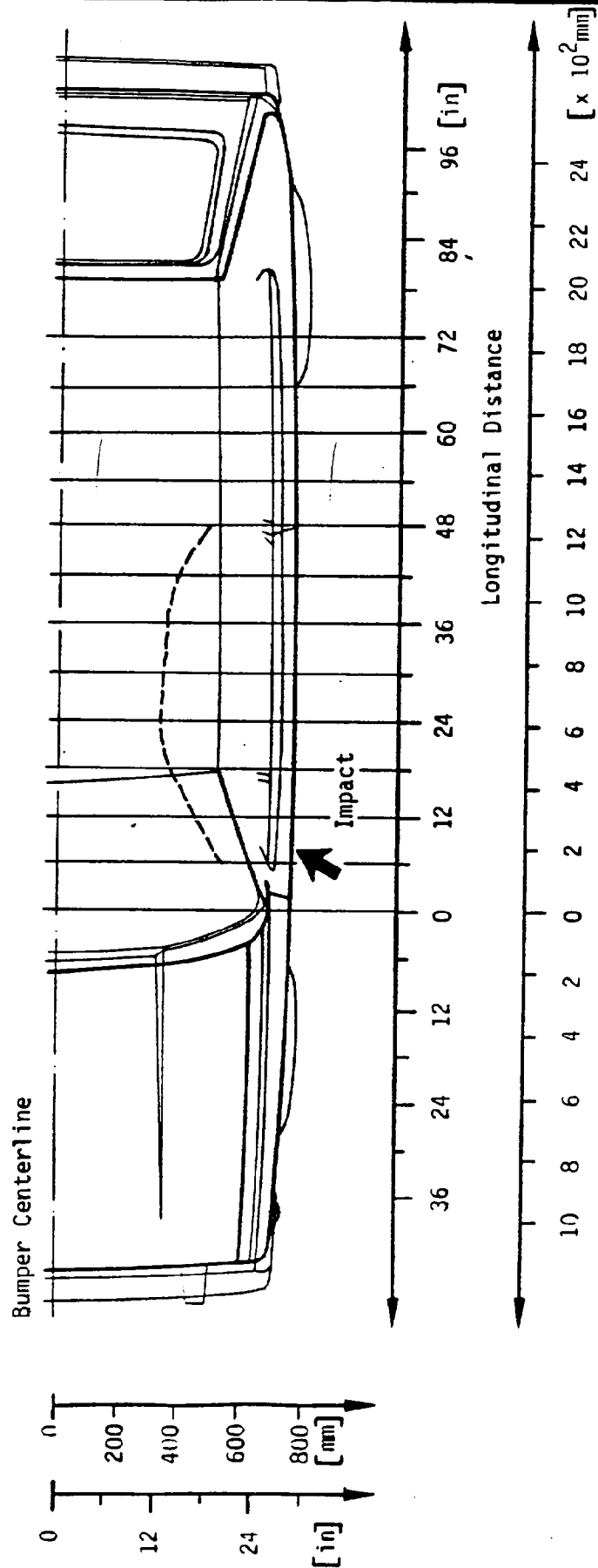


Table 21: Pre - and Post - Test Interior Profiles at 432 mm above Ground Level

Pre Test : _____
 Post Test: ----- Test No: 2
 Test No:
 Test No:
 Test No:
 Test No:

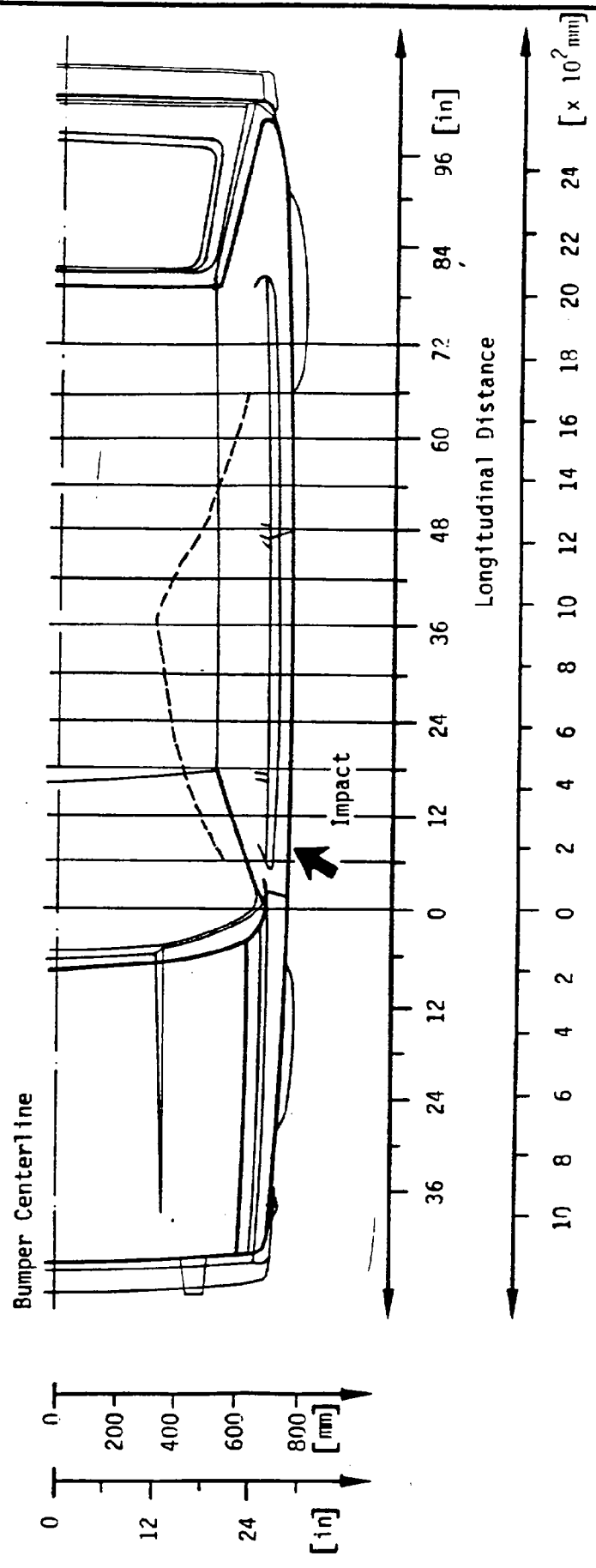
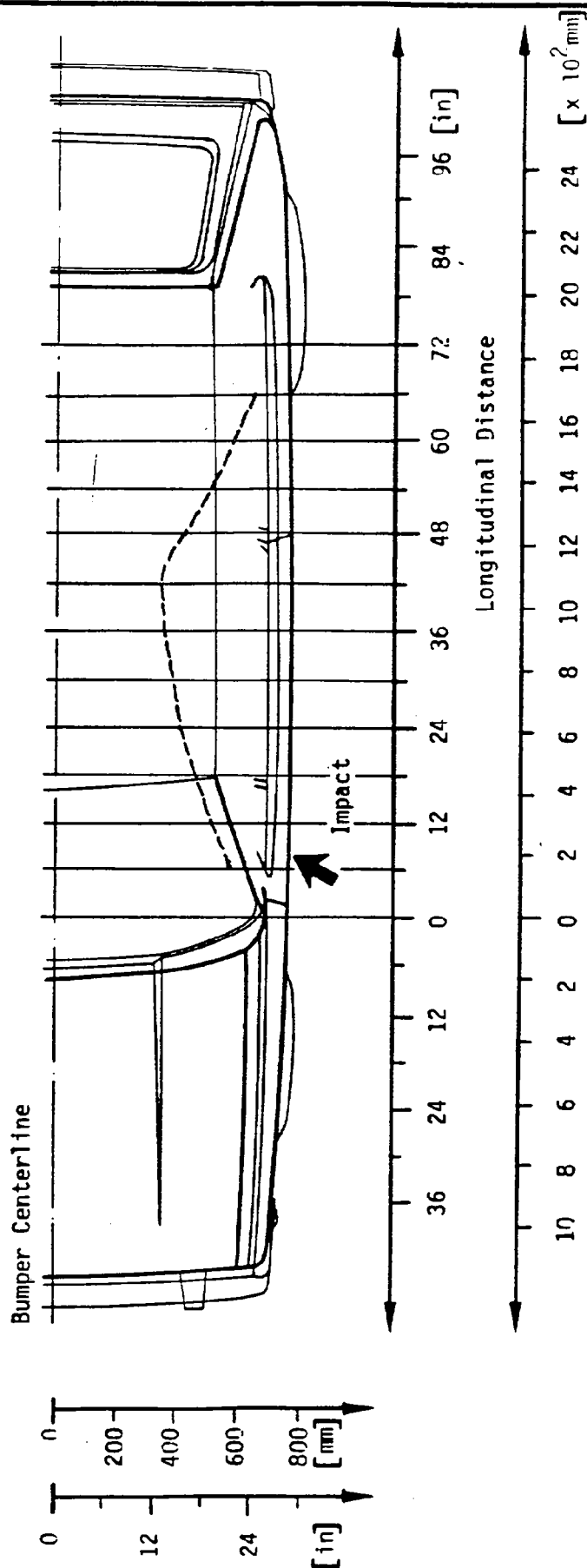


Table 22: Pre - and Post - Test Interior Profiles at 610 mm above Ground Level

Pre Test : _____
 Post Test : _____
 Test No: 2
 Test No:
 Test No:
 Test No:
 Test No:



**Table 23: Pre - and Post - Test Interior Profiles at 876 mm above
Ground Level**

TEST NO : 2

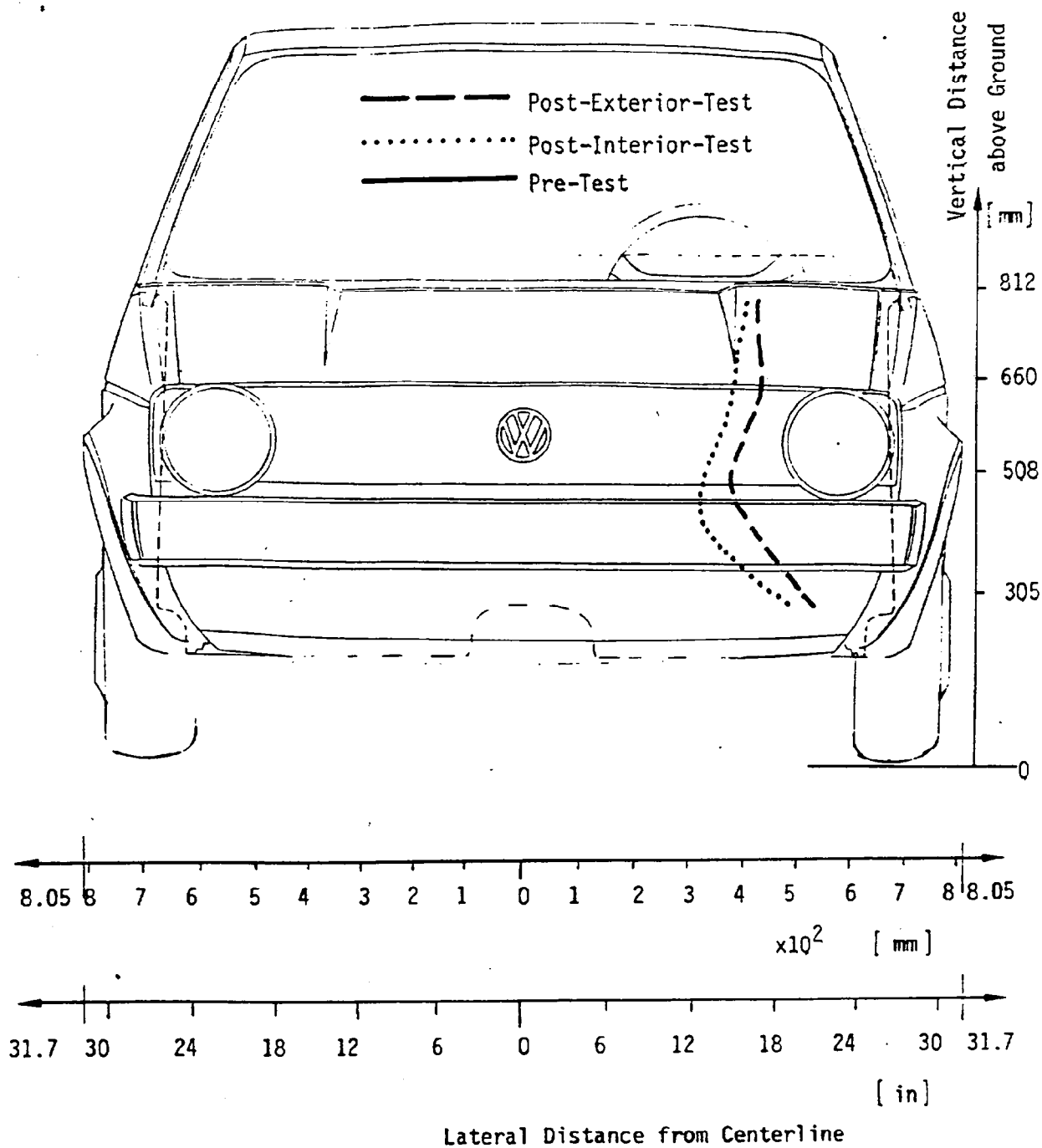


FIGURE 12 : EXTERIOR AND INTERIOR STATIC PROFILES AT THE
LONGITUDINAL DISTANCE 610 MM FROM DOOR

TEST NO : 2

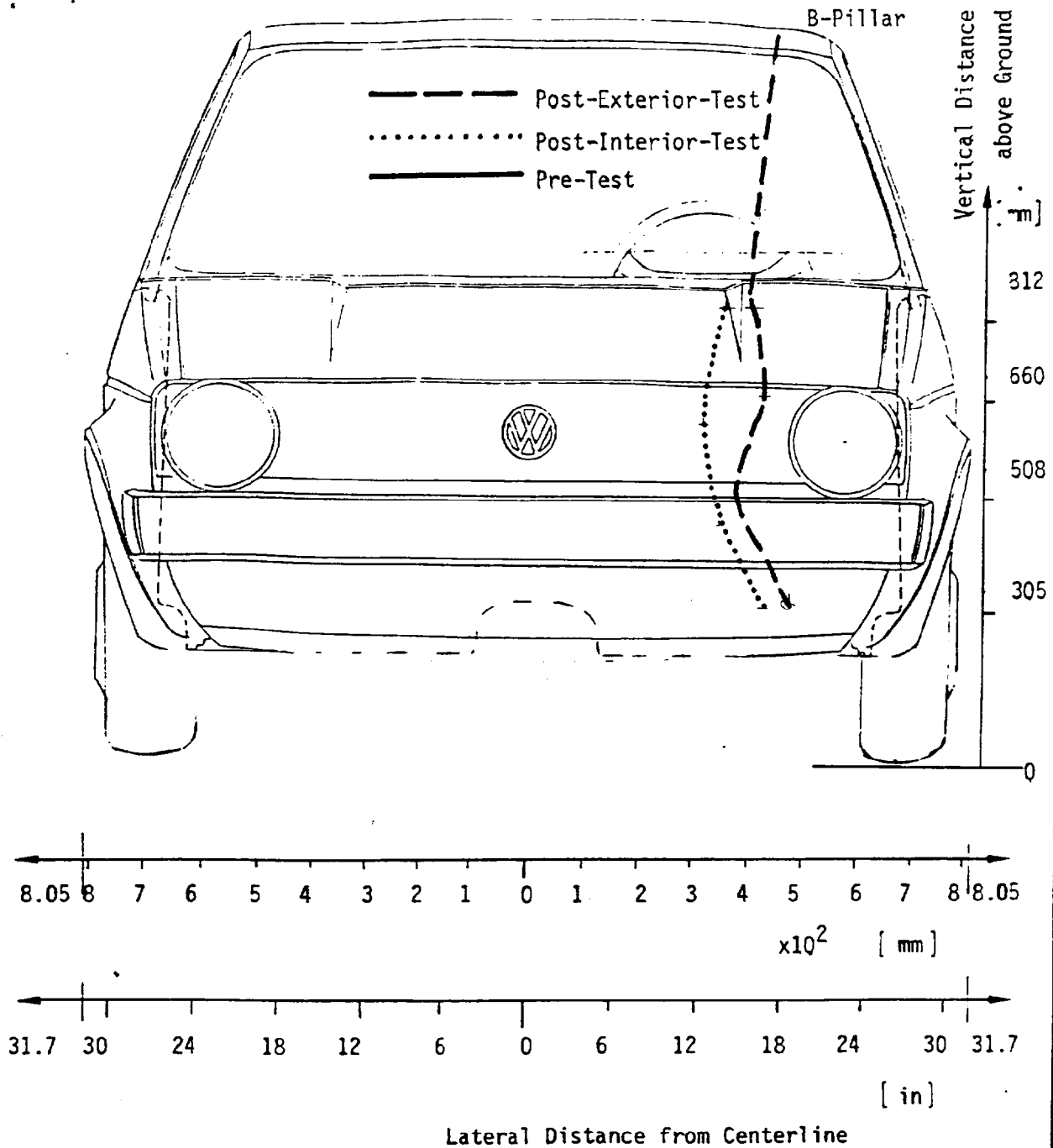


FIGURE 13 : EXTERIOR AND INTERIOR STATIC PROFILES AT THE
LONGITUDINAL DISTANCE 914 MM FROM DOOR

Table 24: Exterior Static Crush for Side Impactor

Location	Height at C_L *	Distance right of Center [mm]				Distance left of Center [mm] **			
		835	700	600	500	400	300	200	100
Top of Stack Level	813								
Mid - Stack Level	554								
Bumper Level	432								

* Heights measured above ground level.

** Impact side.

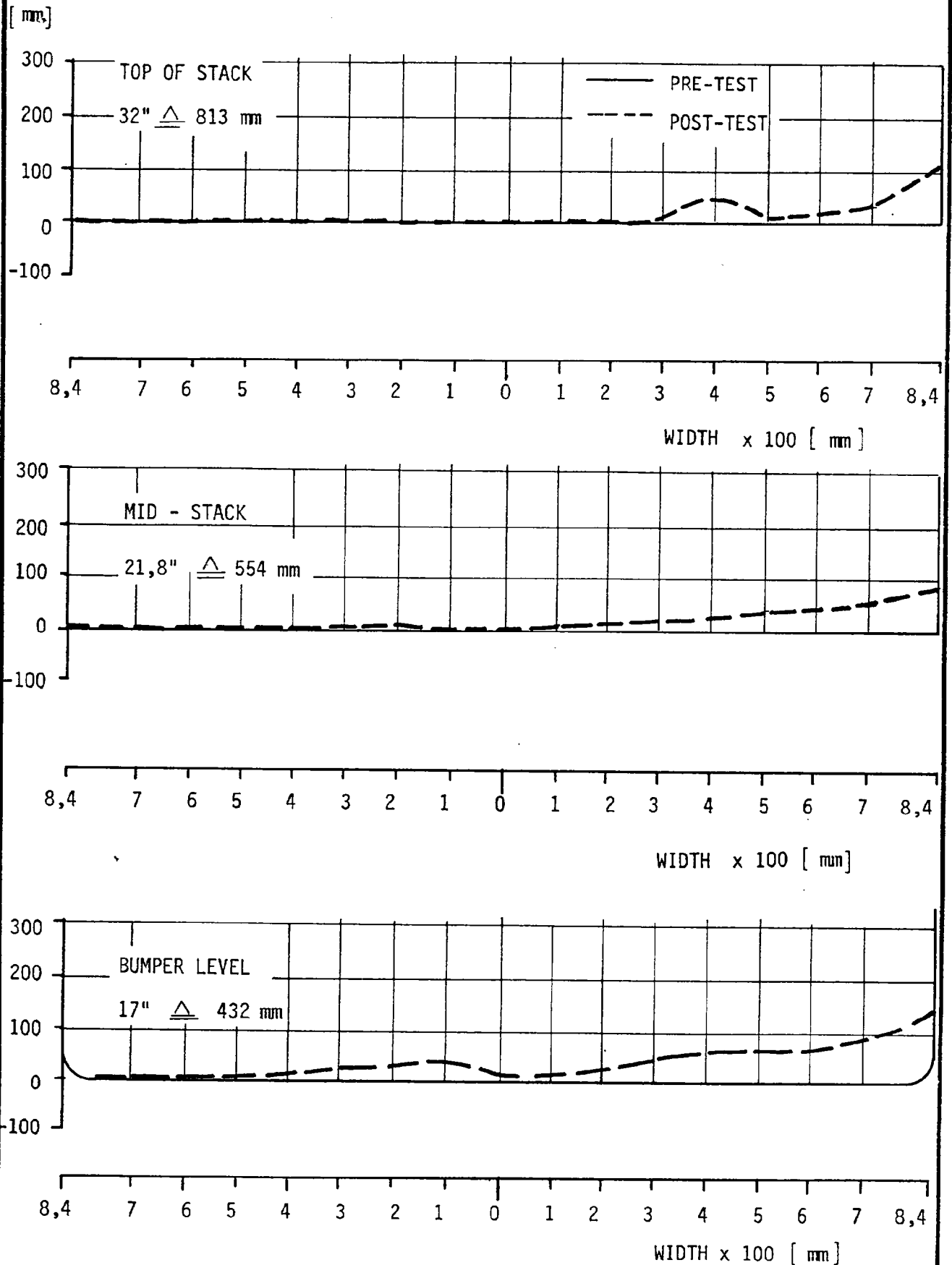


Table 25 : Pre- and Post-Test Frontal Profiles for Side Impactor (Test 2)

A P P E N D I X A

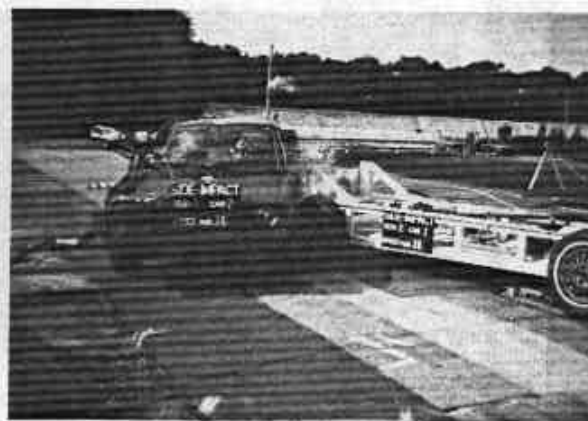
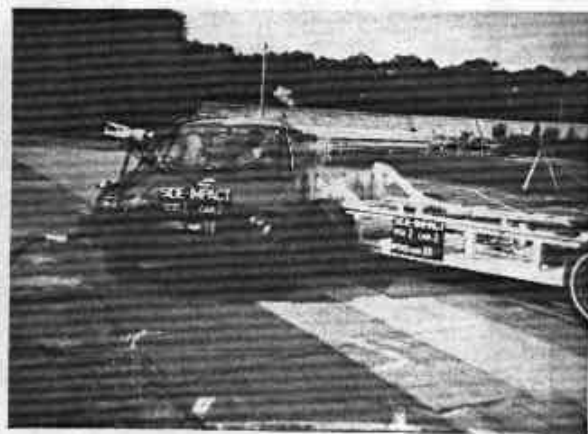
Photographs

List of Illustrations

Figure		Page
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A 3	VW Rabbit Left Side Post Test View (Front-Side Direction)	A - 4
A 4	VW Rabbit Left Side Post Test View	A - 5
A 5	VW Rabbit Left Side Post Test View (Rear-Side Direction)	A - 6
A 6	Crabbed Barrier Post Test View	A - 7

Figure A1 : Crash Sequence Figures

TEST 2 - 30 mph



A - 2

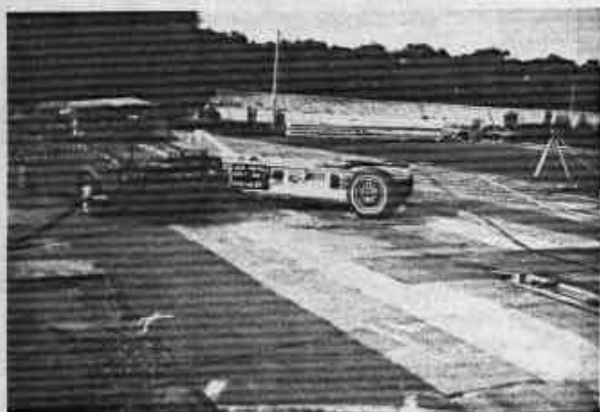
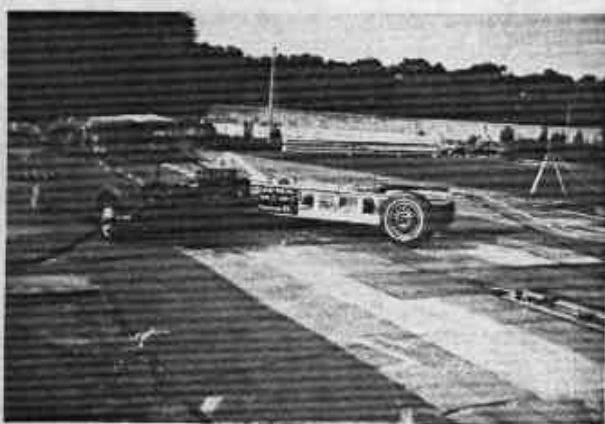
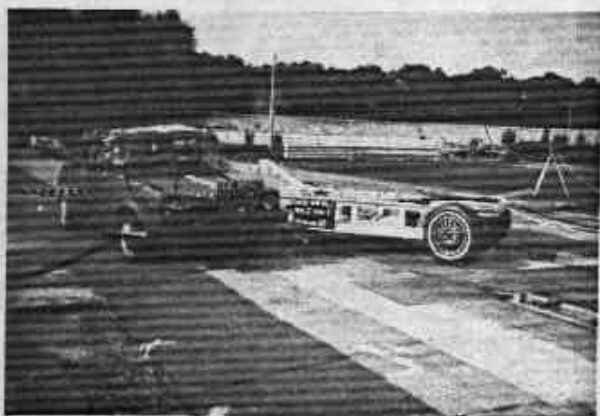




FIGURE A 2 : POST TEST 'POSITION'
CRABBED BARRIER AND VW RABBIT

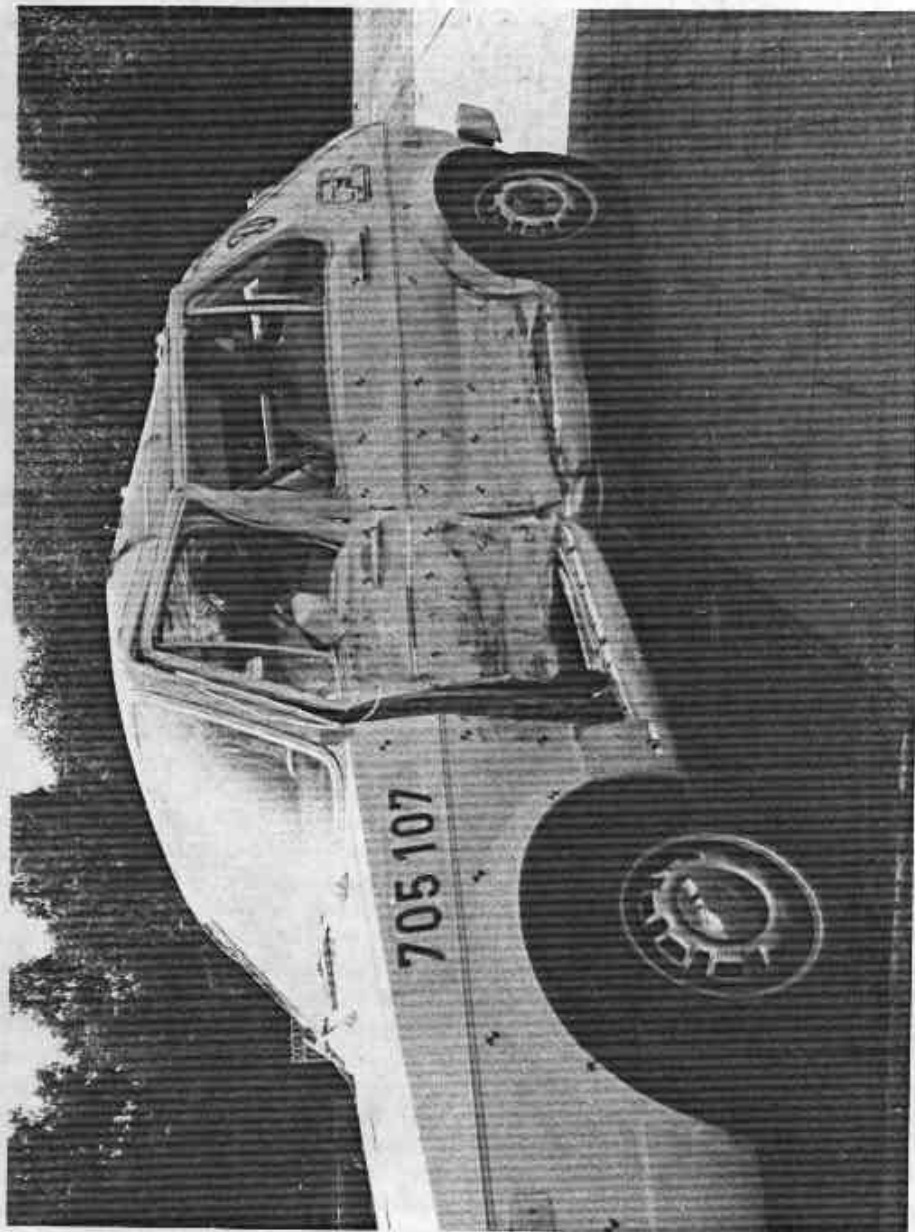


FIGURE A 3 : VW RABBIT LEFT SIDE

POST TEST VIEW (FRONT-SIDE DIRECTION)

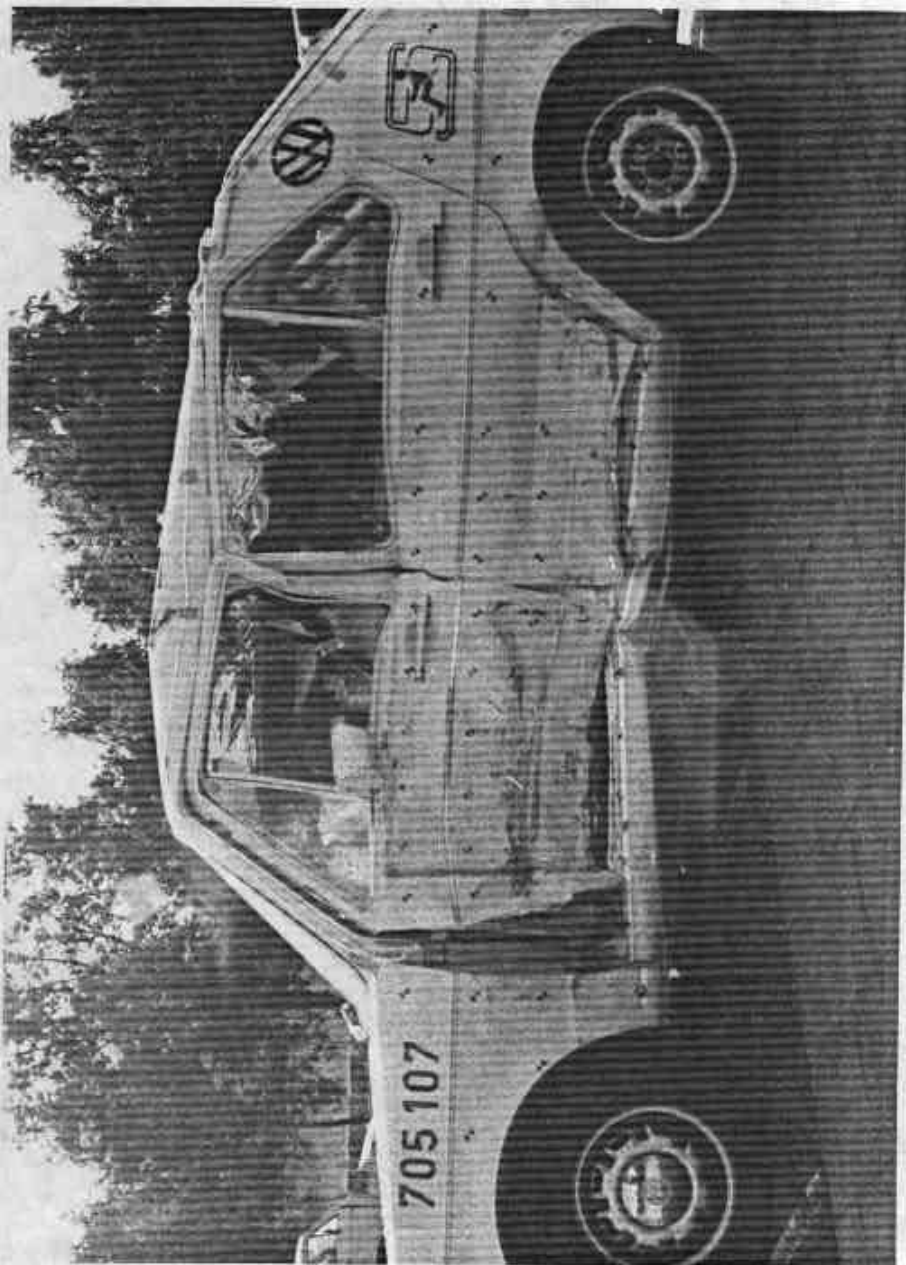


FIGURE A 4 : VW RABBIT LEFT SIDE
POST TEST VIEW

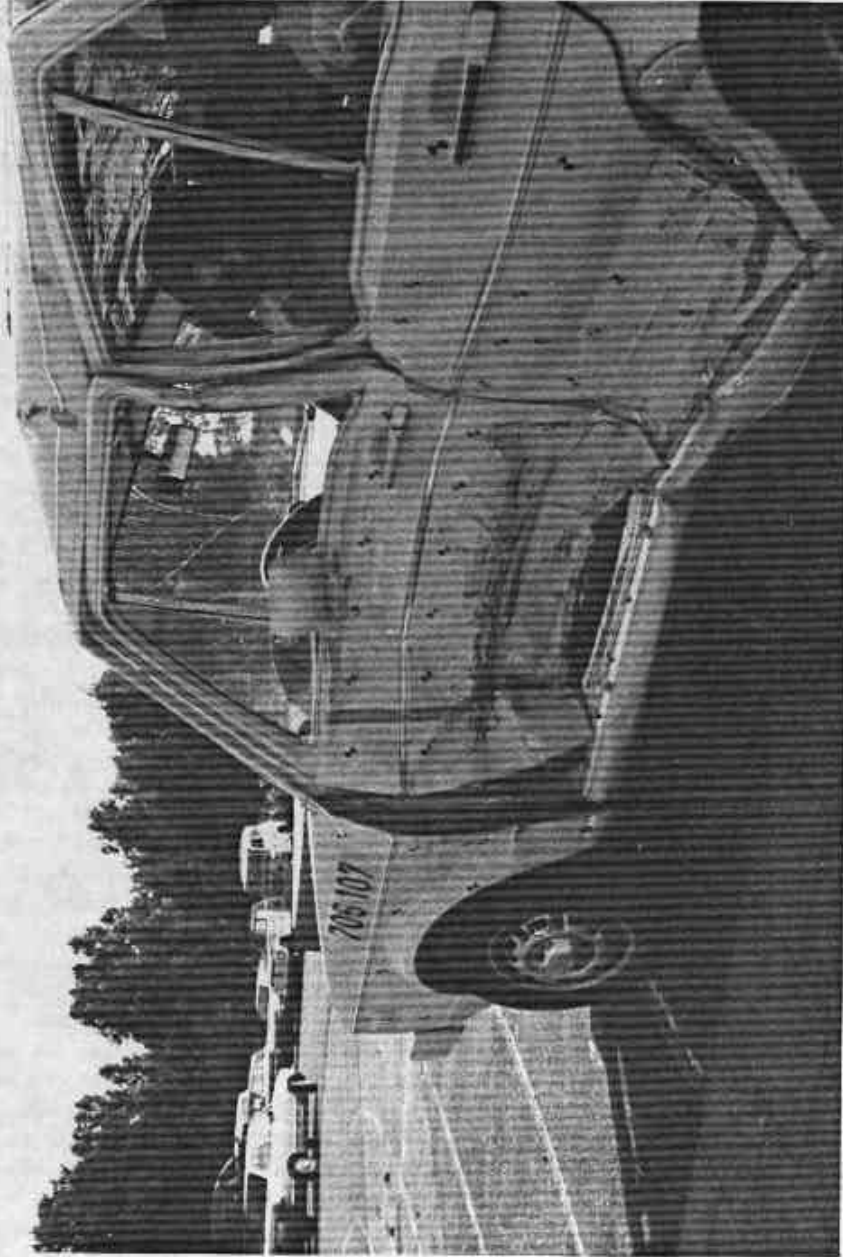


FIGURE A 5 : VW RABBIT LEFT SIDE
POST TEST VIEW (REAR-SIDE DIRECTION)

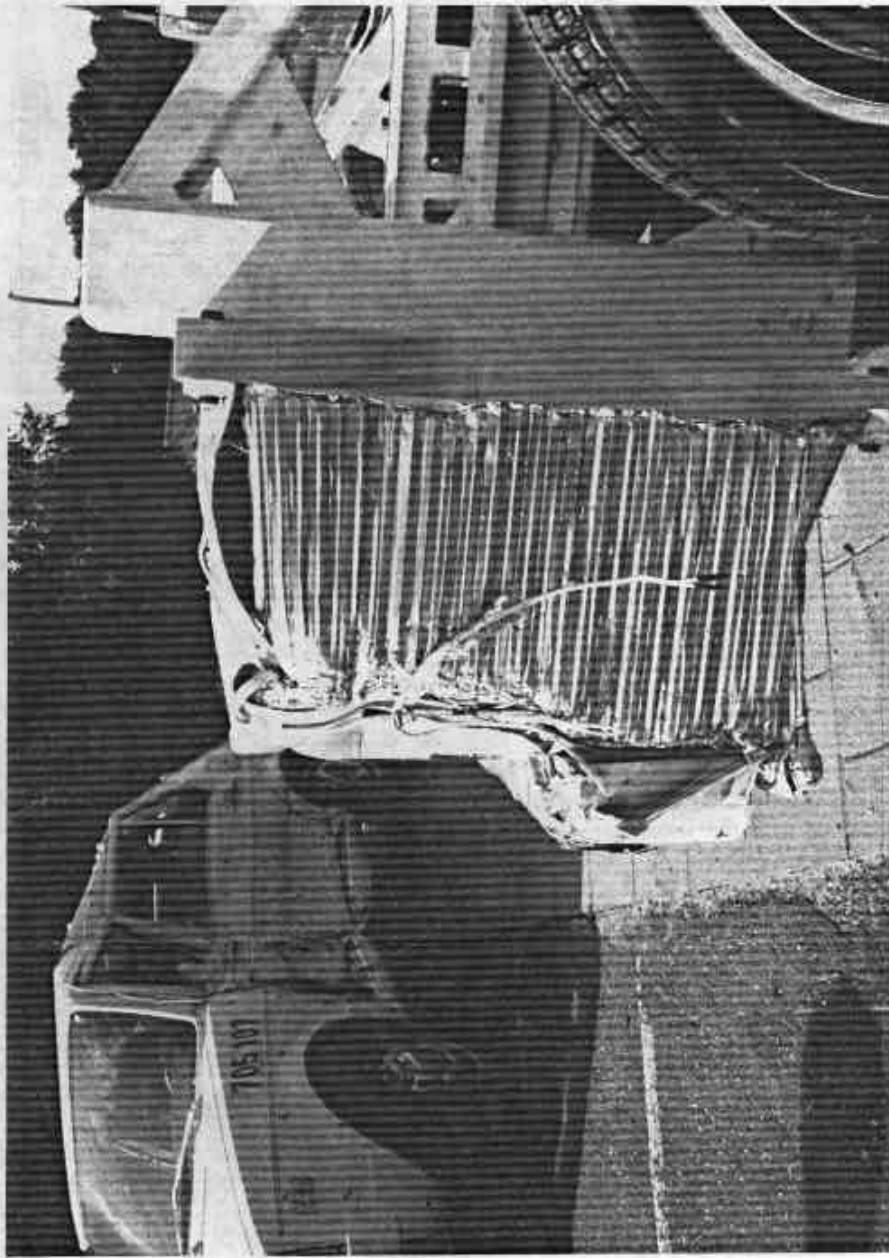


FIGURE A 6 : CRABBED BARRIER POST TEST VIEW

A P P E N D I X B

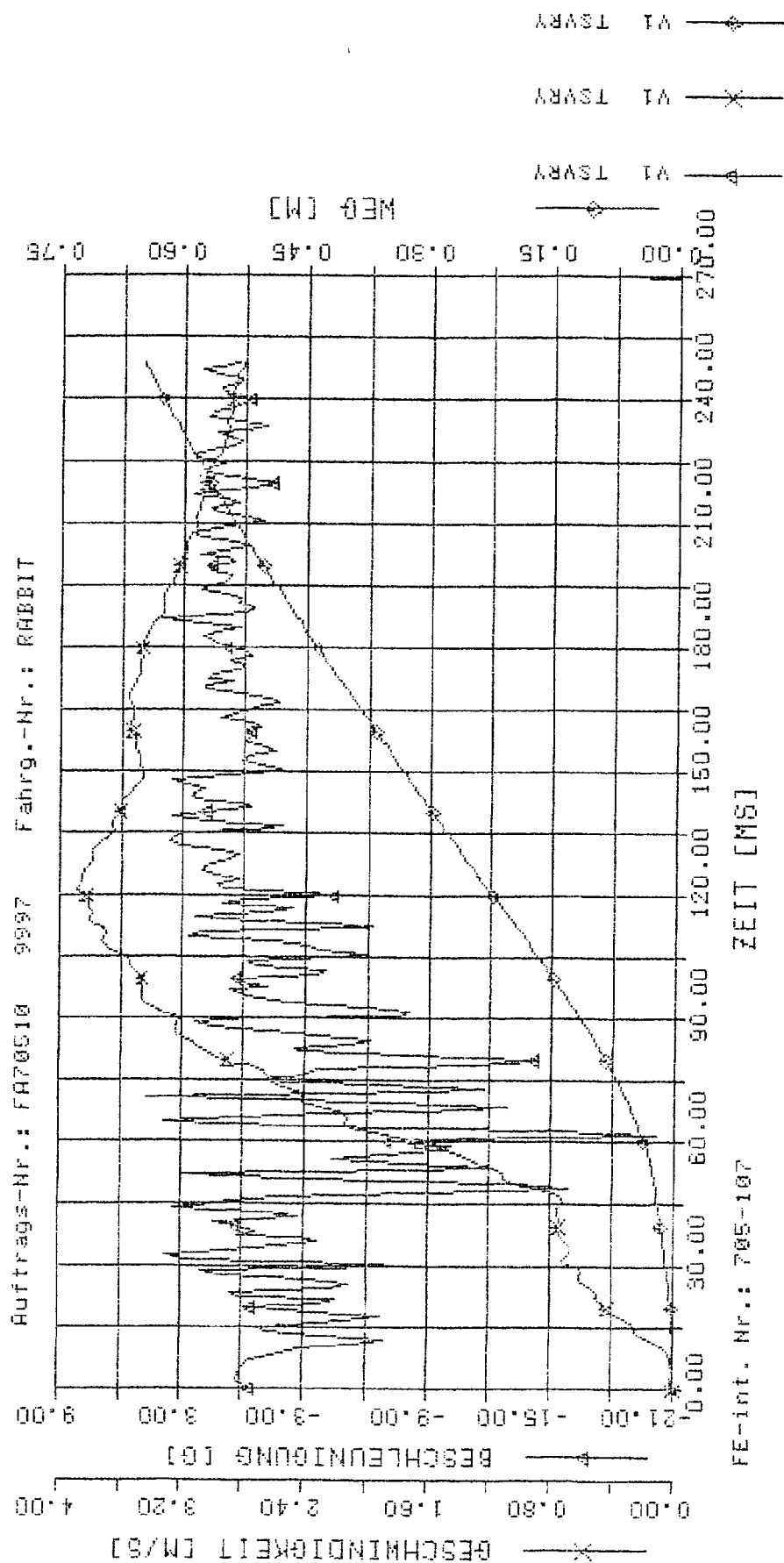
Vehicle and Dummy Test Response Acceleration/ - and Velocity/Time History

- B.1 Vehicle Test Response
 - B.1.1 Target Vehicle
 - B.1.2 Crabbed Barrier
- B.2 Dummy Test Response
 - B.2.1 Driver
 - B.2.2 Rear Passenger

B.1.1 Target Vehicle

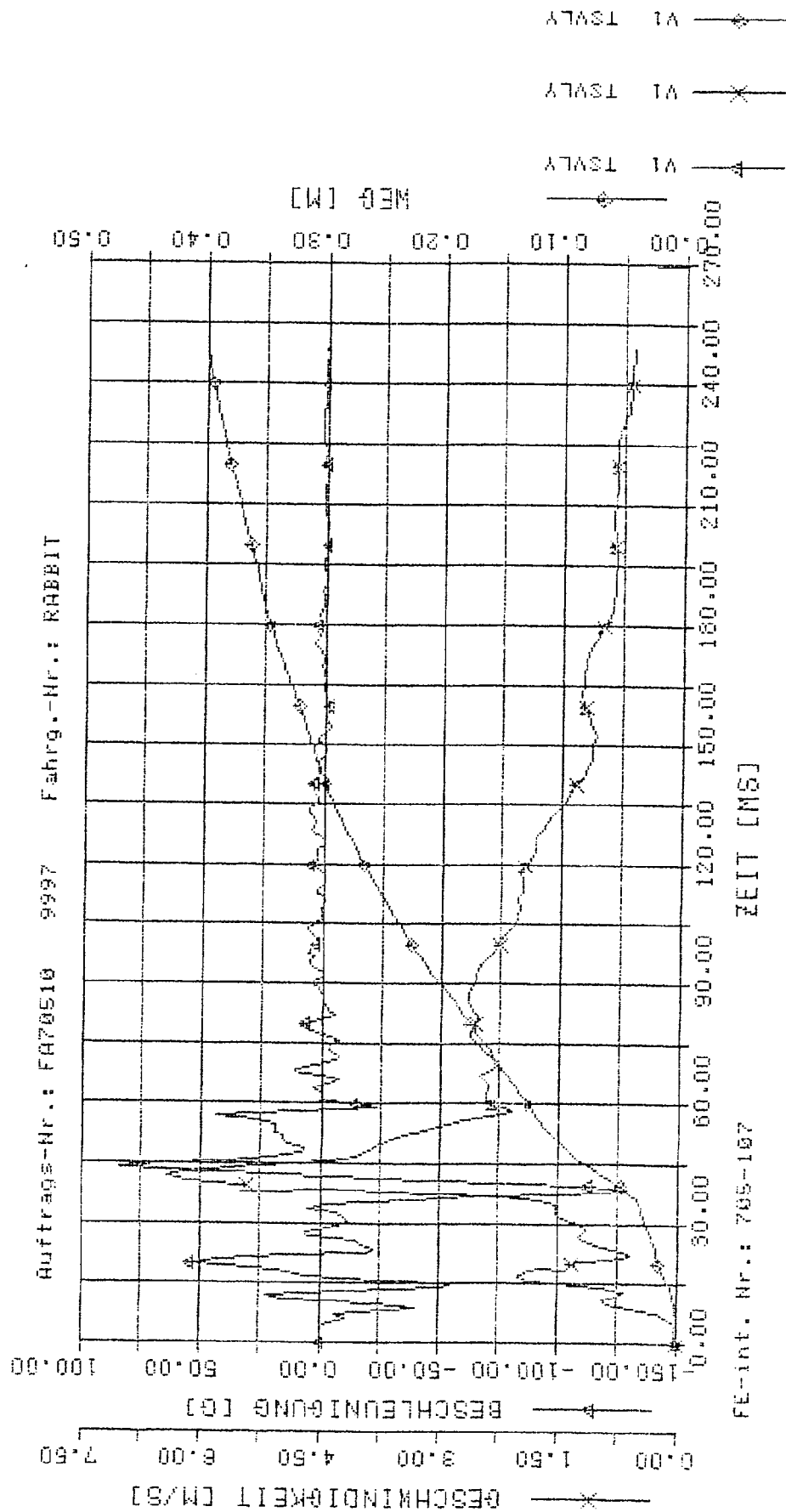
Kennwerte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Groesse	Extremum	t	MS
TSURY	V1	BE	g	-20.123	62.00	0.00
TSURY	V1	CE	m/s	3.874	122.00	0.00
TSURY	V1	WE	n	.676	258.00	0.00



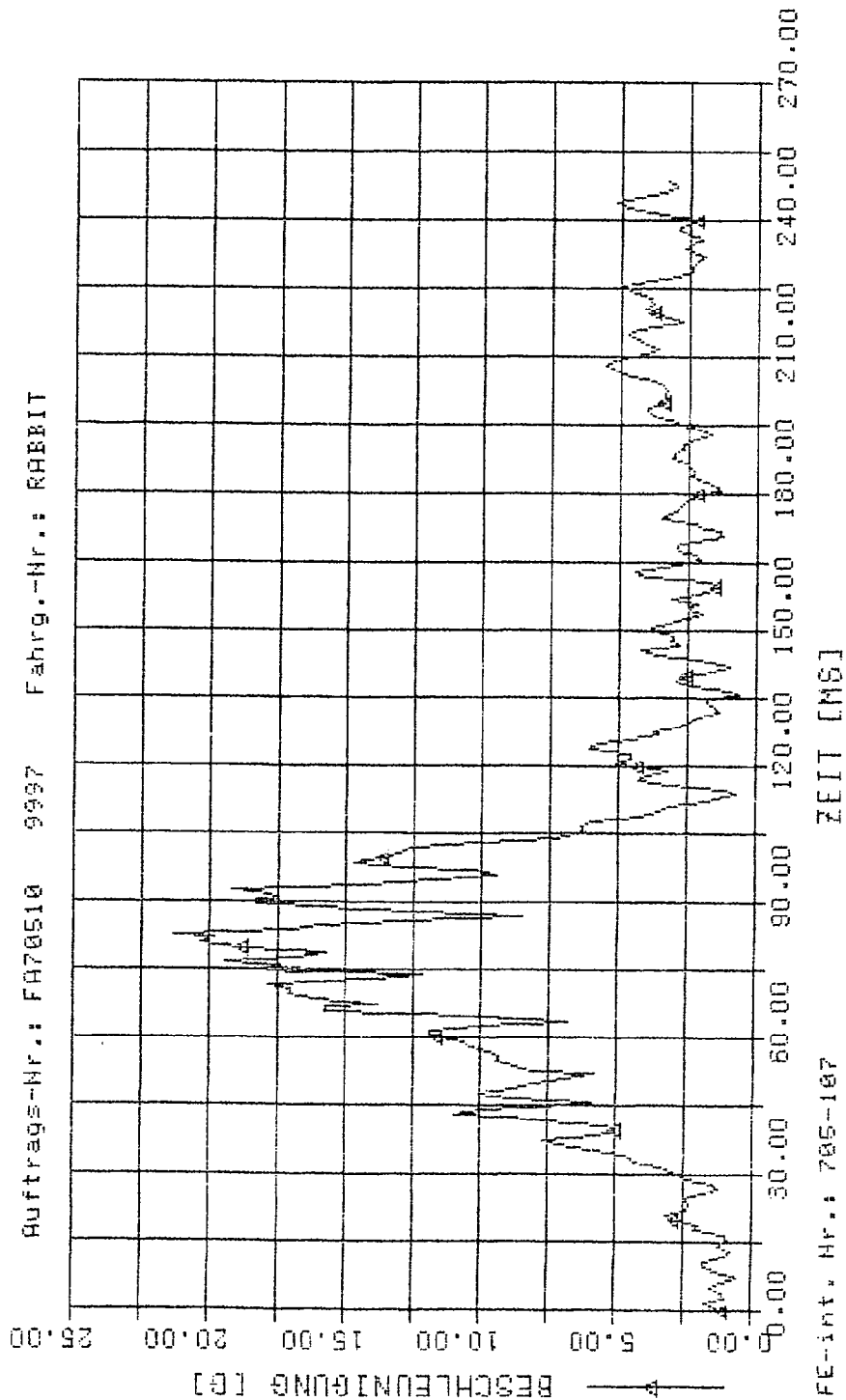
Kennwerte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Grösse	Extremum	t	MS
TSVLY	V1	RE	g	-120.549	32.00	0.00
TSVLY	V1	GE	m/s	6.406	42.00	0.00
TSVLY	V1	WE	m	1.406	258.00	0.00



Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

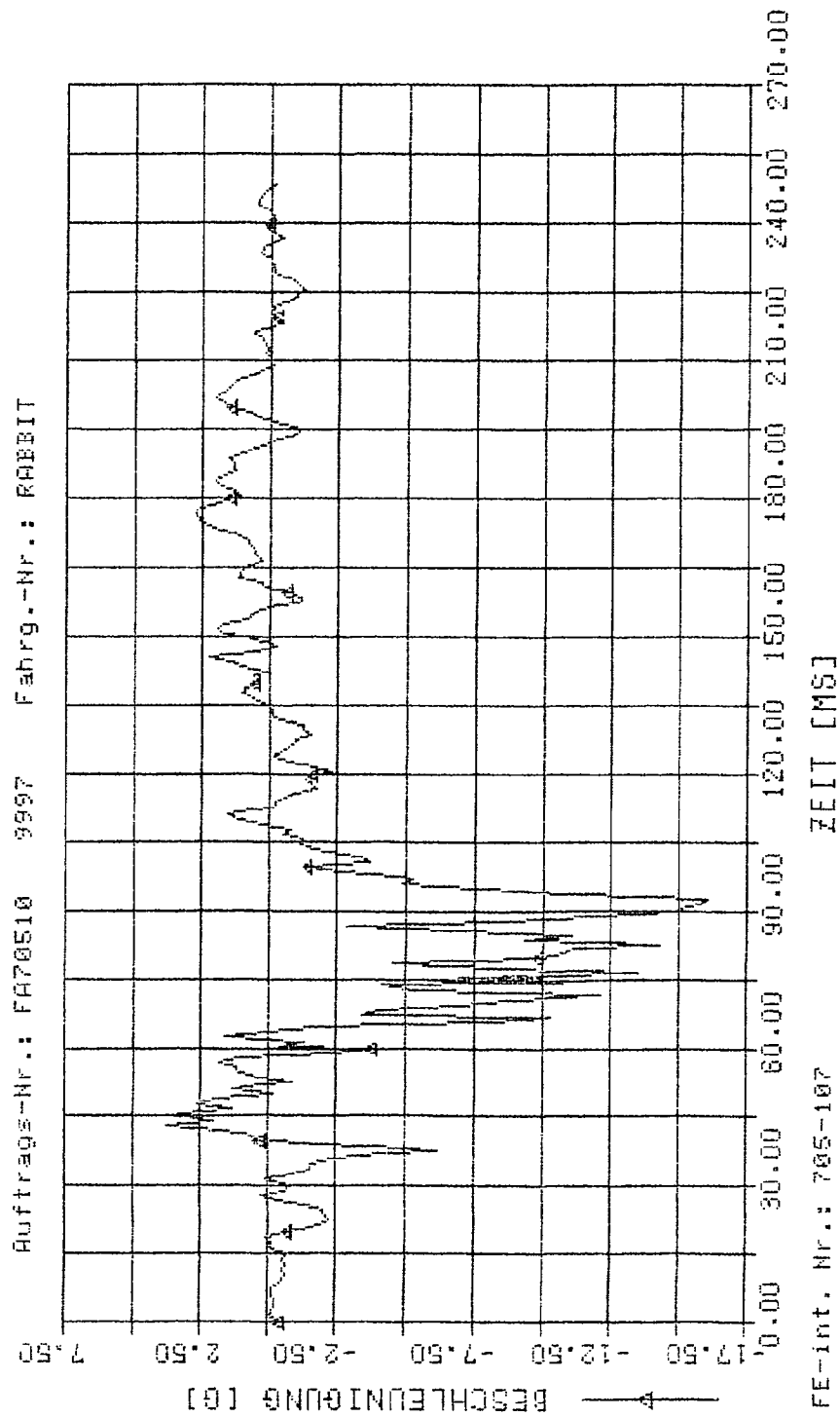
Mess-Stelle UP ber. Extremum t SMS
KOB0 Groesse Extr.
V1 BE 9 21.277 83.00 19.40



-- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

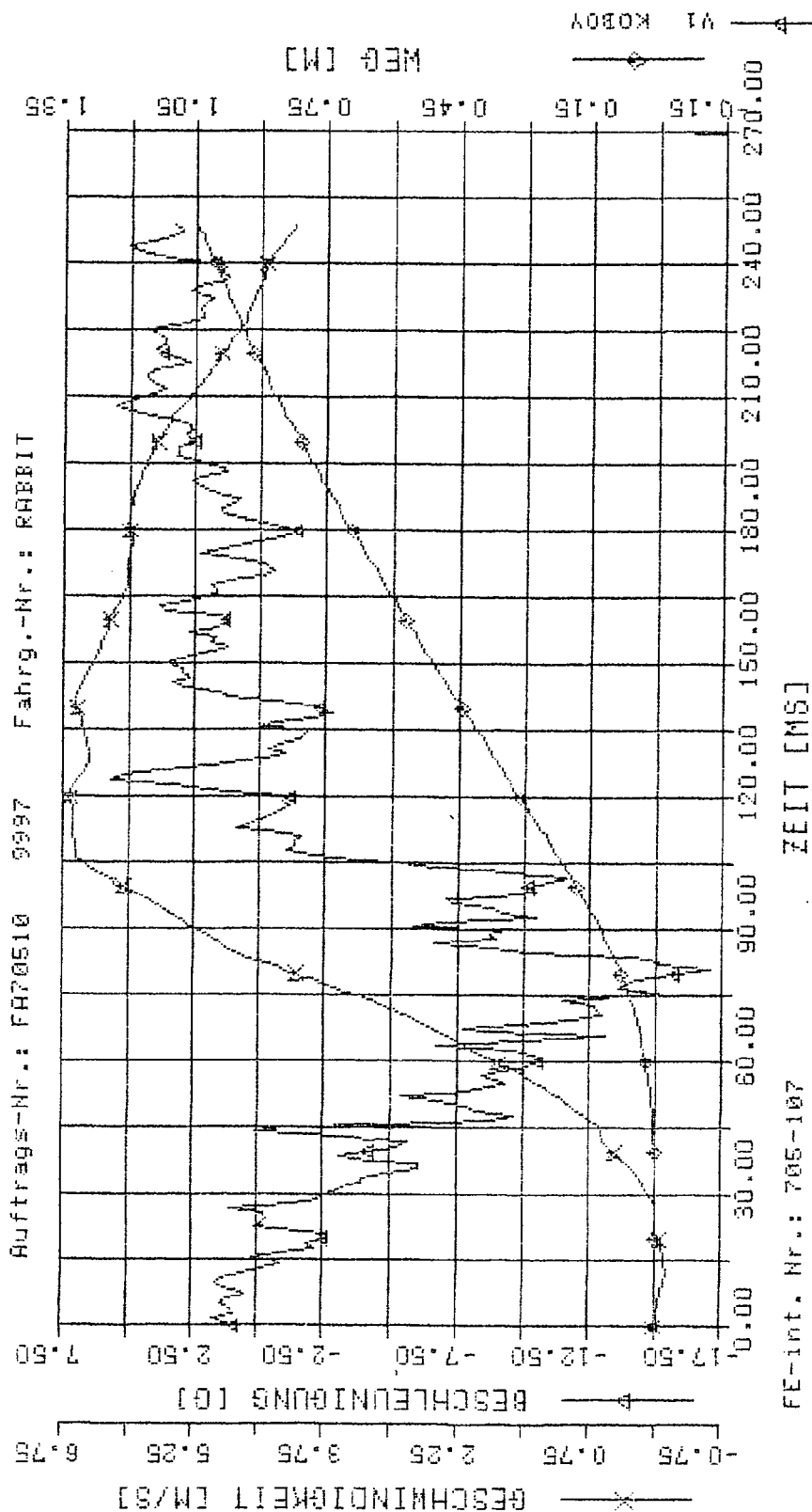
Mess-Stelle
KOROX

UP ber. Extr. t 3MS
Grösse
V1 BE g -16.055 93.00 2.78



Kennwerte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	SMS
KOBOY	V1	BE g	-17.109	34.00	5.10
KOBOY	V1	GE m/s	6.672	121.00	0.00
KOBOY	V1	ME m	1.082	258.00	0.00



- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle

UP

ber.
Grösse

Extreum t

3MS

K080Z

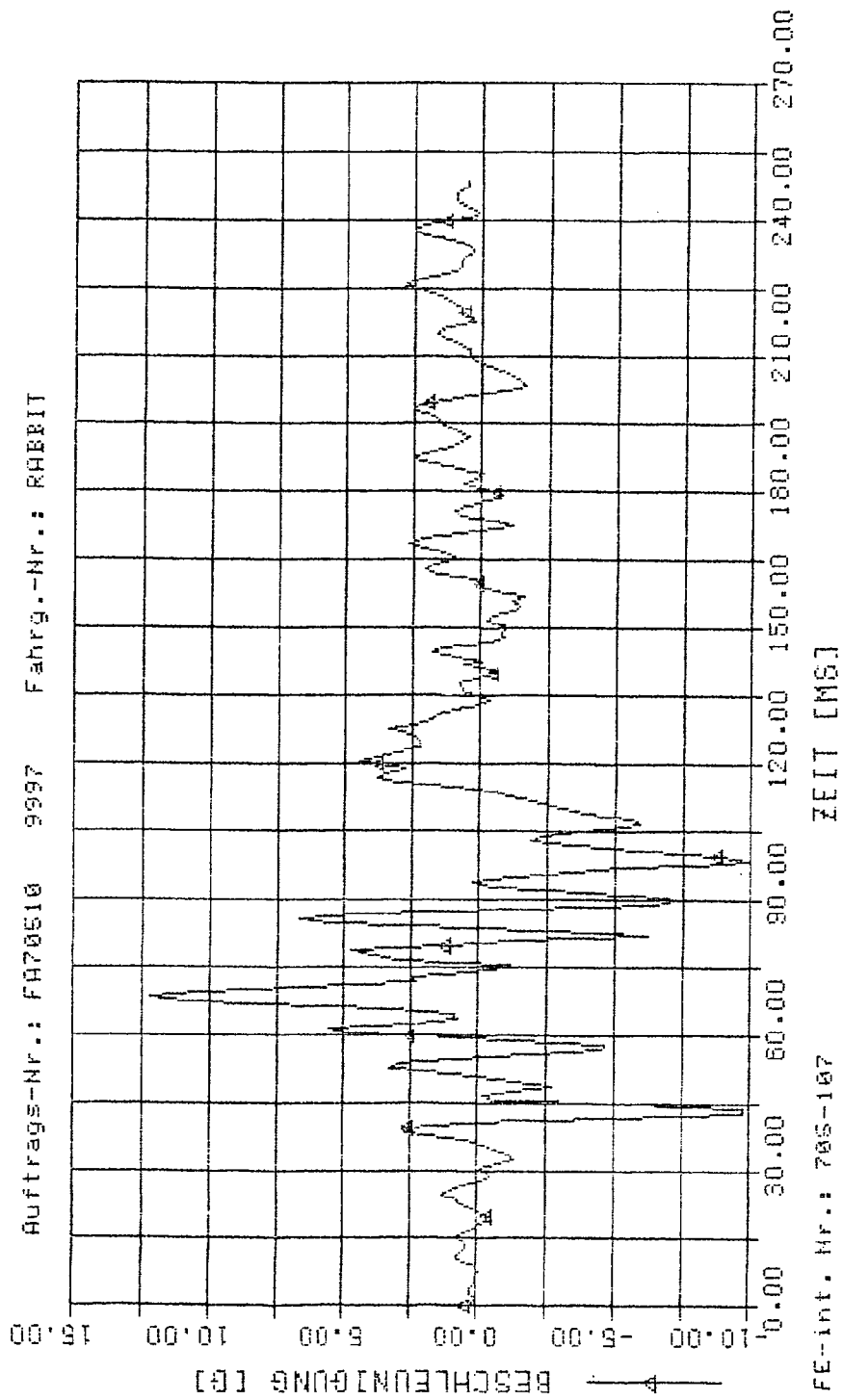
V1

BE g

12.196

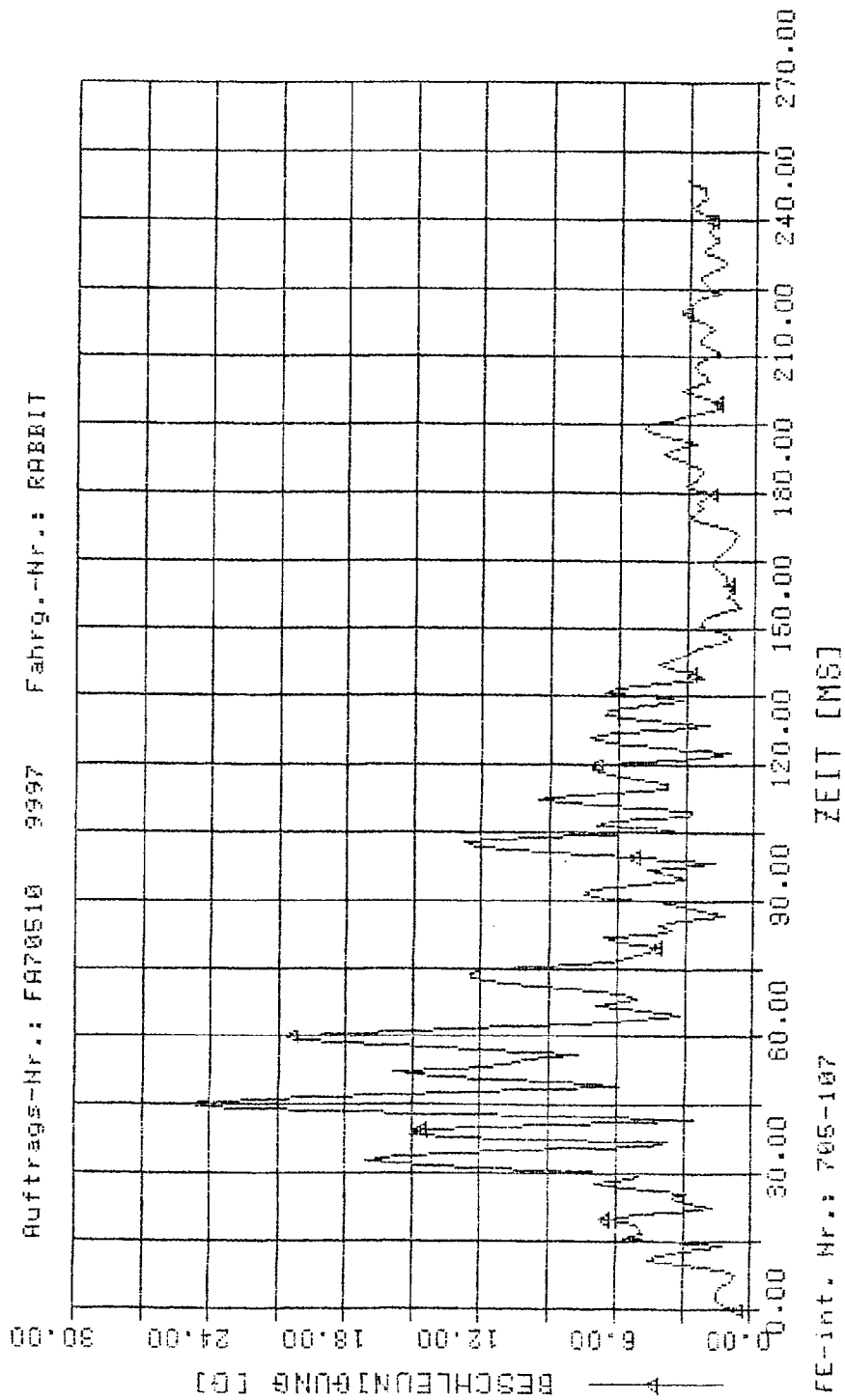
Extr.
69.00

8.15



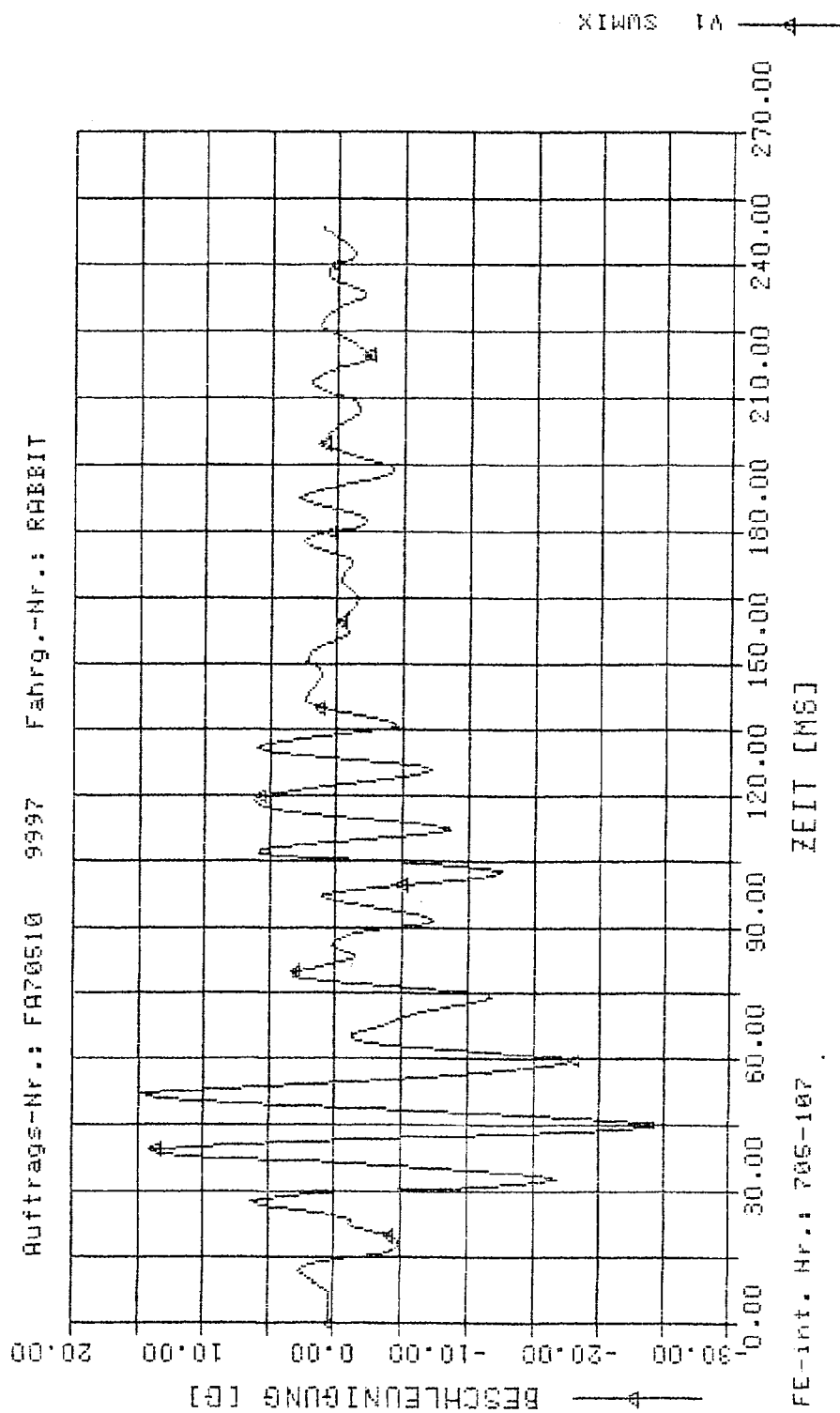
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Mess-Stelle UP ber. Extremum t SMS
 Grösse Extr.
 V1 BE g 25.402 45.00 0.00



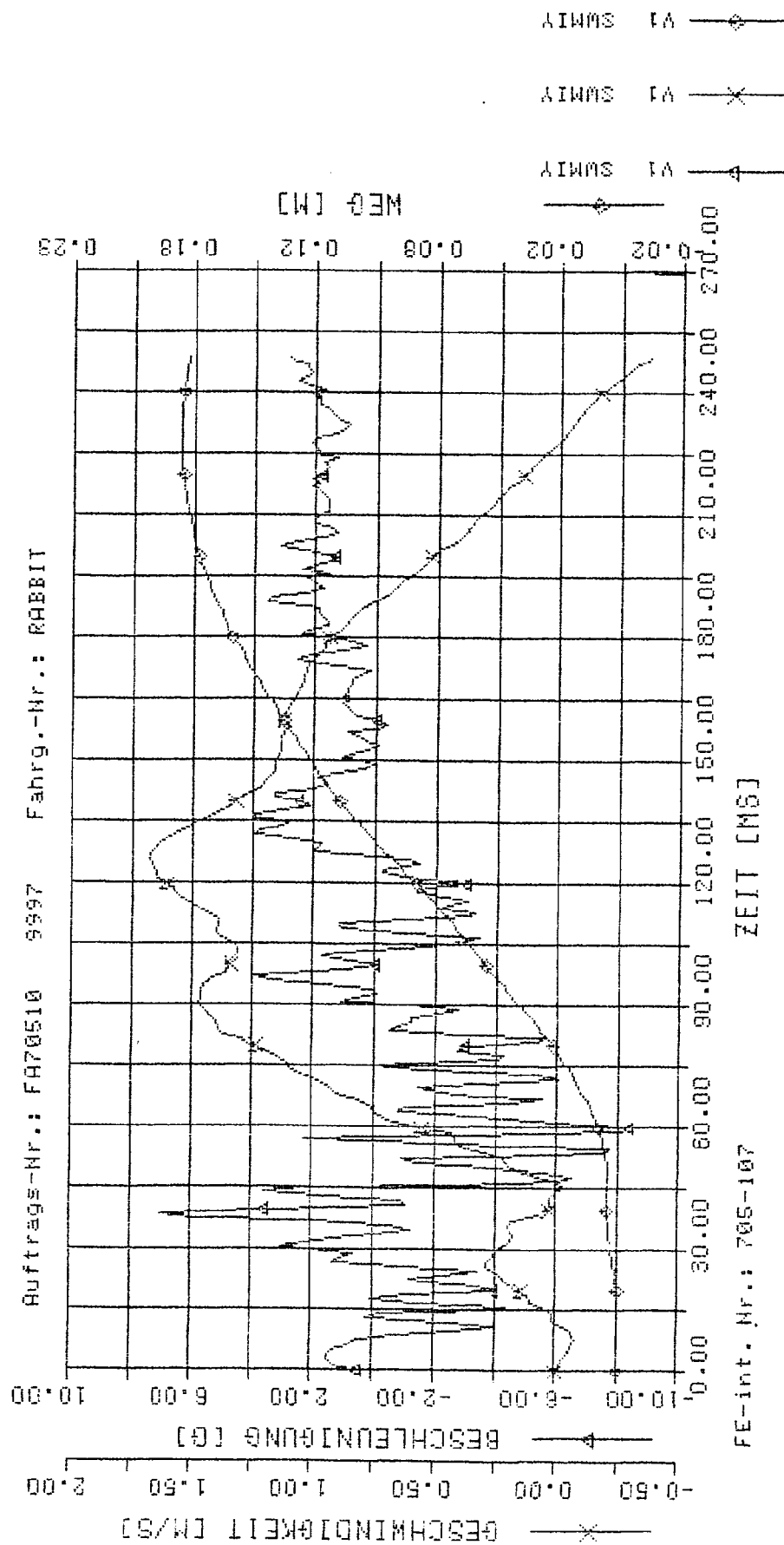
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Mess-Stelle	UP	ber.	Extremum	t	3MS
	V1	RE g	-25.219	Extr.	45.00
SUMIX			0.00		



- Kennwerte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	Ext.	AMS
SWMIY	V1	GE g	-8.432	60.00	0.00	
SWMIY	V1	GE m/s	1.678	127.00	0.00	
SWMIY	V1	ME m	.180	229.00	0.00	

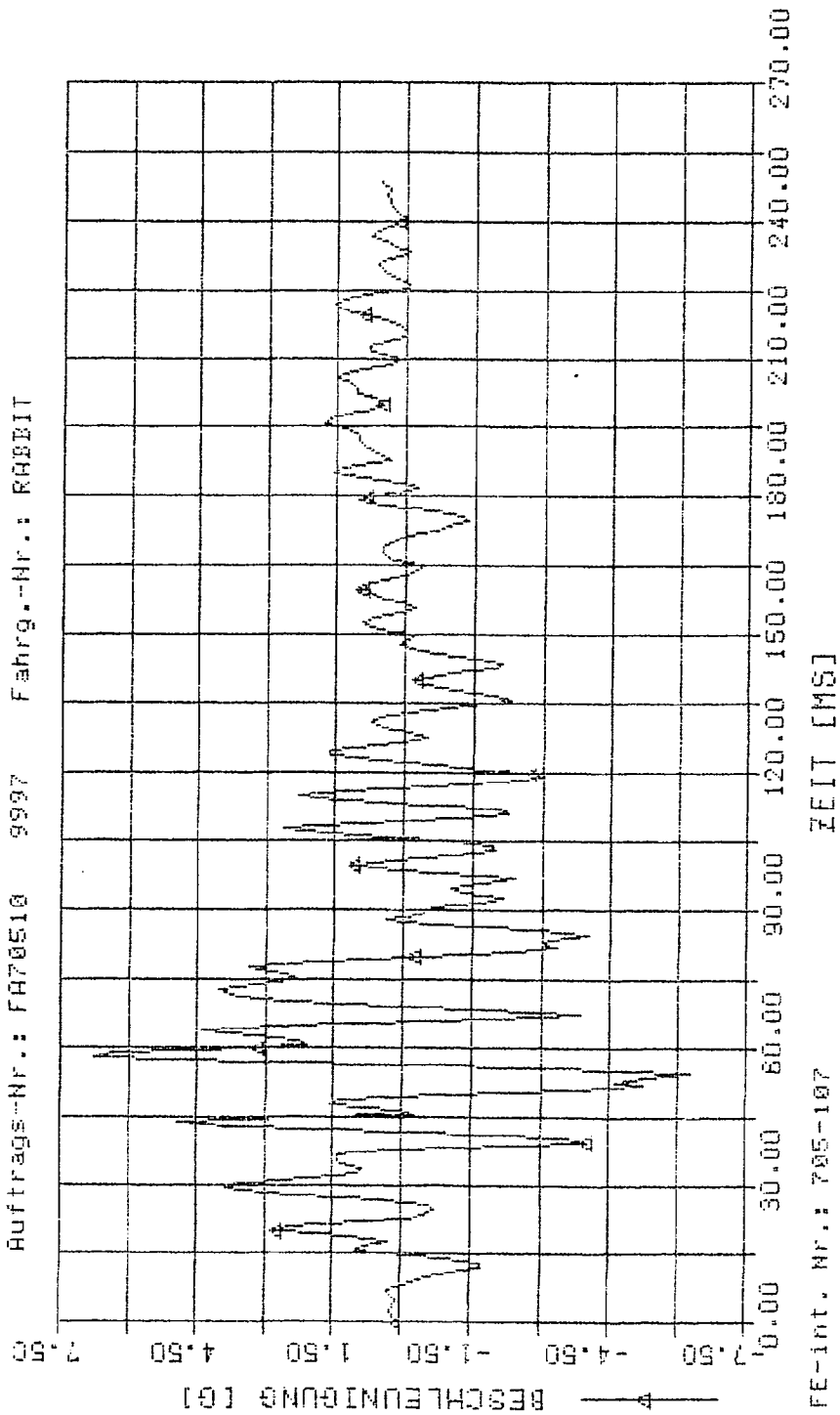


Kennwerte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle UP ber. Extremum t Δ MS
V1 BE g 6.814 58.00 0.00

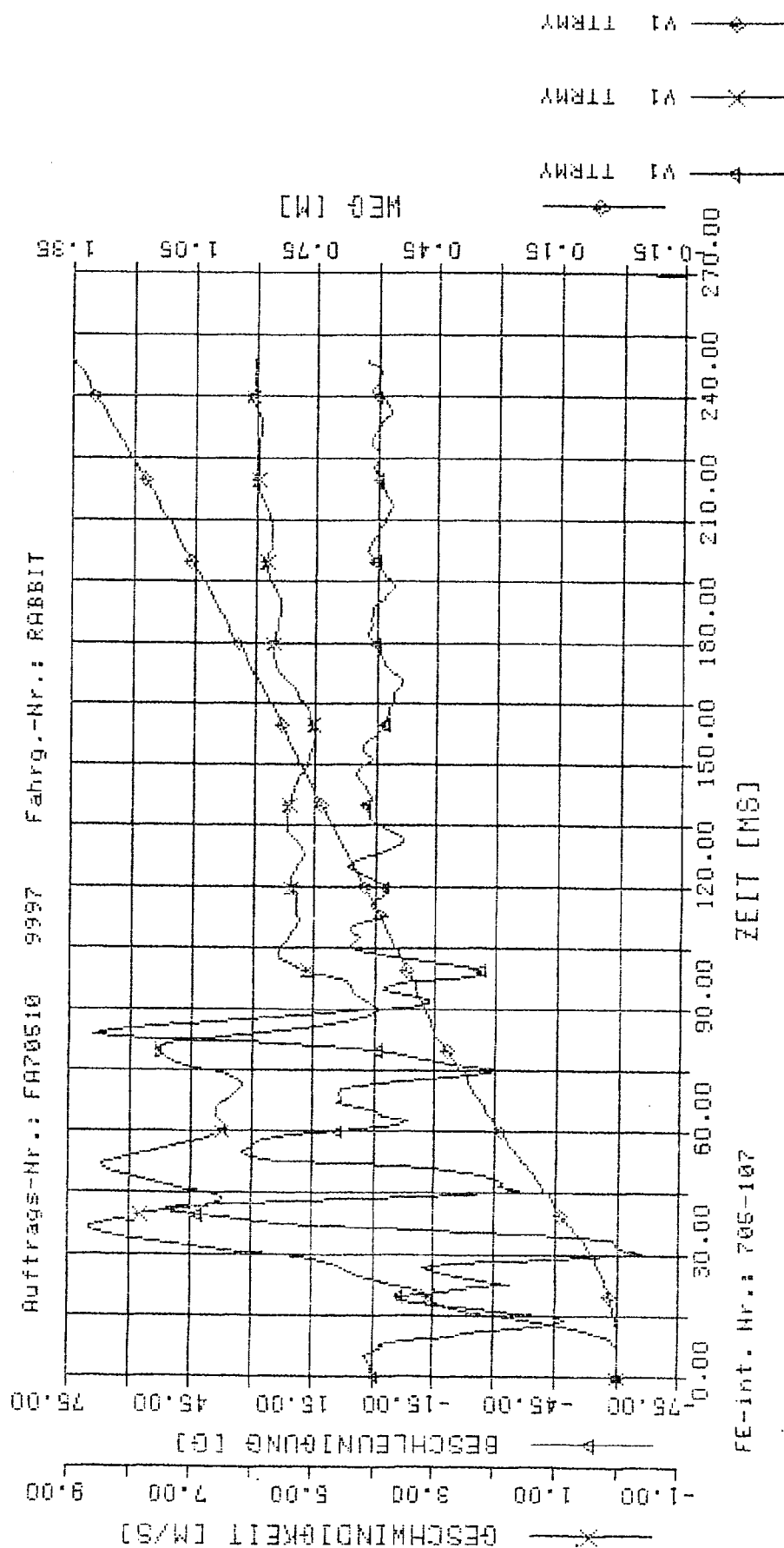
SMITZ

Auftrags-Nr.: FA70510 9997 Fahrg.-Nr.: RABBIT



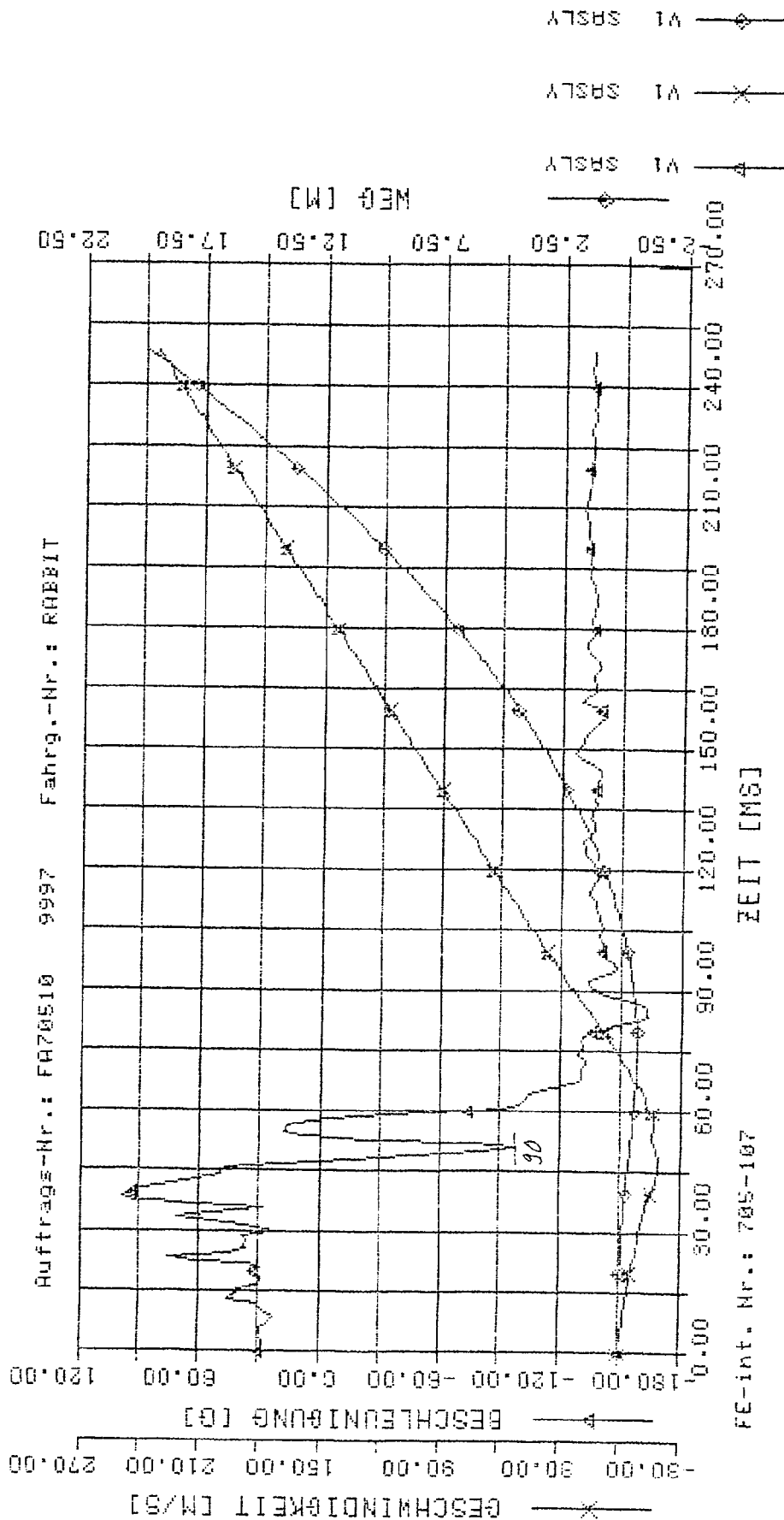
- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	AMS
TTRMY	V1	GE	68.768	84.00	0.00
TTRMY	V1	GE	8.631	36.00	0.00
TTRMY	V1	ME	1.400	258.00	0.00



Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	AMS
		Groesse		Extr.	
SASLY	V1	BE g	-164.301	84.00	0.00
SASLY	V1	GE m/s	245.366	258.00	0.00
SASLY	V1	WE m	22.070	258.00	0.00

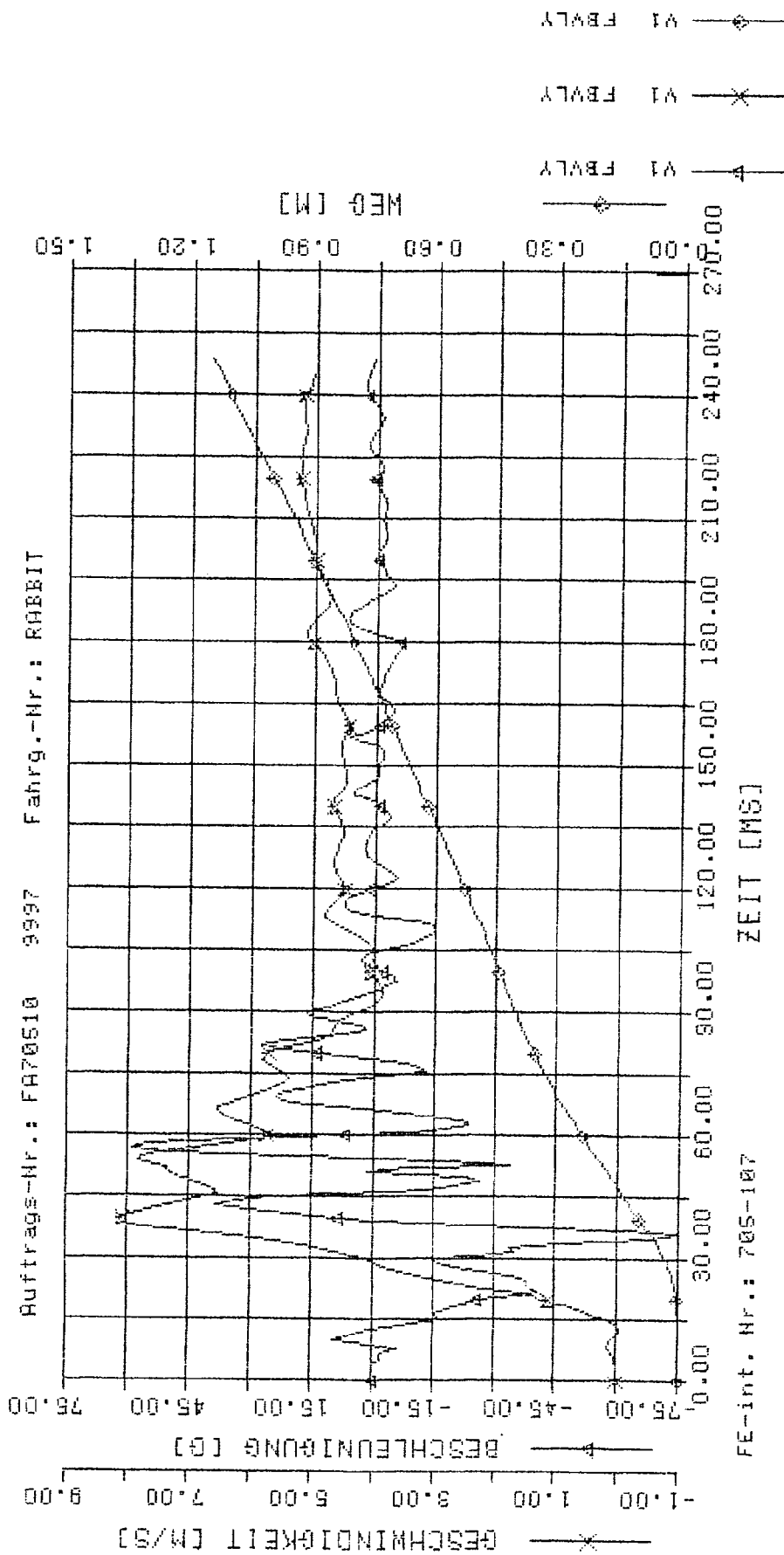


Auftrags-Nr.: FA70510 9997 Fahrg.-Nr.: RHEBIT

FE-int. Nr.: 705-107

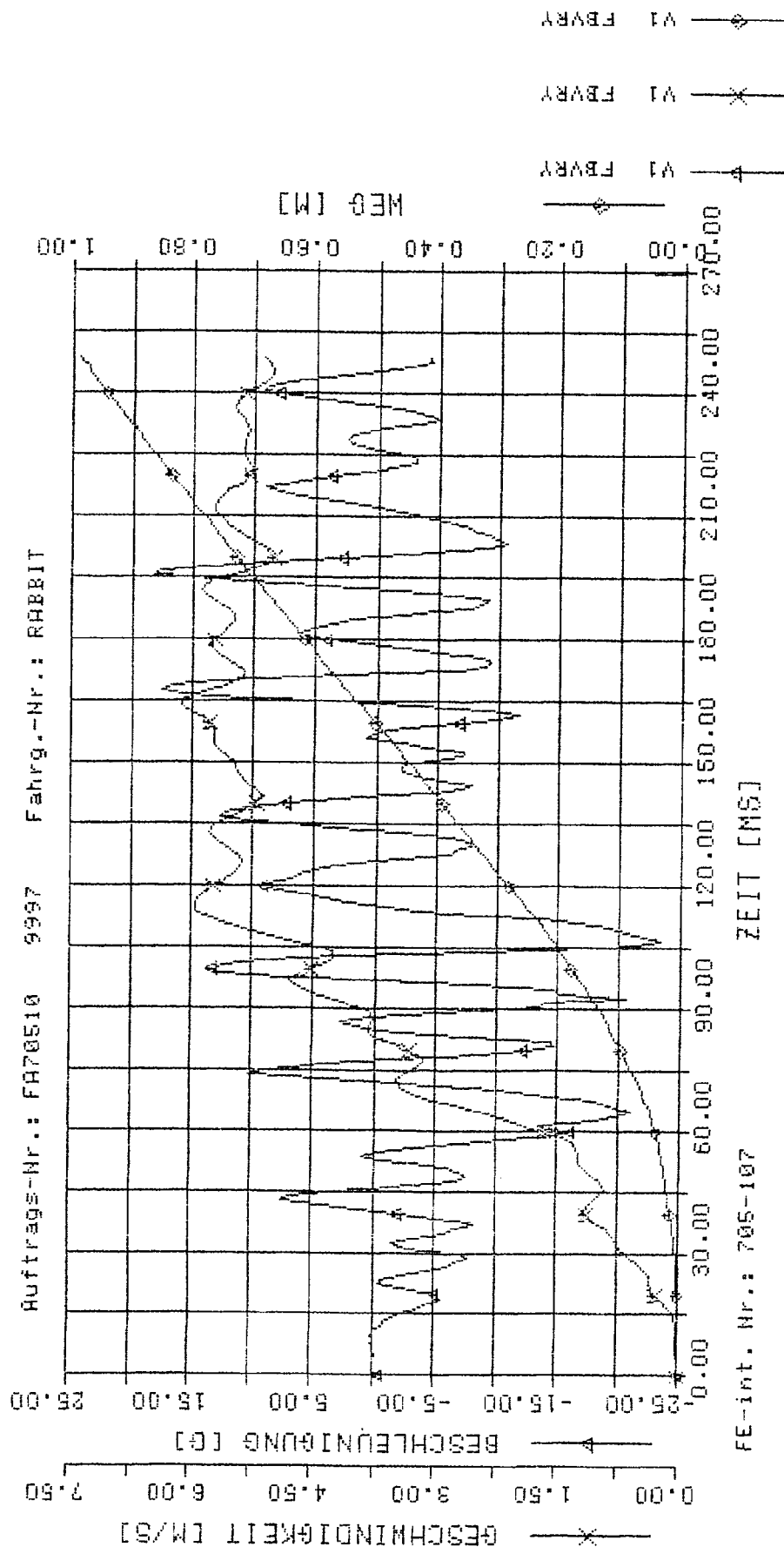
Kennwerte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	3MS
		Groesse		Extr.	
FBVLY	V1	DE g	-24.745	36.00	0.00
FBVLY	V1	GE m/s	8.049	40.00	0.00
FBVLY	V1	WE m	1.200	258.00	0.00



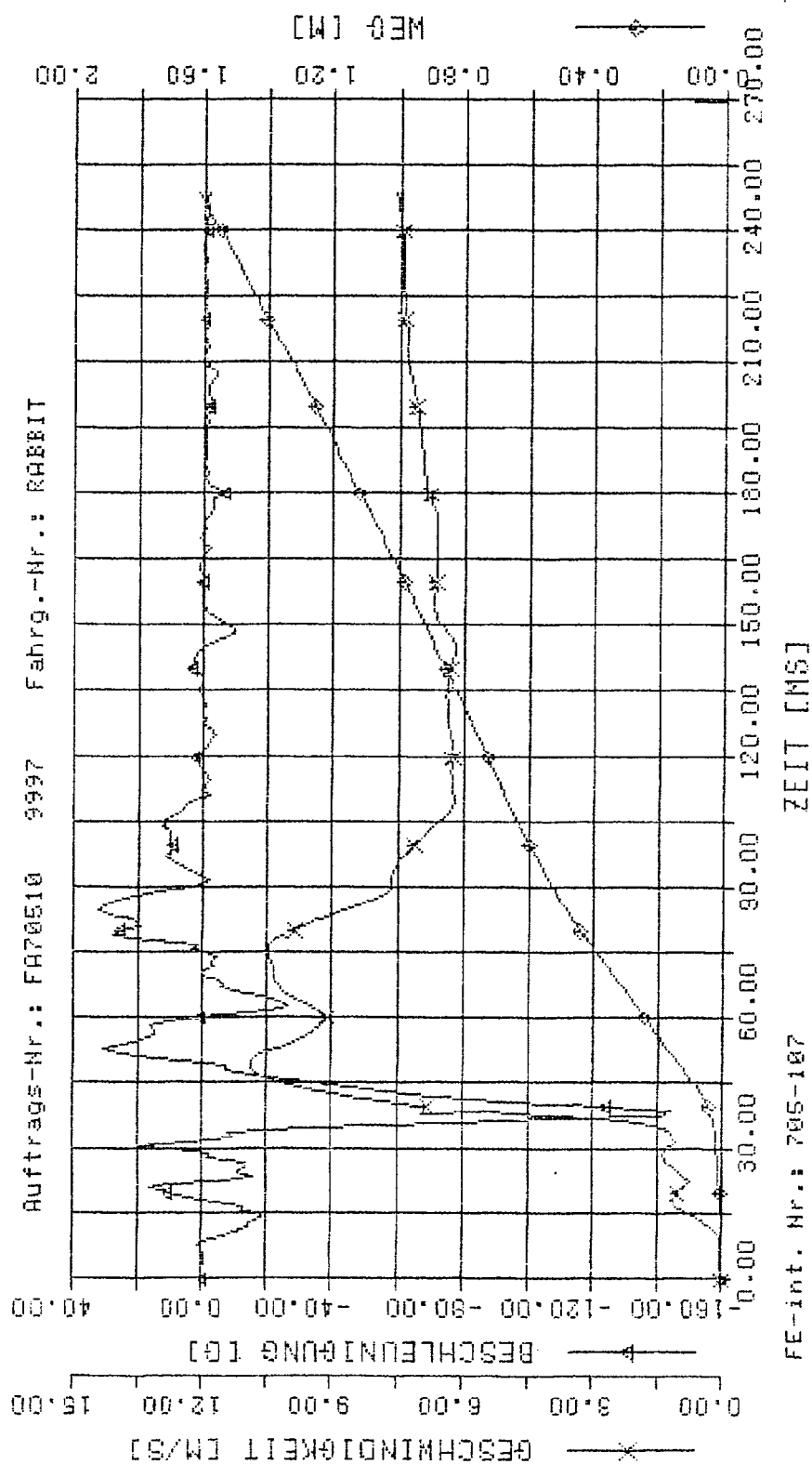
- Kennwerte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber. Grösse	Extremum	t Extr.	3MS
FBURY	V1	DE 9	-23.394	107.00	0.00
FBURY	V1	GE m/s	6.128	164.00	0.00
FBURY	V1	DE n	1.036	258.00	0.00



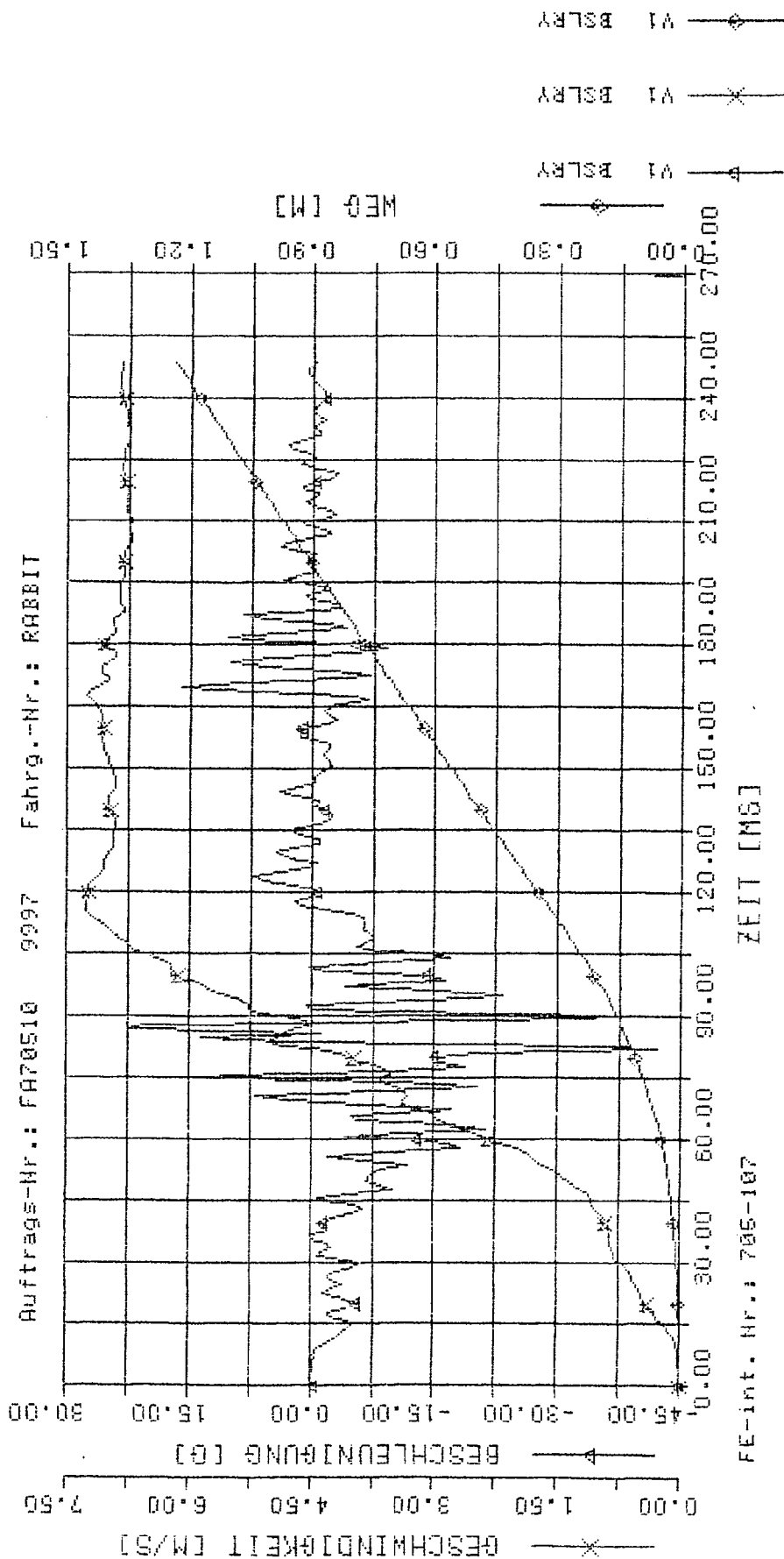
- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Groesse	Extremum	t	Ext.	SMS
BSLLY	V1	BE	g	-144.641	39.00	0.00	0.00
BSLLY	V1	GE	m/s	10.872	50.00	0.00	0.00
BSLLY	V1	WE	m	1.687	258.00	0.00	0.00



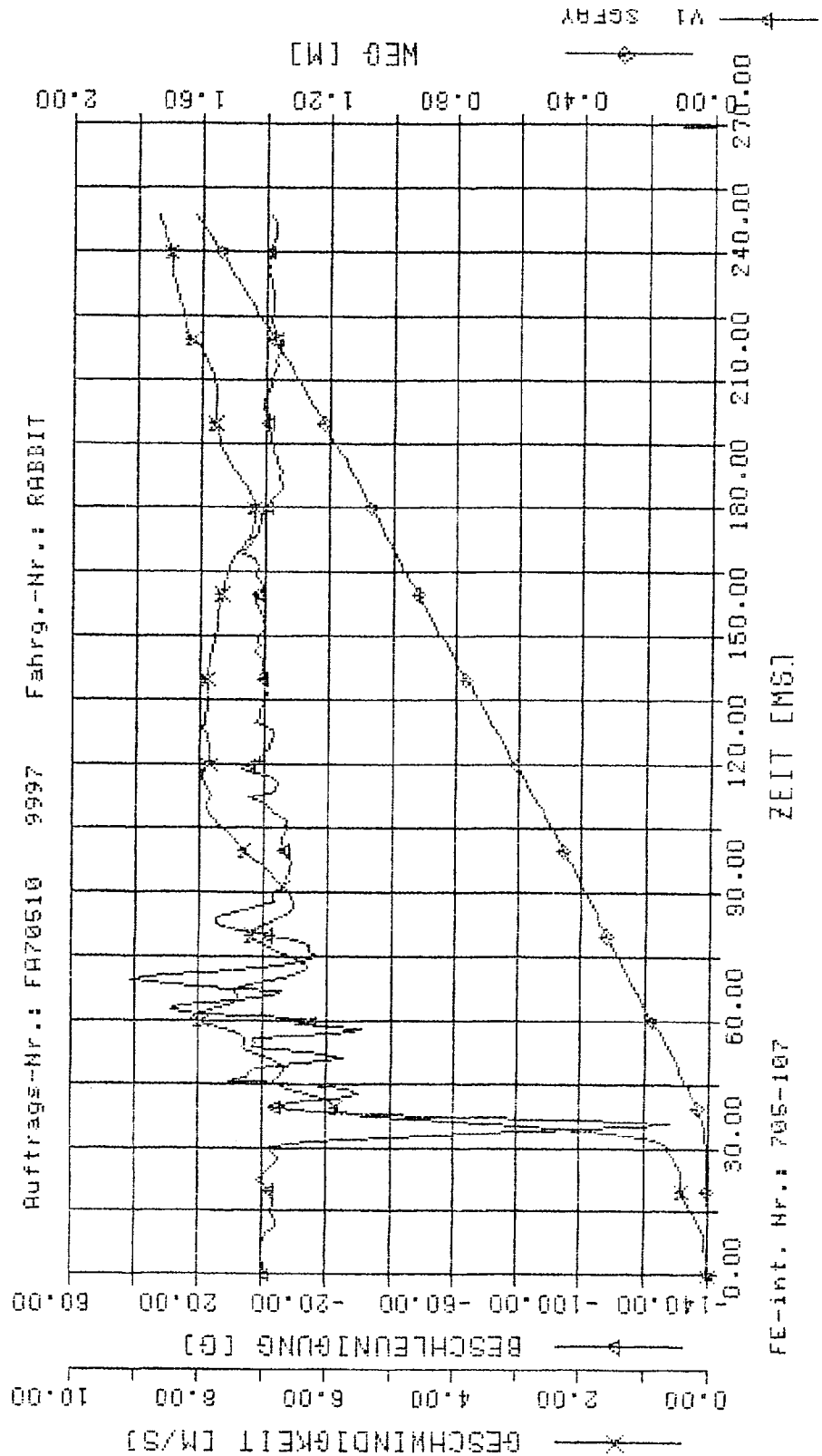
- Kenn-Nr.: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	MS
BSLRY	V1	BE g	-42.200	82.00	0.00
BSLRY	V1	GE m/s	7.257	116.00	0.00
BSLRY	V1	ME m	1.300	258.00	0.00



- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

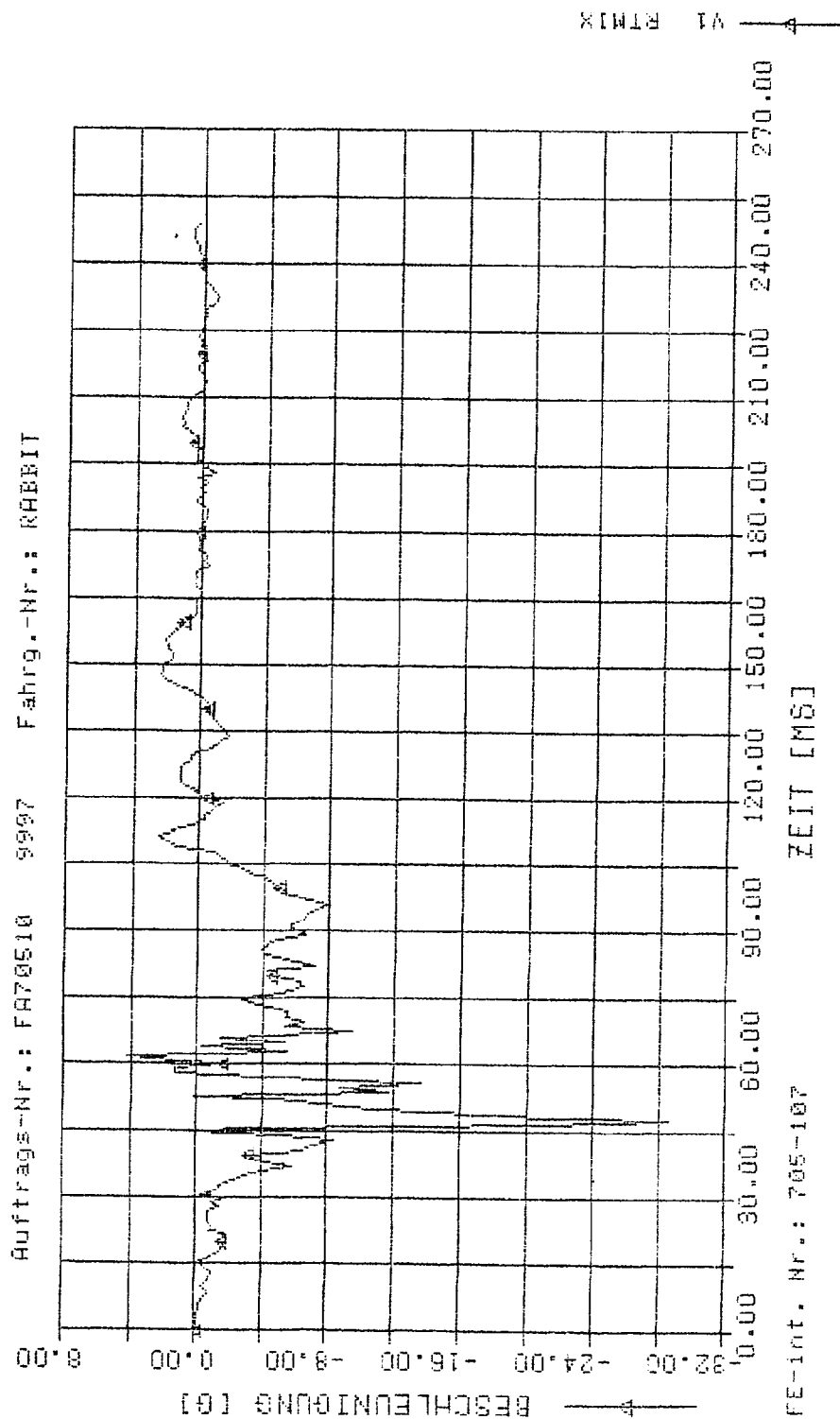
Ness-Stelle	UP	ber.	Extremum	t	3MS
SGFAY	V1	Grösse	-128.417	36.00	0.00
SGFAY	V1	GE g	8.752	258.00	0.00
SGFAY	V1	GE m/s	1.699	258.00	0.00



FE-int. Nr.: 705-107

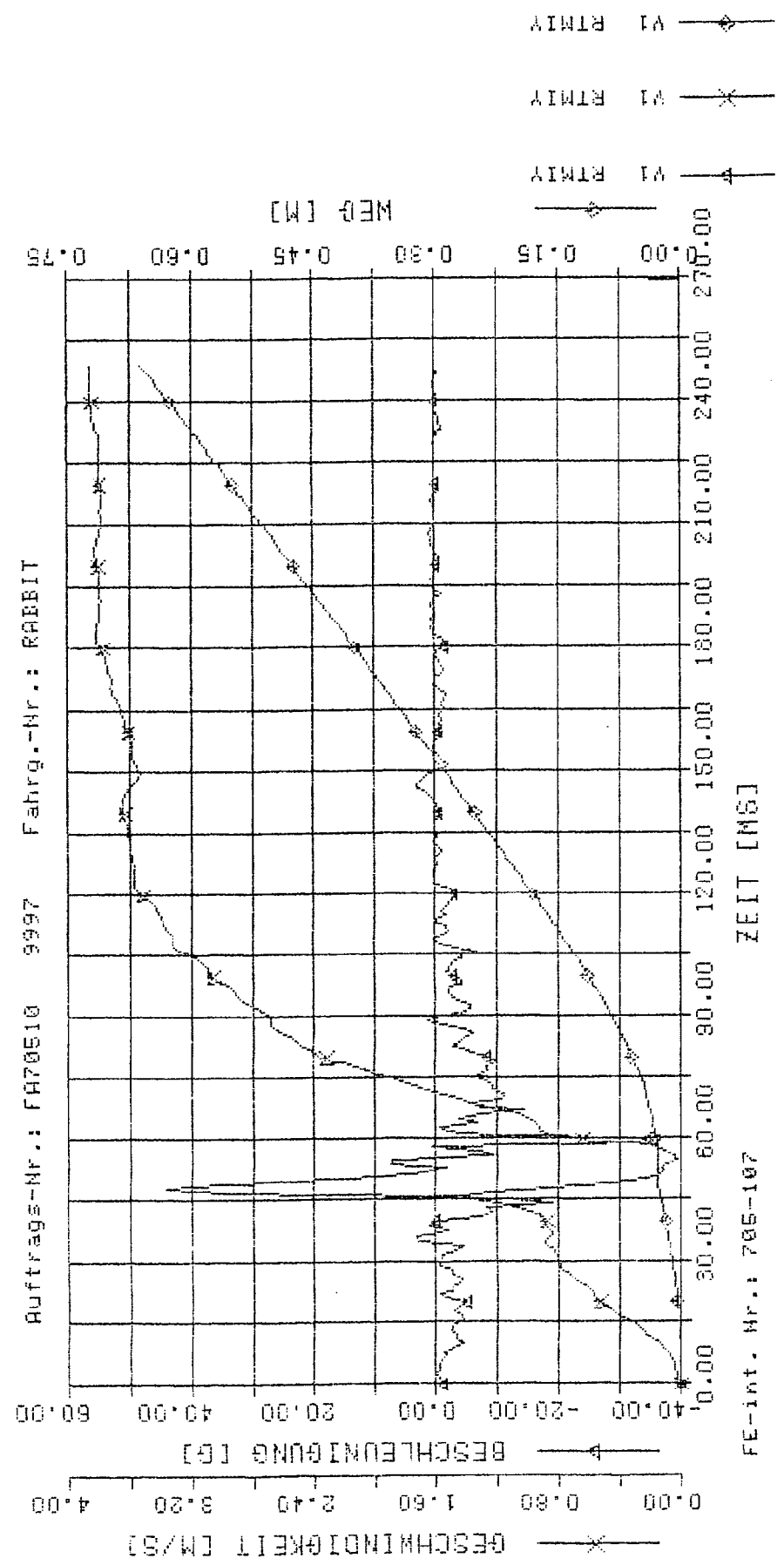
Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997
 Mess-Stelle
 RTMIX
 UP ber. Extremum t SNG
 V1 BE g -23.553 Extr. 43.00 0.00

(3)



- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	Ext.	ms
RTMIY	V1	BE g	44.345	48.00	0.00	
RTMIY	V1	GE m/s	3.689	250.00	0.00	
RTMIY	V1	WE m	.695	250.00	0.00	



FE-int. Nr.: 705-107

- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

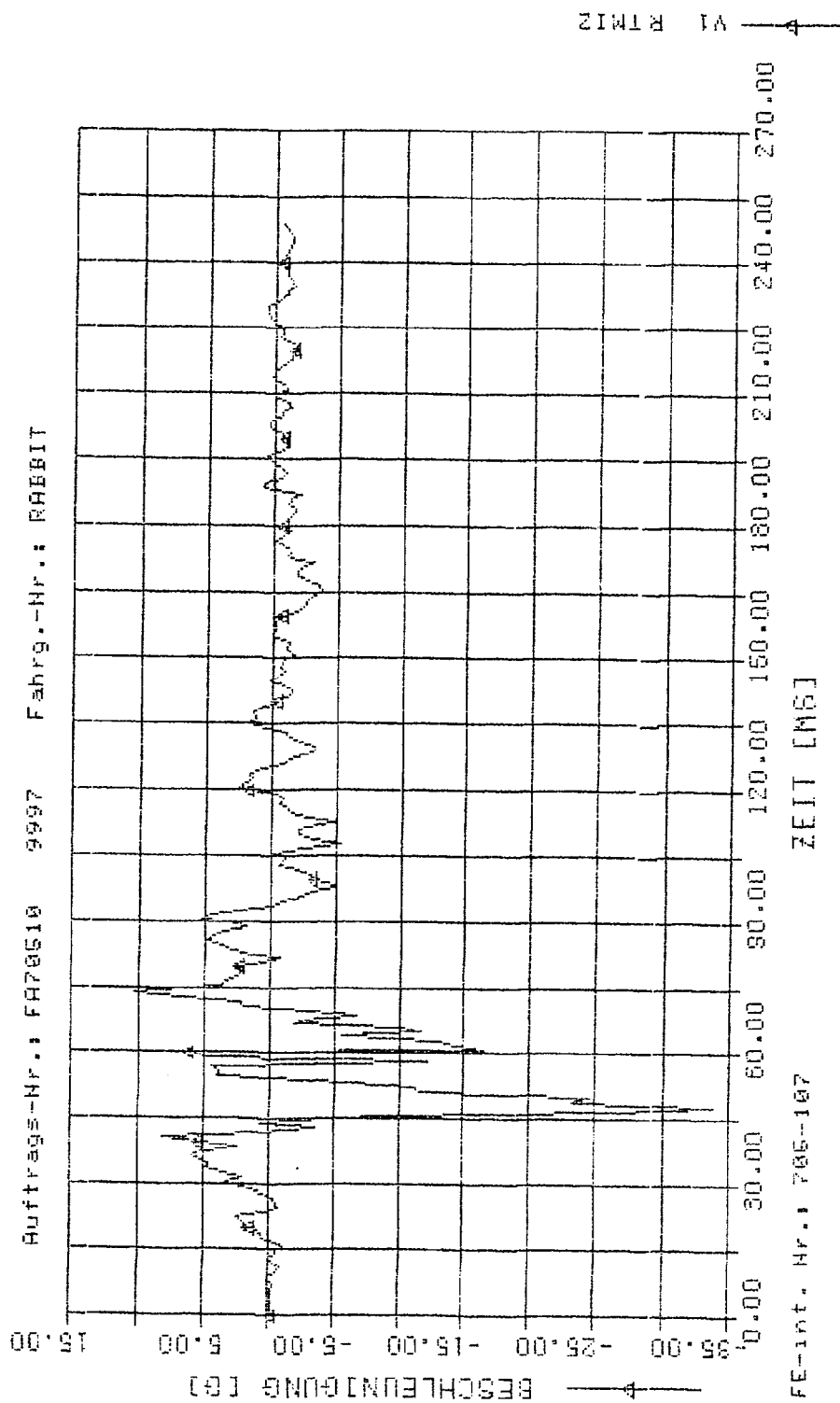
Mess-Stelle

UP ber. Extrapol. t SMS

RTMIZ

V1 BE g Groesse Extr. 43.00 0.00

S

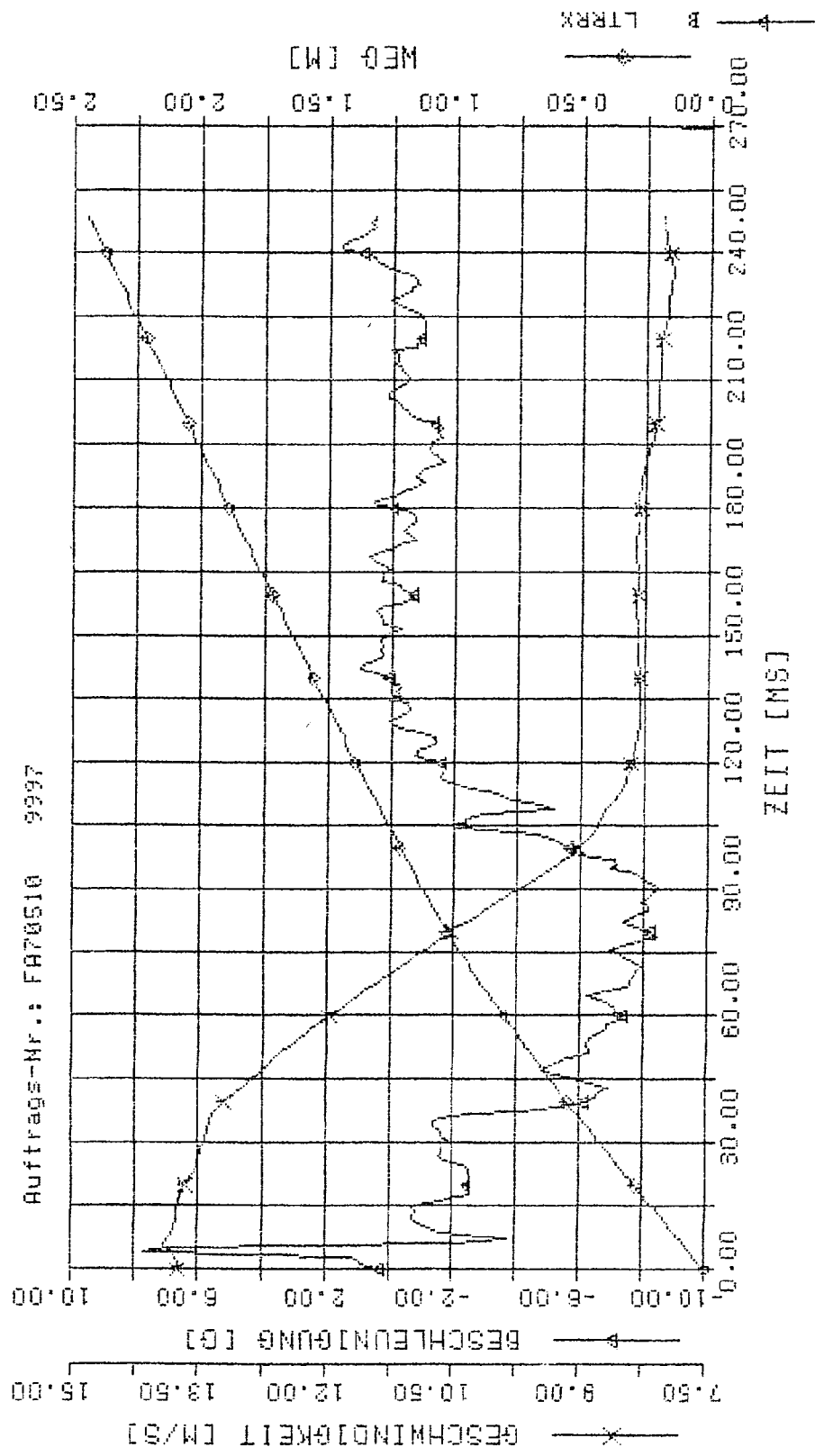


B.1.2 Crabbed Barrier

Kl-Werte: Auftrags-Nr.: FA70510 Versu-Nr.: 9997

Mess-Stelle		UP	ber.	Extrema	t	3MS
		Grösse		Extr.		
LTRRX	B	BE	g	-8.458	91.00	0.00
LTRRX	B	GE	n/s	13.889	6.00	0.00
LTRRX	B	WE	m	2.520	238.00	0.00

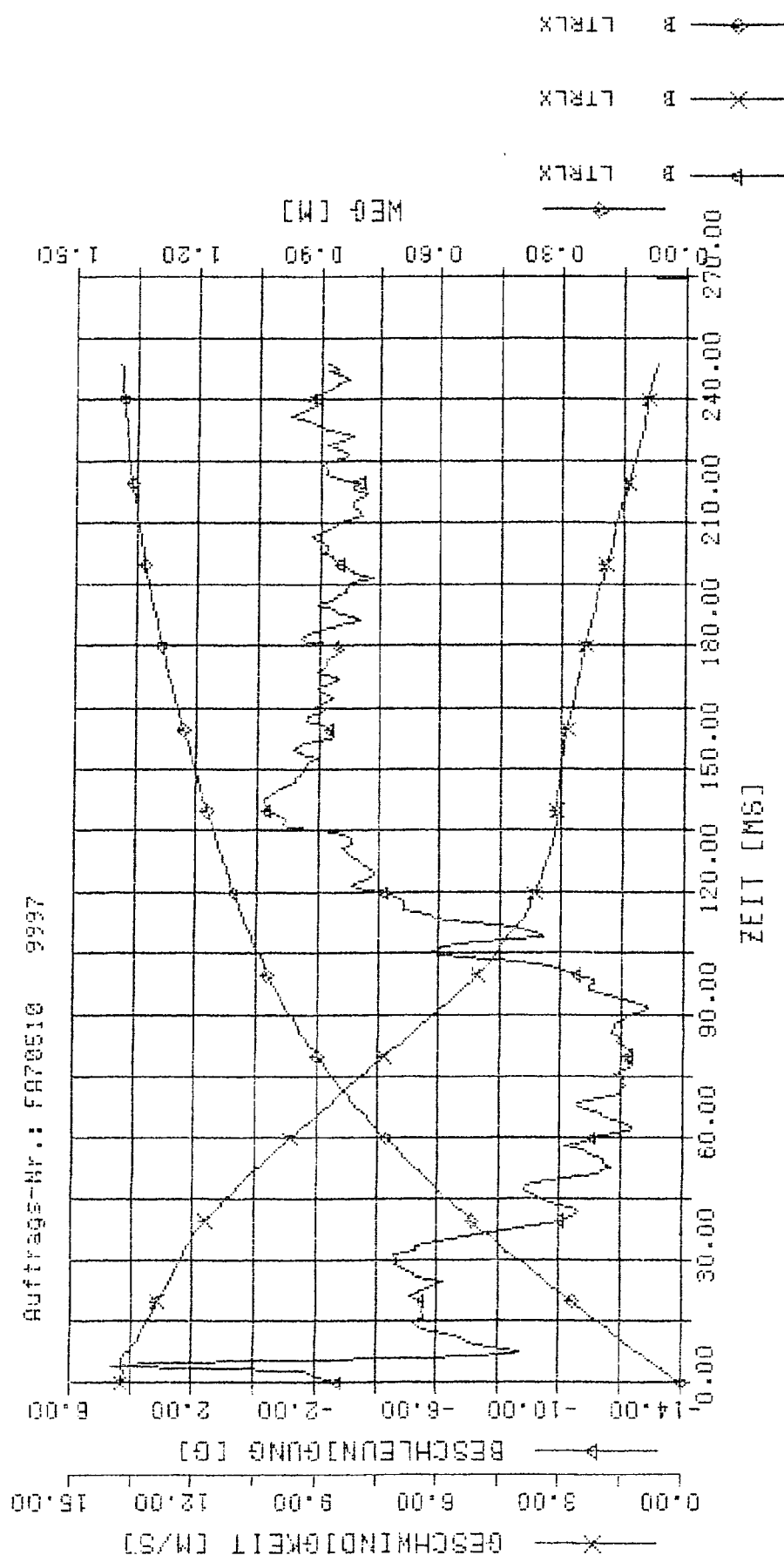
63



Mess-Stelle: Auftrags-Nr.: FA70510 Vers.-Nr.: 9997

Mess-Stelle: Auftrags-Nr.: FA70510 Vers.-Nr.: 9997
 LTRLX Extr. 0.00
 LTRLX Extr. 92.00
 LTRLX Extr. 0.00
 LTRLX Extr. 0.00
 LTRLX Extr. 258.00

64



Auftrags-Nr.: FA70510 Vers.-Nr.: 9997

Mess-Stelle

UP ber.

Extremum - t

3MS

Groesse

Extr.

QTVMX
 QTVMX
 QTVMX

B BE g
 B GE m/s
 B WE m

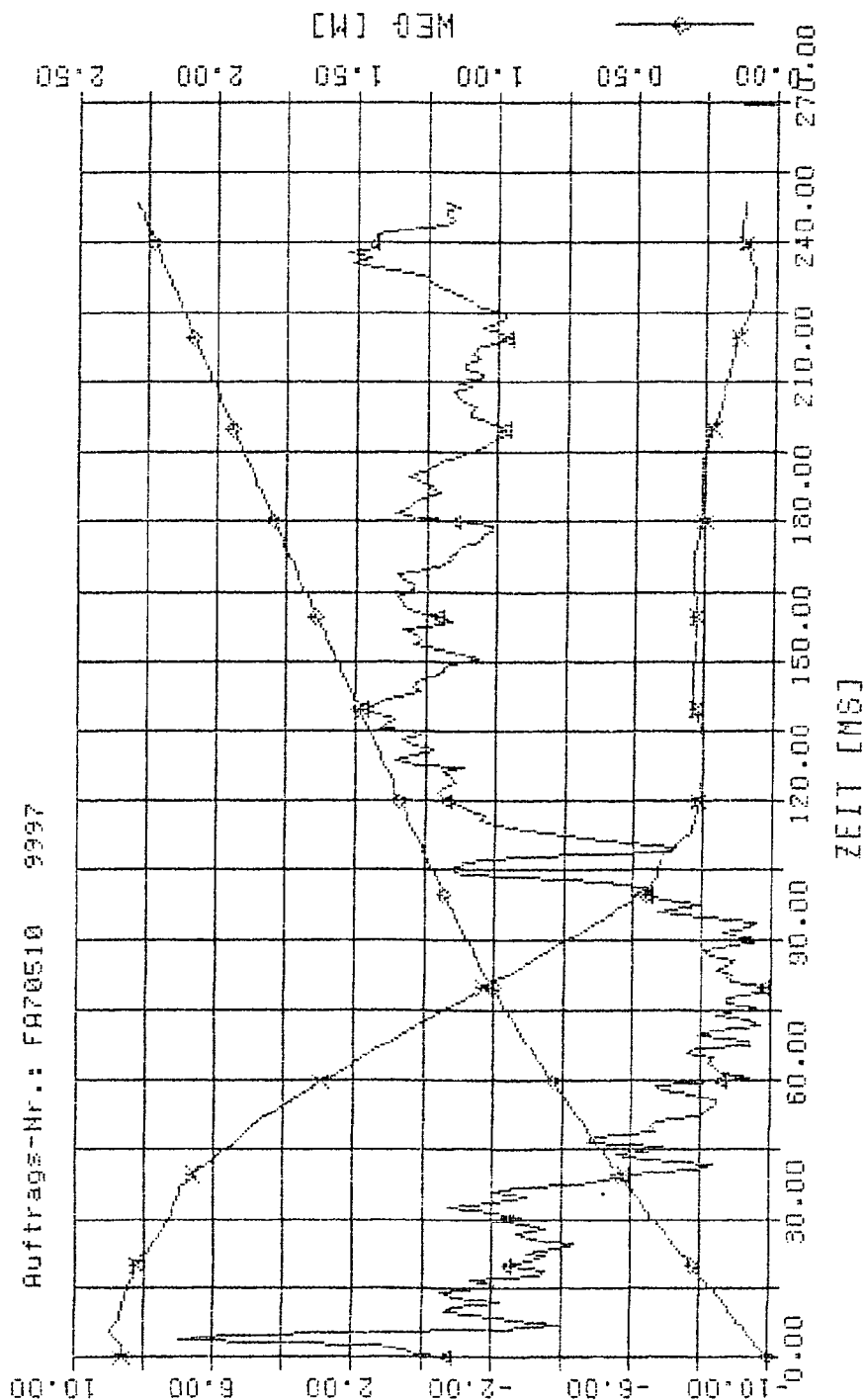
-7.848
 13.854
 2.354 258.00

0.00
 0.00
 0.00

65

Auftrags-Nr.: FA70510 9997

GESCHWINDIGKEIT [M/S]
 BESCHLEUNIGUNG [G]



Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle

UP

ber.

Extremum

t

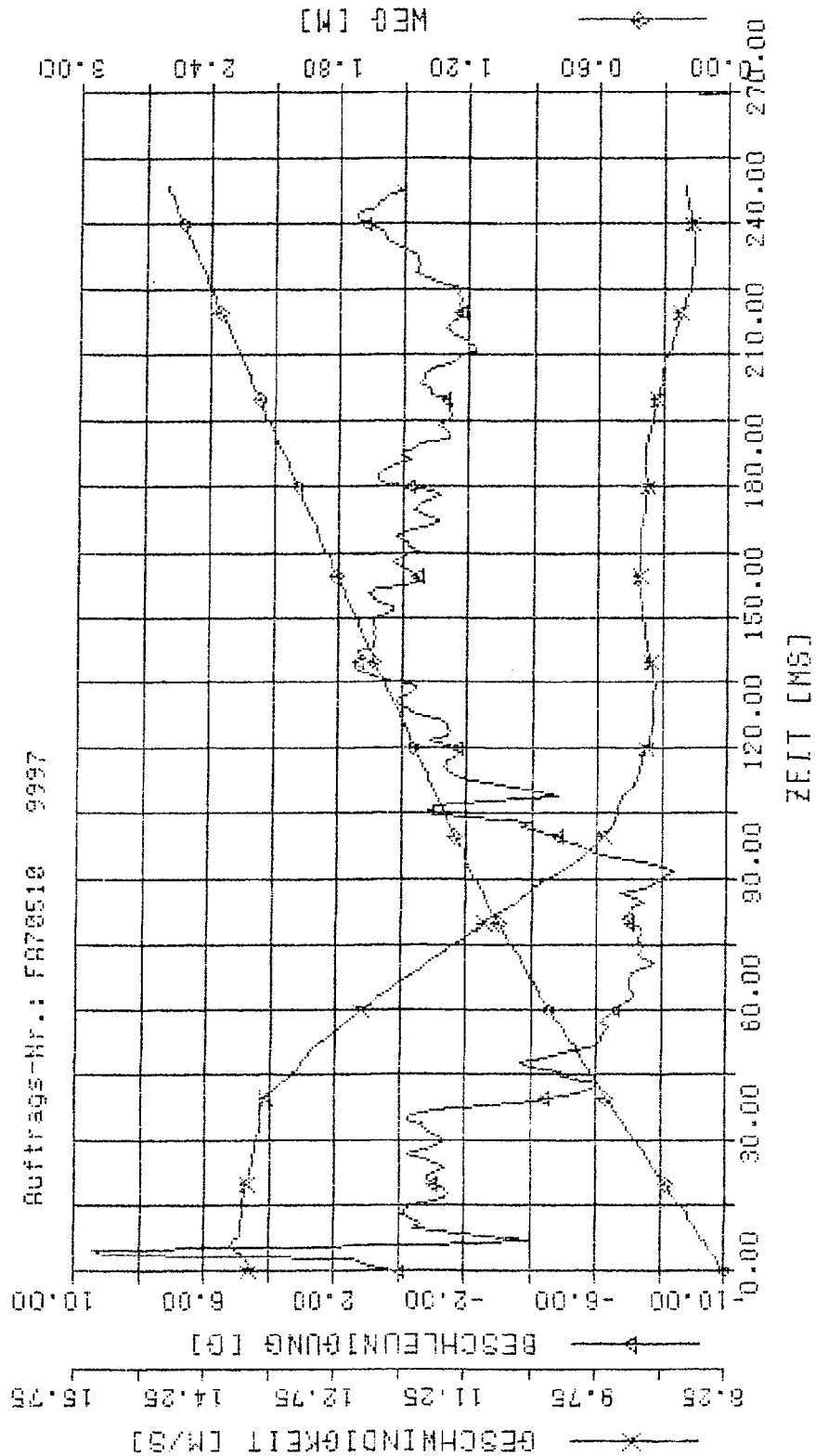
MS

RHTRX
RHTRX
RHTRX

Grösse	Extremum	t	MS
BE g	2.431	5.00	0.00
CE m/s	13.935	6.00	0.00
WE m	2.684	258.00	0.00

664

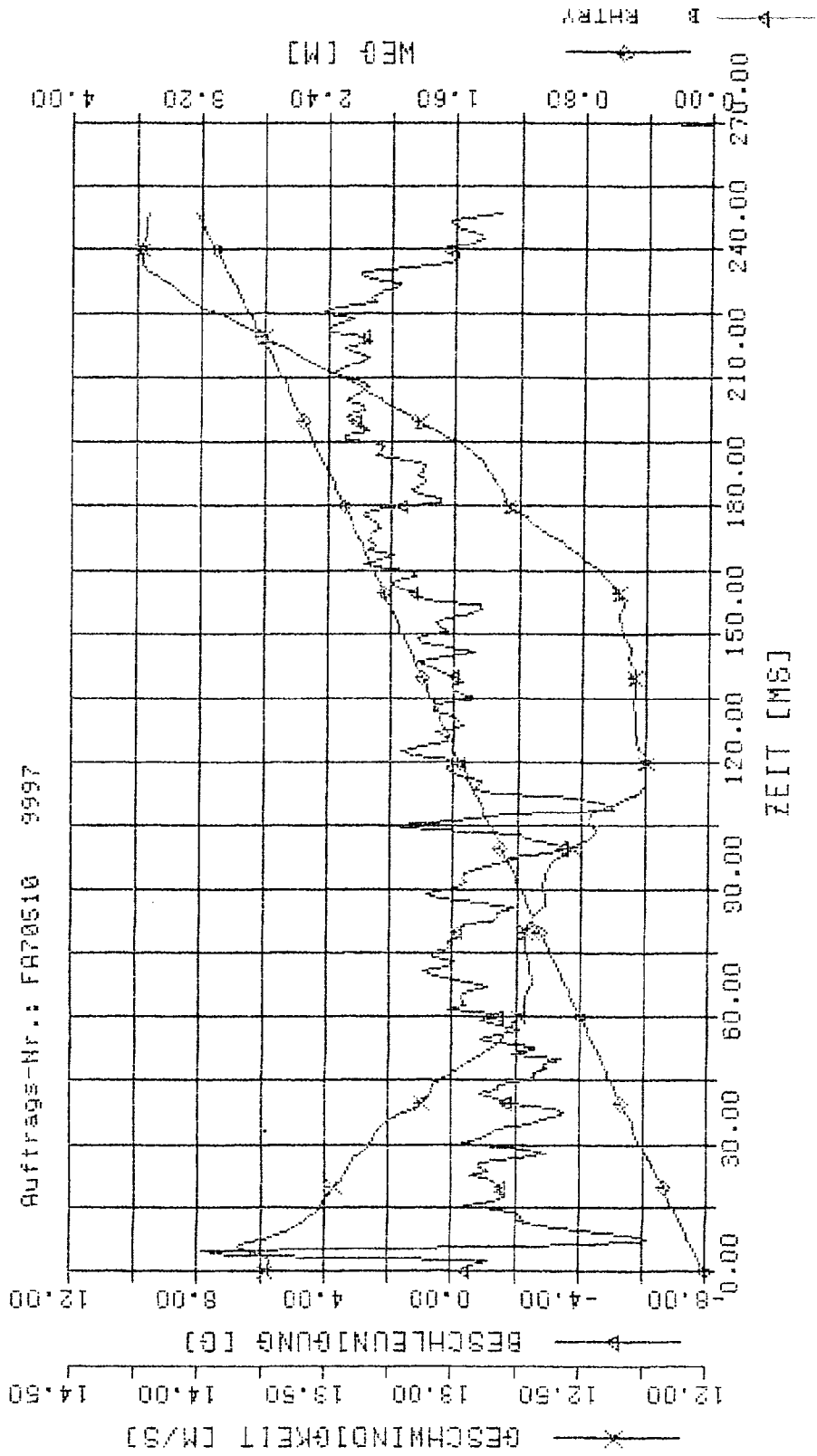
Auftrags-Nr.: FA70510 9997



Auftrags-Nr.: FA70510 Ver. - Nr.: 9997

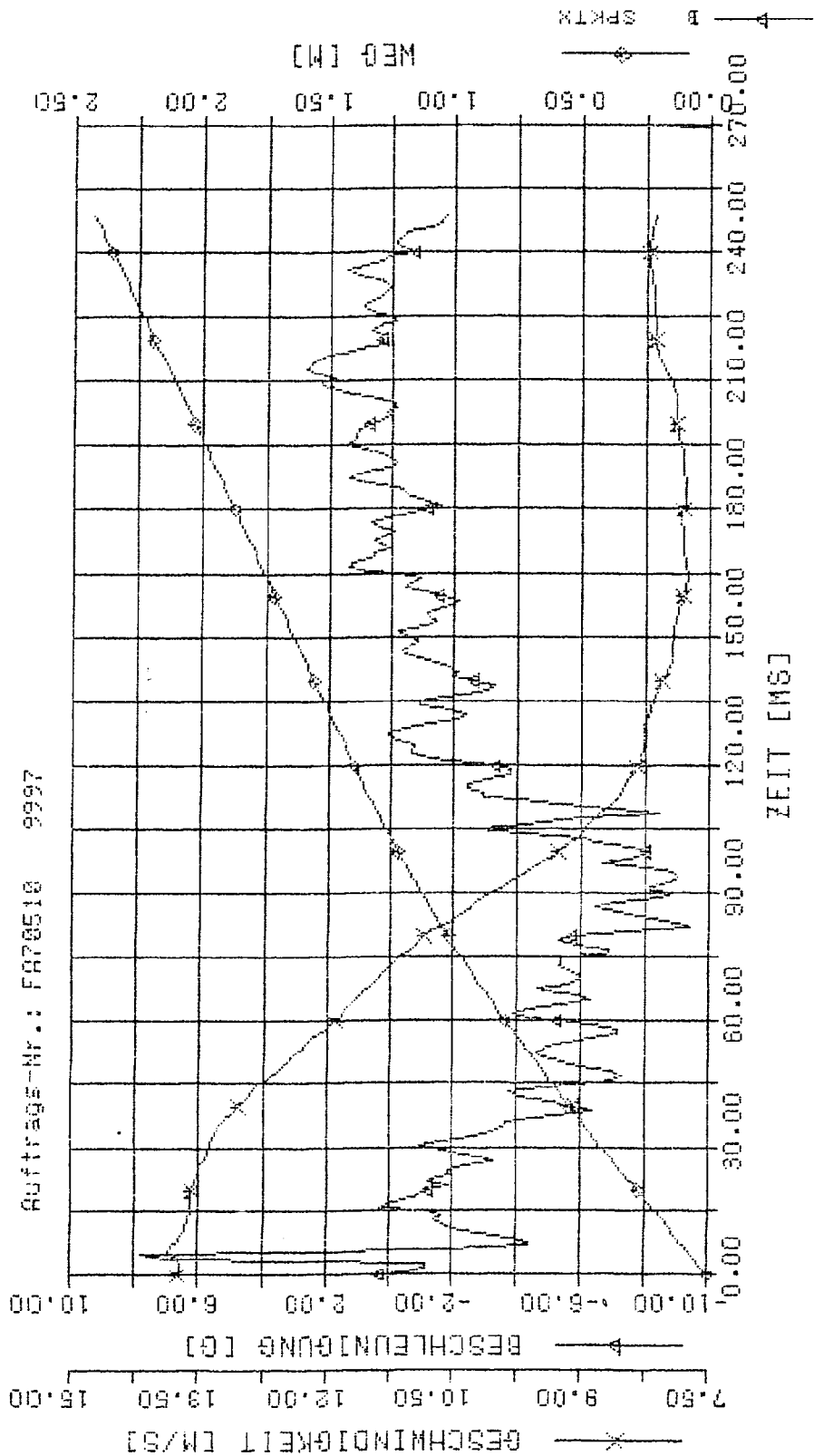
Mess-Stelle	UP	ber.	Extremum	t	ONS
RHTRY	B	Grösse	7.866	5.00	0.00
RHTRY	B	BE g	14.232	241.00	0.00
RHTRY	B	GE m/s	3.359	253.00	0.00

67



Mess-Stelle: Auftrags-Nr.: FA70510 Verordnungs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	MS
SPKTX	B	BE	-9.307	82.00	0.00
SPKTX	B	GE	43.836	6.00	0.00
SPKTX	B	WE	2.500	258.00	0.00



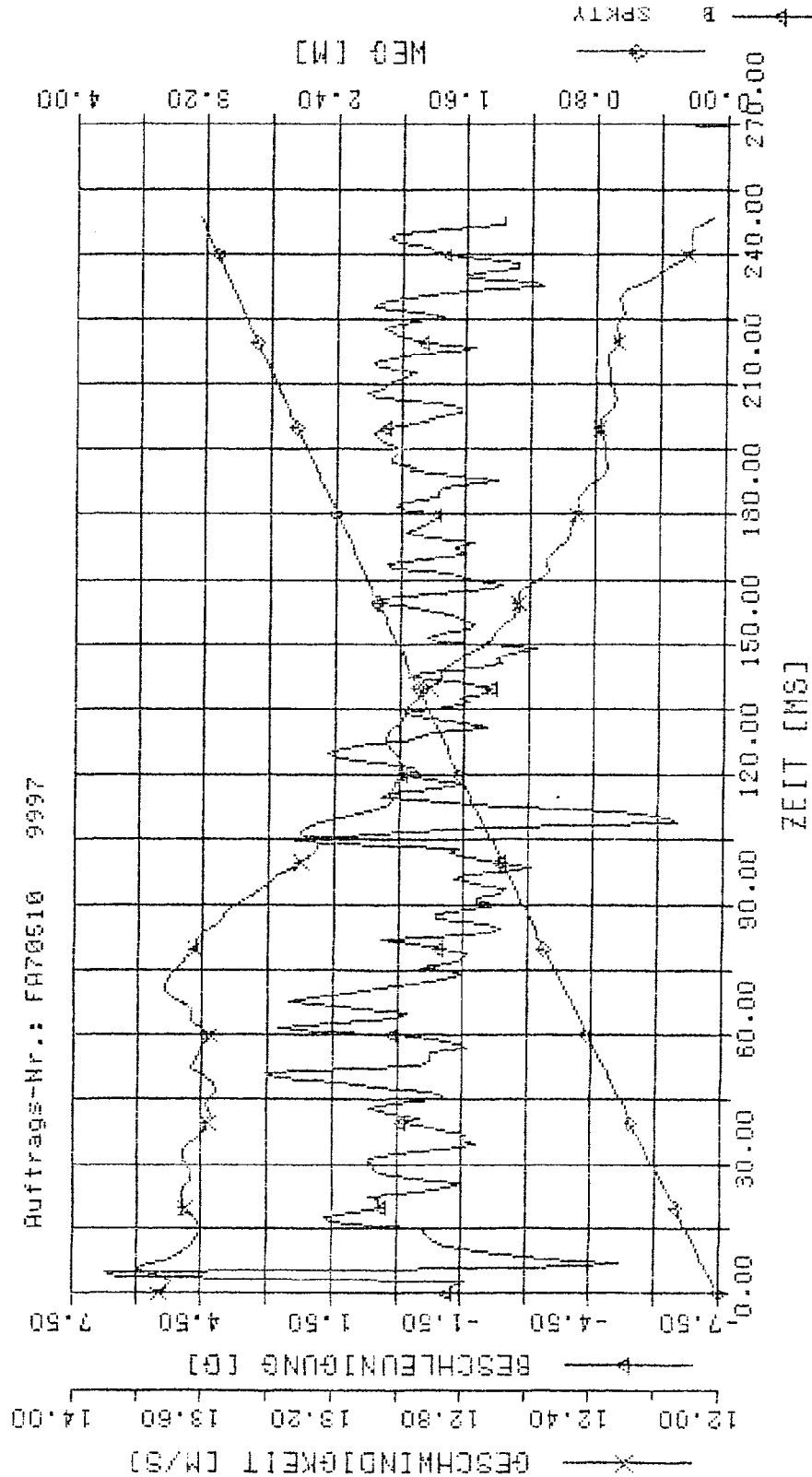
Ein-Werte: Auftrags-Nr.: FA70510 Vers.-Nr.: 9997

Mess-Stelle

UP	ber.	Extremum	t	Ext.	MS
B	BE g	6.748		5.00	0.00
B	GE m/s	13.796		6.00	0.00
B	ME m	3.347	250.00		0.00

les

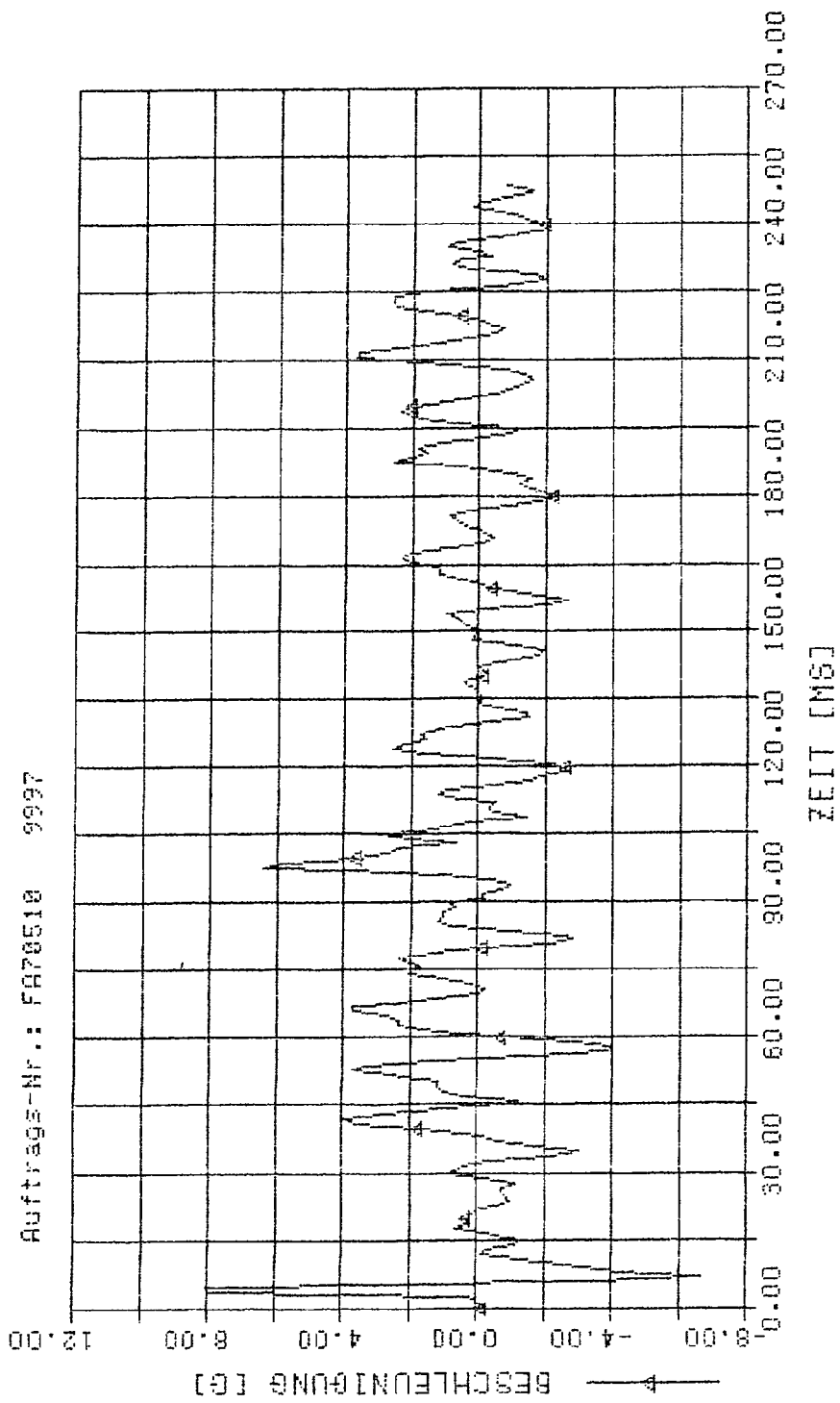
Auftrags-Nr.: FA70510 9997



Ann-Werte: Auftrags-Nr.: FA70510 Verh-Nr.: 9997

Mess-Stelle UP ber. Extremum t 3MS
SPK1Z B BE g 8.027 5.00 0.00

70



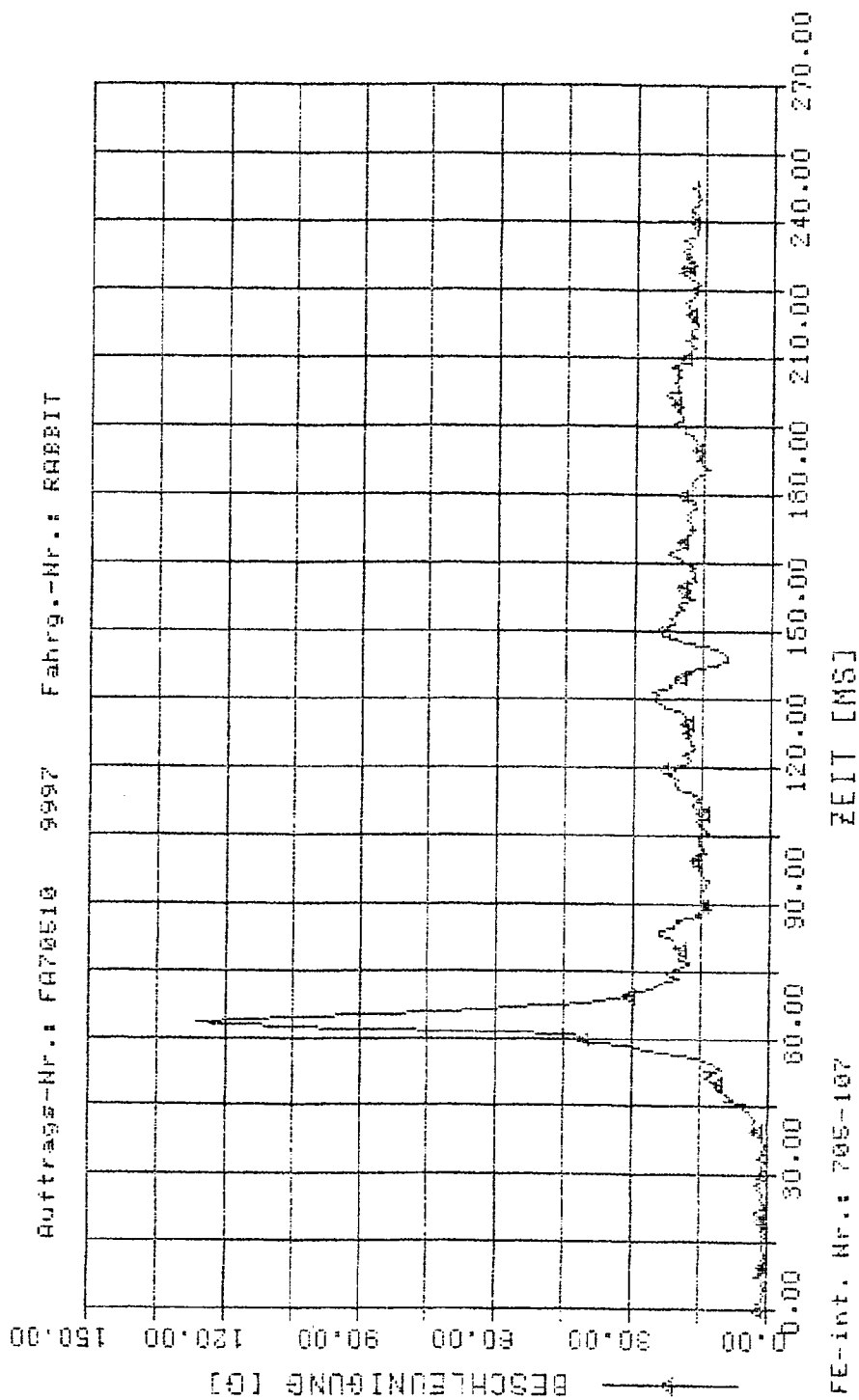
B.2 Dummy Test Response
B.2.1 Driver

- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

23

Mess-Stelle
 UP ber. Extremum t 3MS
 Groesse Extr.
 V1 DE g 129.116 64.10 98.86

K001

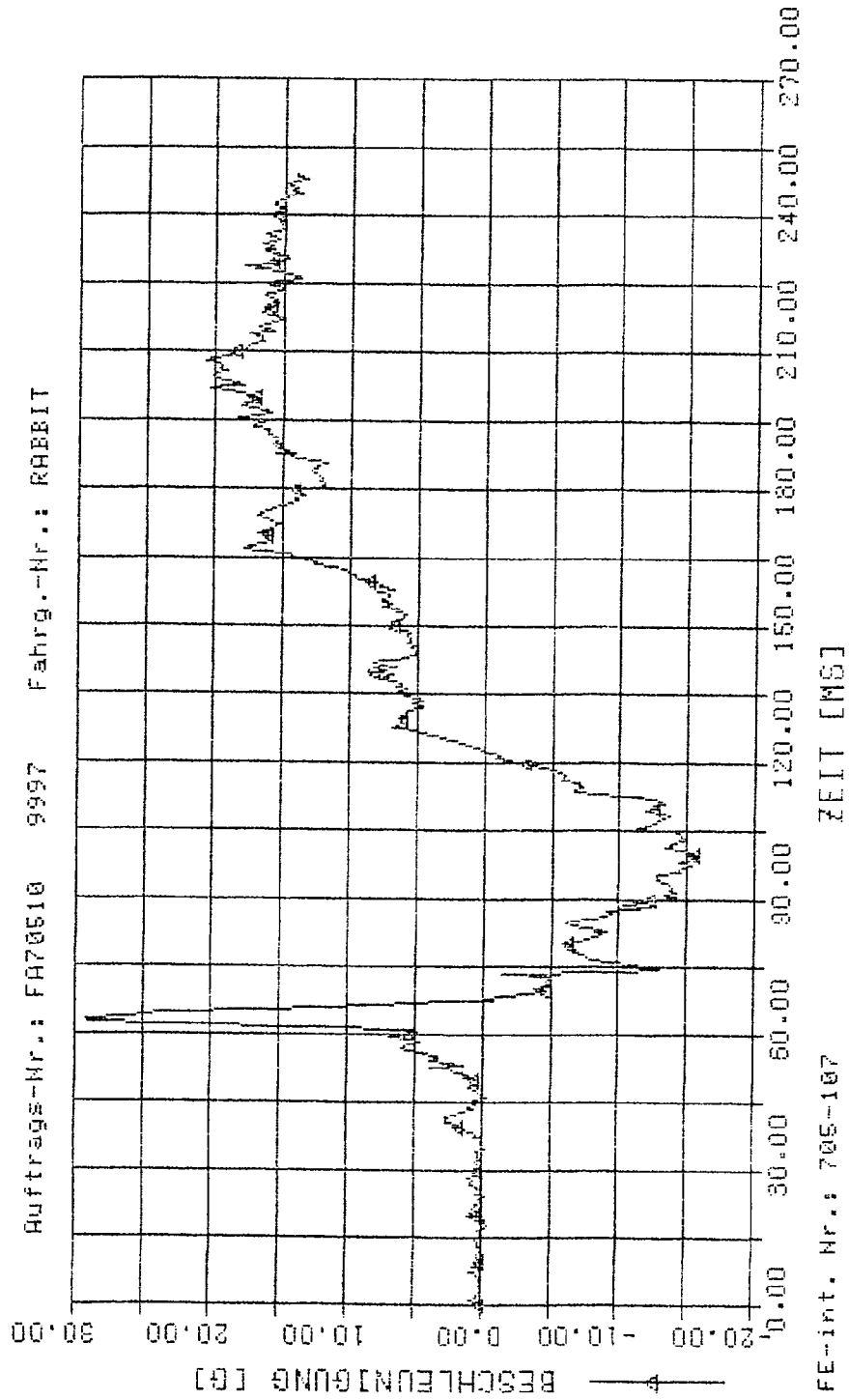


VI K001X V Z

Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle UP ber. Extremum t SMS
K001X V1 BE g Grösse Extr. 30.830 53.40 20.74

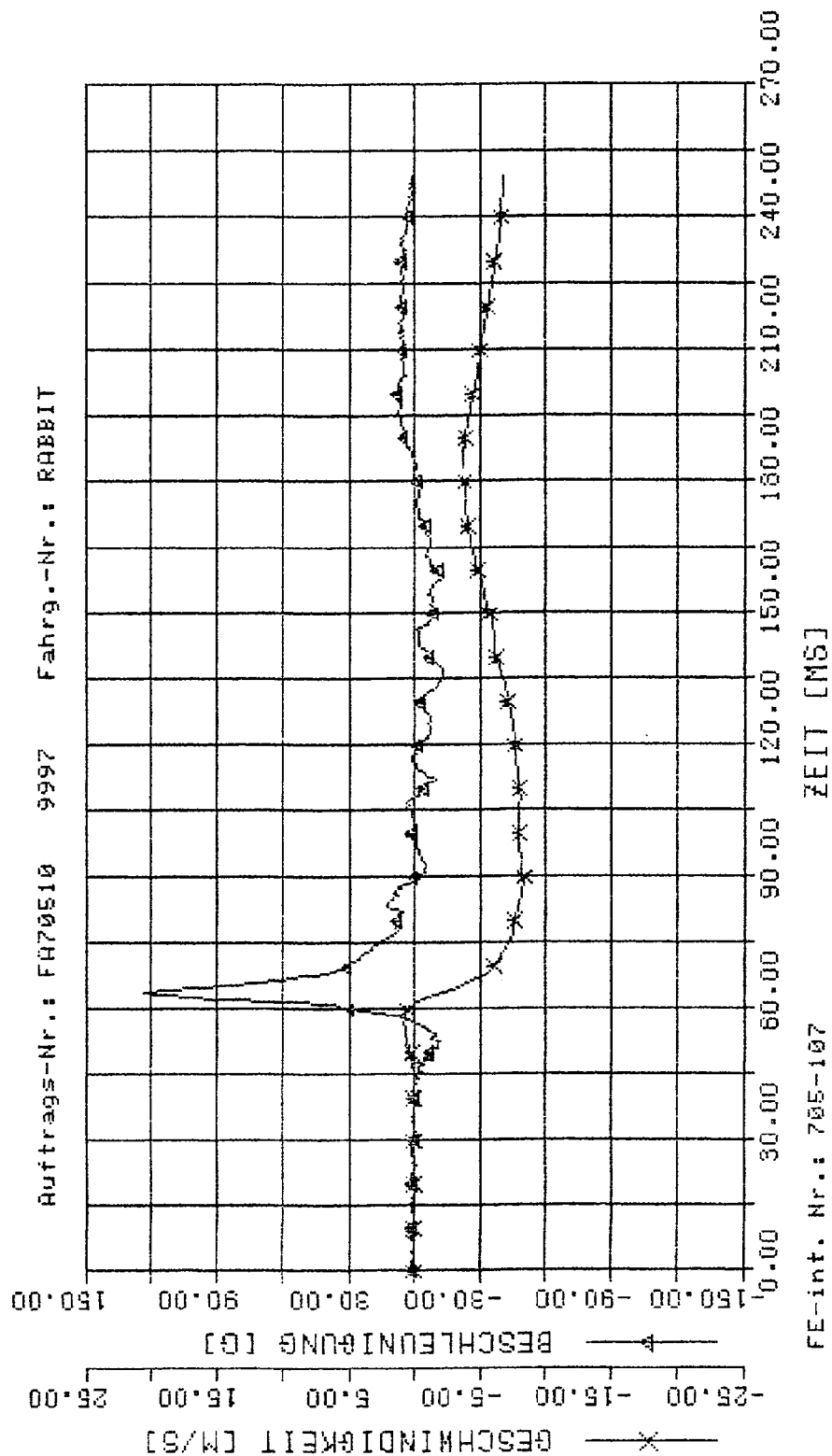
23



- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	3MS
K001Y	V1	Groesse	126.387	Extr.	86.17
K001Y	V1	GE g	-8.401	88.70	0.00

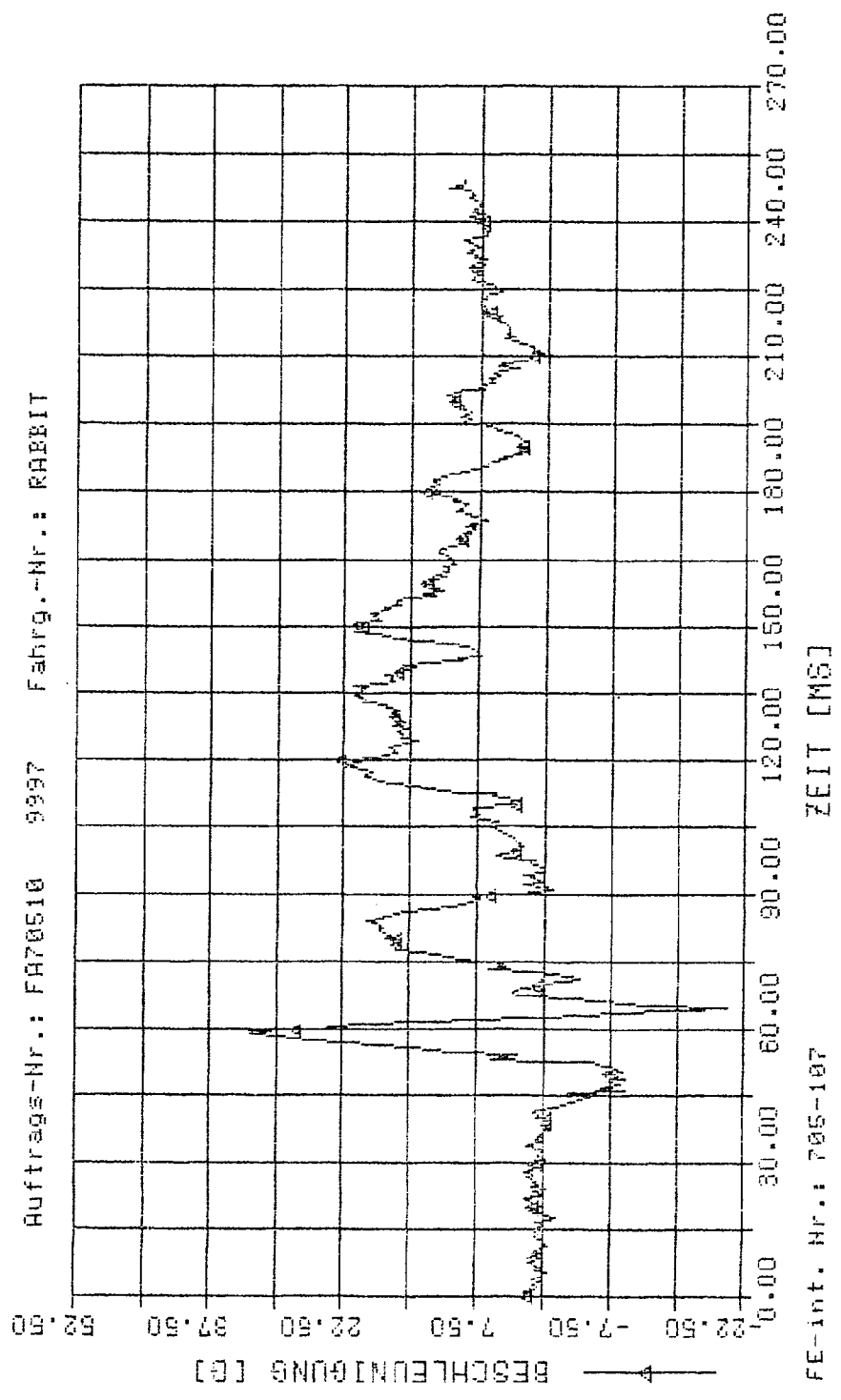
24



Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle UP ber. Extr. t SMS
K001Z V1 BE g 33.610 59.30 25.99

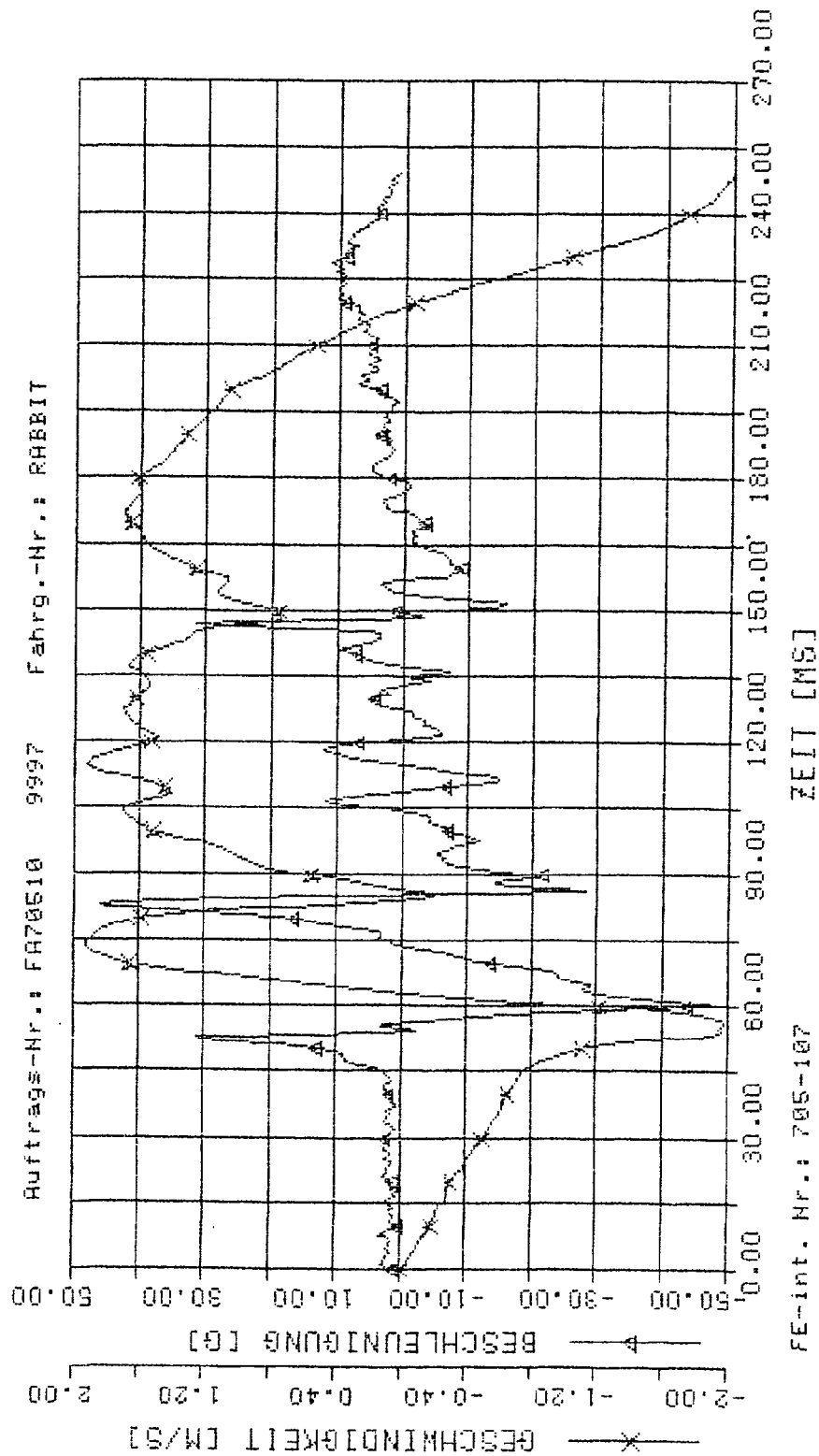
25



Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle UP ber. Extremum t. SMS
 R001X Groesse Extr. 0.00
 R001X V1 BE g 60.50
 R001X V1 GE m/s 257.00

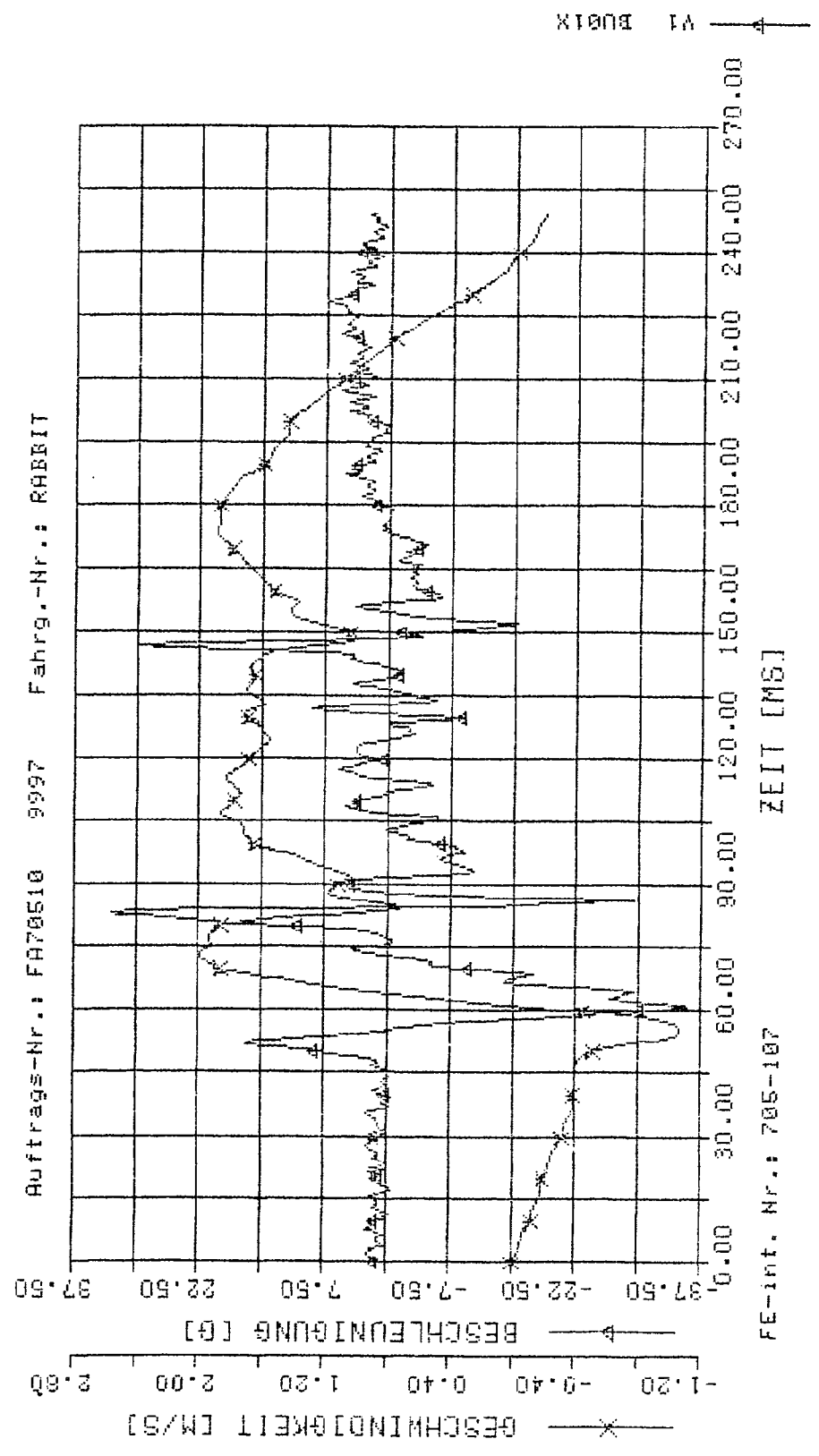
46



Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	3HS
BU01X	V1	Groesse	-35.295	61.00	0.00
BU01X	V1	GE m/s	1.985	73.00	0.00

47

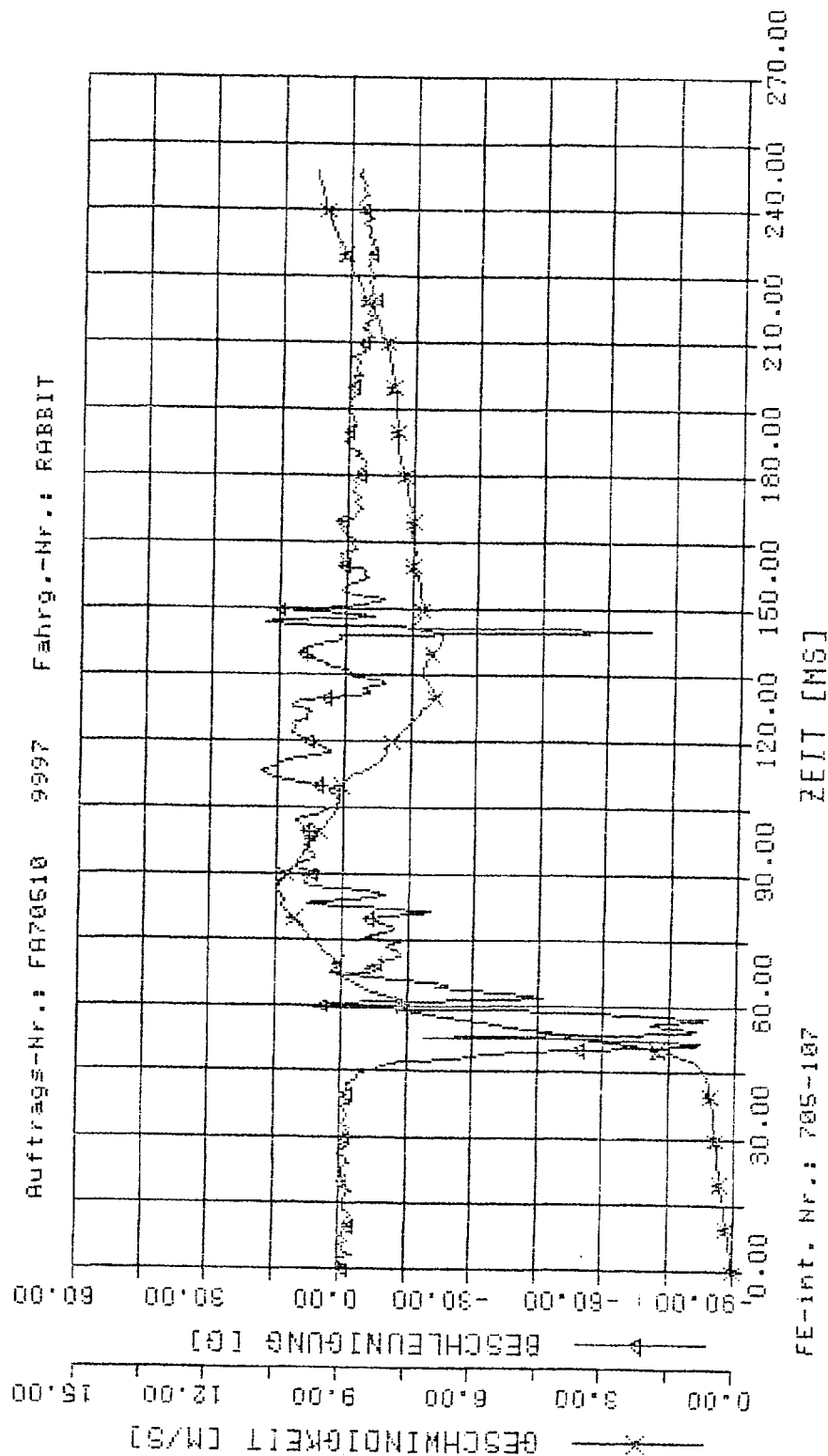


FE-int. Nr.: 705-107

Mess-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extrema	t	MS
L001Y	V1	GE	-83.649	57.50	0.00
L001Y	V1	GE	10.478	87.00	0.00

48

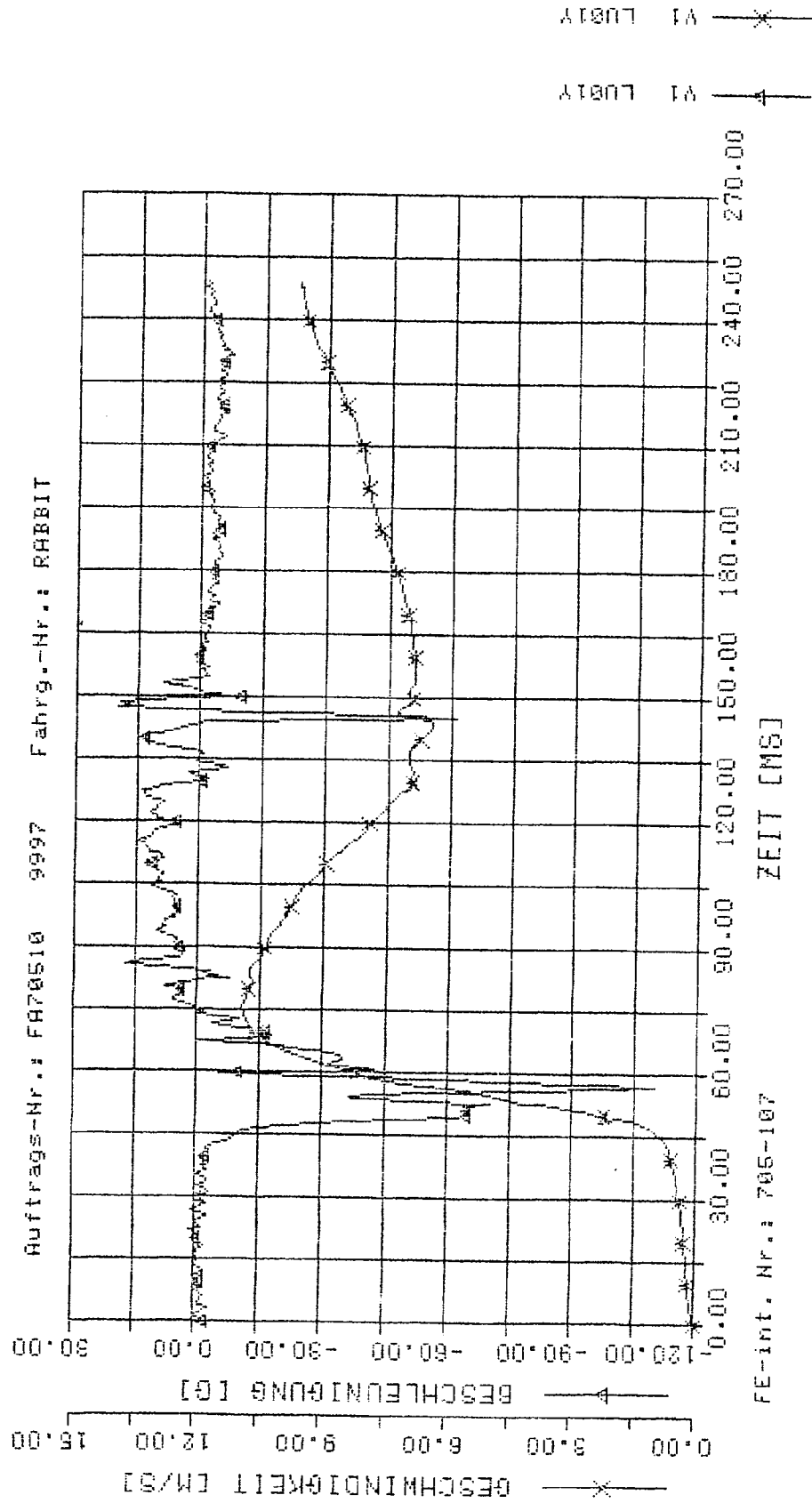


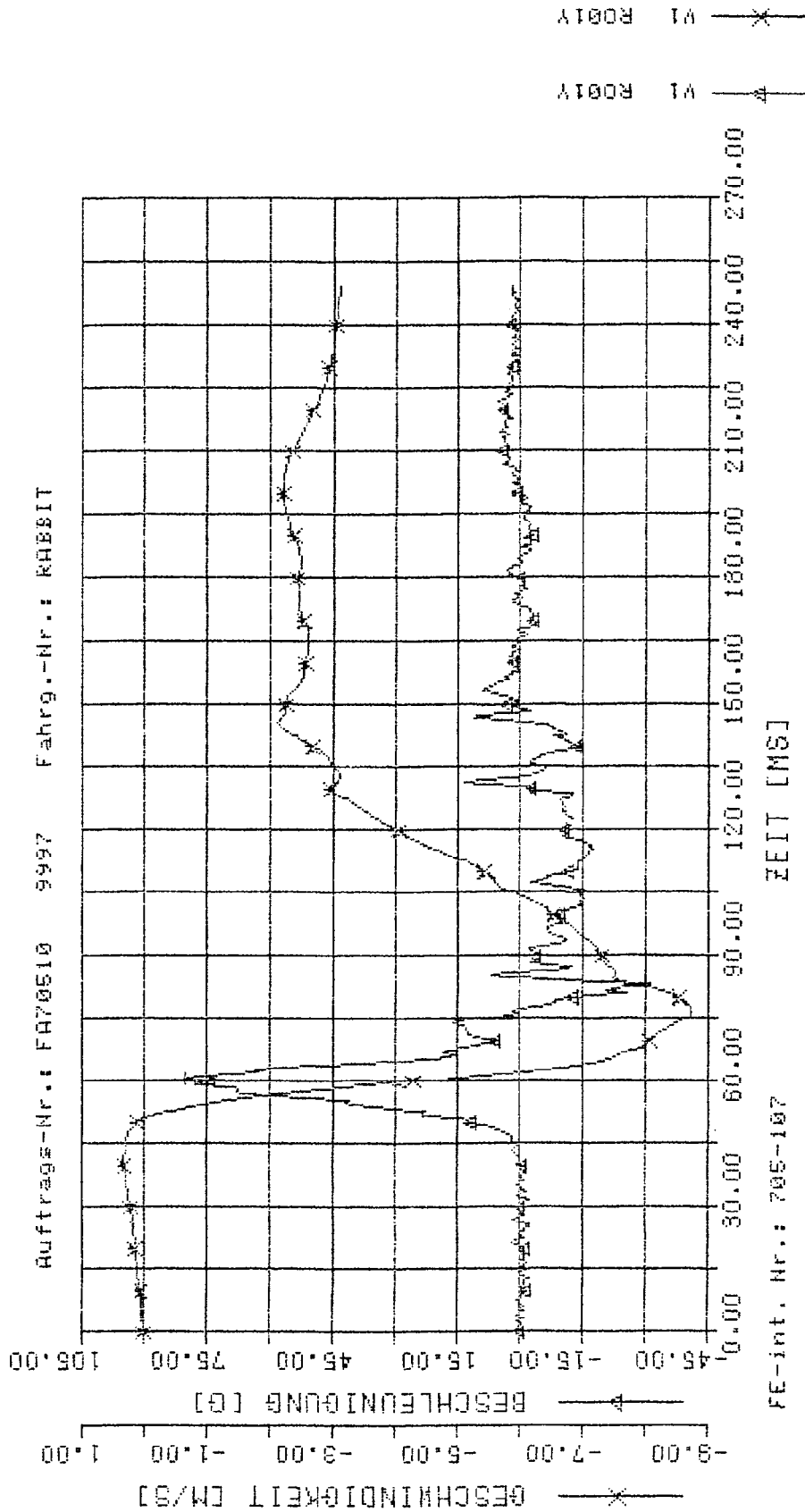
V1 L001Y

V1 L001Y

- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

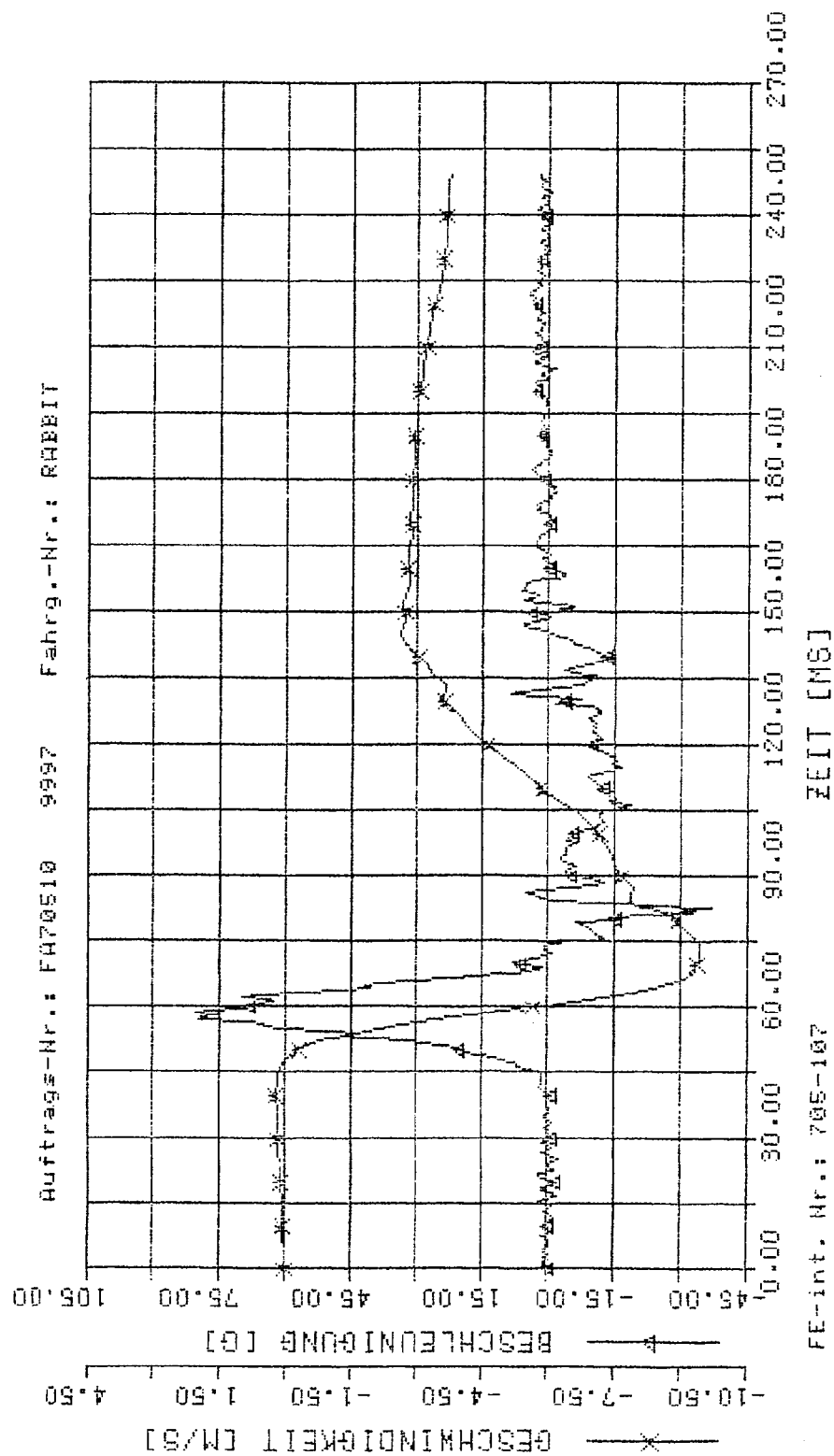
Mess-Stelle	UP	ber. Grösse	Extremum	t Extr.	AMS
LU01Y	V1	BE g	-109.830	52.00	0.00
LU01Y	V1	GE m/s	10.904	76.00	0.00





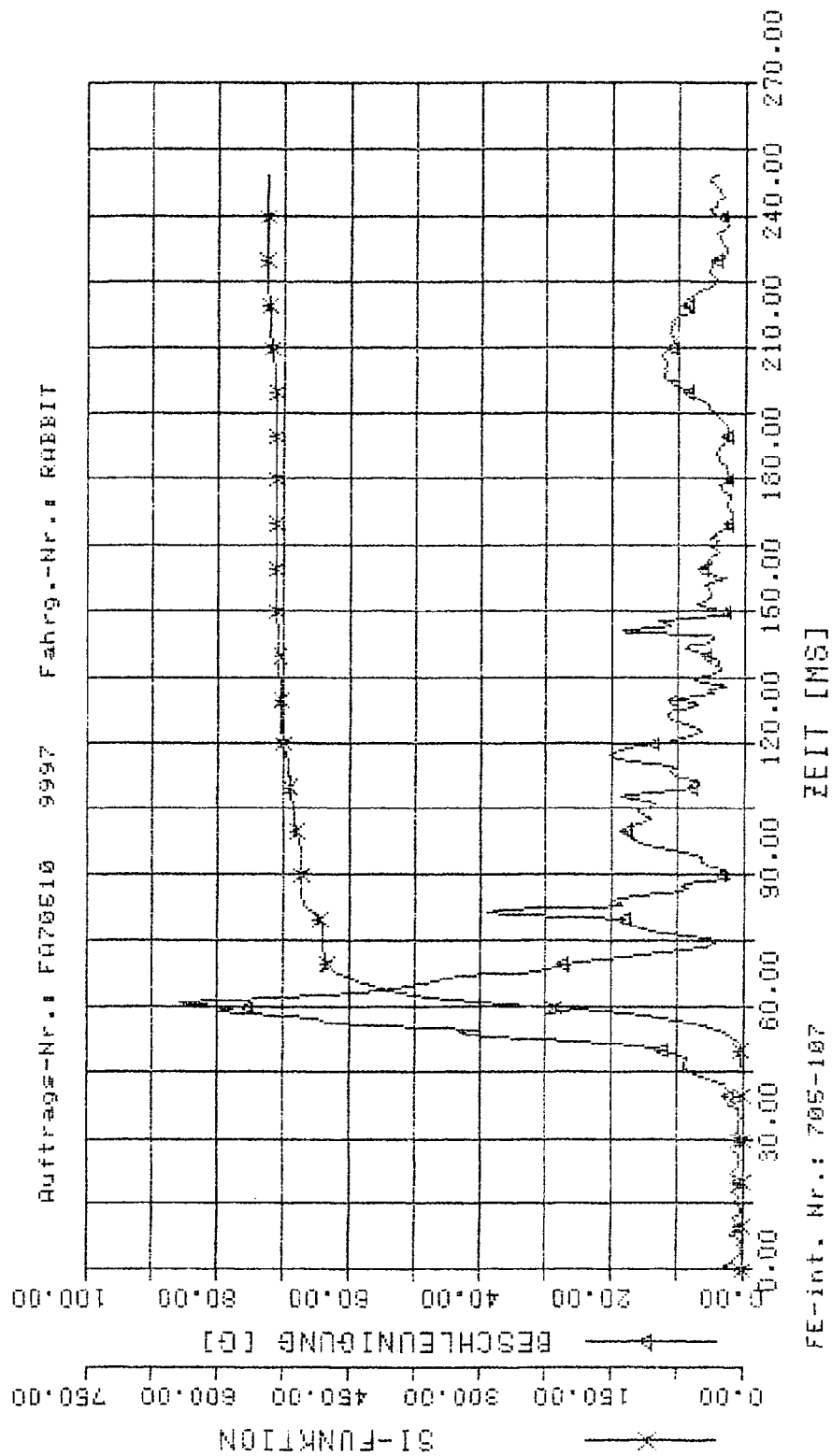
Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	3MS
RU01Y	V1	Groesse		Extr.	
RU01Y	V1	BE g	79.995	58.50	0.00
RU01Y	V1	GE m/s	-9.456	72.00	0.00



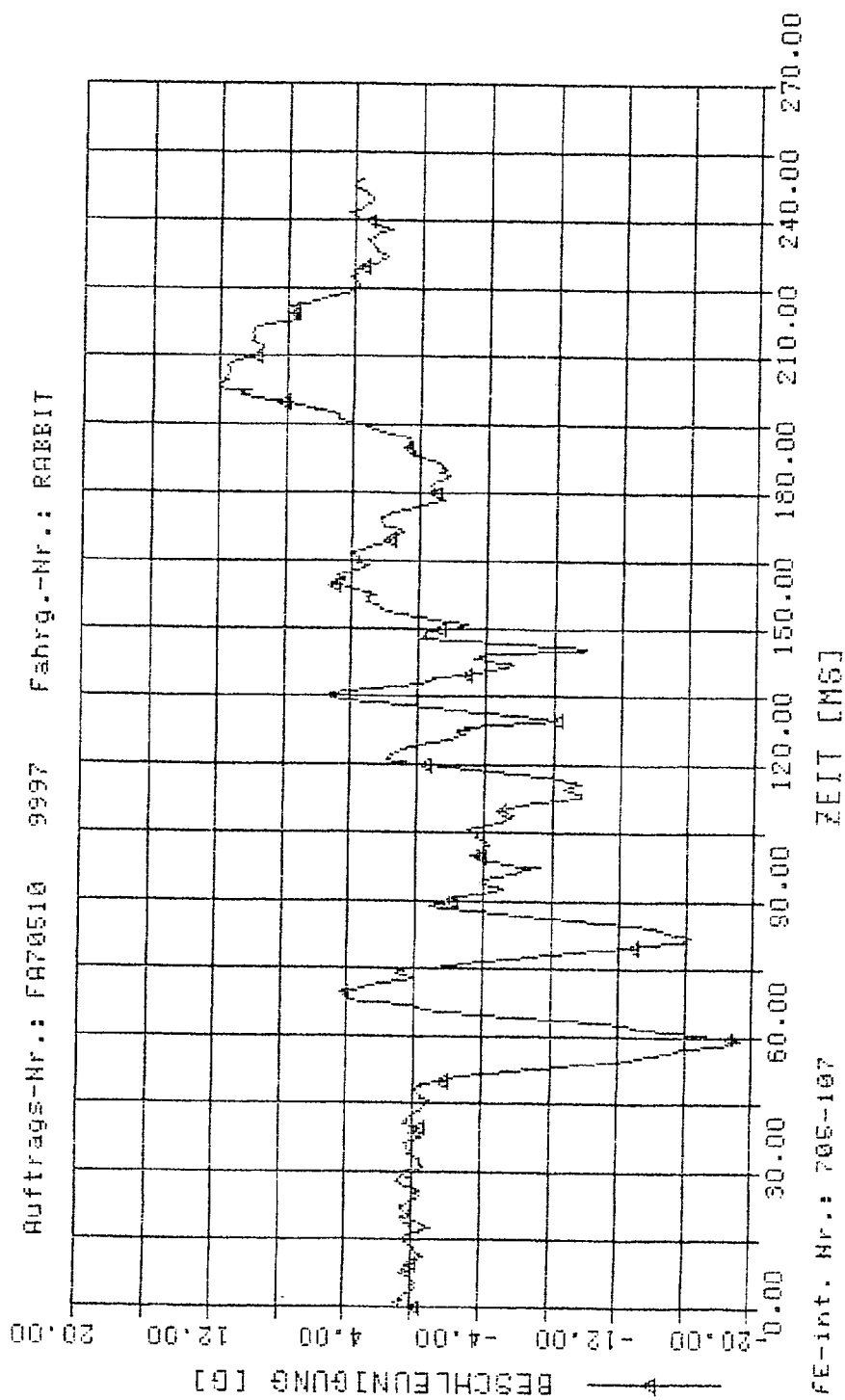
Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extrema	t	SMS
T001	V1	BE	Groesse	61.50	0.00
T004	V1	SI	542.667	250.00	0.00



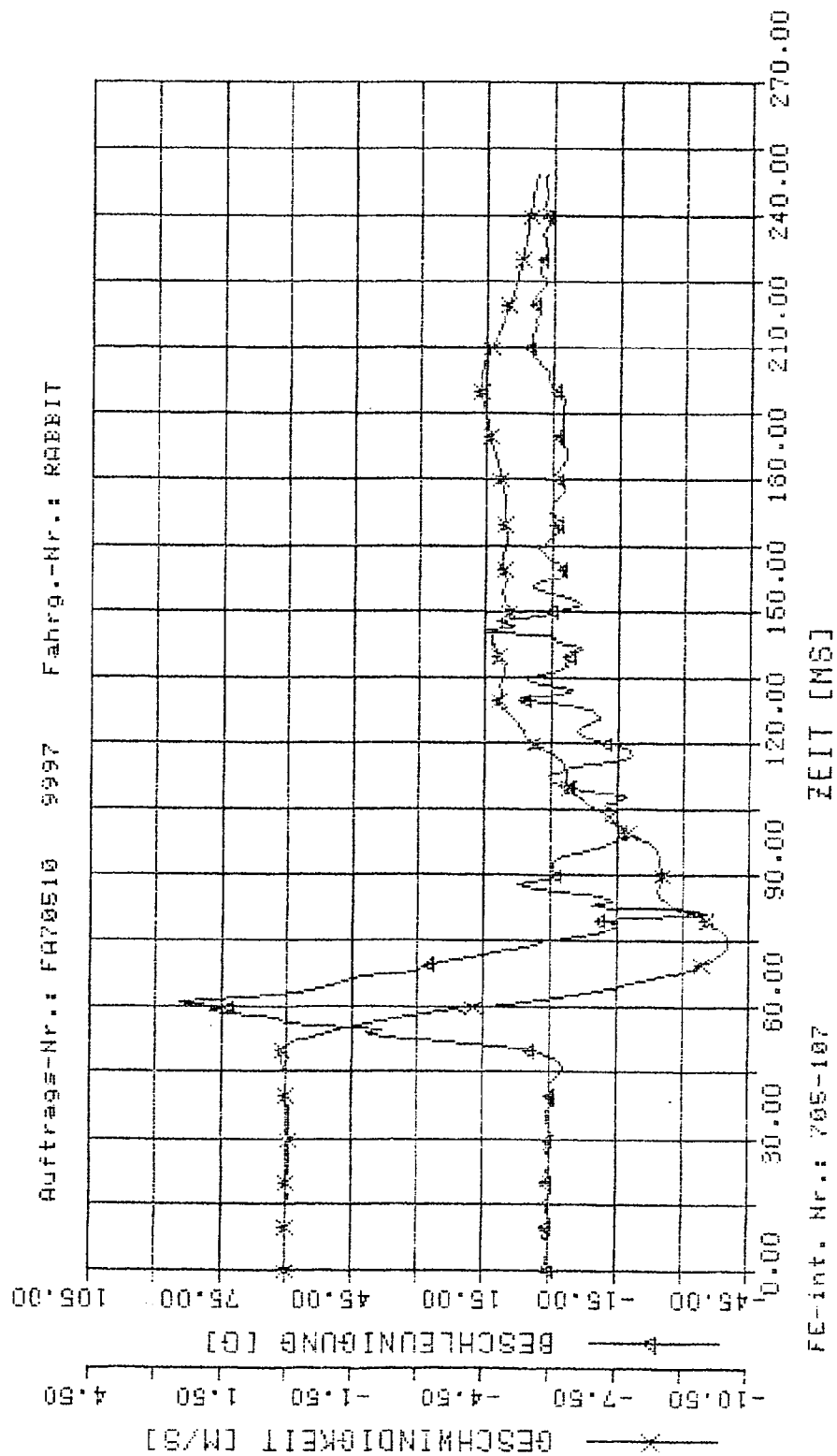
Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle UP ber. Extremum t JMS
T001X V1 BE 9 Grösse Extr.
-19.318 59.00 0.00



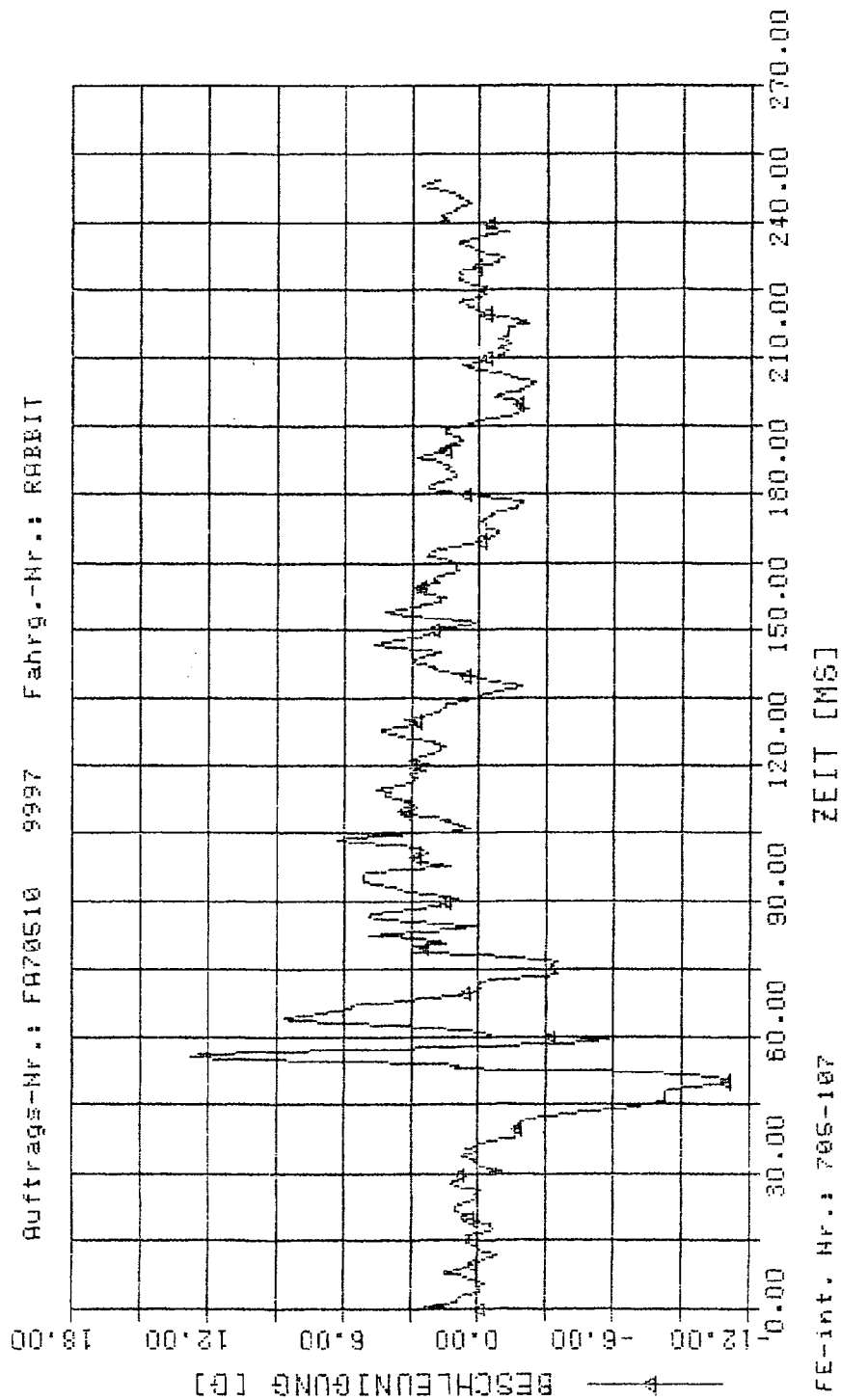
Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	Ext.	ms
T001Y	V1	Grösse	84.333		51.50	0.00
T001Y	V1	GE m/s	-10.056		75.00	0.00



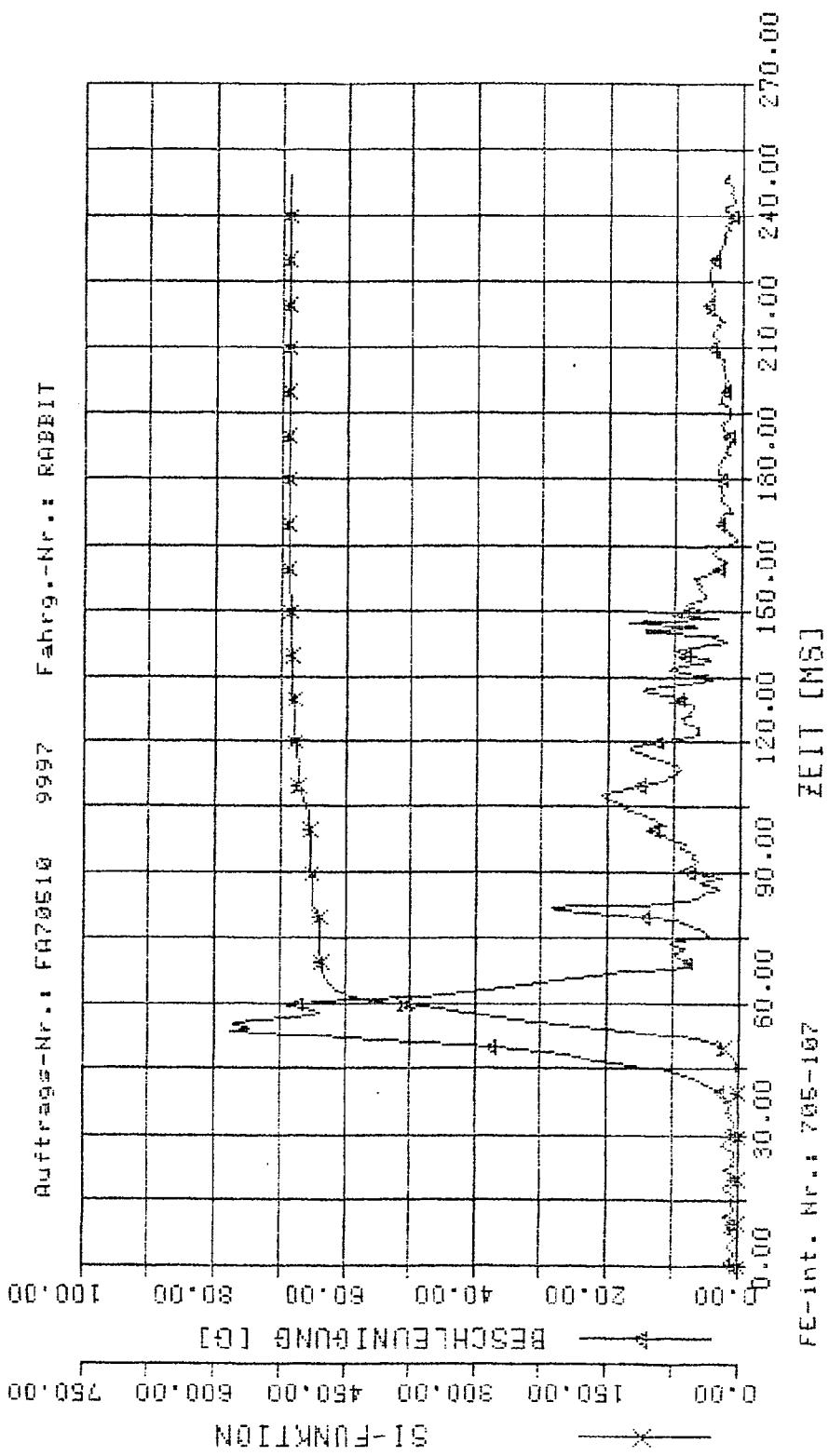
VI 1001Y

Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997
 Mess-Stelle UP ber. Extremum t SMS
 T001Z Groesse Extr.
 V1 BE g 12.675 56.00 0.00



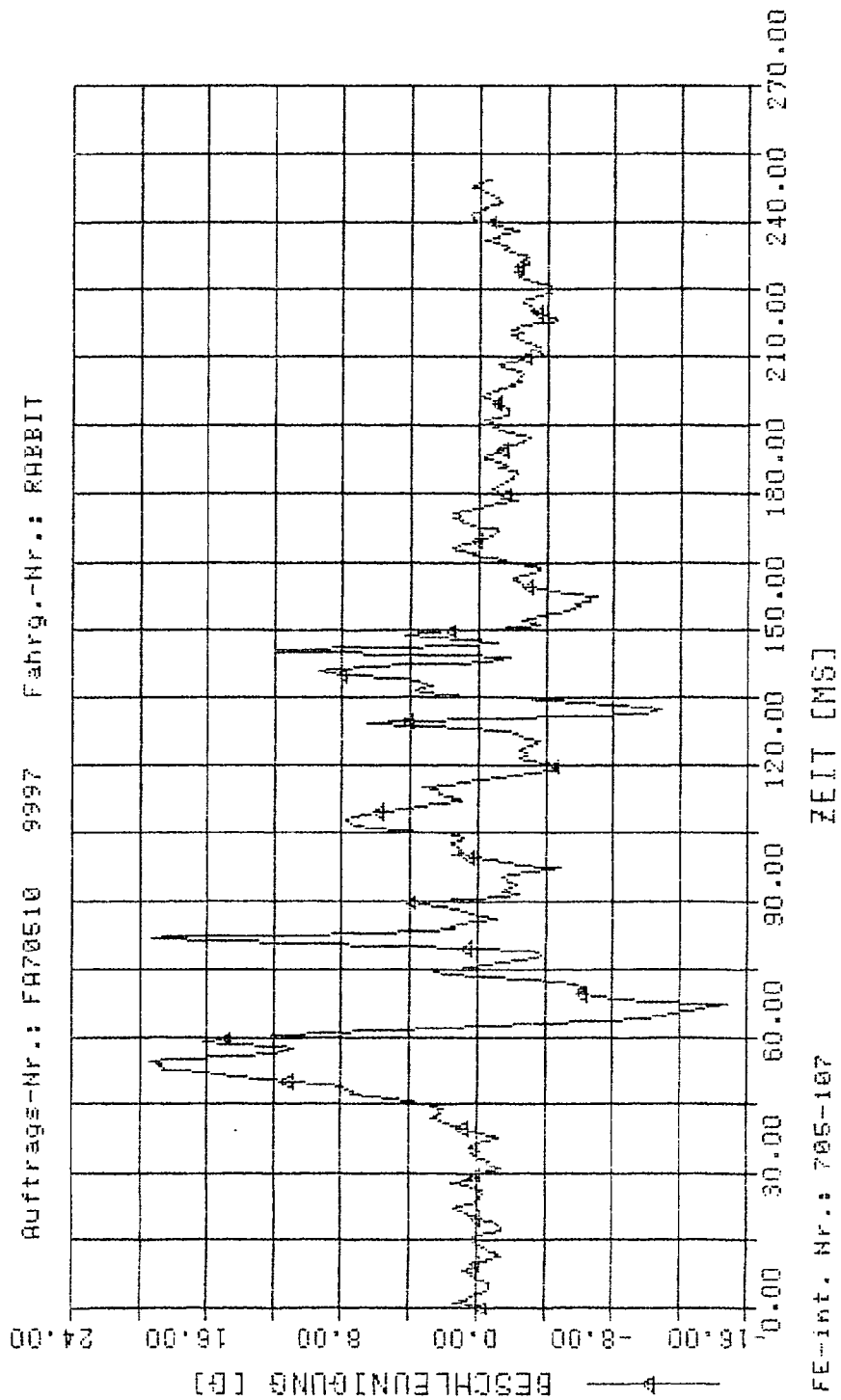
Ann-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	Extr.
TU01	V1	BE	77.383	54.00	0.00
TU01	V1	SI	516.860	250.00	0.00



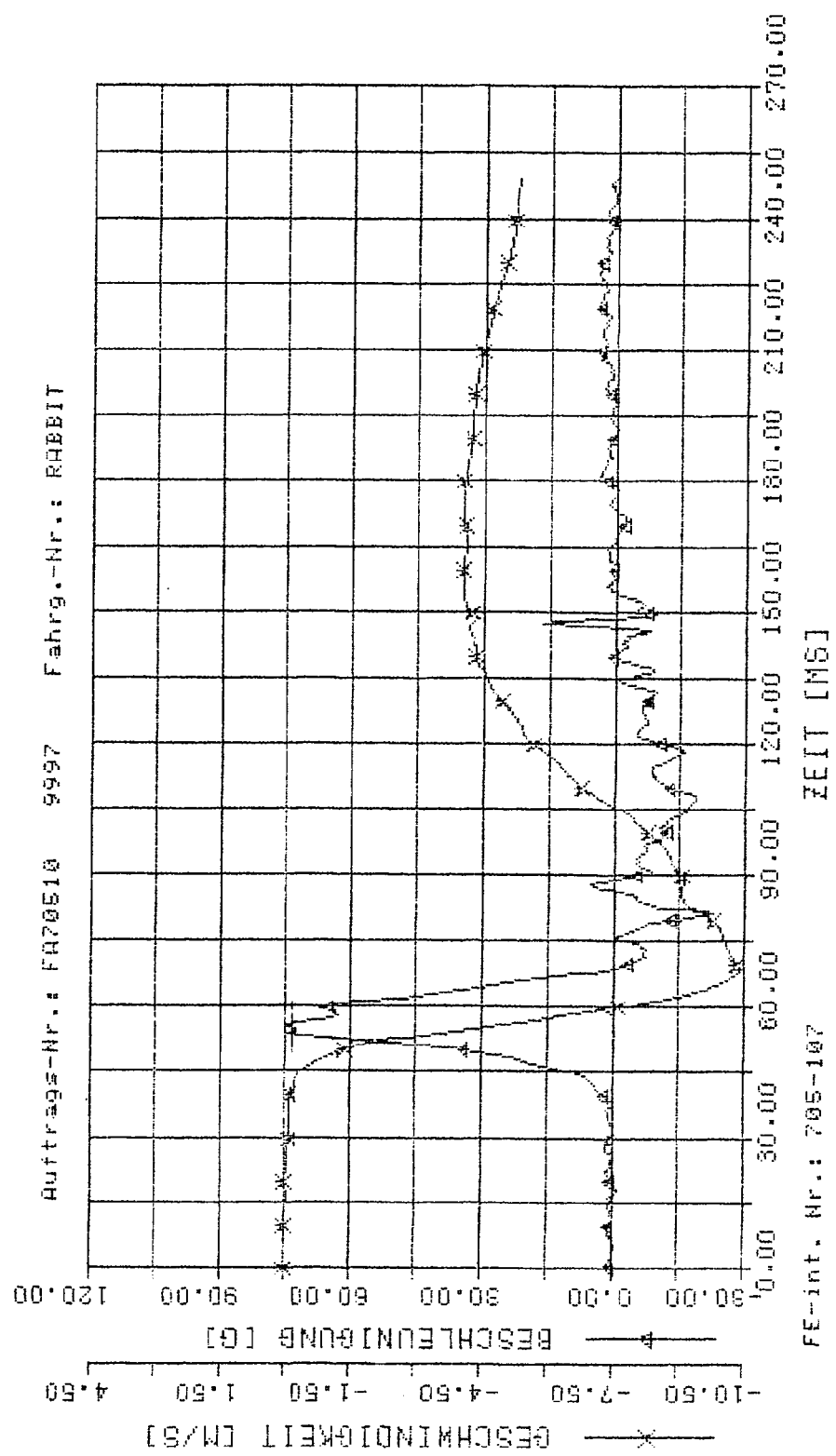
Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle UP ber. Extremum 1 3MS
TU01X Groesse Extr. 55.00 0.00
V1 DE g



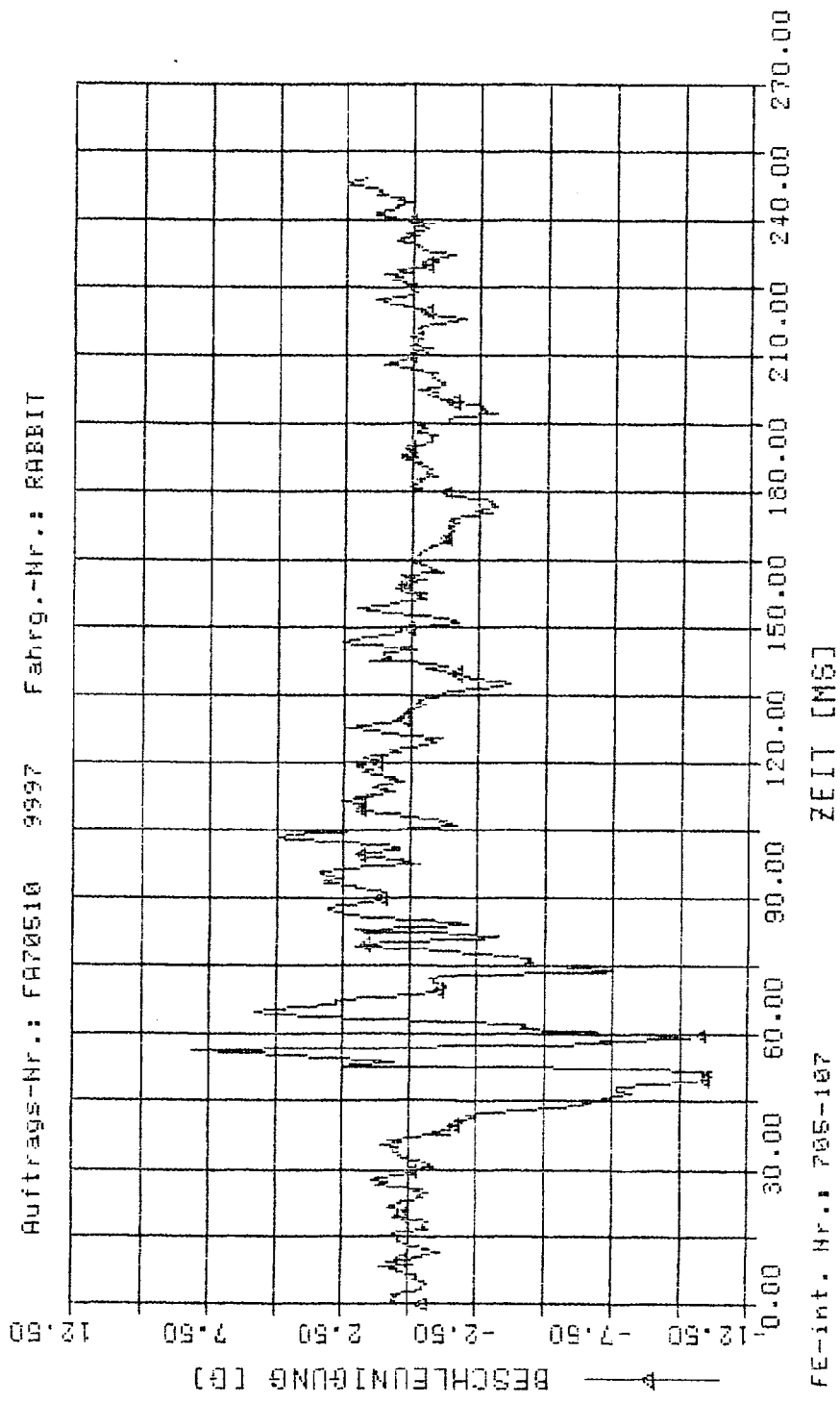
Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	3MS
TU01Y		Groesse		Extr.	
TU01Y	V1	BE g	75.044	54.00	0.00
TU01Y	V1	GE m/s	-10.397	69.00	0.00



Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

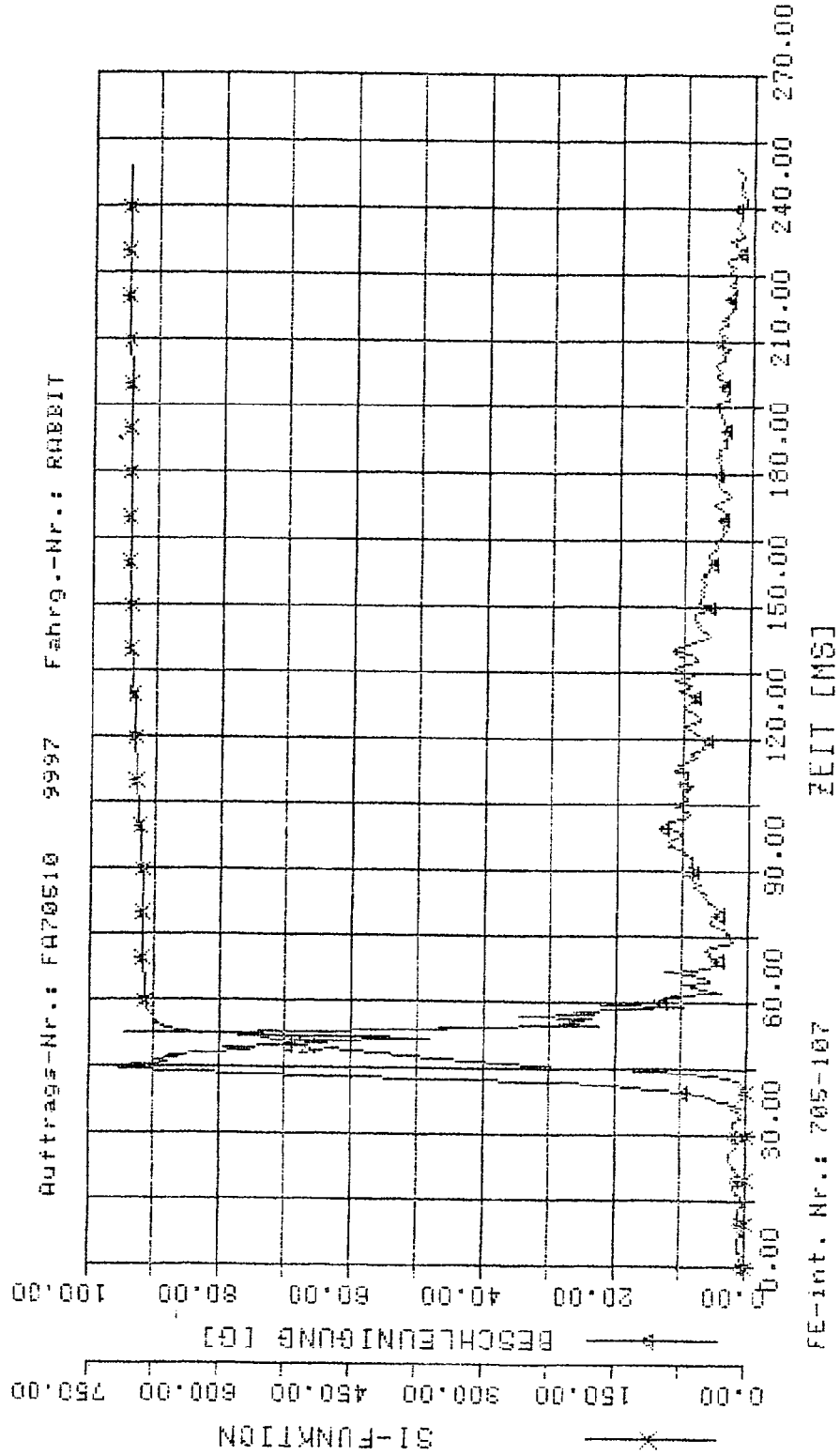
Mess-Stelle UP ber. Extremum t 3MS
TU01Z Groesse Extr. 51.50 0.00
V1 BE g -11.208



V1 TU01Z

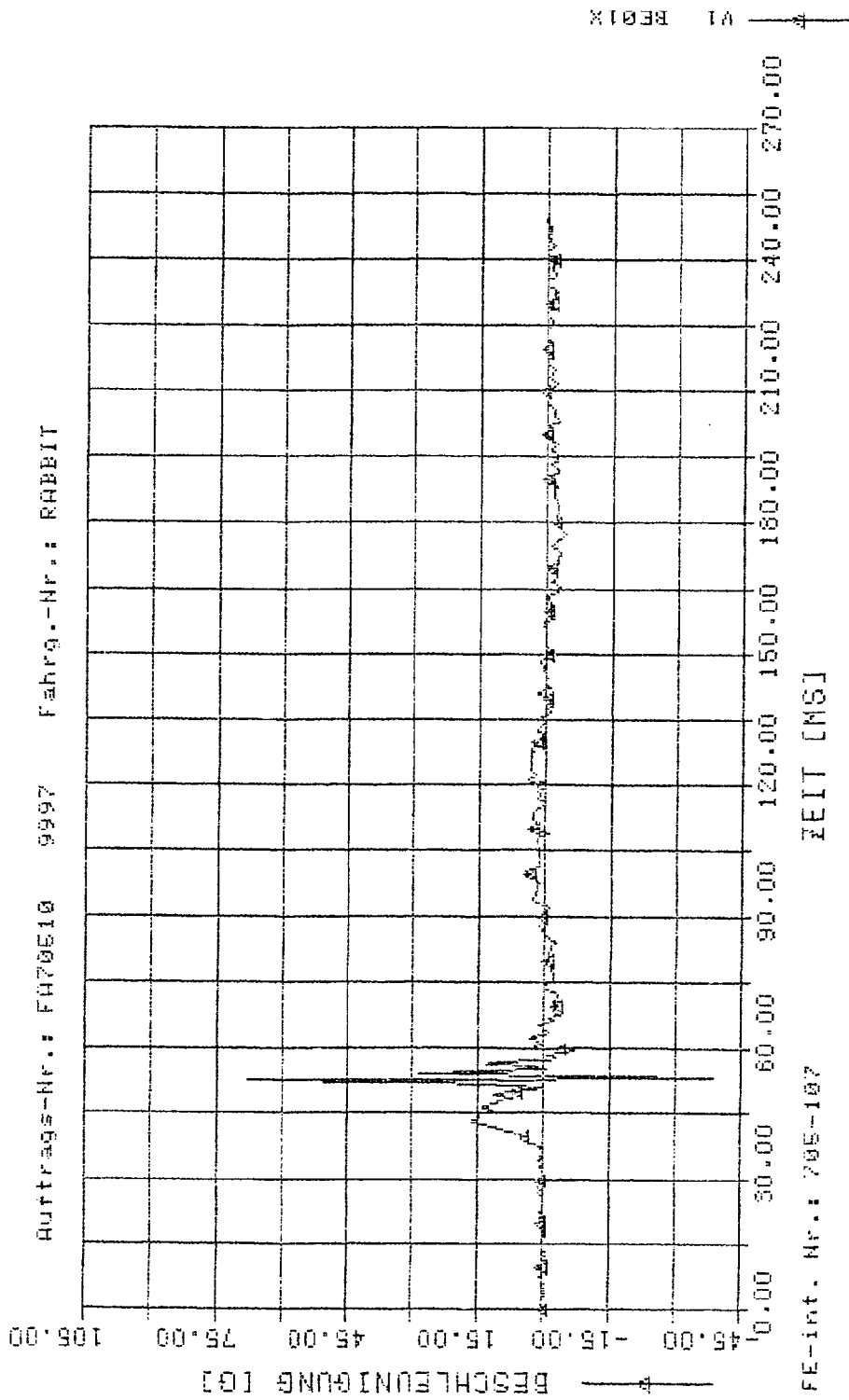
Kennwerte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	3MS
BE01	V1	Groesse	97.743	Extr.	87.76
BE01	V1	SI	708.396	250.00	0.00



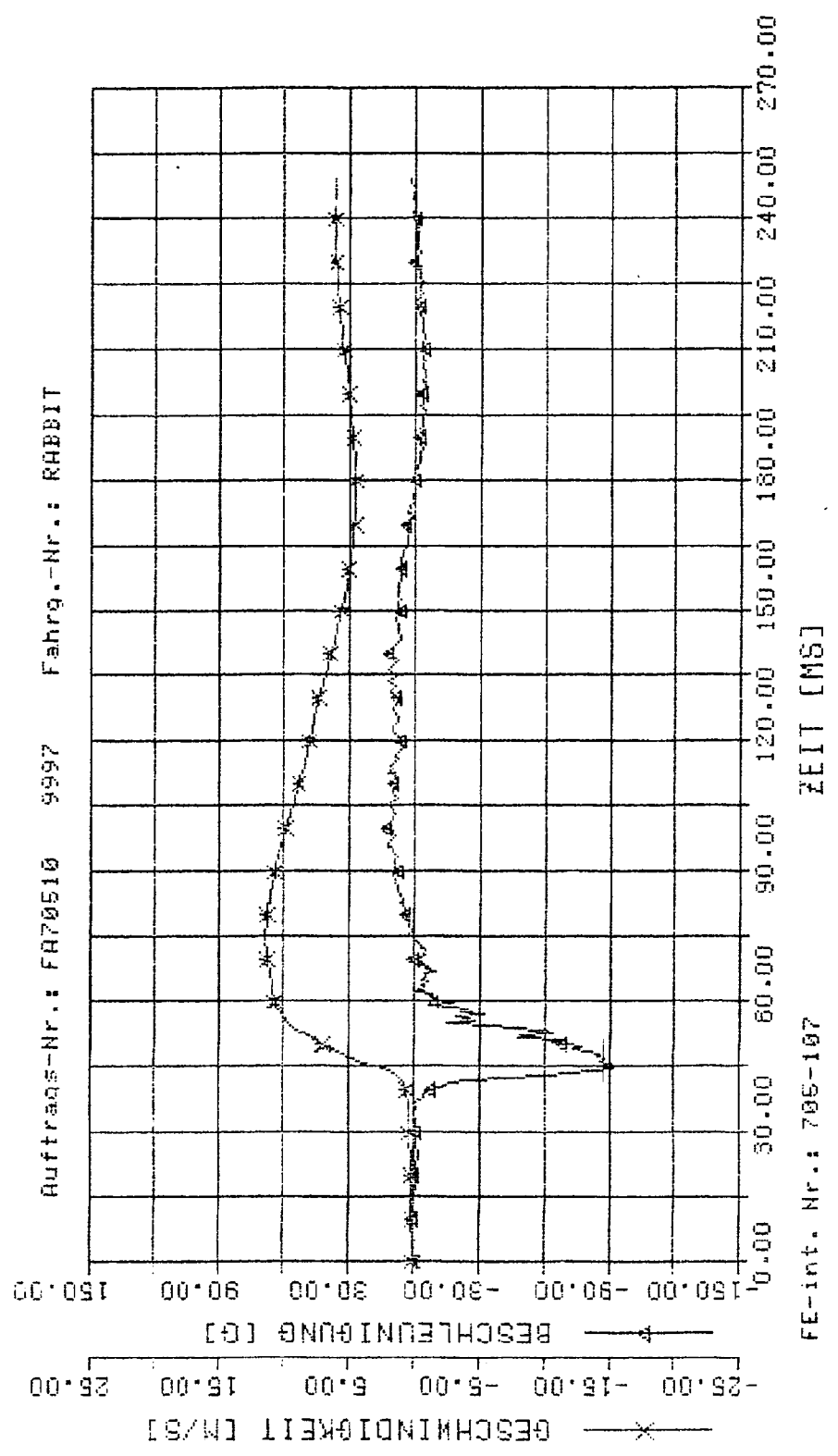
Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	SMS
BE01X	V1	DE	Groesse	Extr.	
			g	52.50	14.42



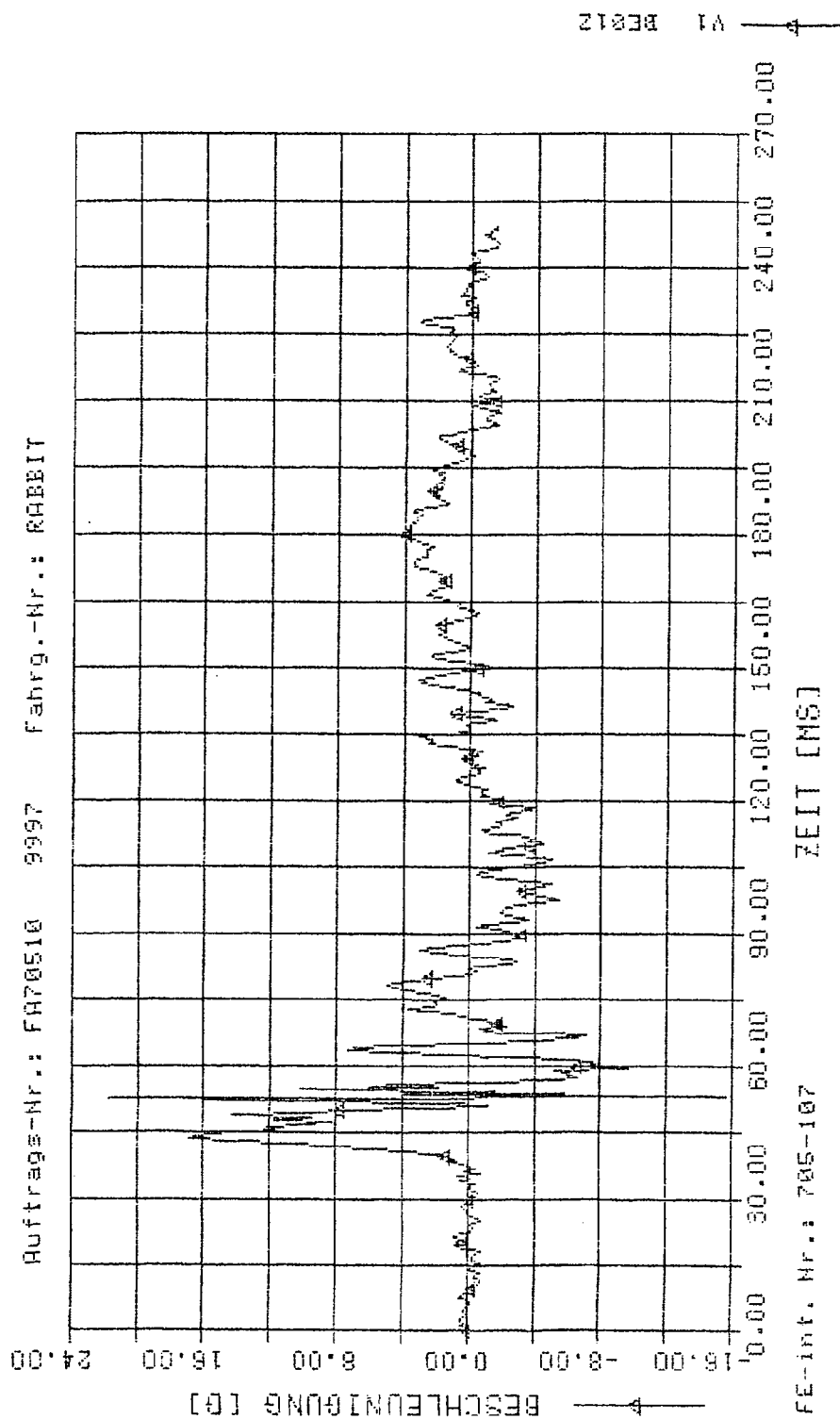
775921

Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997
 Mess-Stelle: UP ber. Extr. t SMS
 BE01Y Groesse -95.746 45.00 11.25
 BE01Y V1 BE g 11.311 74.50 0.00
 V1 GE a/s



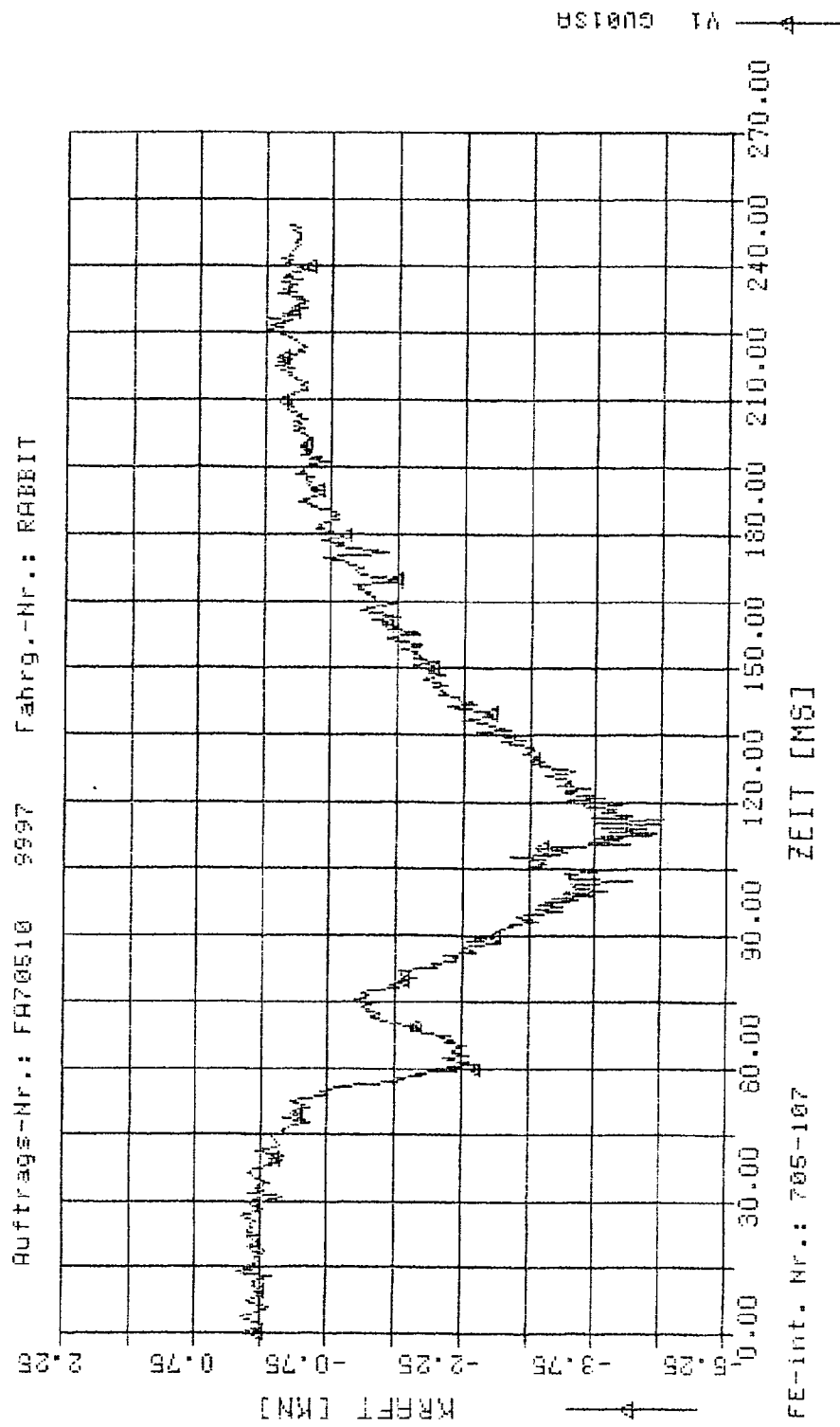
- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

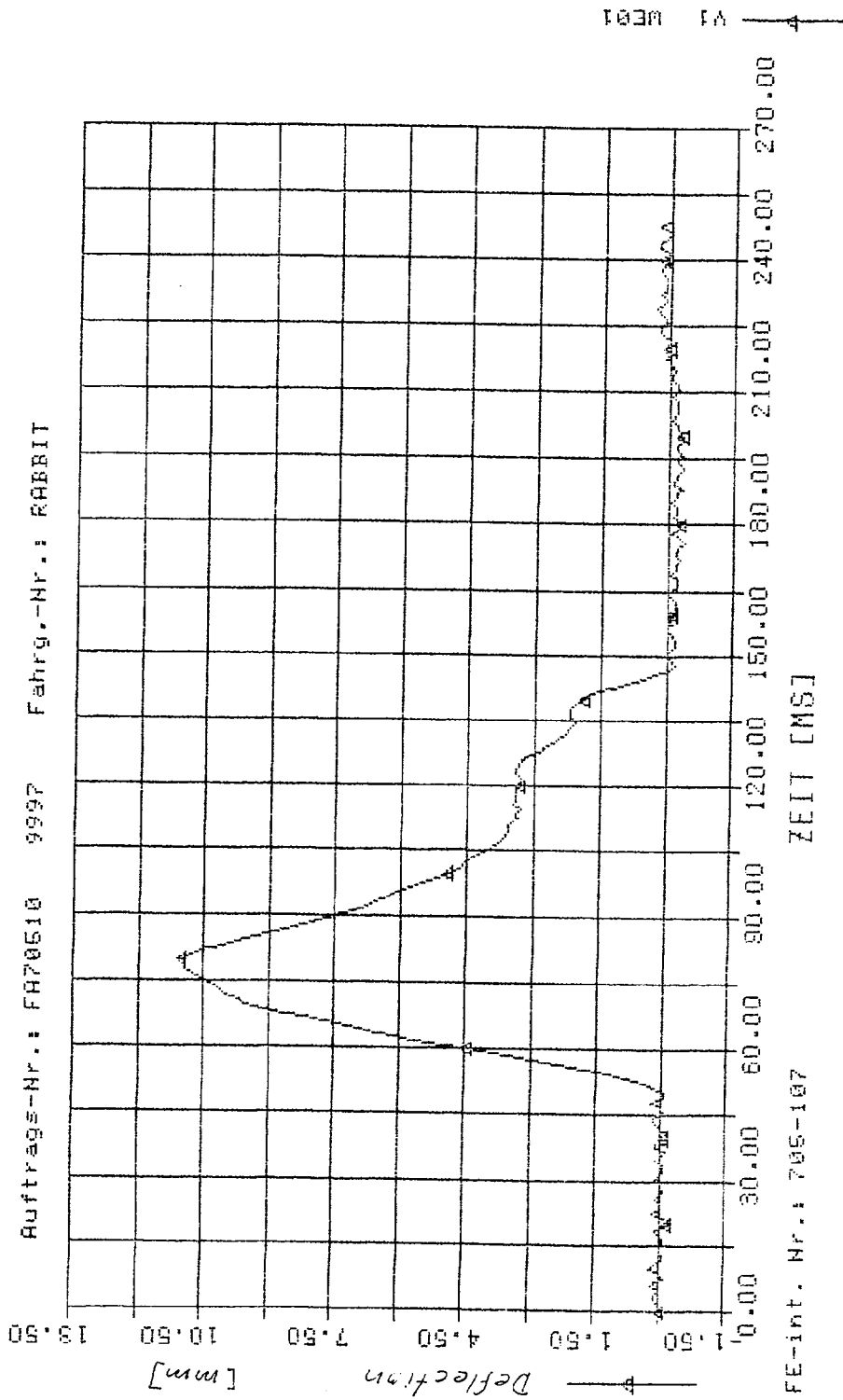
Mess-Stelle	UP	ber.	Extremum	t	MS
DE01Z	V1	BE	g	21.760	52.50
					14.03



- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

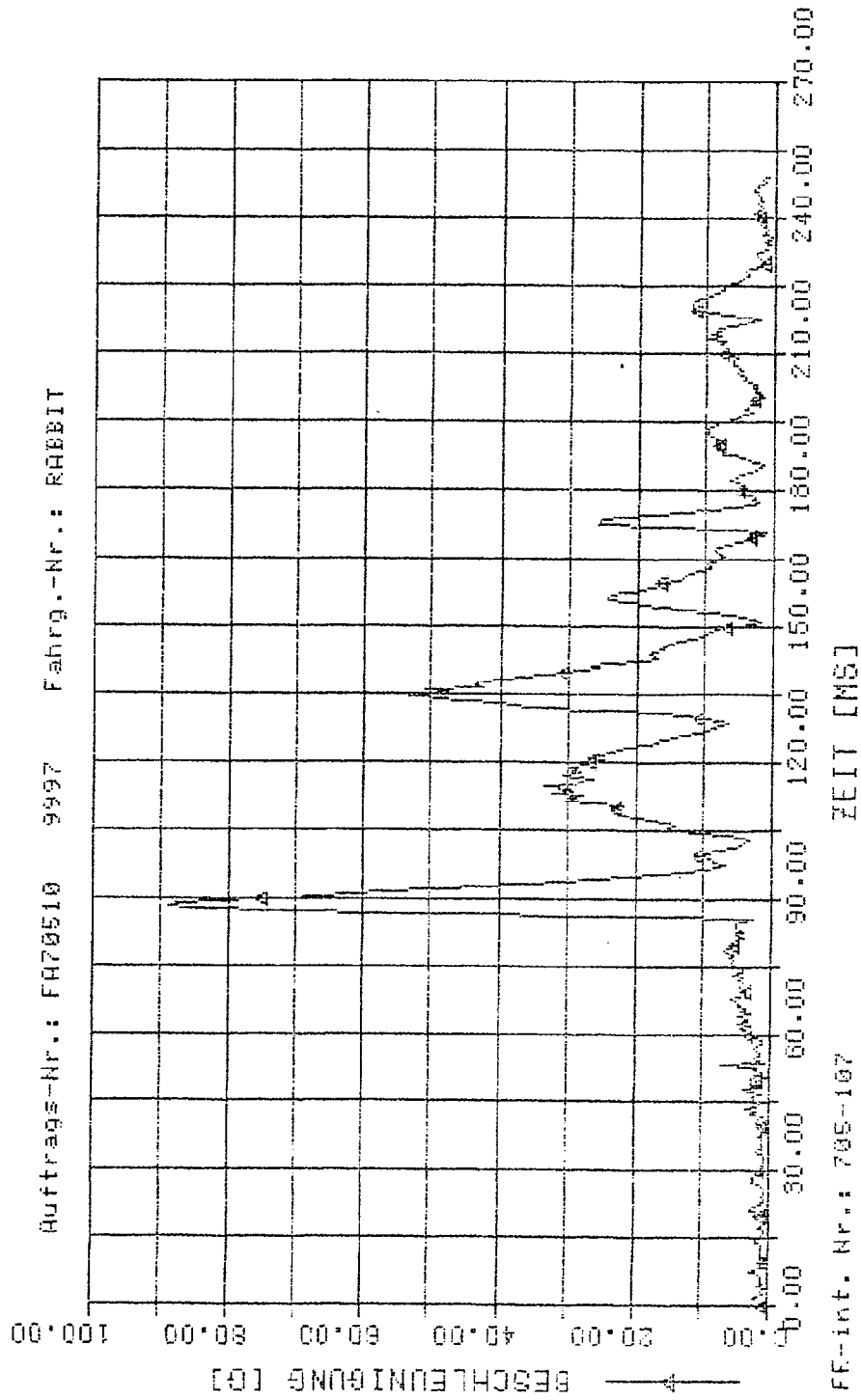
Mess-Stelle UP ber. Extremum t 3MS
GU01SA V1 KR KN -4.535 116.50 0.00





B.2.2 Rear Passenger

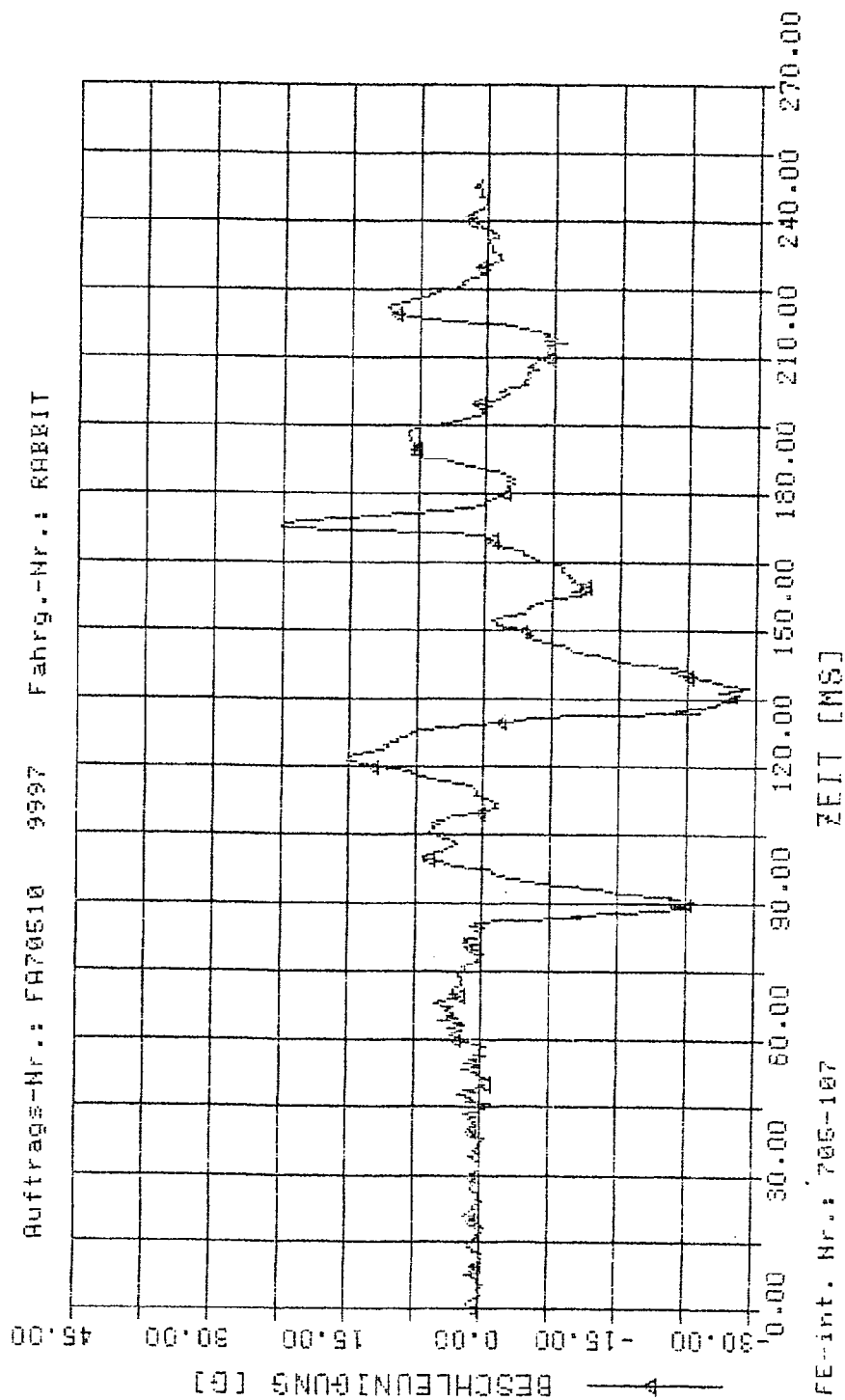
Kennwerte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997
 Mess-Stelle UP ber. Extremum t SMS
 K003 U1 BE g 89.224 33.40 70.76



V1 K083X V Z

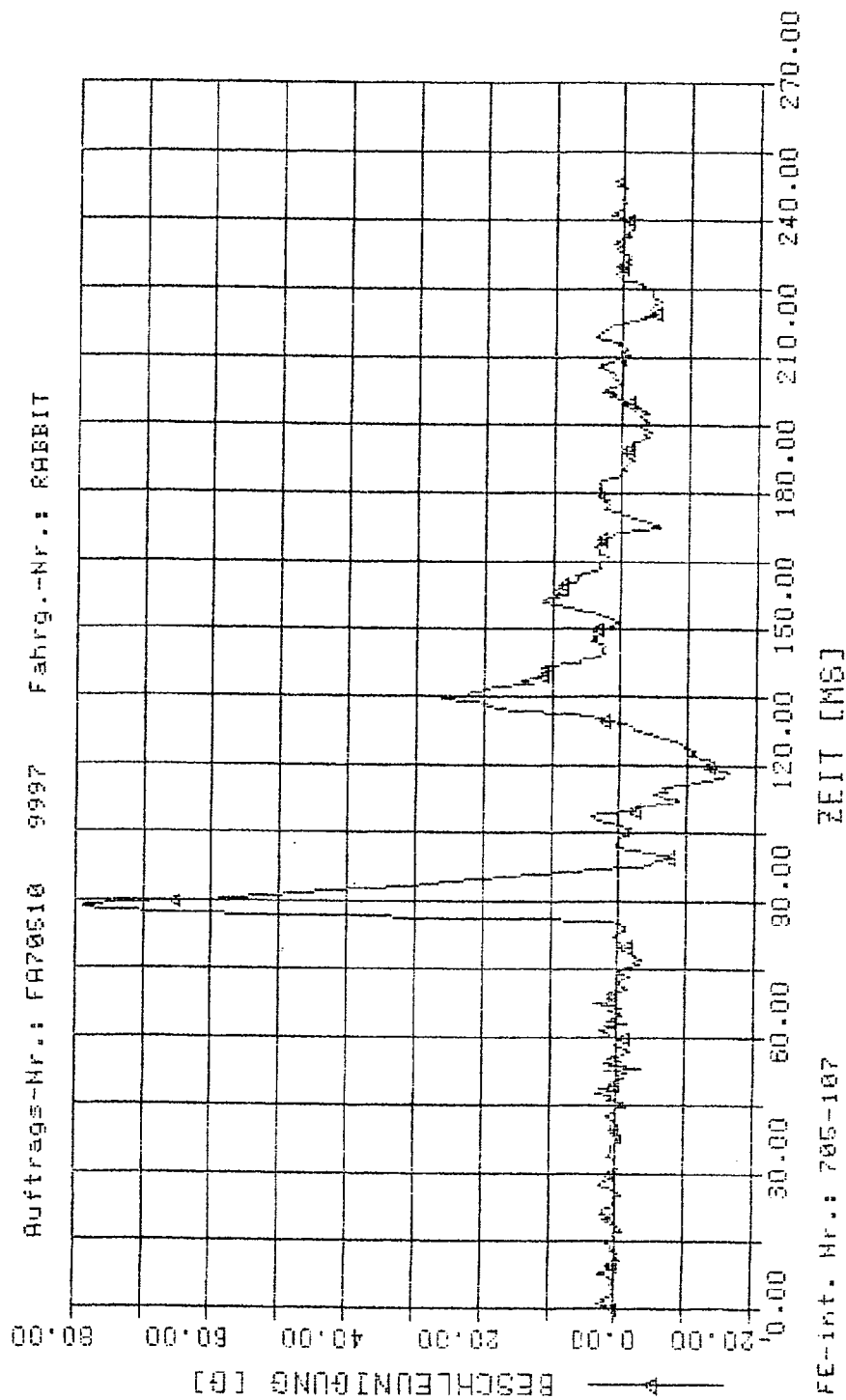
Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle UP ber. Extremum t 3MS
K003X Grösse Extr.
V1 BE g -30.827 134.80 15.73



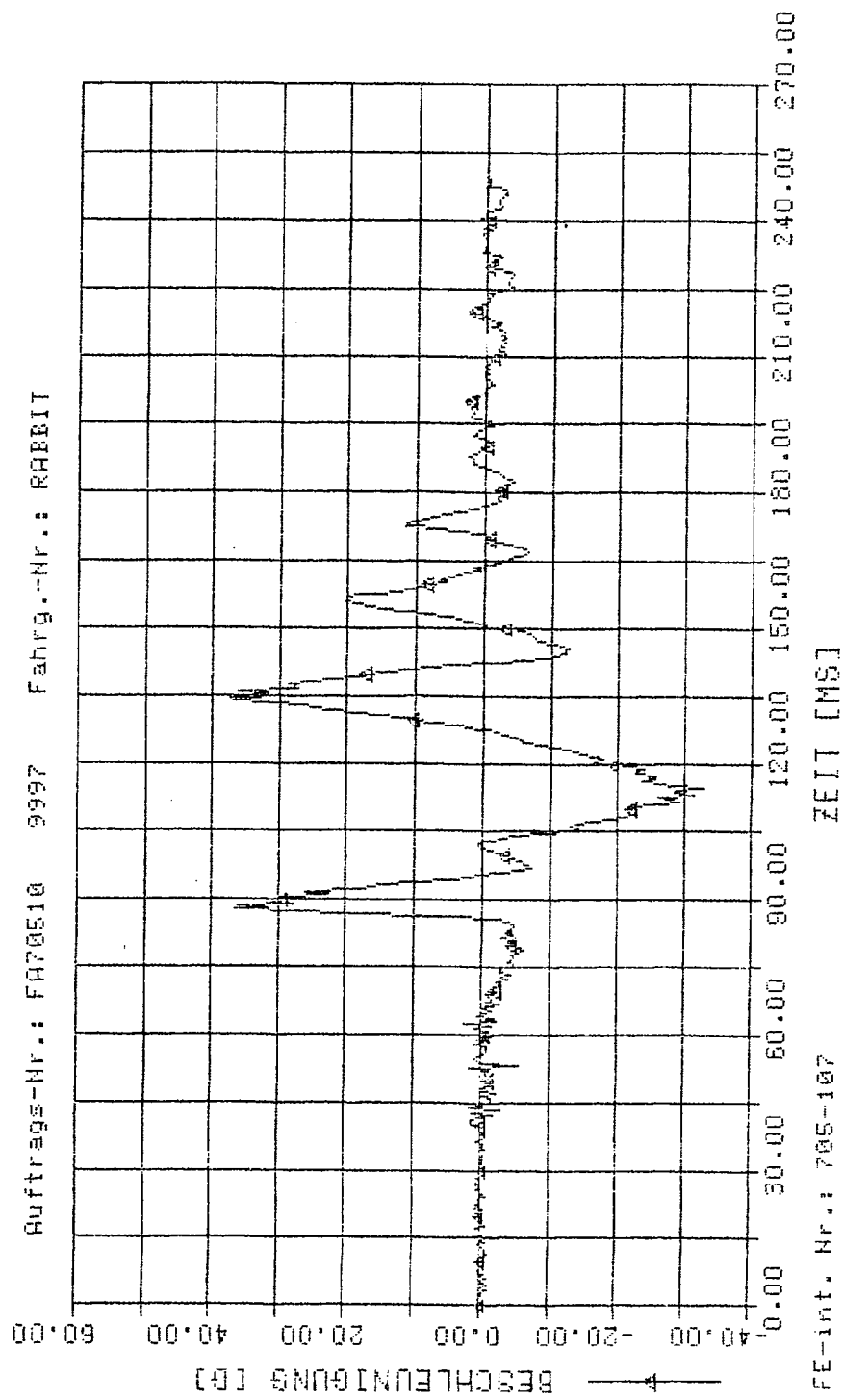
Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	MS
K003Y	V1	BE g	79.920	33.40	61.98



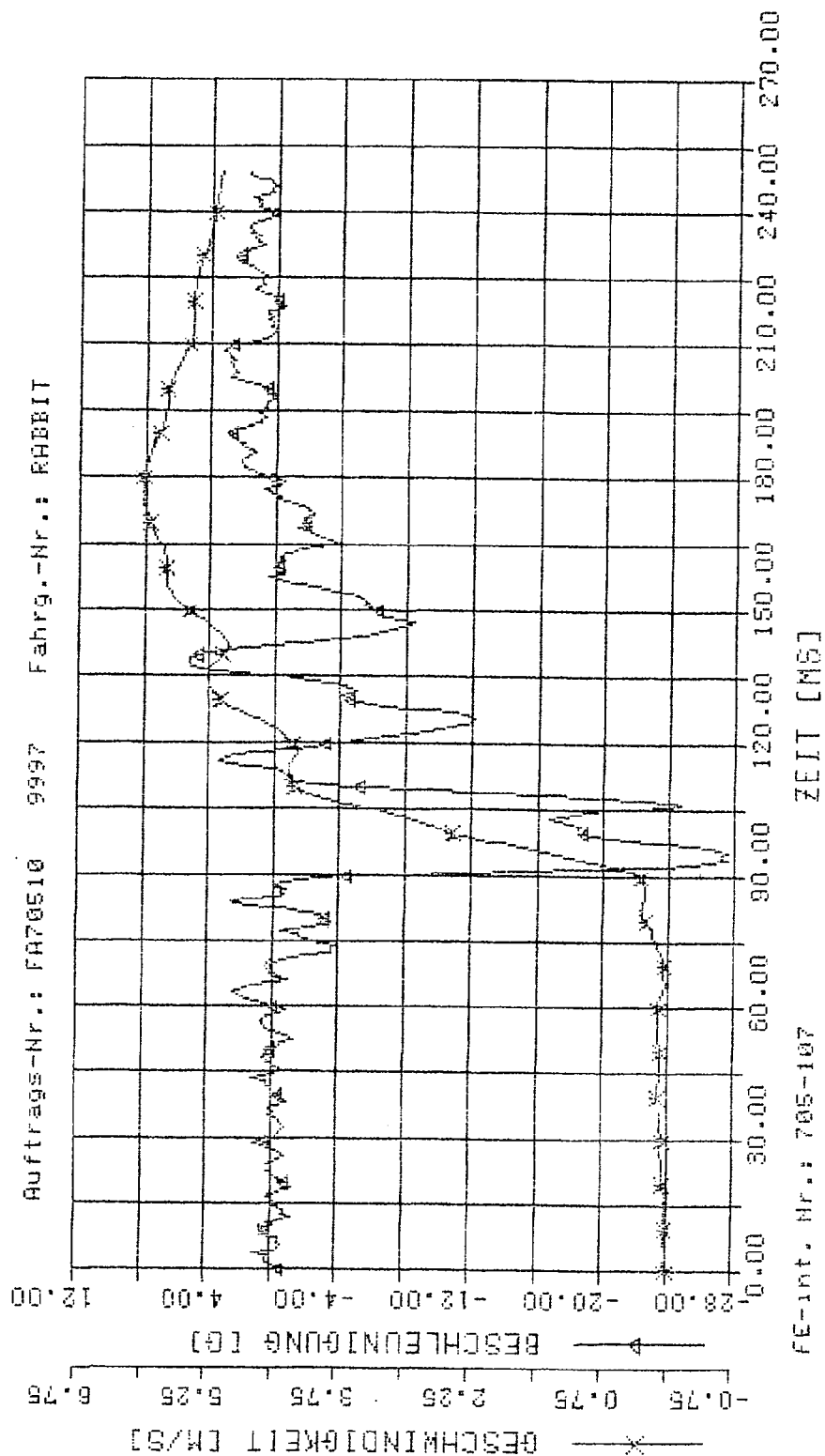
- Kennwerte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	MS
K003Z	V1	BE	g	42.566	135.00
				33.14	



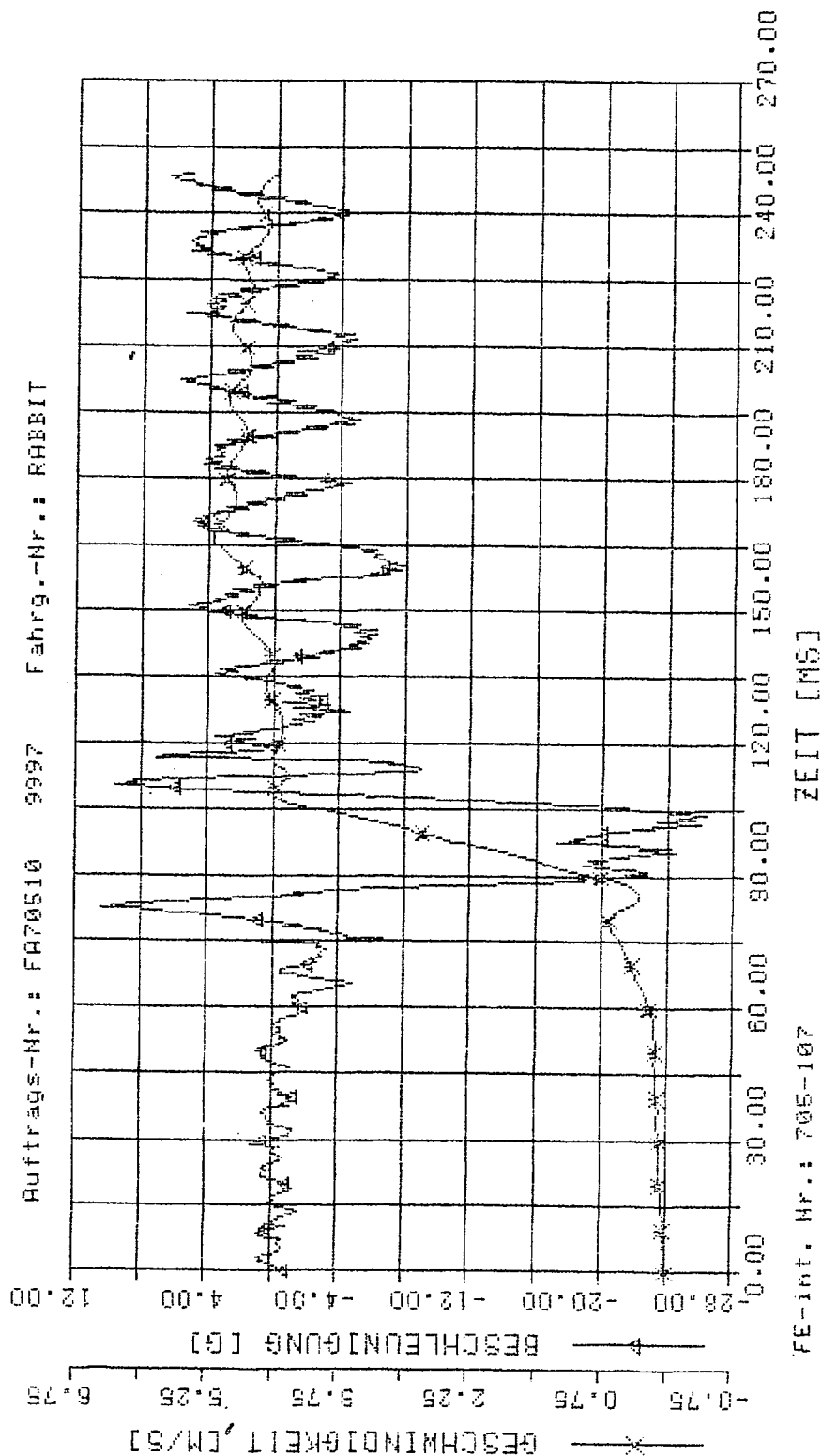
Kennwerte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

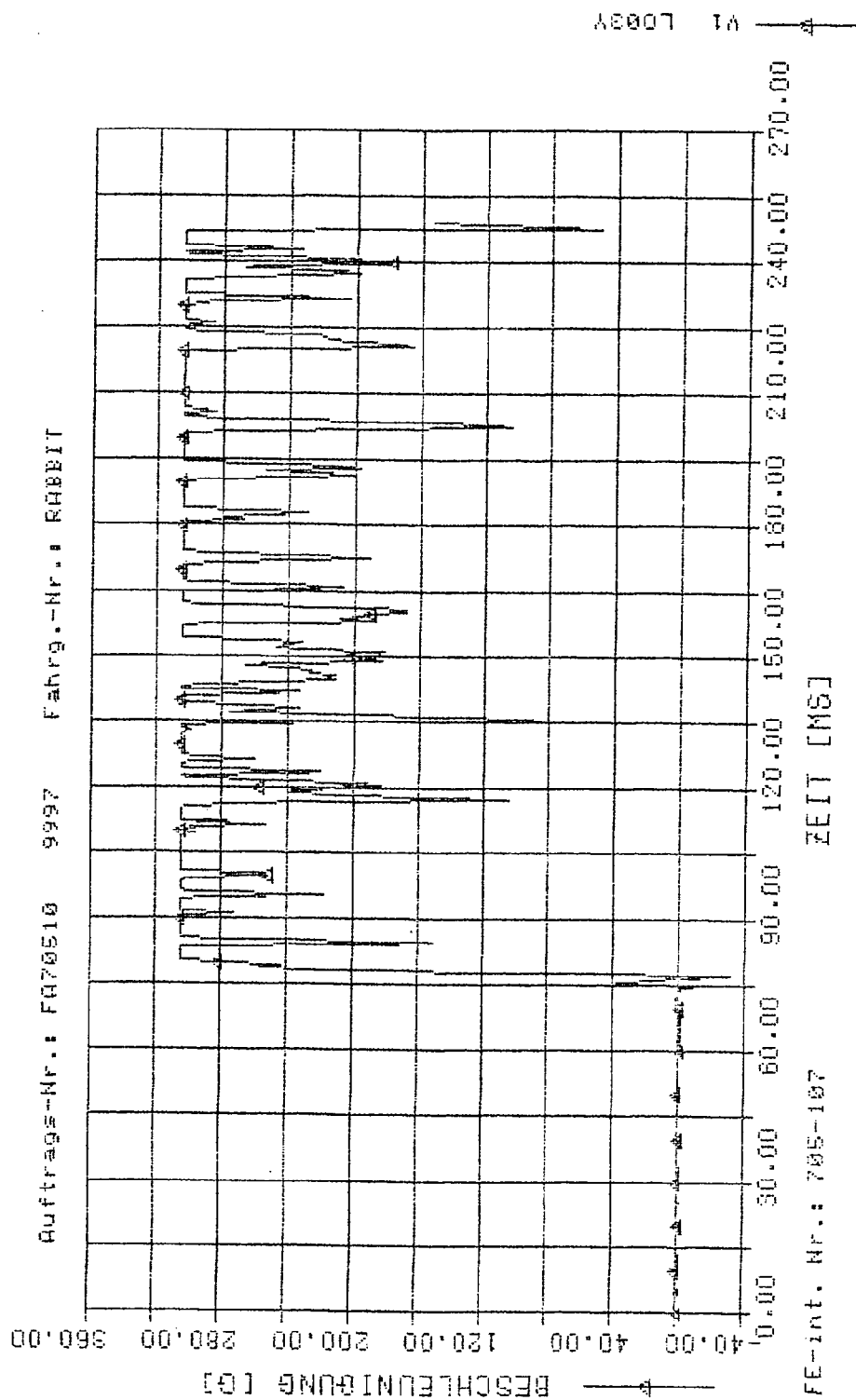
Mess-Stelle	UP	ber. Grösse	Extremum	t Extr.	3MS
B003X	V1	8E g	-27.575	75.50	0.00
B003X	V1	GE m/s	6.022	176.00	0.00



- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

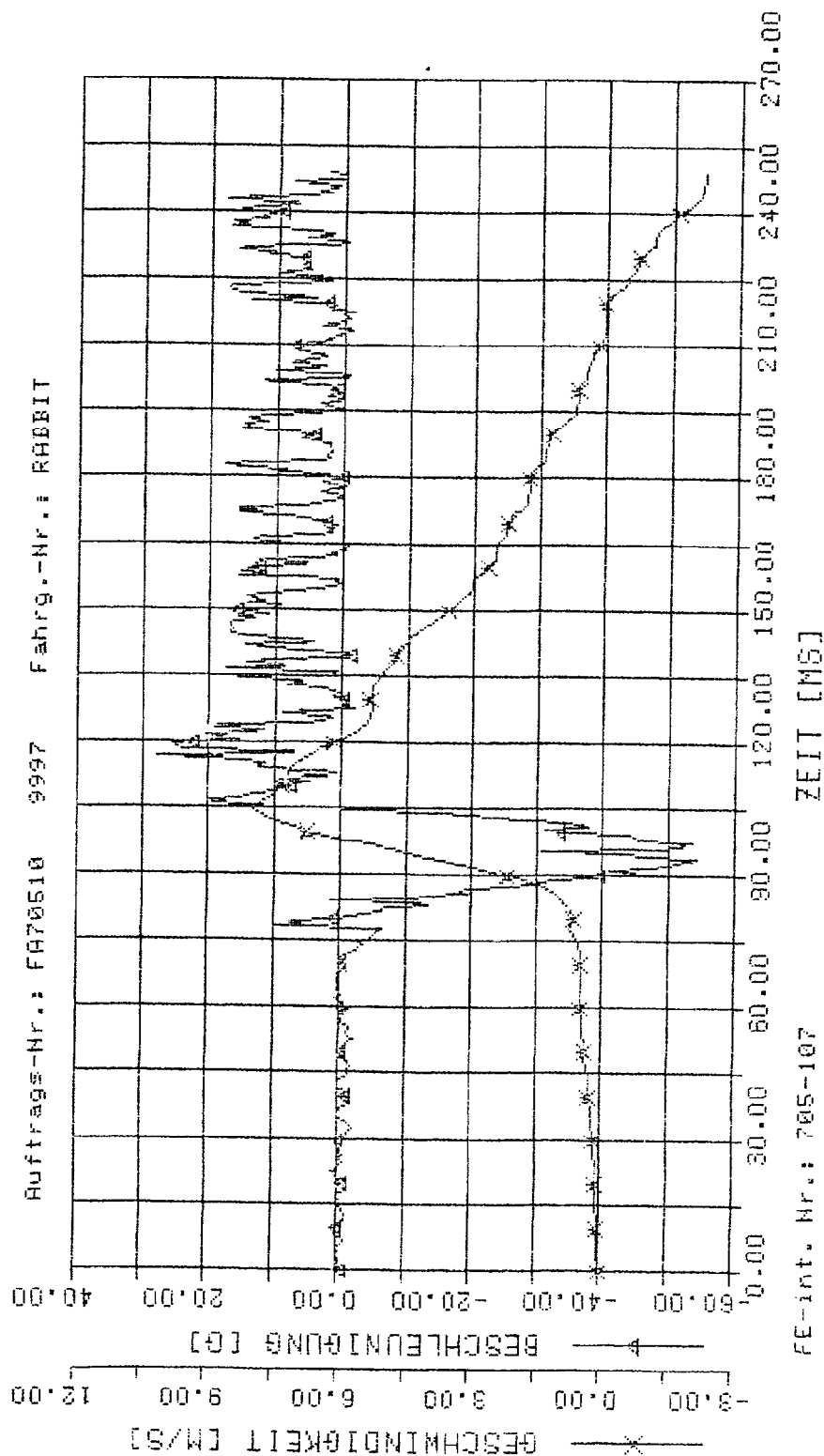
Mess-Stelle	UP	ber.	Extremum	t	3MS
BU03X		Groesse		Extr.	
BU03X	V1	GE g	-26.374	104.00	0.00
BU03X	V1	GE m/s	5.189	167.00	0.00

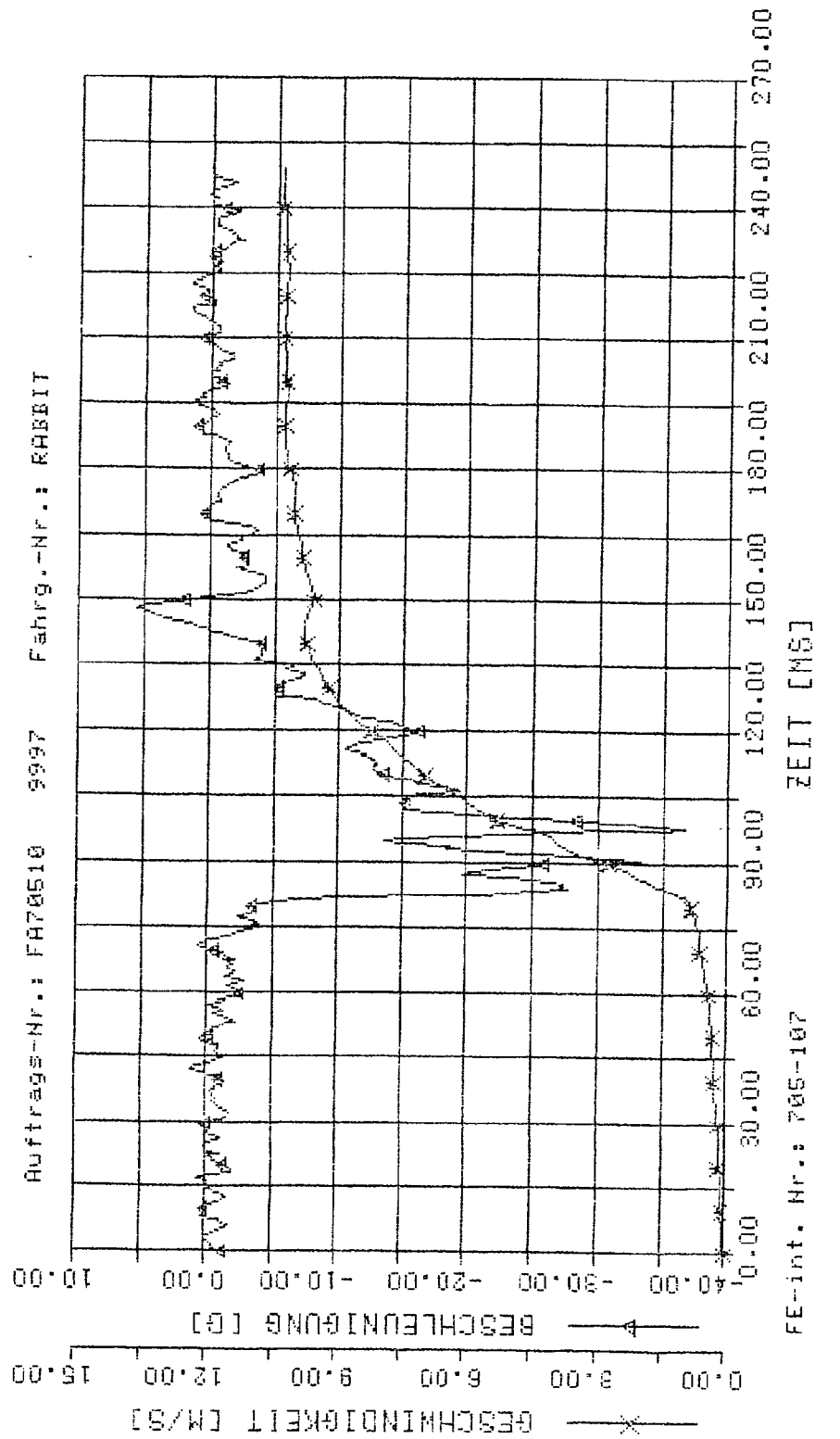




- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

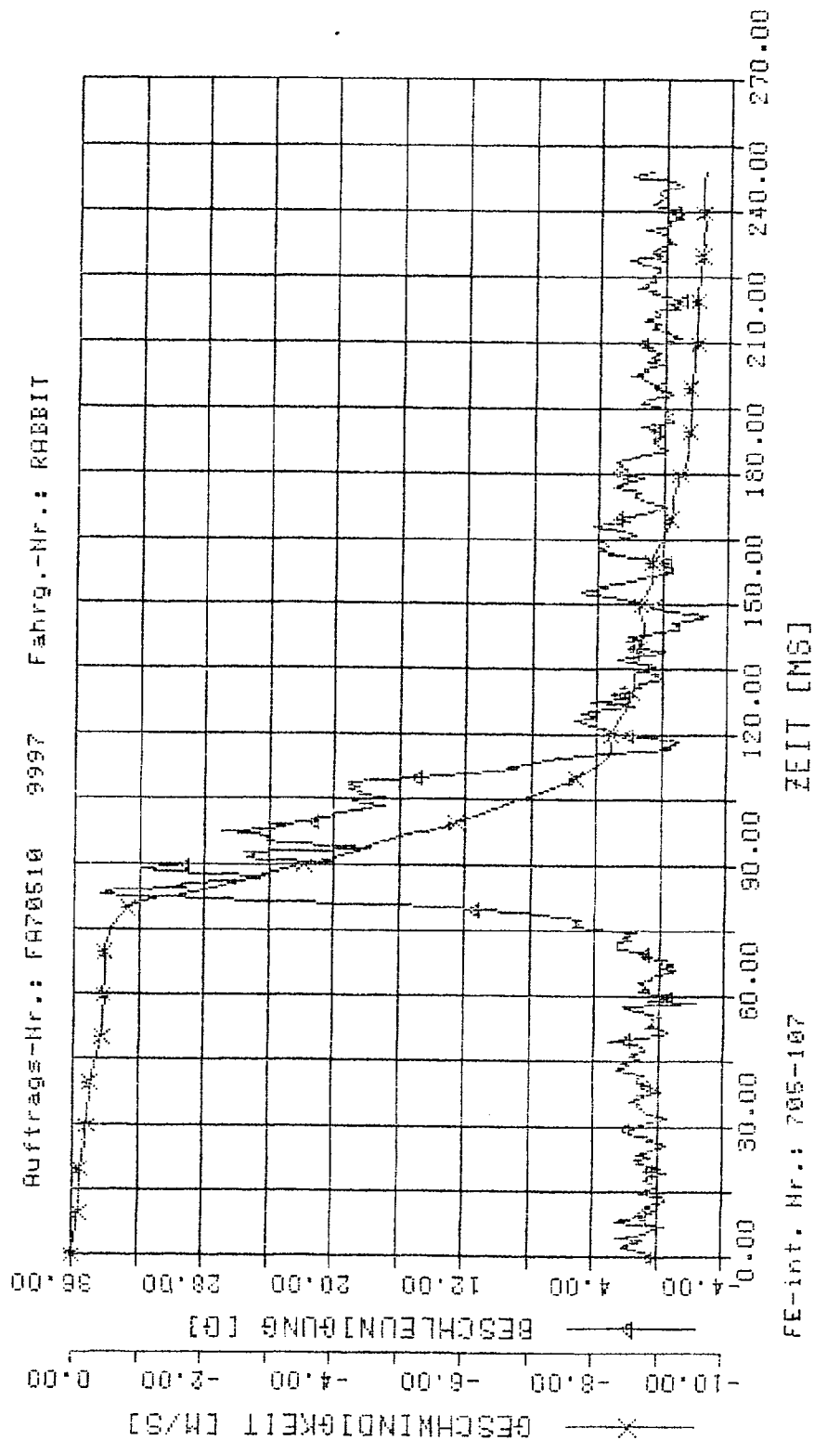
Mess-Stelle	UP	ber.	Extremum	t	Ext.	AMS
LU03Y	V1	GE	g	-54.517	24.00	0.00
LU03Y	V1	GE	m/s	7.950	105.00	0.00





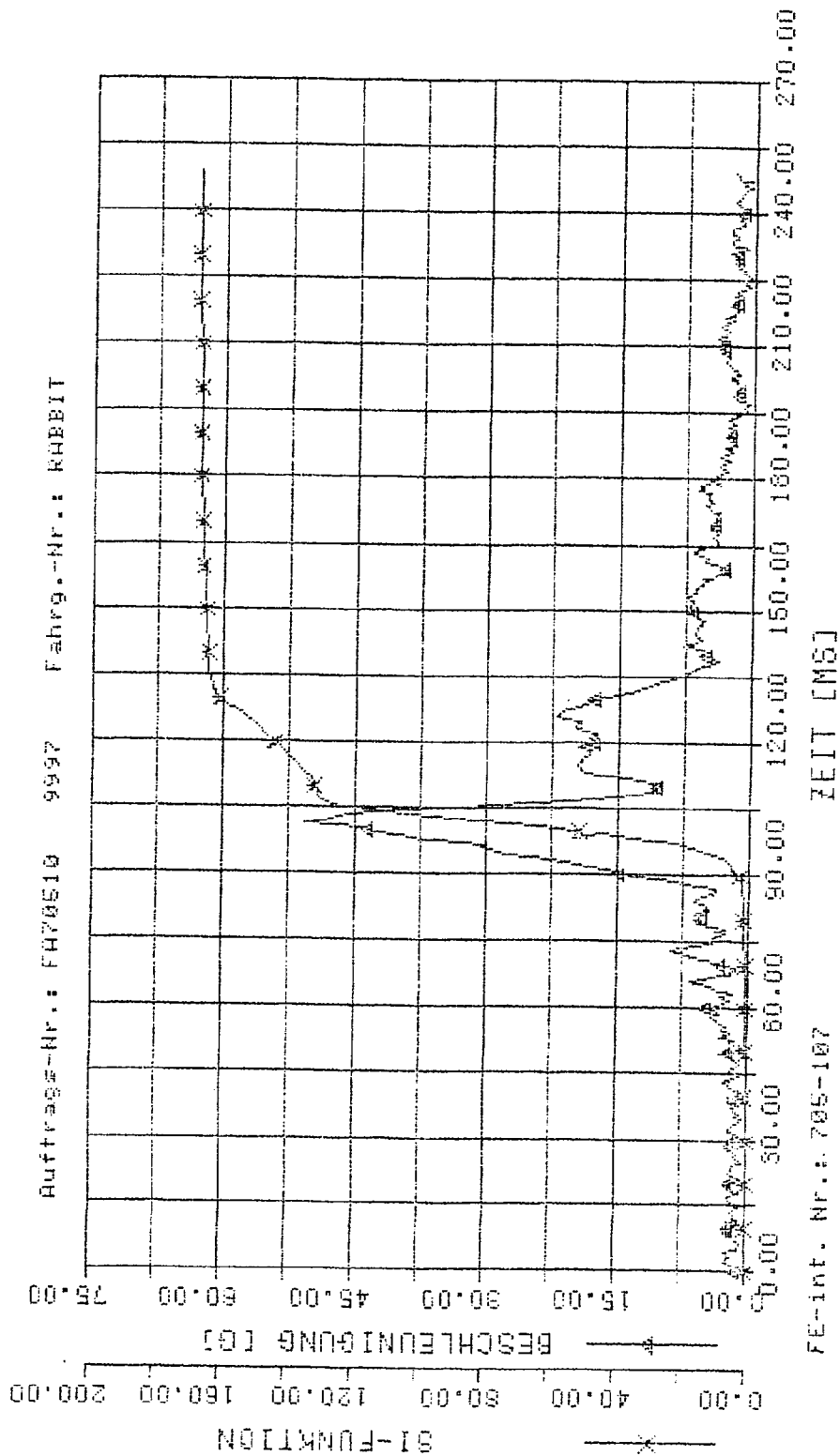
- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	MS
RU03Y	V1	BE g	34.338	83.50	0.00
RU03Y	V1	GE m/s	-9.644	256.00	0.00



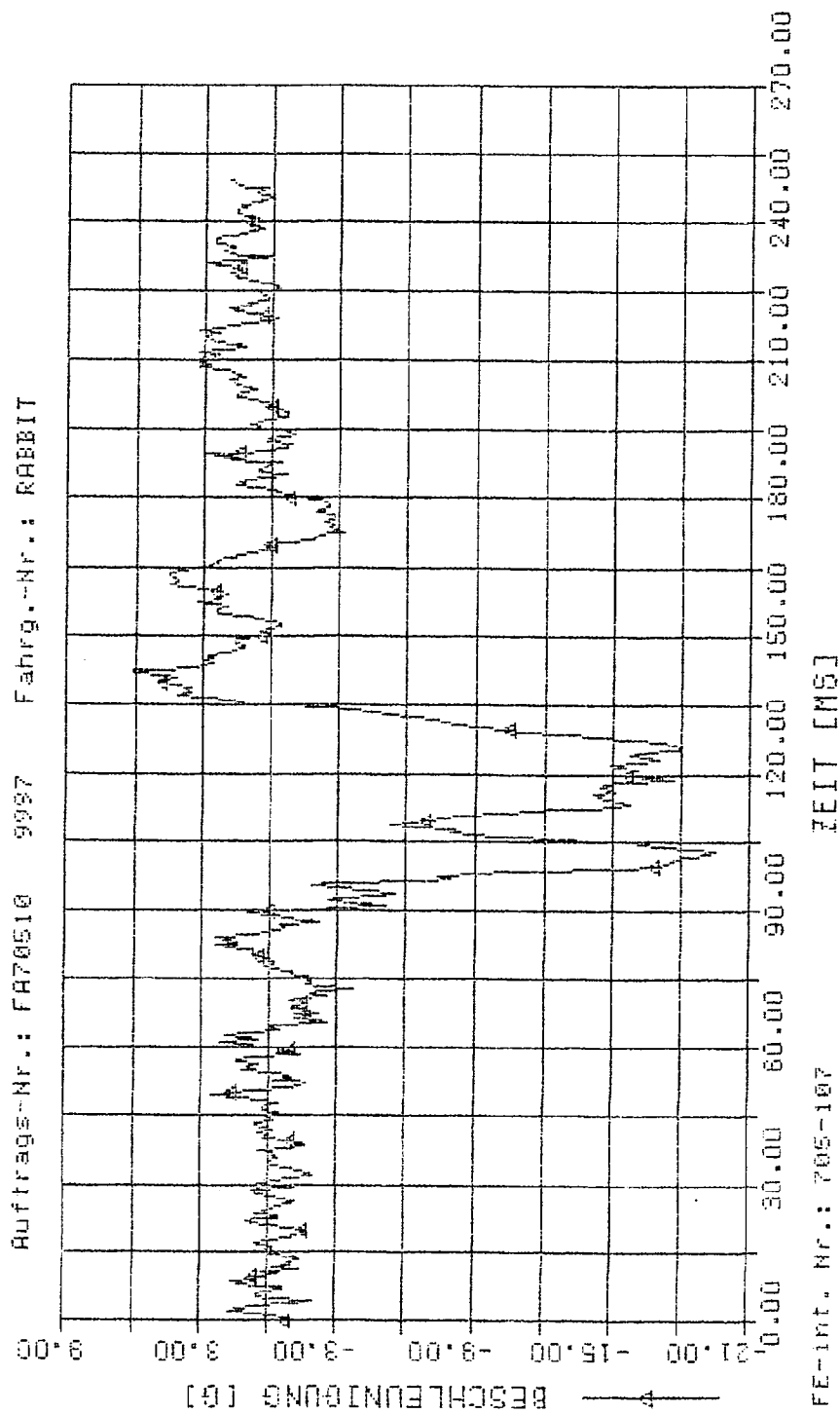
Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	MS
T003	V1	BE	50.569	101.50	0.00
T003	V1	SI	167.461	250.00	0.00



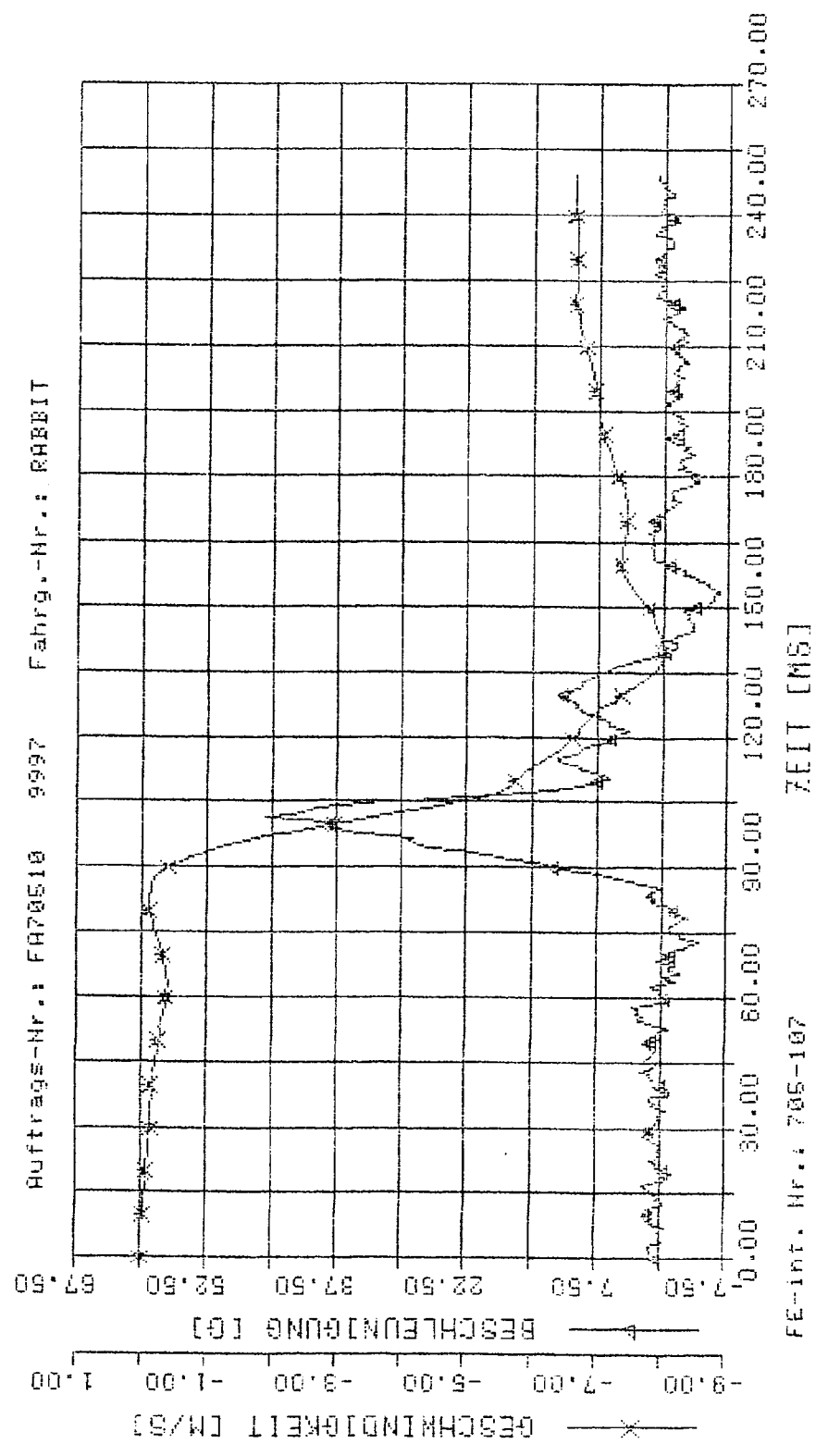
Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle UP ber. Extremum x GMS
T003X V1 GE g Grösse Extr. 103.00 0.00



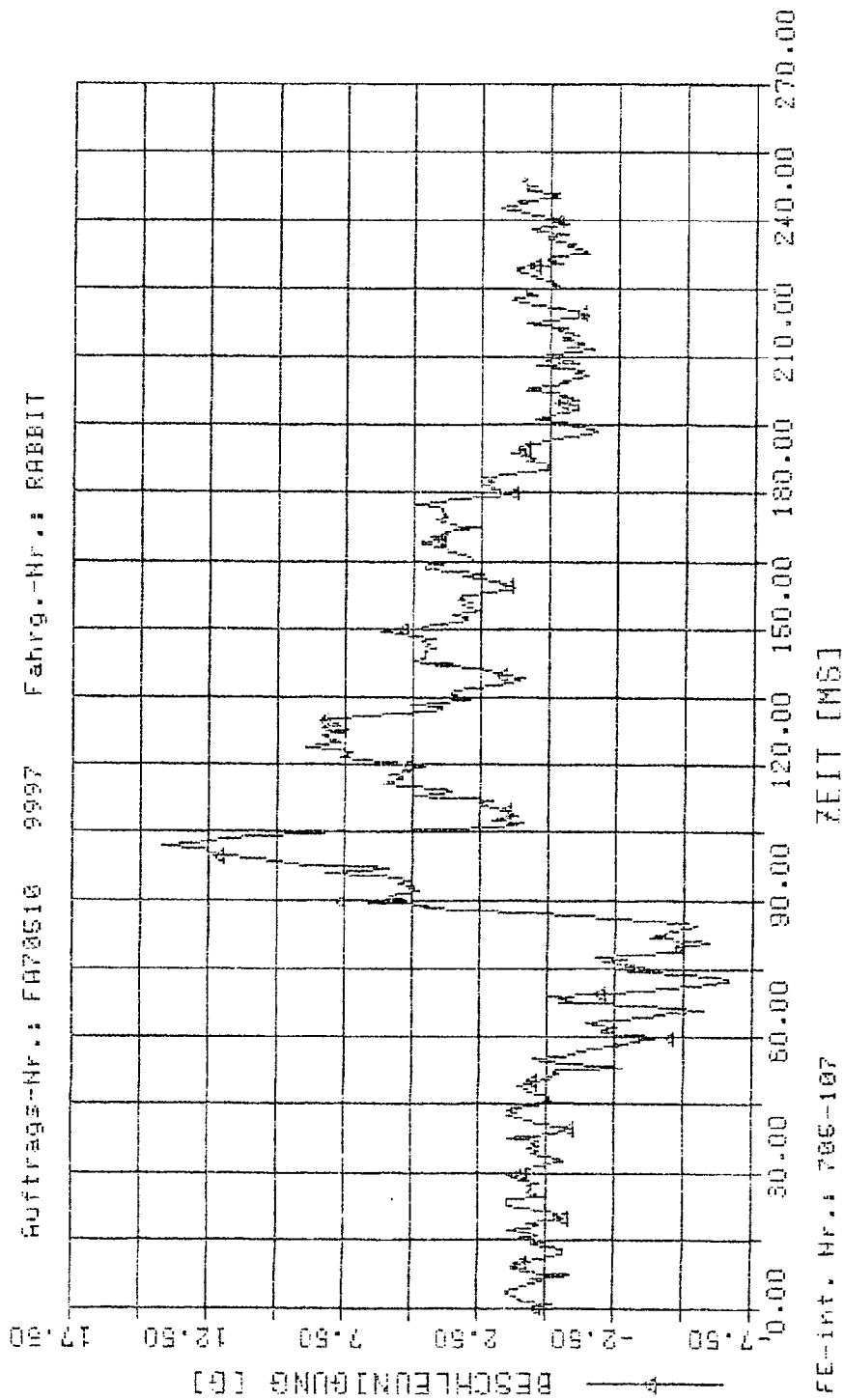
Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	MS
T003Y	V1	GE g	45.579	101.50	0.00
T003Y	V1	GE m/s	-8.040	139.50	0.00



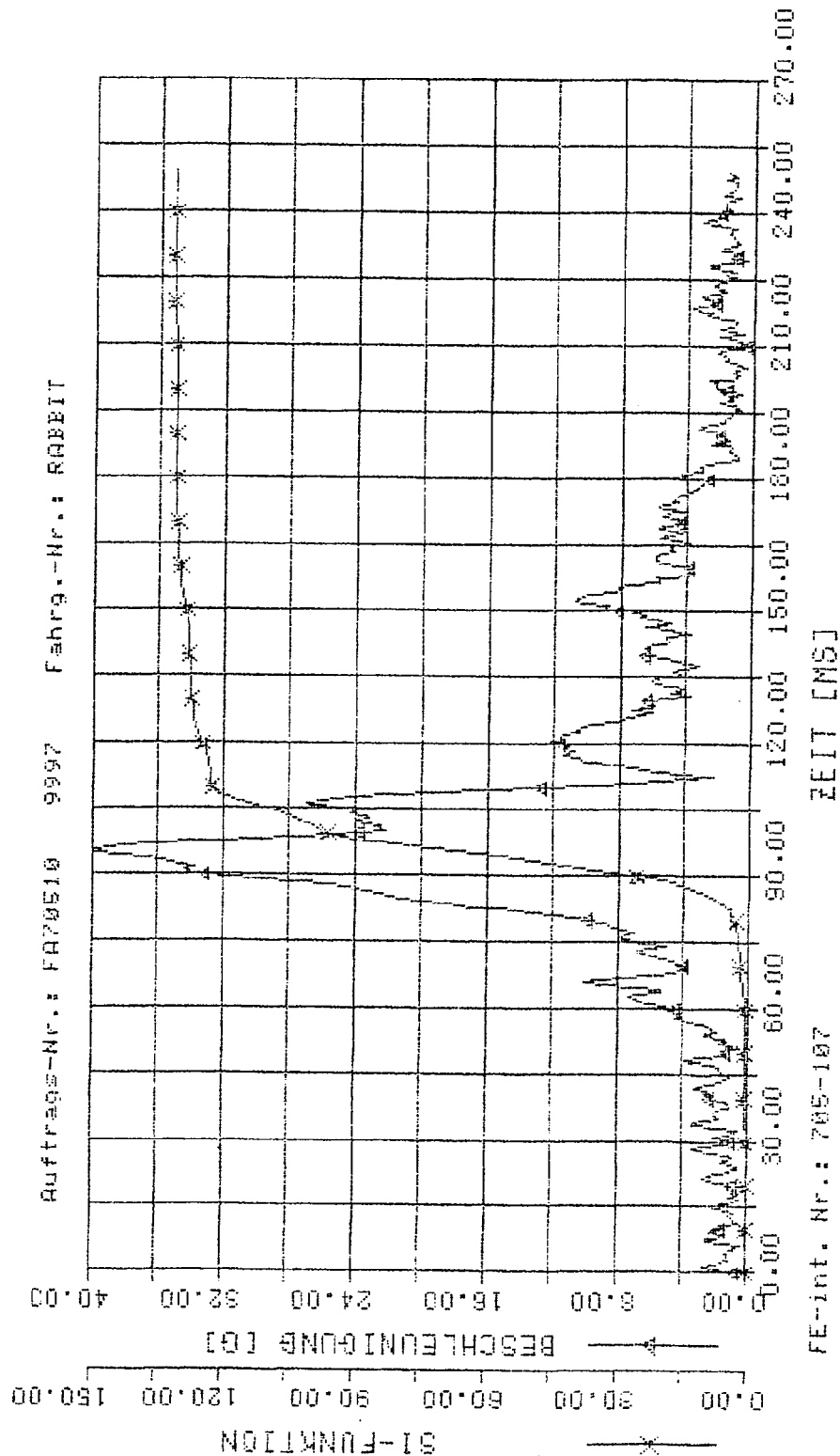
Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle UP ber. Extremum t SMS
T003Z Groesse Extr.
V1 BE q 14.166 102.00 0.00

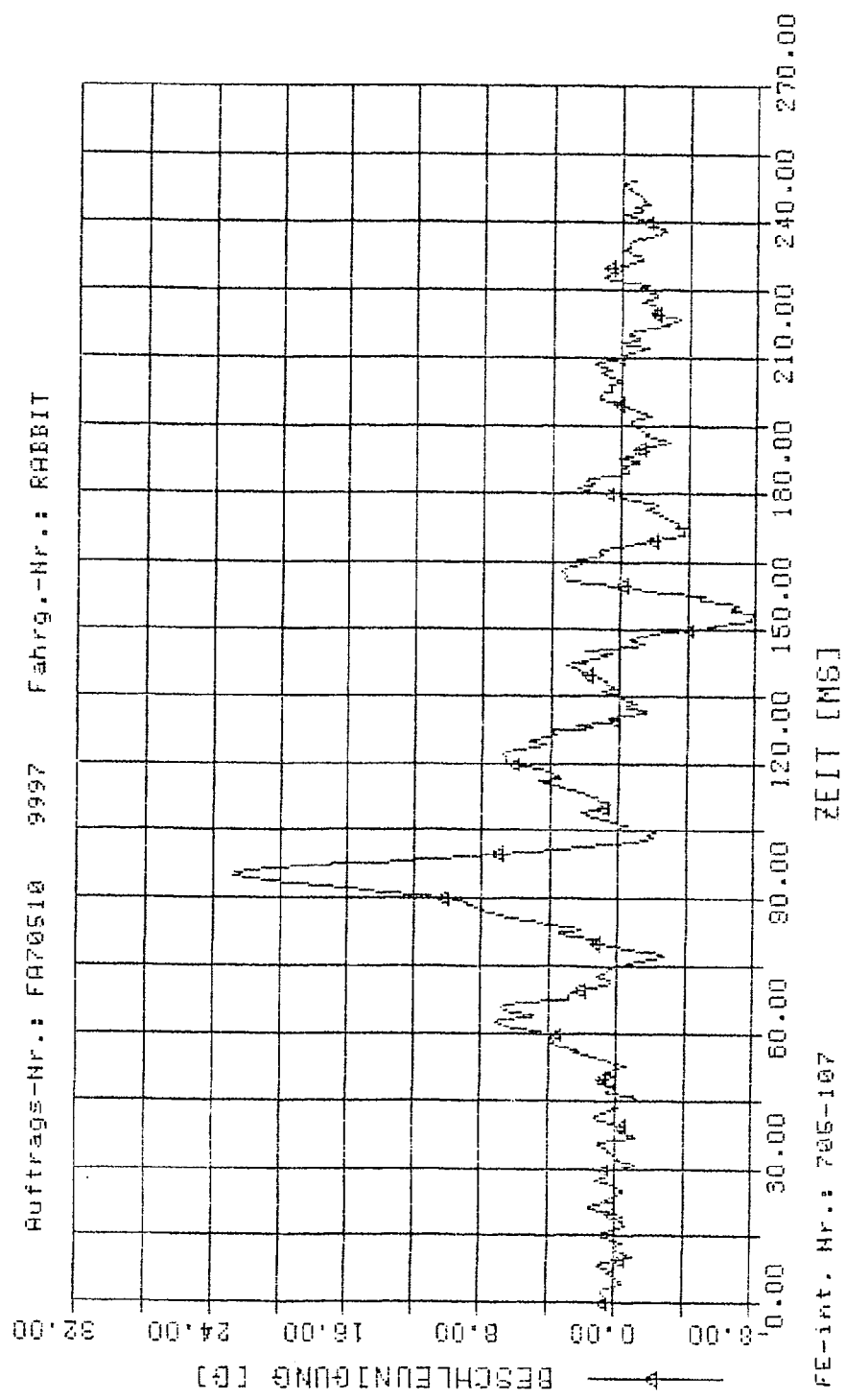


Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Ness-Stelle	UP	ber.	Extremum	t	MS
TU03	V1	BE	39.963	95.50	0.00
TU03	V1	SI	131.546	250.00	0.00

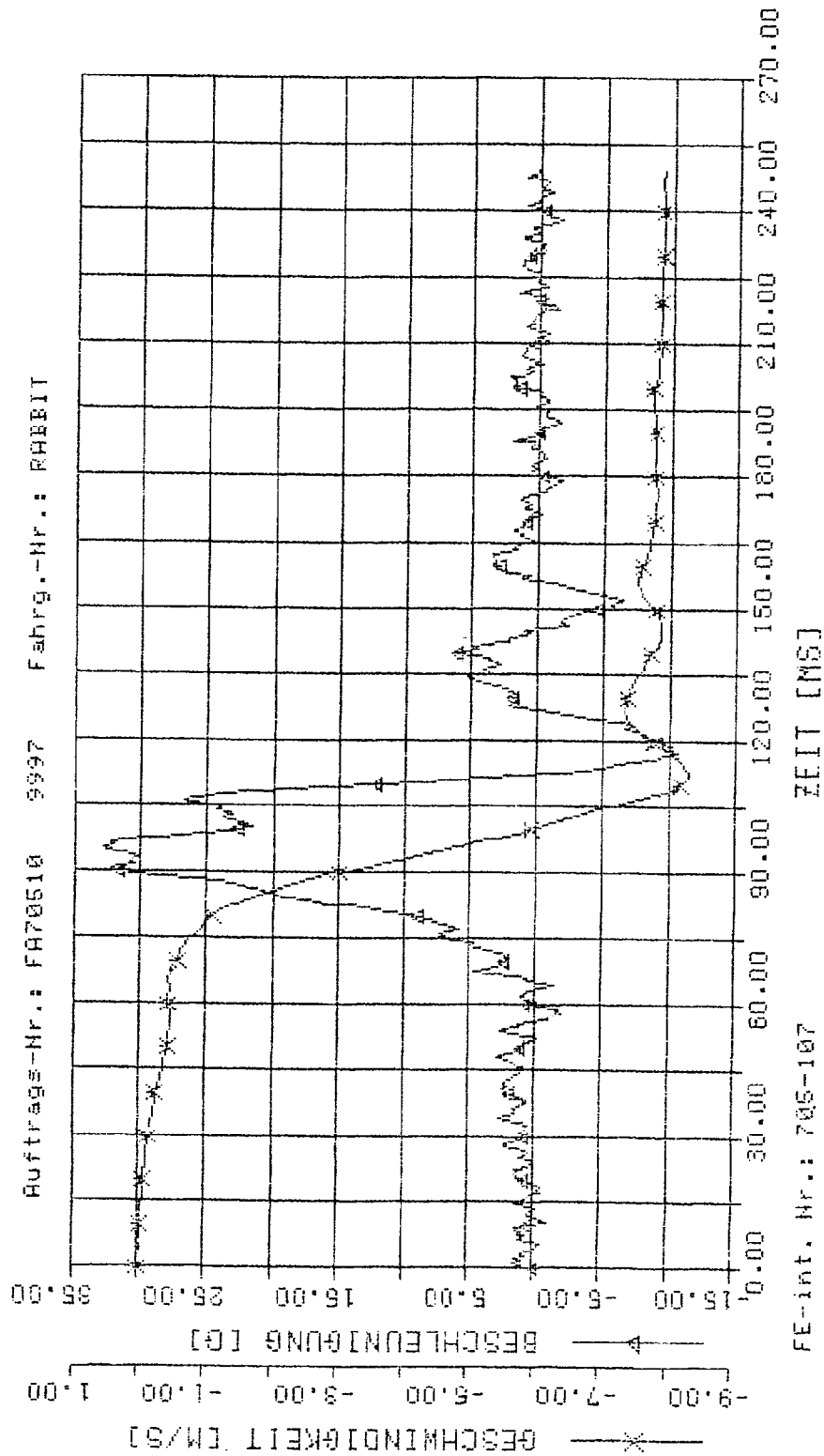


Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997
 Mess-Stelle UP ber. Extremum t 3MS
 TU03X Groesse Extr.
 V1 BE g 22.817 95.00 0.00



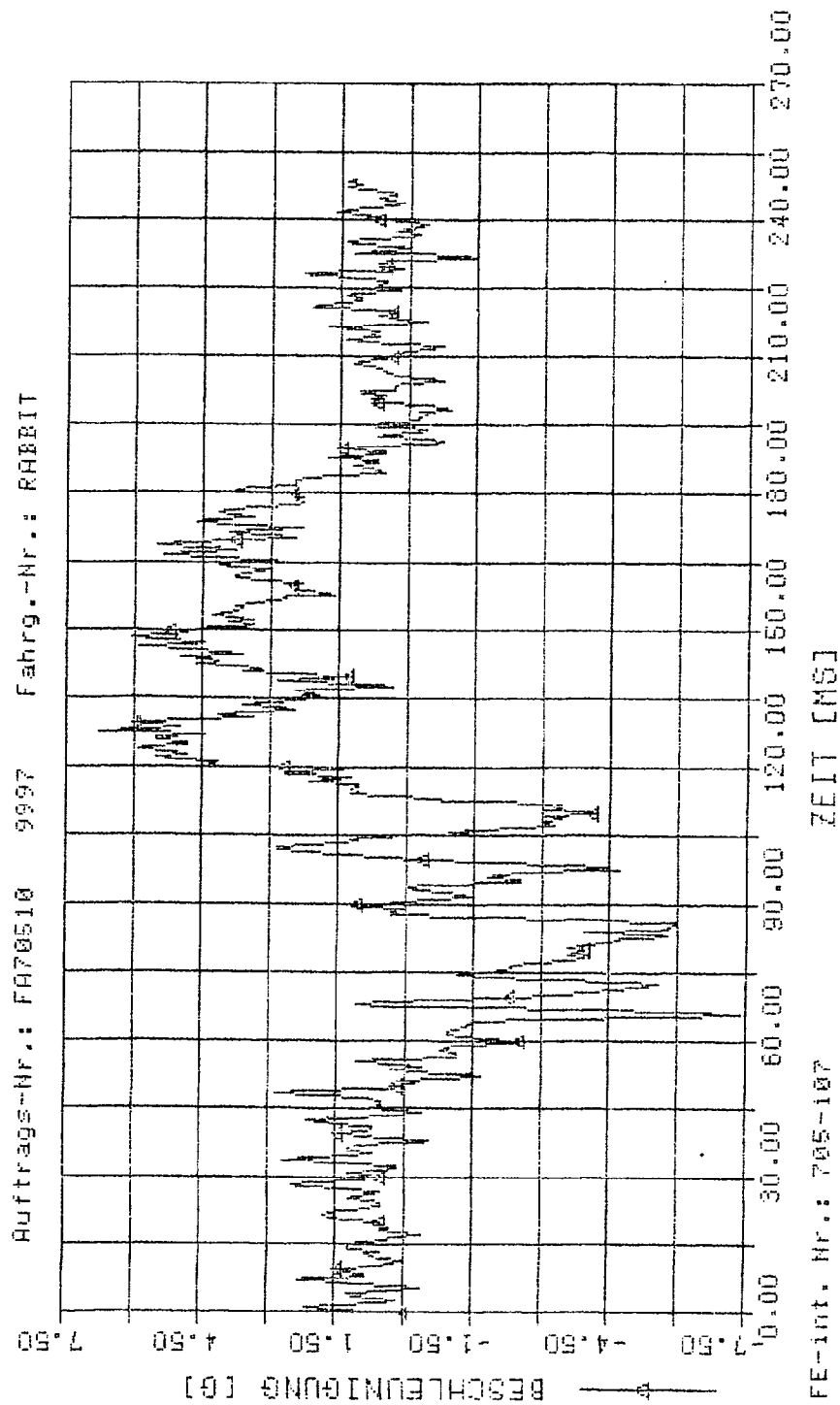
- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle	UP	ber.	Extremum	t	ΔMS
TU03Y	V1	GE	32.843	95.50	0.00
TU03Y	V1	GE	-8.308	112.50	0.00



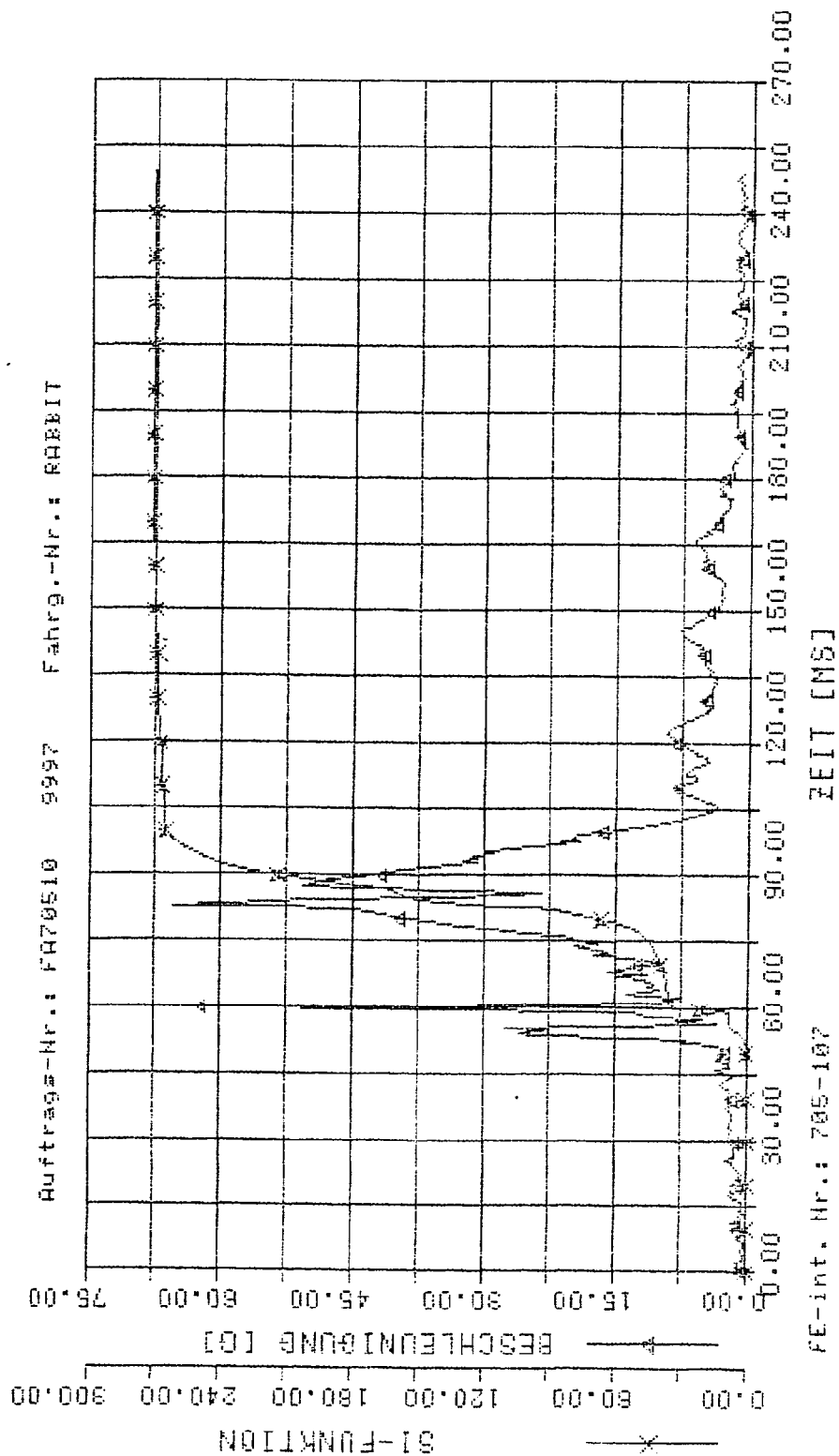
- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle UP ber. Extremum τ SMS
TU03Z Groesse Extr.
V1 BE q -7.399 66.00 0.00



- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

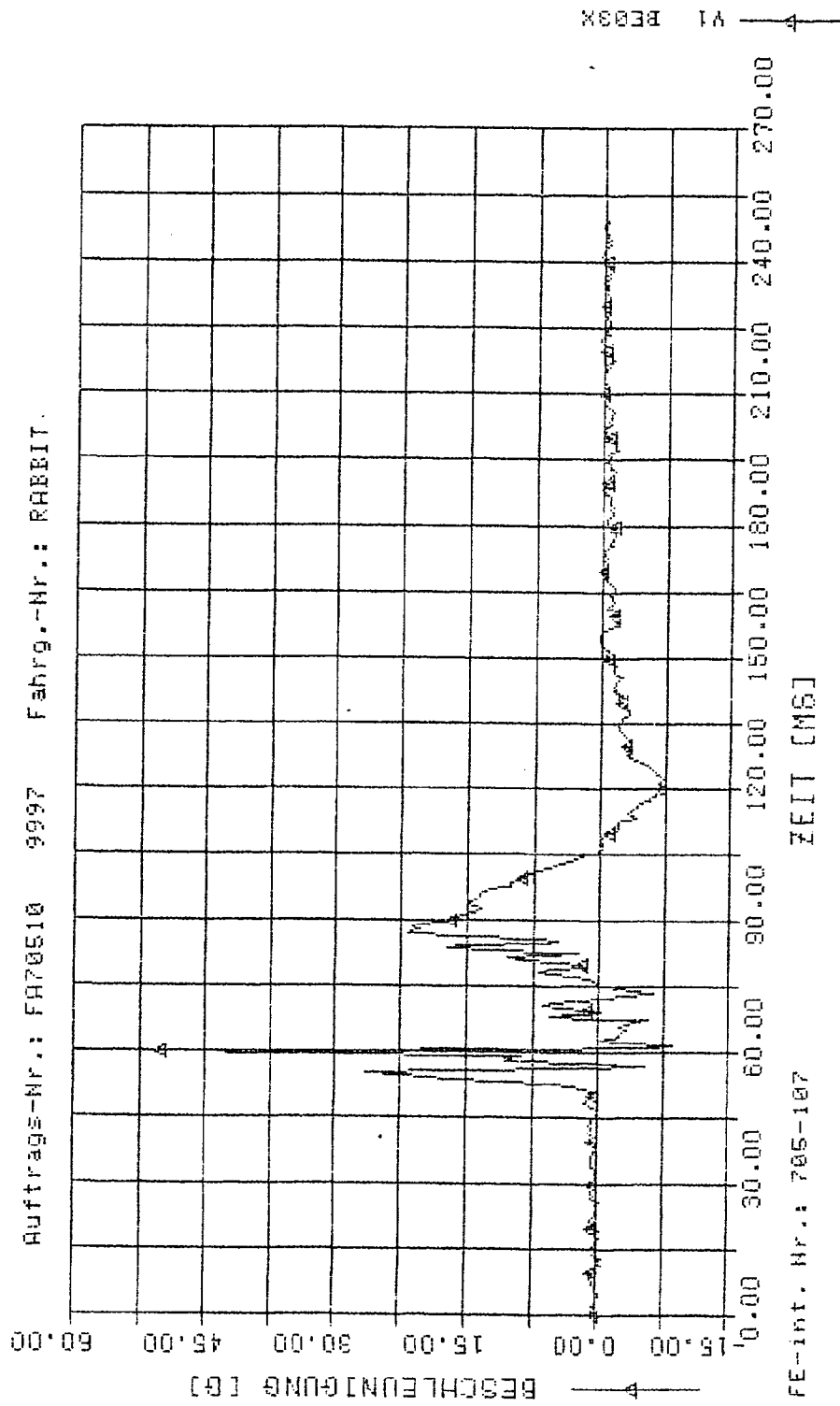
Mess-Stelle	UP	ber.	Extreum	t	3MS
BE03	V1	BE g	65.159	83.00	49.48
BE03	V1	CI	270.738	250.00	0.00



- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle
BE03X

UP	ber.	Extremum	t	3MS
V1	BE 9	49.969	60.00	21.53

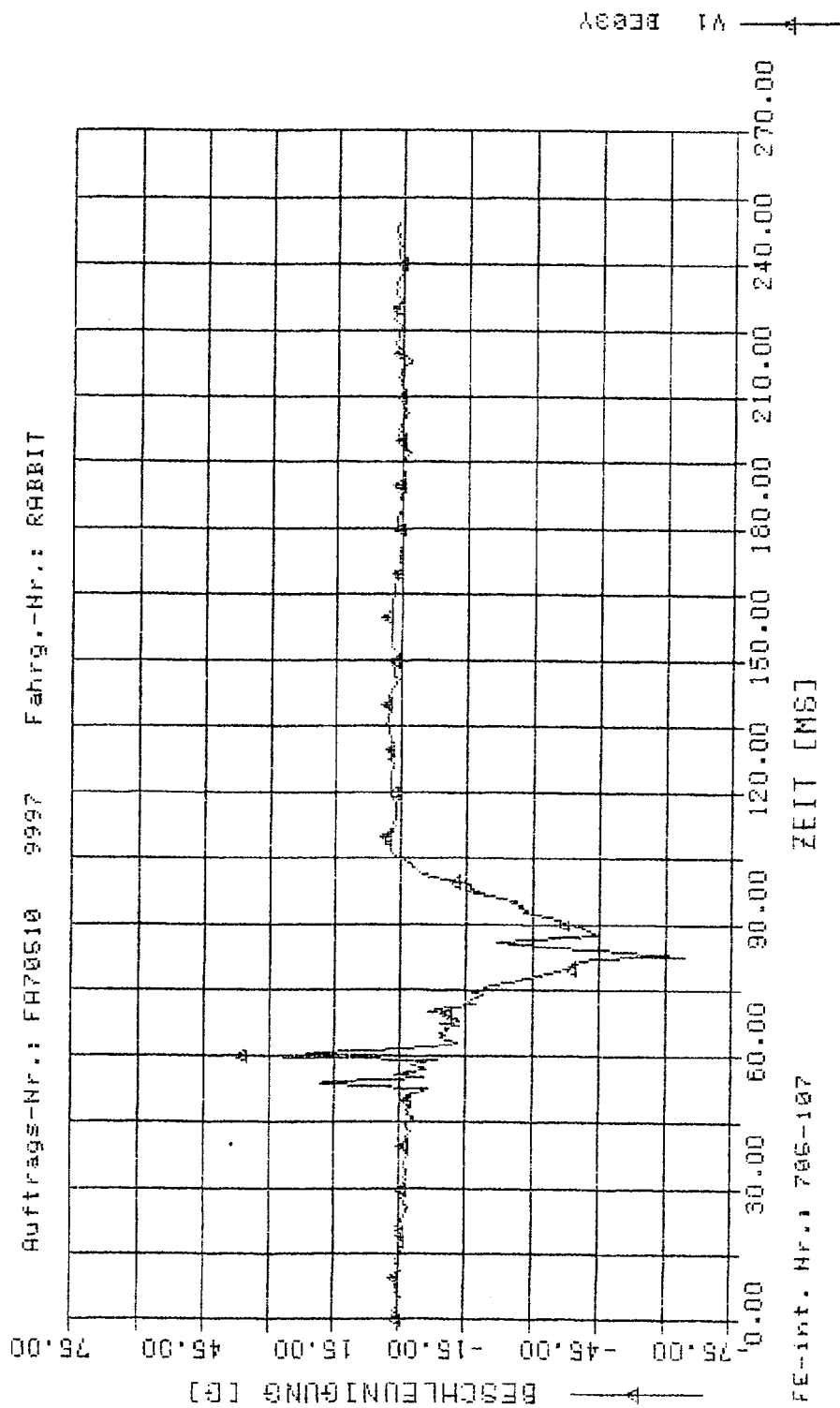


- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle

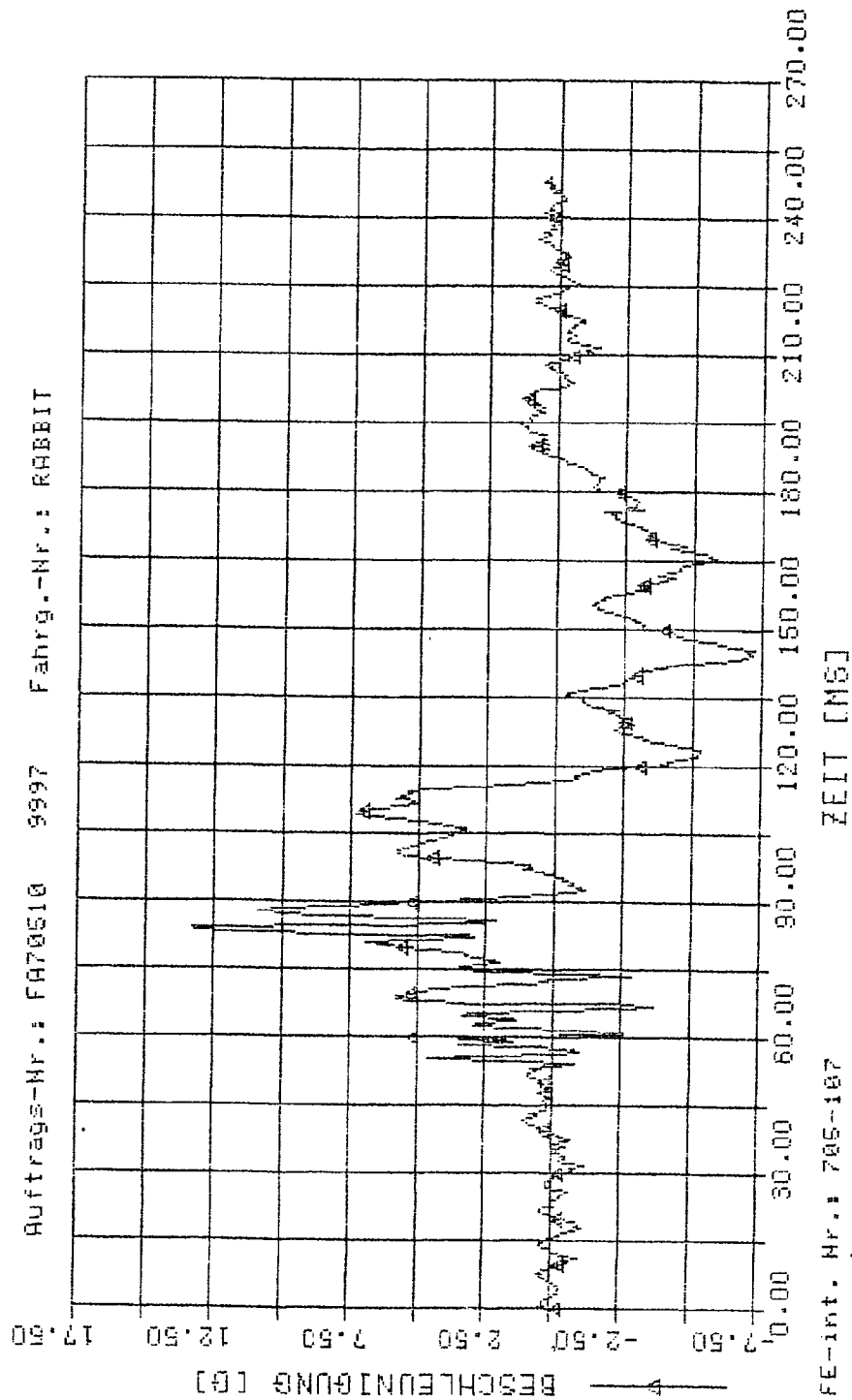
UP	ber.	Extremum	t	3MS
V1	BE g	-64.532	83.00	7.56

BE03Y



Kennwerte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997

Mess-Stelle UP ber. Extremum t 3MS
BE03Z V4 BE 9 13.291 04.50 8.06



VI BE03Z

- Kenn-Werte: Auftrags-Nr.: FA70510 Versuchs-Nr.: 9997
 Mess-Stelle UP ber. Extrapol. 3MS
 V1 KR KN 461 110.00 0.00
 GU03BA

