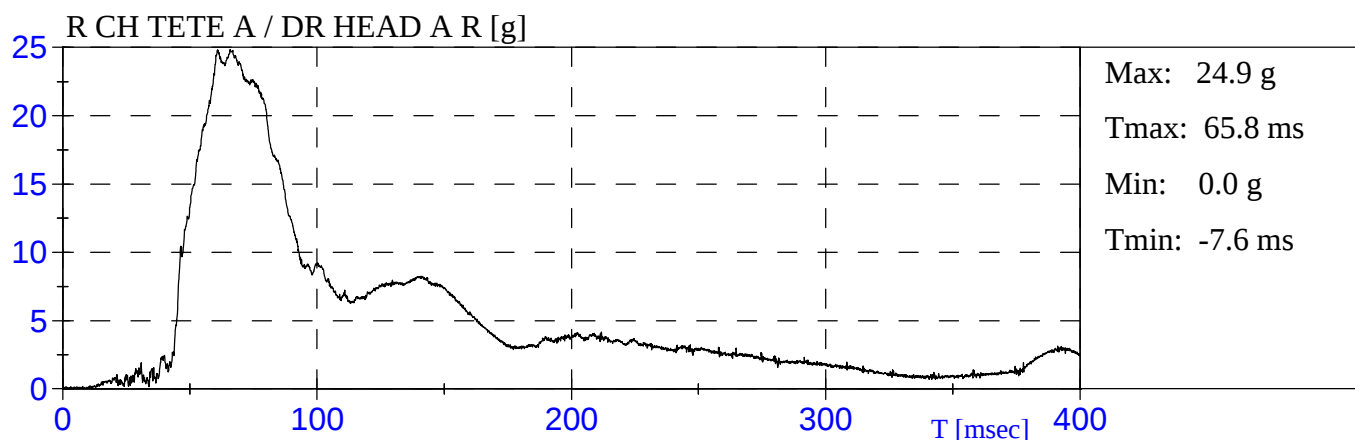
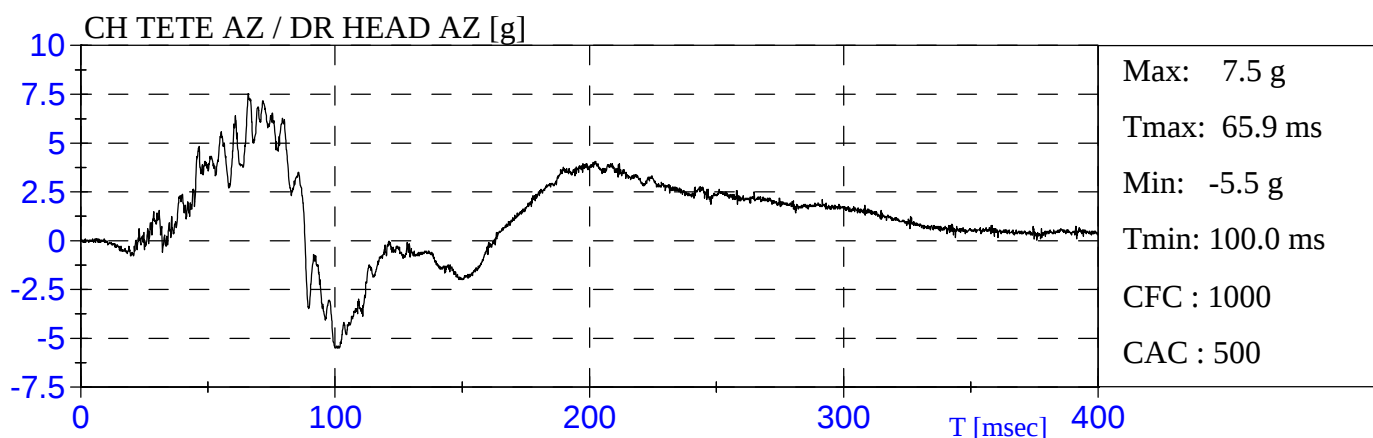
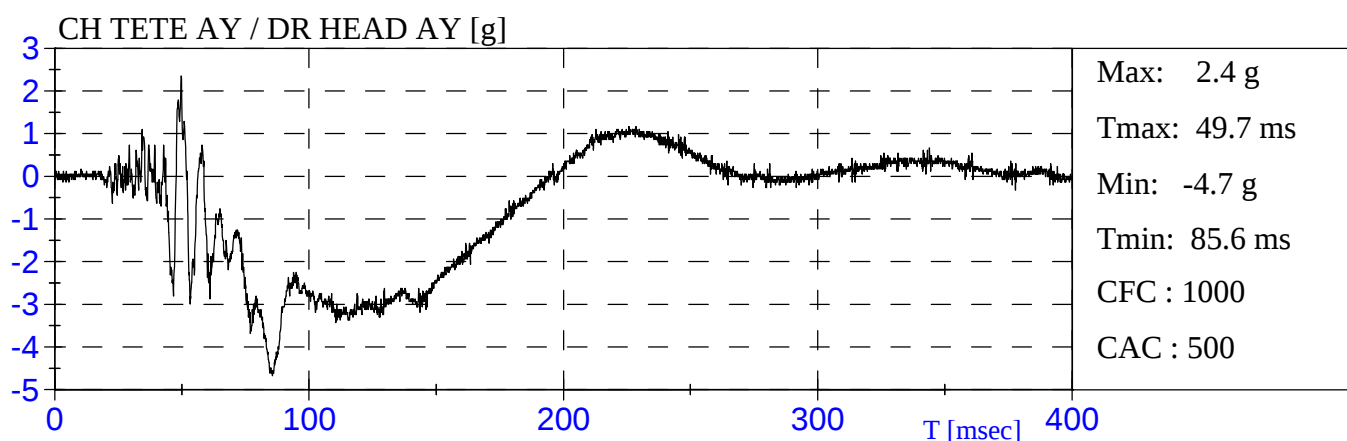
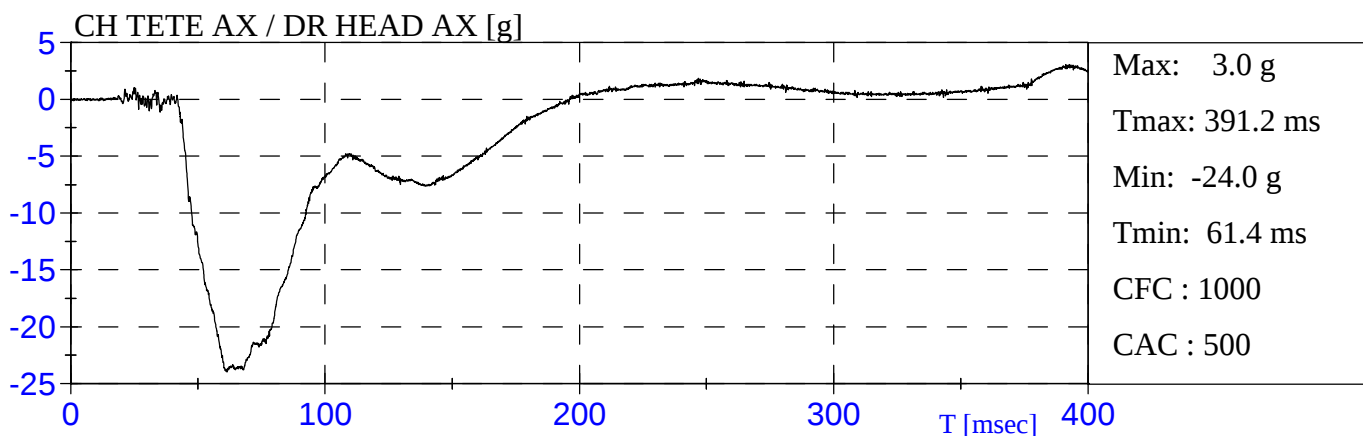
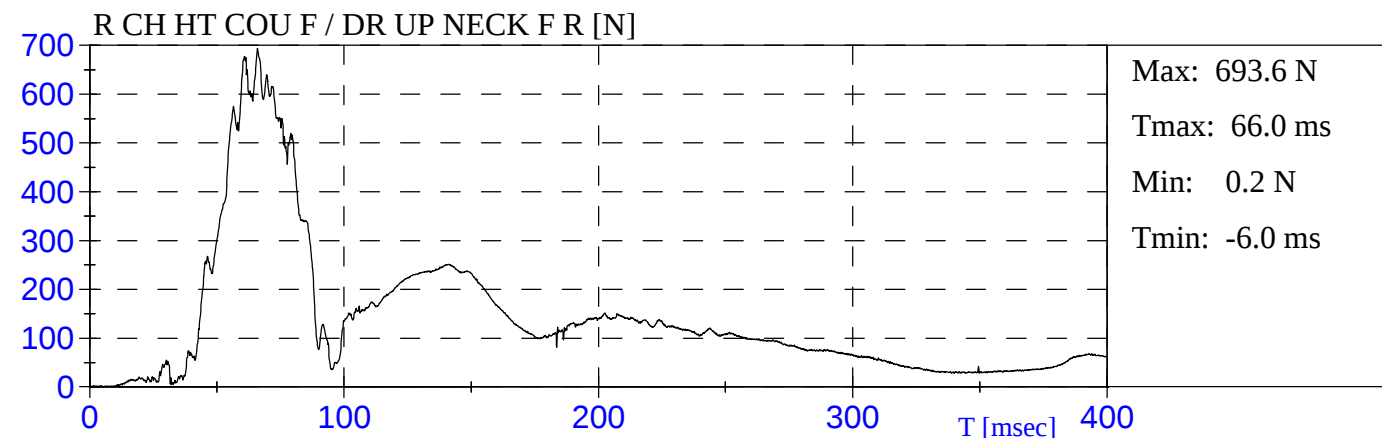
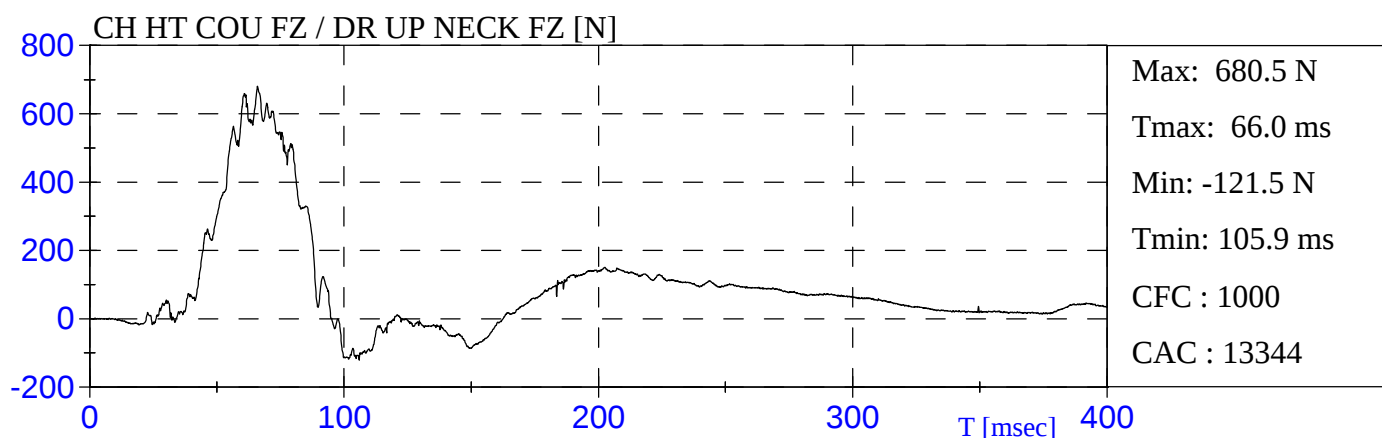
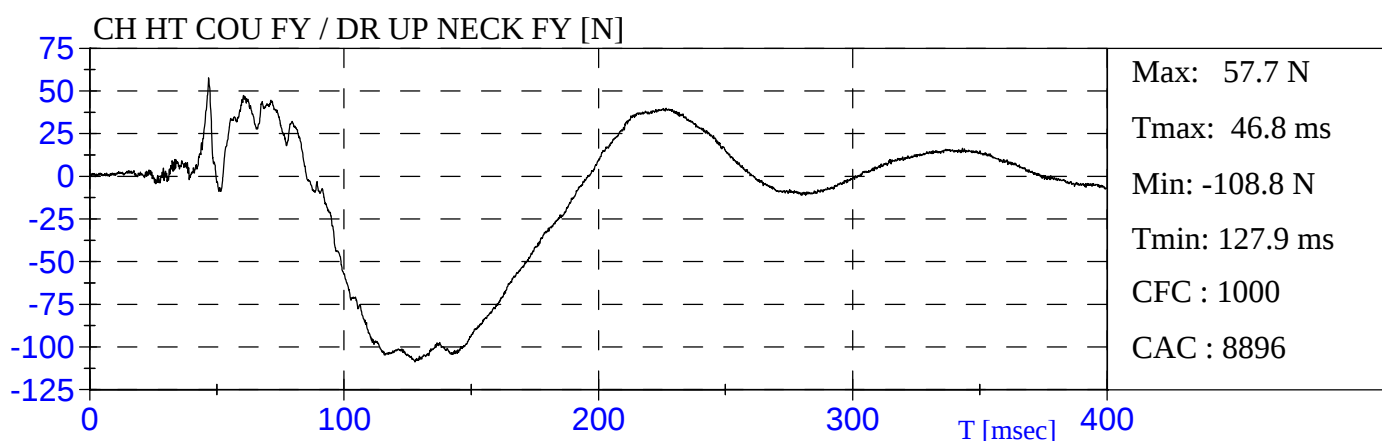
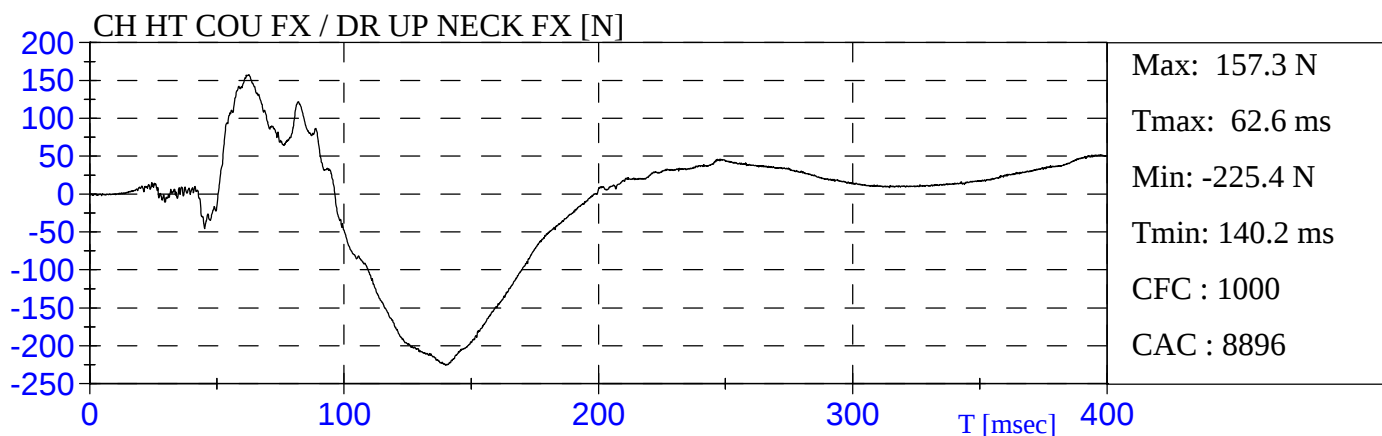
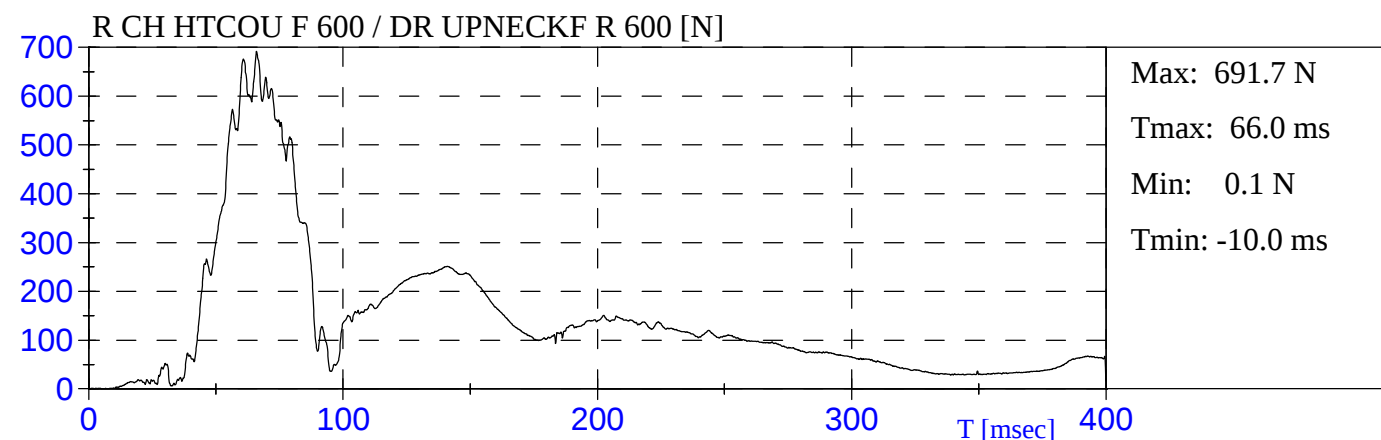
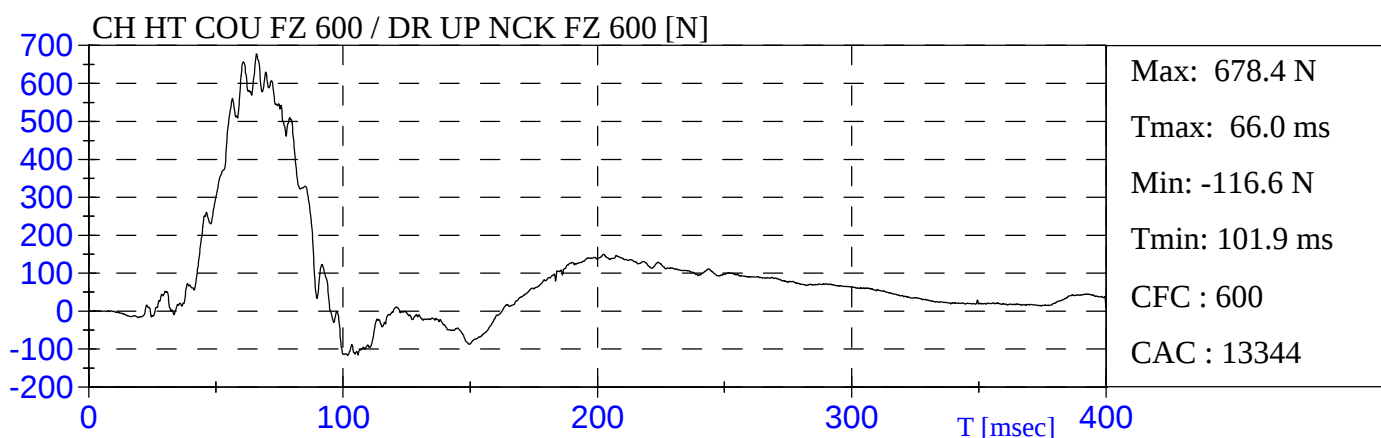
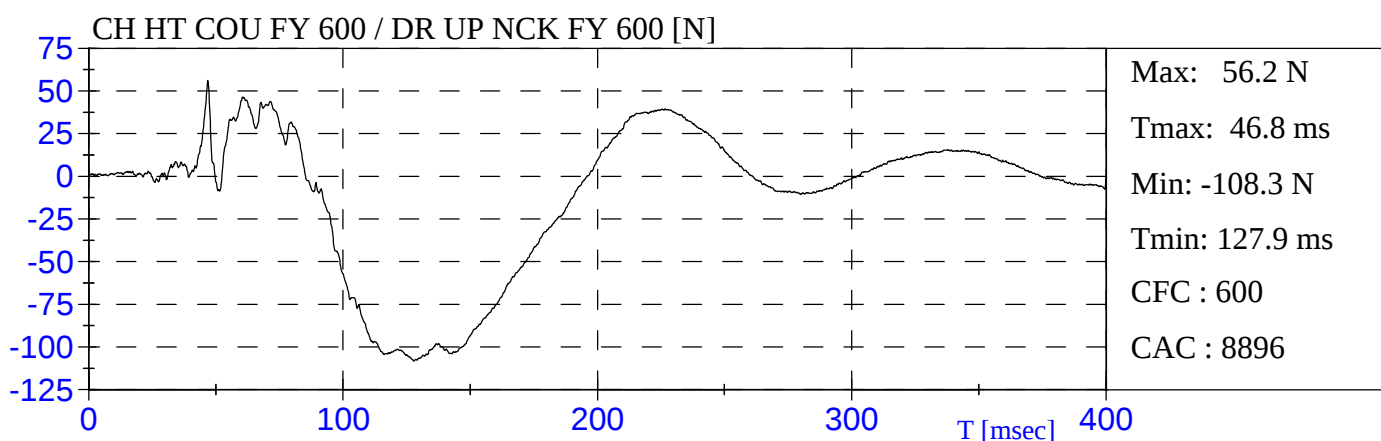
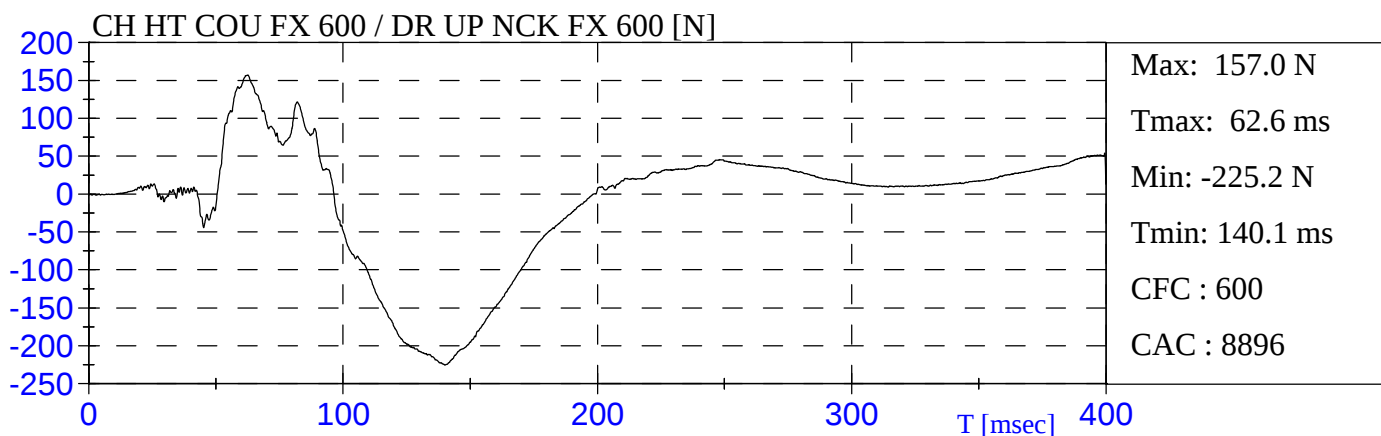


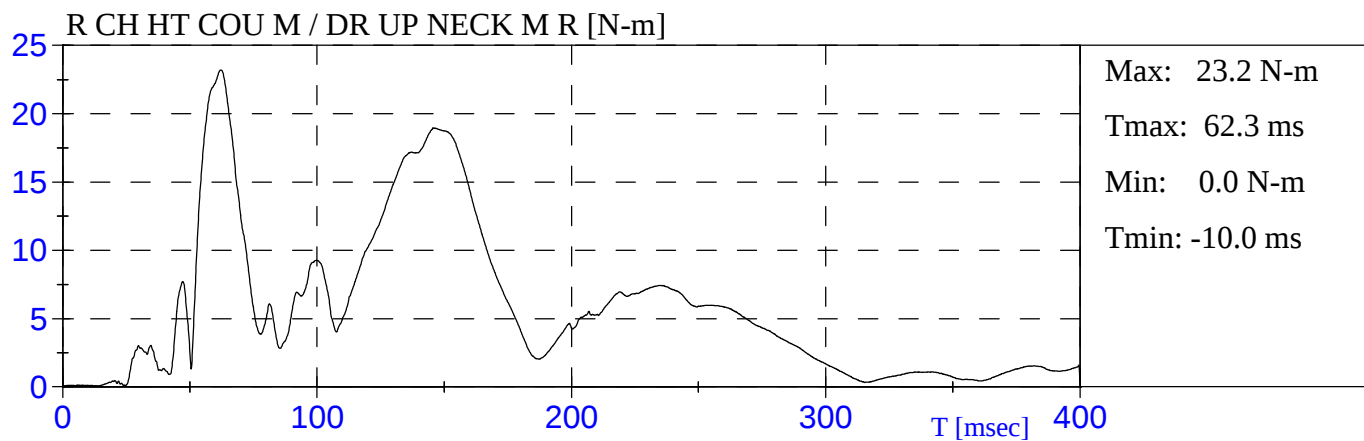
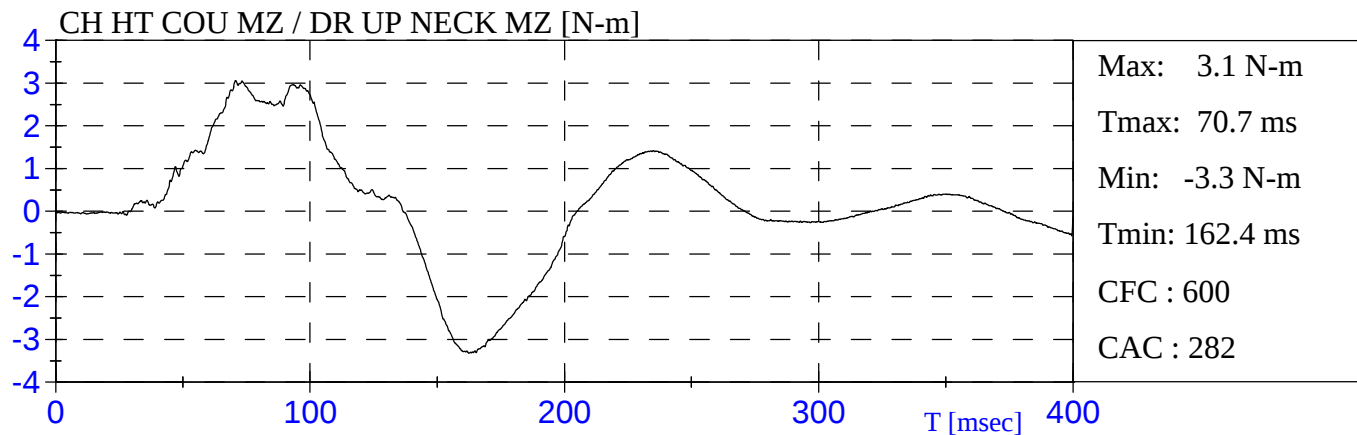
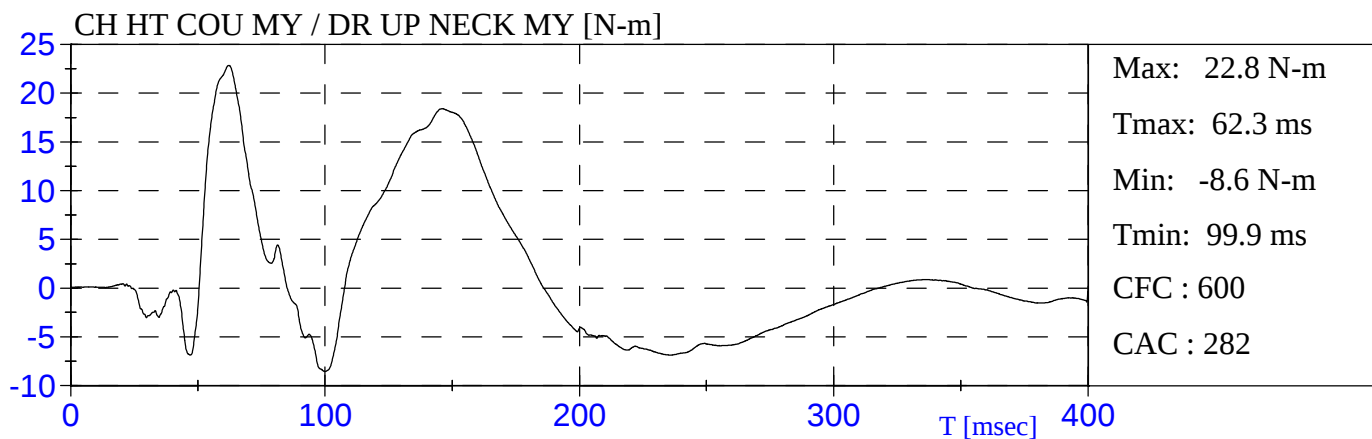
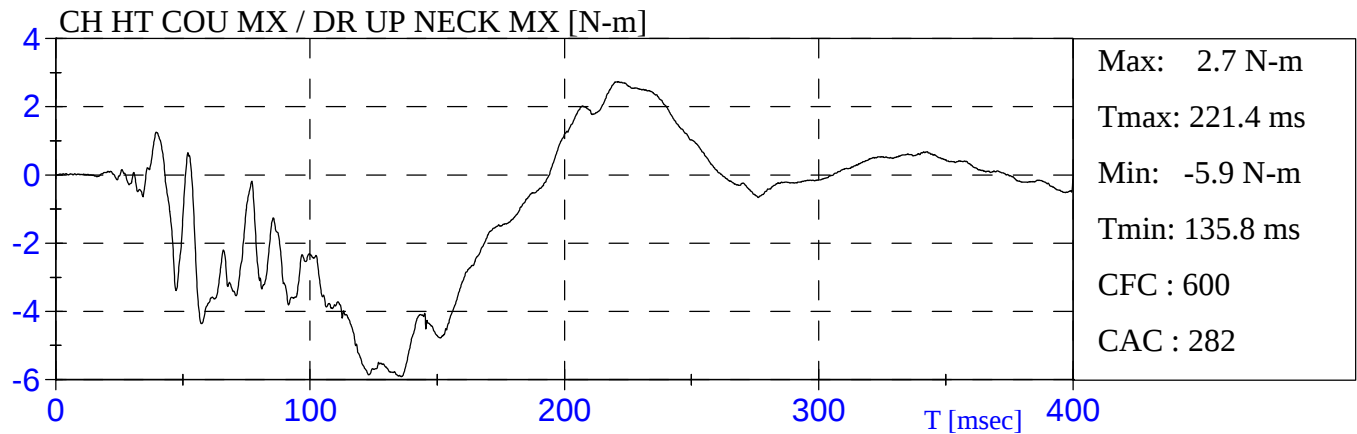


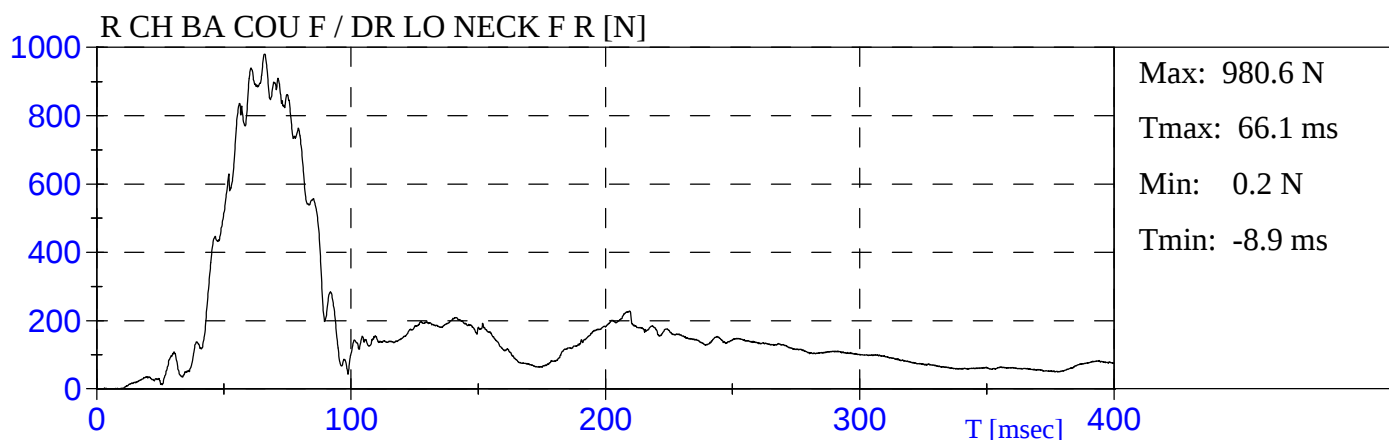
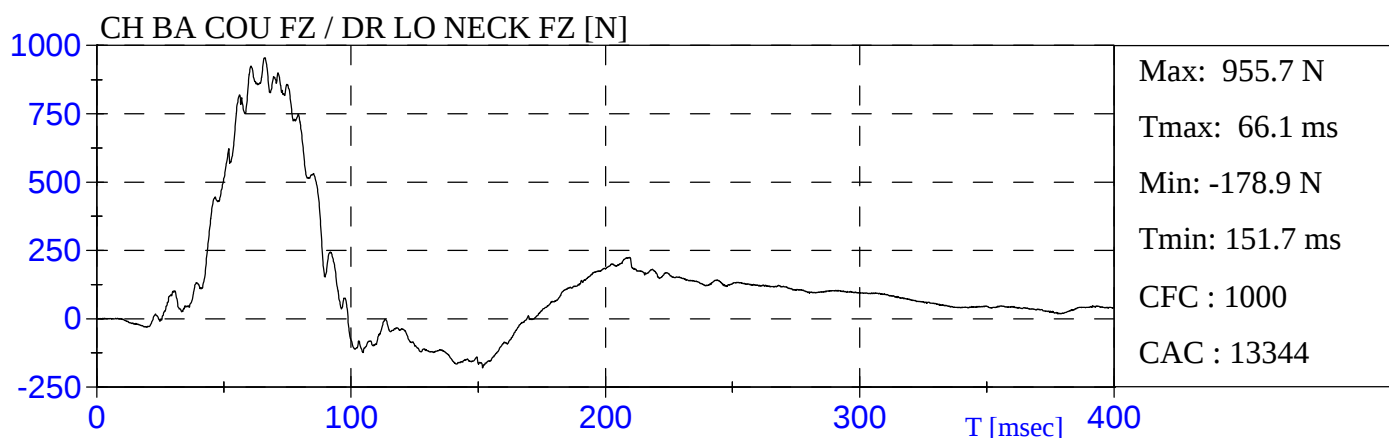
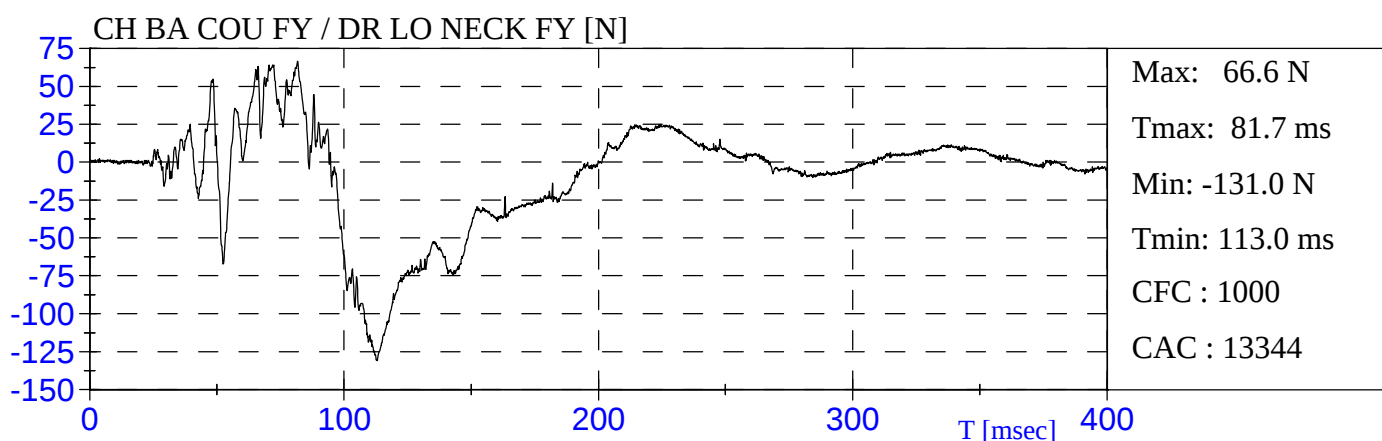
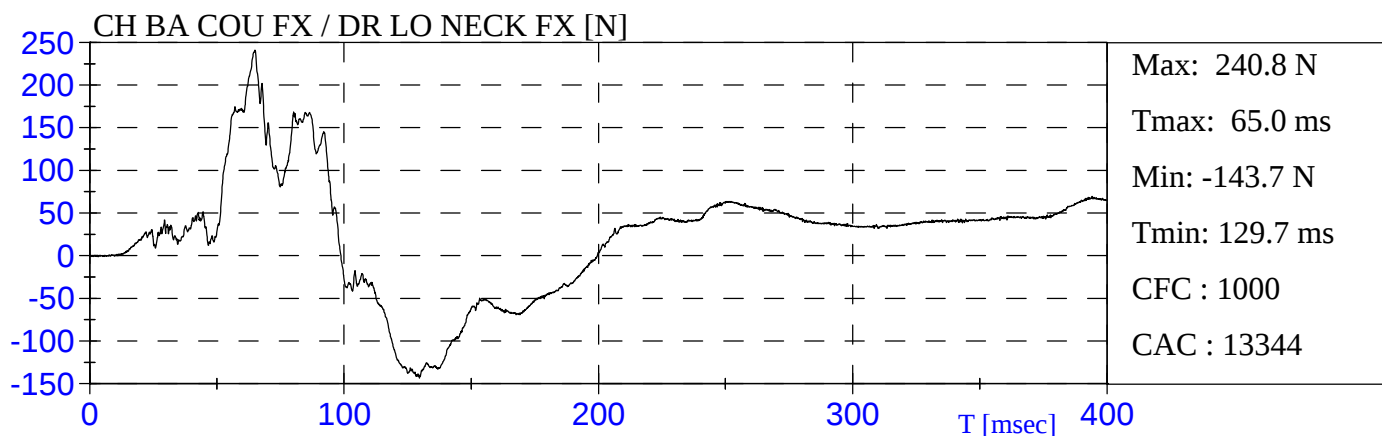
Nom du client Client Name	TRANSPORT CANADA
Type de véhicule Type of Vehicle	SATURN VUE 2003
Numéro de TC Tc Number	TC03-232
Numéro de contrat Contract No	04-6008
Acquisition de données selon Data Acquisition according to	SAE J211/1 MAR 95
Date de l'essai Test date	2004-03-04
Titre du projet Project Title	COLLISION DE RECHERCHE COLLISION FRONTALE RESEARCH COLLISION TEST FRONTAL CRASH
MANNEQUIN / DUMMY	
Chauffeur Driver	HYBRID III 5% F IR
Passager Passenger	HYBRID III 5% F IR
Passager 1 (arrière gauche) Passenger 1 (rear left)	Q6
Passager 2 (arrière centre) Passenger 2 (rear centre)	HYBRID III 6Y







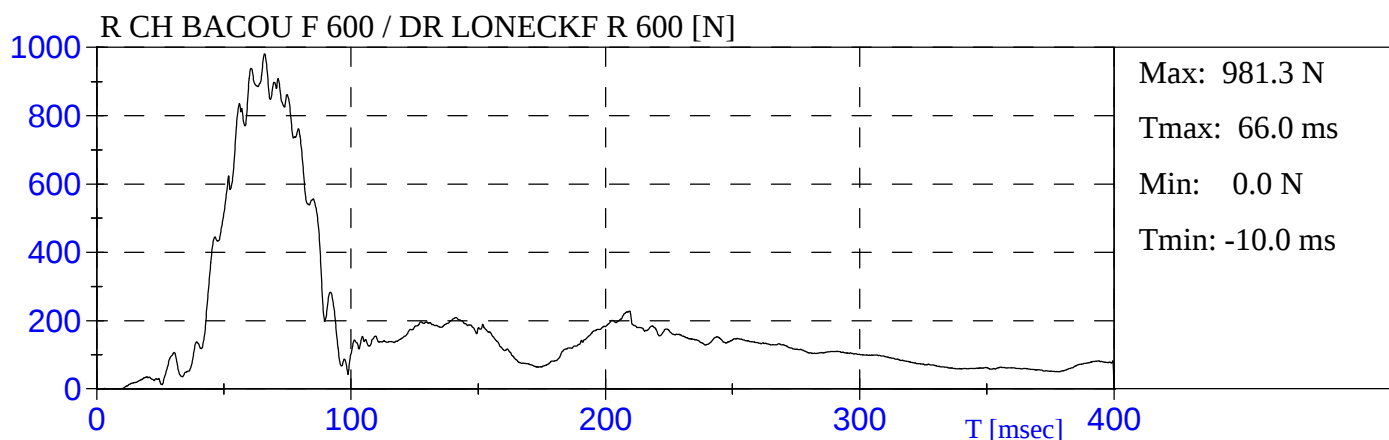
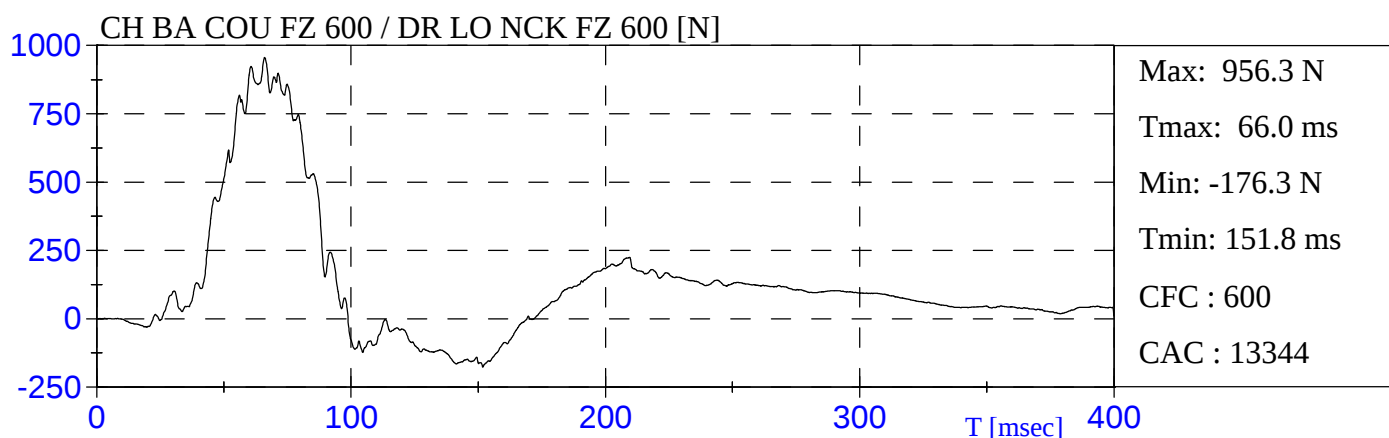
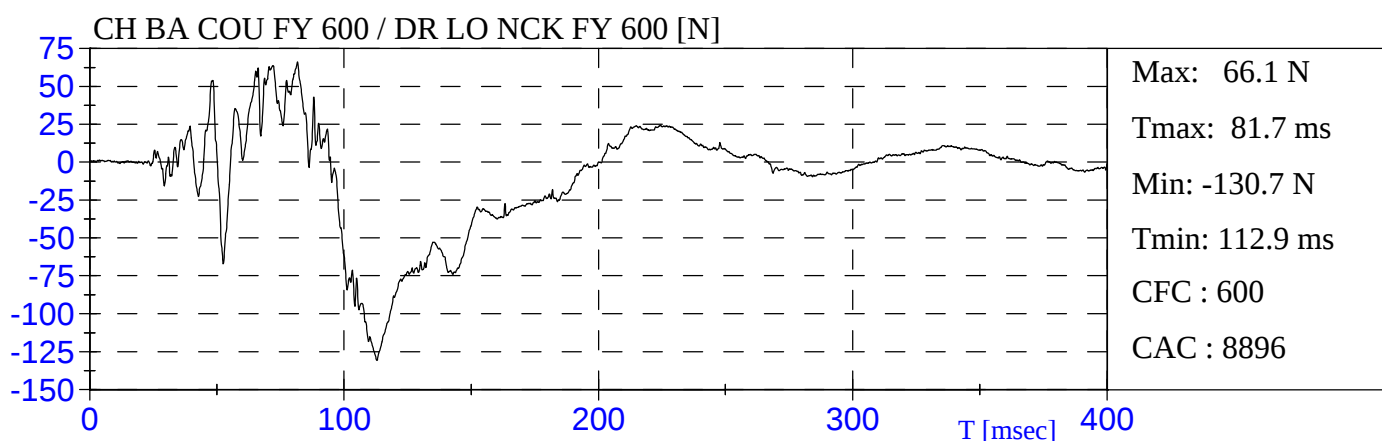
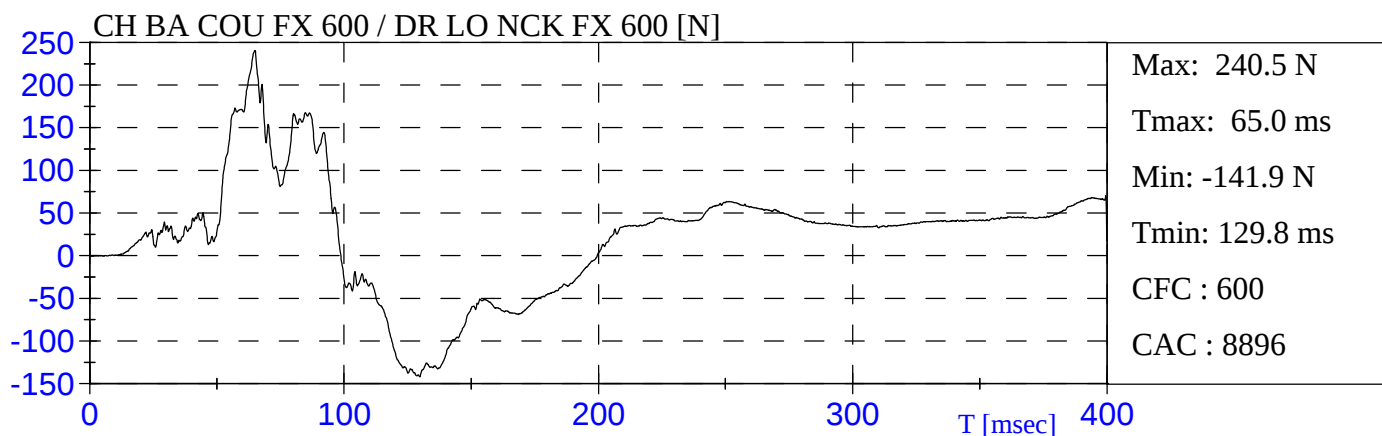


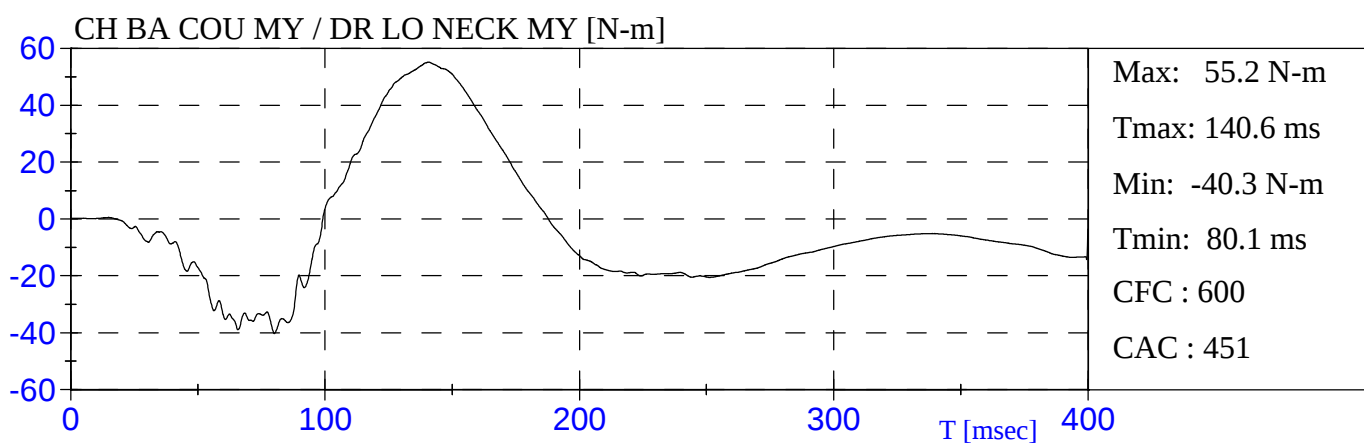
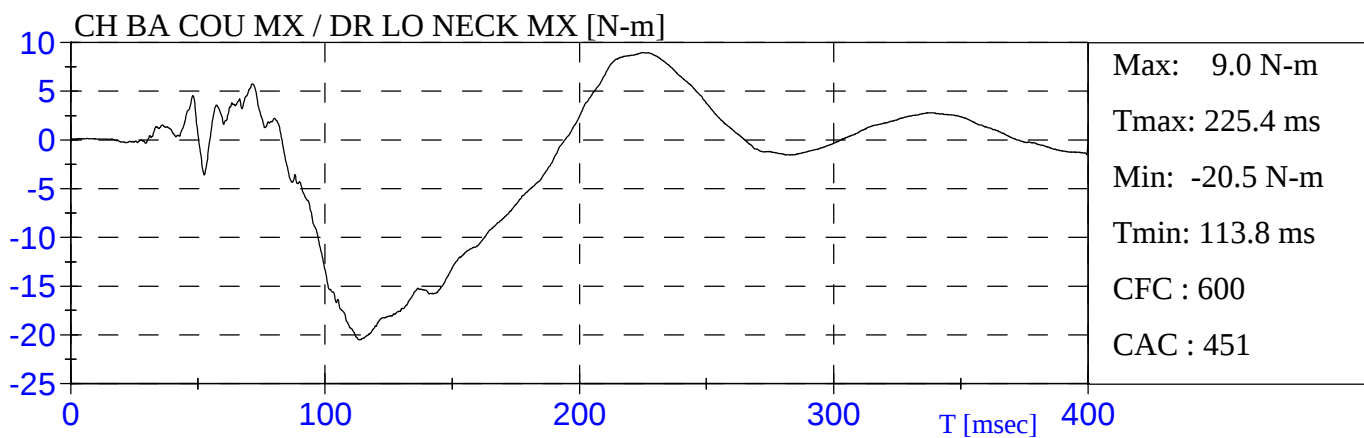


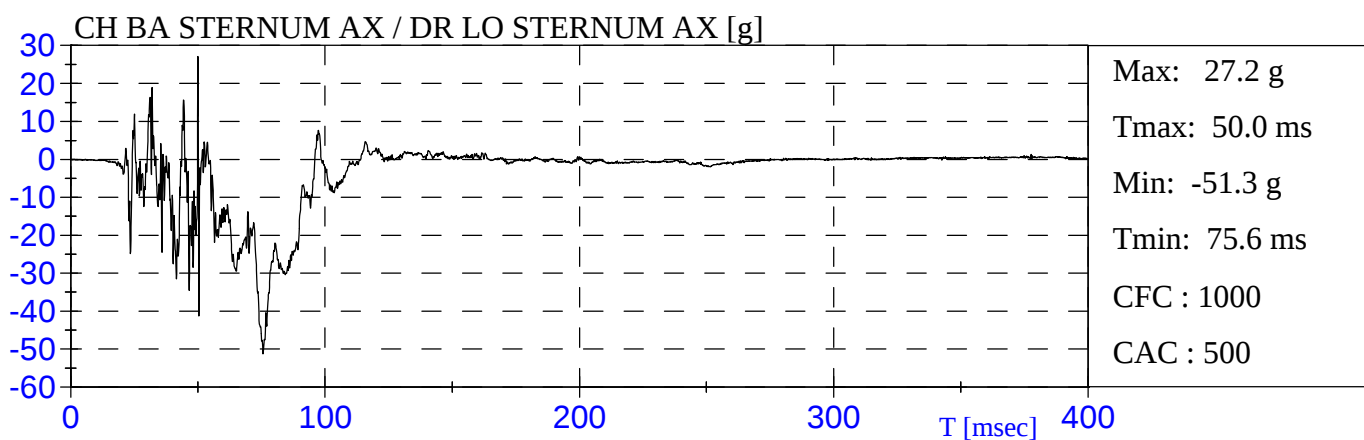
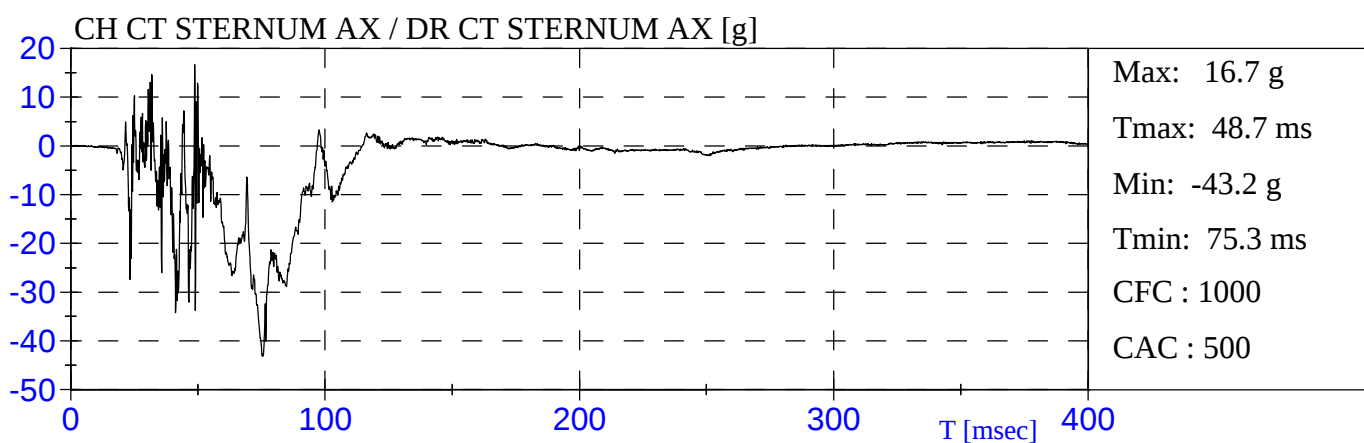
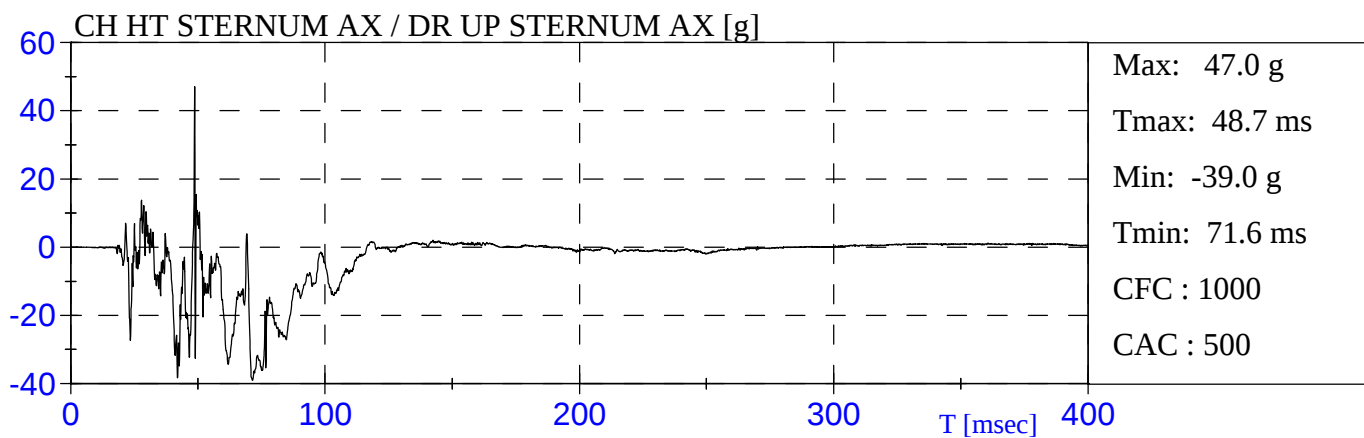


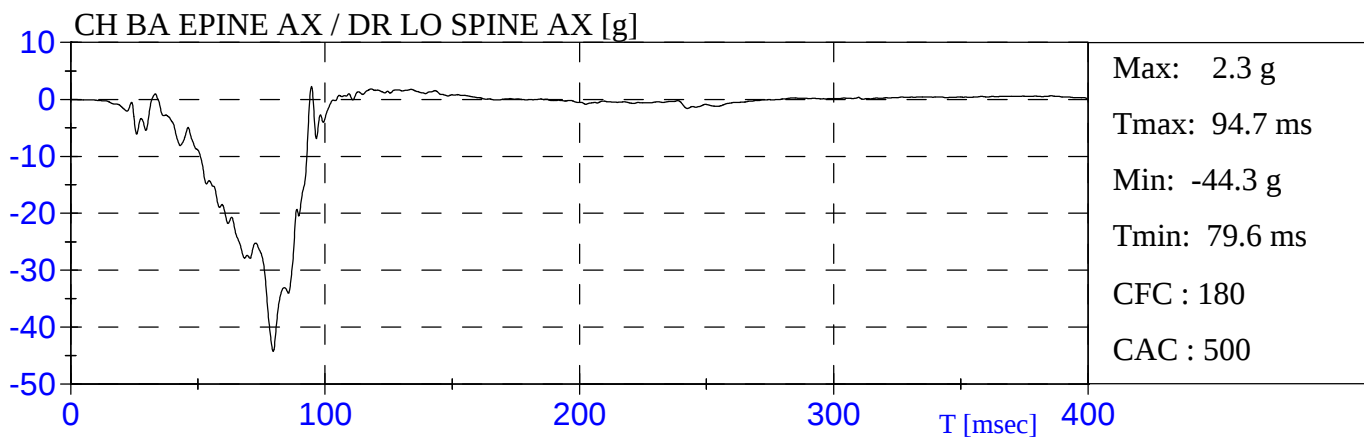
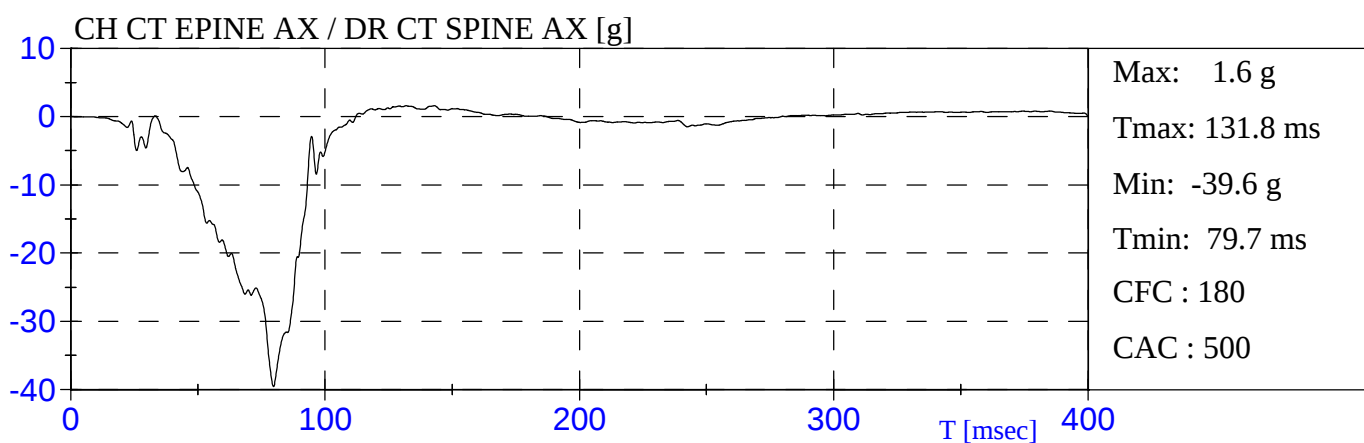
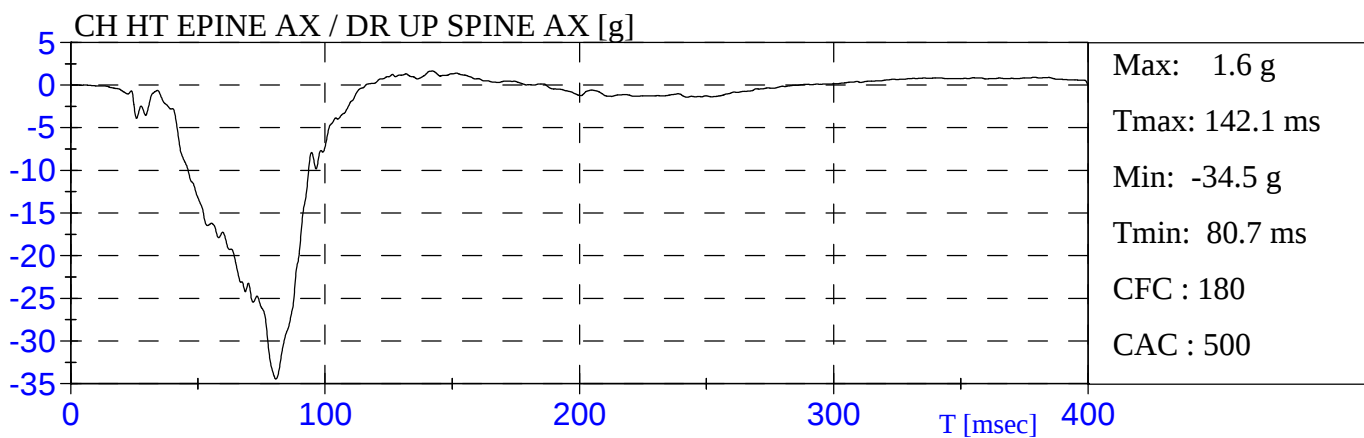
COLLISION FRONTALE
FRONTAL CRASH
SATURN VUE 2003

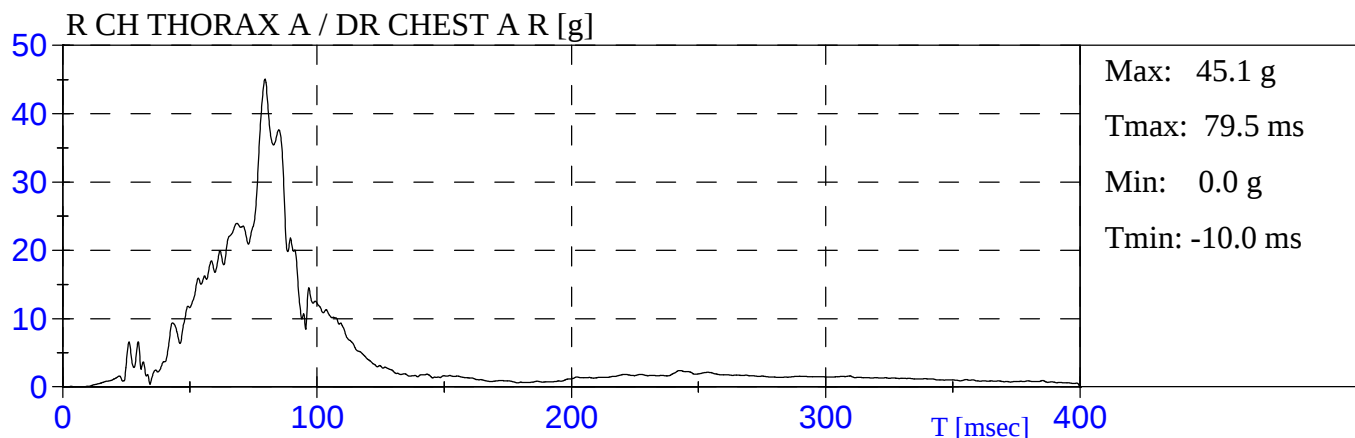
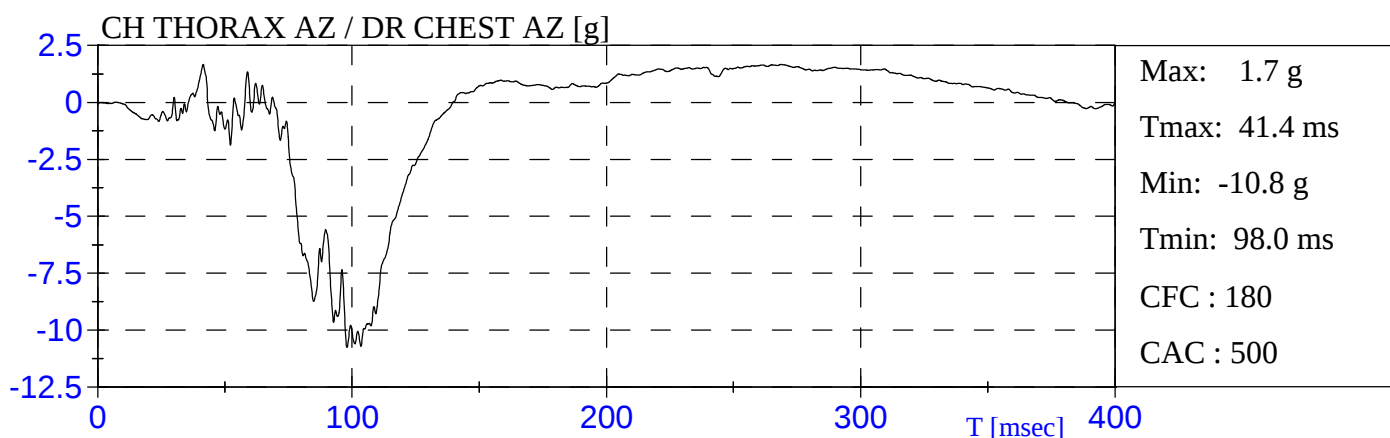
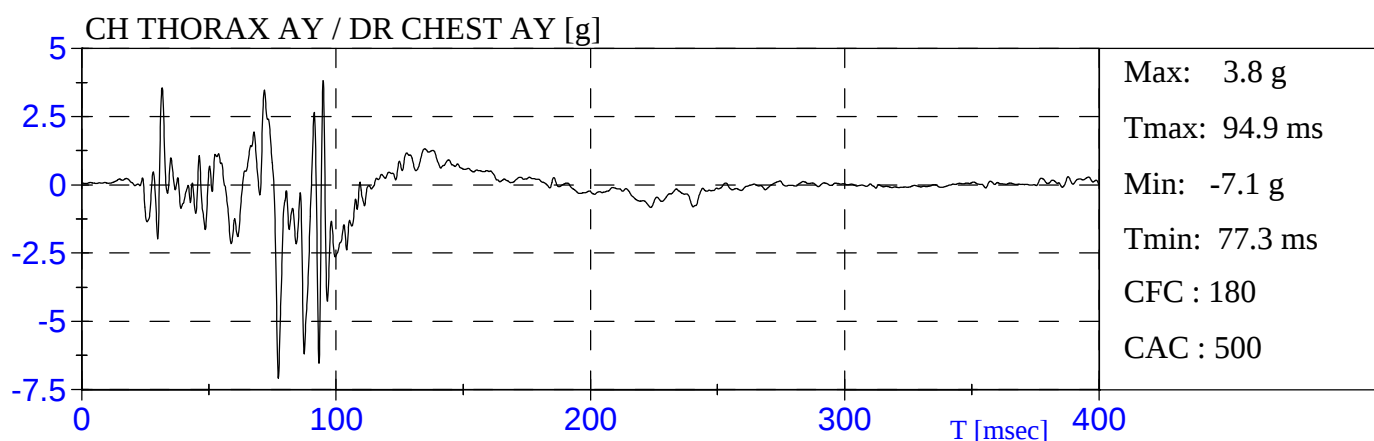
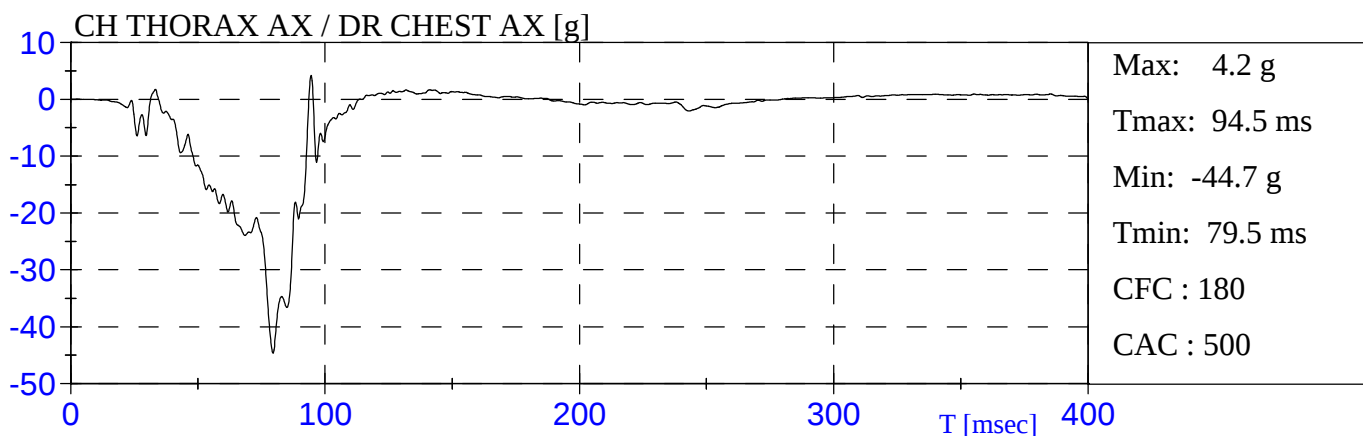
Date: 2004-03-04
N° TC / TC No.: TC03-232

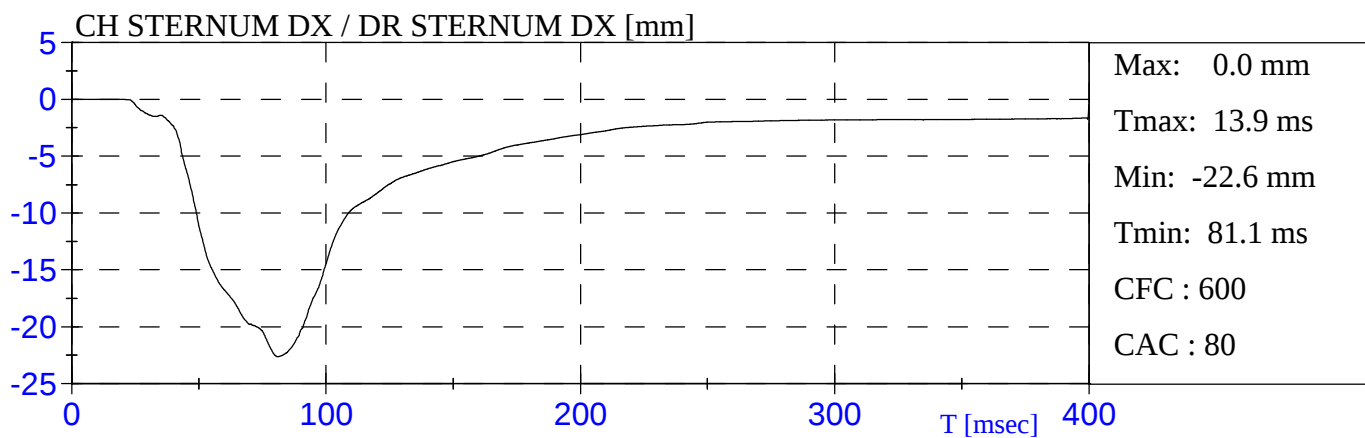










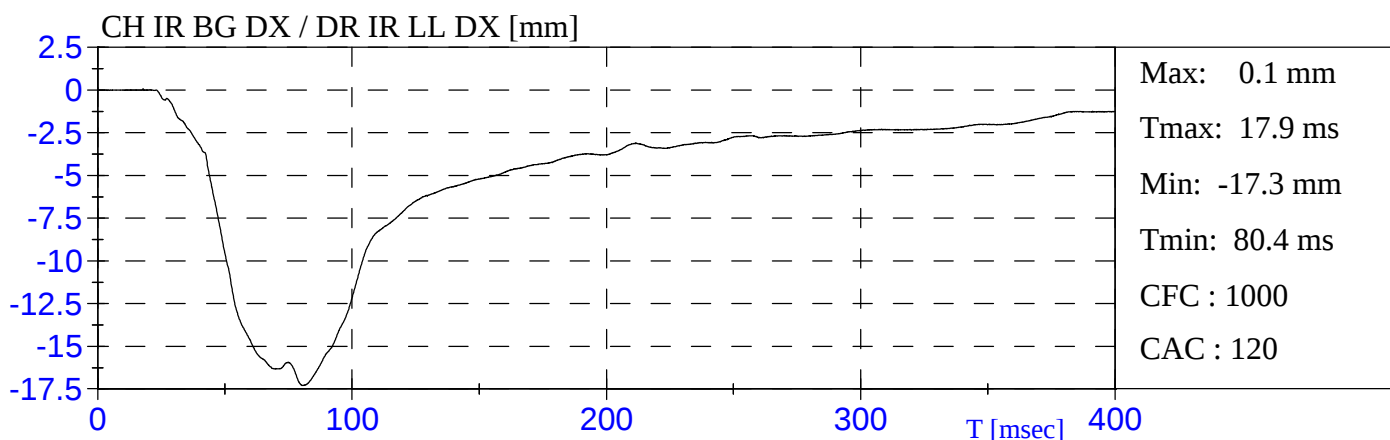
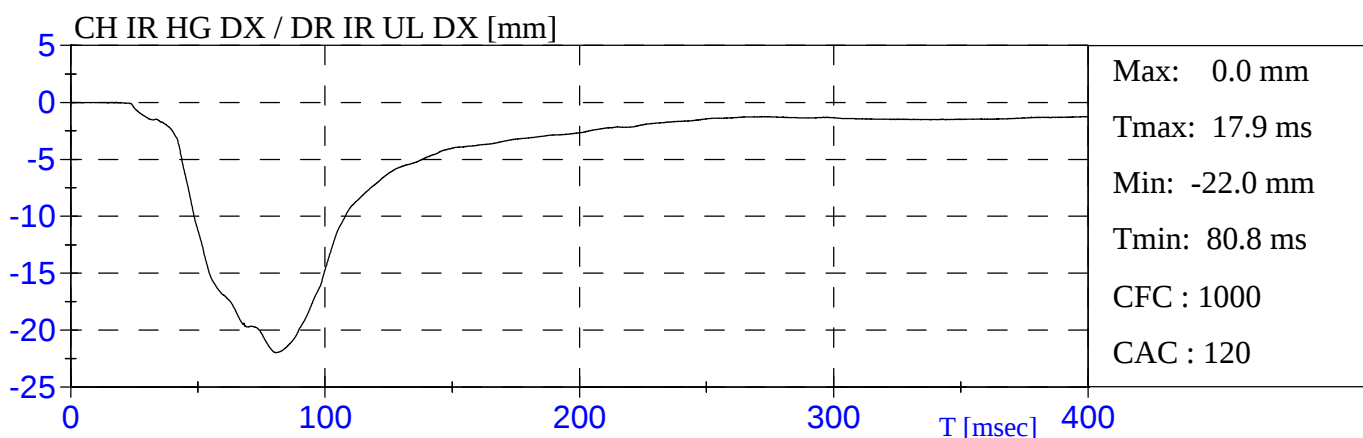
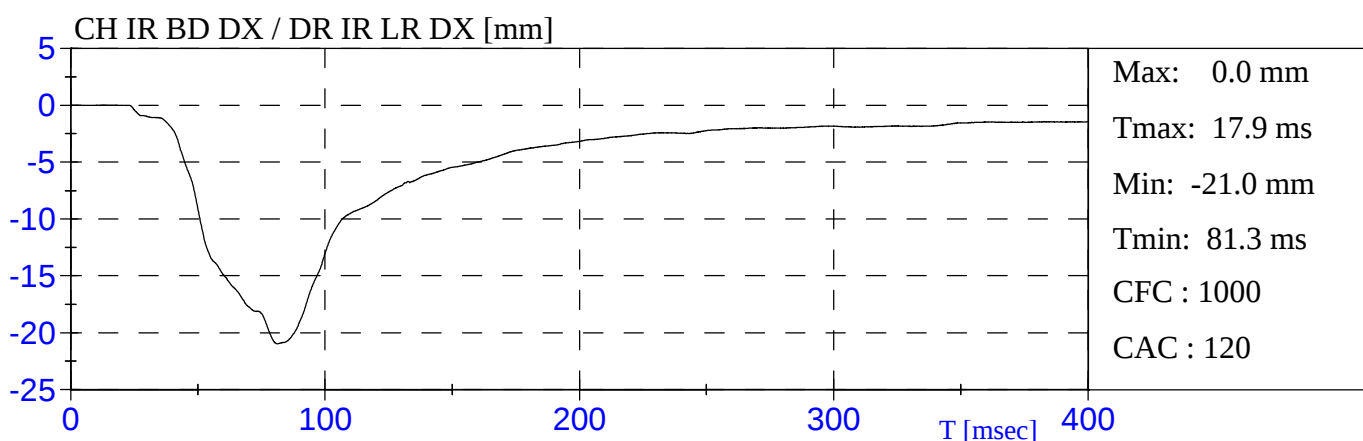
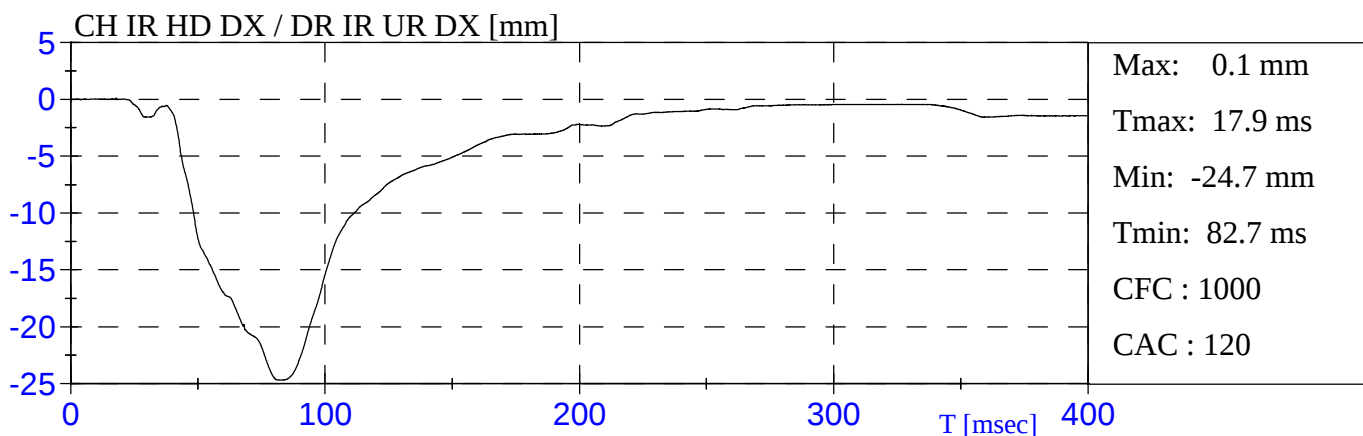




COLLISION FRONTALE
FRONTAL CRASH
SATURN VUE 2003

Date: 2004-03-04

N° TC / TC No.: TC03-232

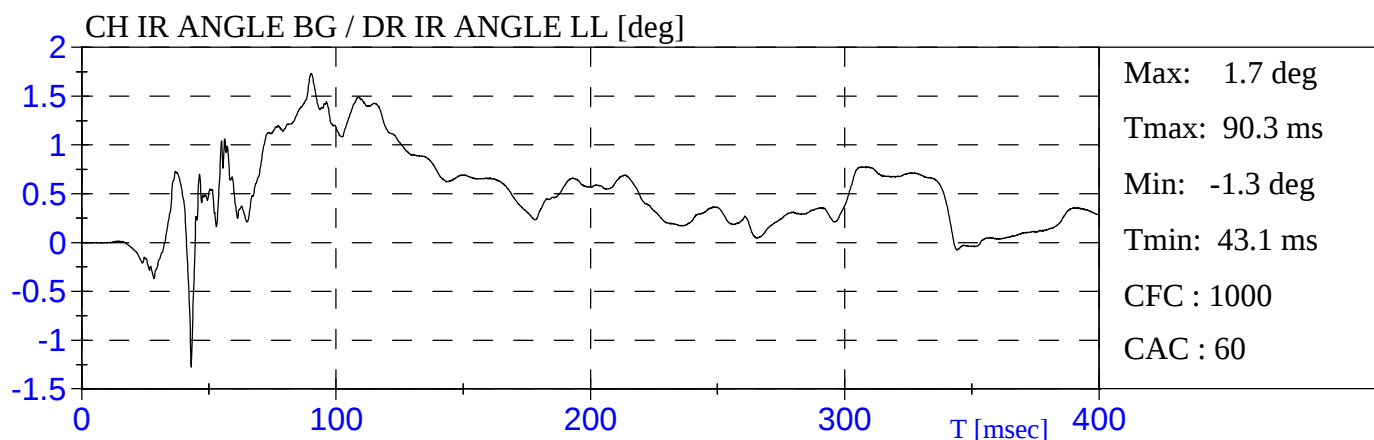
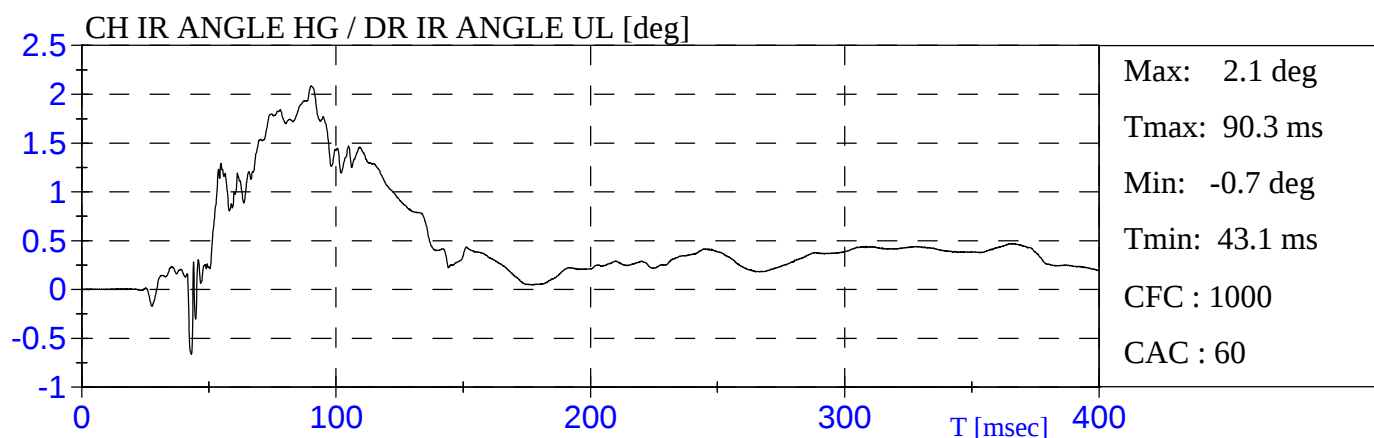
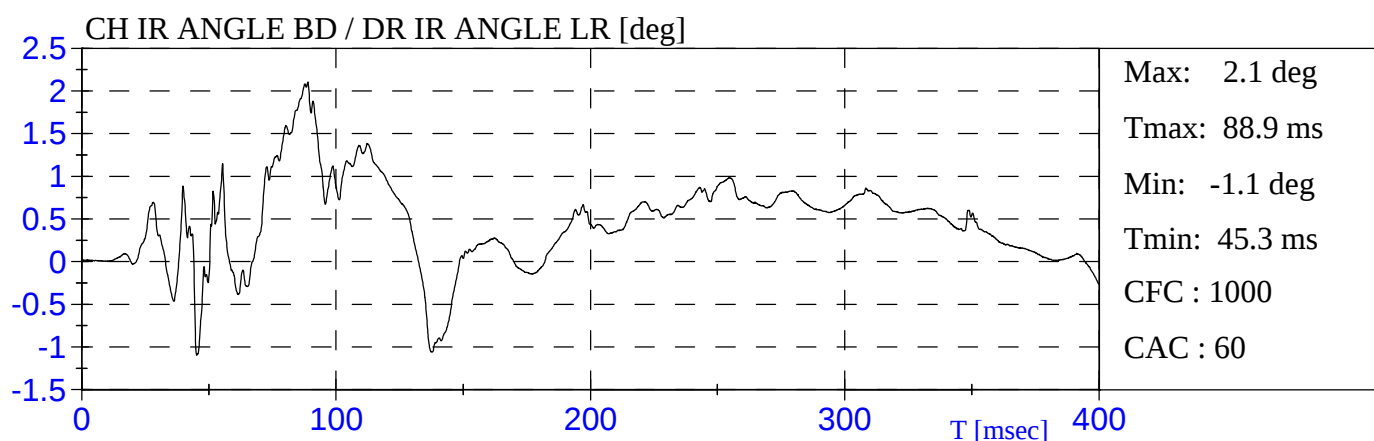
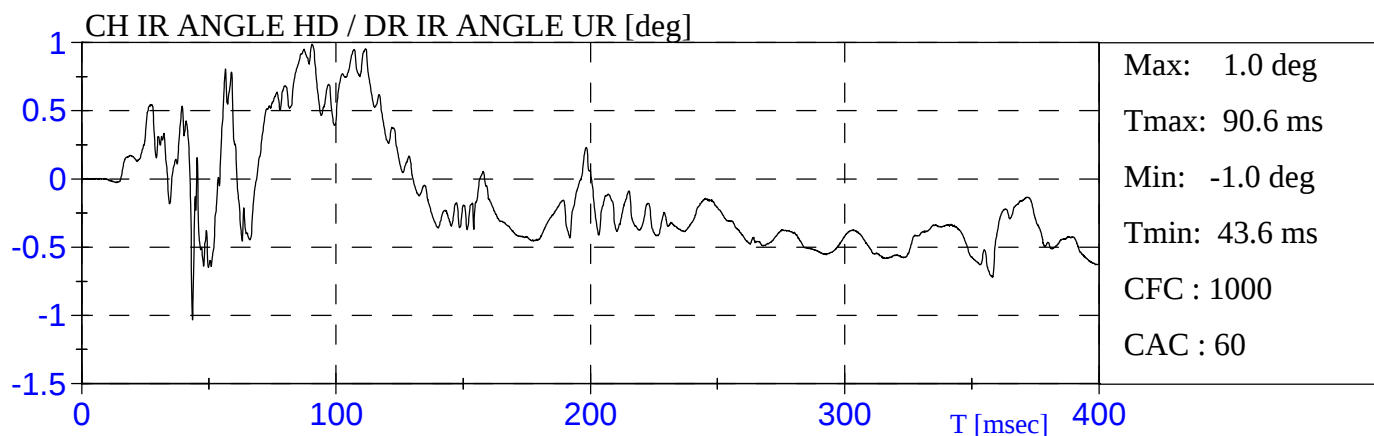


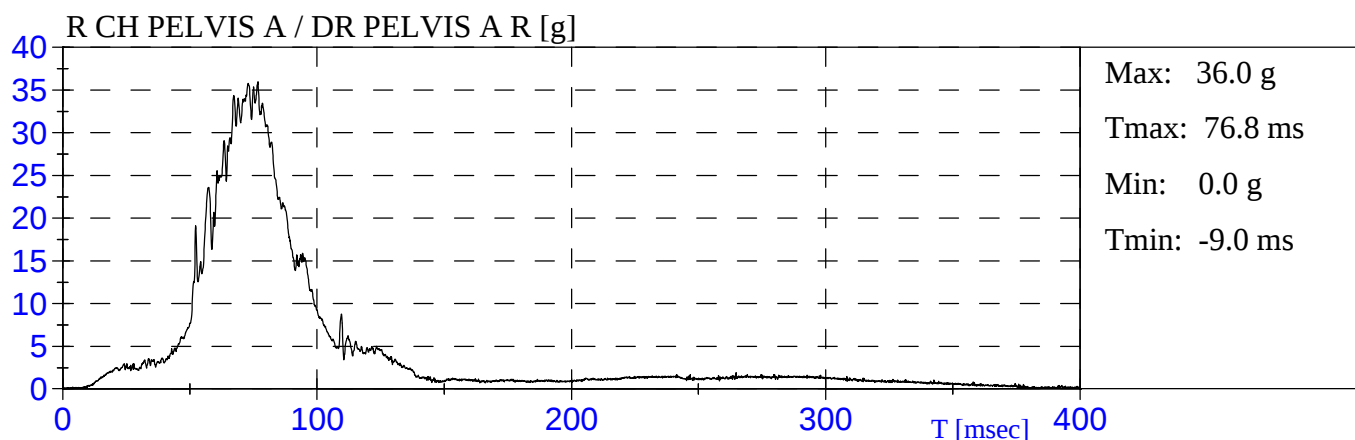
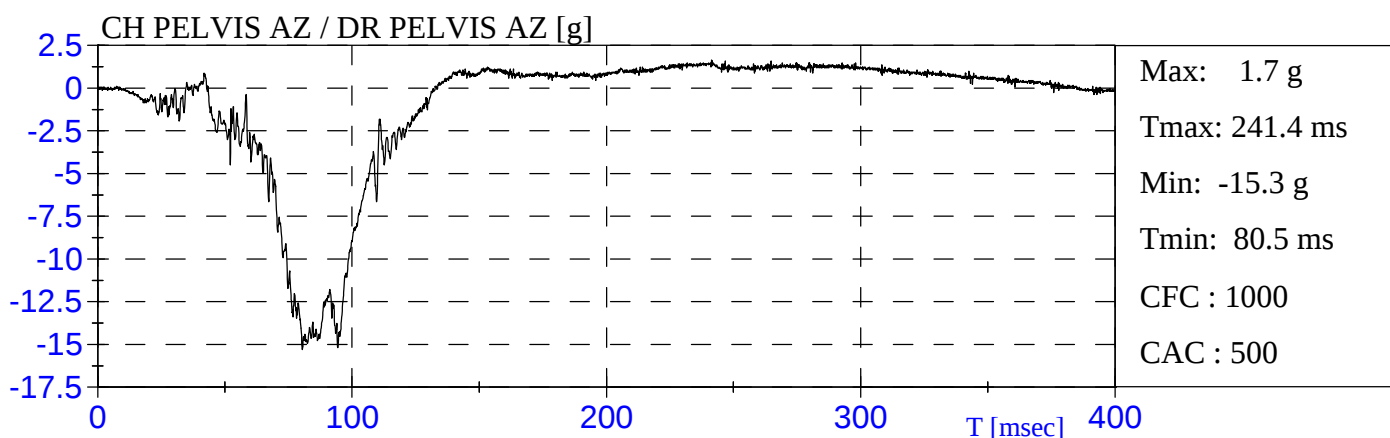
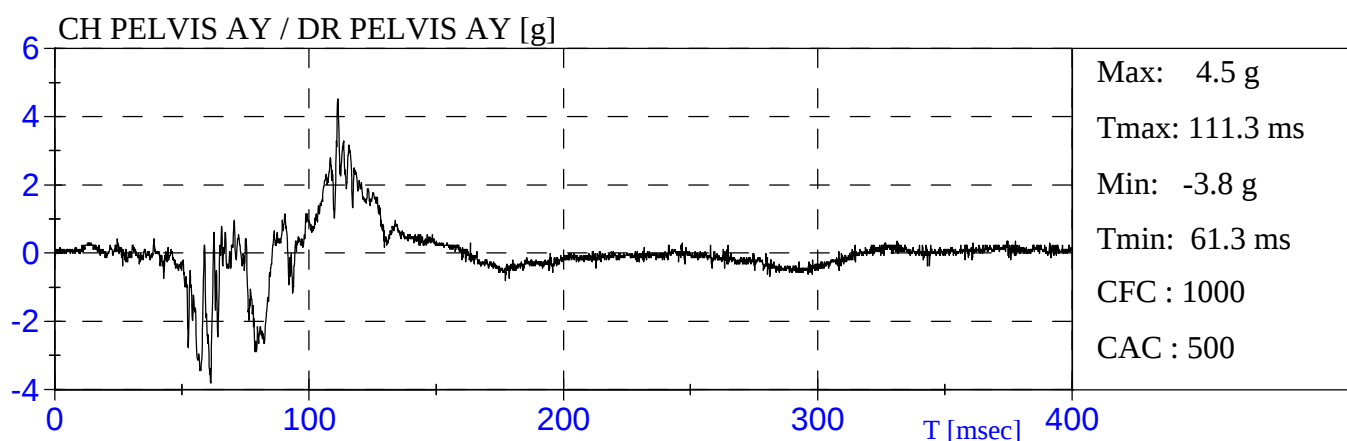
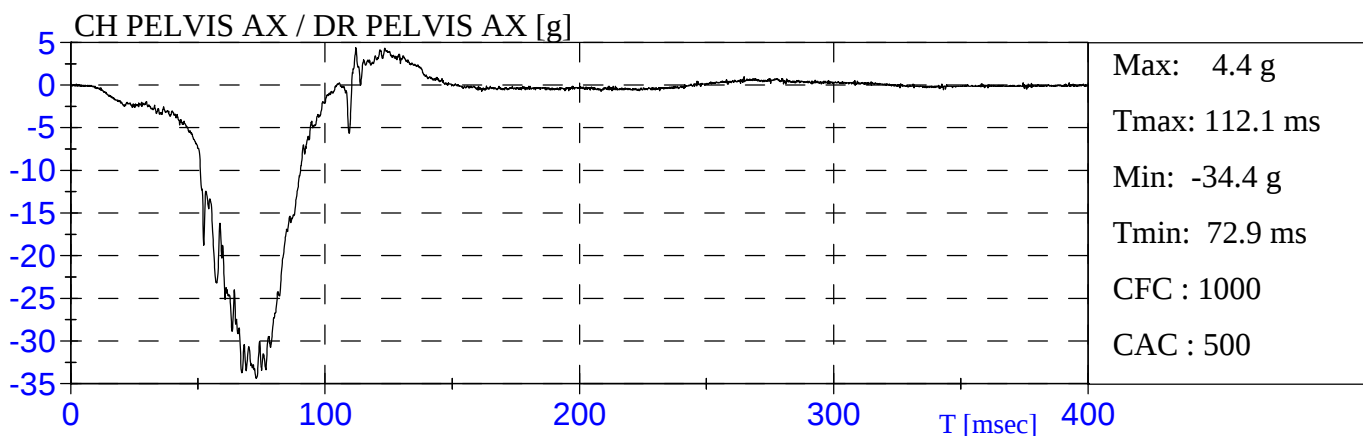


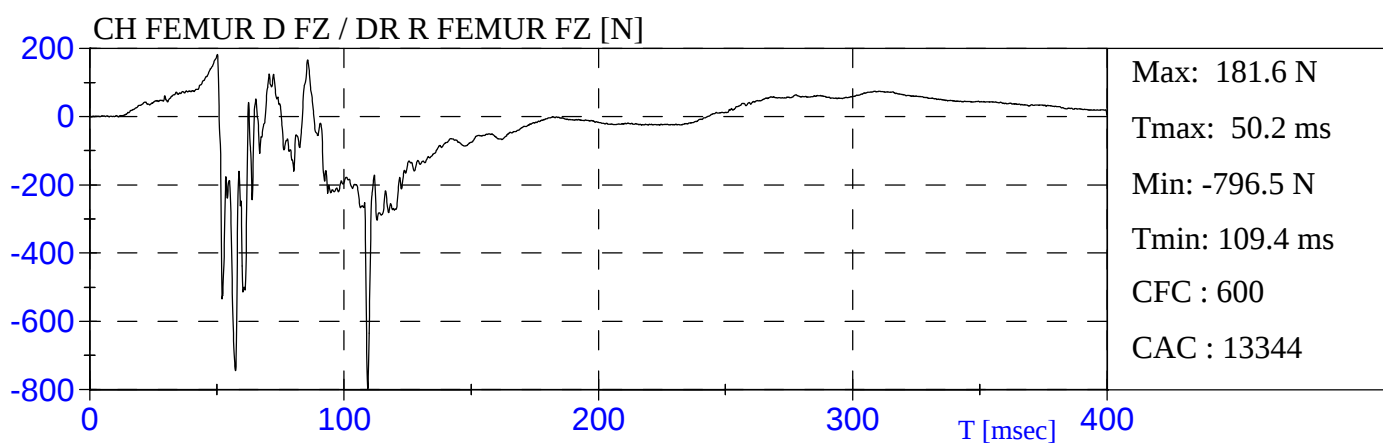
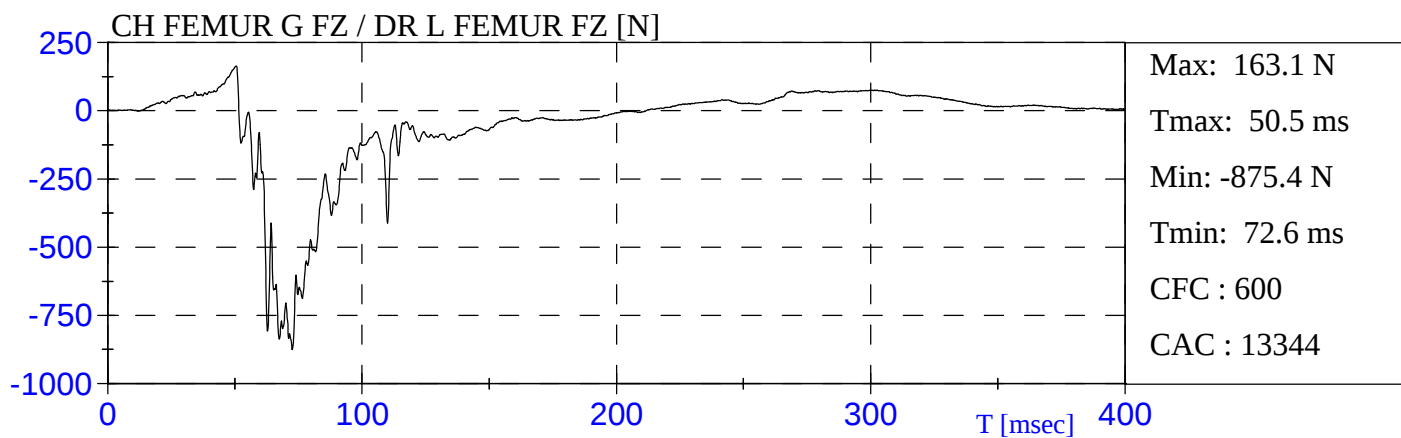
COLLISION FRONTALE
FRONTAL CRASH
SATURN VUE 2003

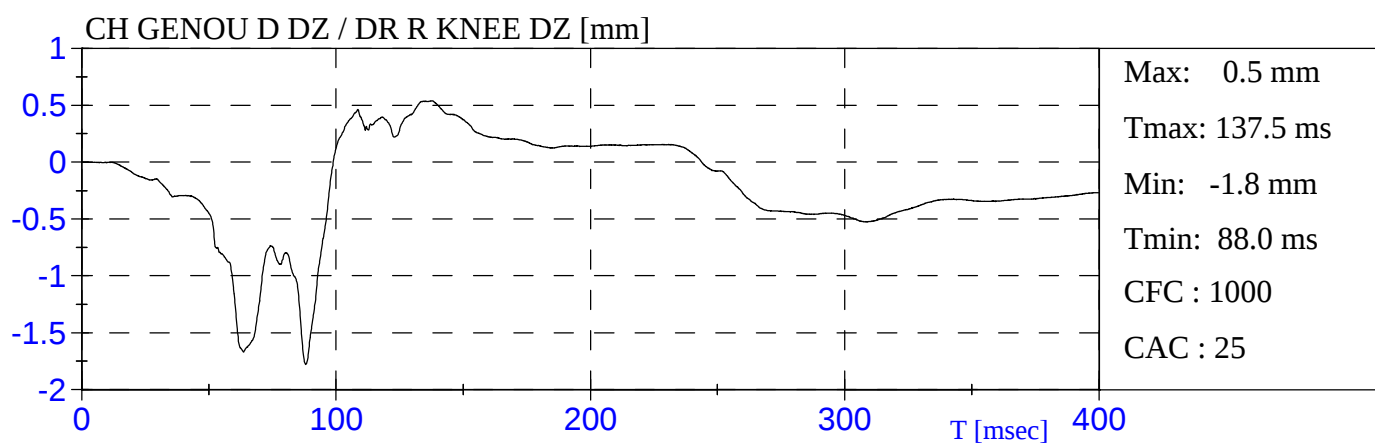
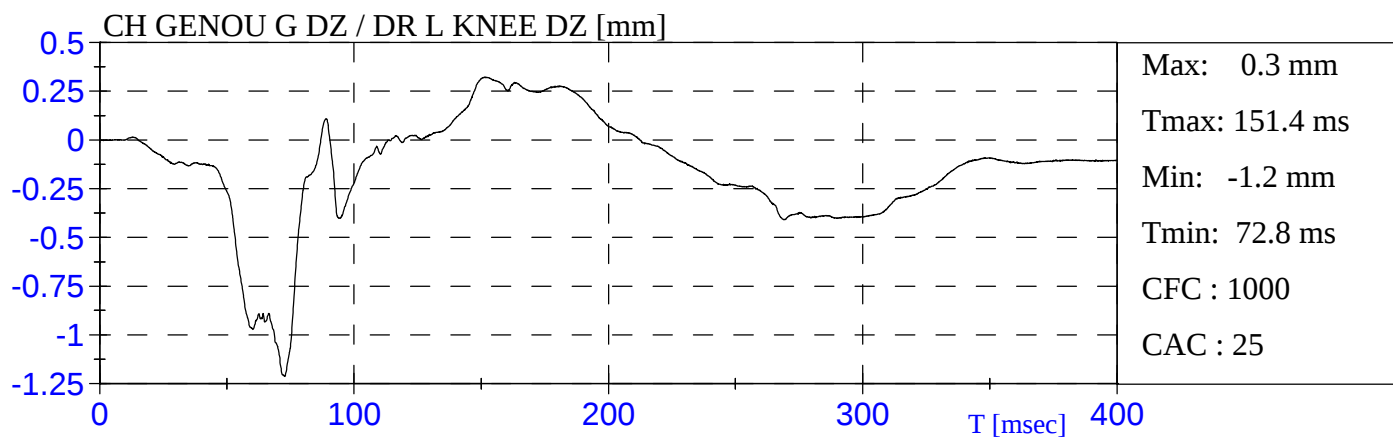
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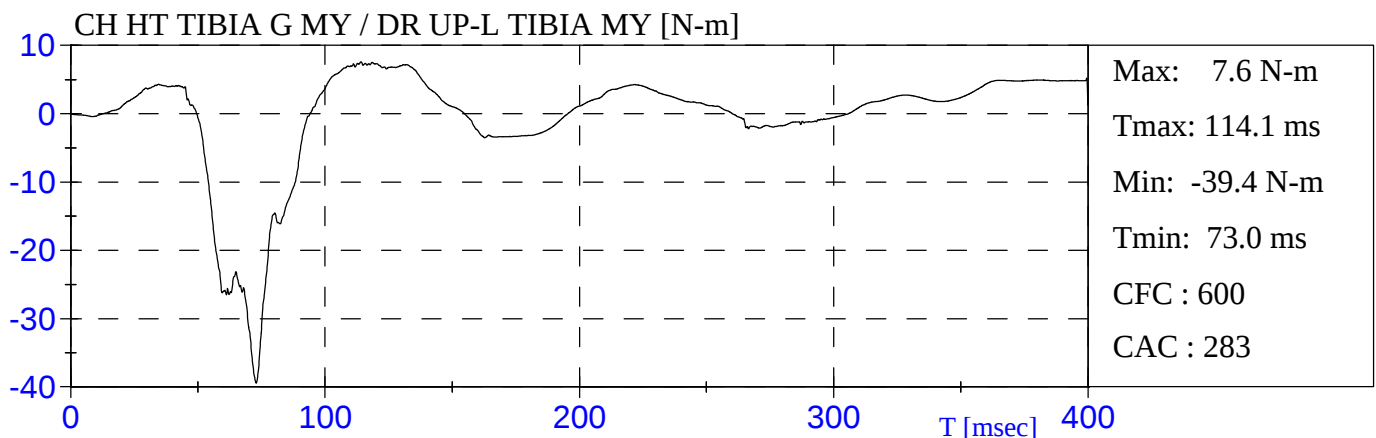
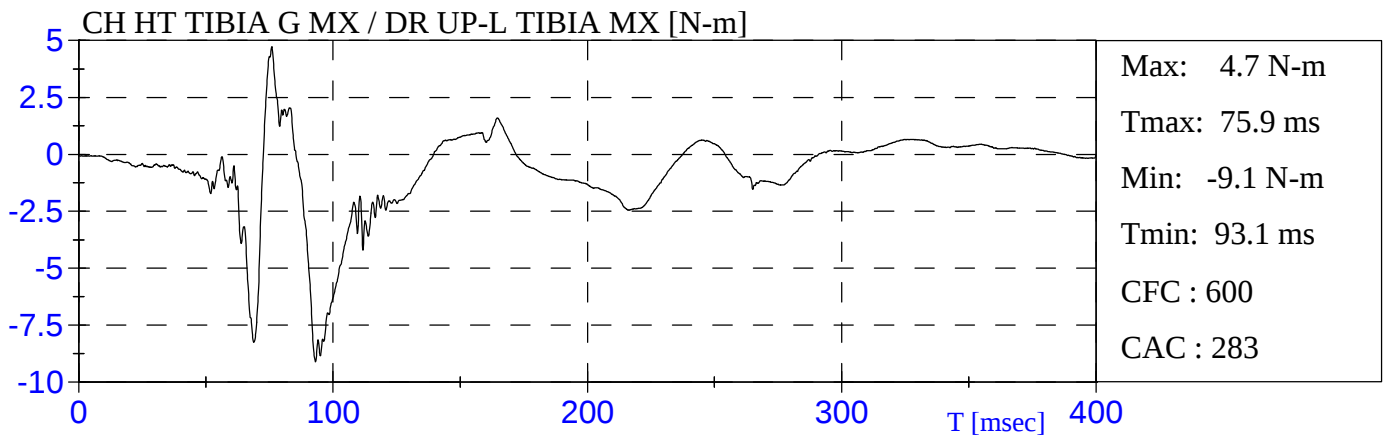
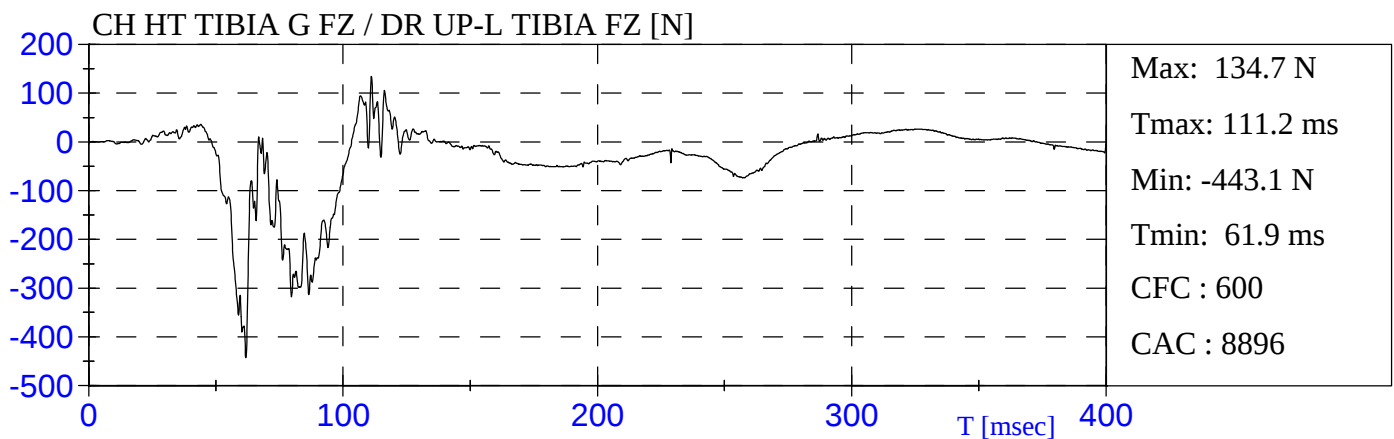
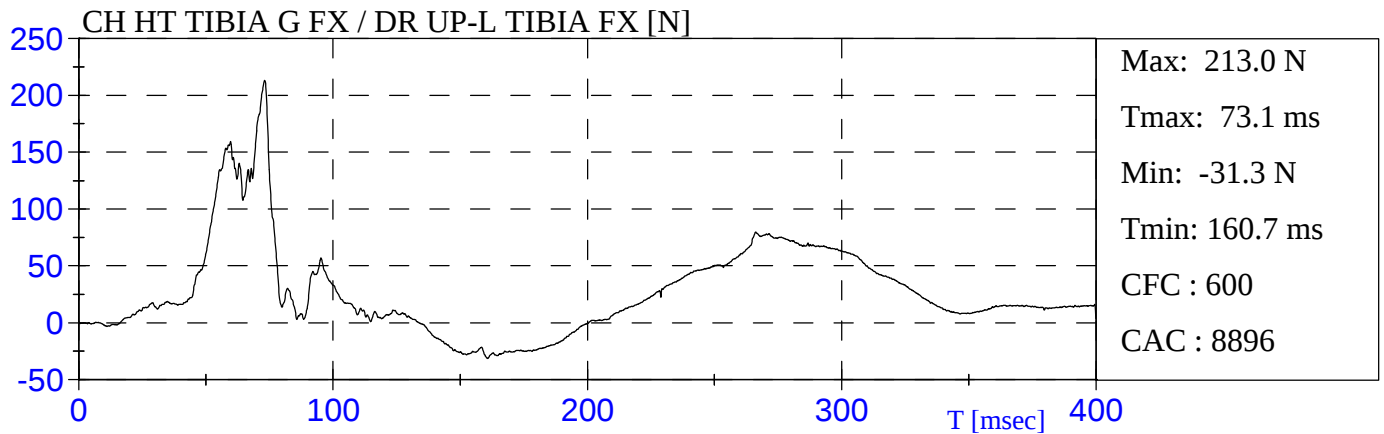
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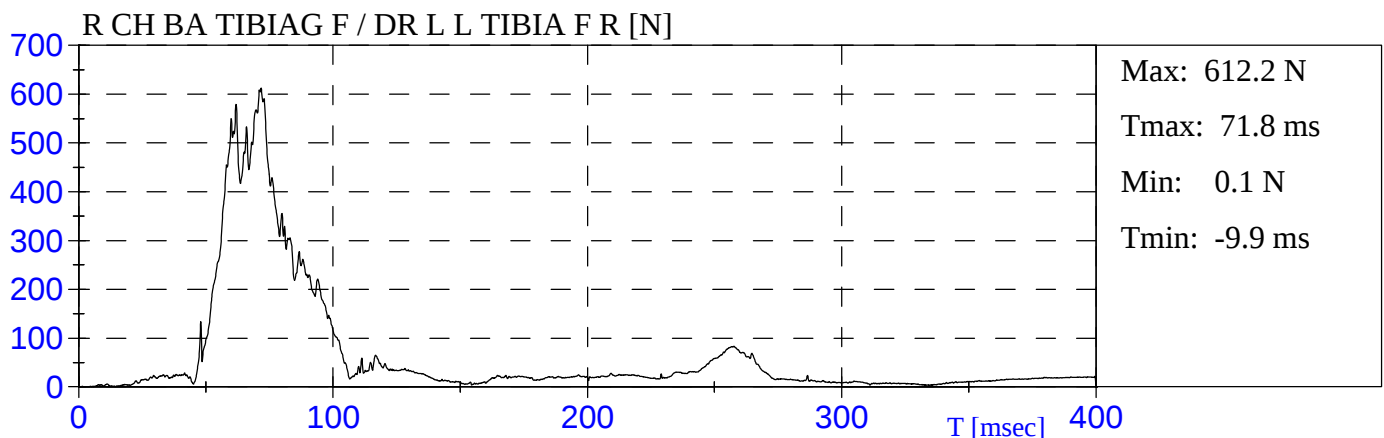
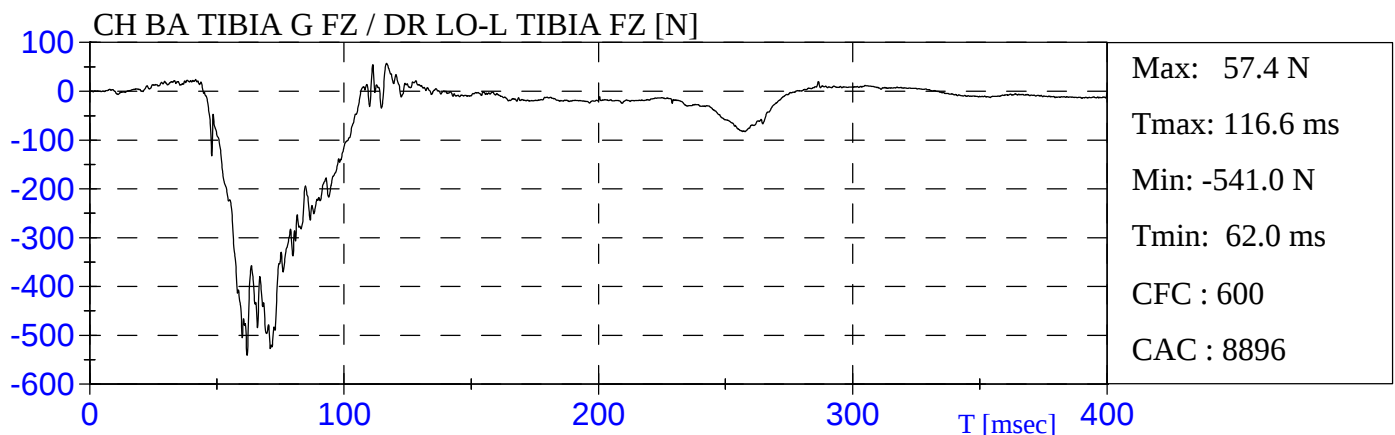
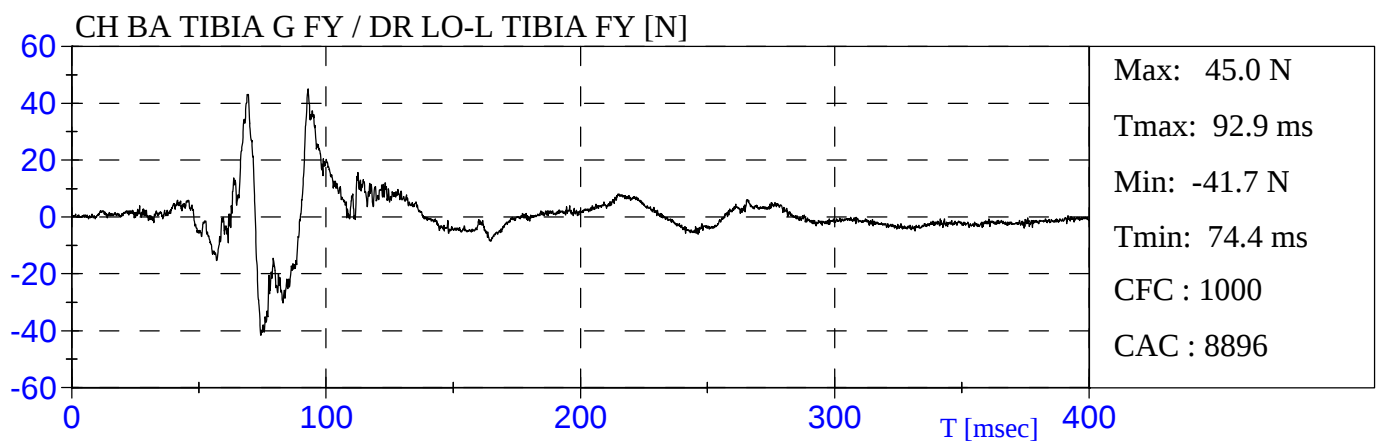
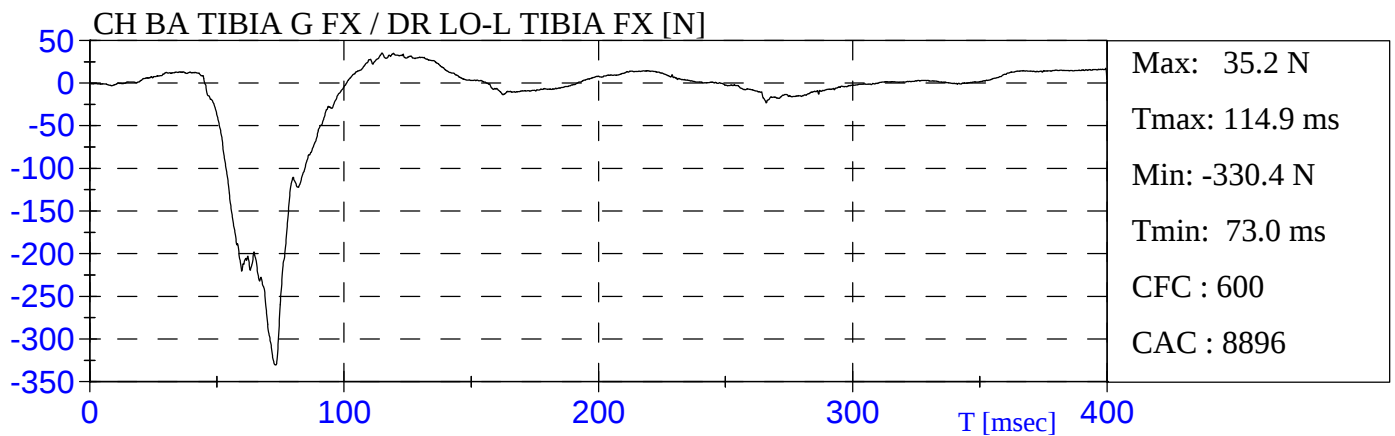


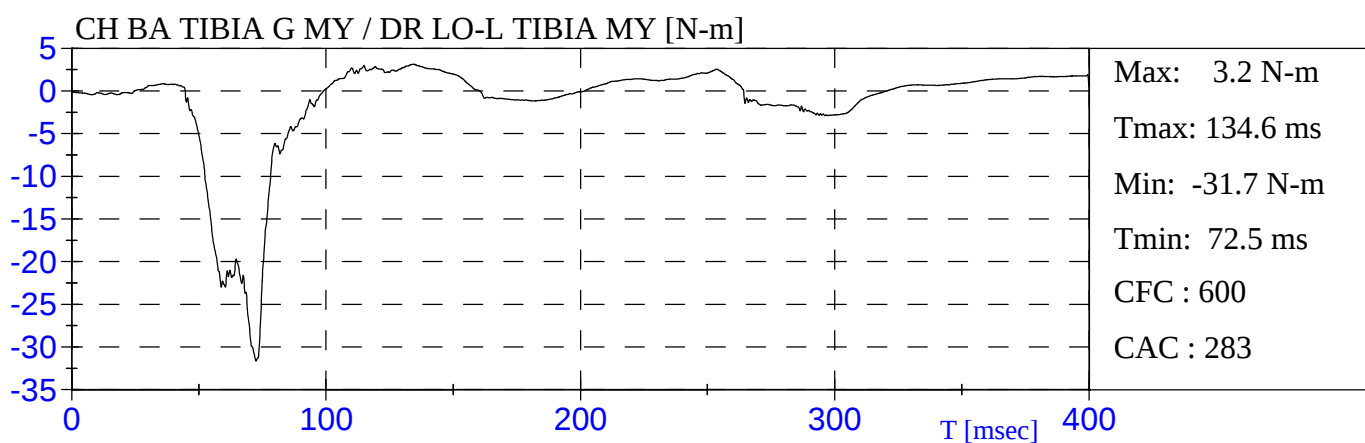
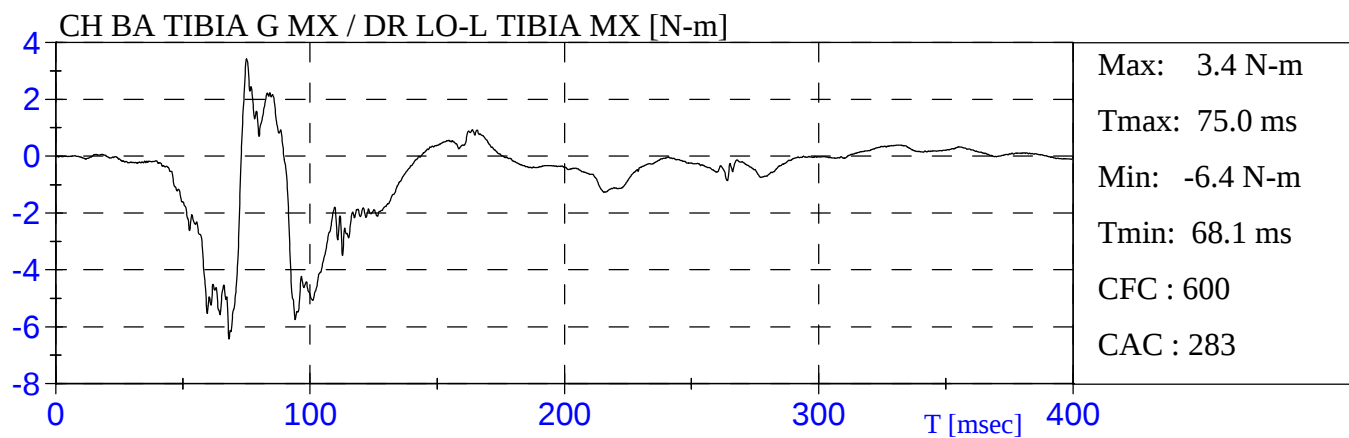


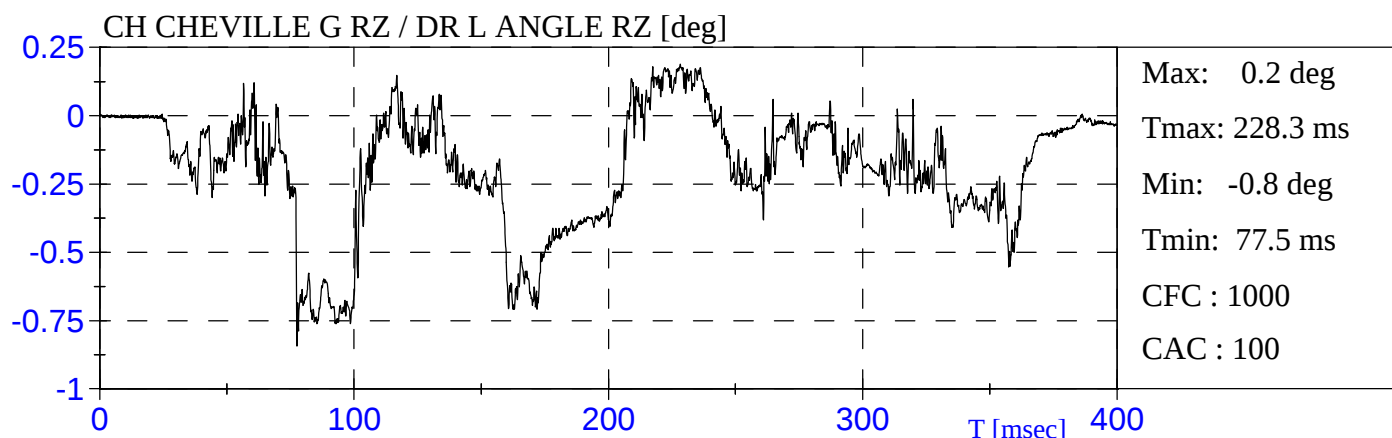
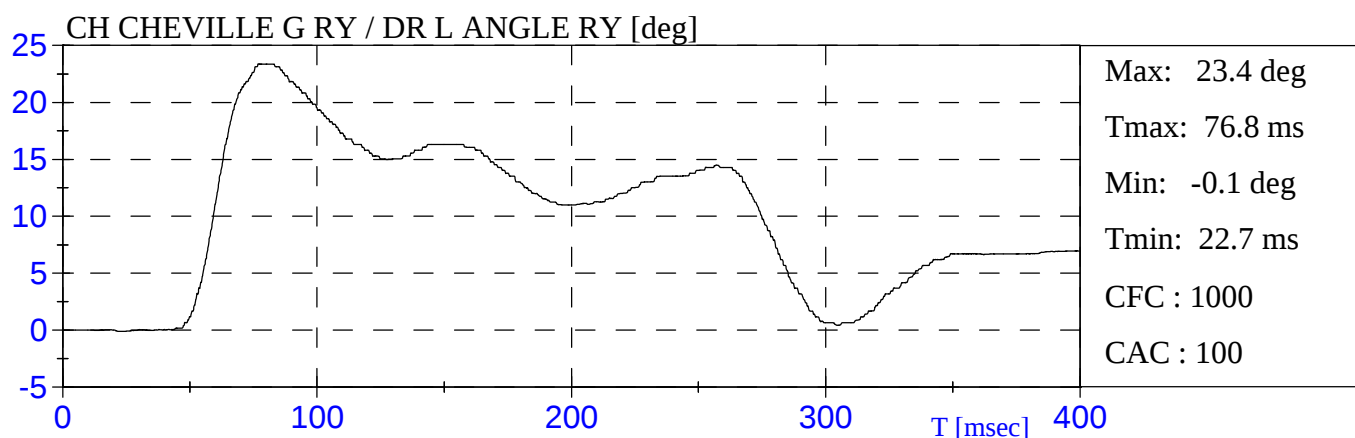
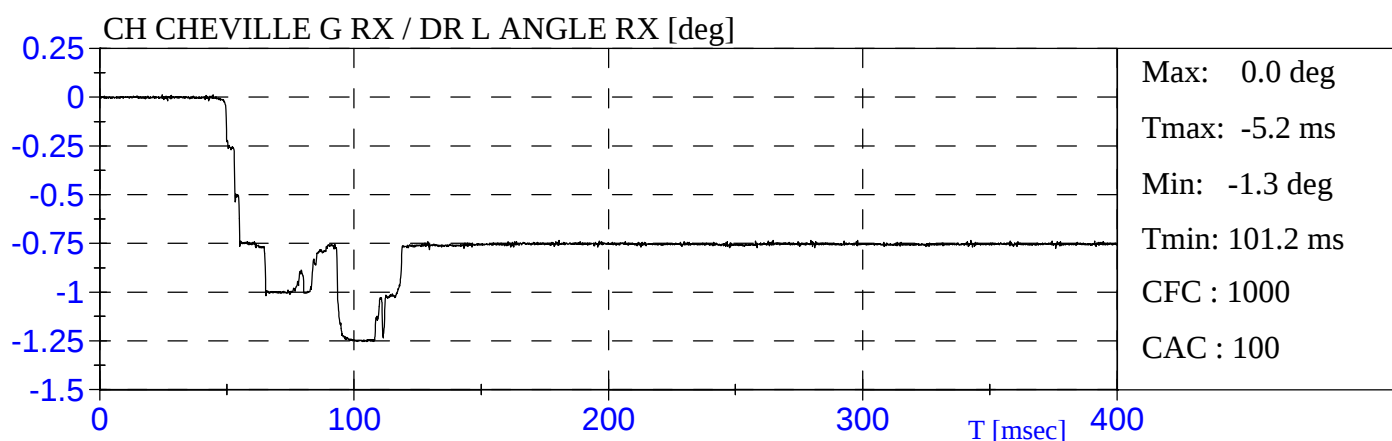
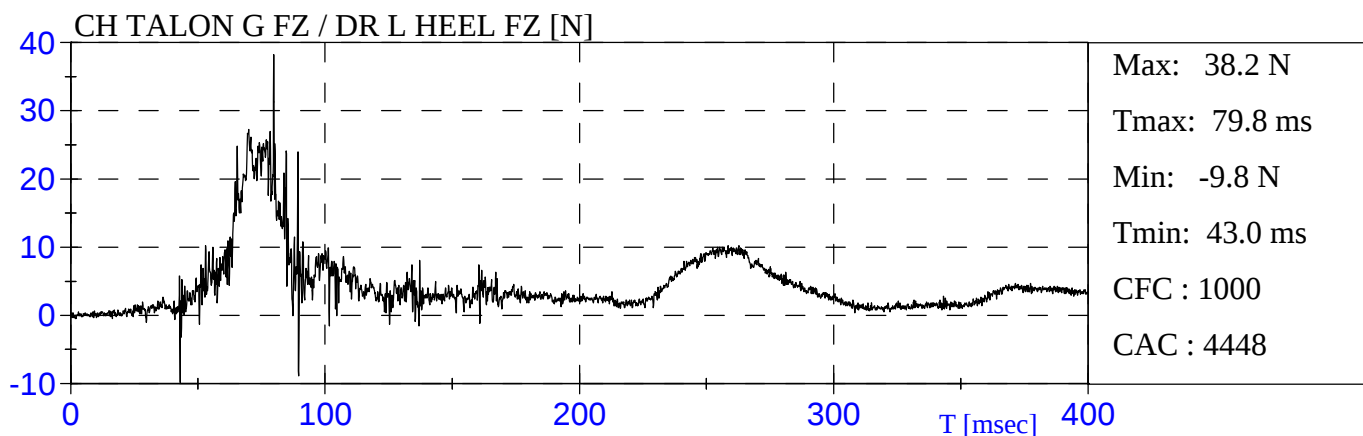


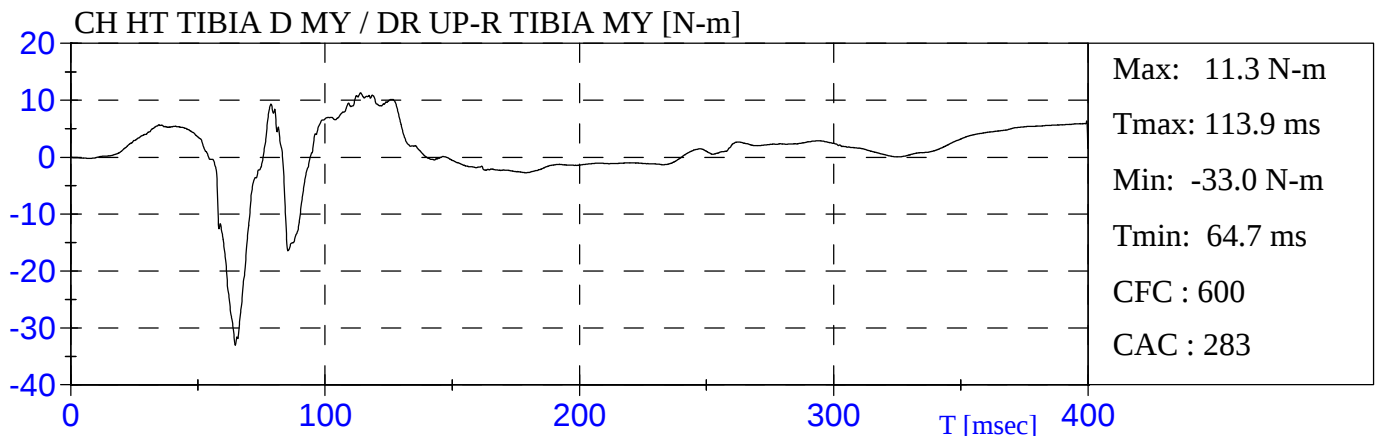
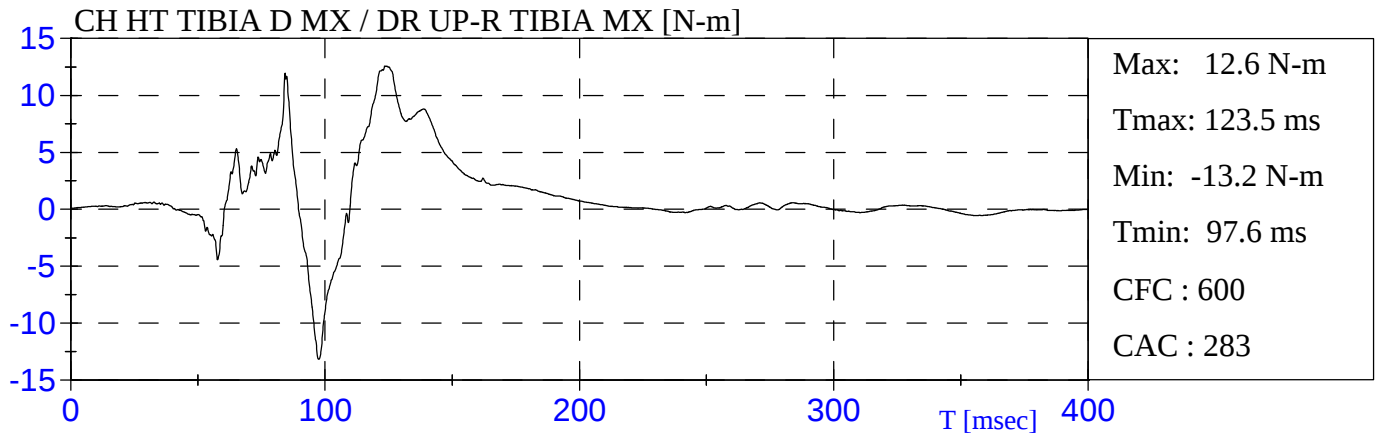
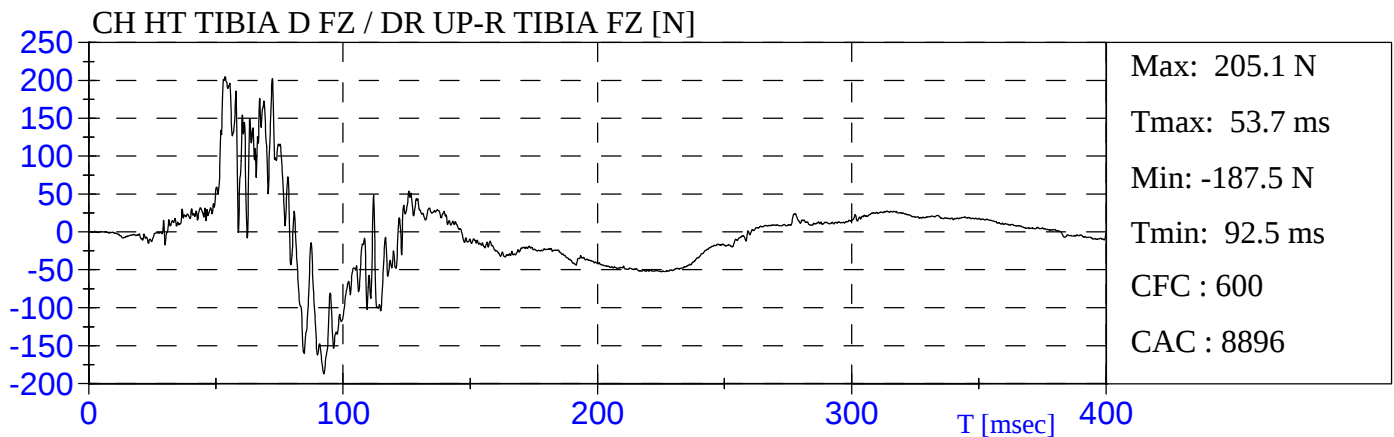
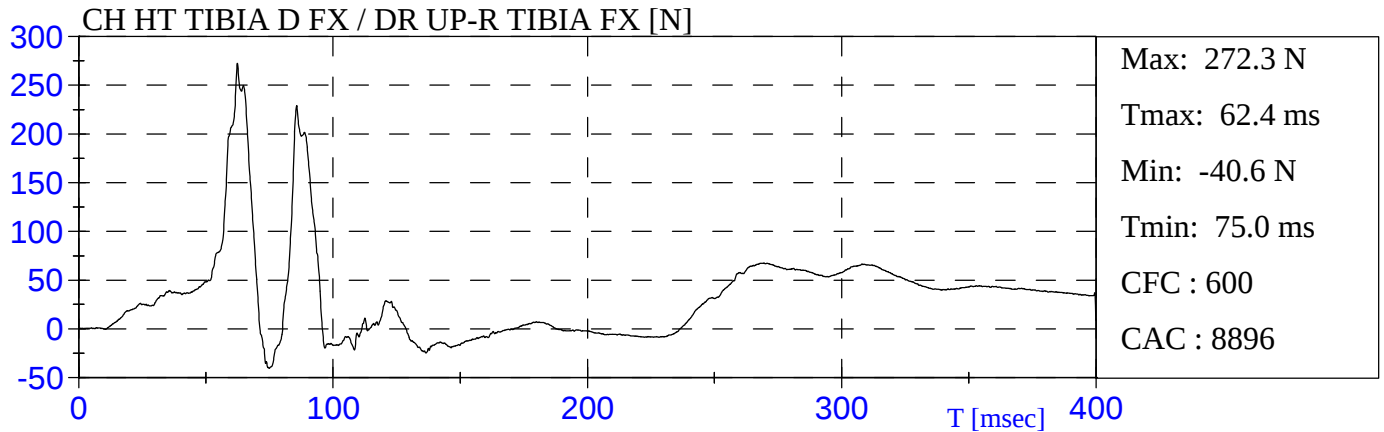


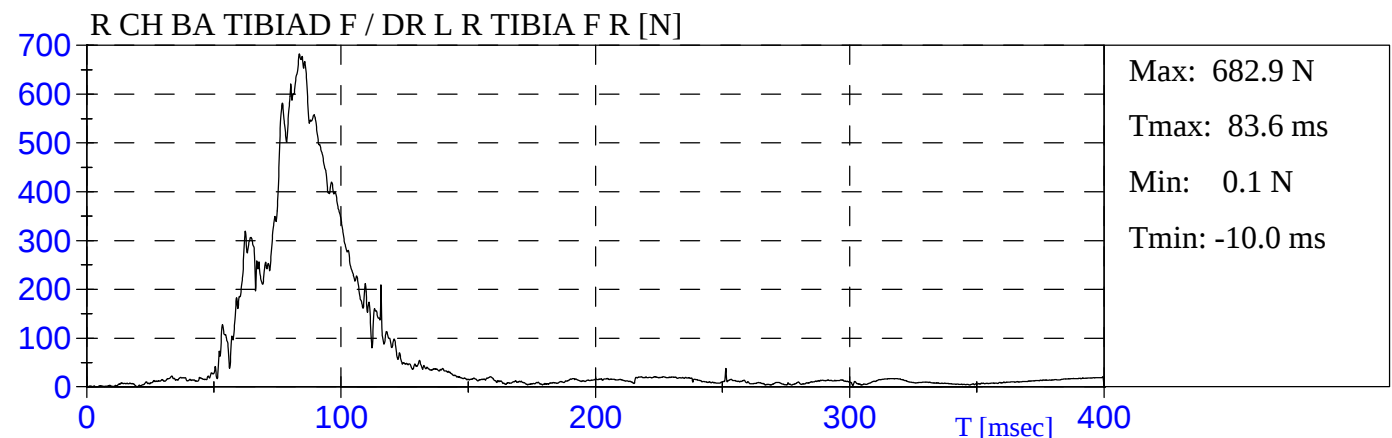
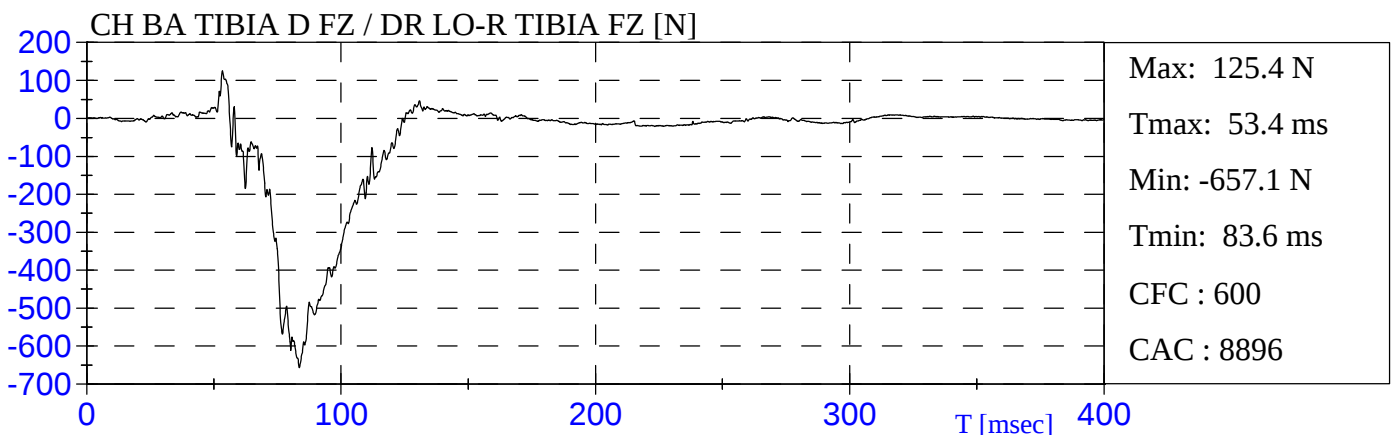
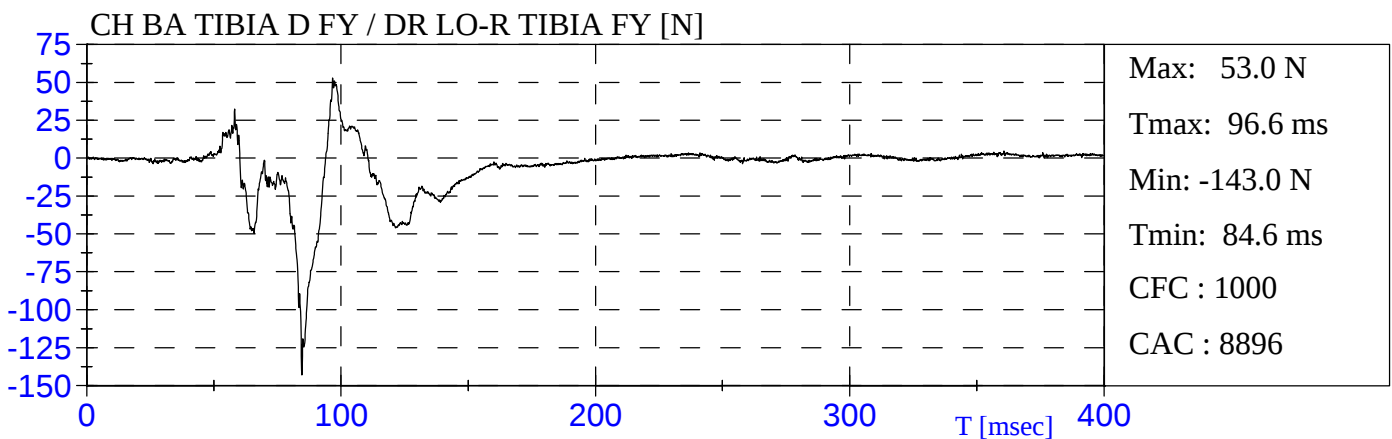
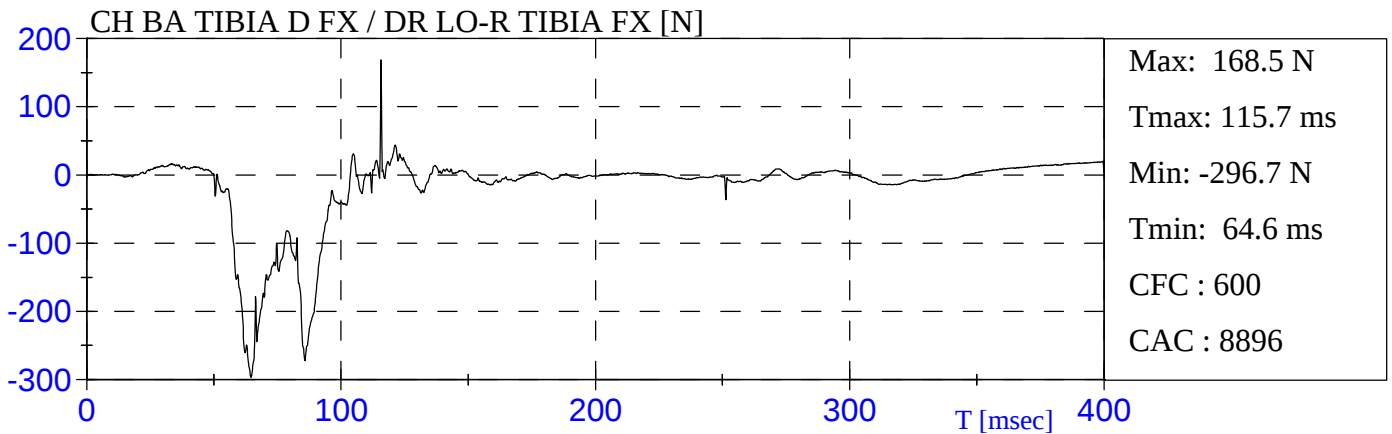


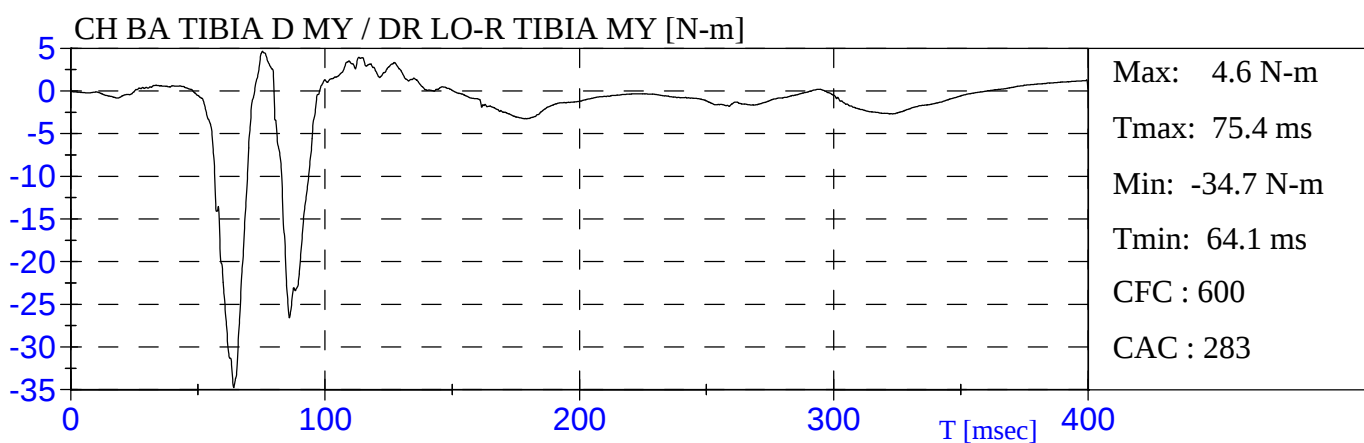
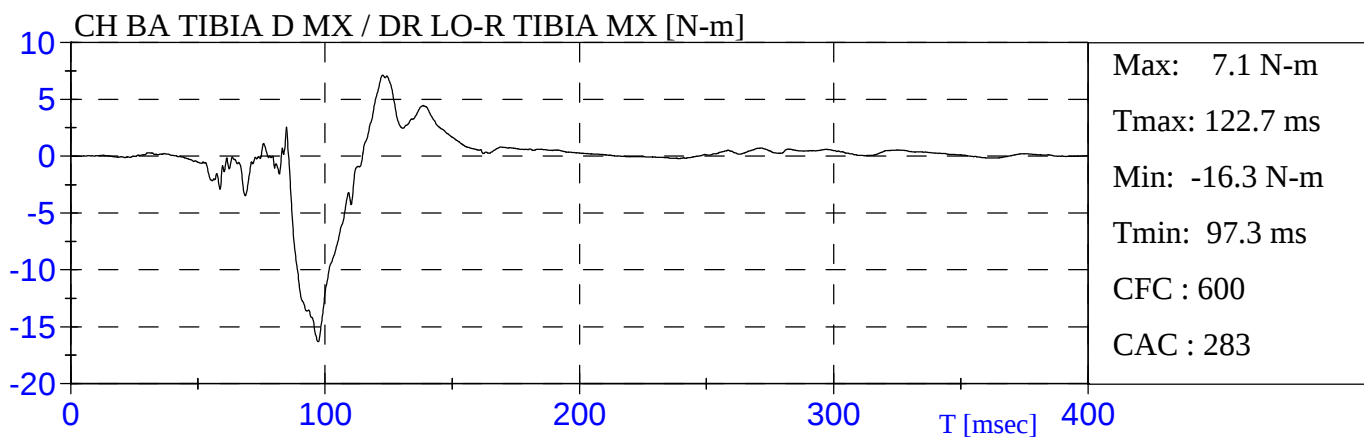


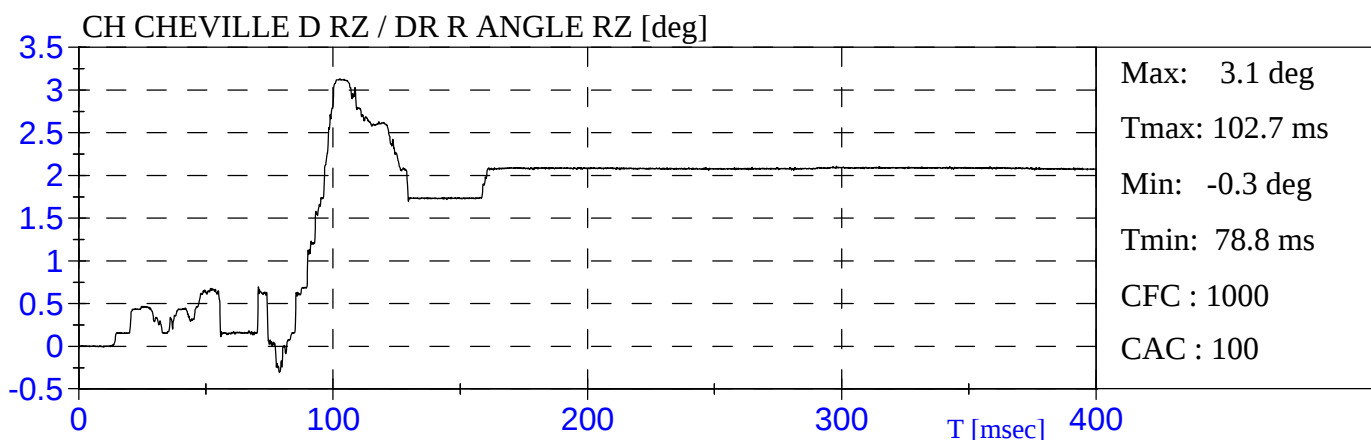
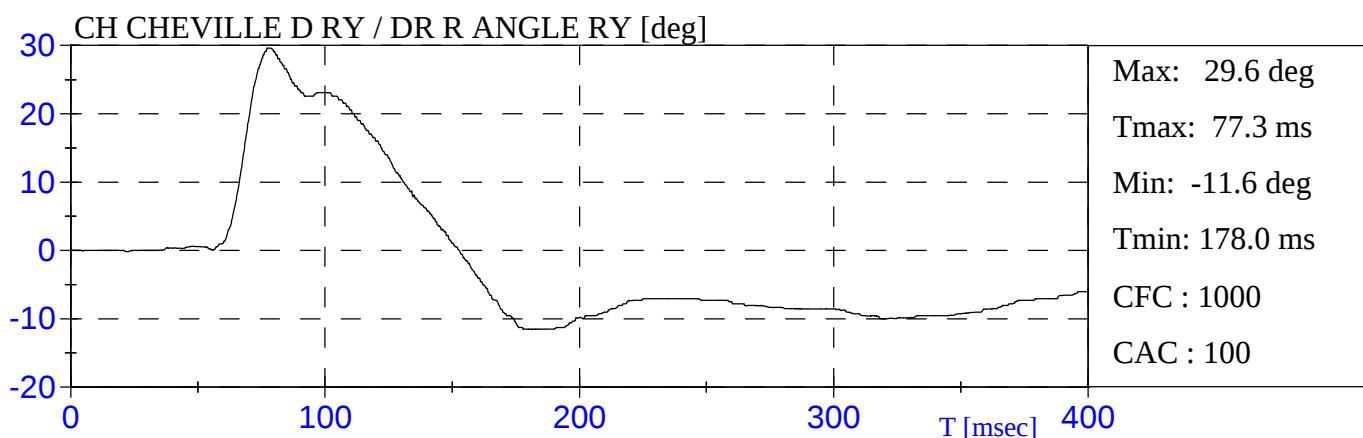
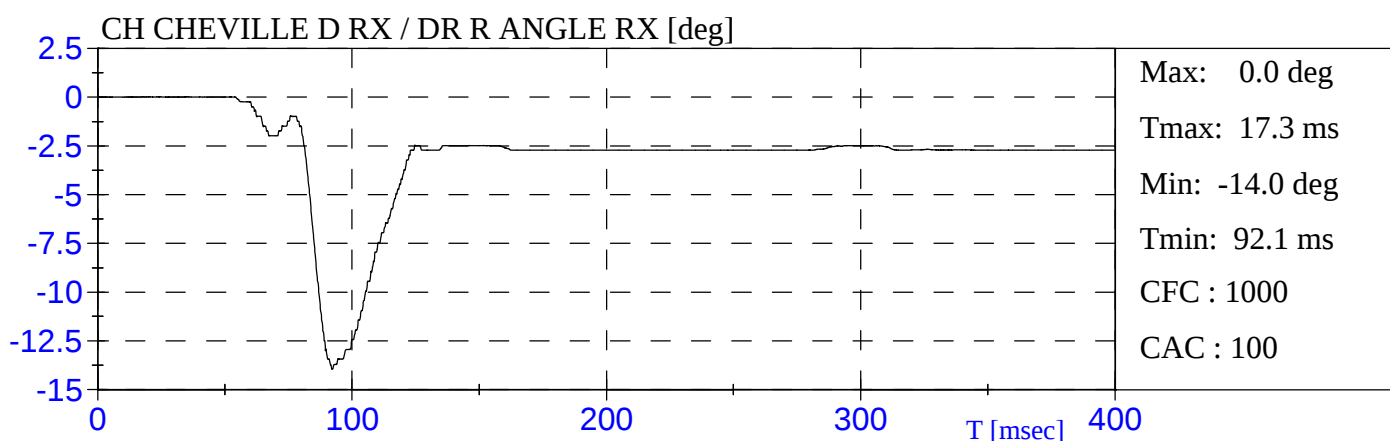
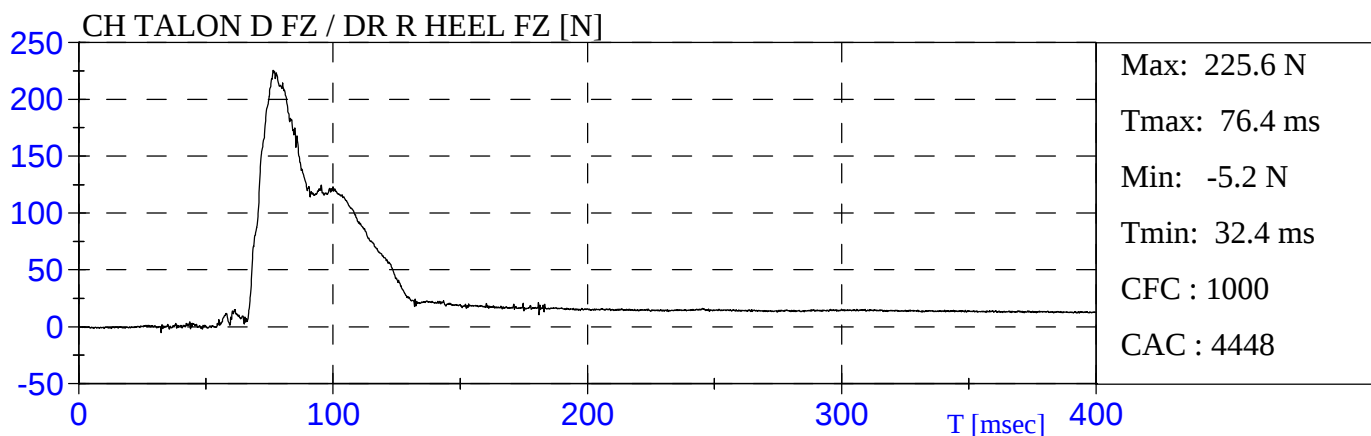


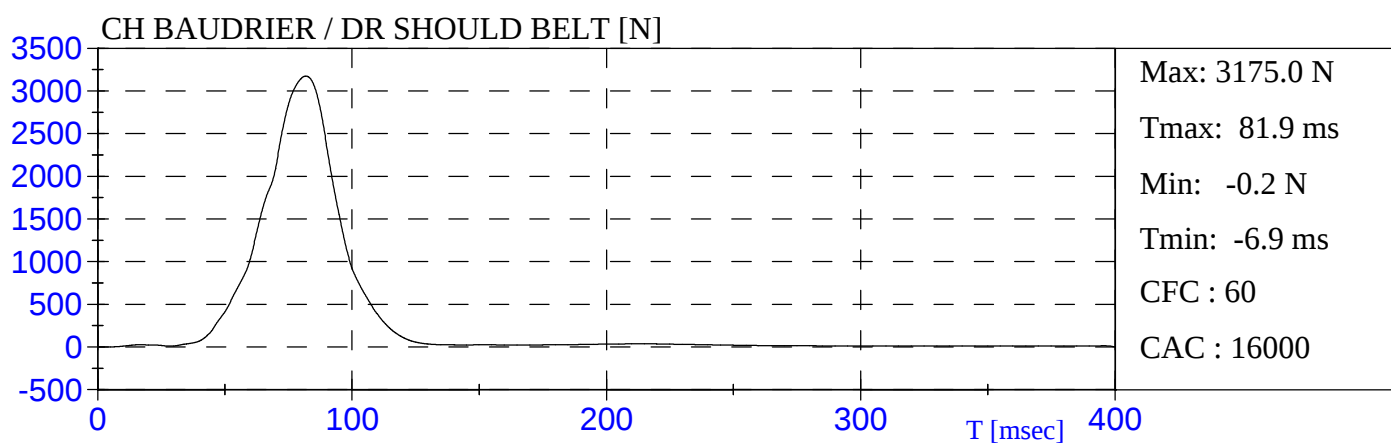
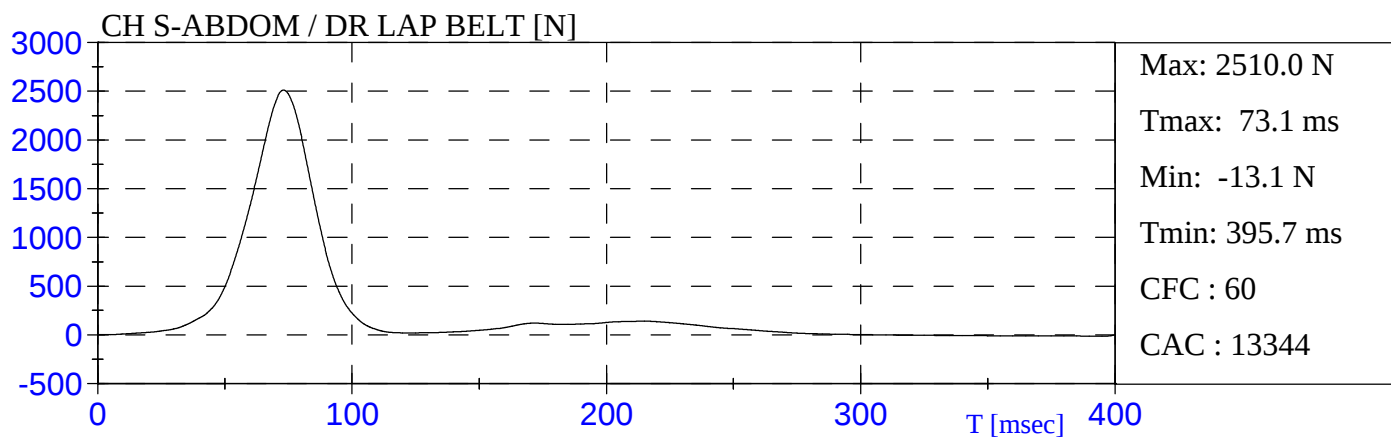


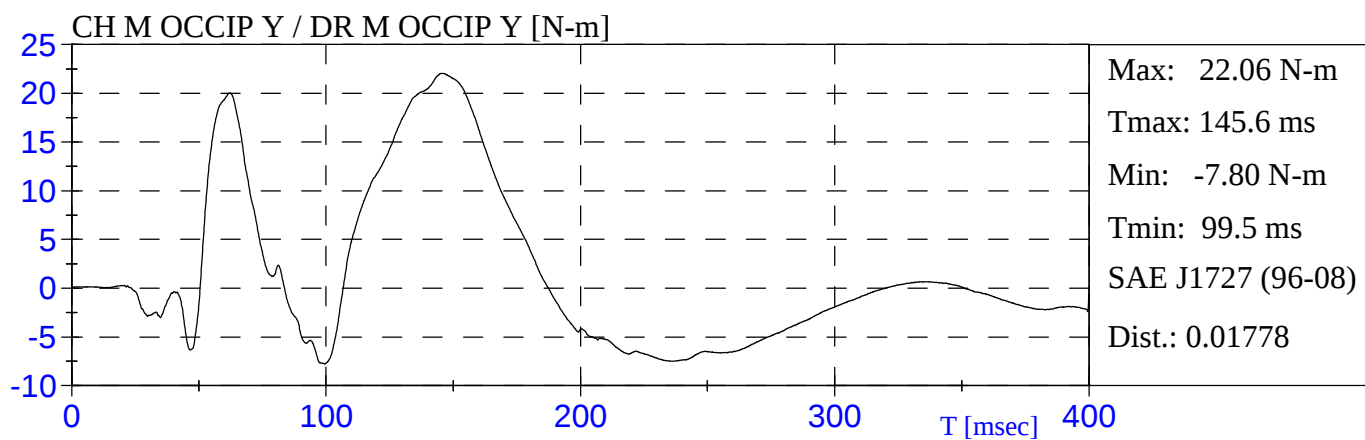


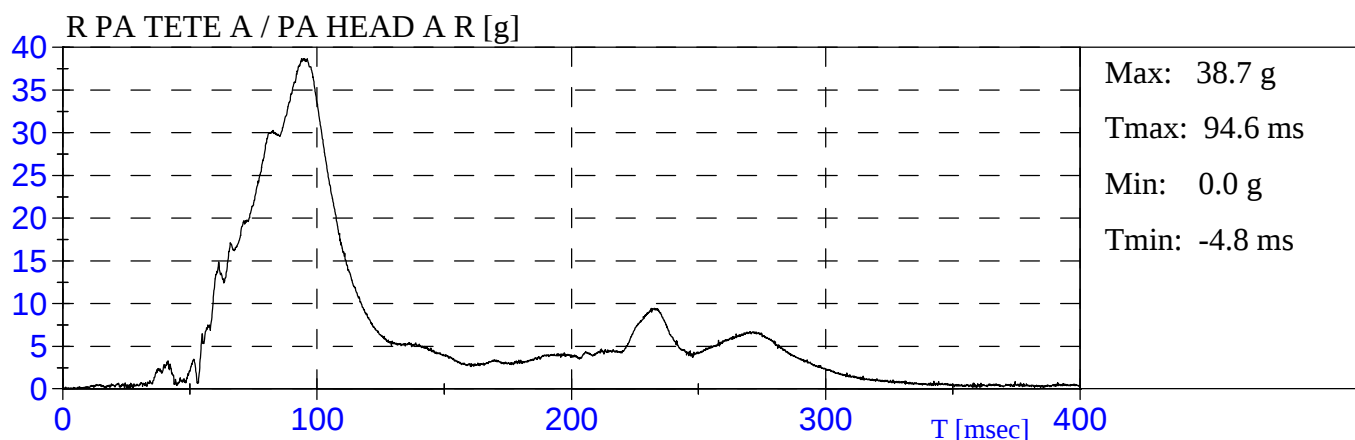
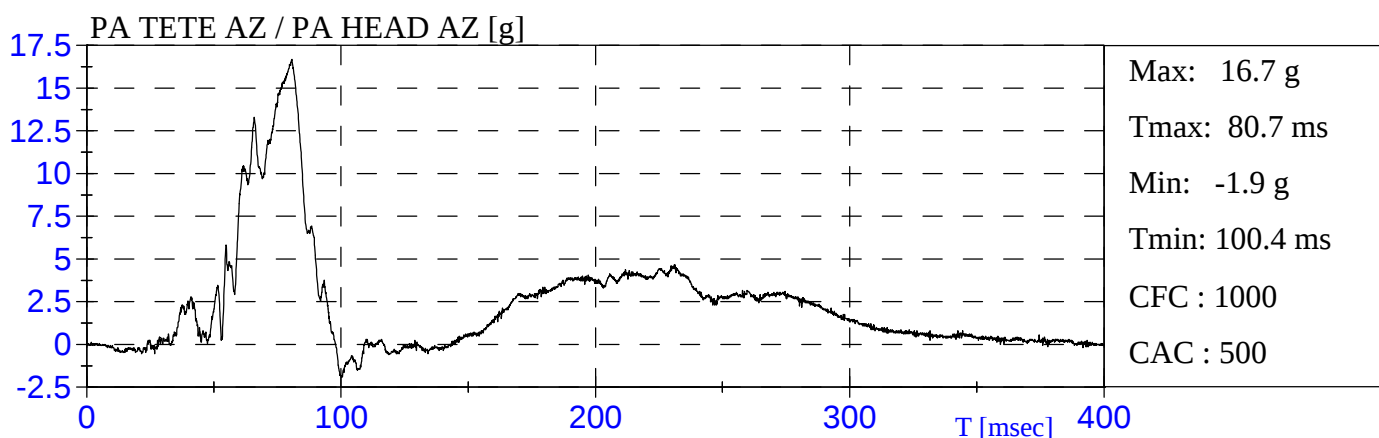
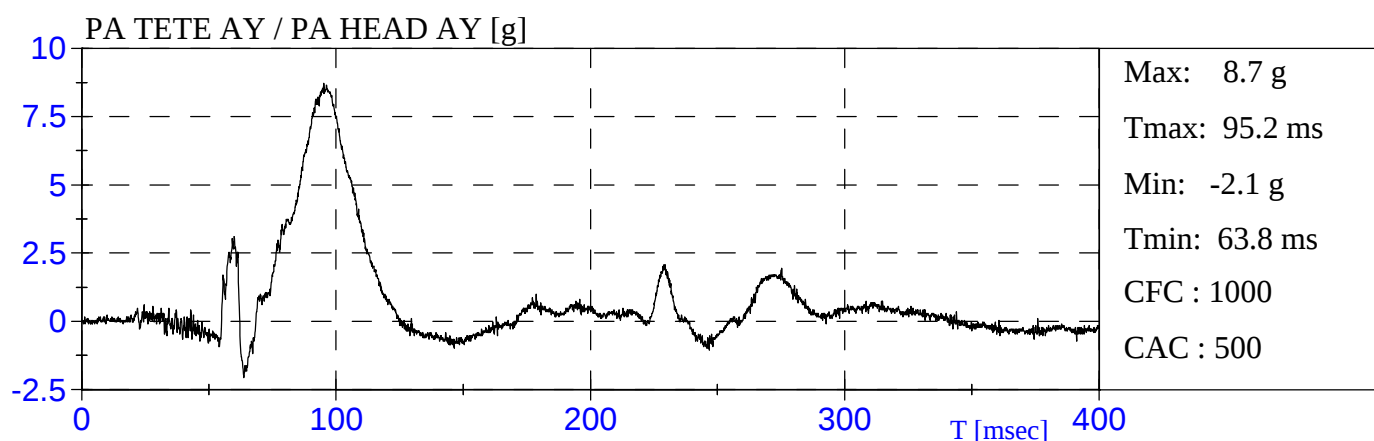
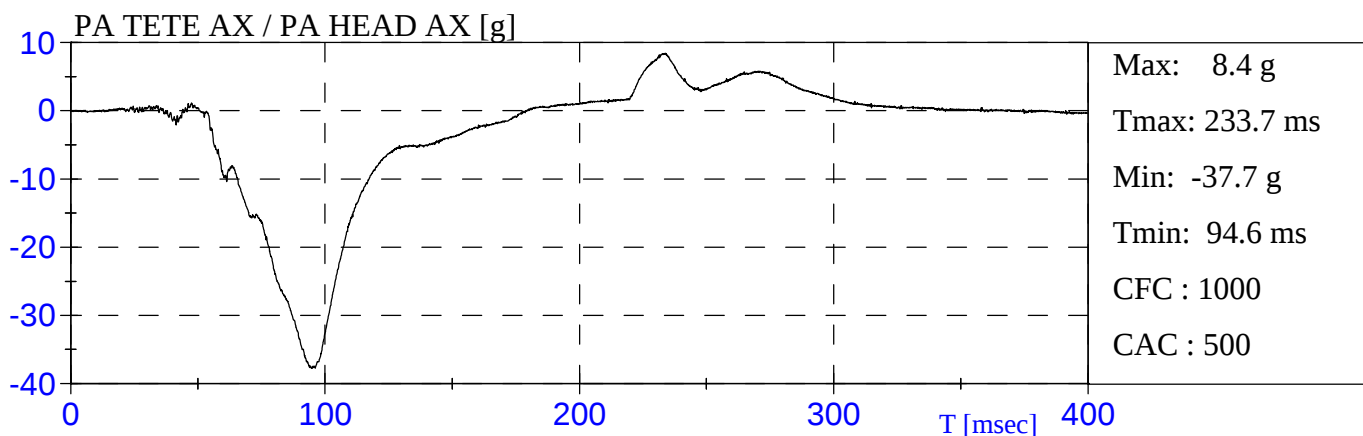


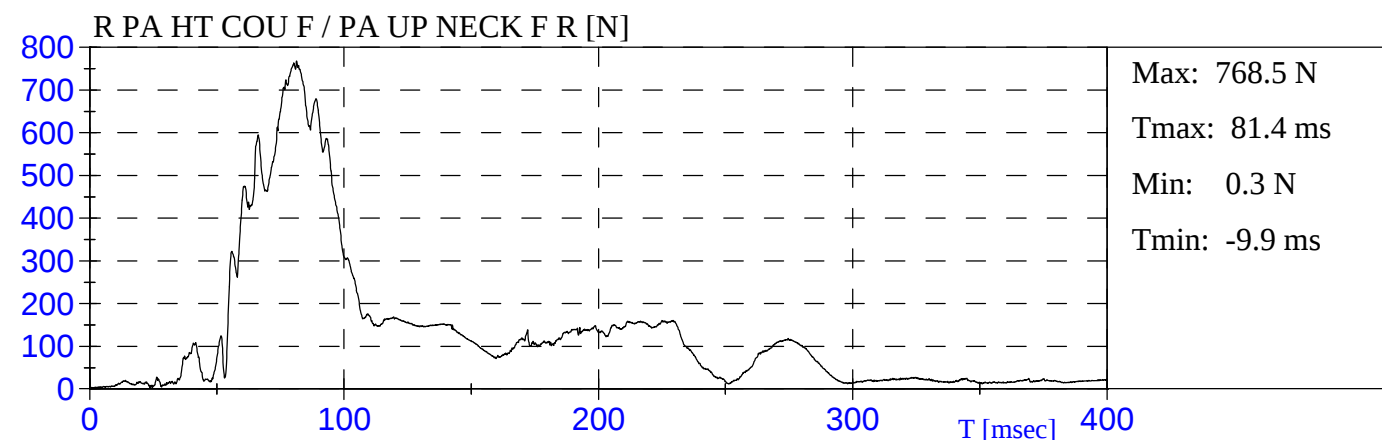
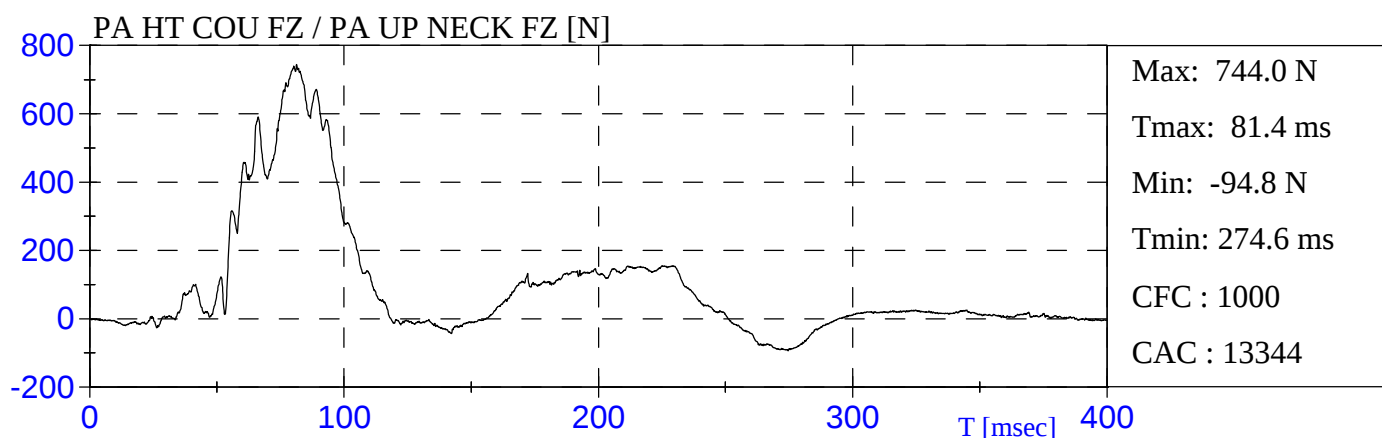
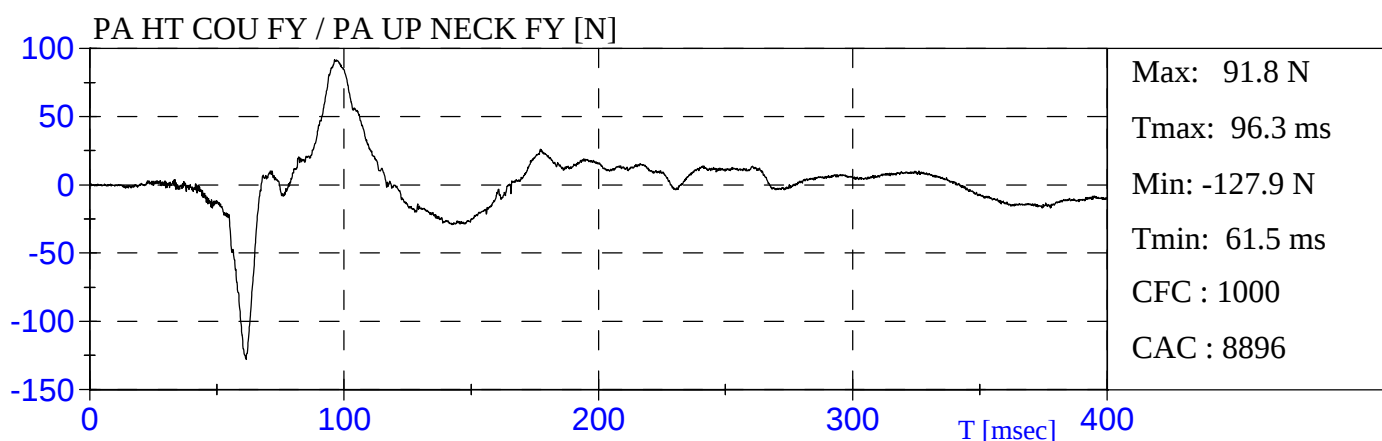
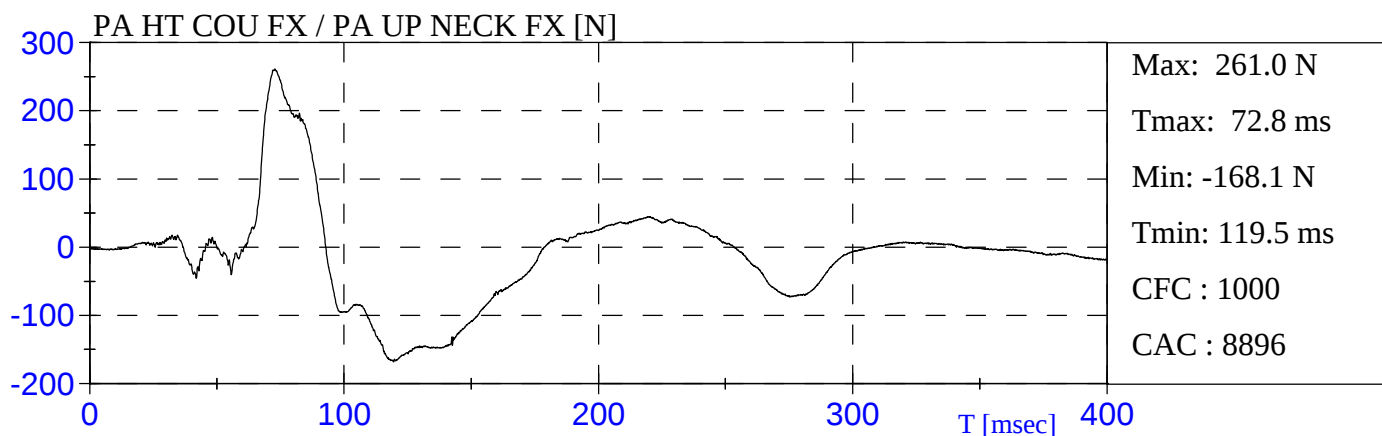








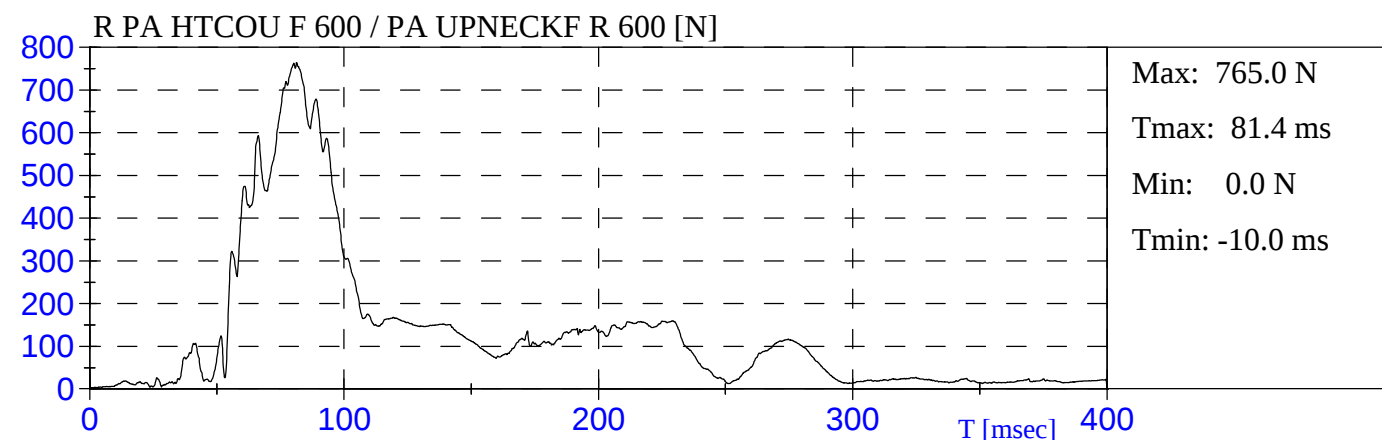
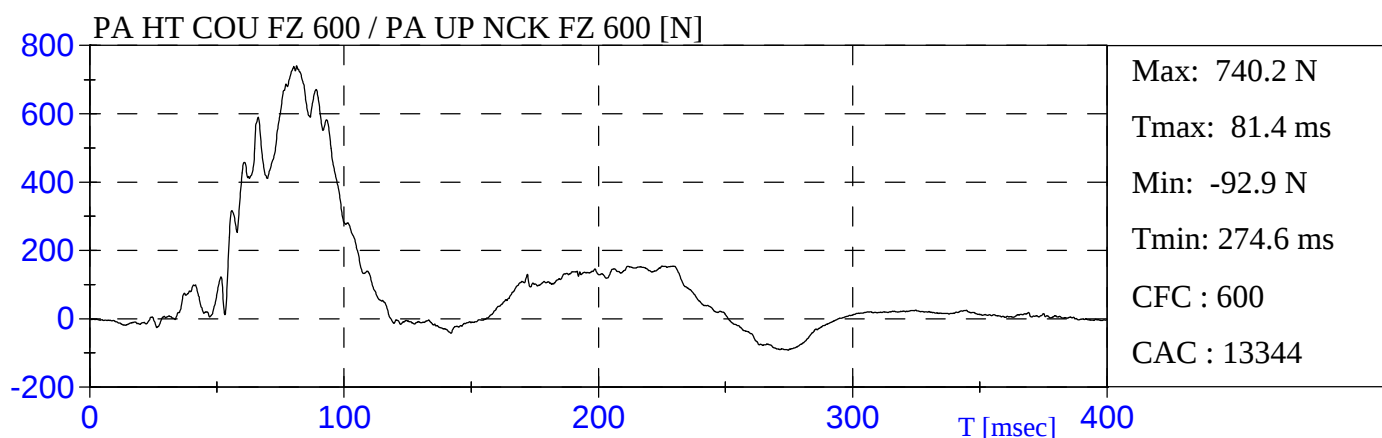
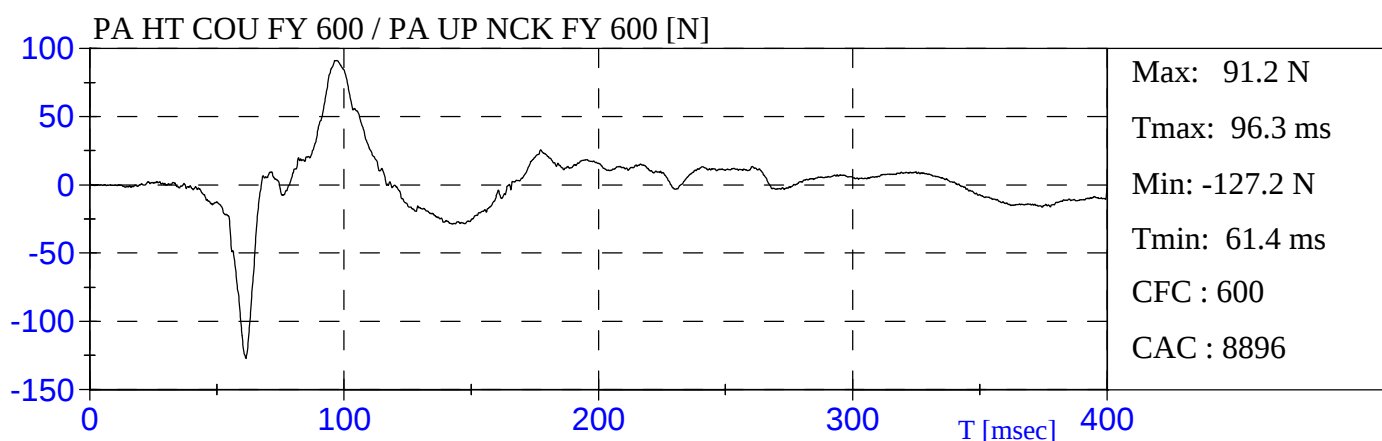
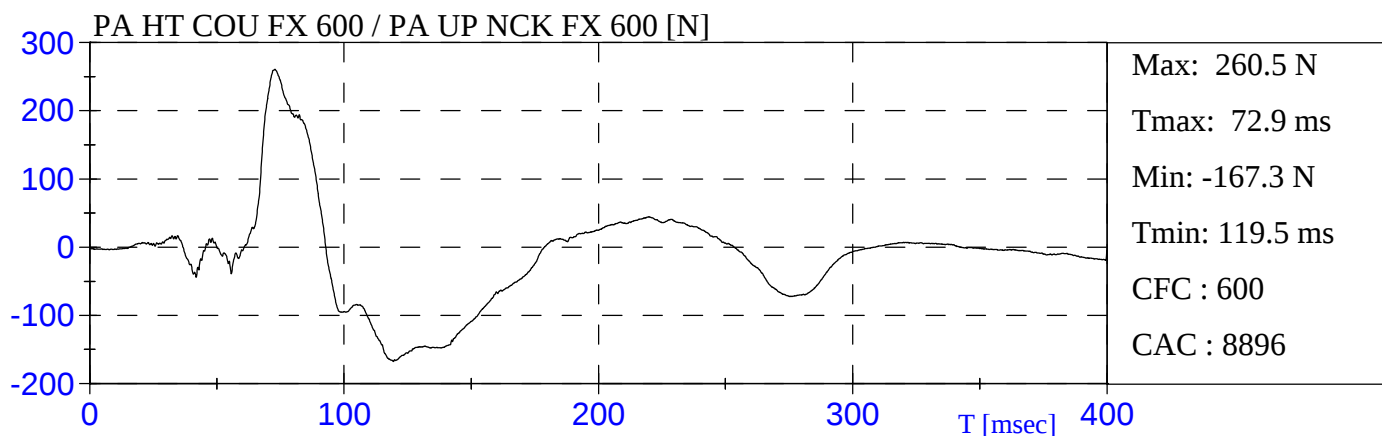


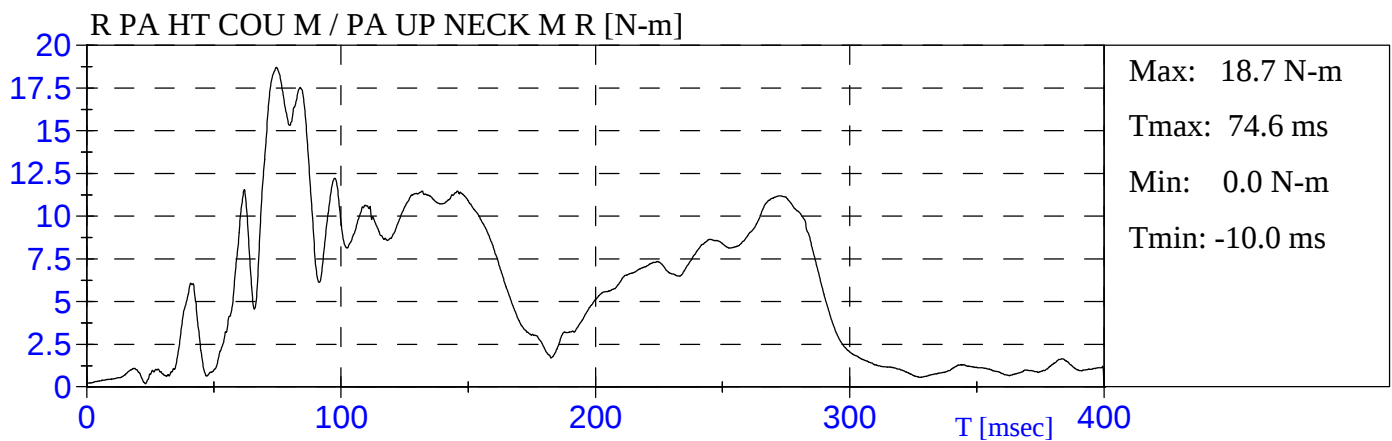
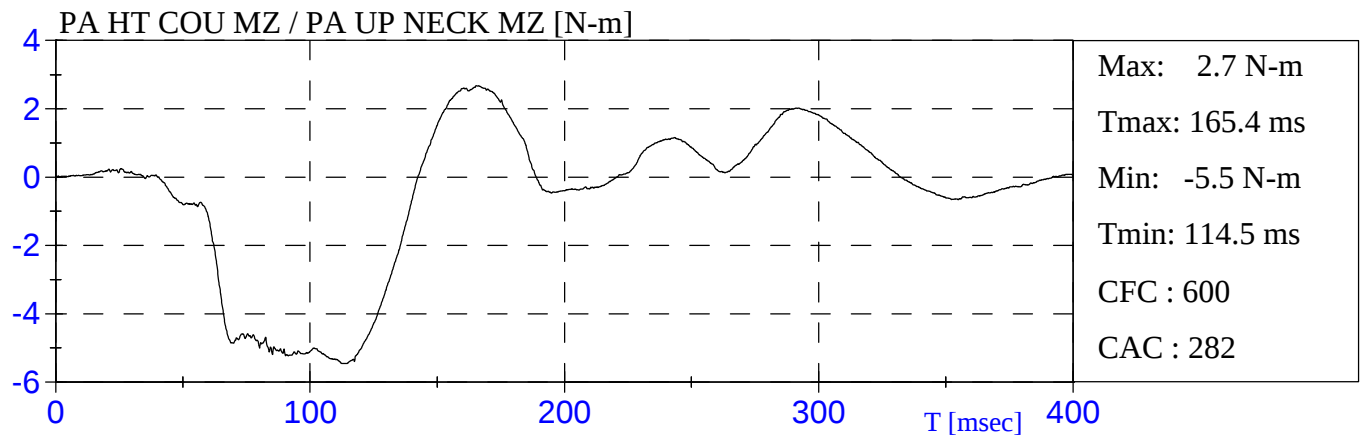
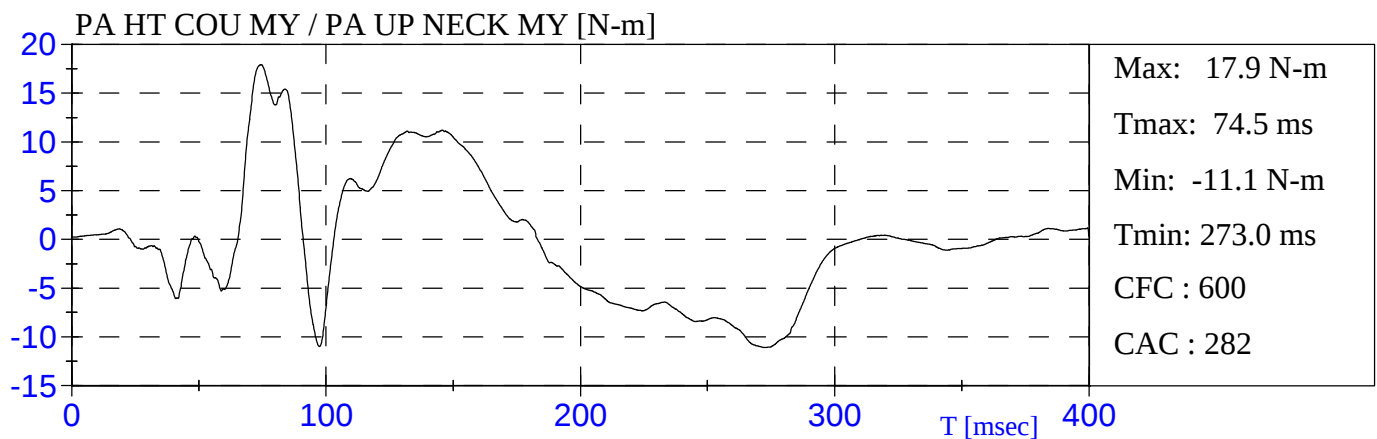
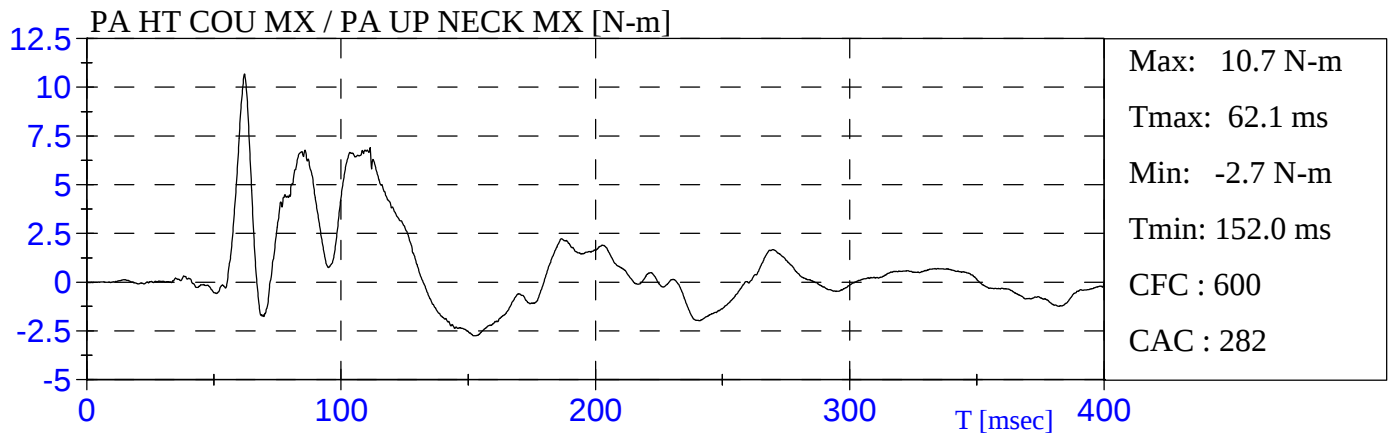


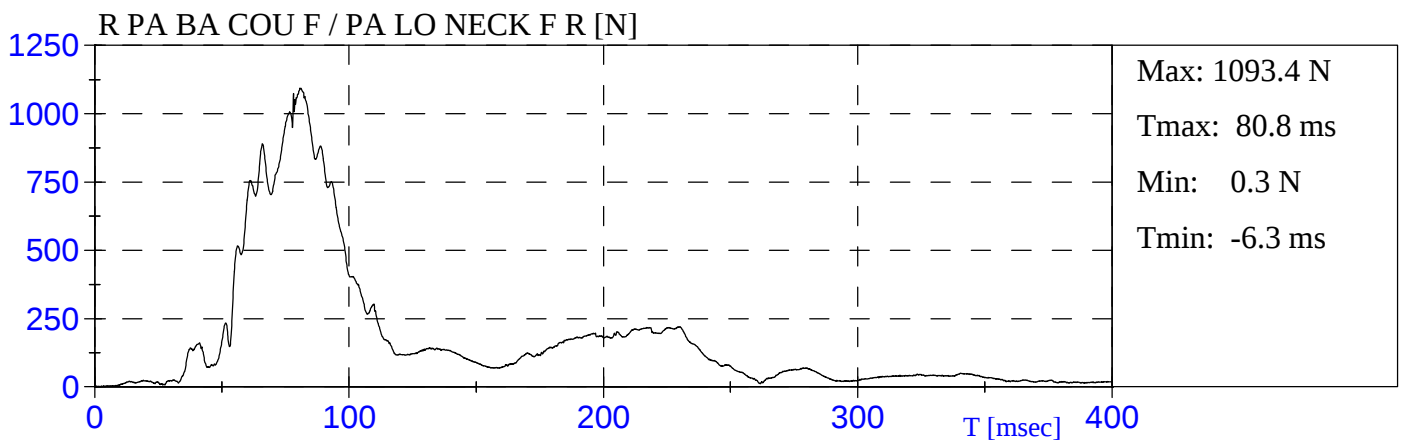
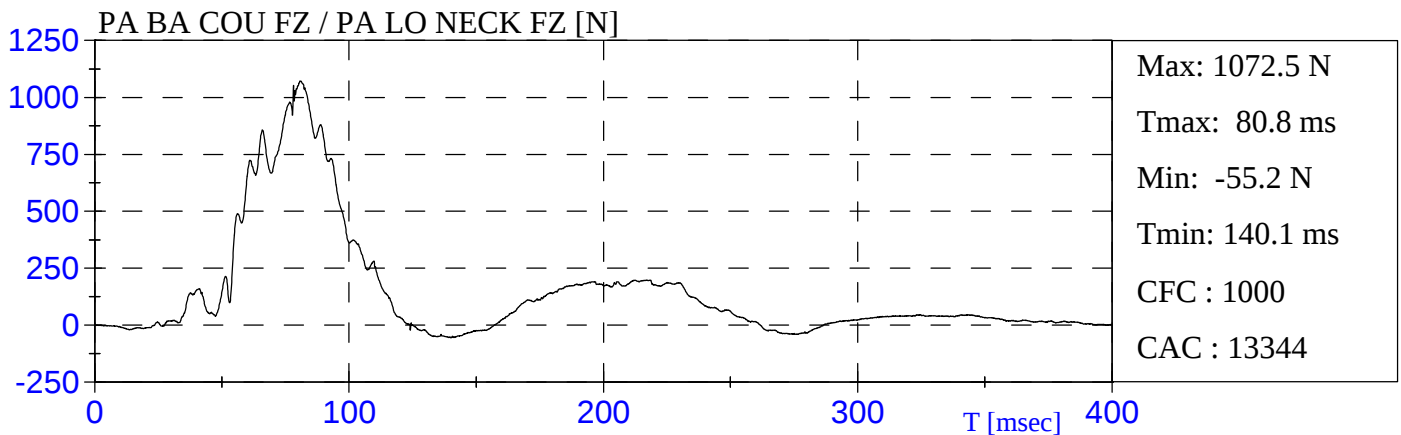
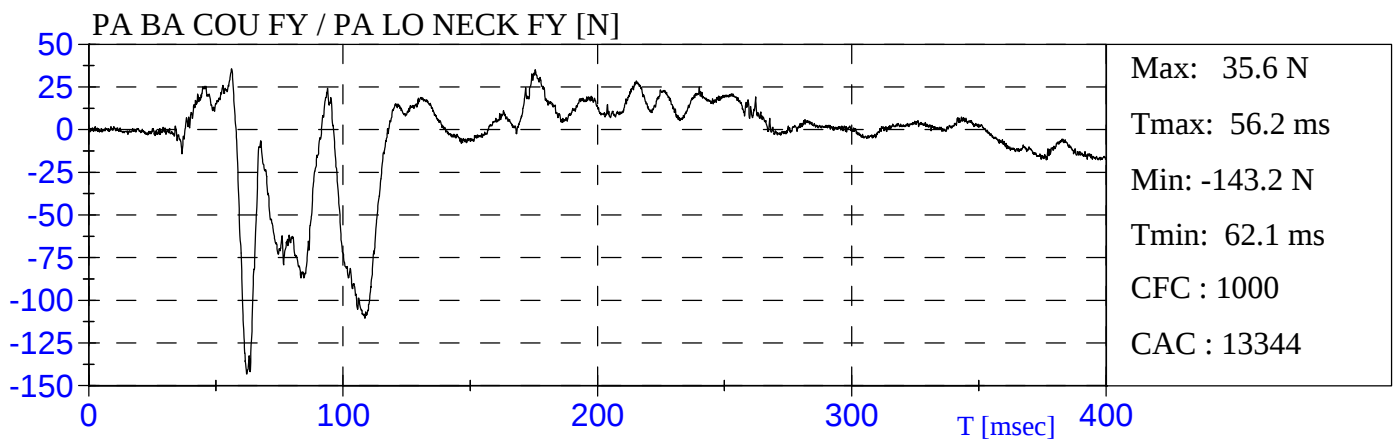
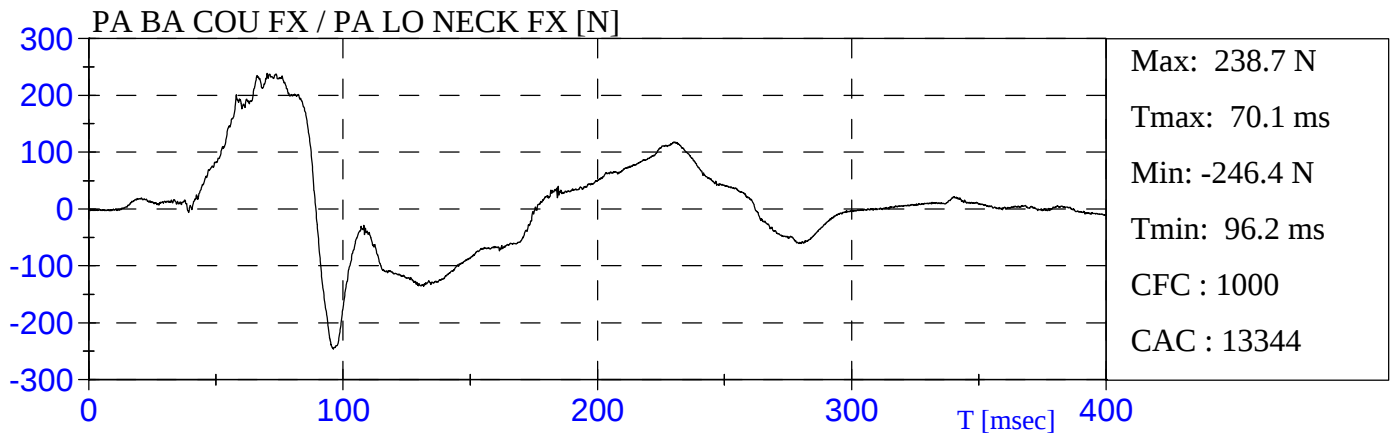


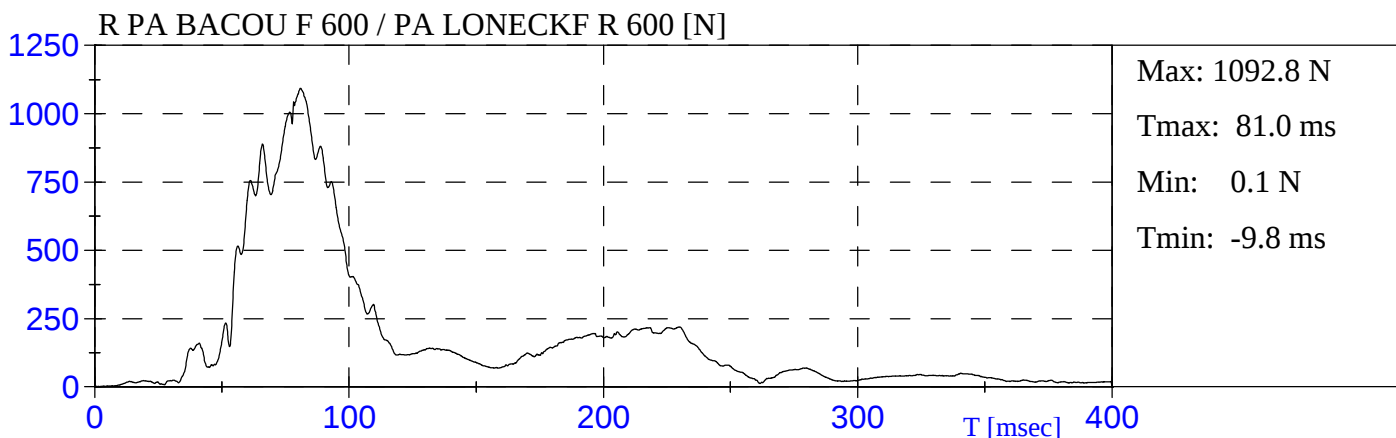
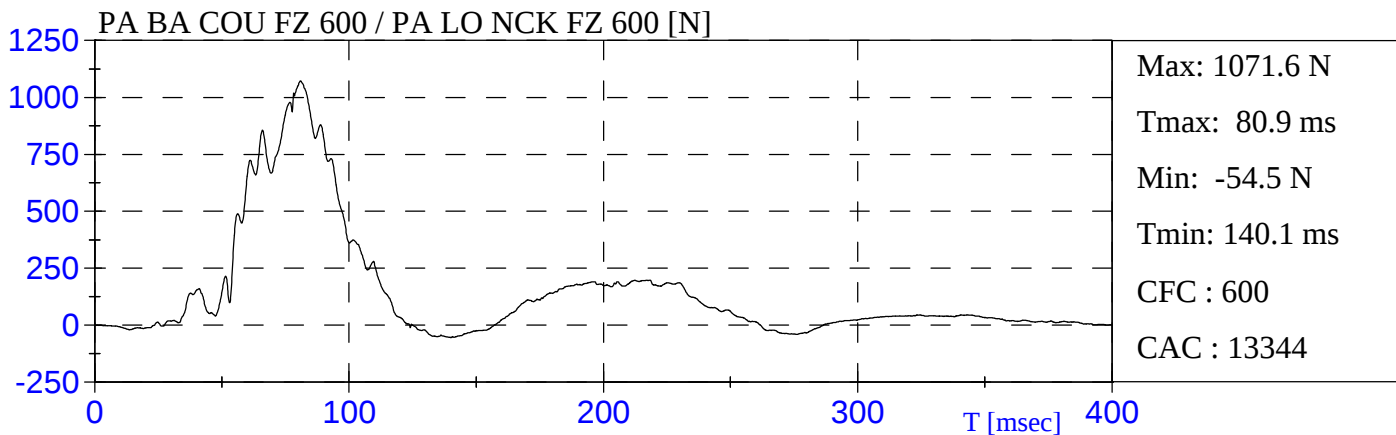
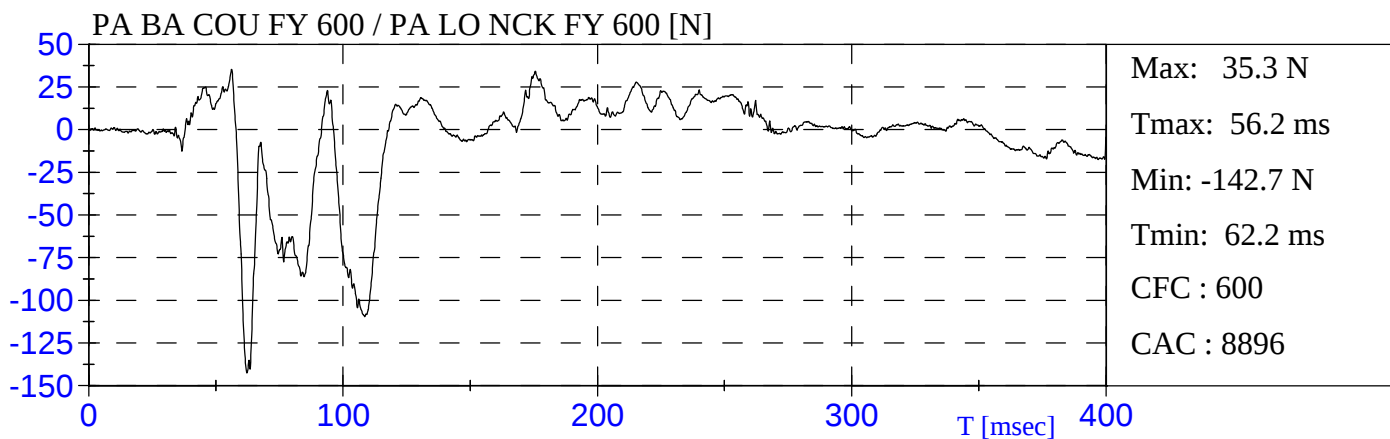
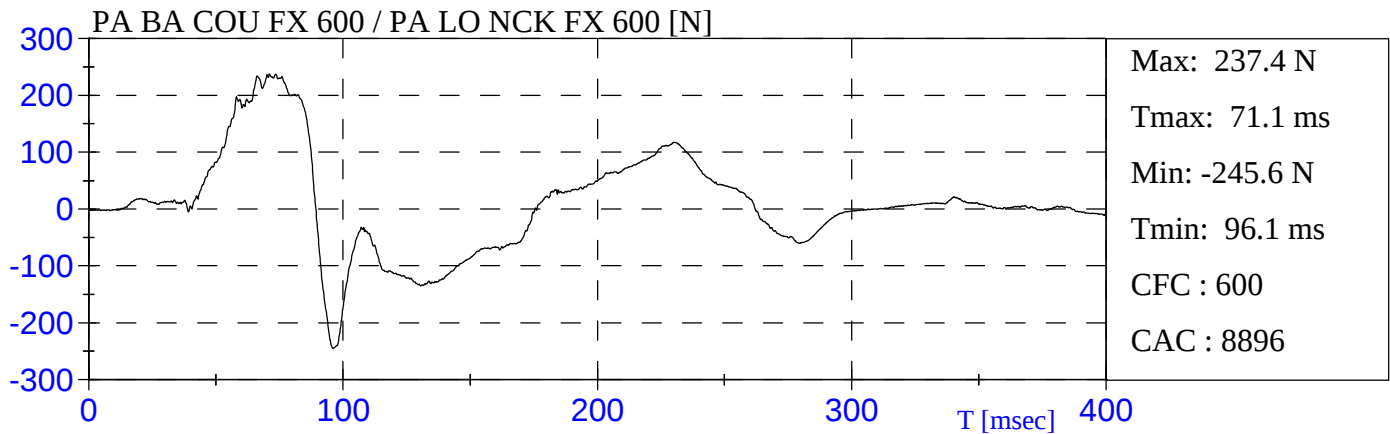
COLLISION FRONTALE
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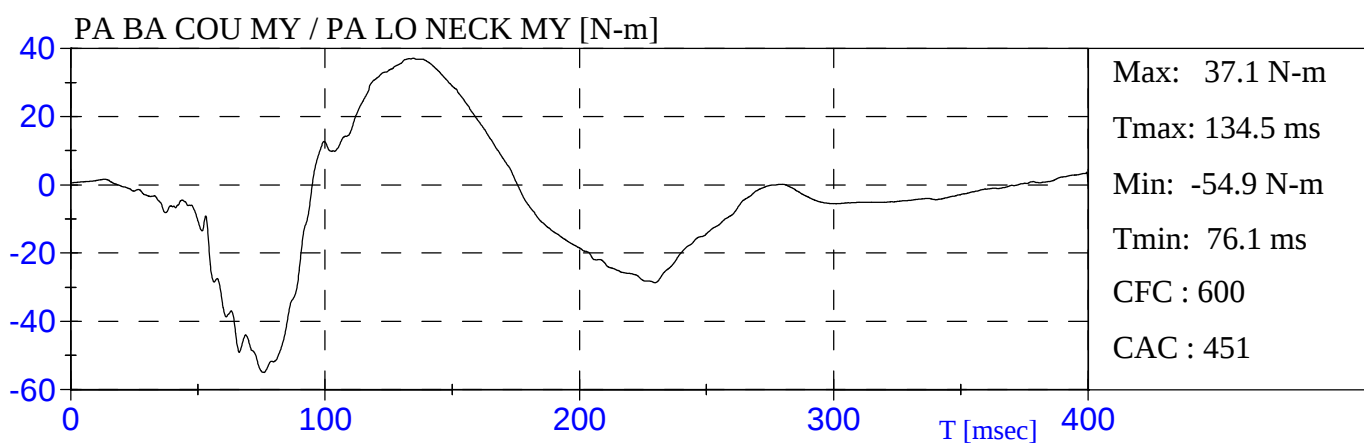
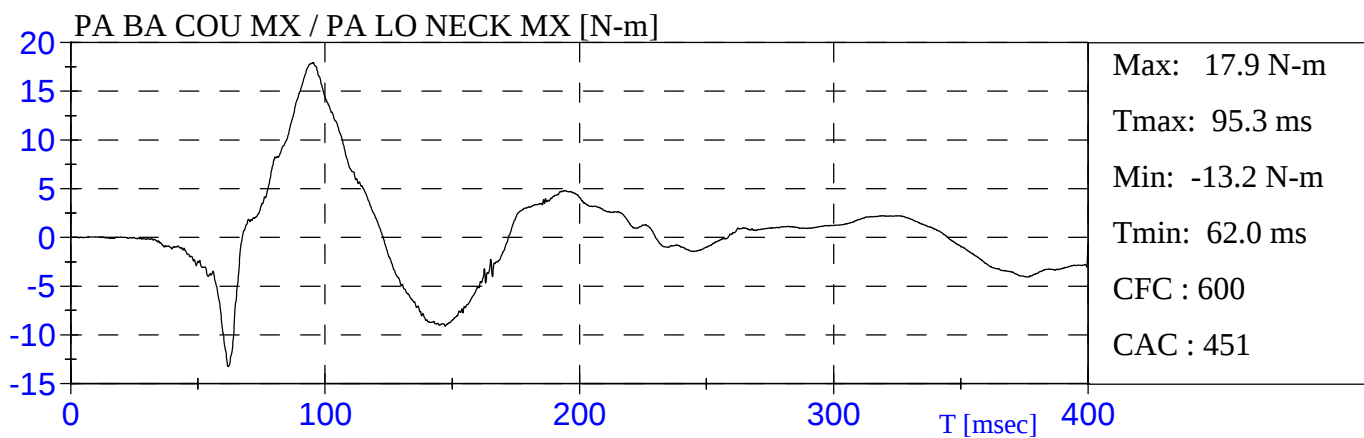
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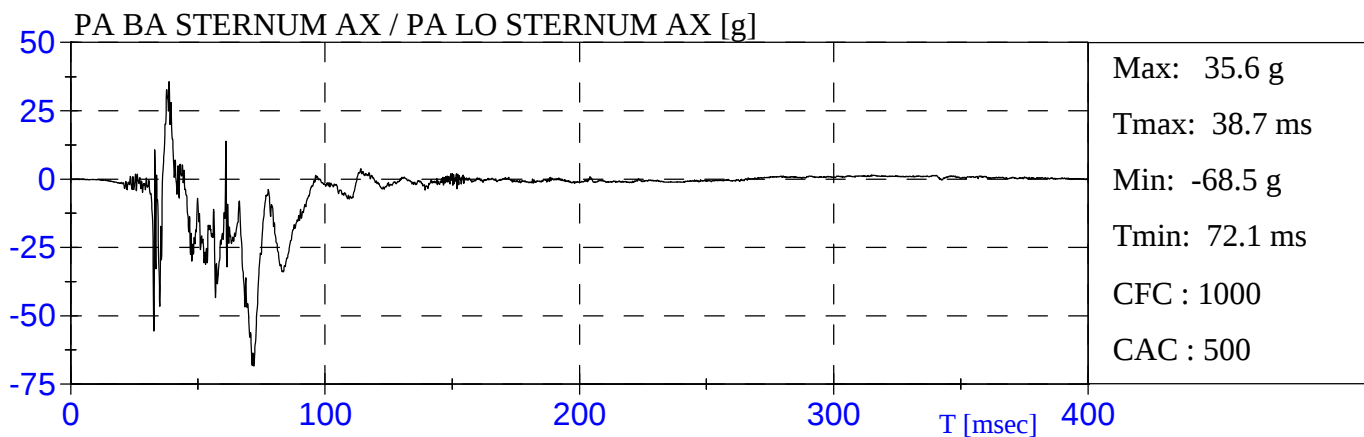
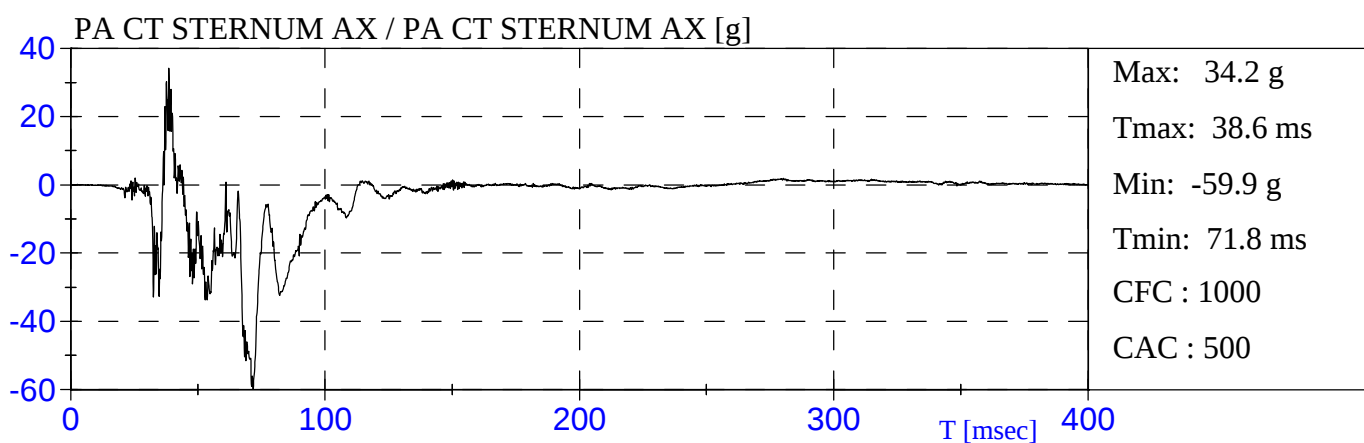
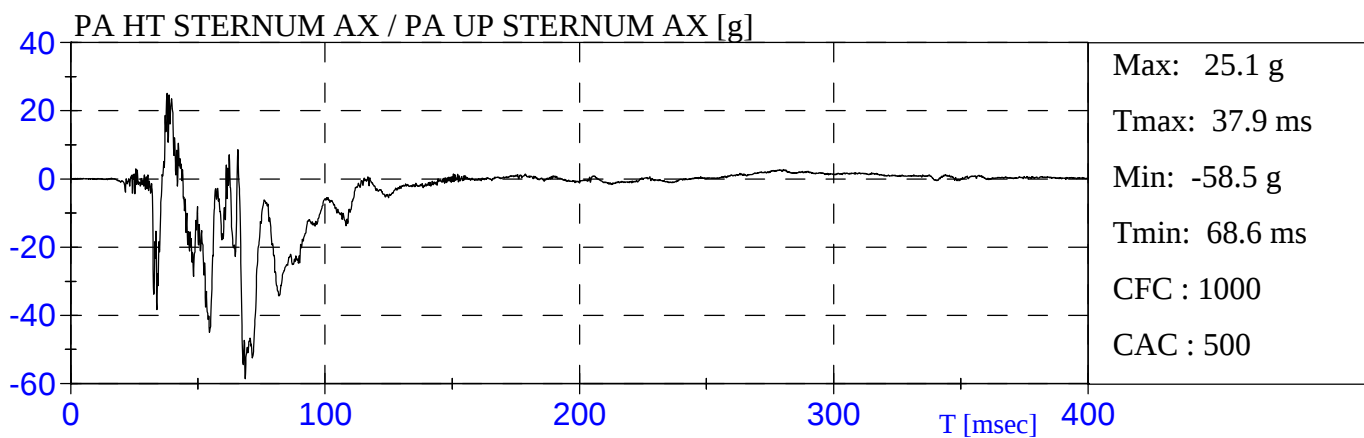


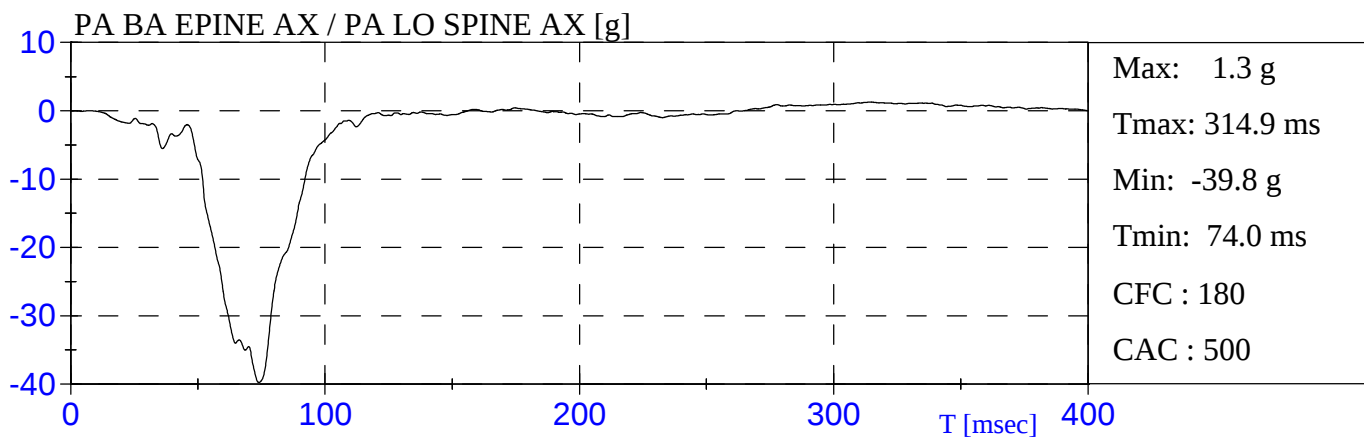
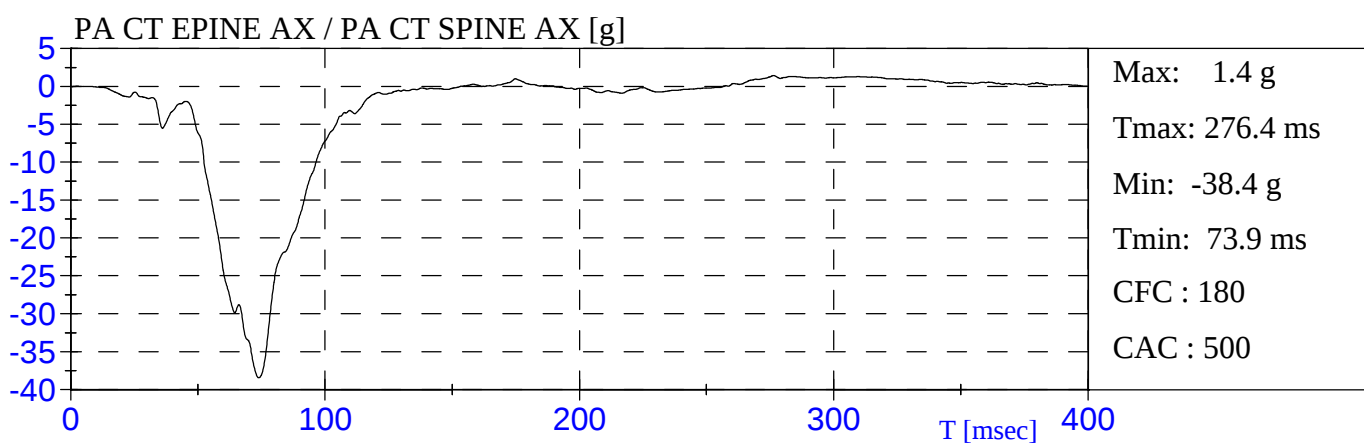
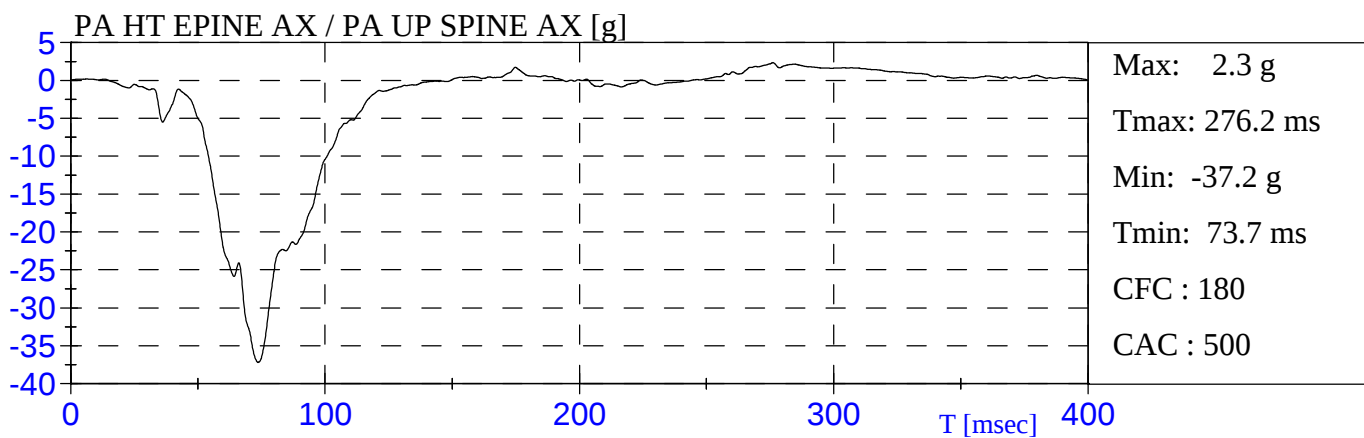


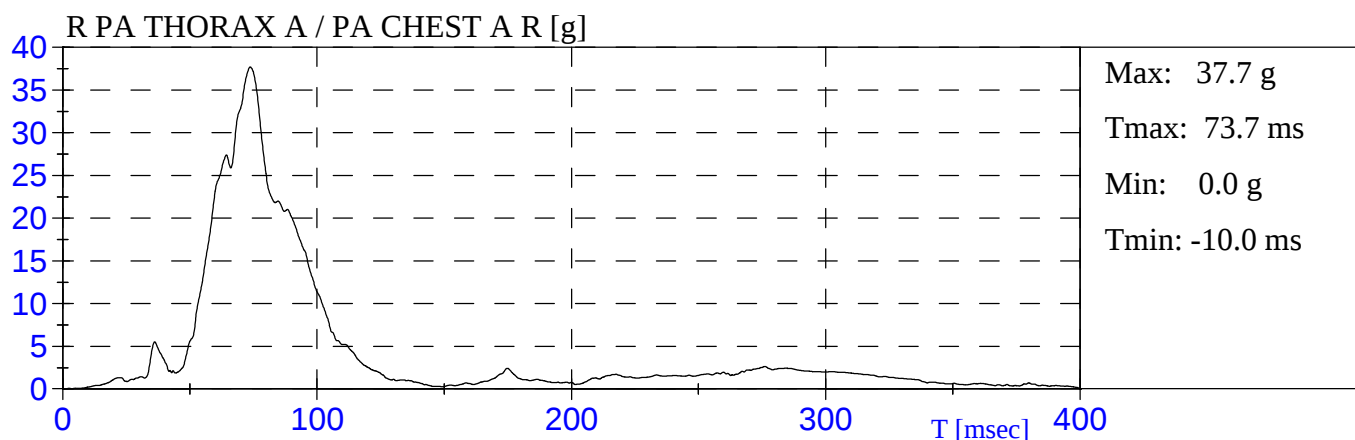
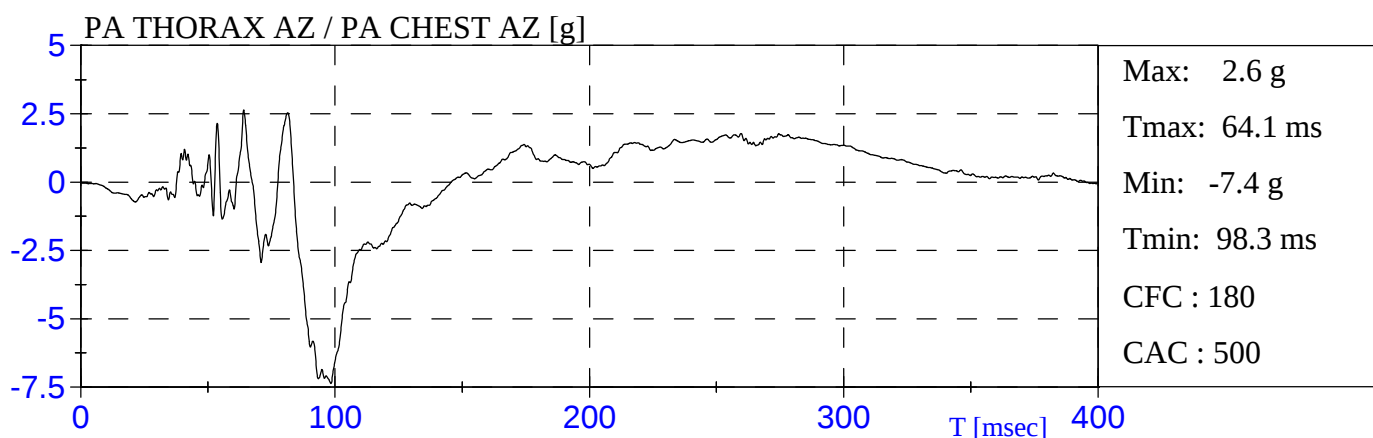
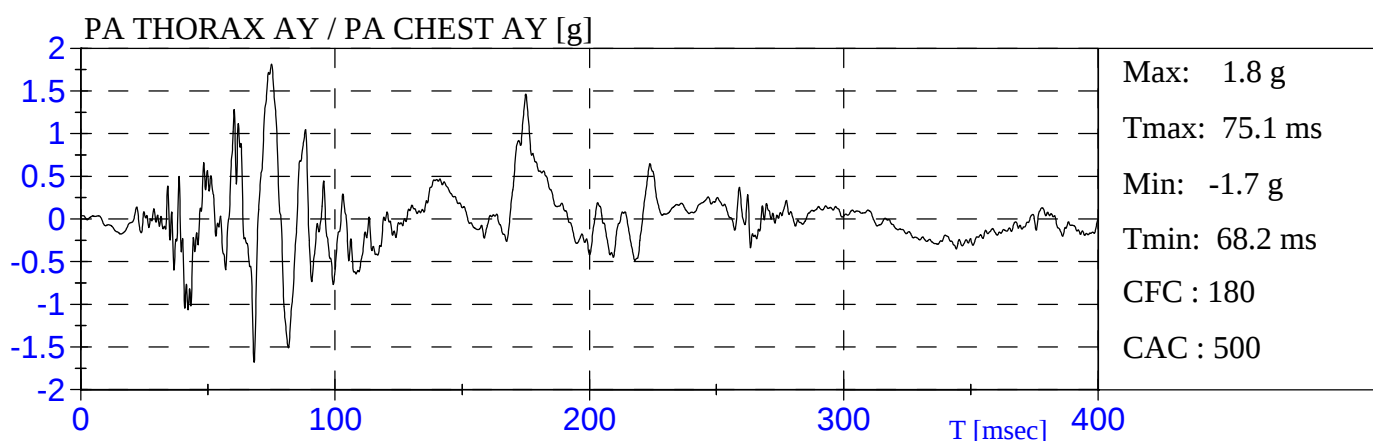
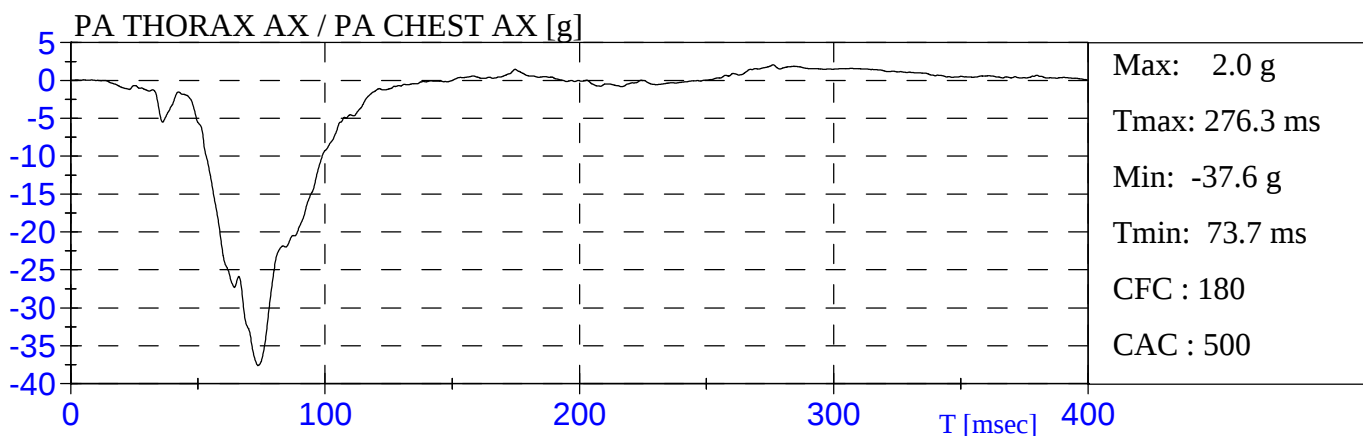


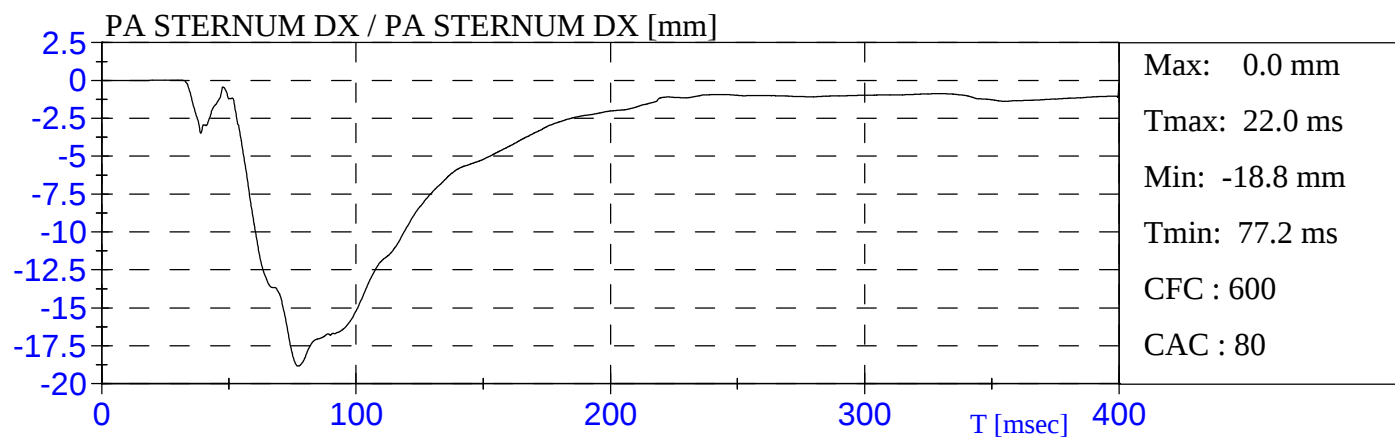










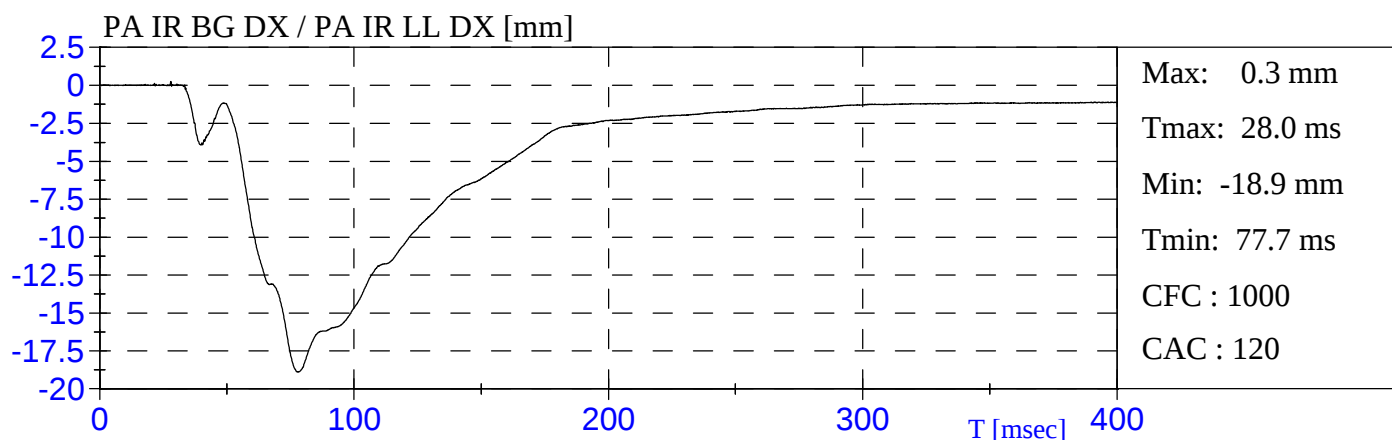
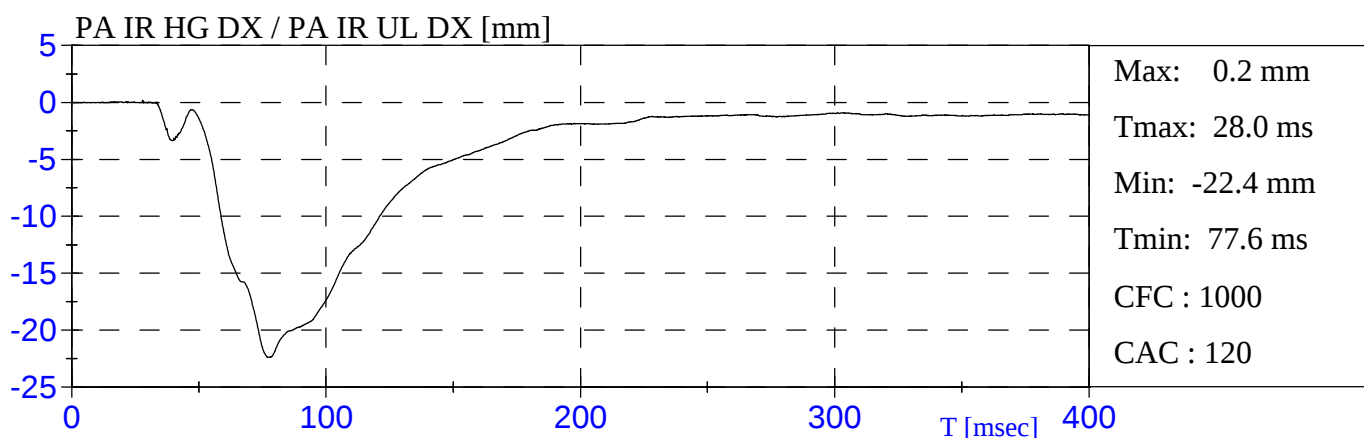
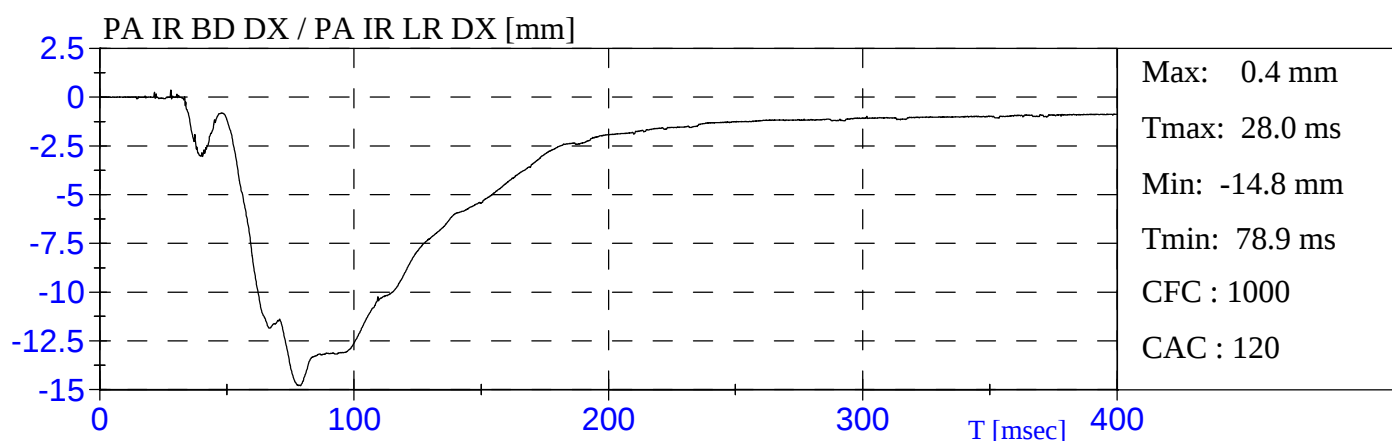
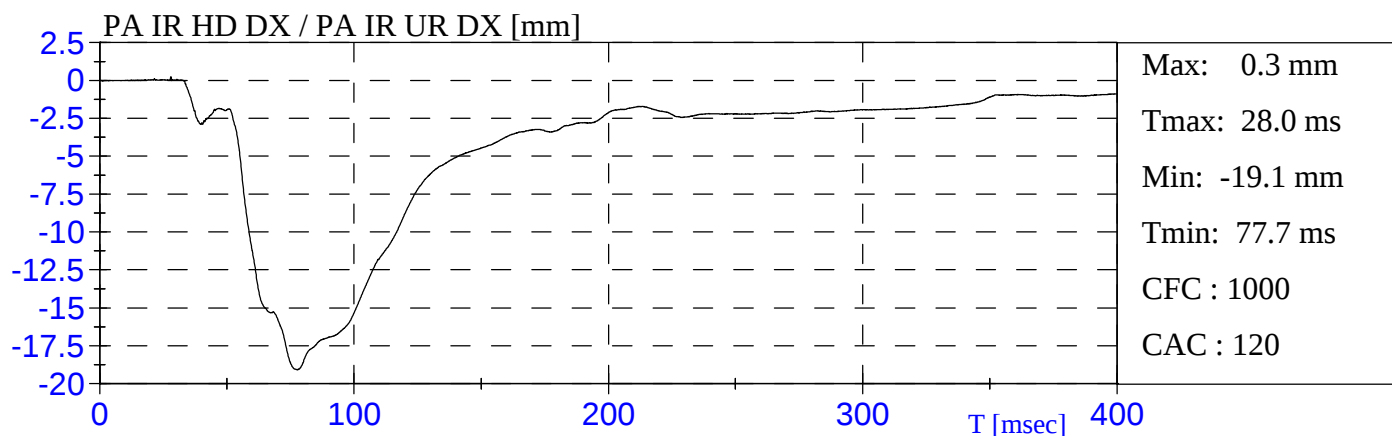




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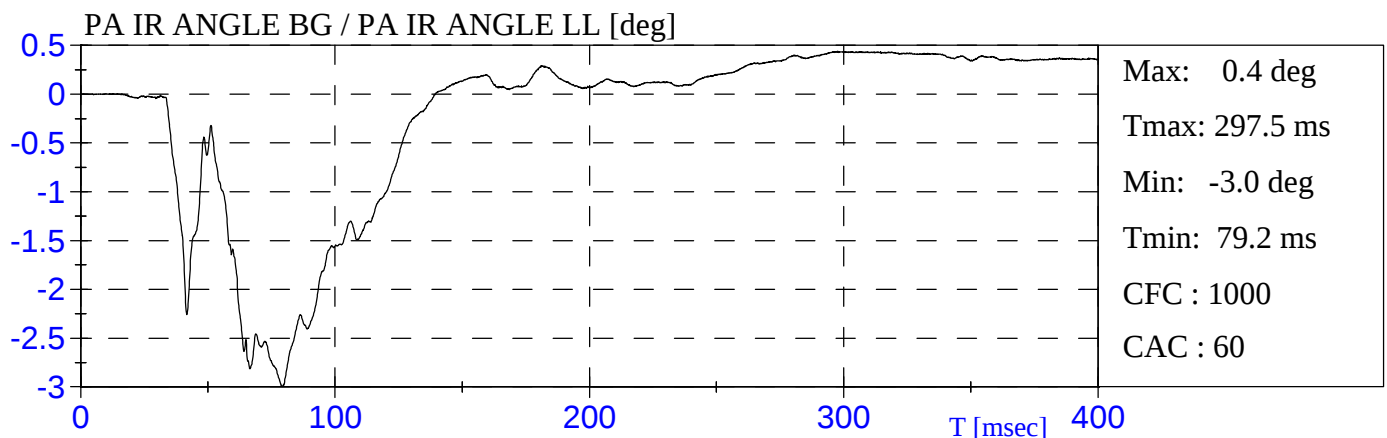
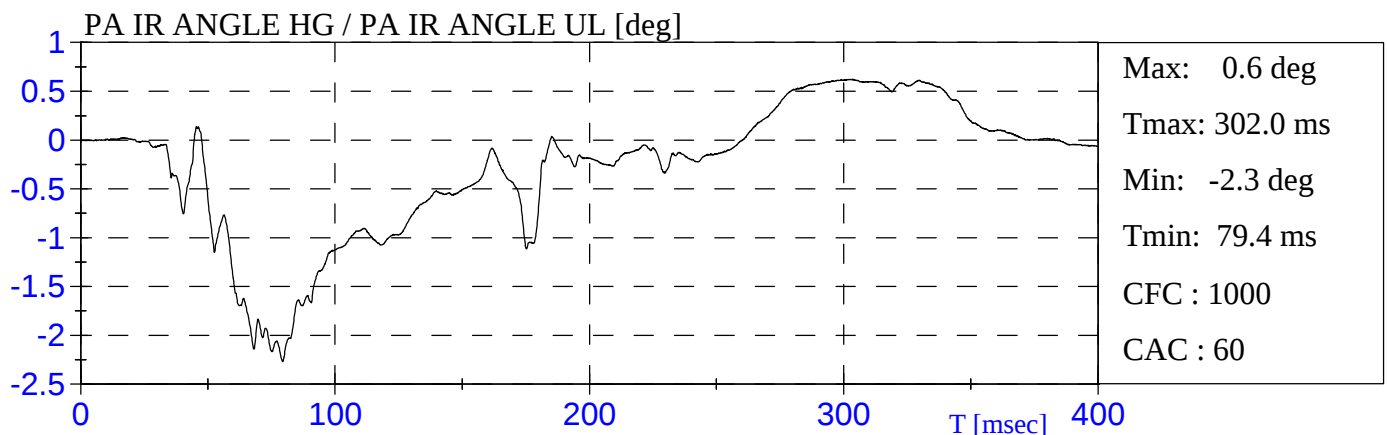
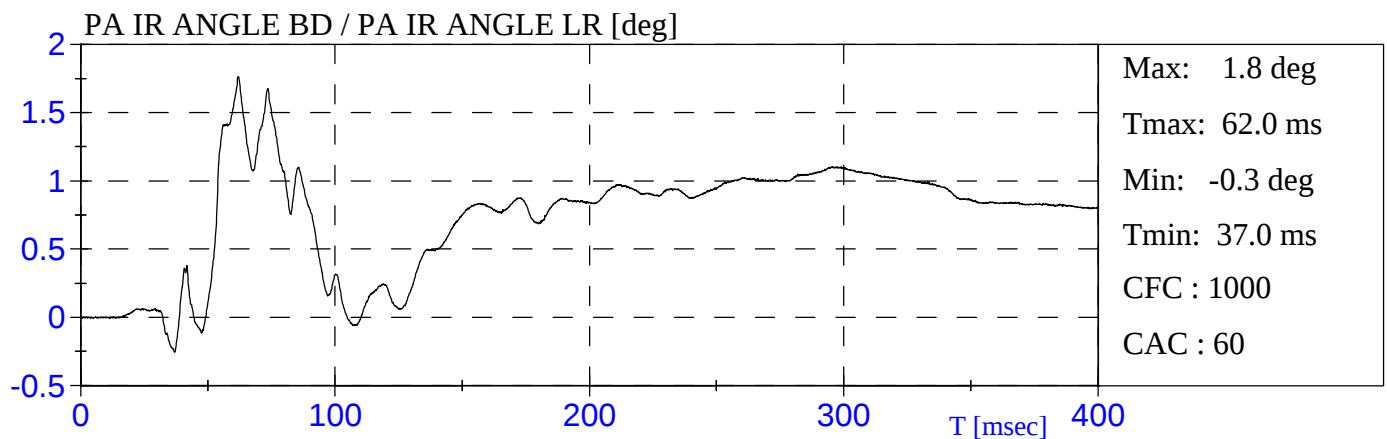
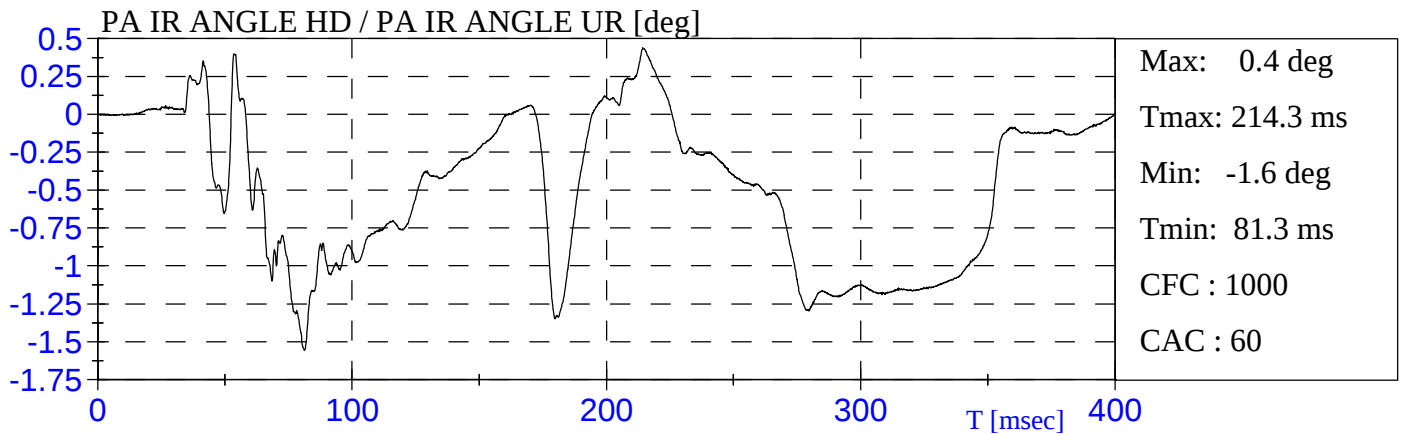


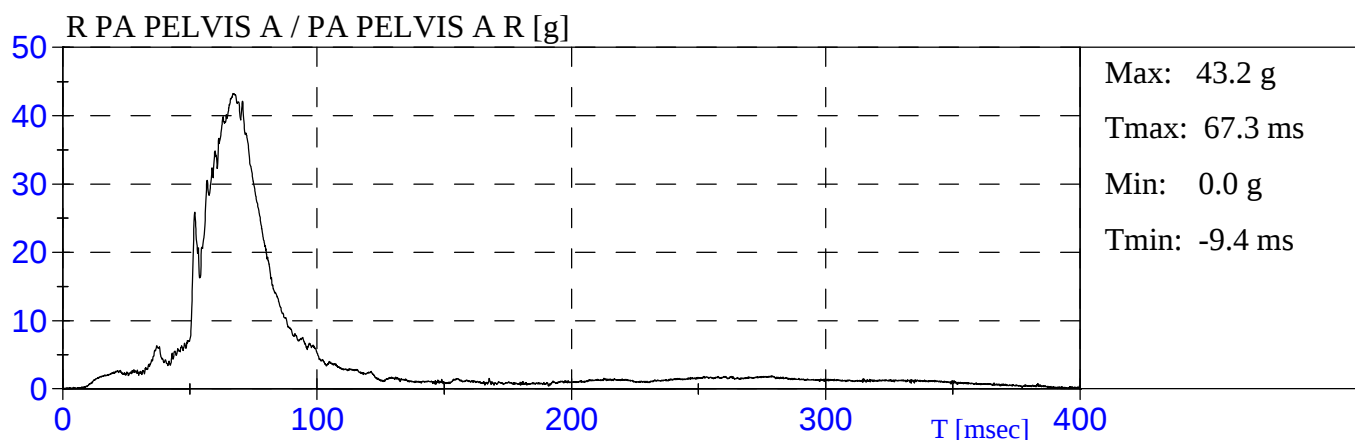
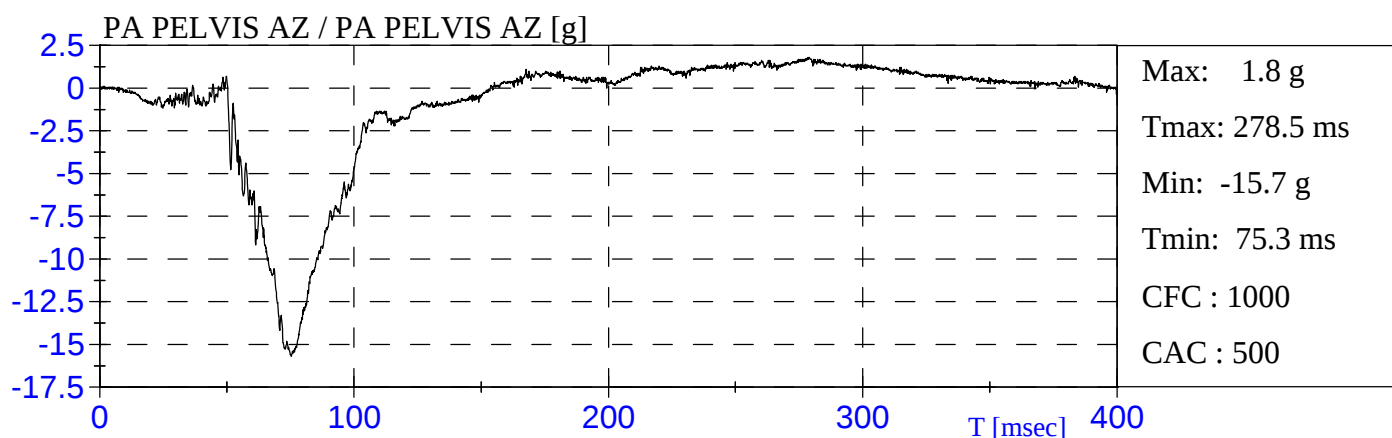
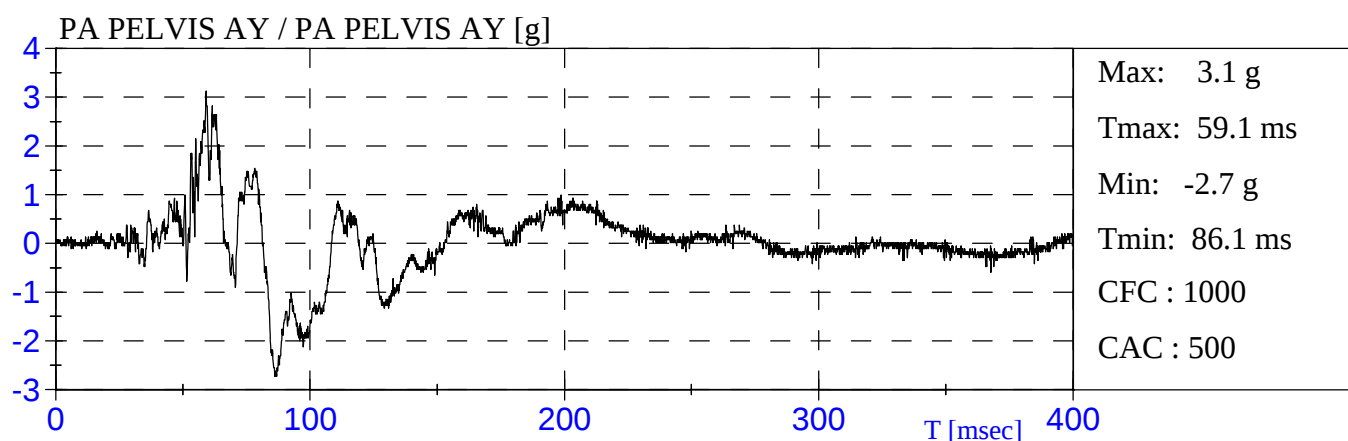
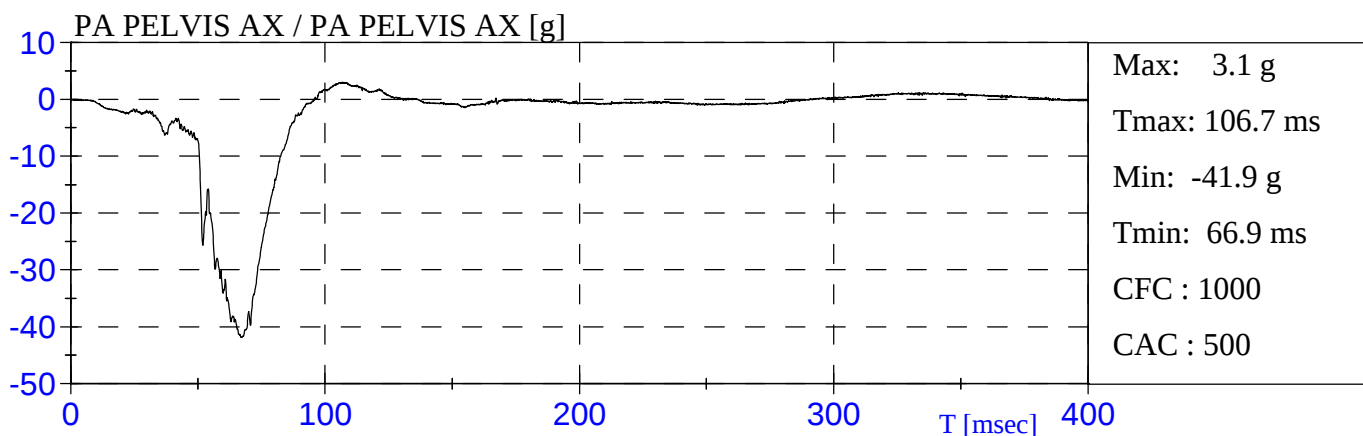
COLLISION FRONTALE
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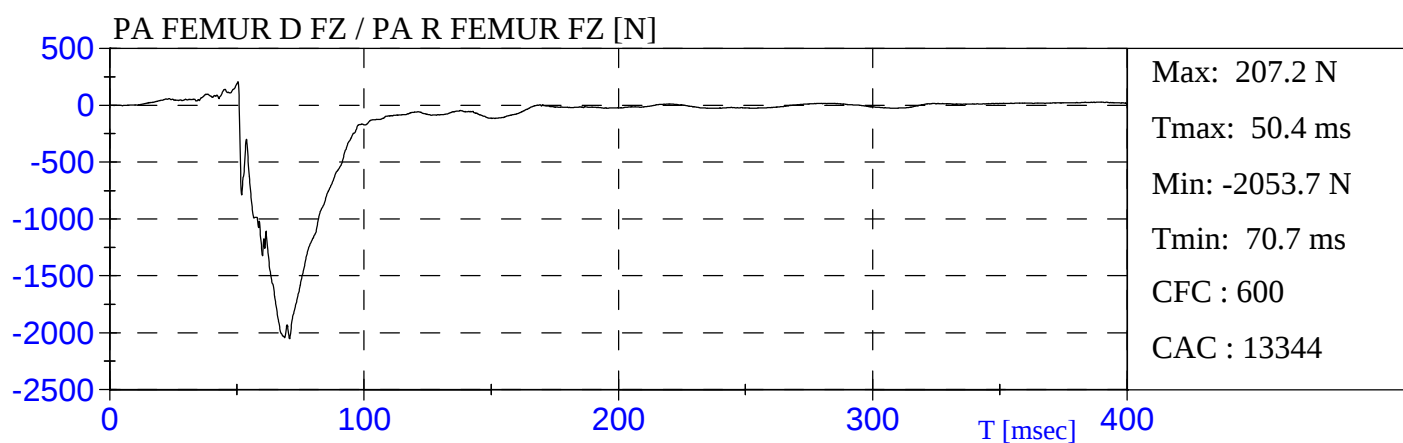
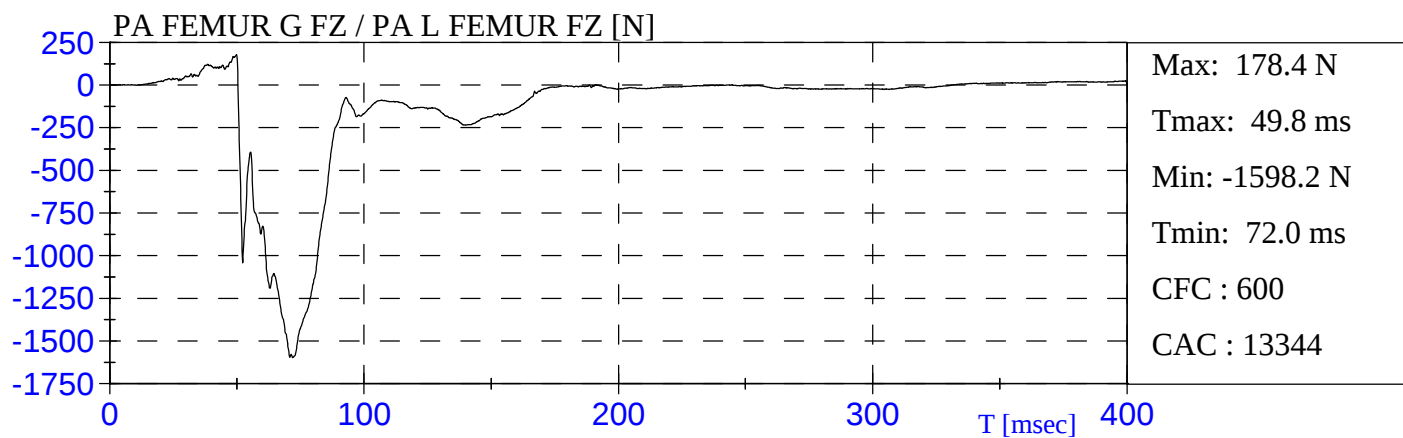
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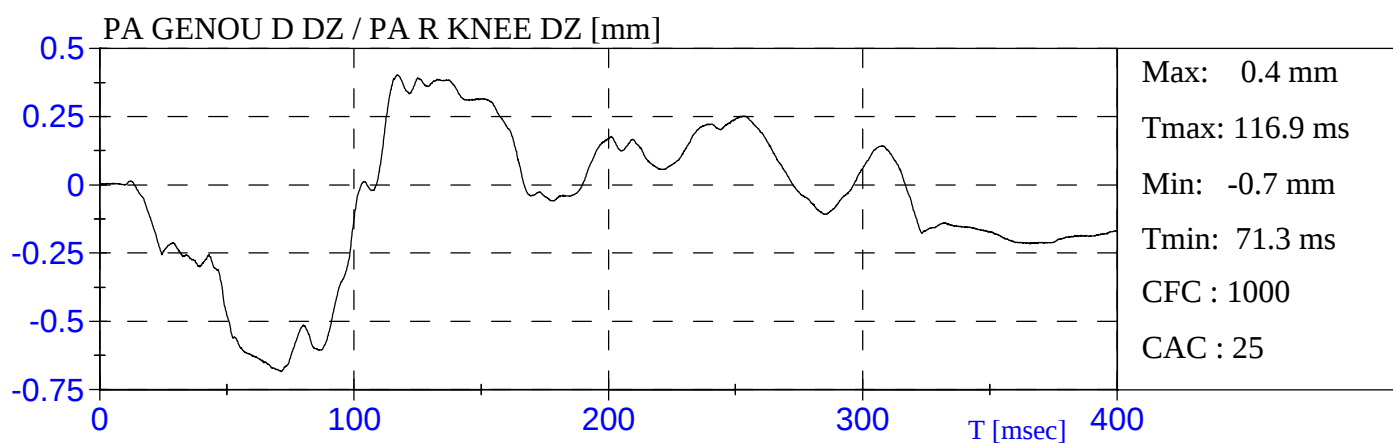
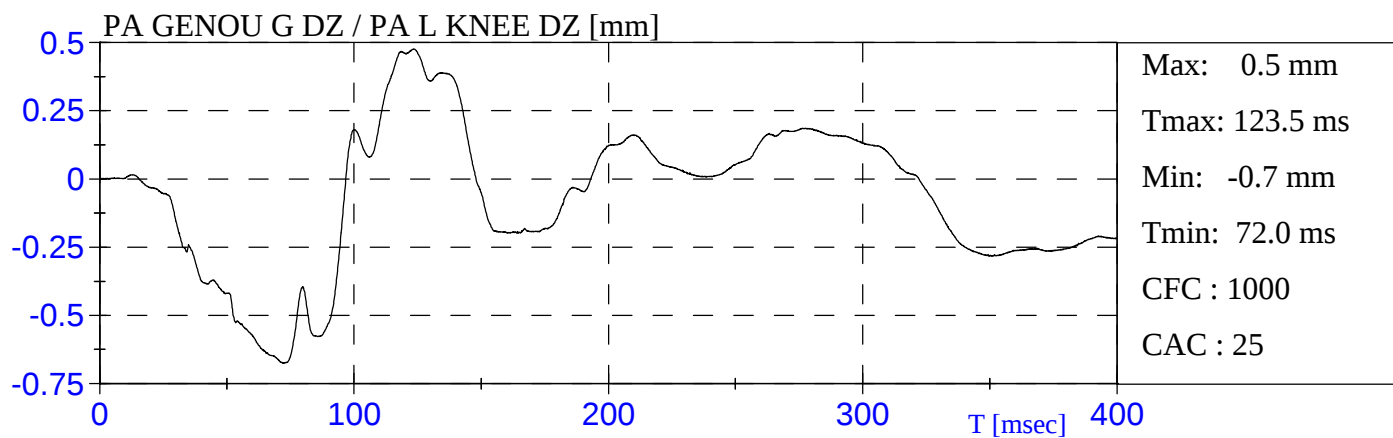
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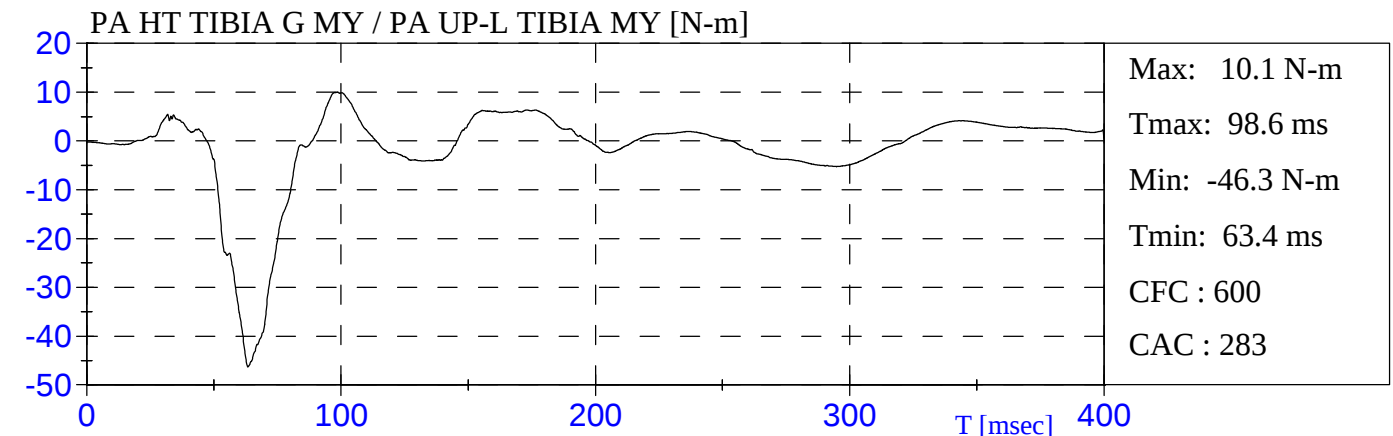
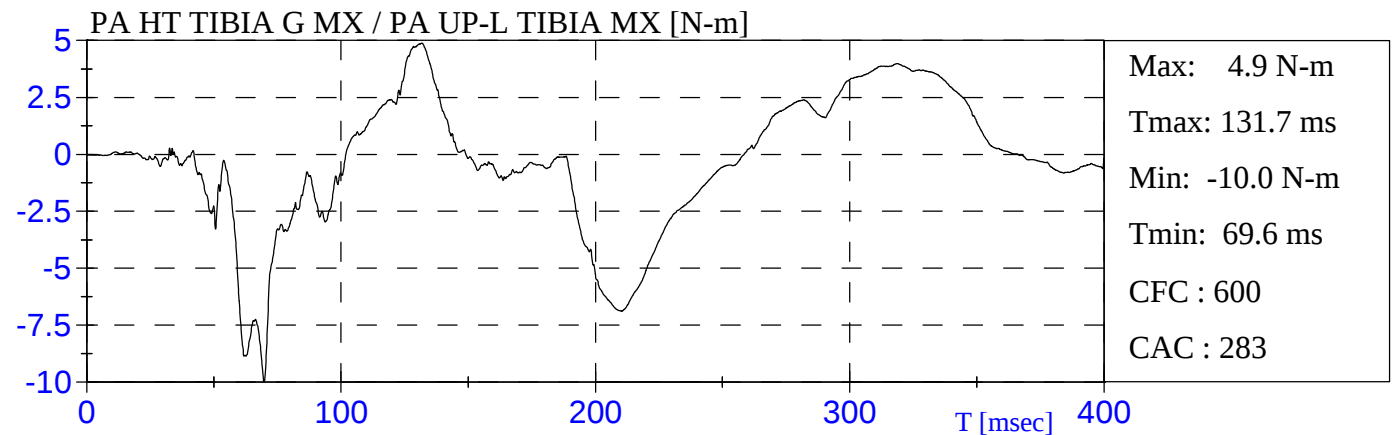
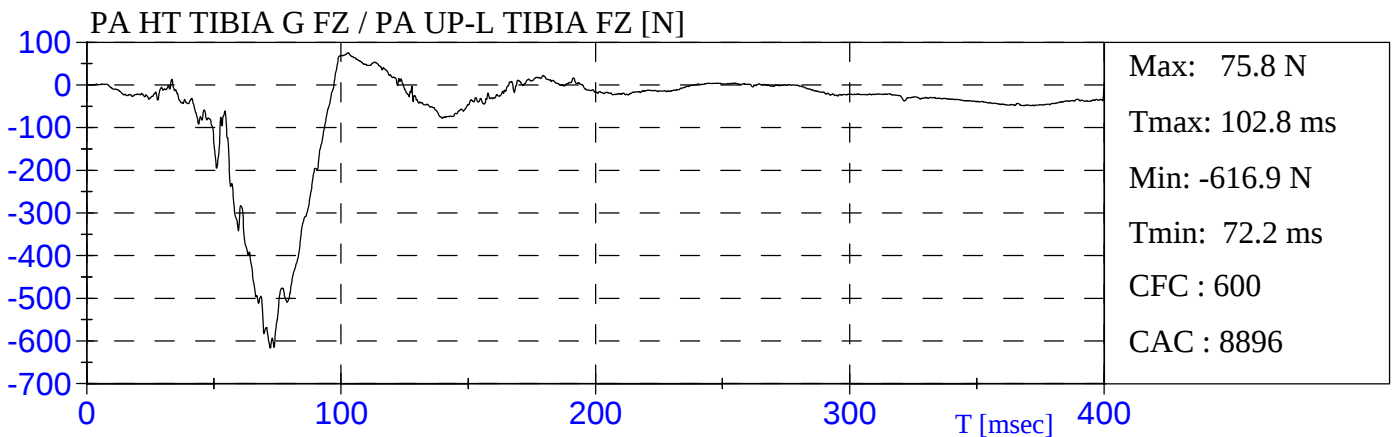
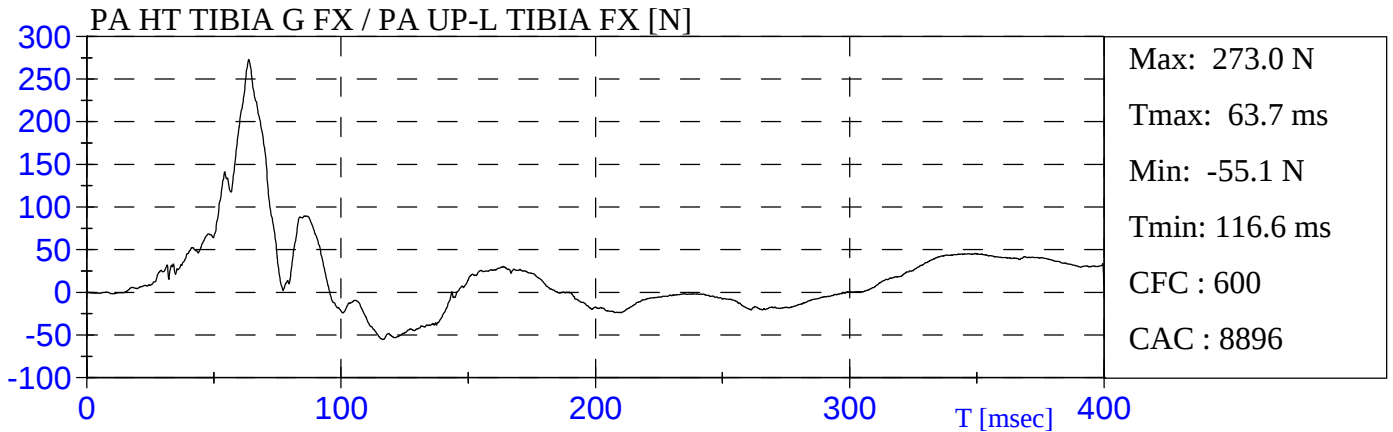
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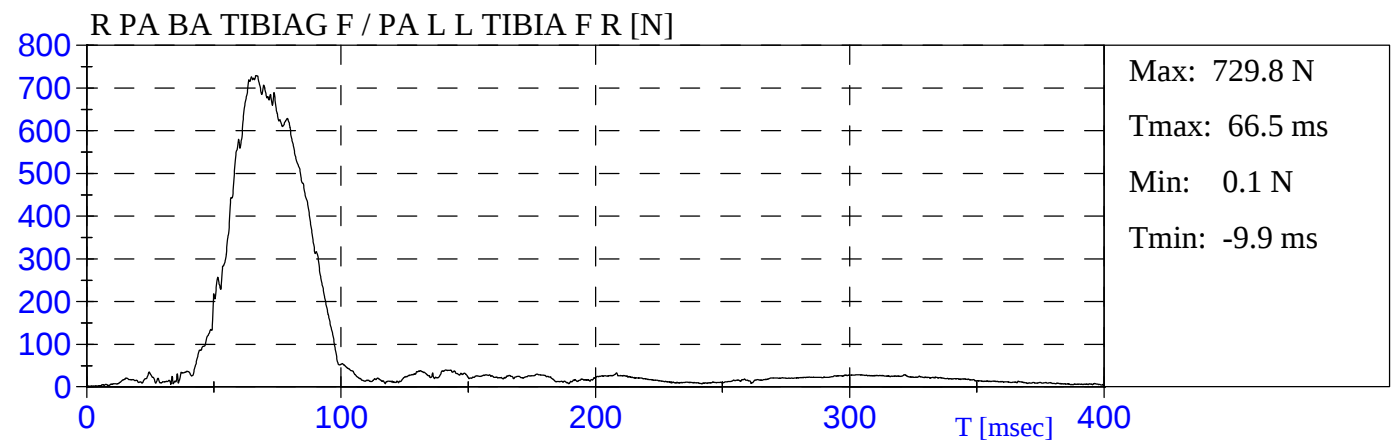
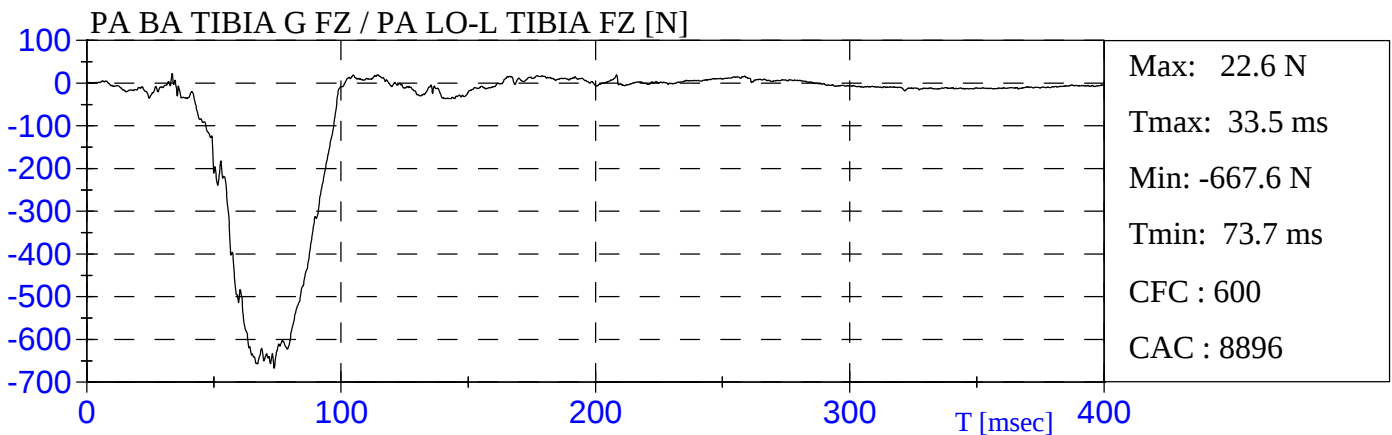
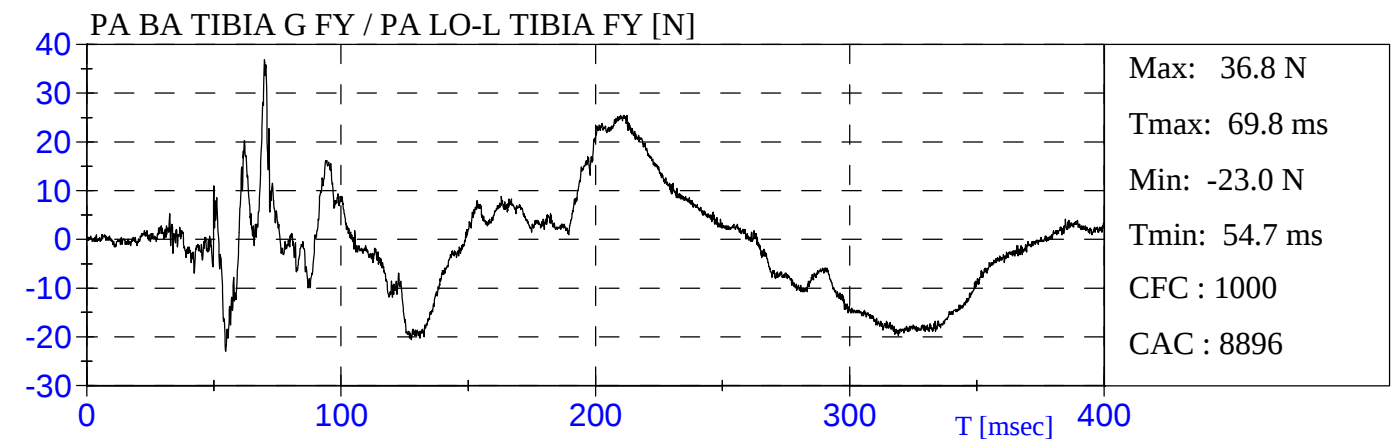
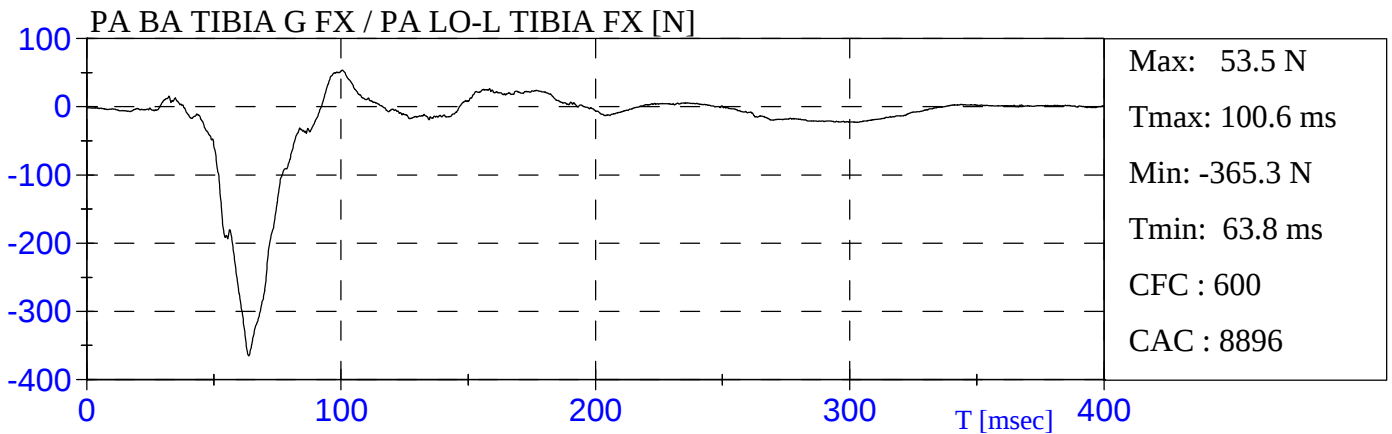


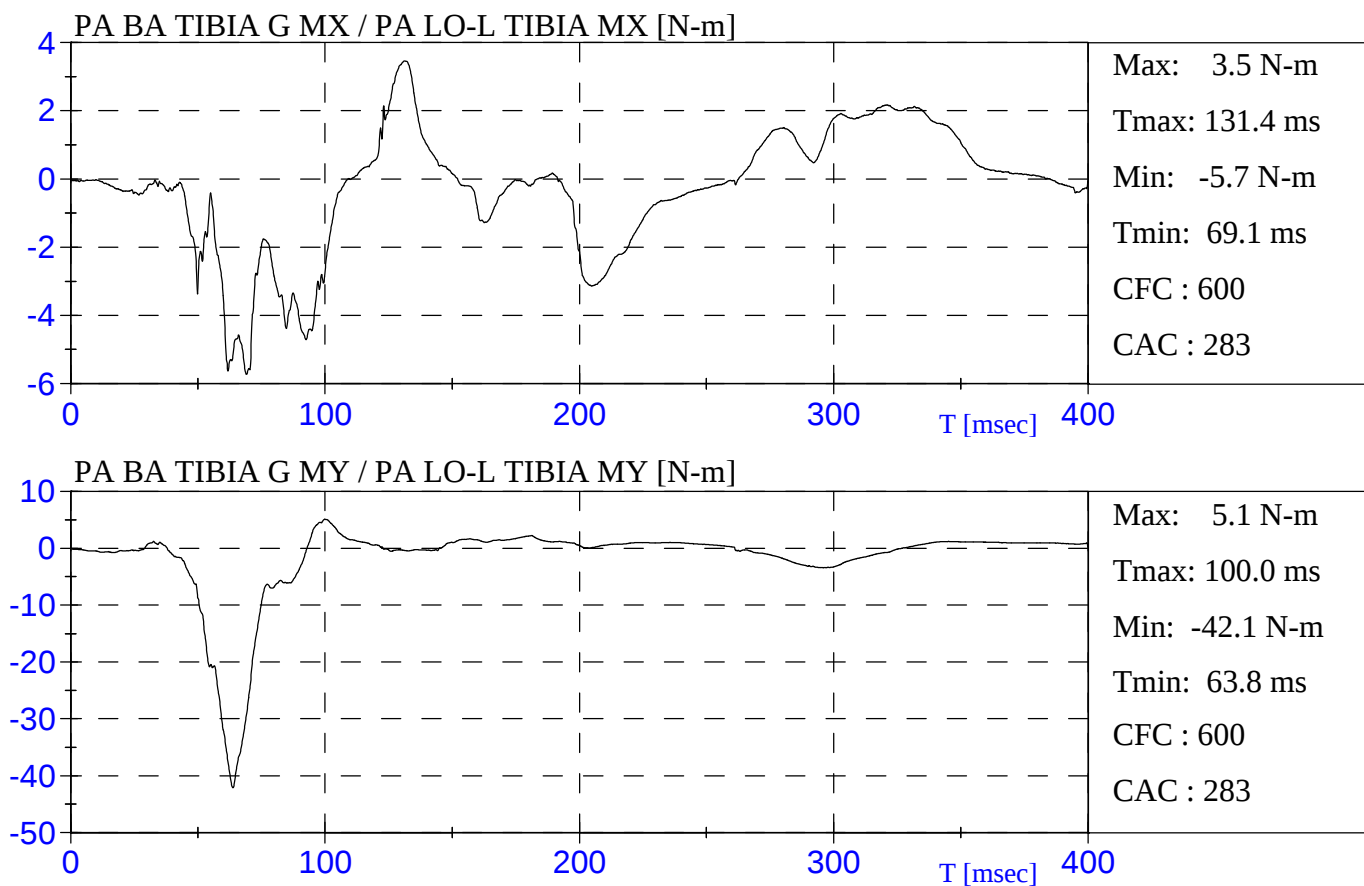


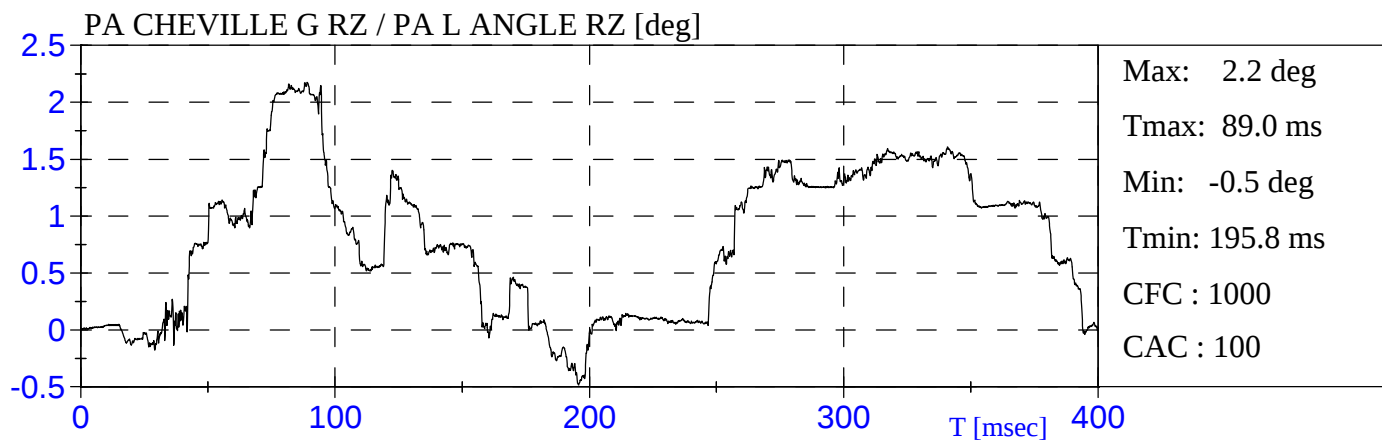
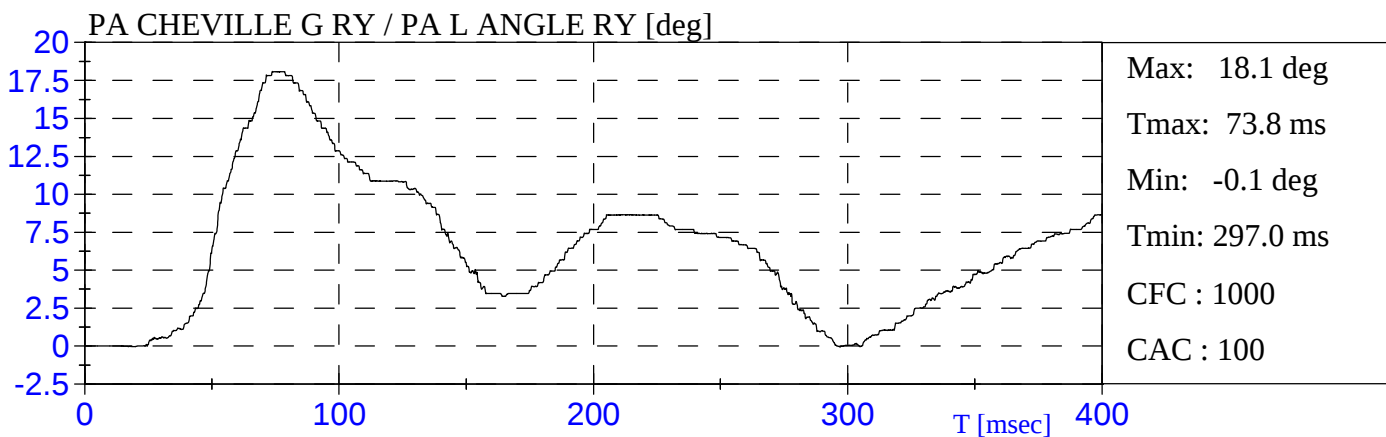
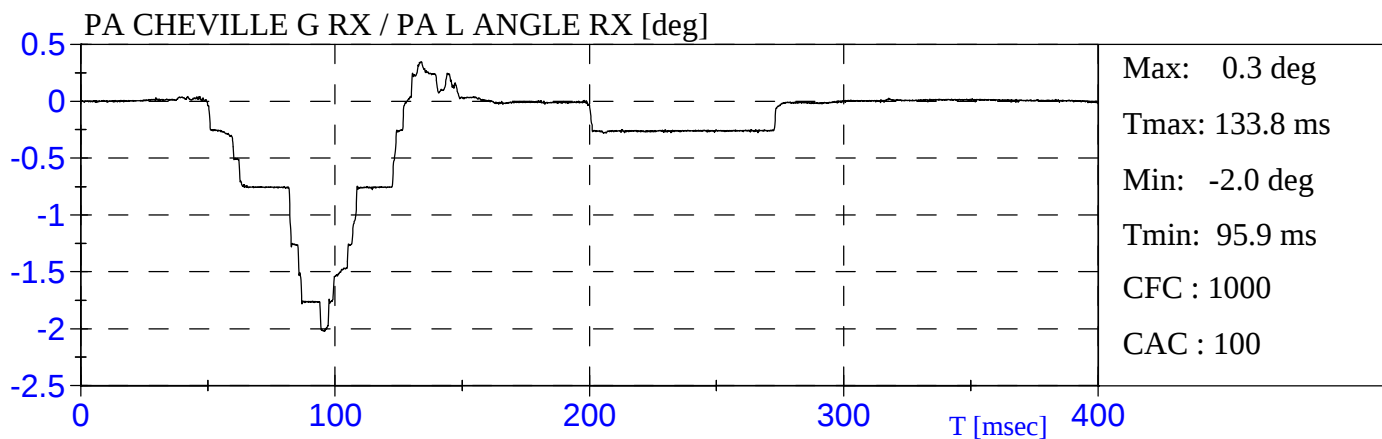
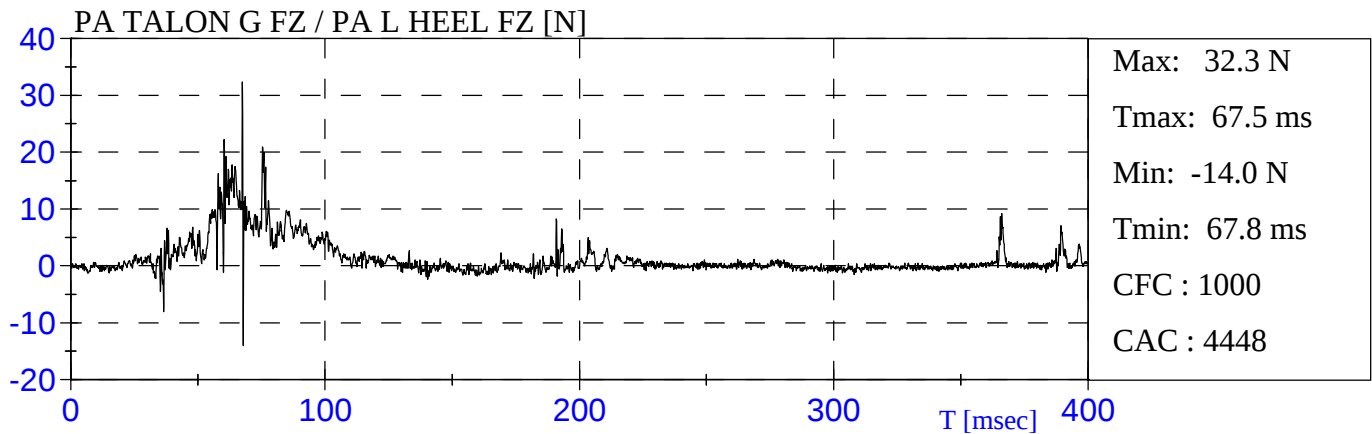


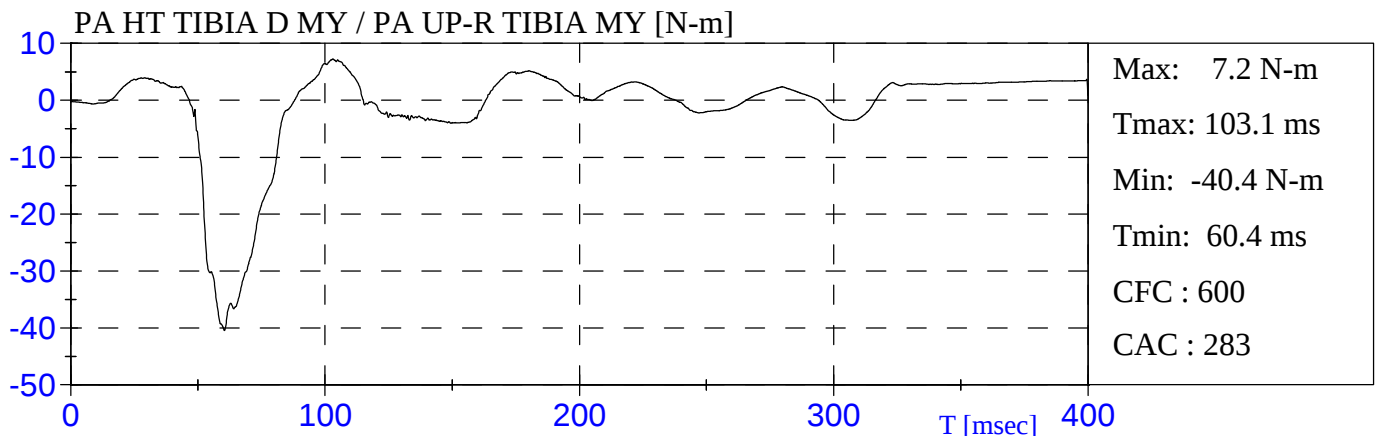
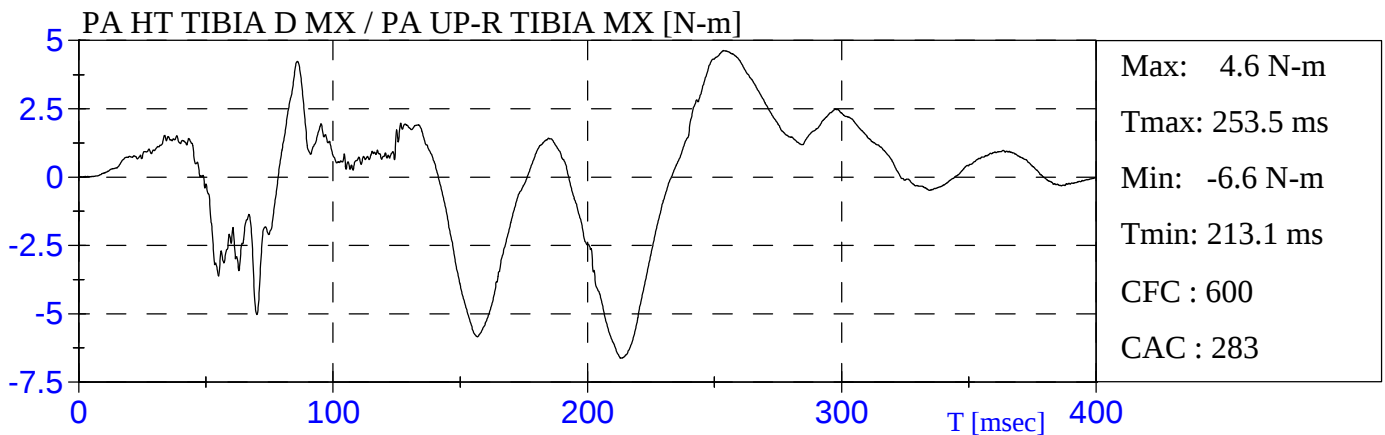
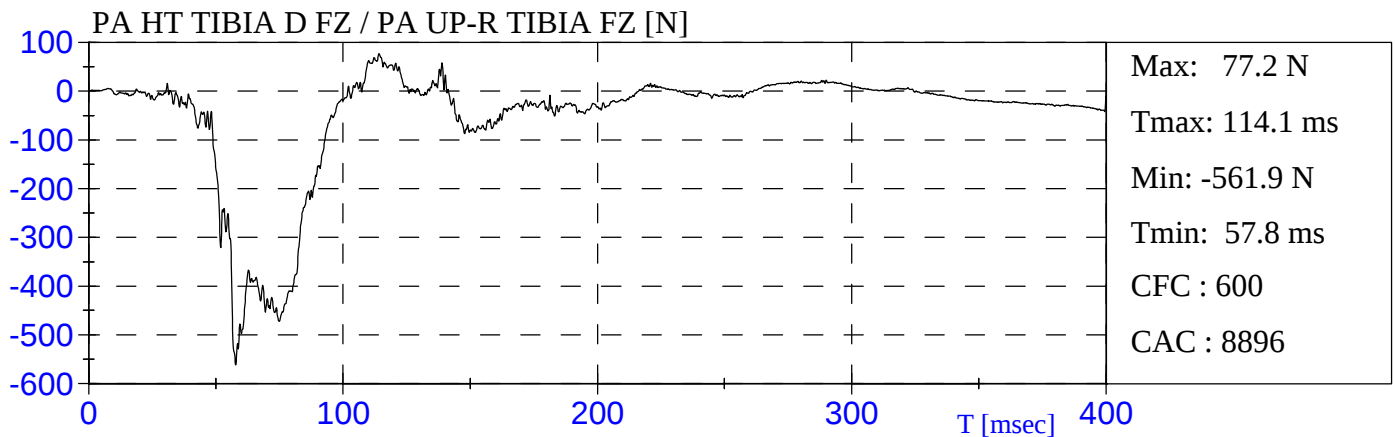
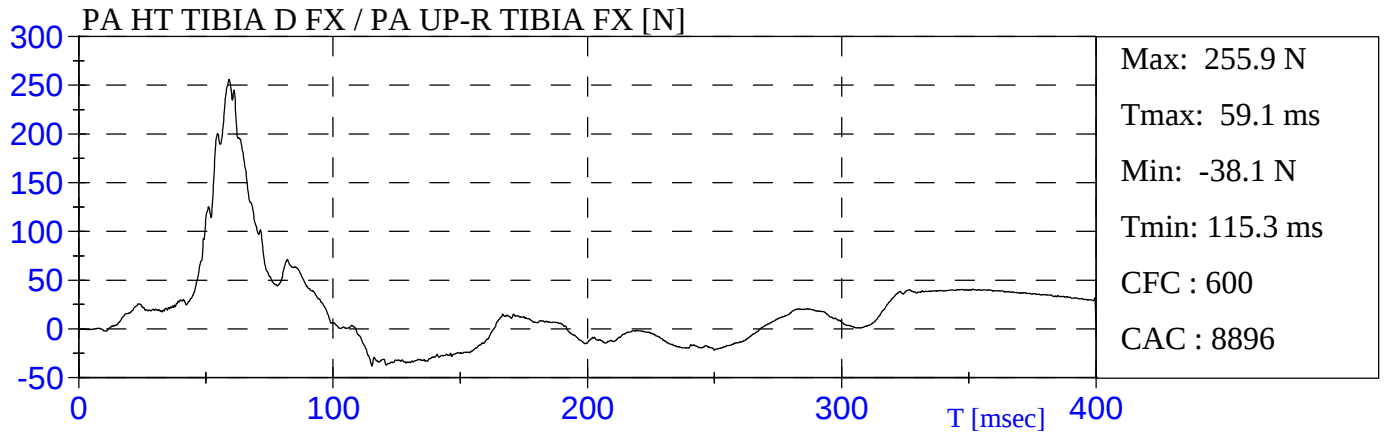








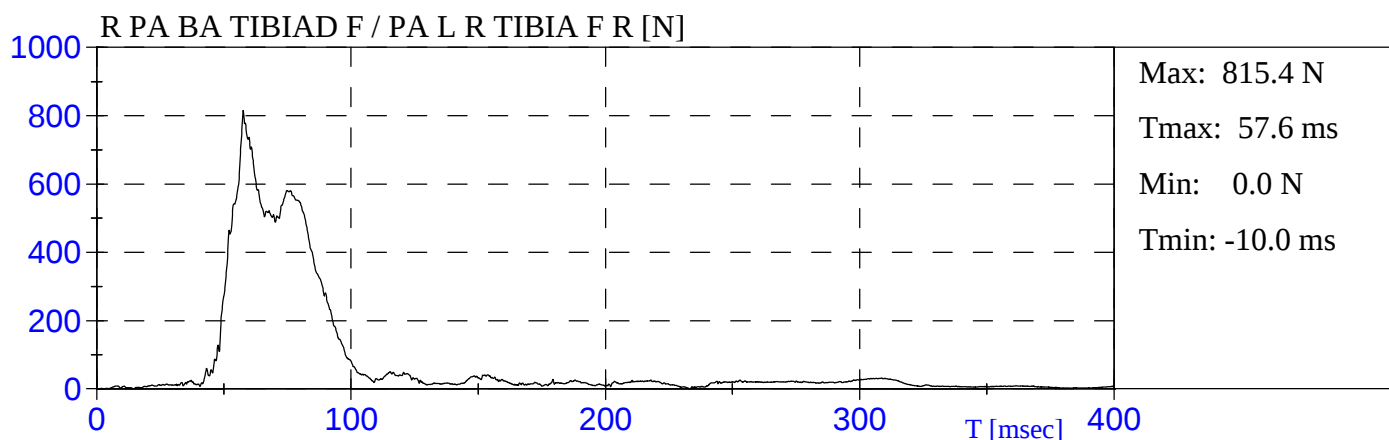
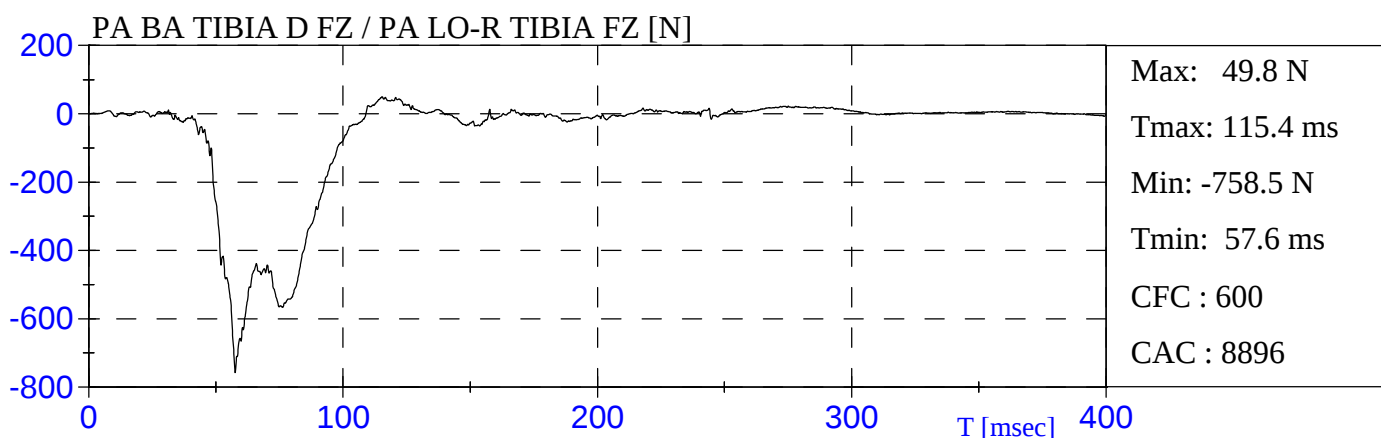
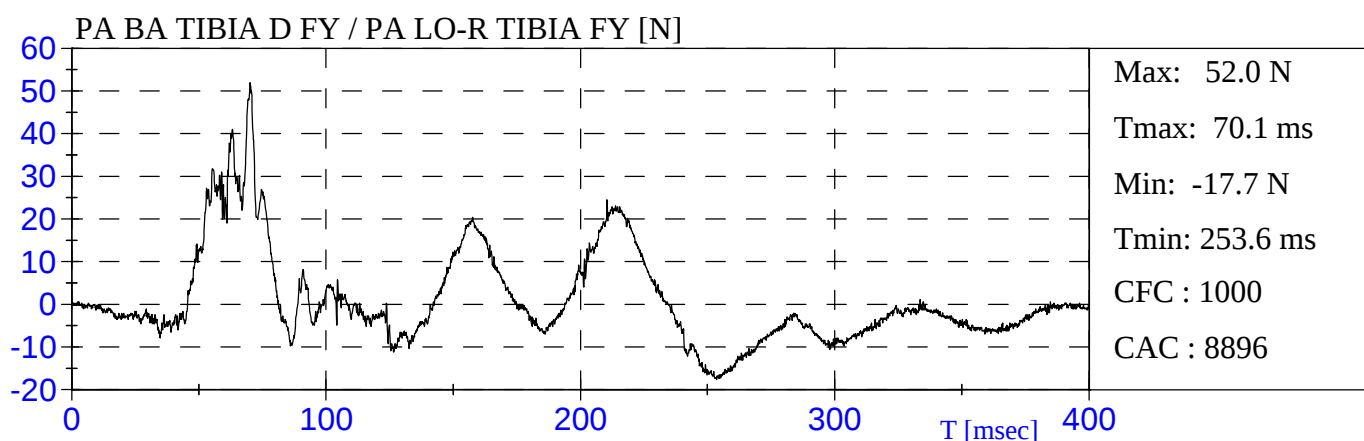
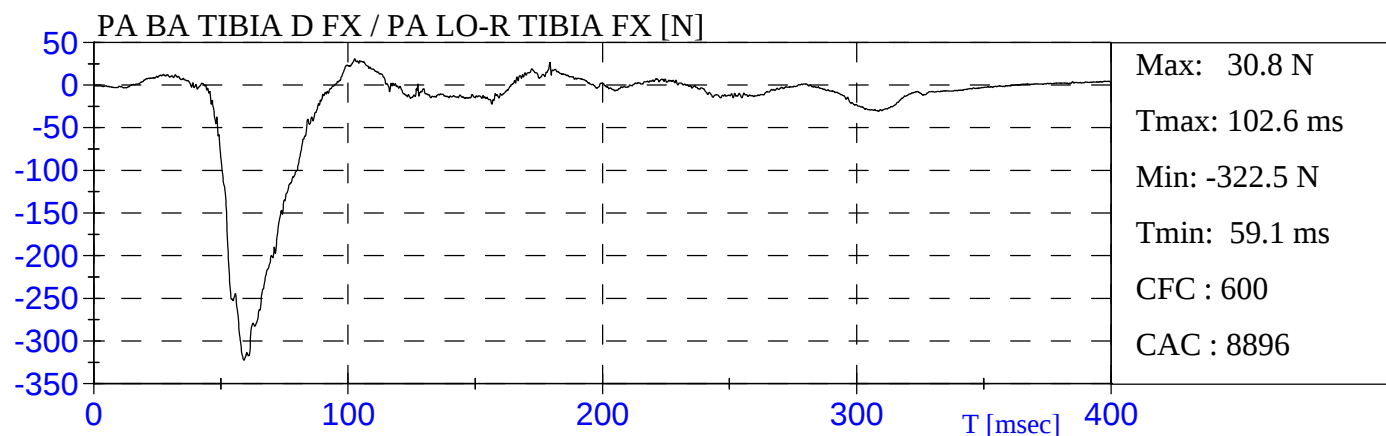


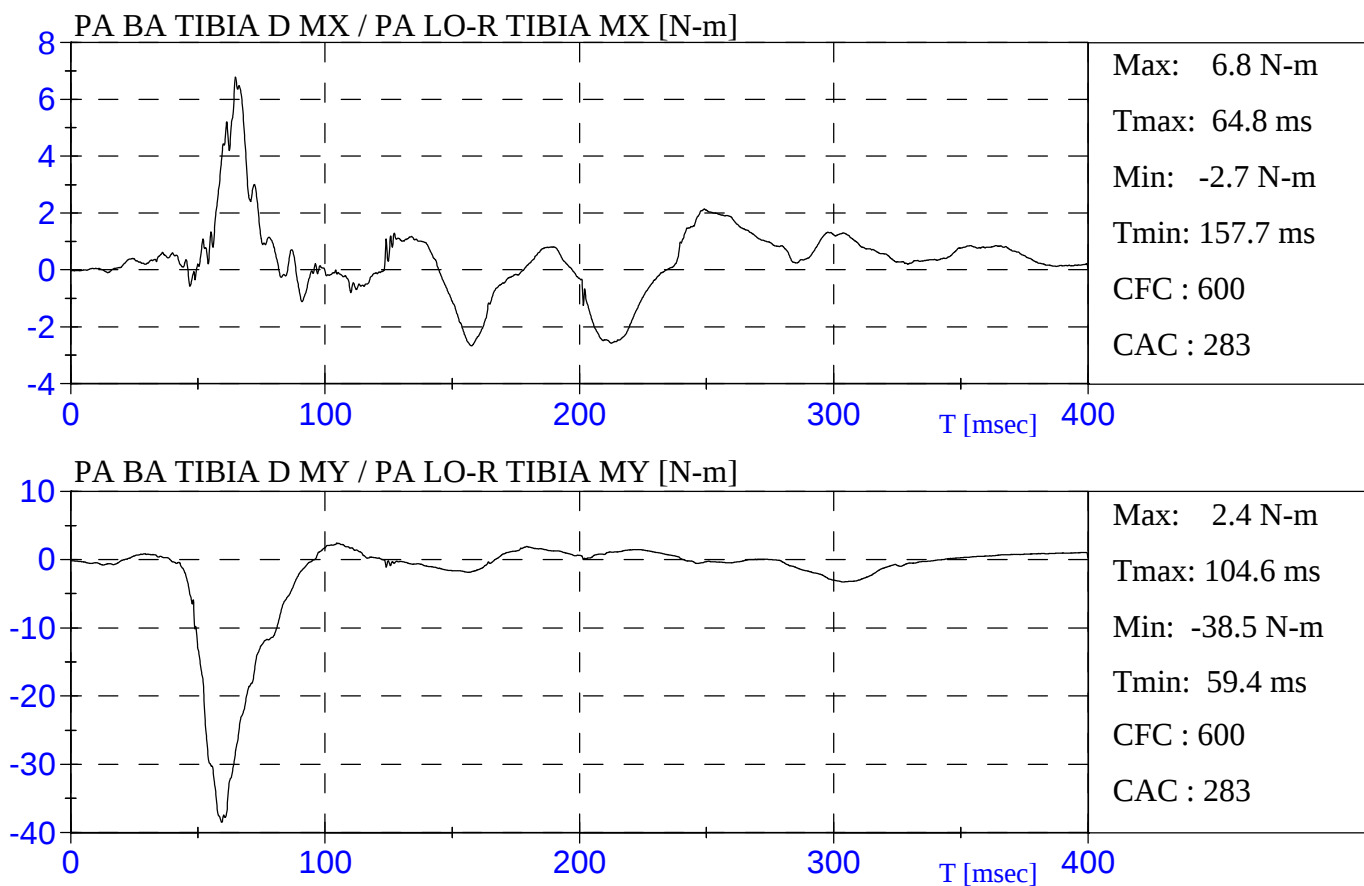


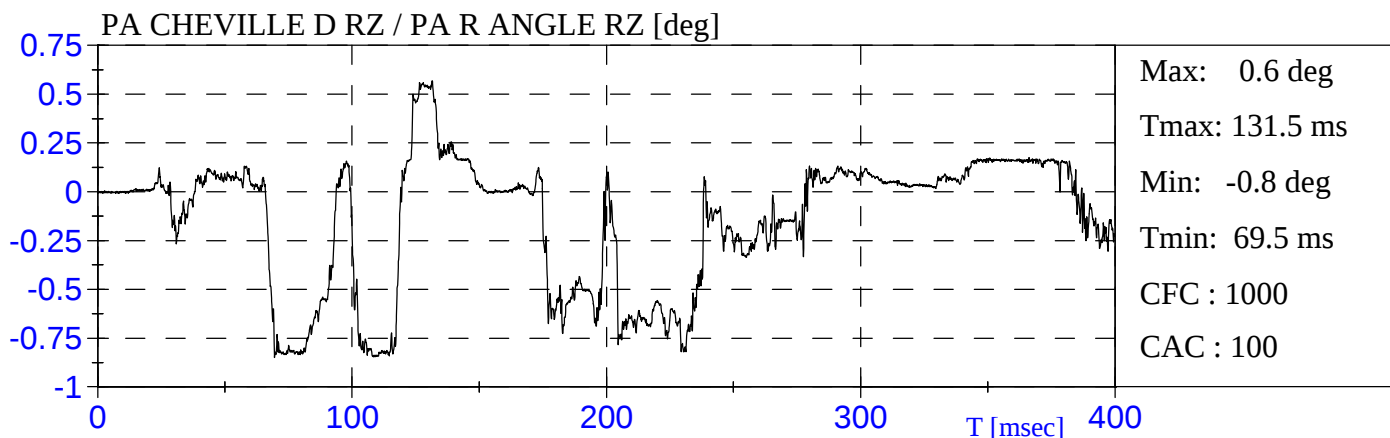
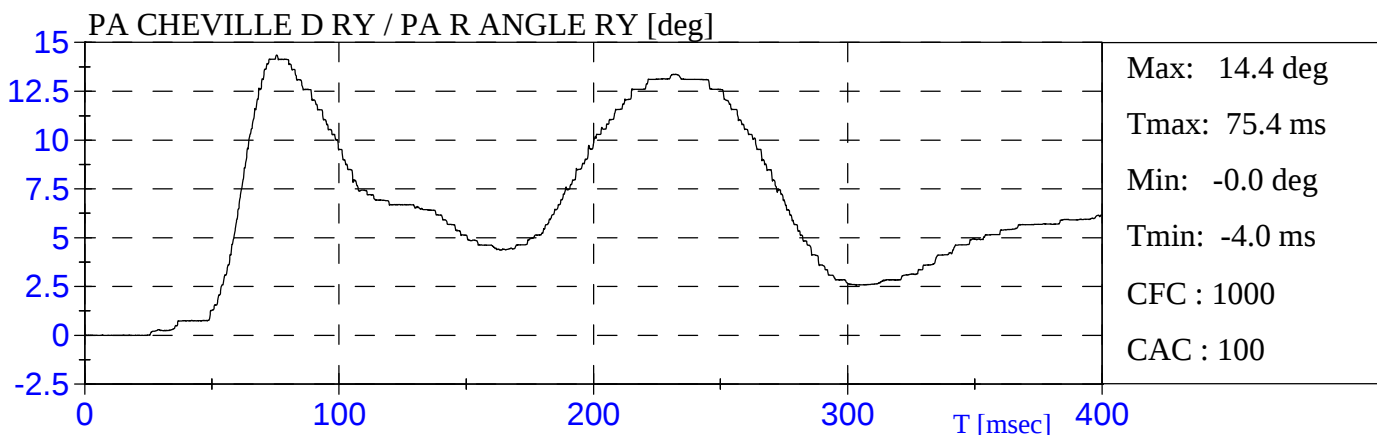
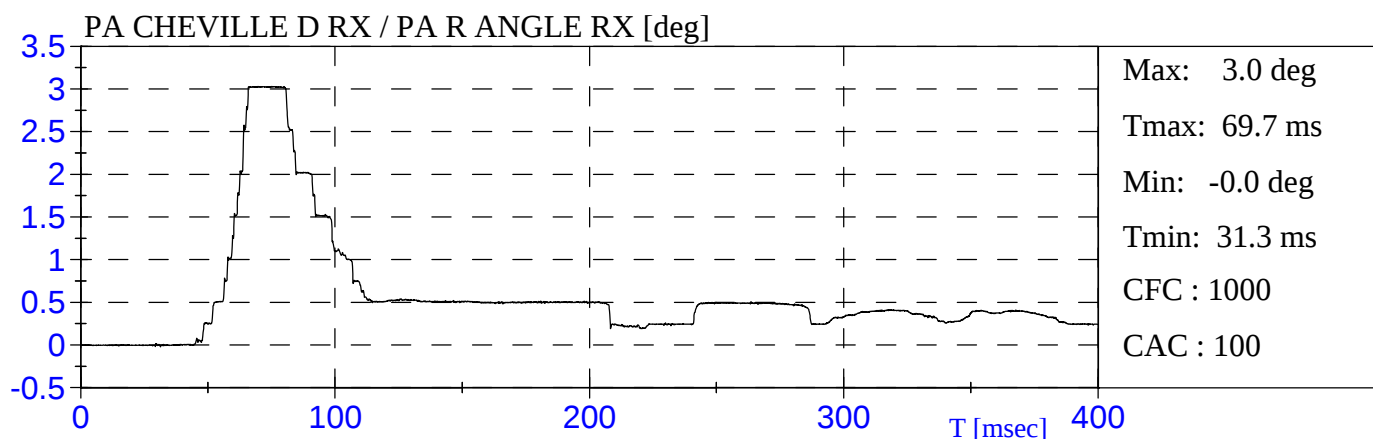
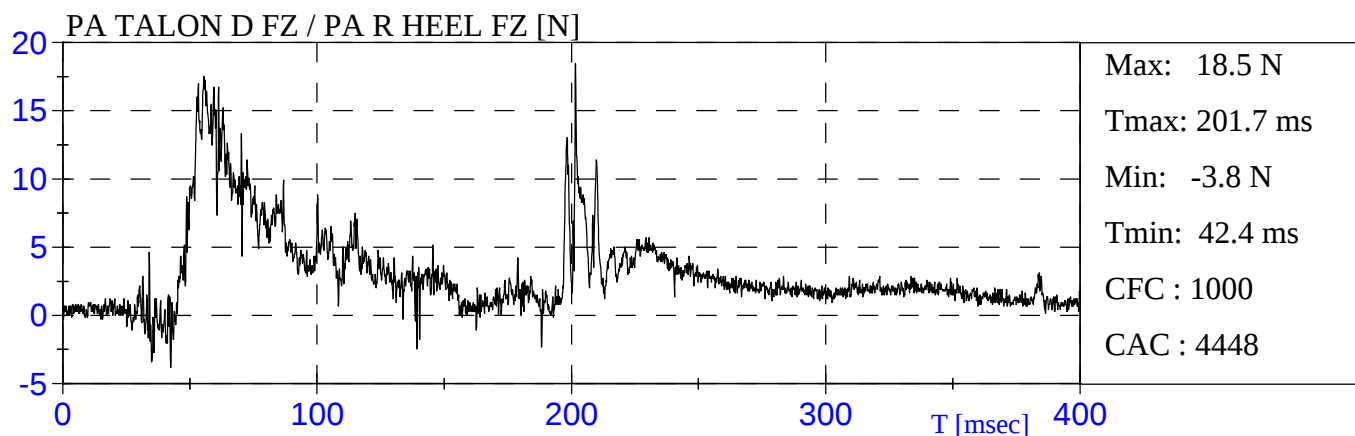


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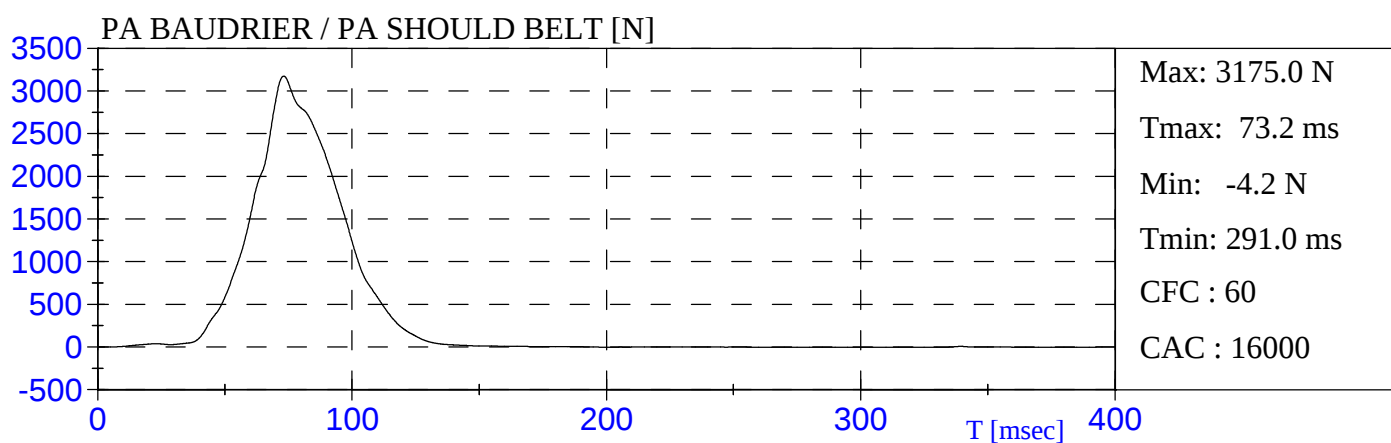
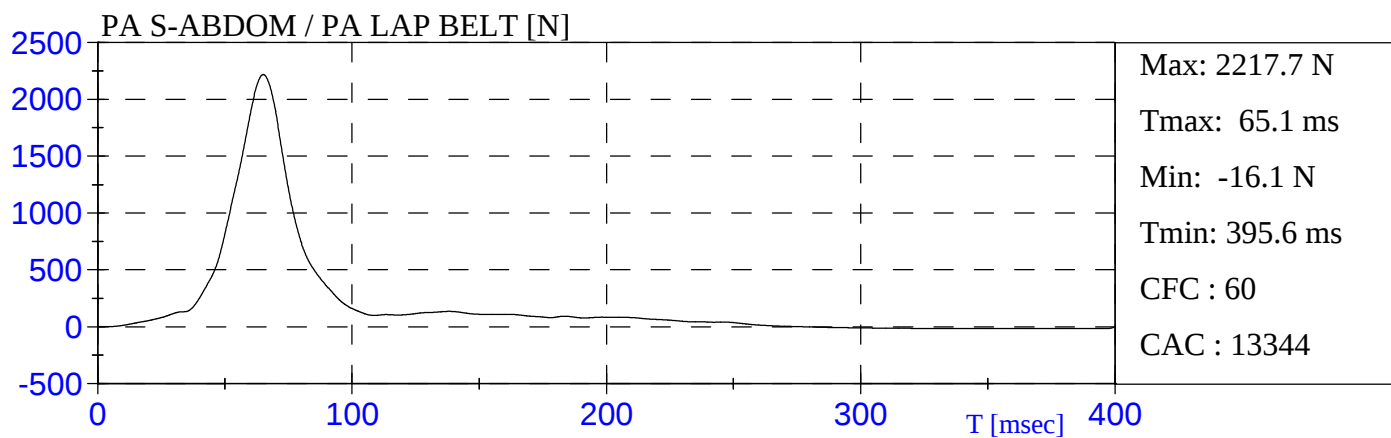


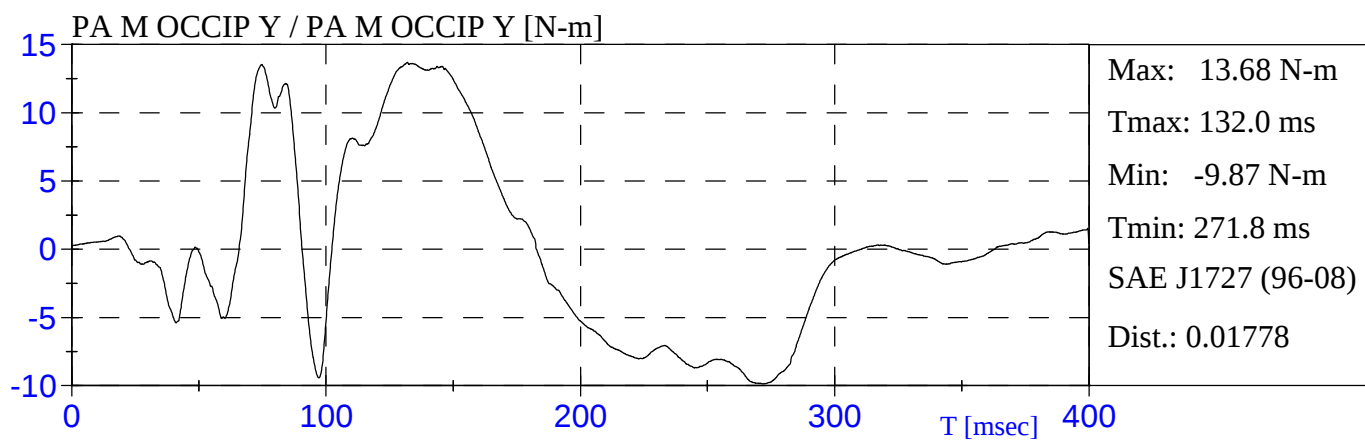


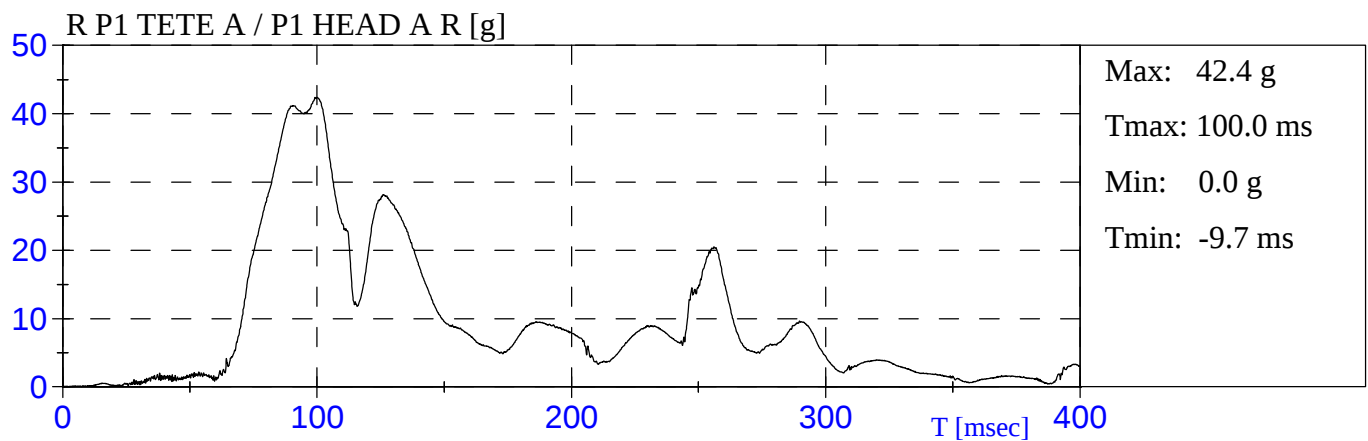
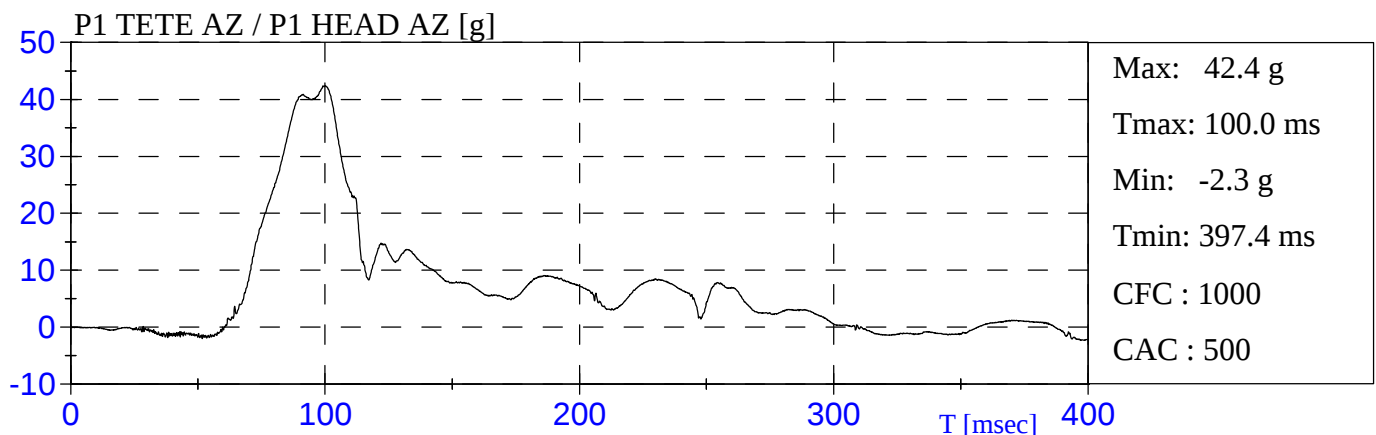
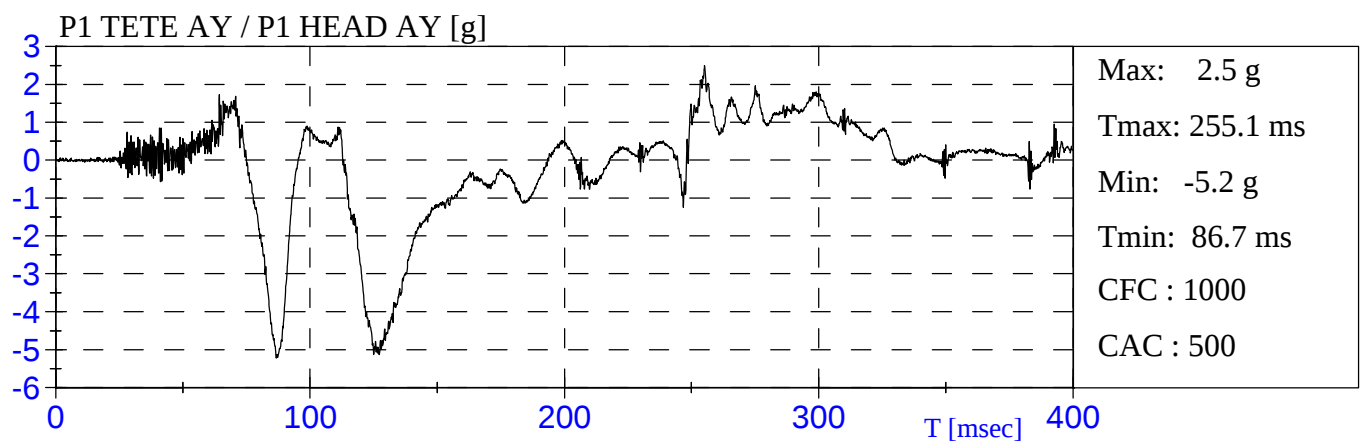
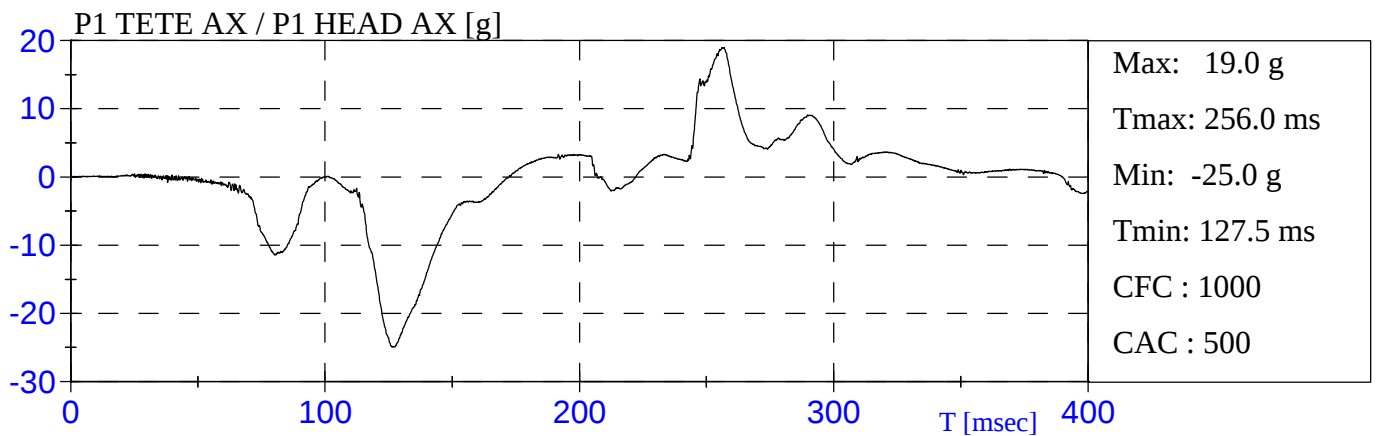


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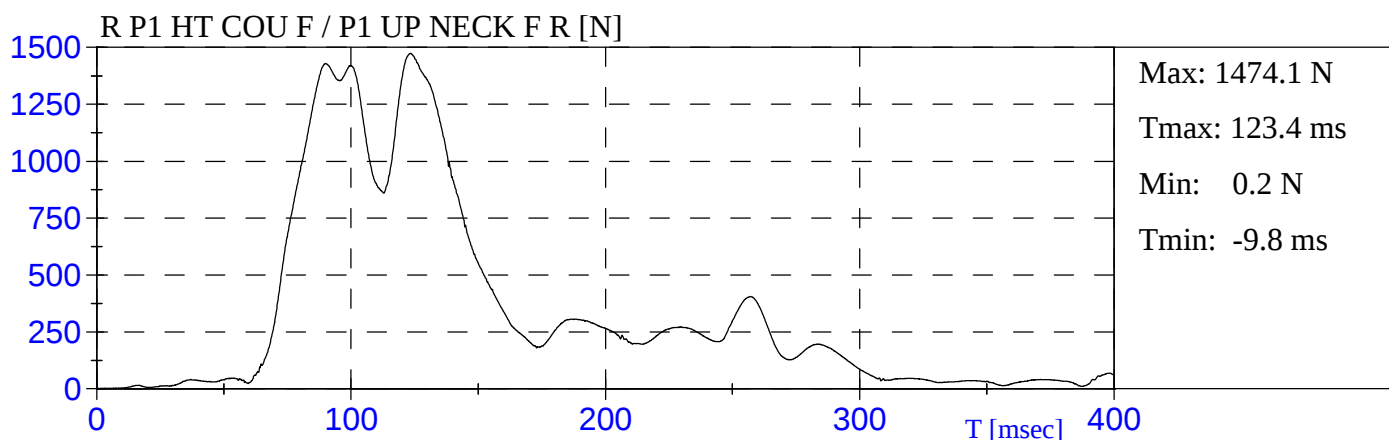
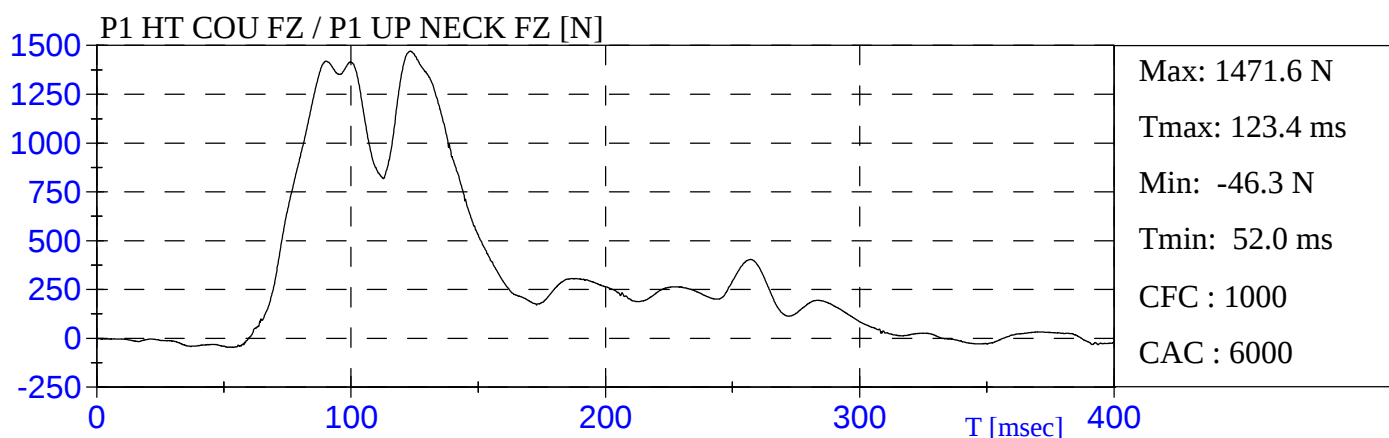
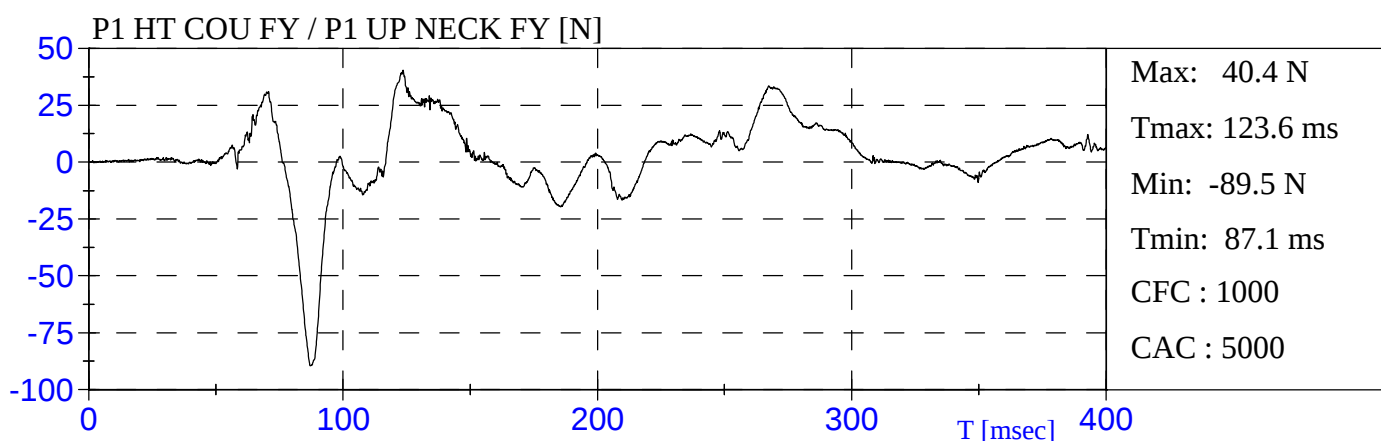
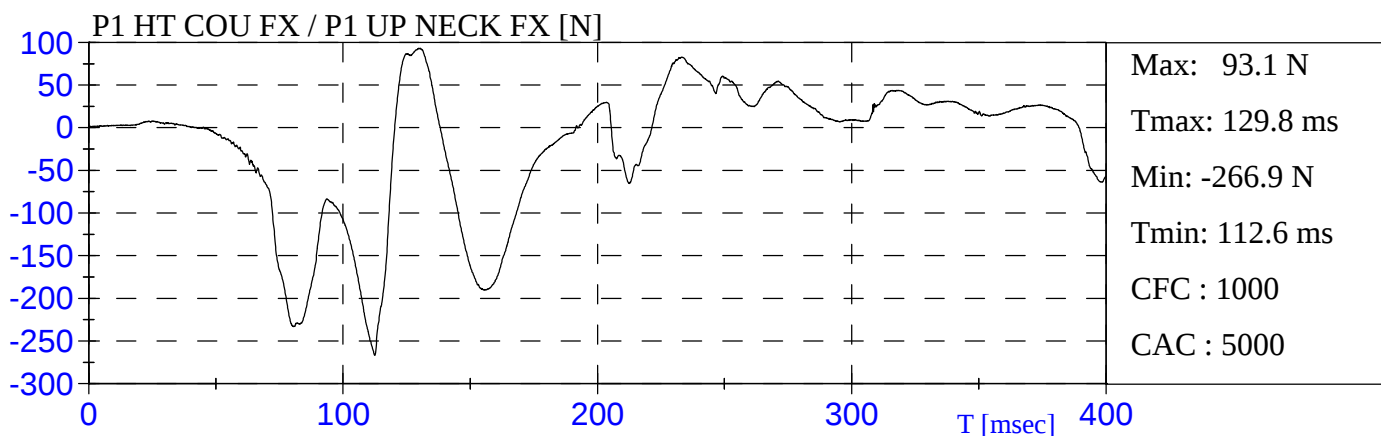


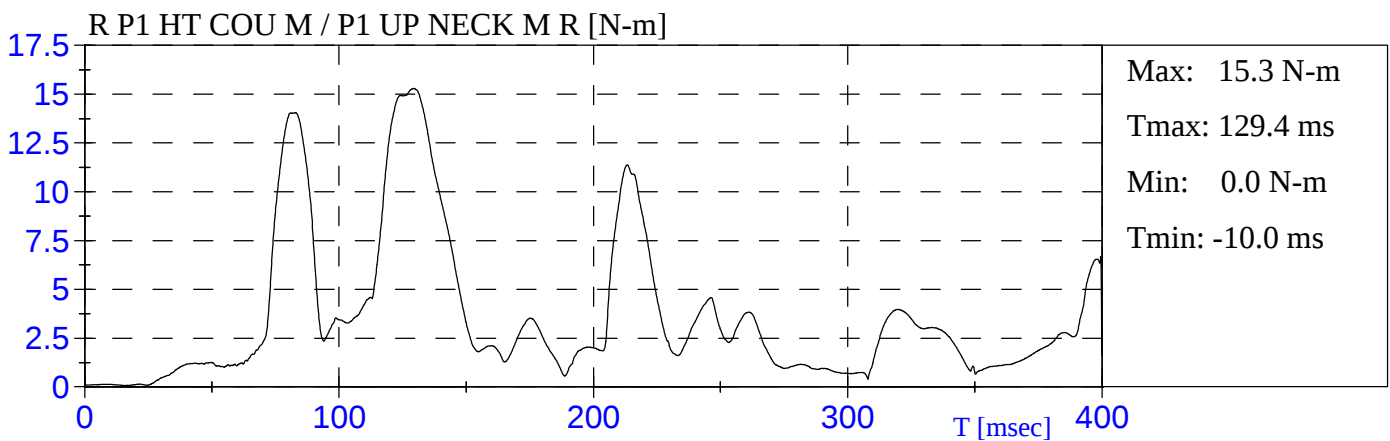
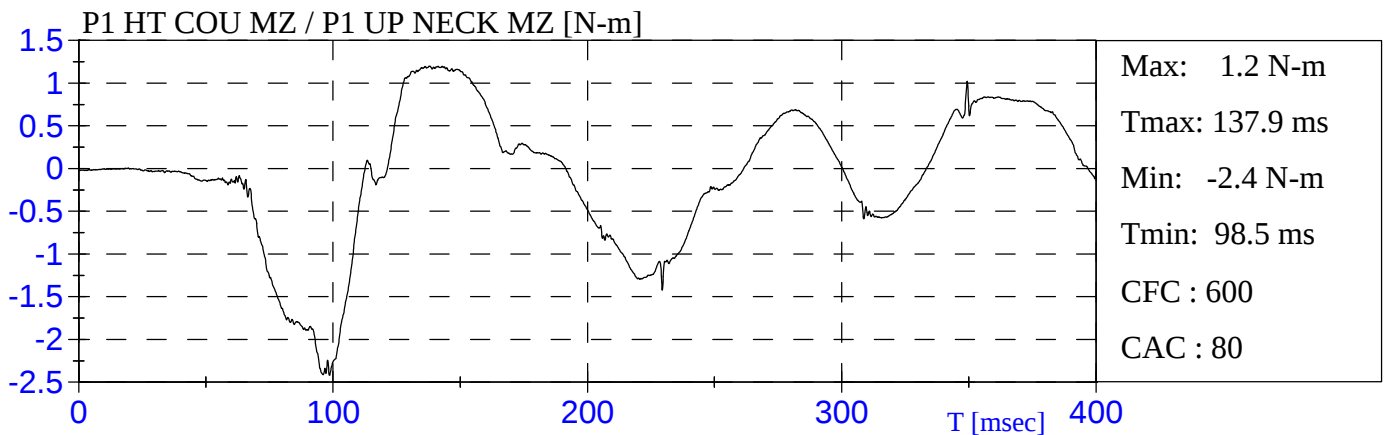
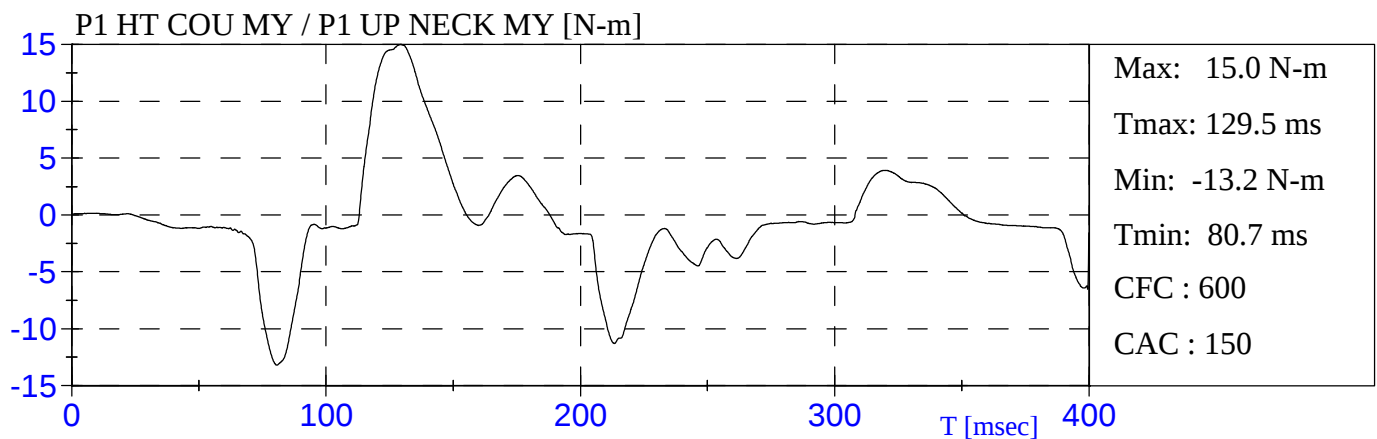
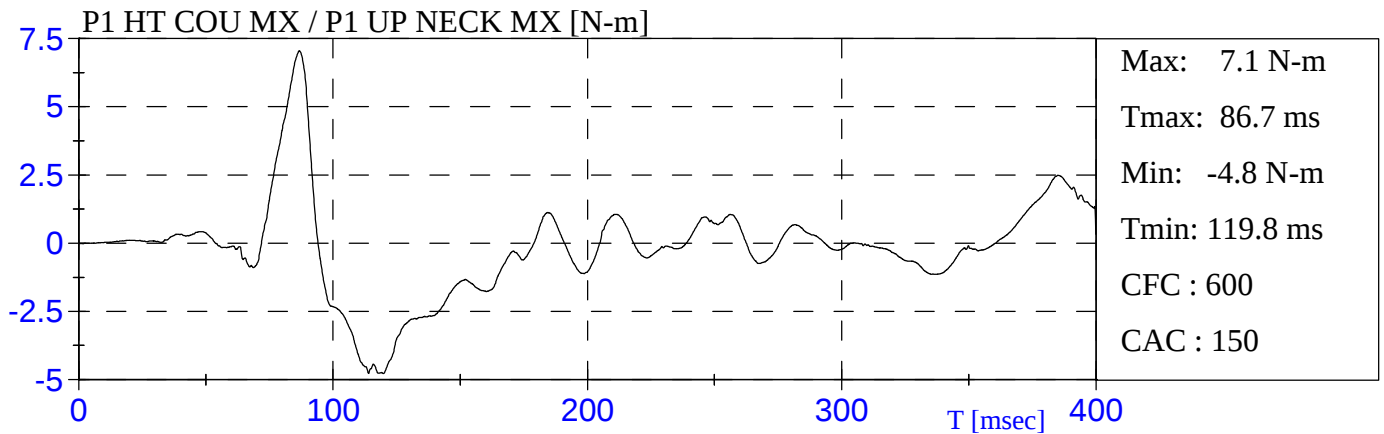




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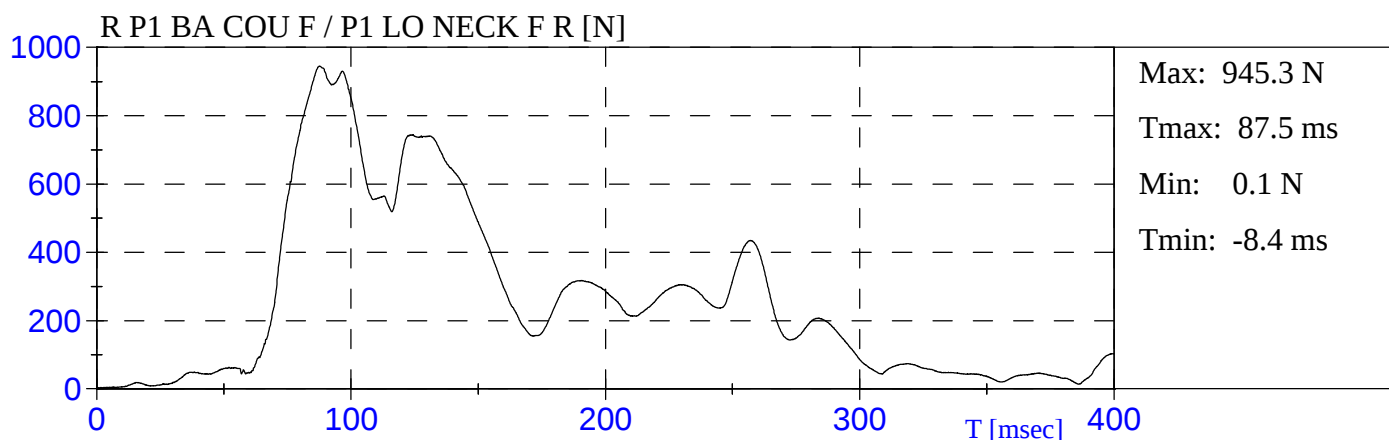
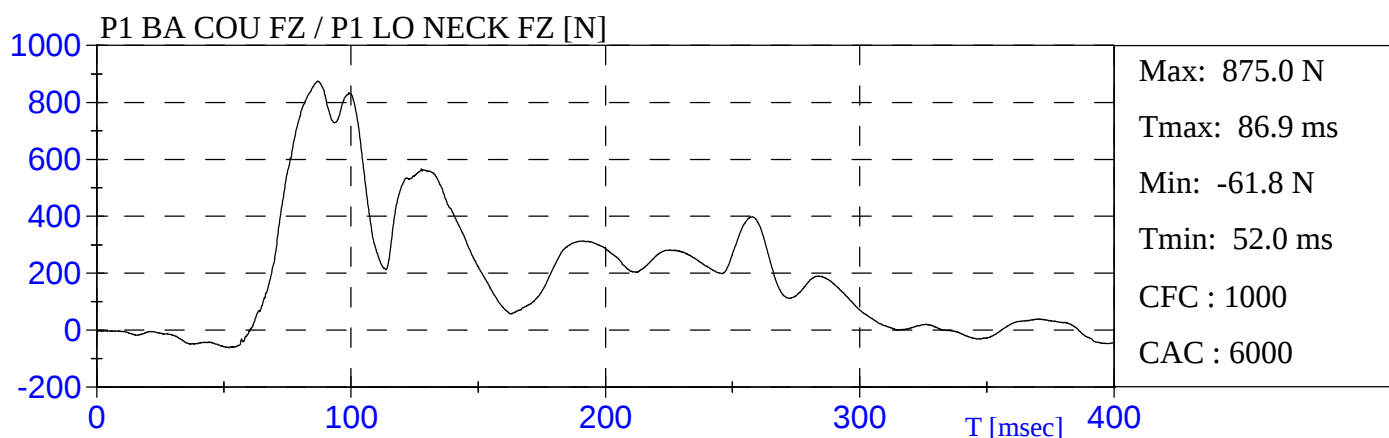
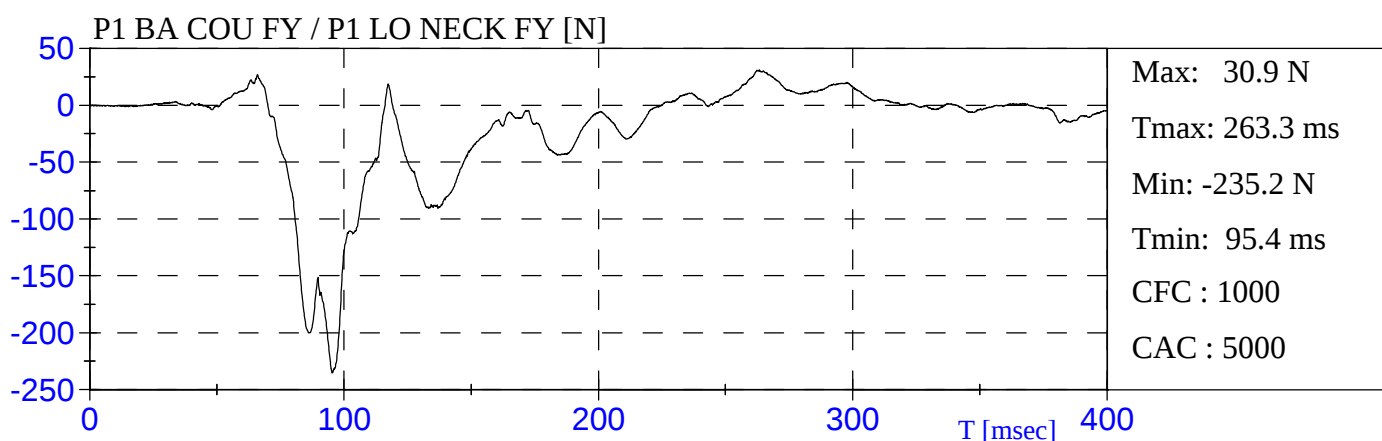
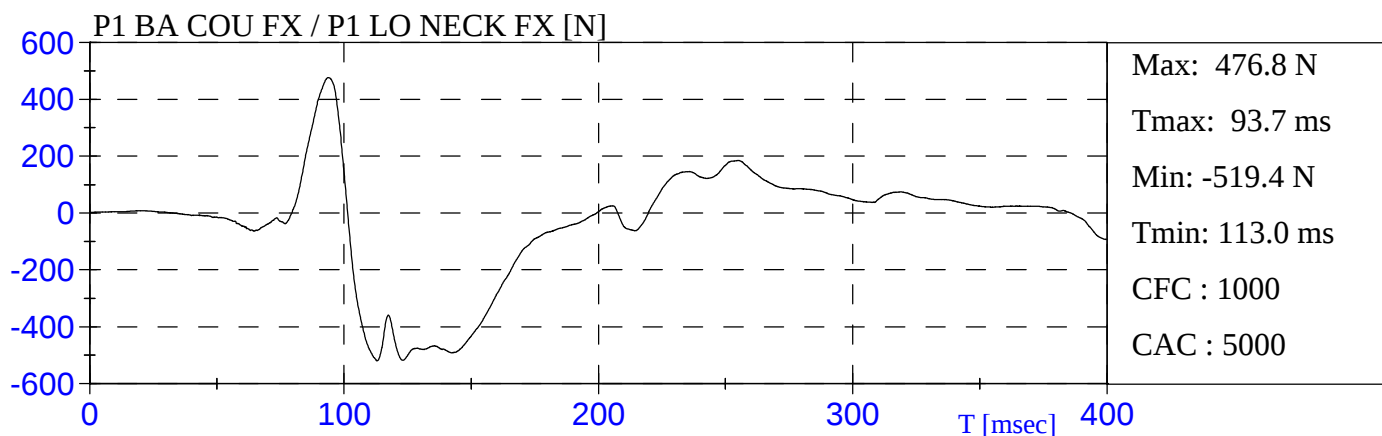


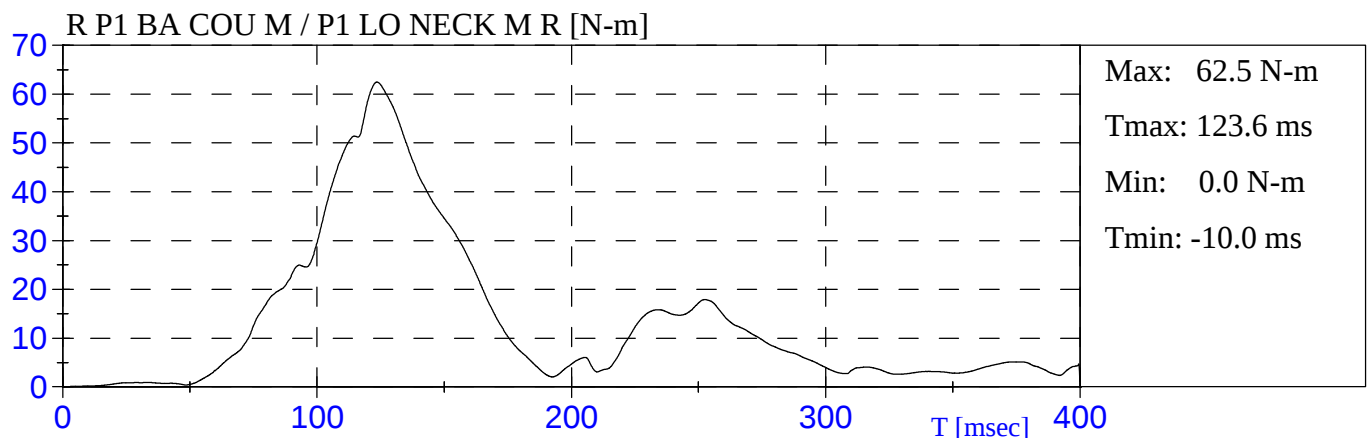
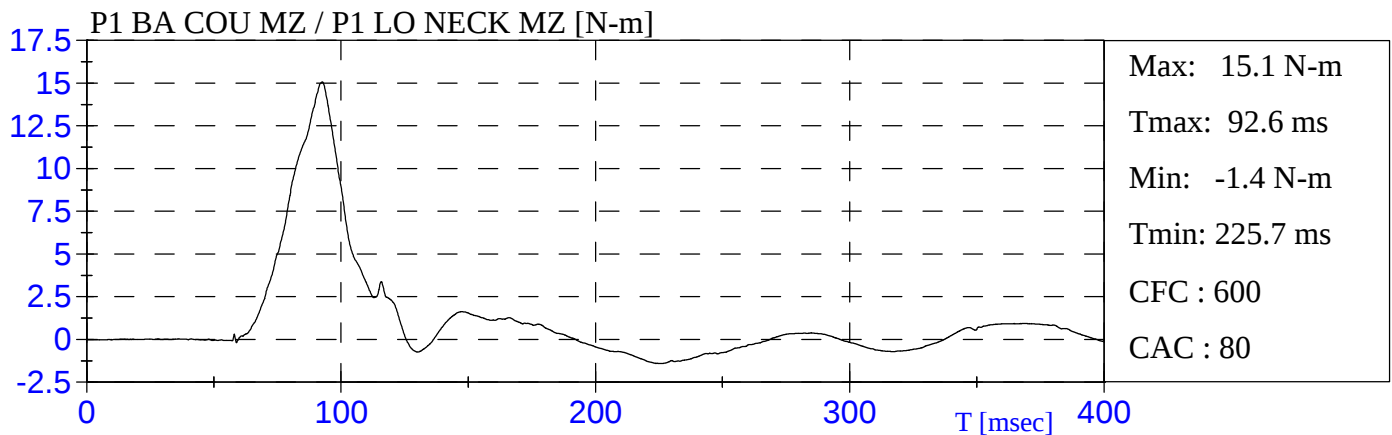
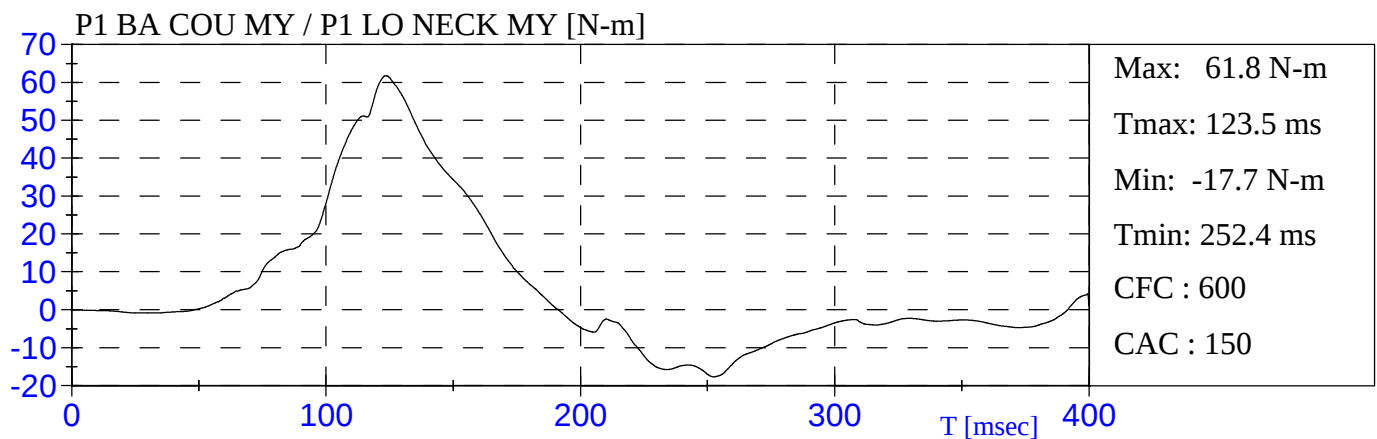
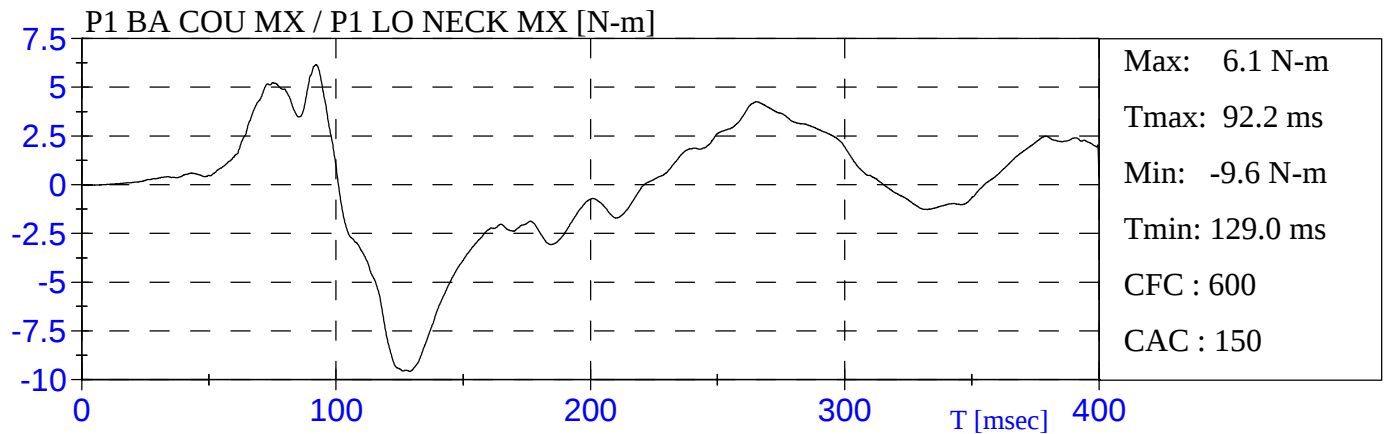


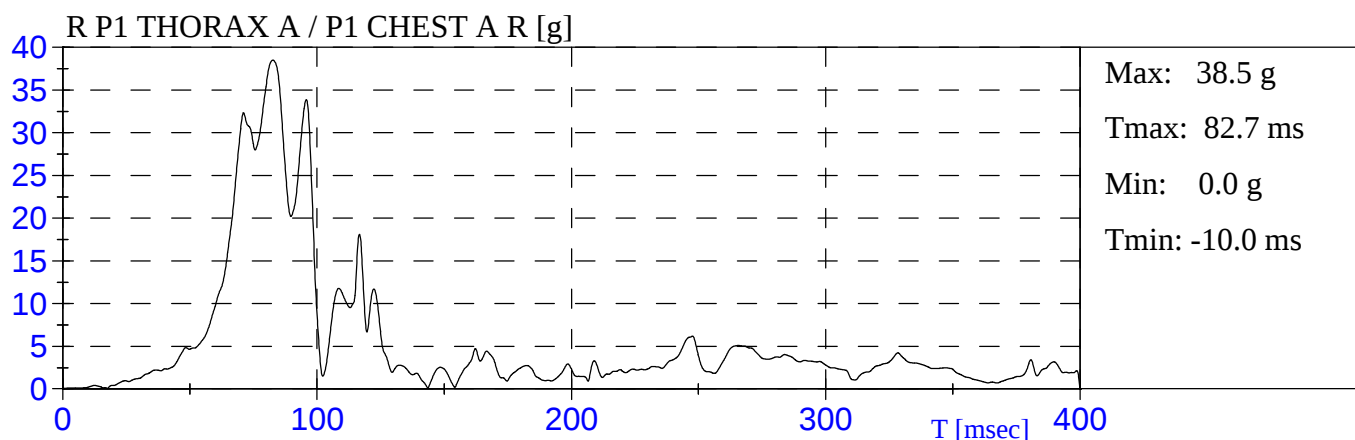
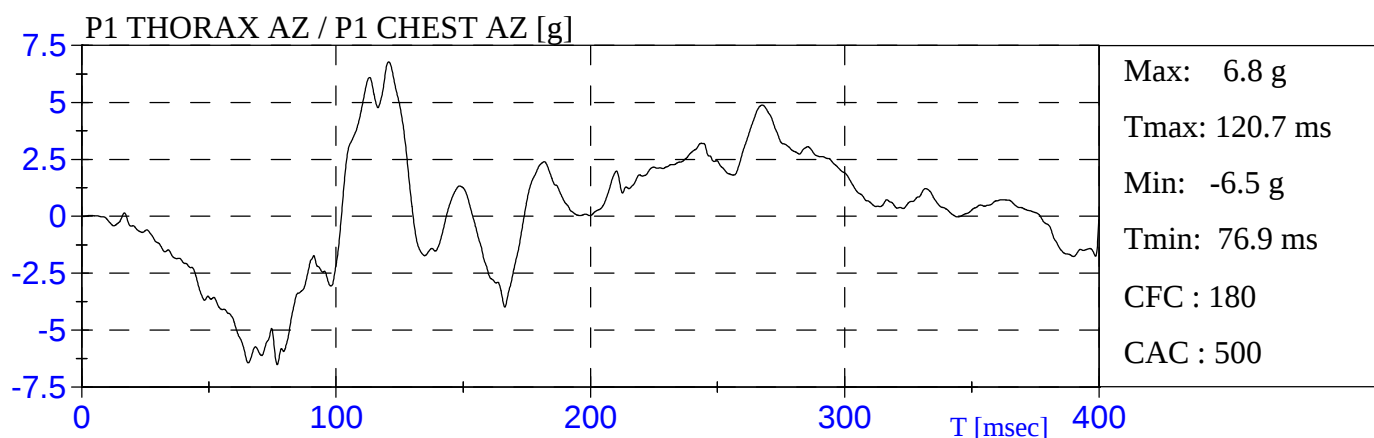
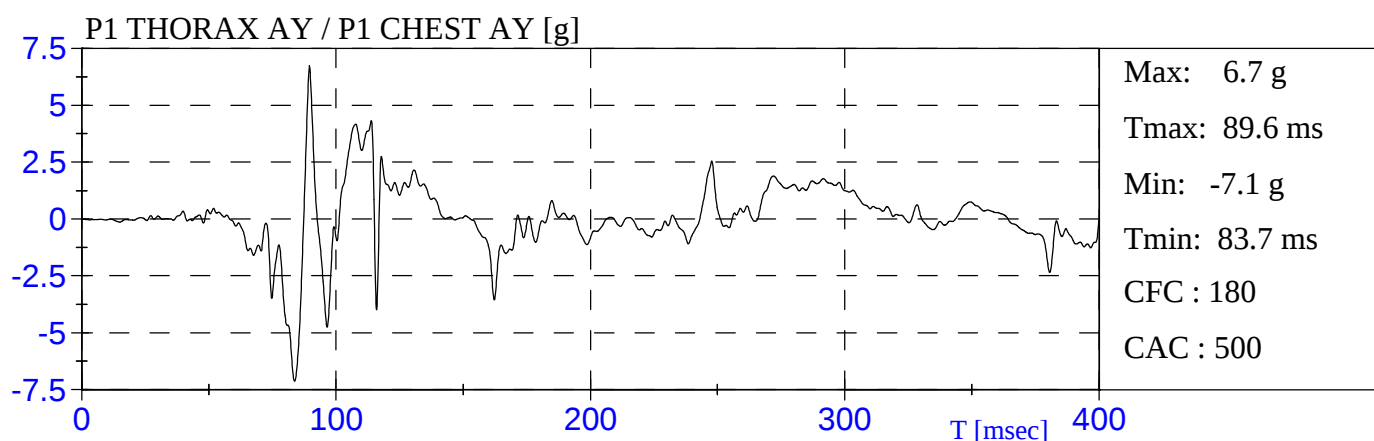
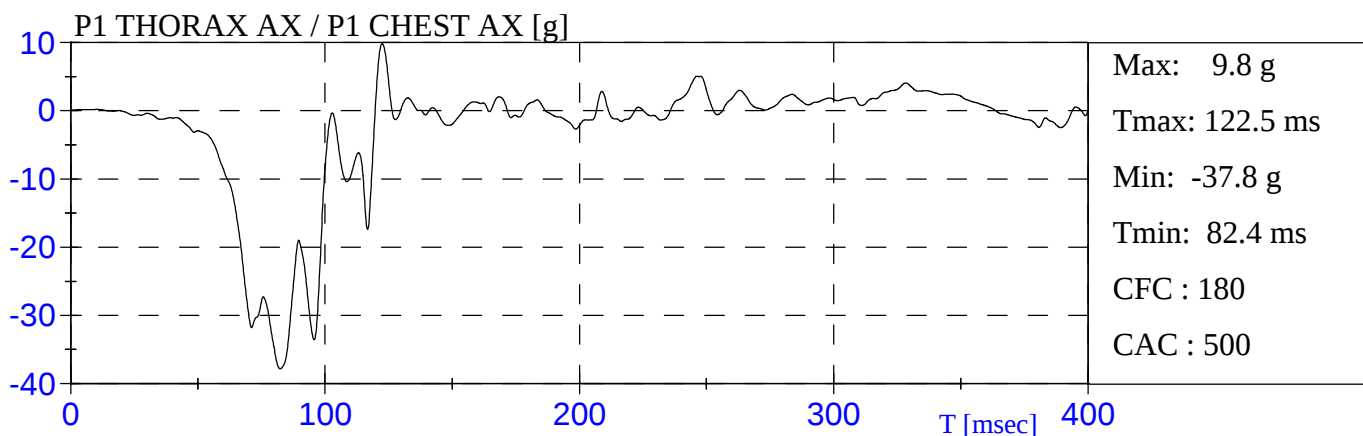


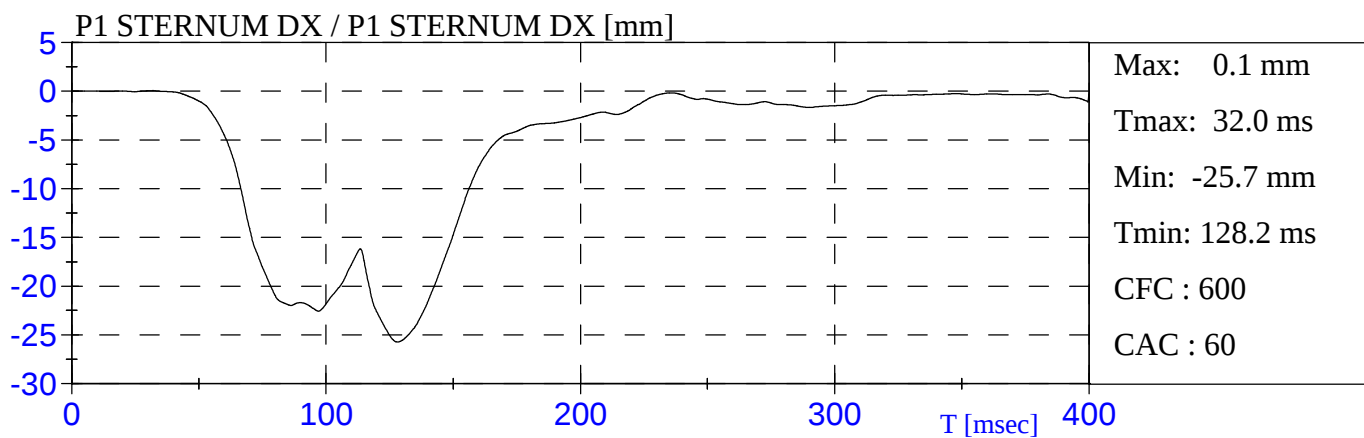
COLLISION FRONTALE
FRONTAL CRASH
SATURN VUE 2003

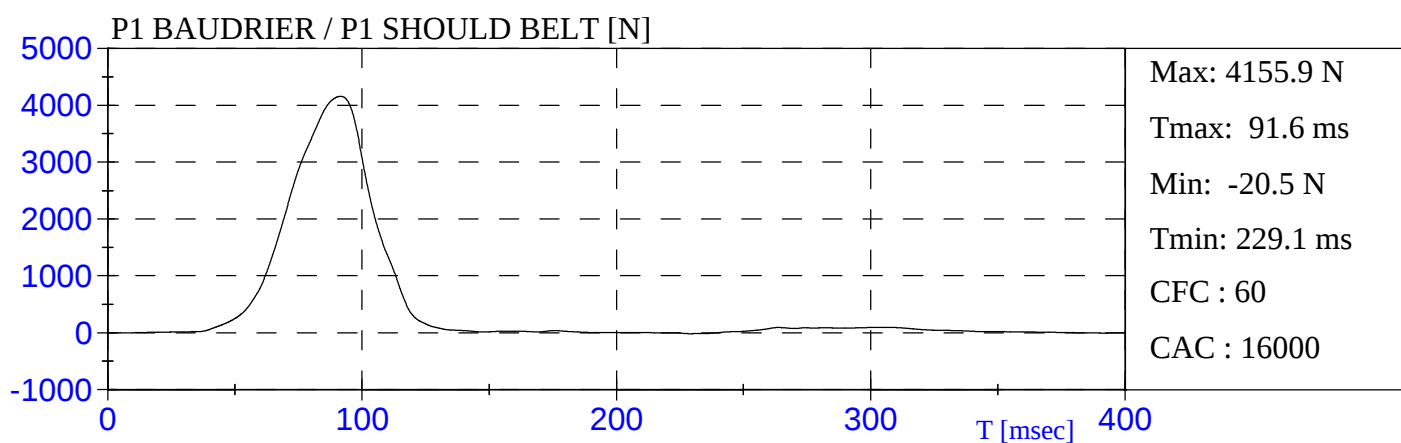
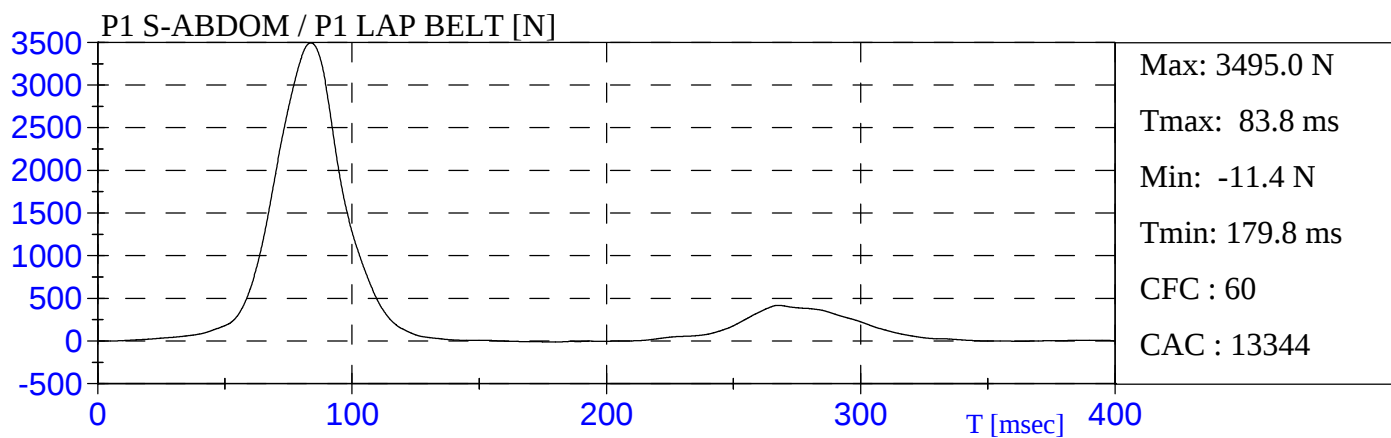
Date: 2004-03-04
N° TC / TC No.: TC03-232

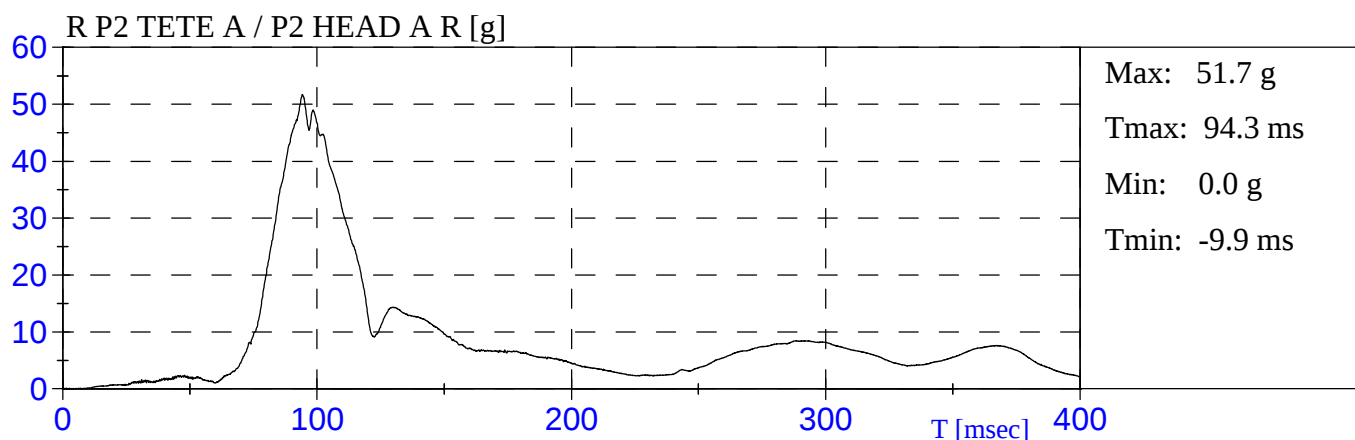
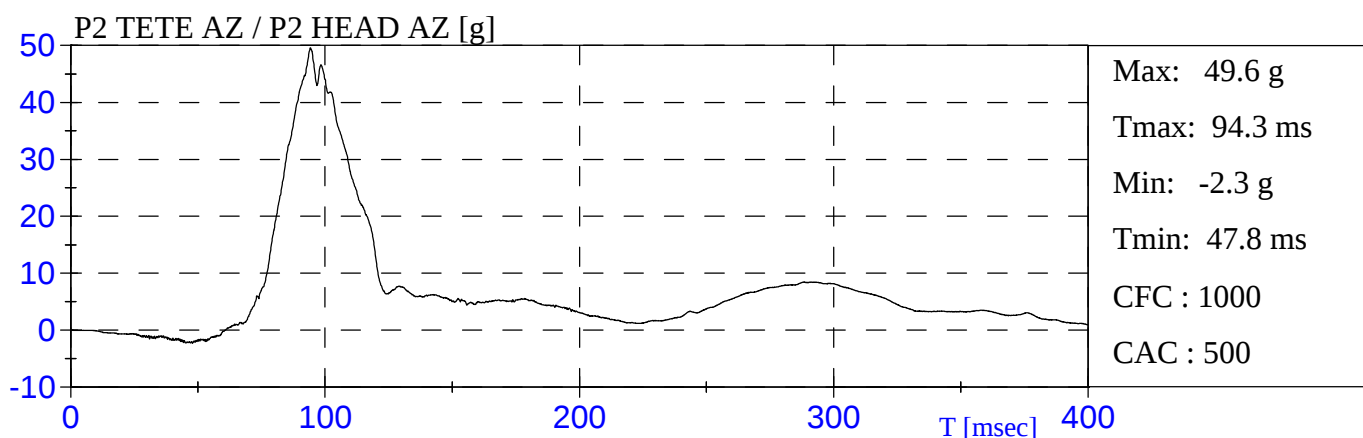
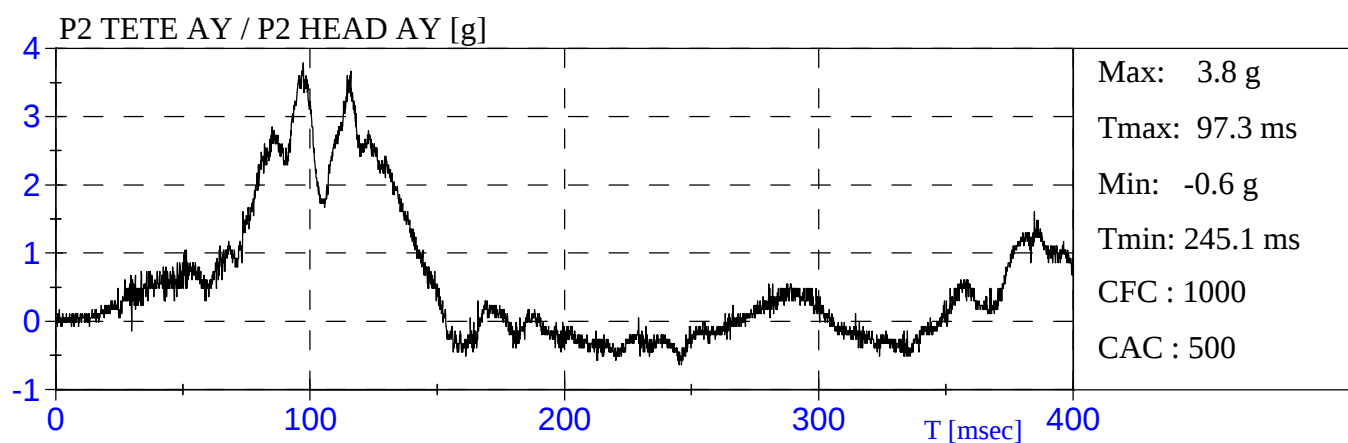
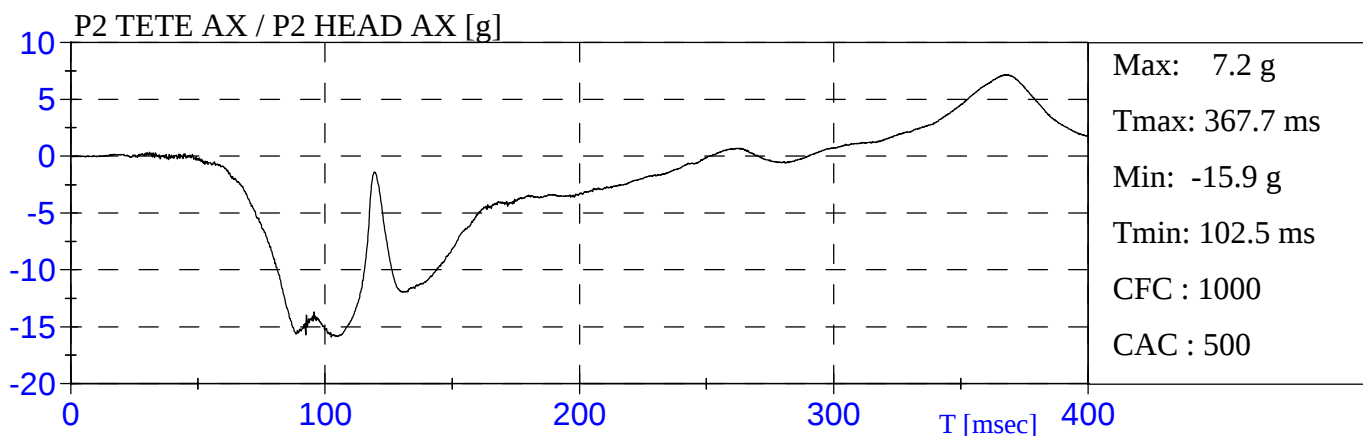


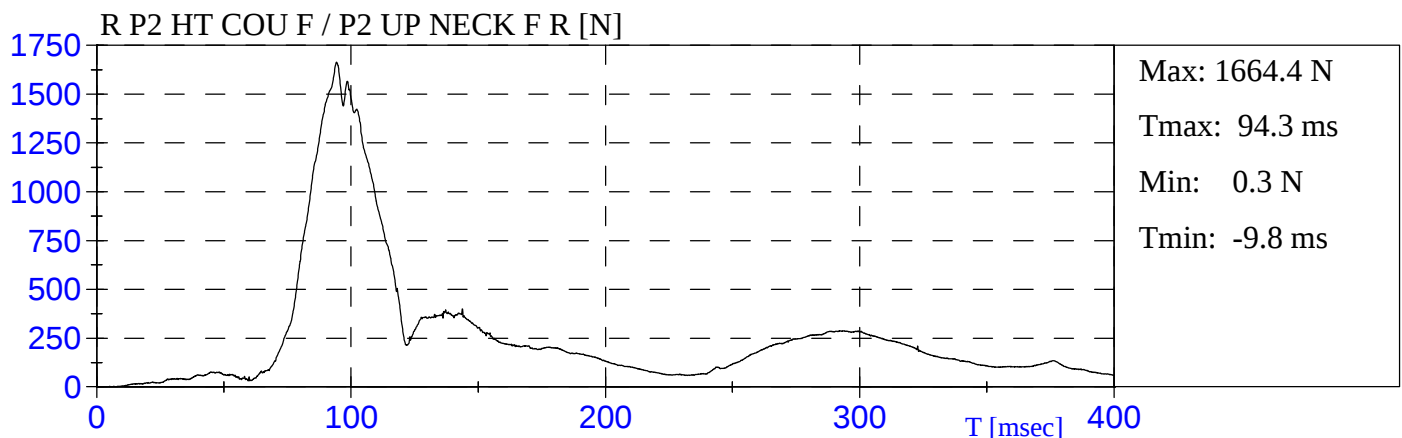
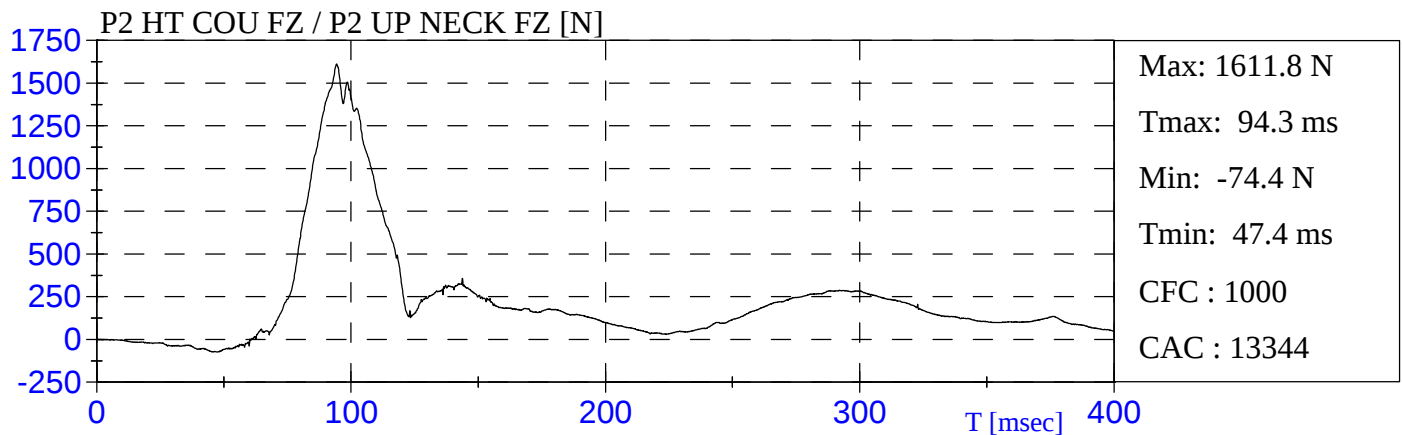
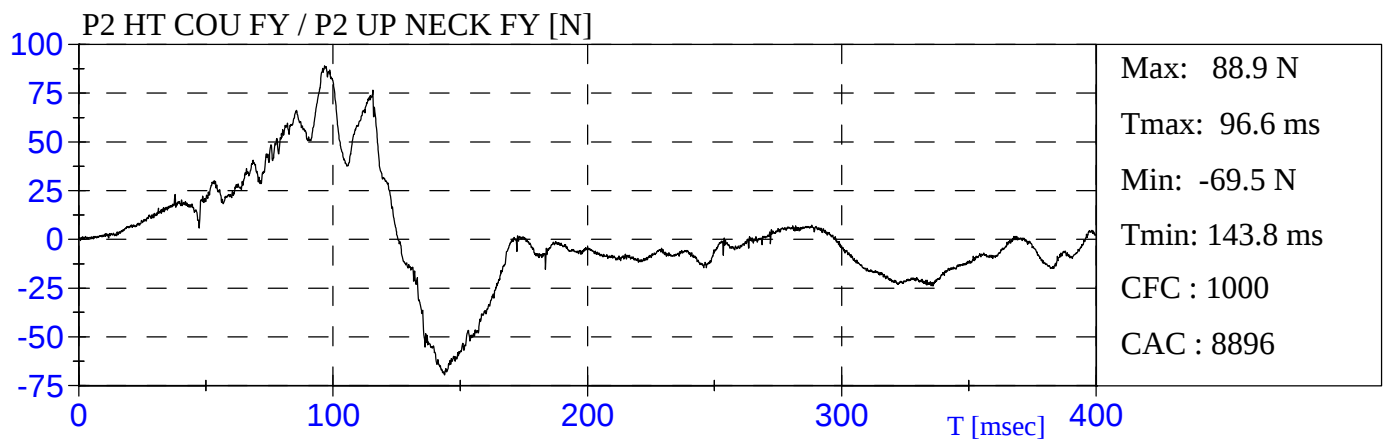
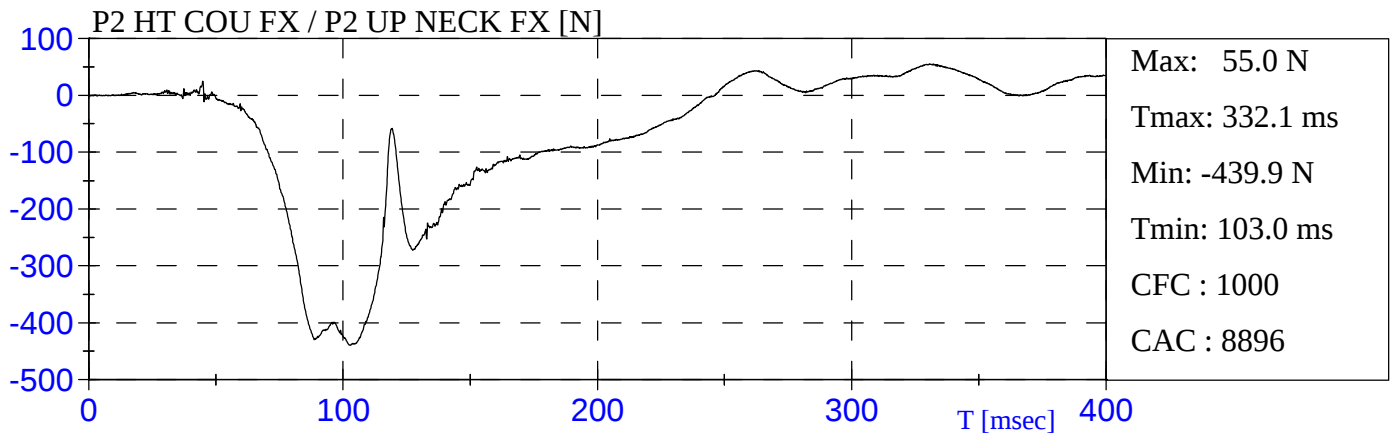


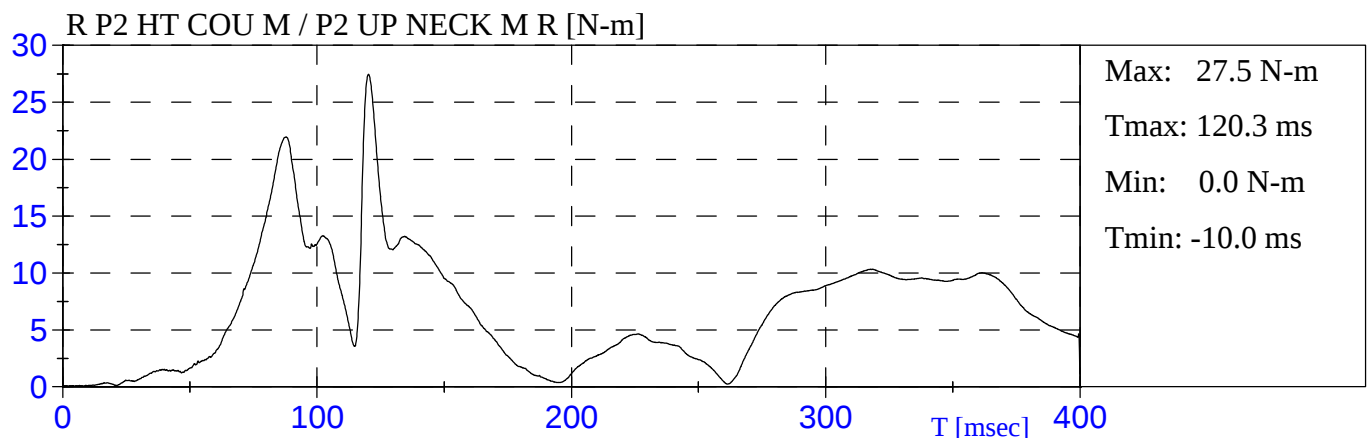
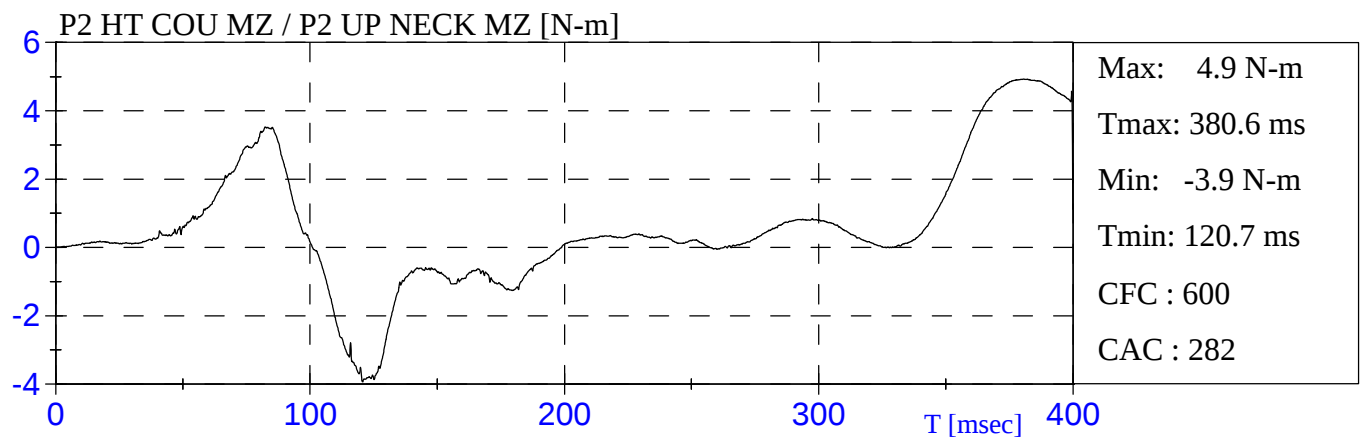
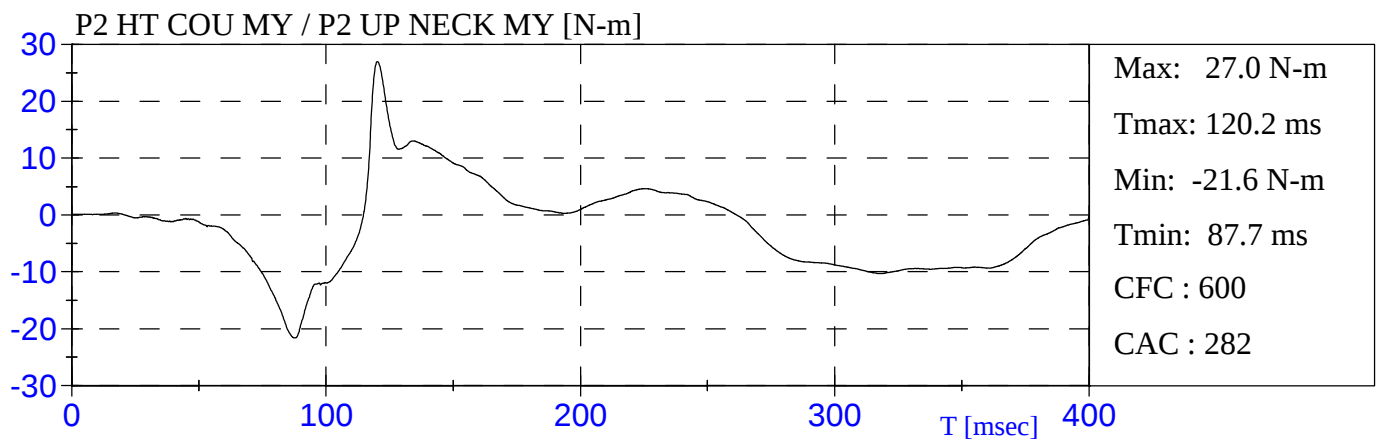
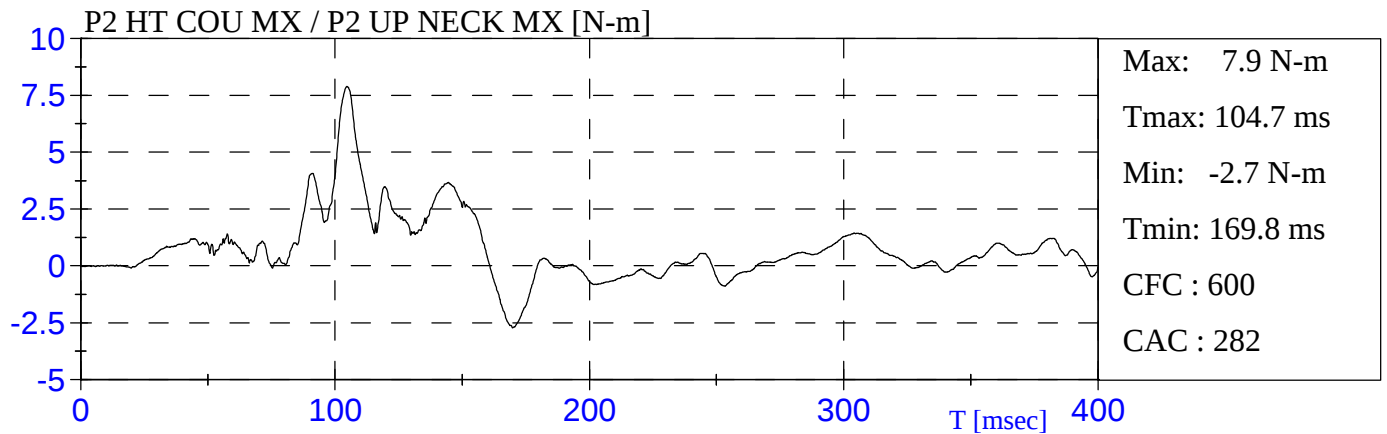


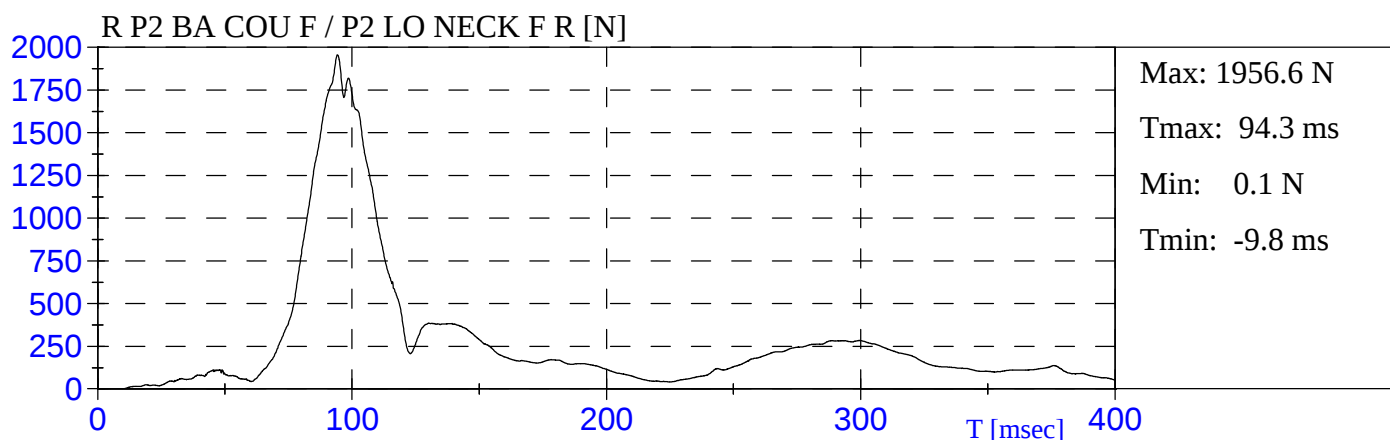
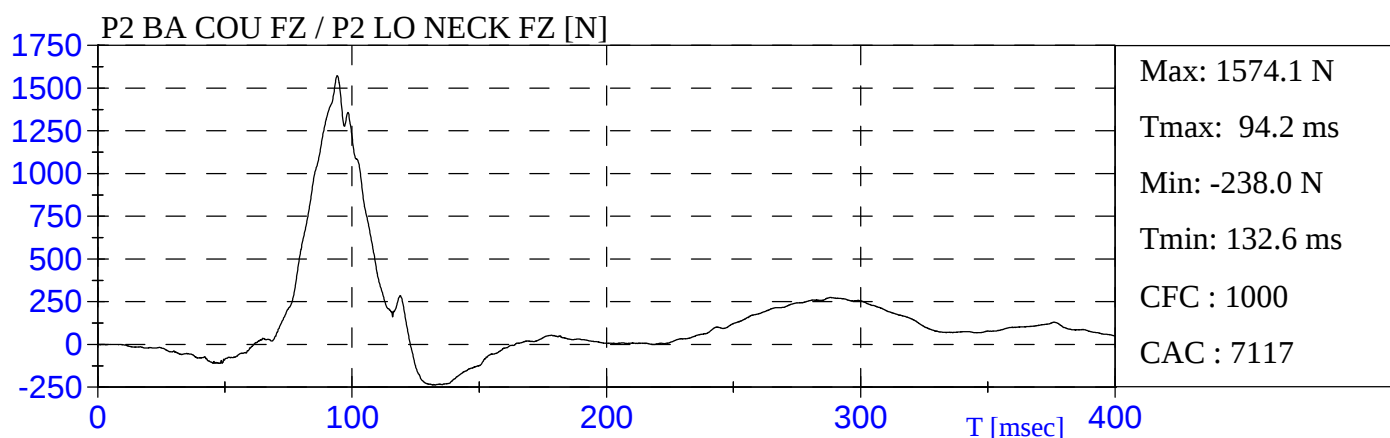
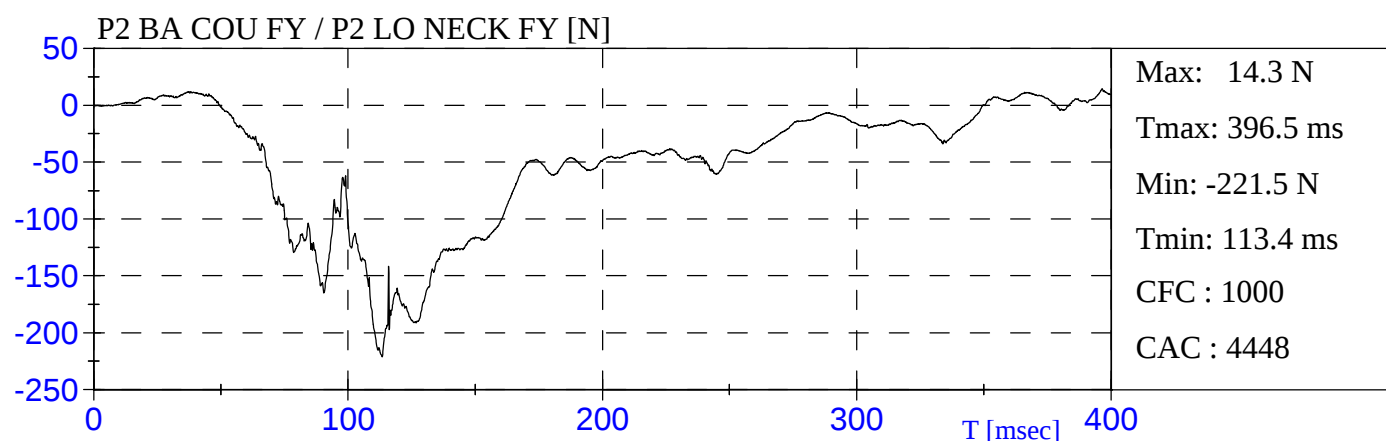
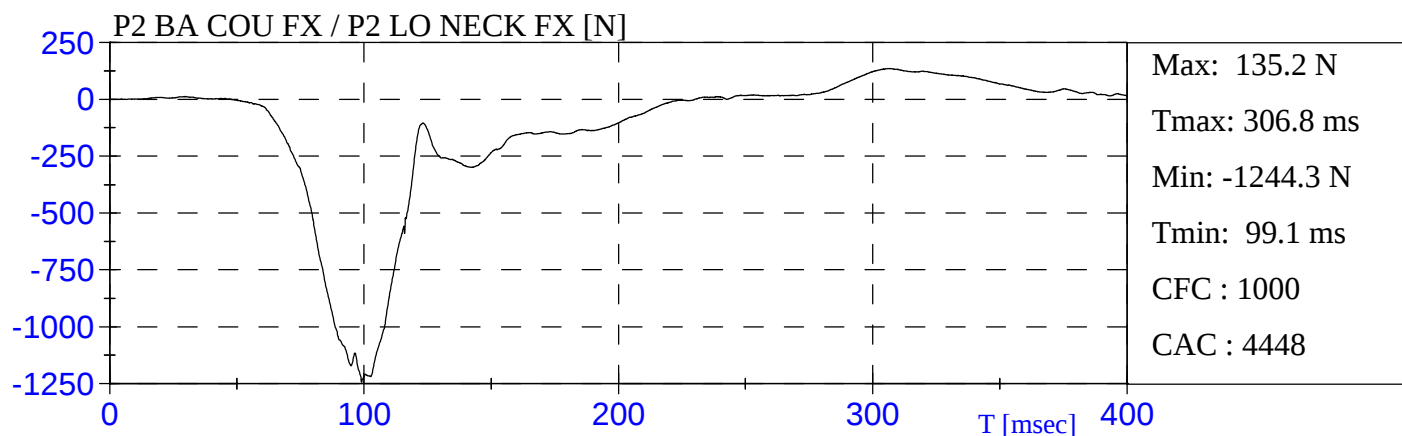


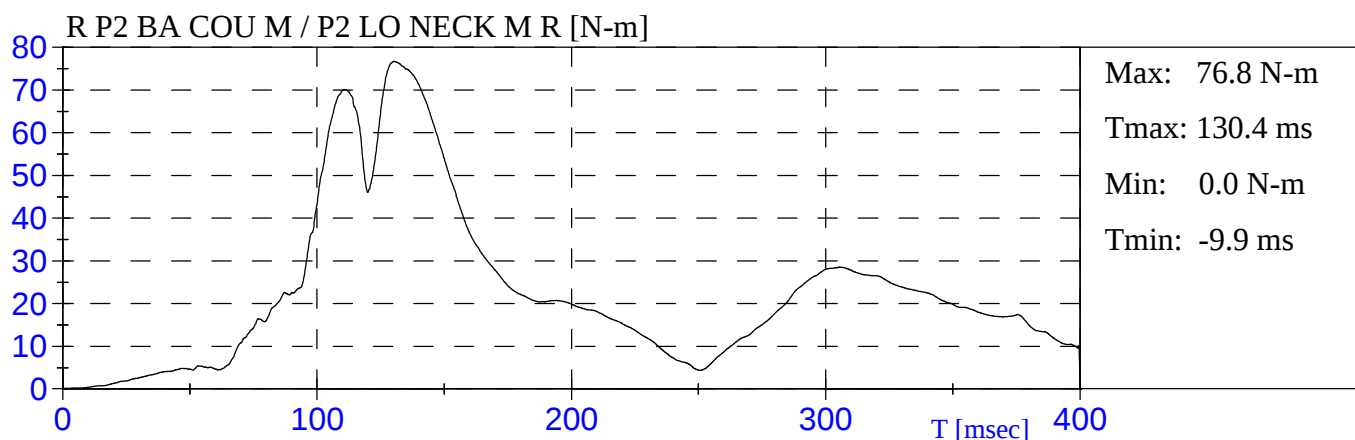
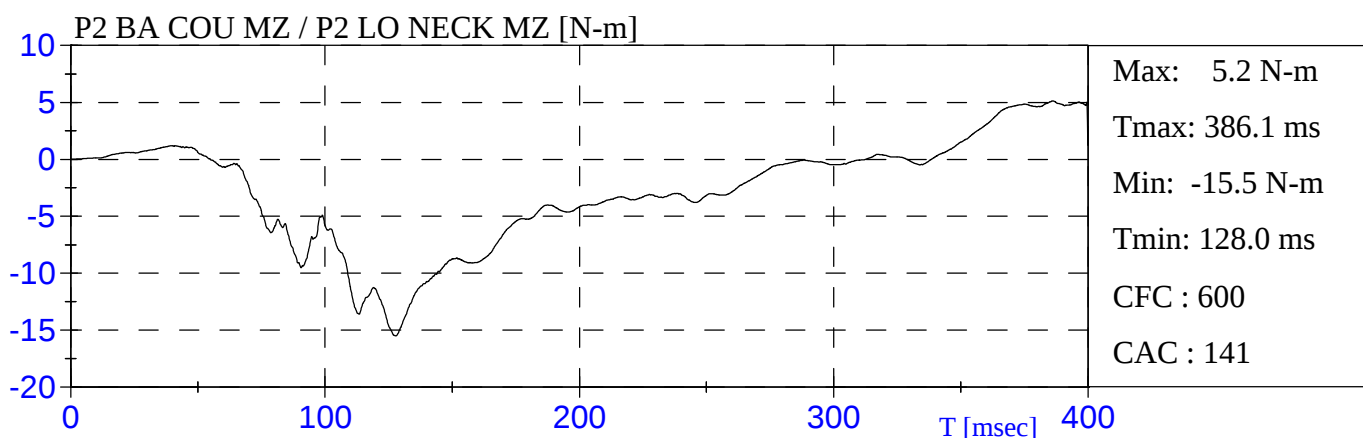
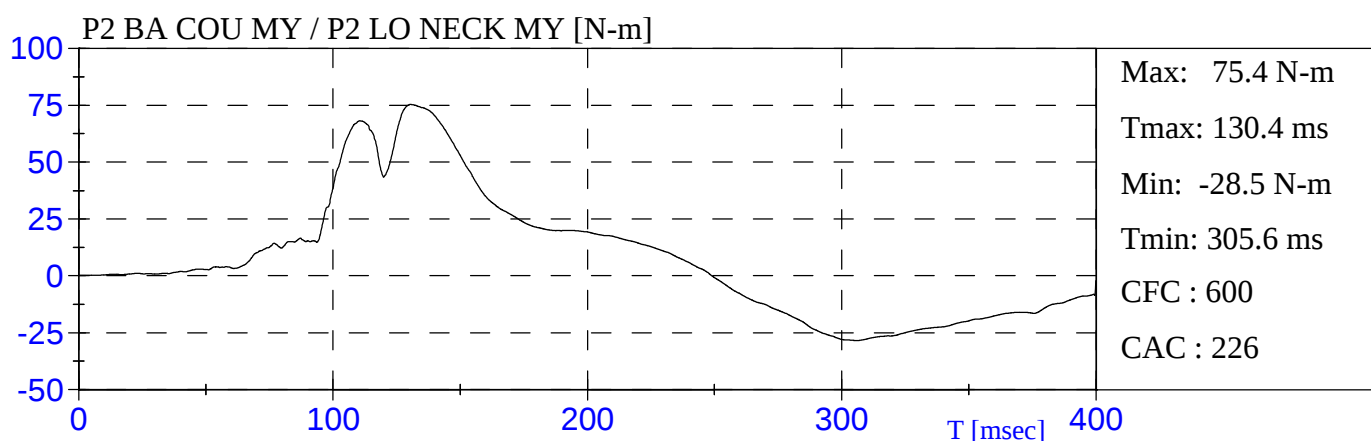
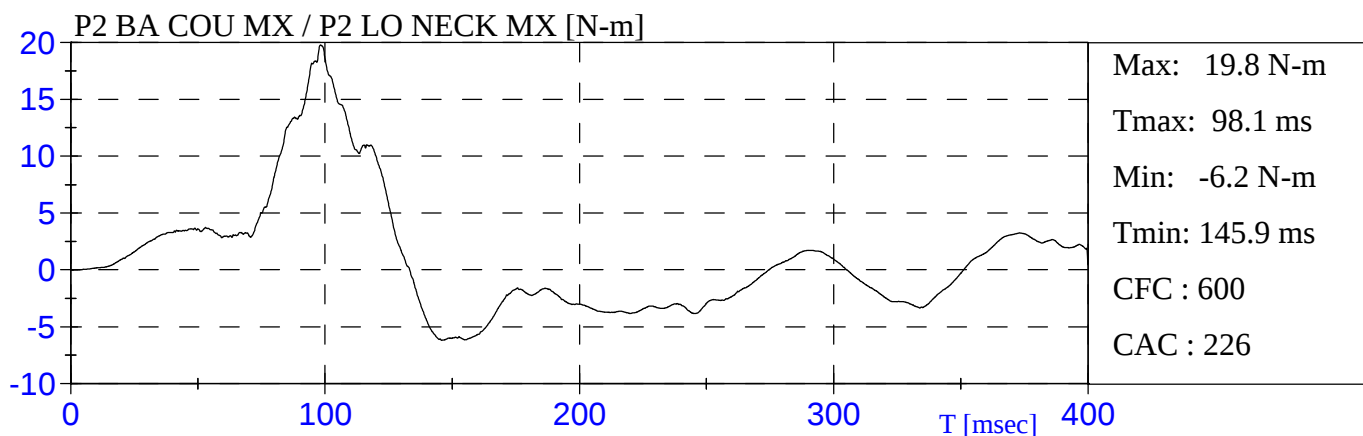


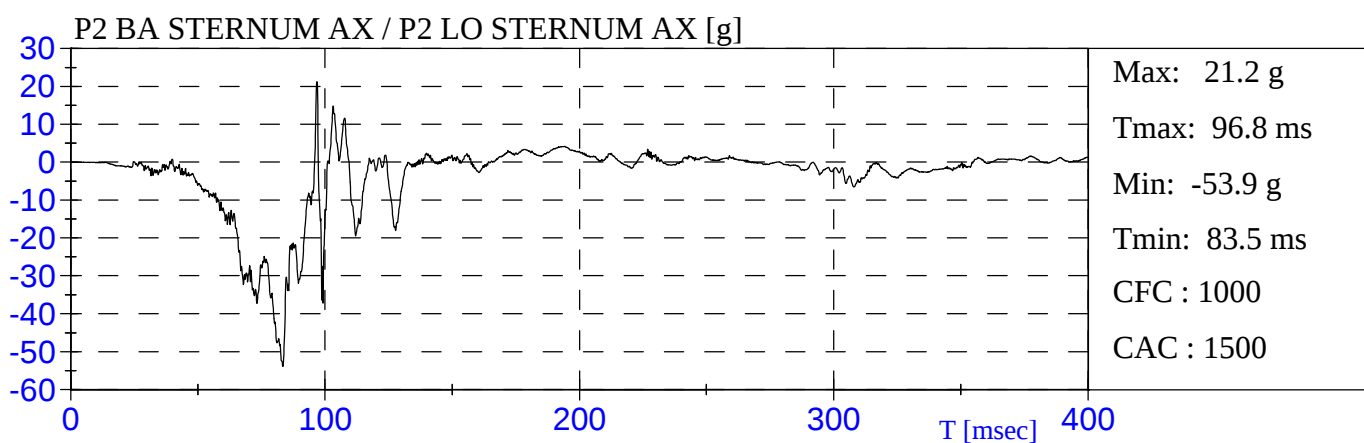
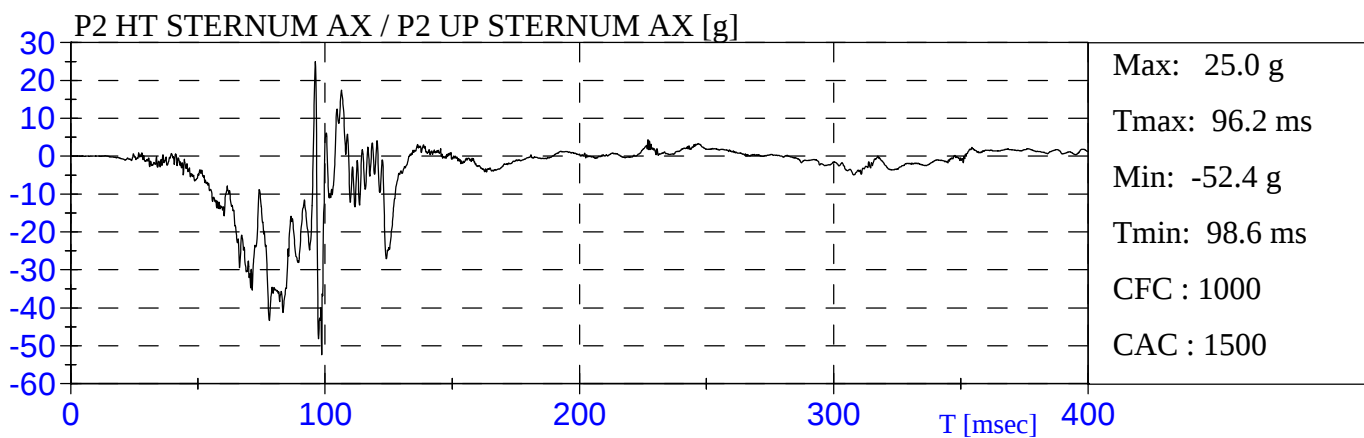


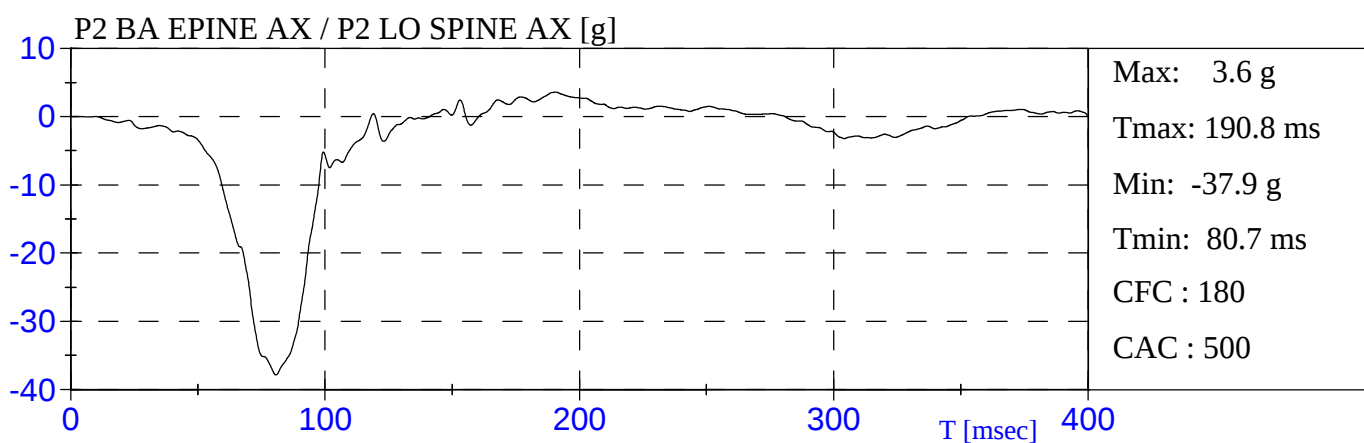
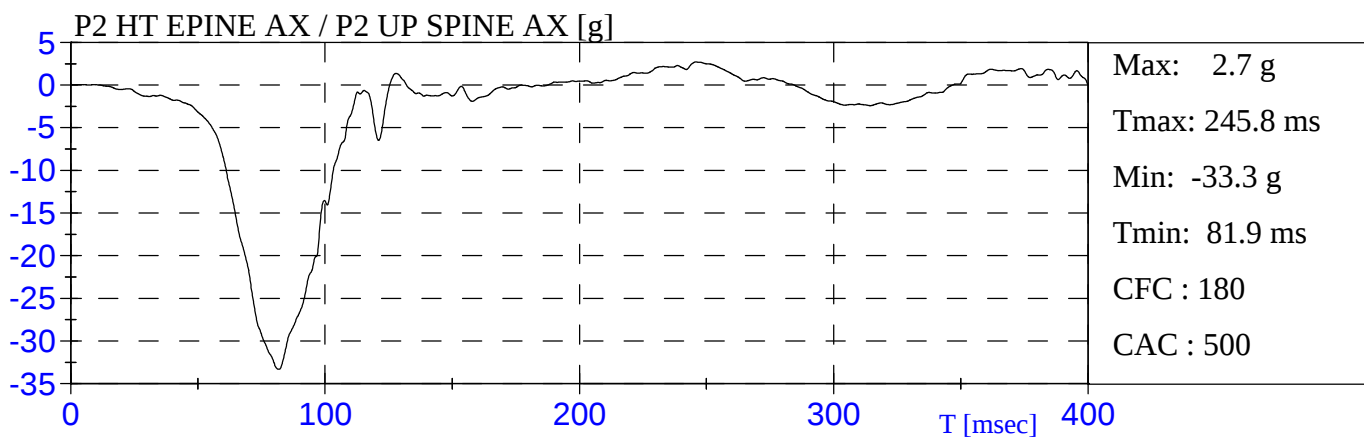


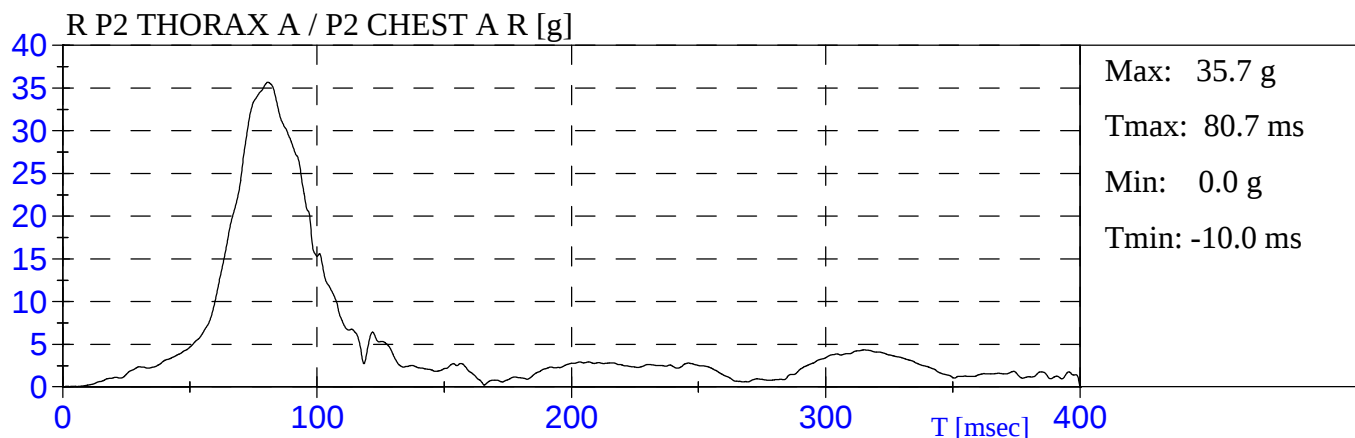
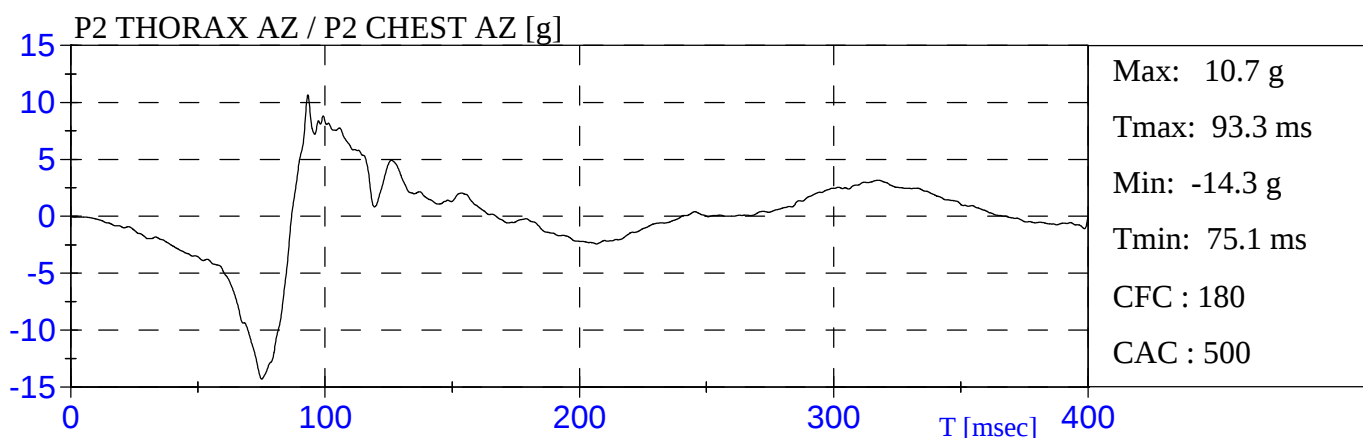
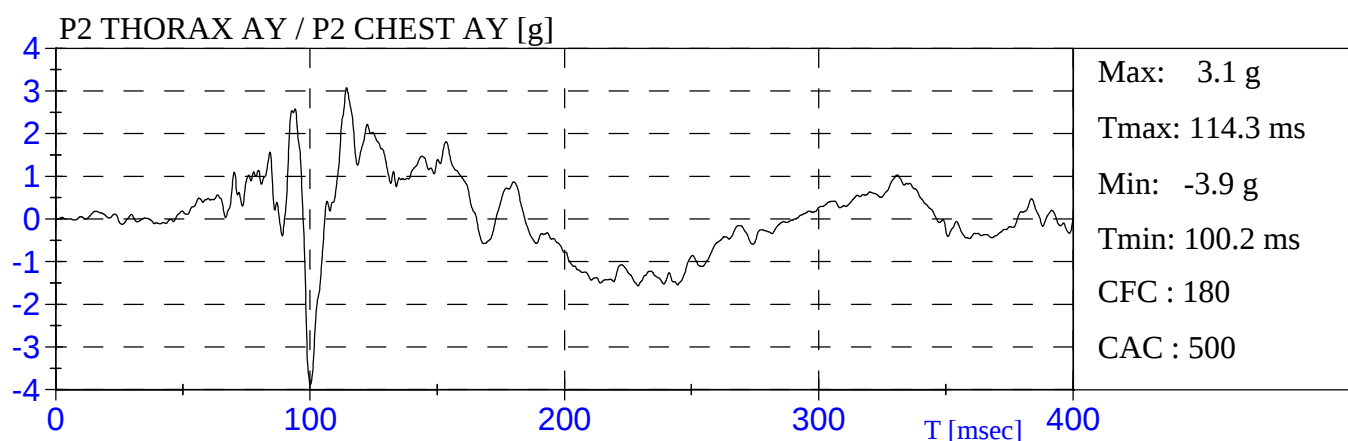
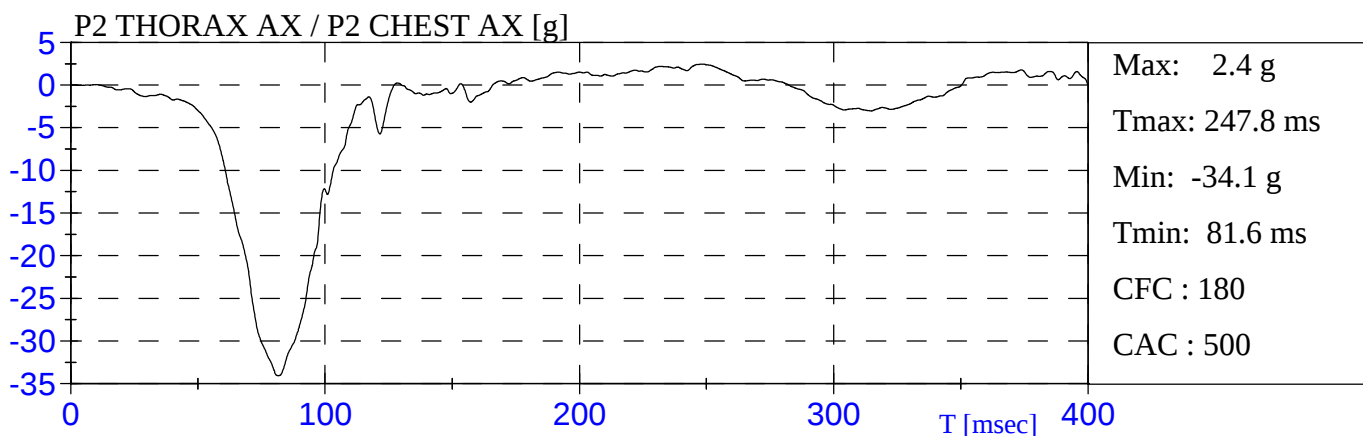


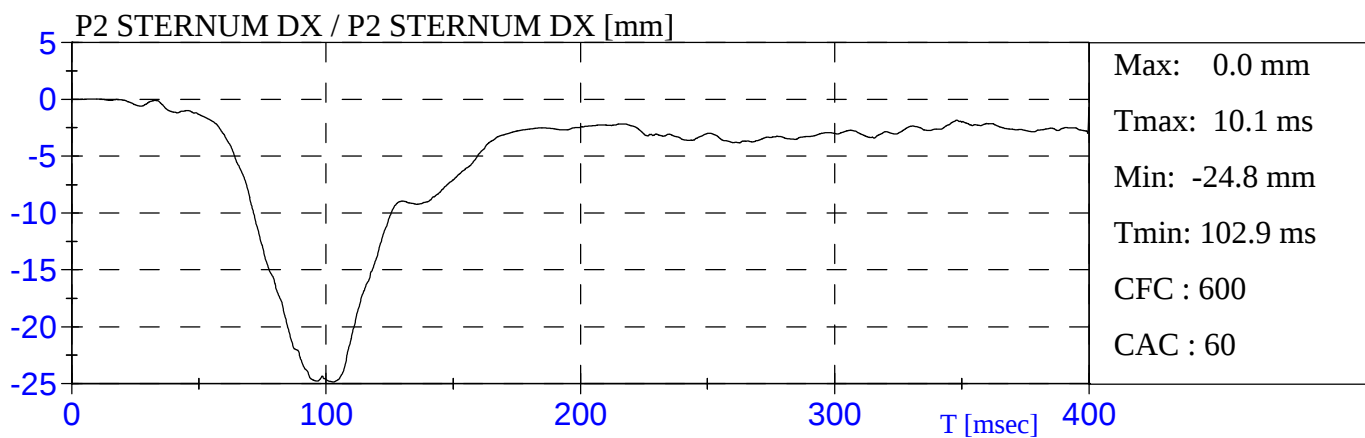








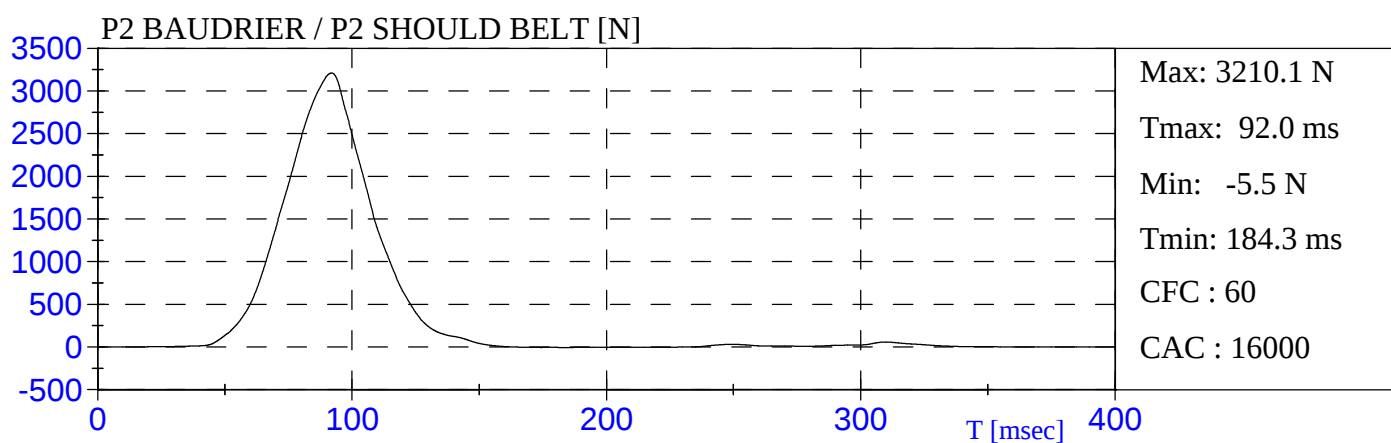
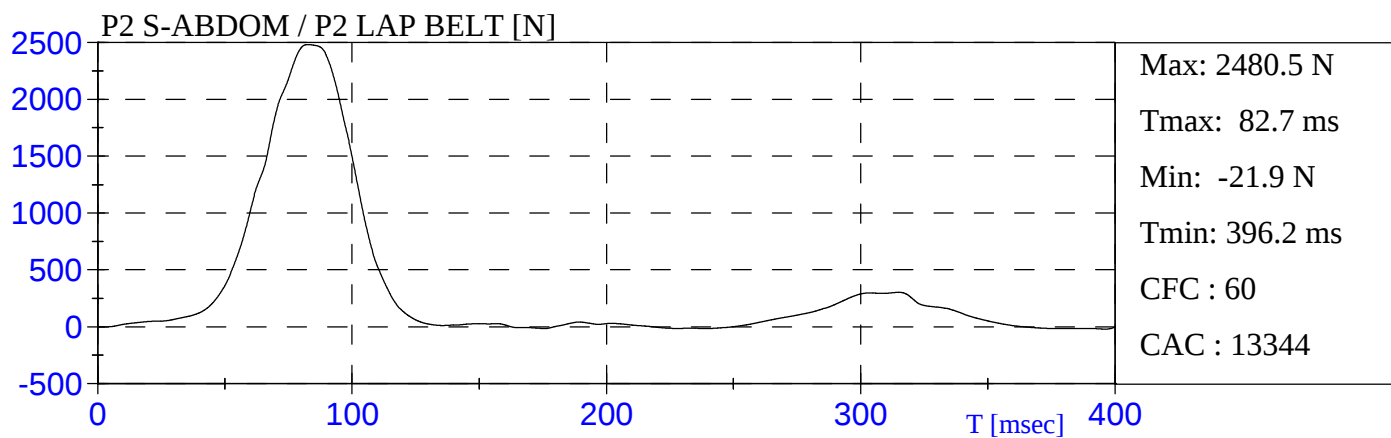


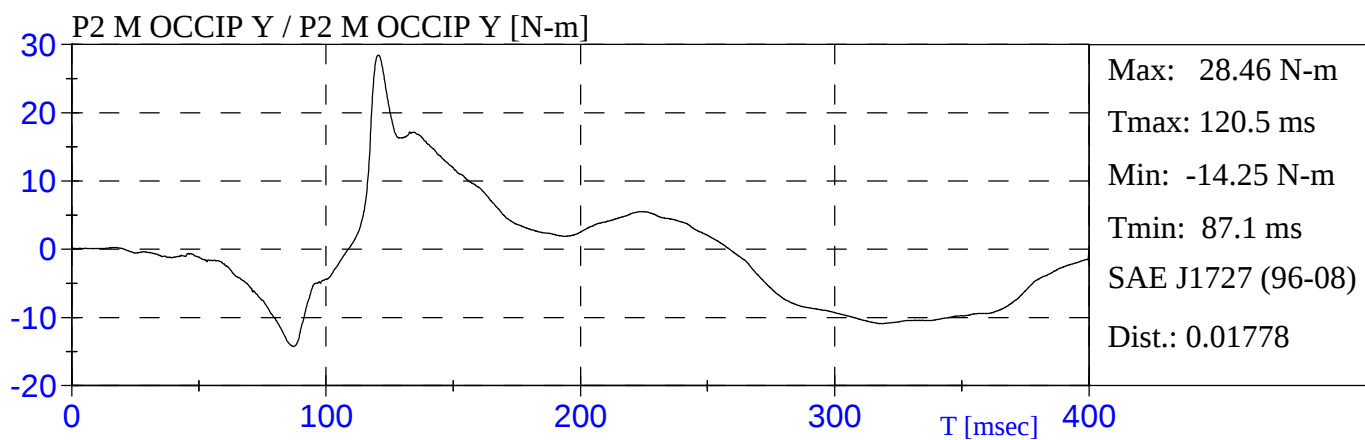


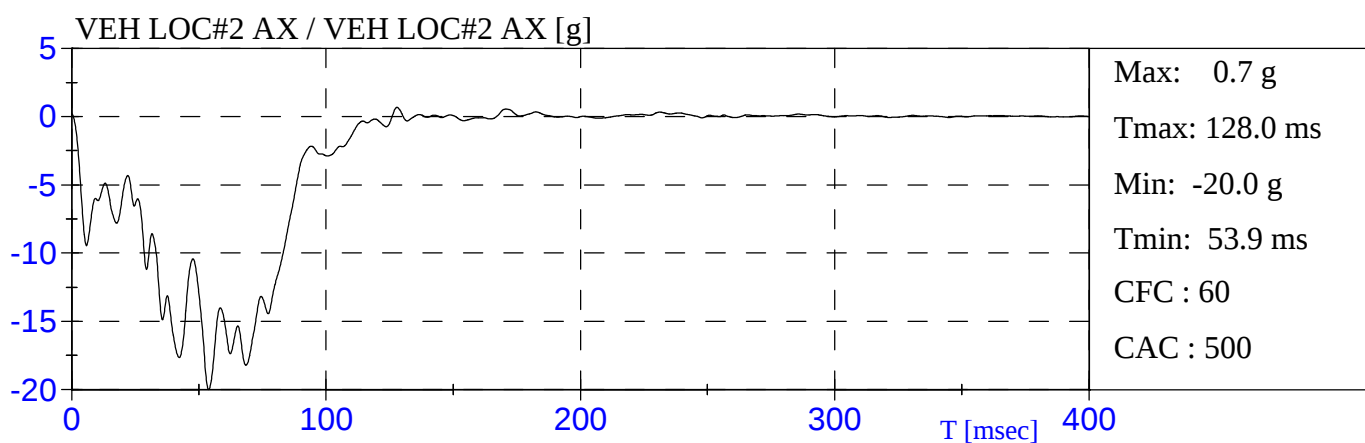
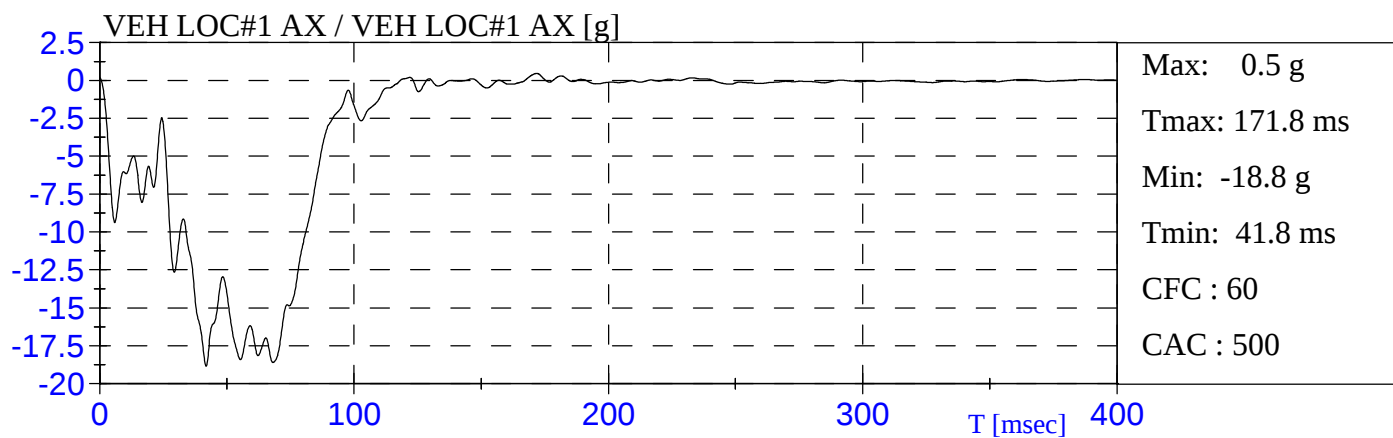


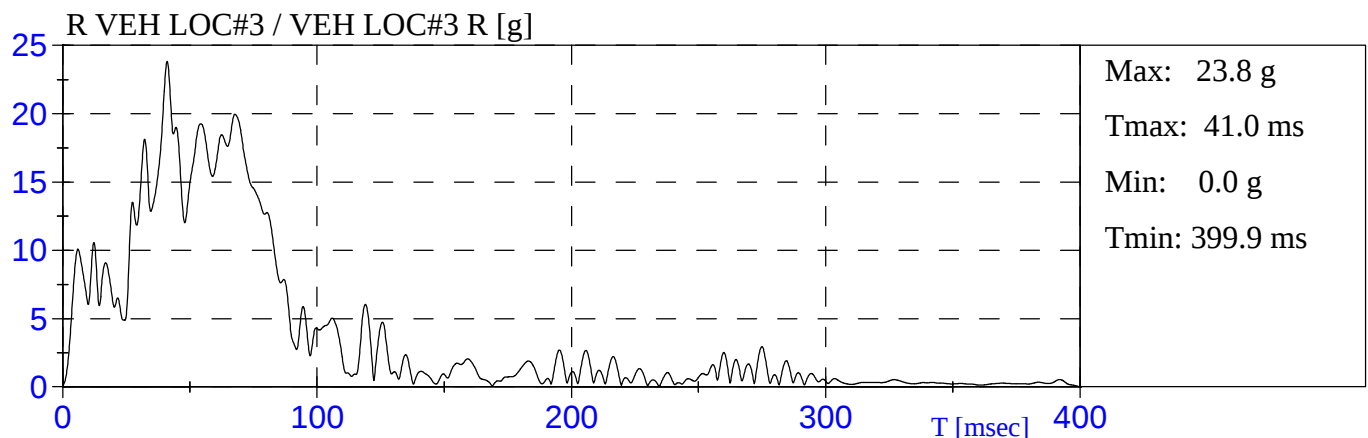
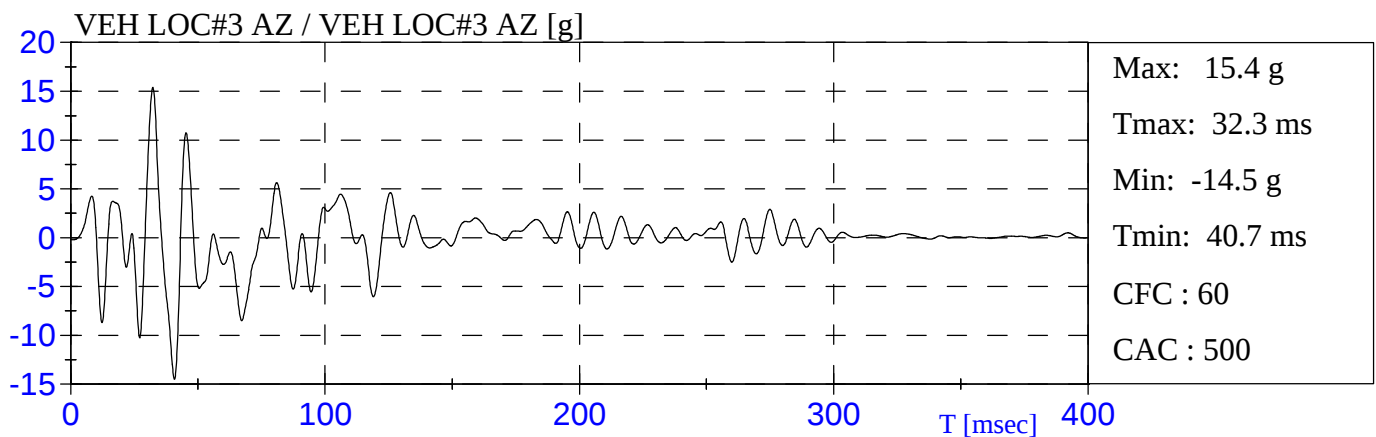
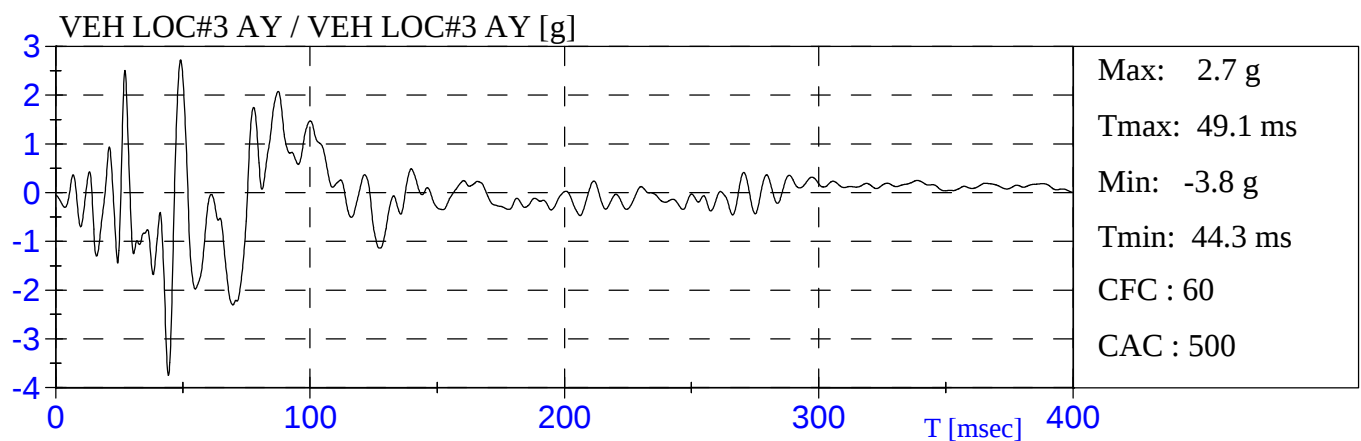
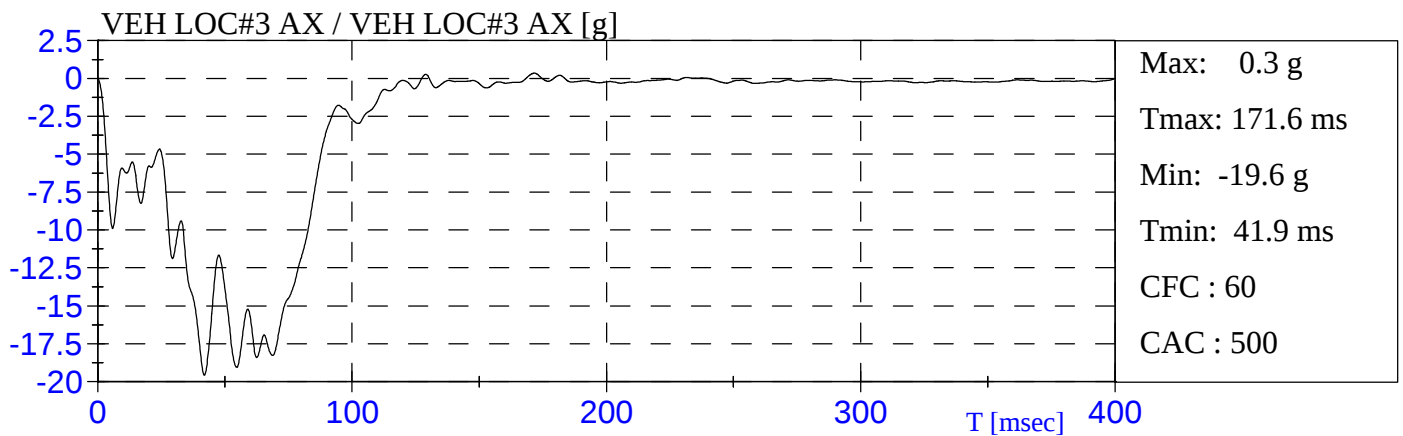
COLLISION FRONTALE
FRONTAL CRASH
SATURN VUE 2003

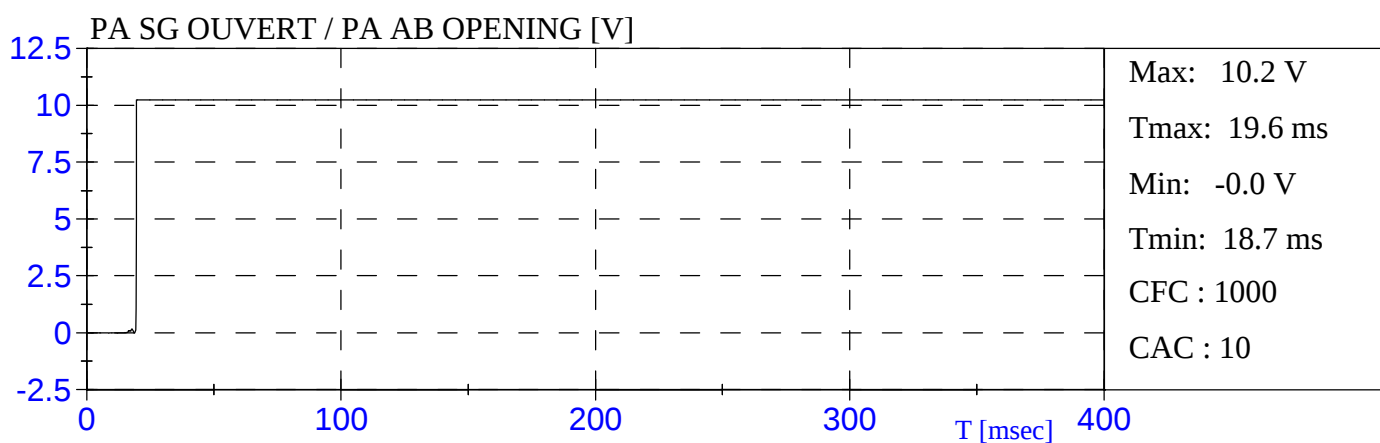
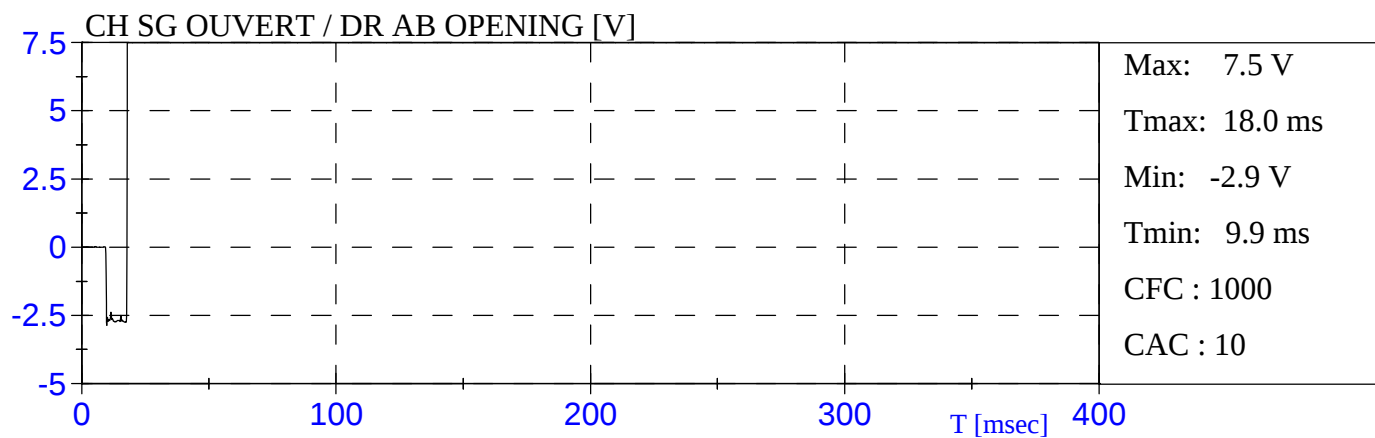
Date: 2004-03-04
N° TC / TC No.: TC03-232

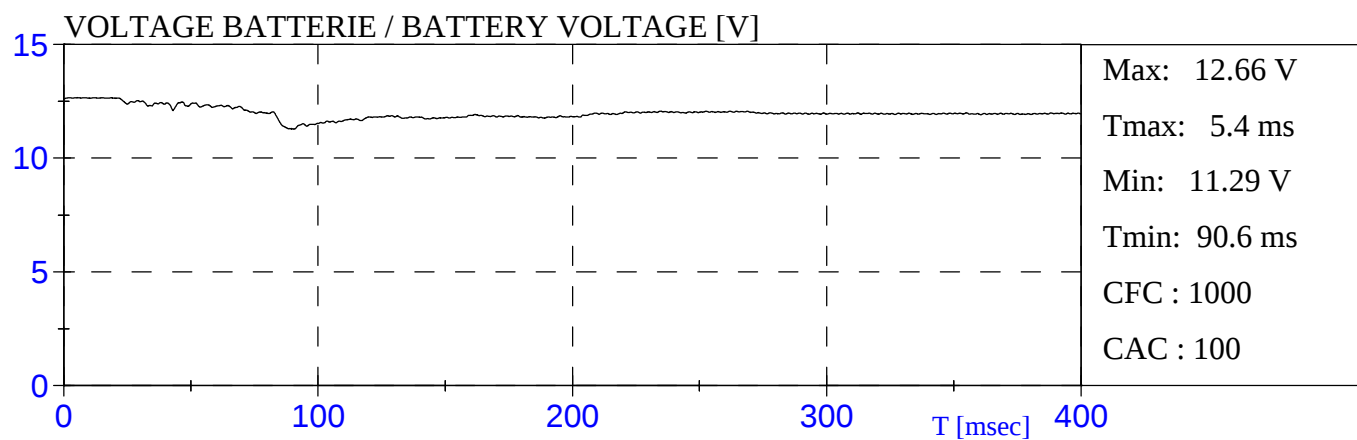


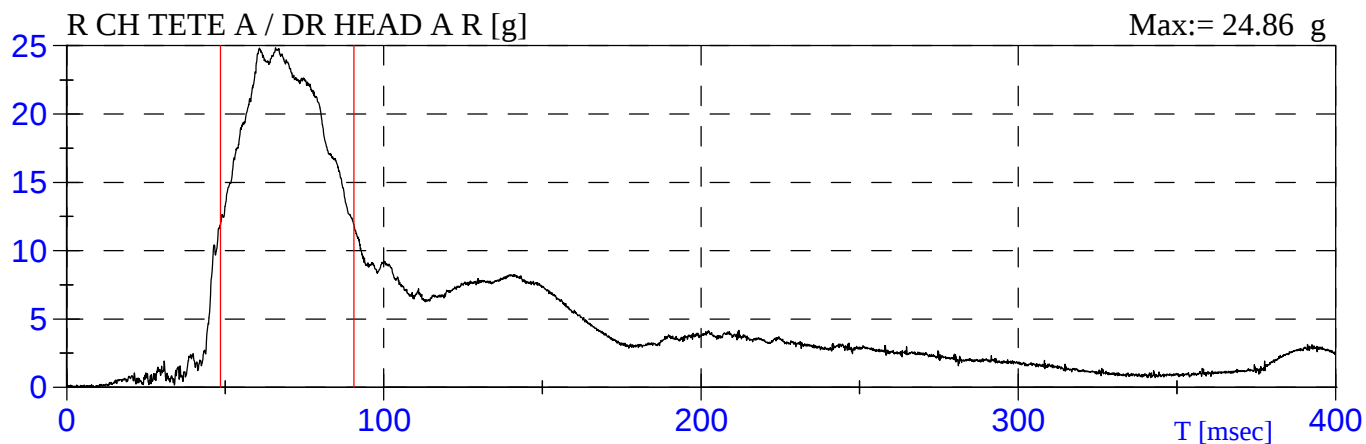










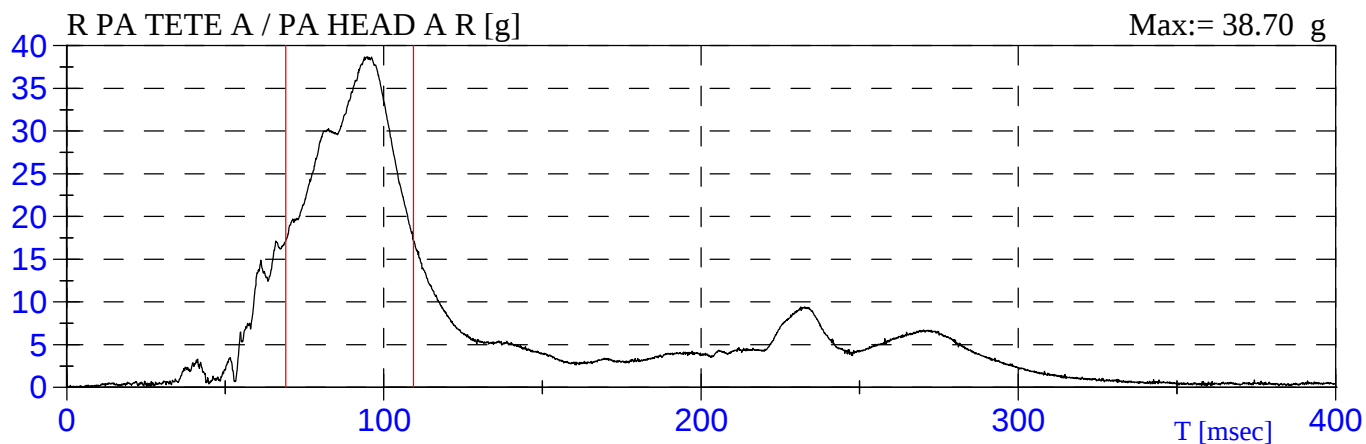


HEAD INJURY CRITERIA (HIC) *

CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 74	HIC(36ms):= 73	HIC(15ms):= 41
T1:= 48.5 ms	T1:= 51.0 ms	T1:= 59.2 ms
T2:= 90.6 ms	T2:= 87.0 ms	T2:= 74.2 ms

* Selon / According To: SAE J1727 96-08

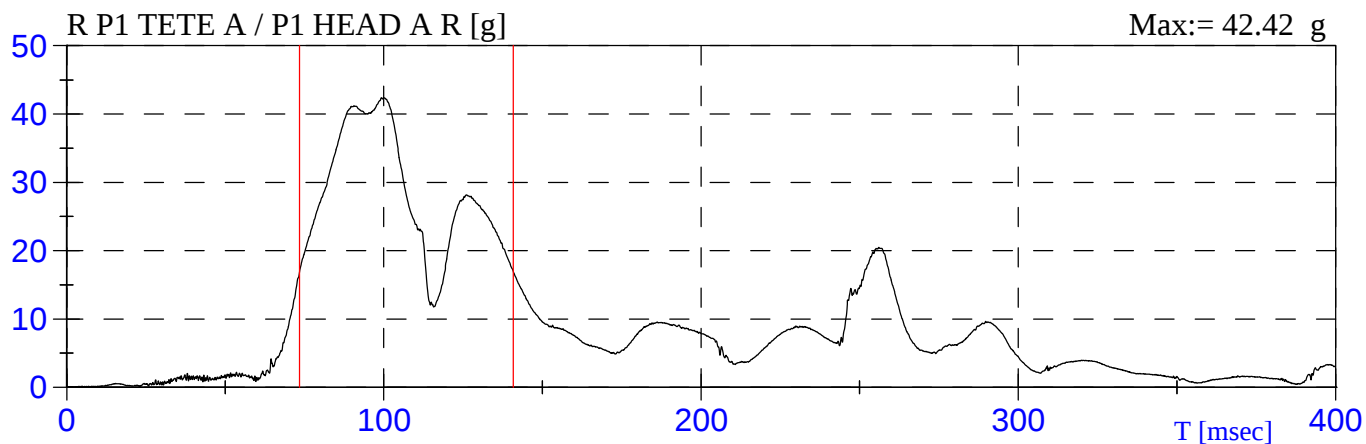


HEAD INJURY CRITERIA (HIC) *

CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 177	HIC(36ms):= 175	HIC(15ms):= 113
T1:= 69.1 ms	T1:= 71.8 ms	T1:= 86.5 ms
T2:= 109.3 ms	T2:= 107.8 ms	T2:= 101.5 ms

* Selon / According To: SAE J1727 96-08

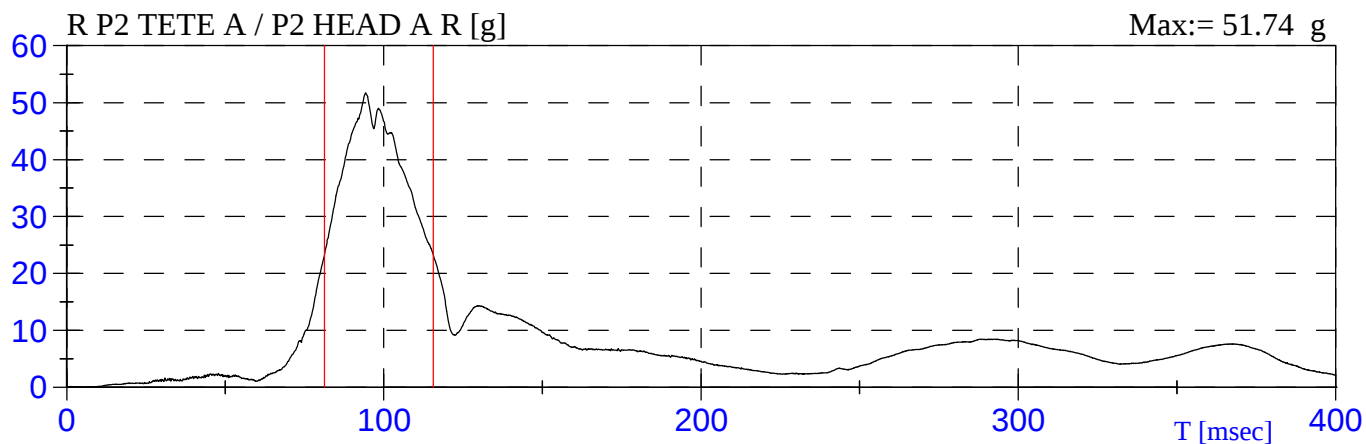


HEAD INJURY CRITERIA (HIC) *

CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 288	HIC(36ms):= 248	HIC(15ms):= 161
T1:= 73.4 ms	T1:= 76.4 ms	T1:= 87.8 ms
T2:= 140.8 ms	T2:= 112.4 ms	T2:= 102.8 ms

* Selon / According To: SAE J1727 96-08

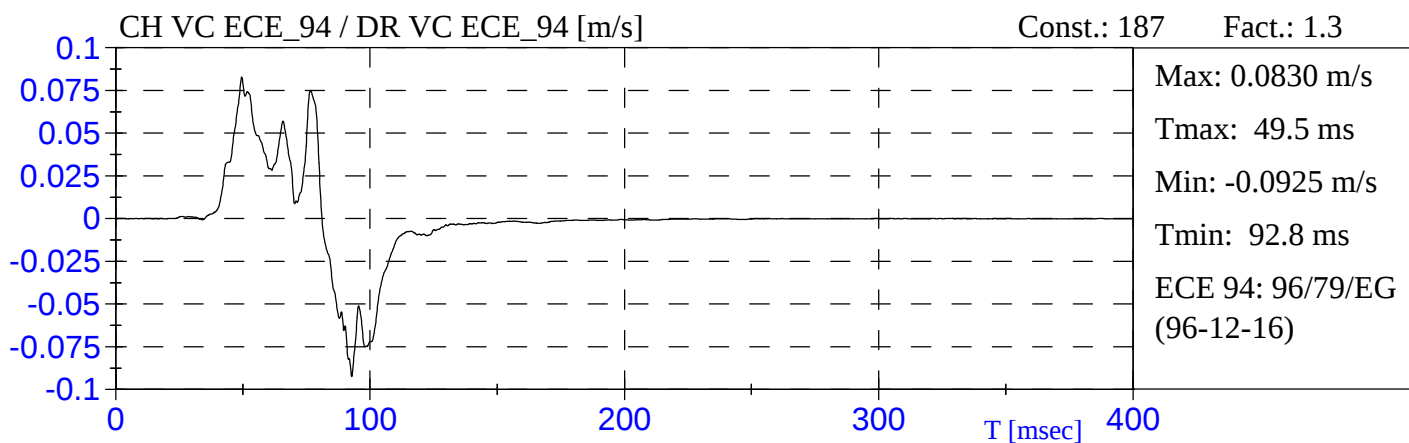
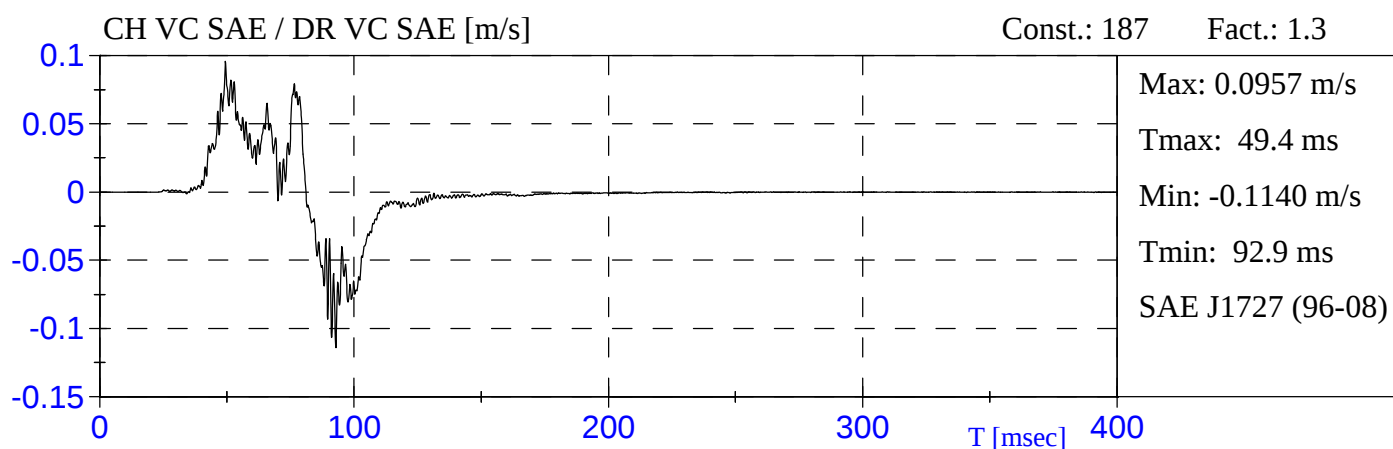
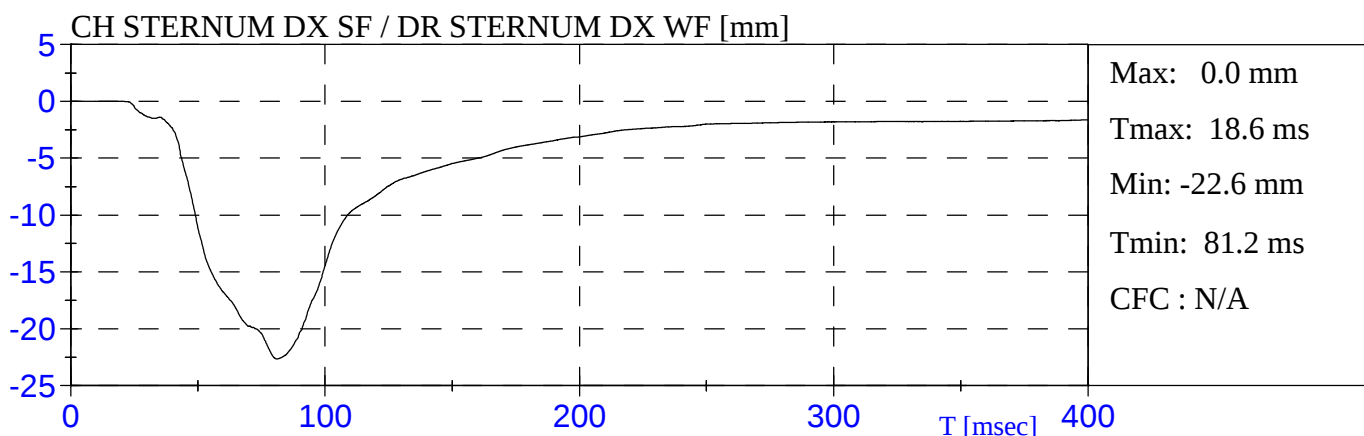


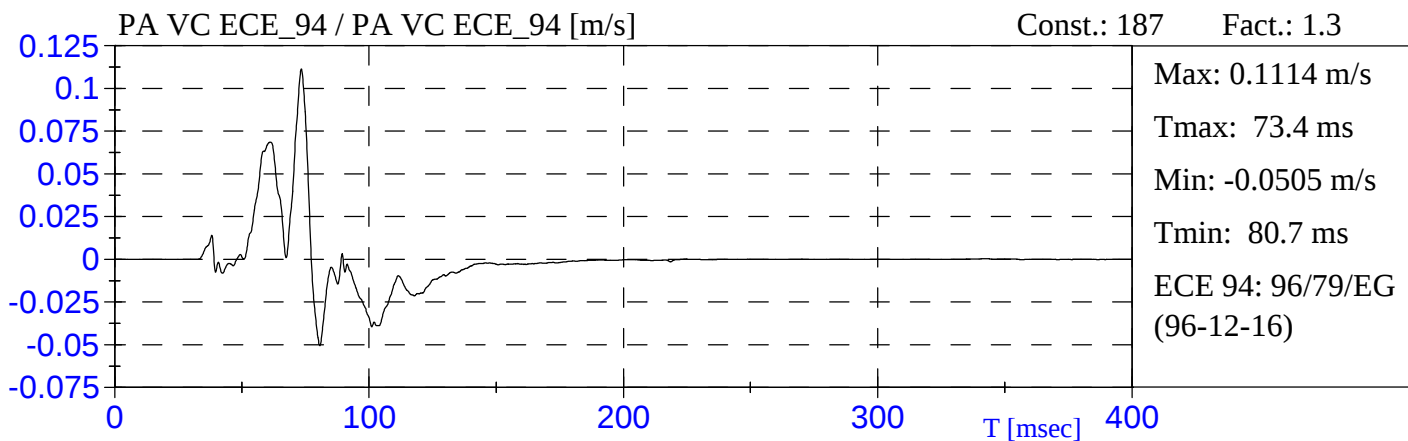
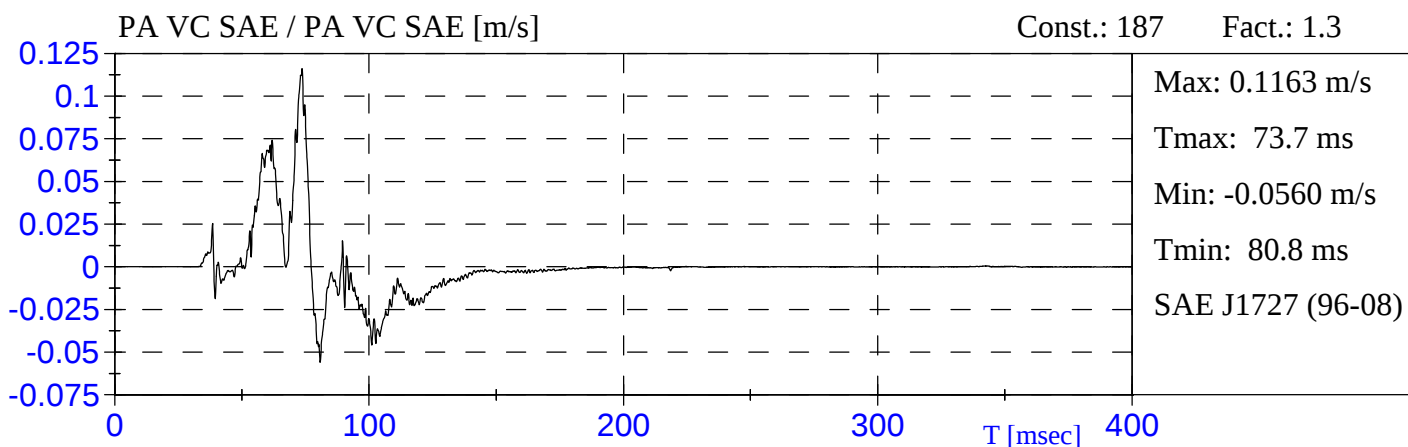
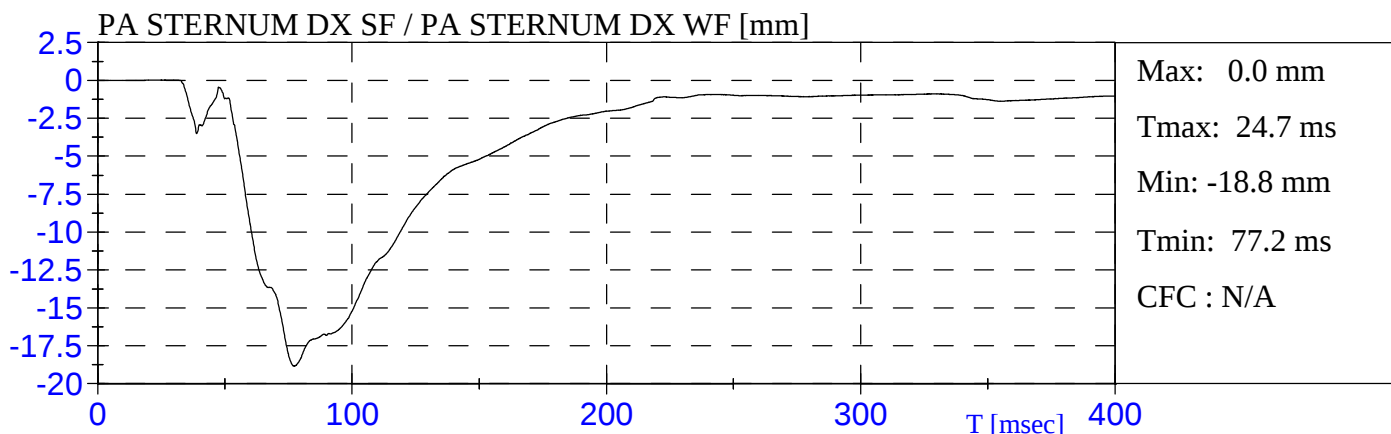
HEAD INJURY CRITERIA (HIC) *

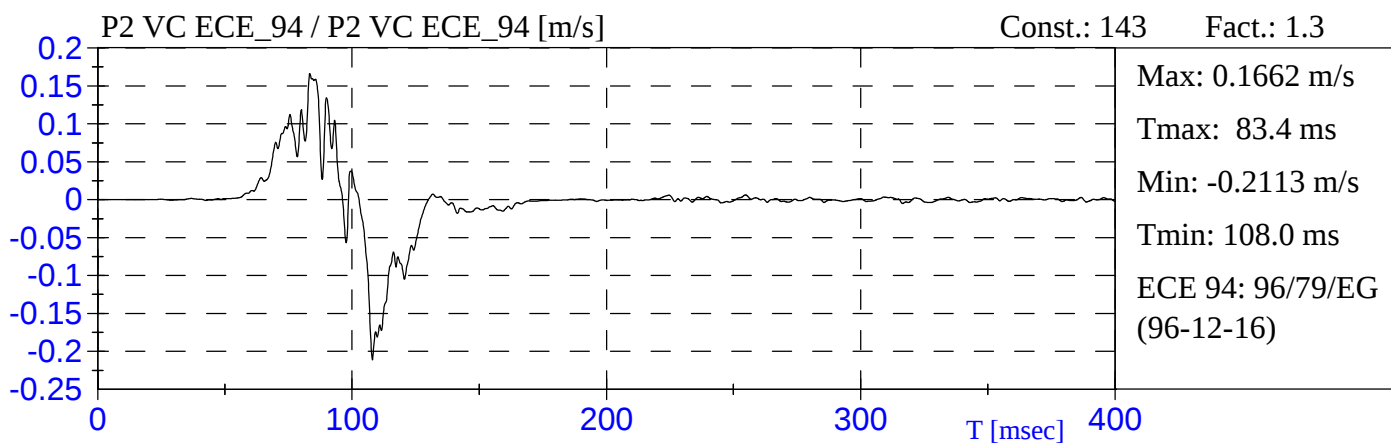
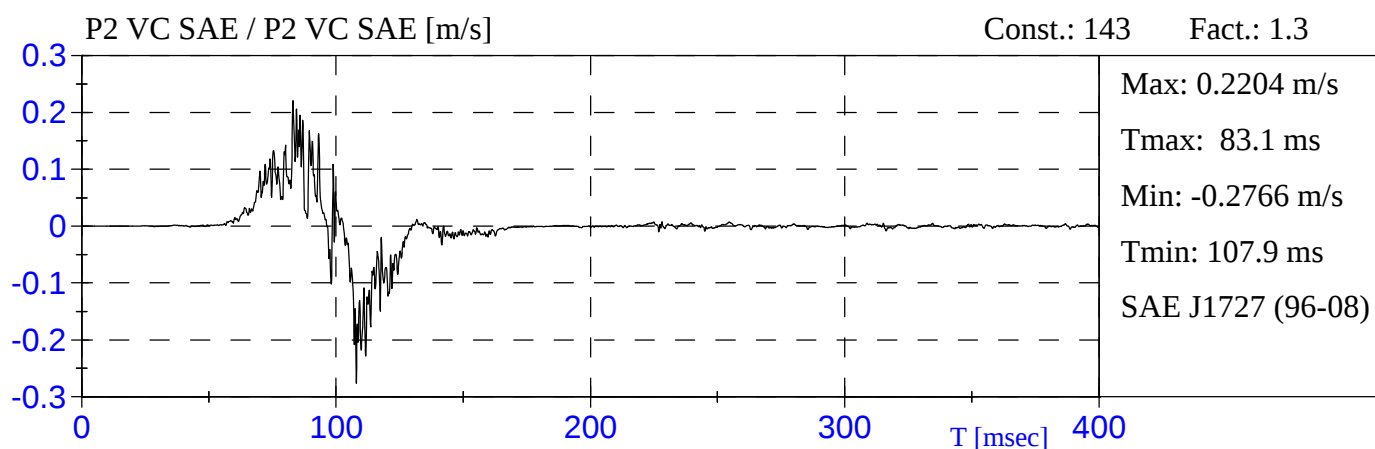
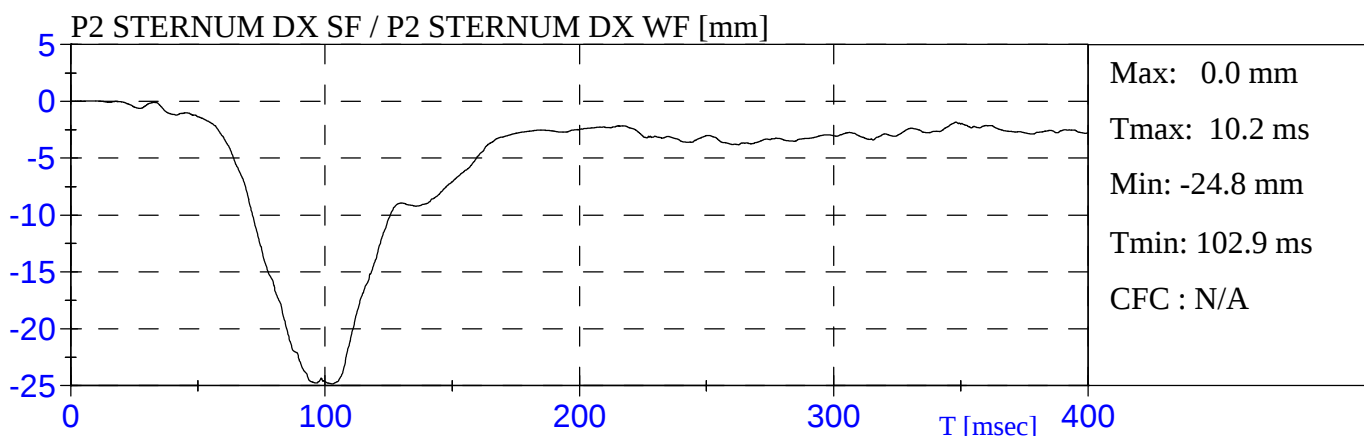
CRITÈRE DE BLESSURE DE LA TÊTE

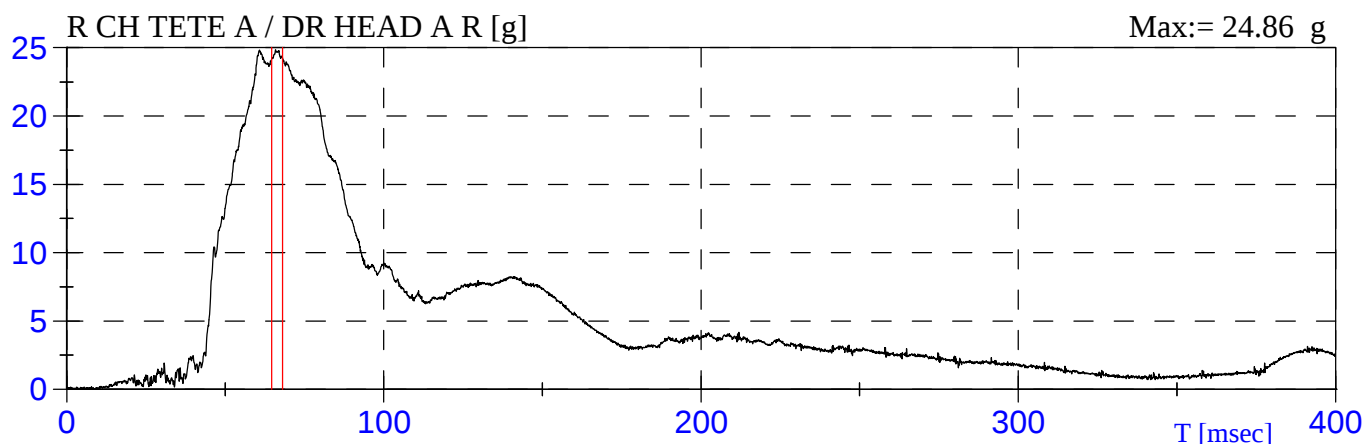
HIC:= 322	HIC(36ms):= 322	HIC(15ms):= 225
T1:= 81.3 ms	T1:= 81.3 ms	T1:= 88.6 ms
T2:= 115.6 ms	T2:= 115.6 ms	T2:= 103.6 ms

* Selon / According To: SAE J1727 96-08



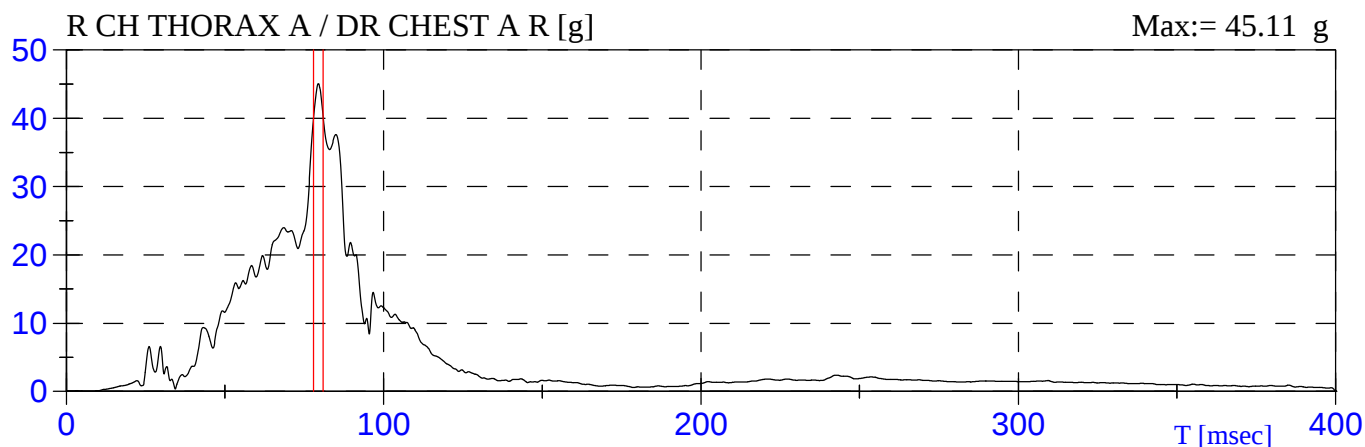






CLIP 3ms *

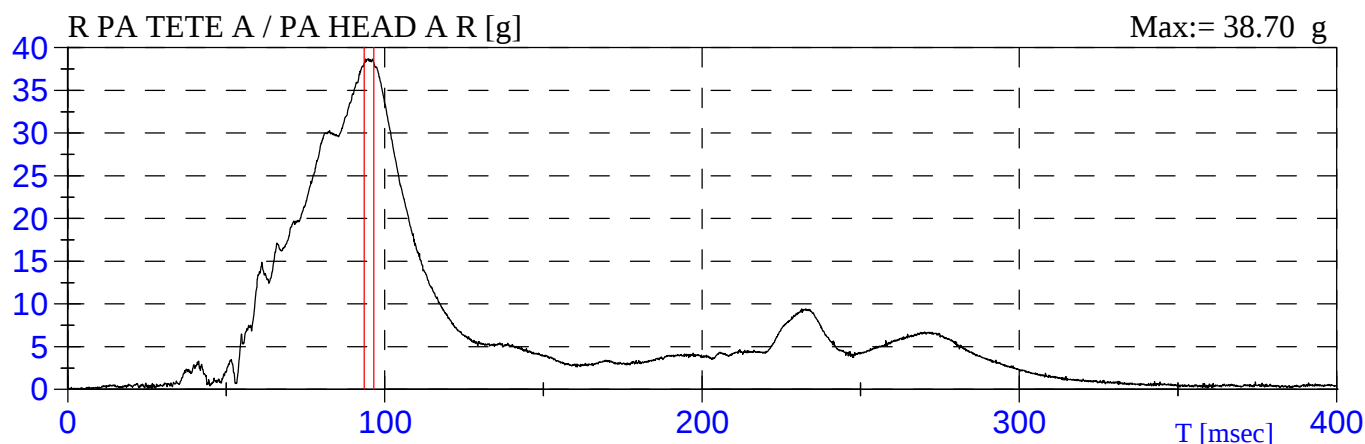
Acc. := 24.22 g	T1:= 64.6 ms	T2:= 68.1 ms
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CLIP 3ms *

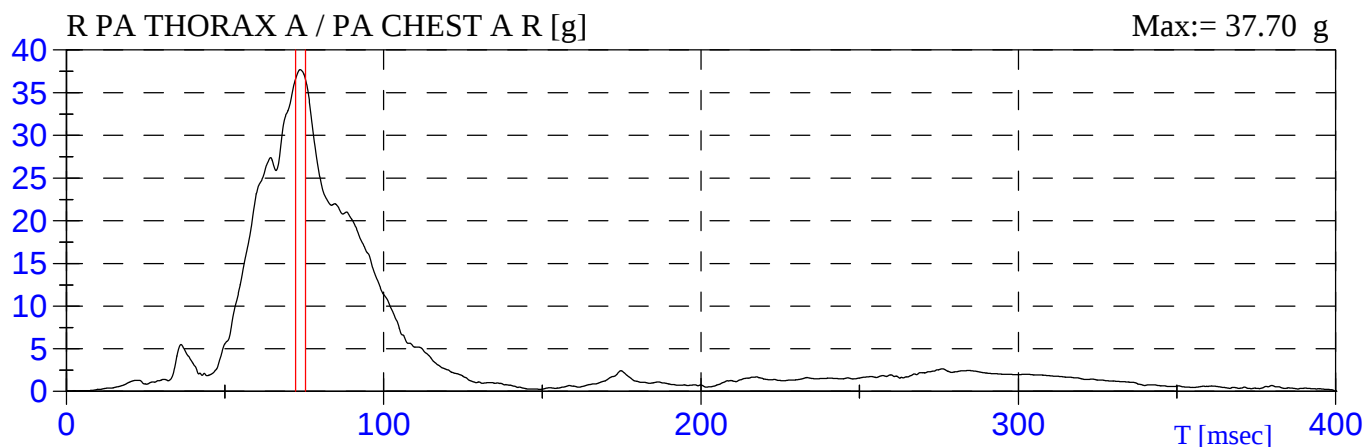
Acc. := 39.90 g	T1:= 78.0 ms	T2:= 81.0 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95



CLIP 3ms *

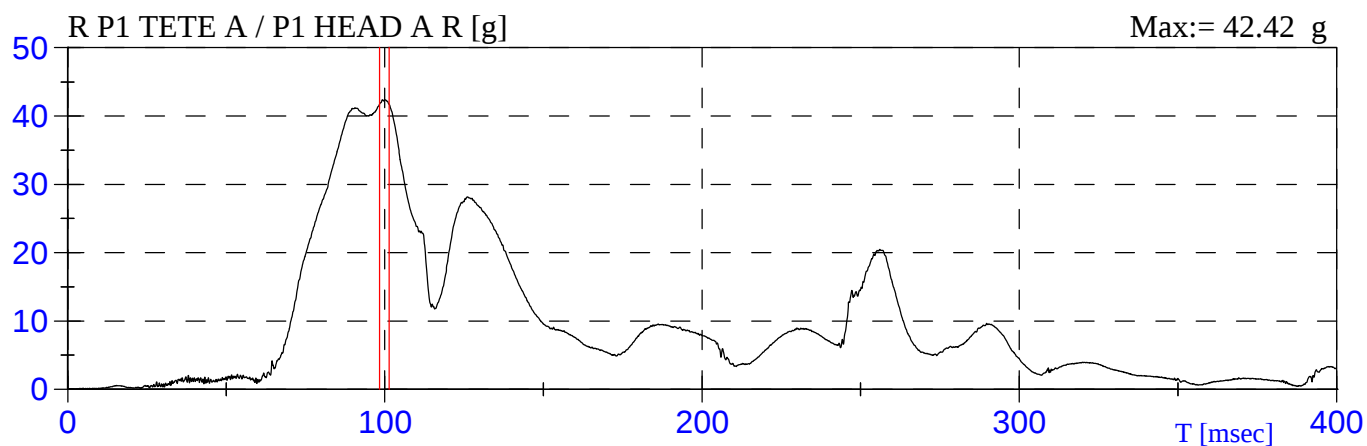
Acc. := 38.23 g	T1:= 93.5 ms	T2:= 96.5 ms
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CLIP 3ms *

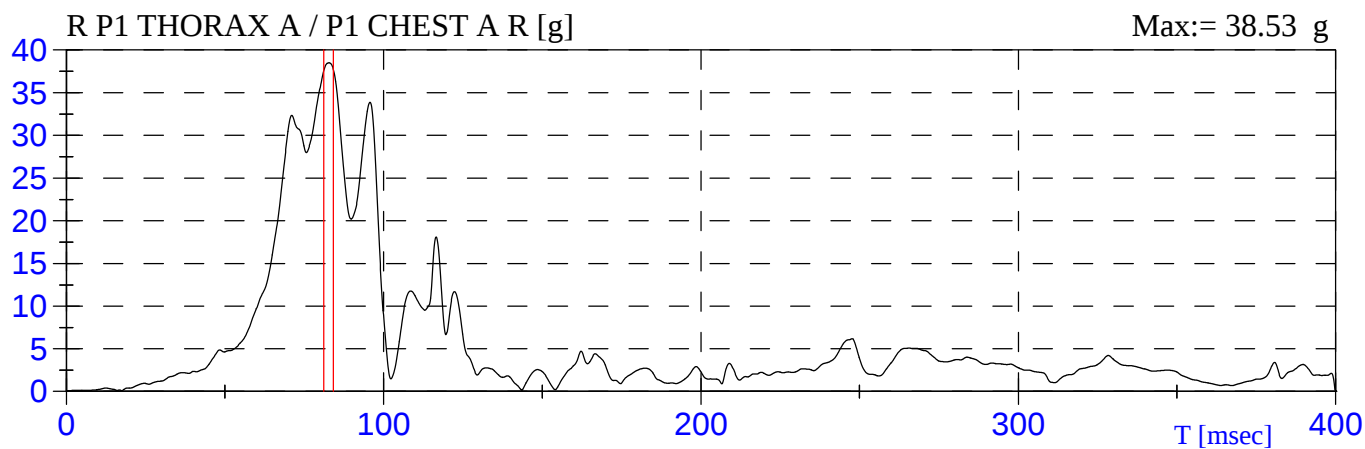
Acc. := 36.66 g	T1:= 72.3 ms	T2:= 75.3 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95



CLIP 3ms *

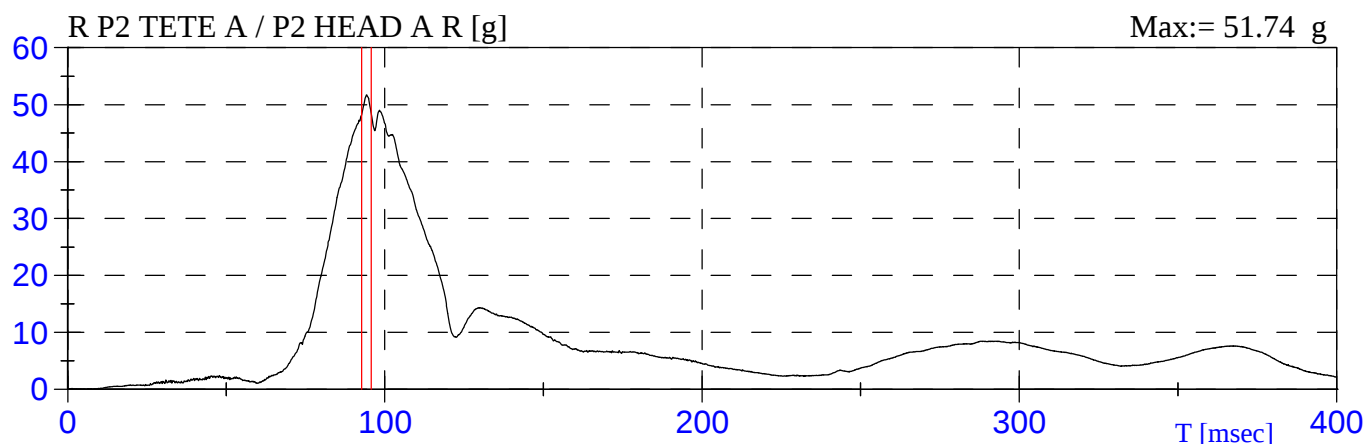
Acc. := 41.76 g	T1:= 98.4 ms	T2:= 101.4 ms
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CLIP 3ms *

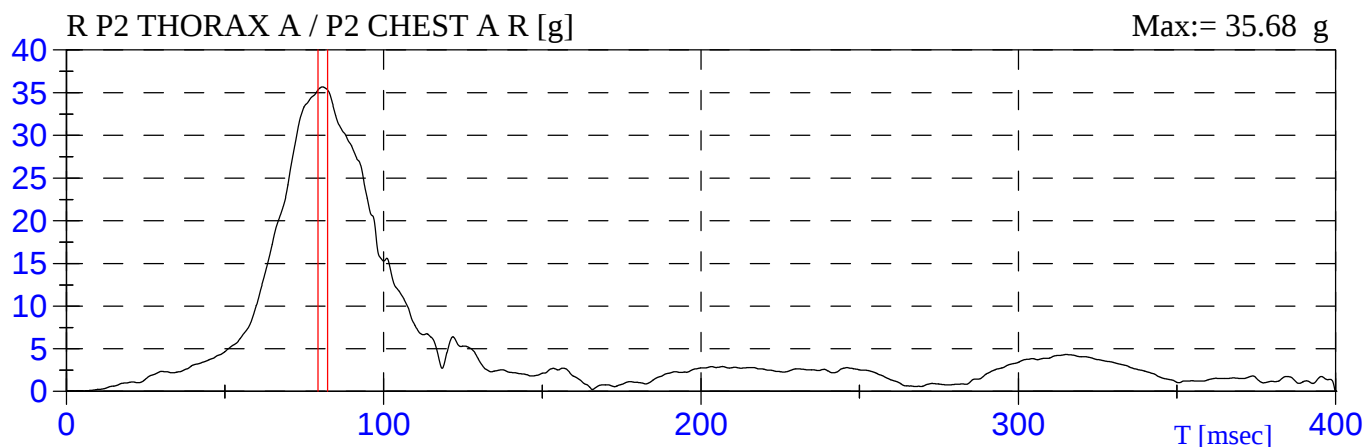
Acc. := 37.69 g	T1:= 81.2 ms	T2:= 84.2 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95



CLIP 3ms *

Acc. := 48.31 g	T1:= 92.7 ms	T2:= 95.7 ms
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CLIP 3ms *

Acc. := 35.29 g	T1:= 79.4 ms	T2:= 82.4 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95

INDEX DU TIBIA *
TIBIA INDEX *

TI Chauffeur / Driver

Mc := 115 N-m

Fc := 22.9 kN

TIBIA	GAUCHE / LEFT	DROIT / RIGHT
HAUT / UPPER	0.351	0.296
BAS / LOWER	0.297	0.306

TI Passenger / Passenger

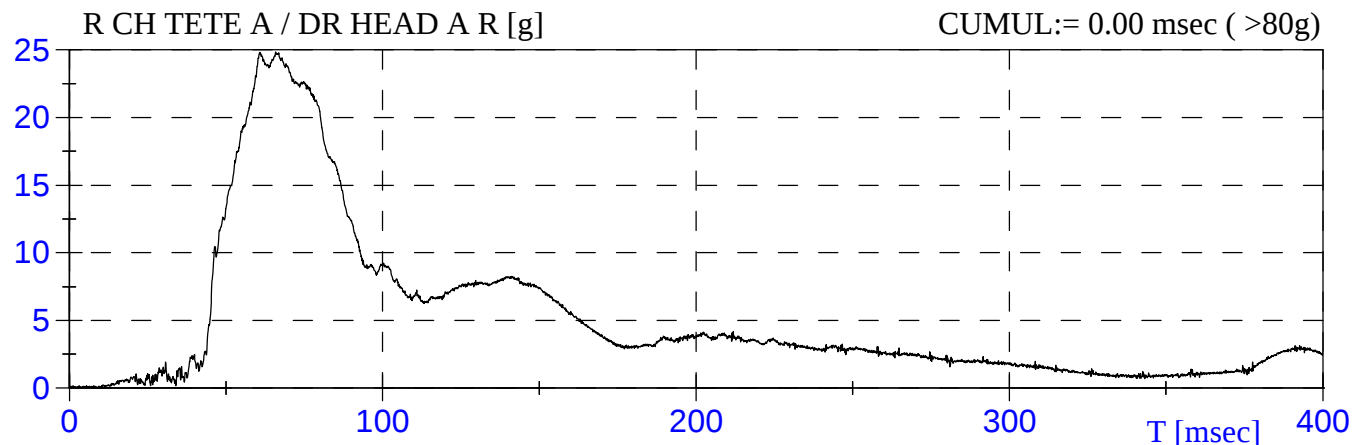
Mc := 115 N-m

Fc := 22.9 kN

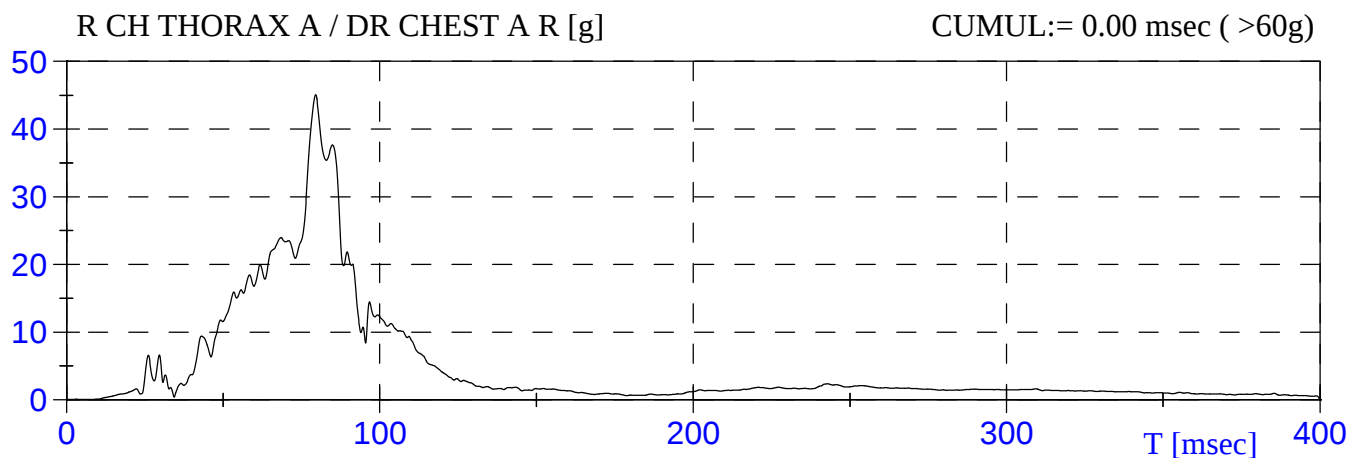
TIBIA	GAUCHE / LEFT	DROIT / RIGHT
HAUT / UPPER	0.427	0.373
BAS / LOWER	0.396	0.365

* Selon / According To: SAE J1727 AUG 96

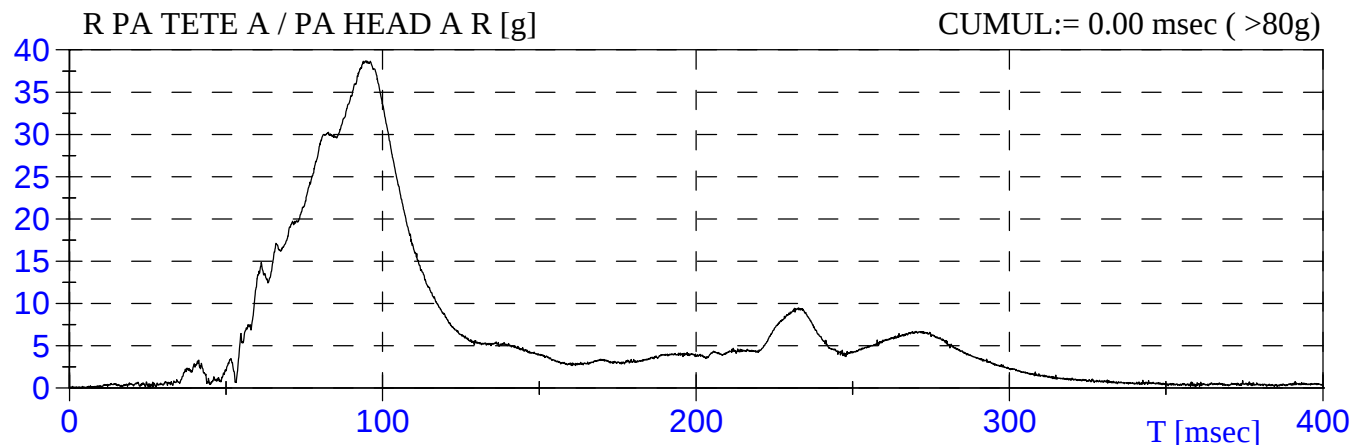
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



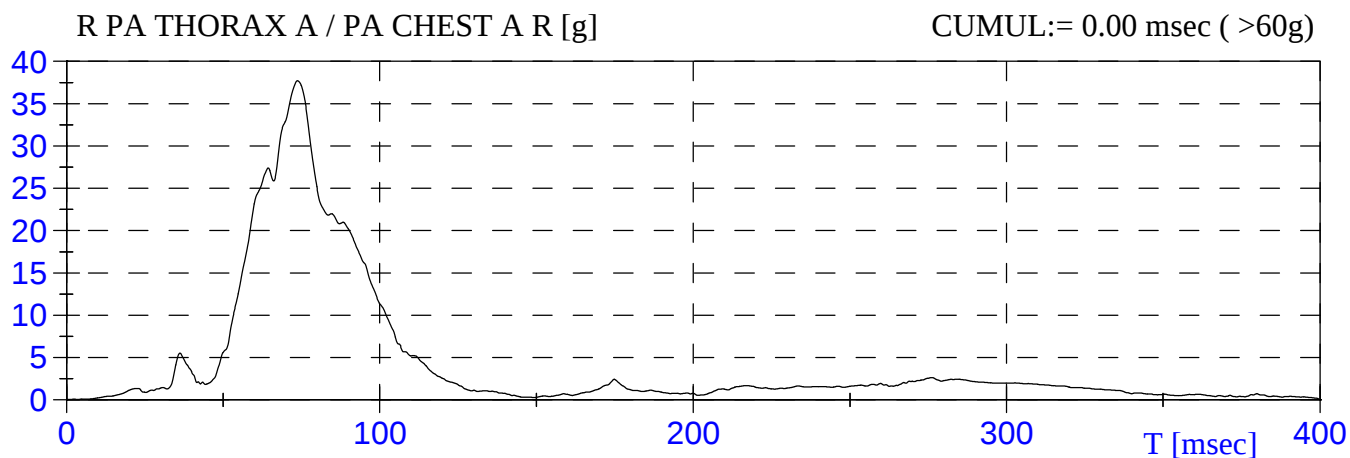
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



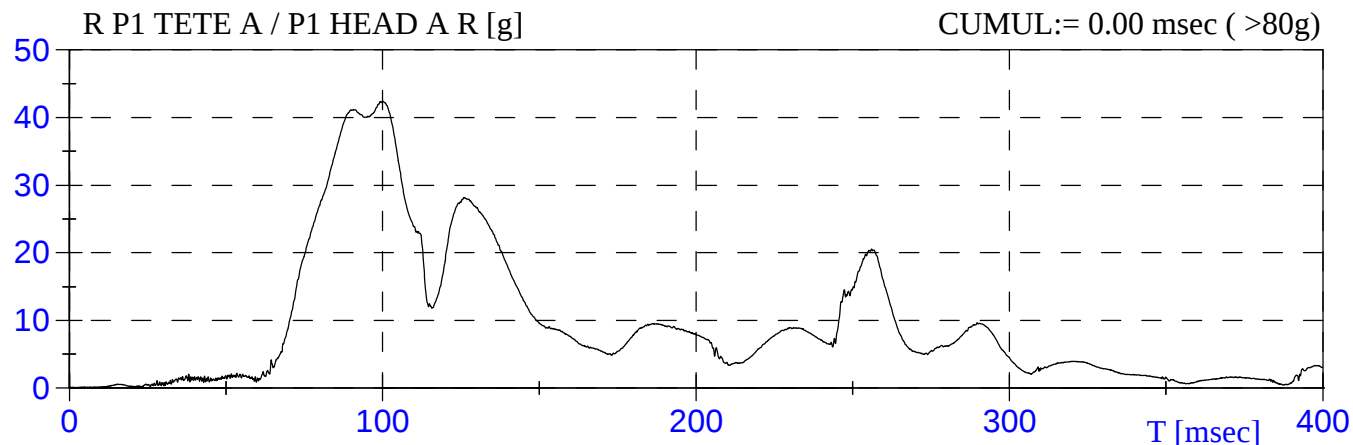
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



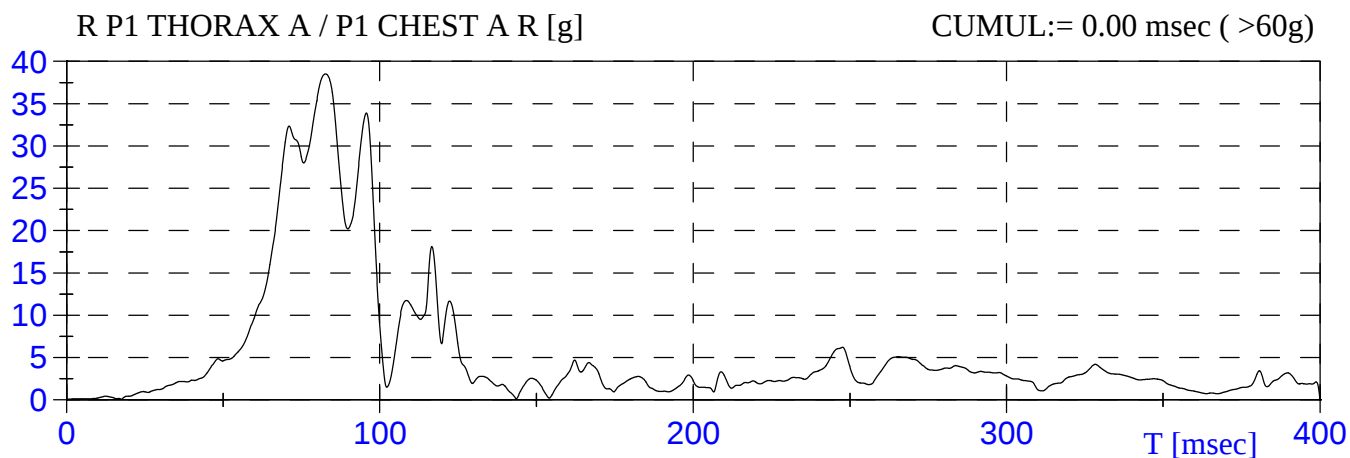
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



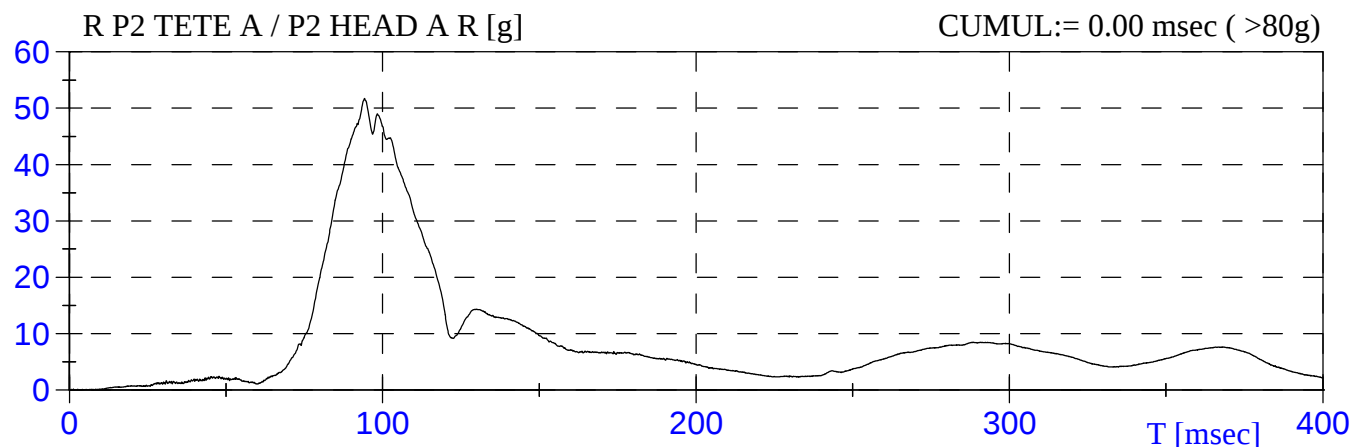
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



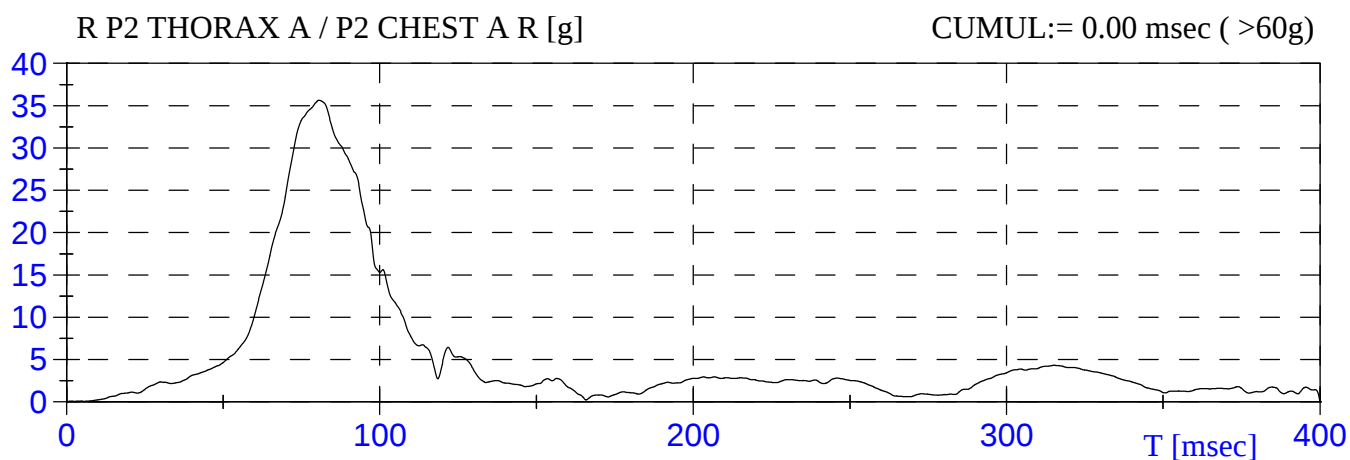
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



Chauffeur / Driver

$$N_{ij}^* = 0.28$$

Valeurs critiques
Criticals Values

N _{tf}	N _{te}	N _{cf}	N _{ce}	T _c	4287
				C _c	3880
0.28	0.15	0.16	0.14	F _c	155
				E _c	67

Passager / Passenger

$$N_{ij}^* = 0.24$$

Valeurs critiques
Criticals Values

N _{tf}	N _{te}	N _{cf}	N _{ce}	T _c	4287
				C _c	3880
0.24	0.24	0.10	0.17	F _c	155
				E _c	67

* Selon / According To: Federal Register 5/2000