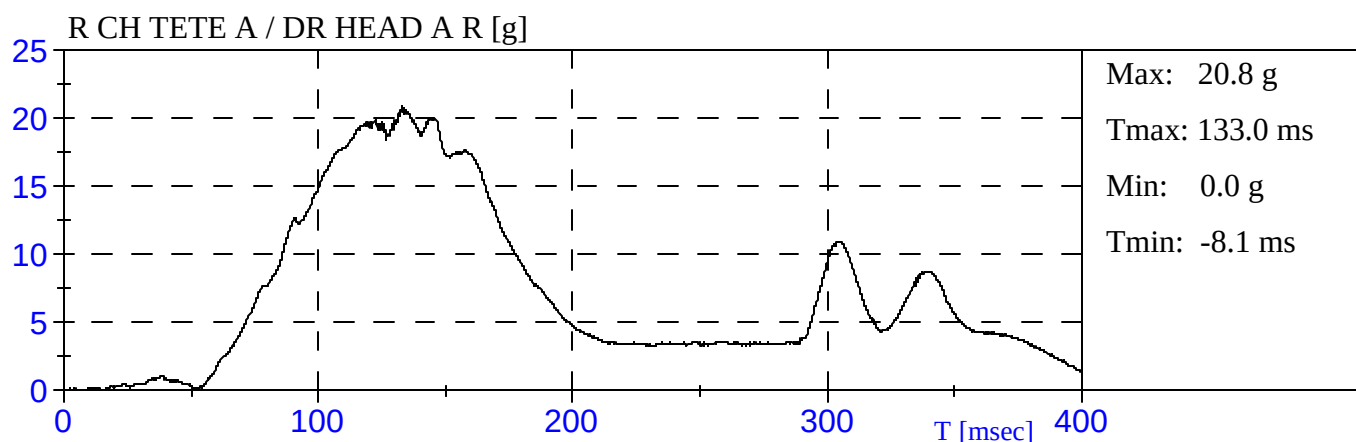
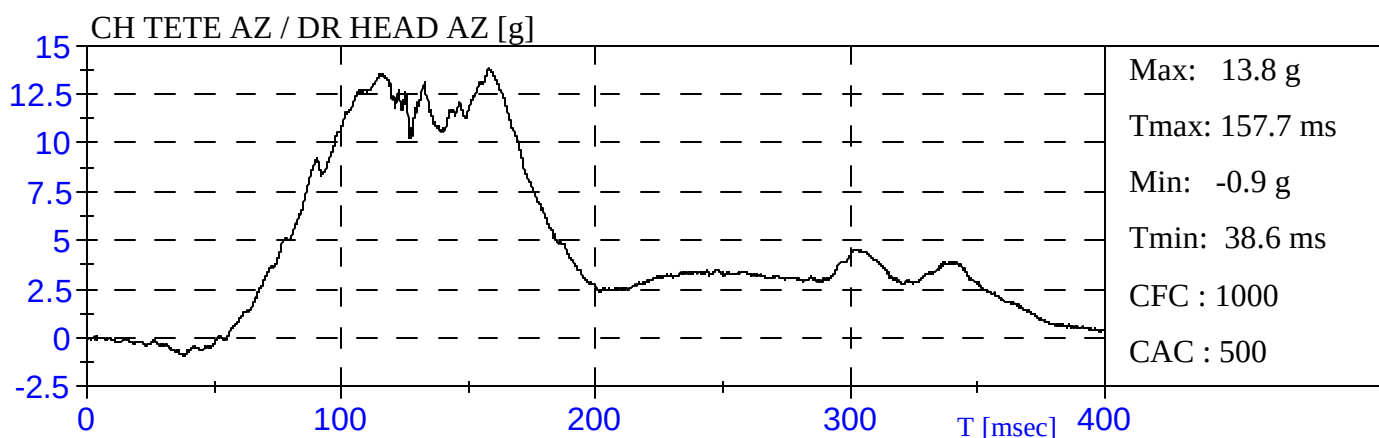
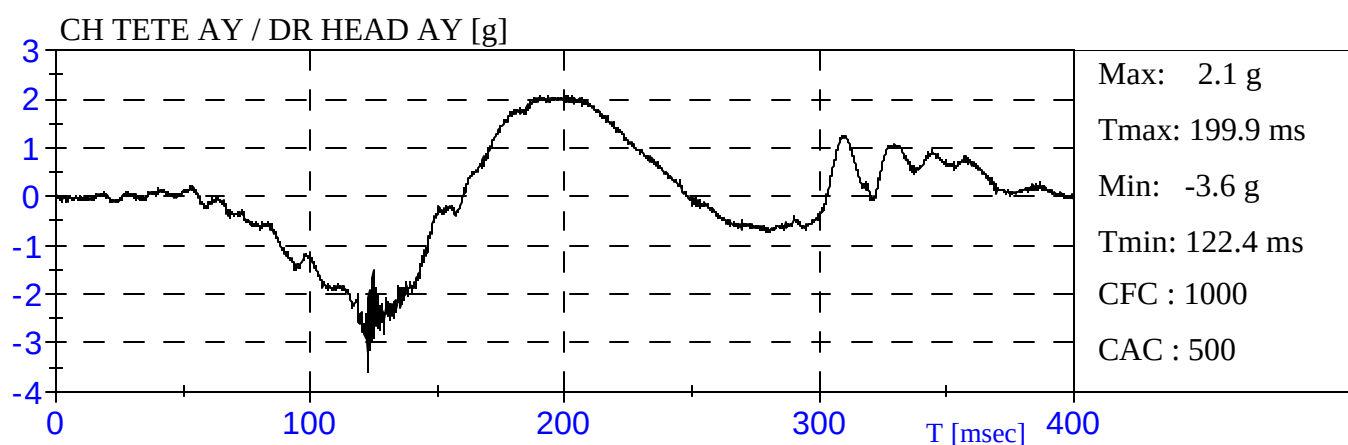
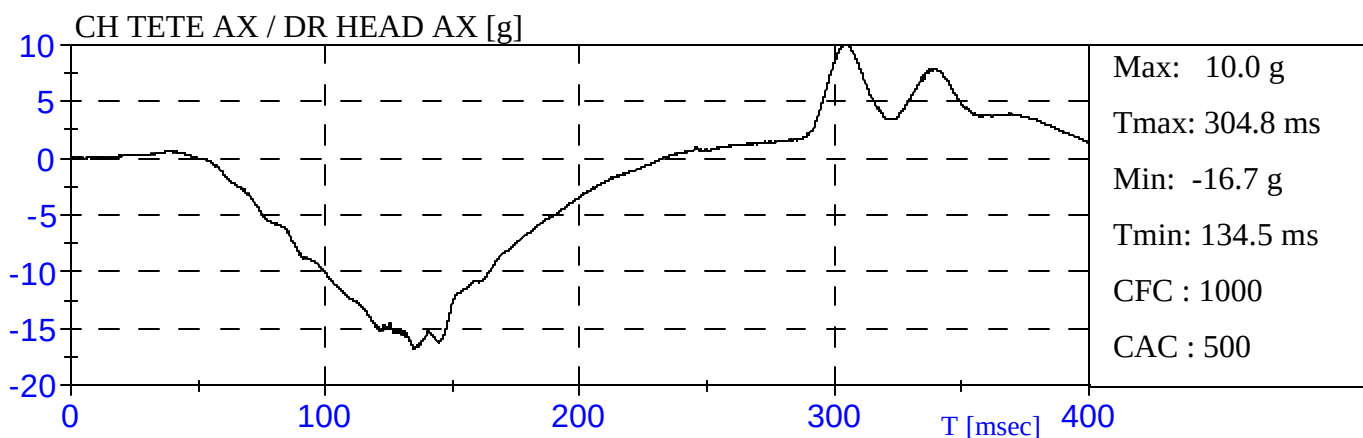
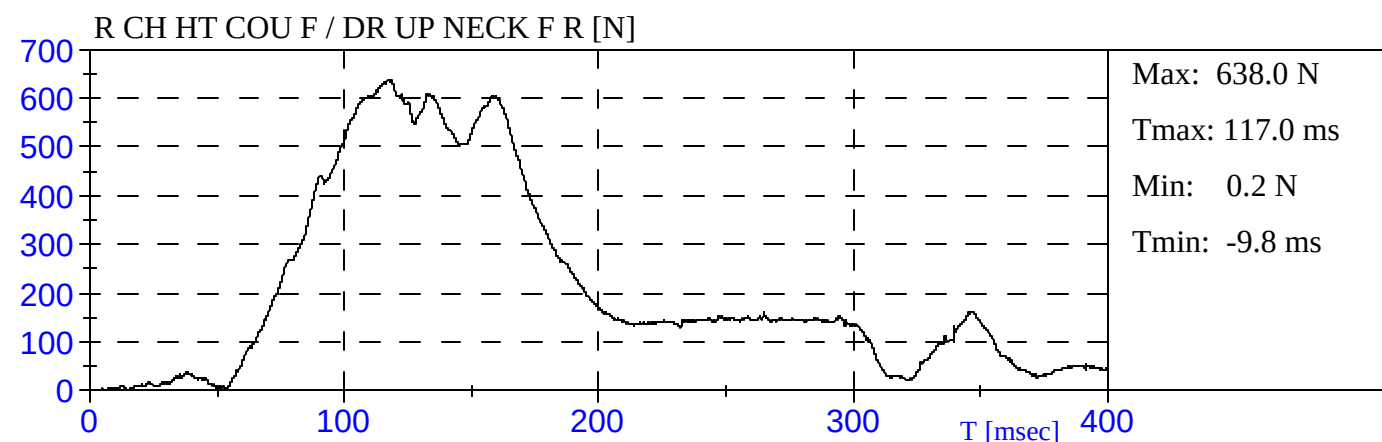
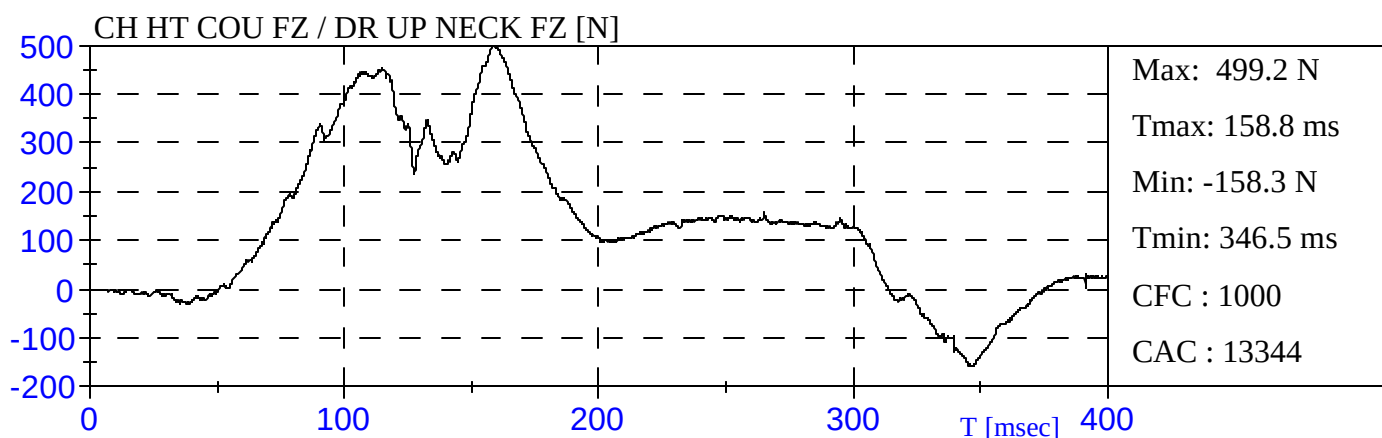
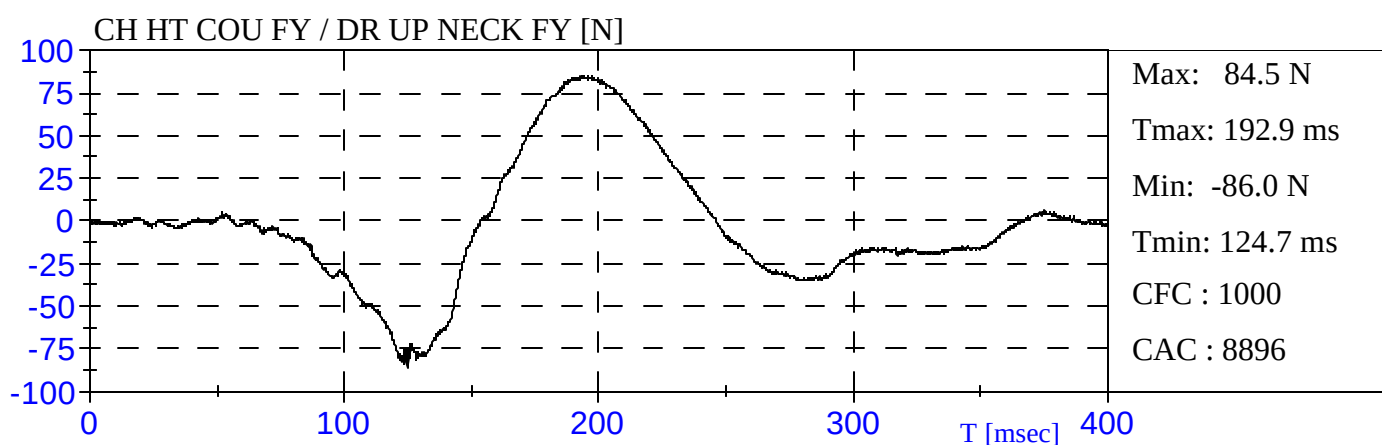
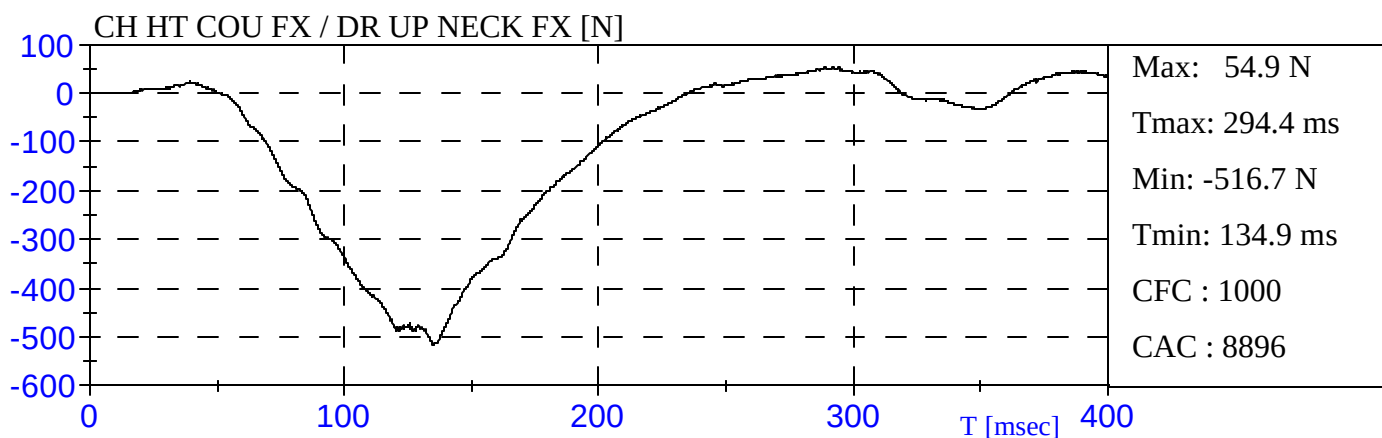
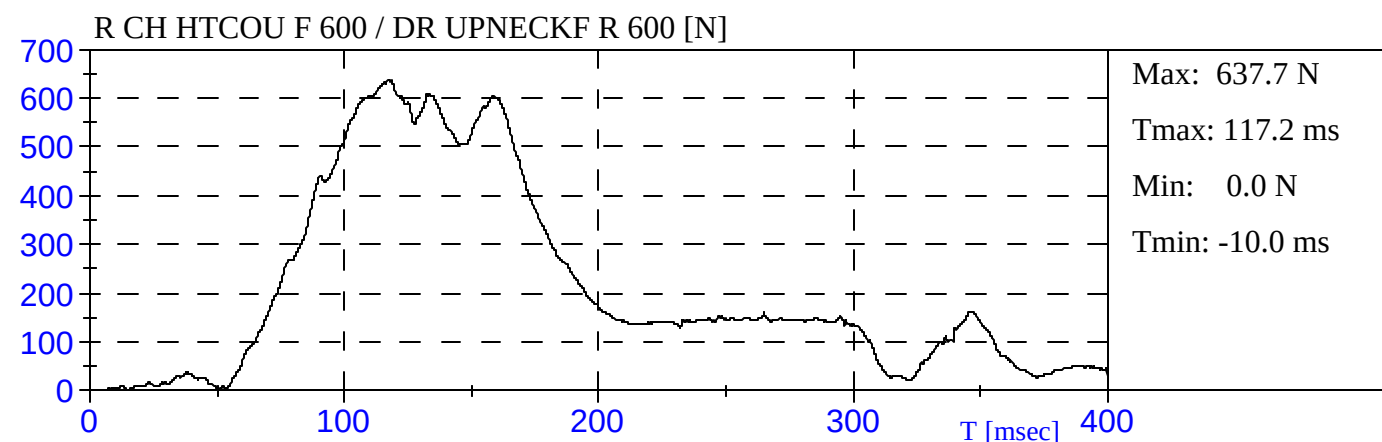
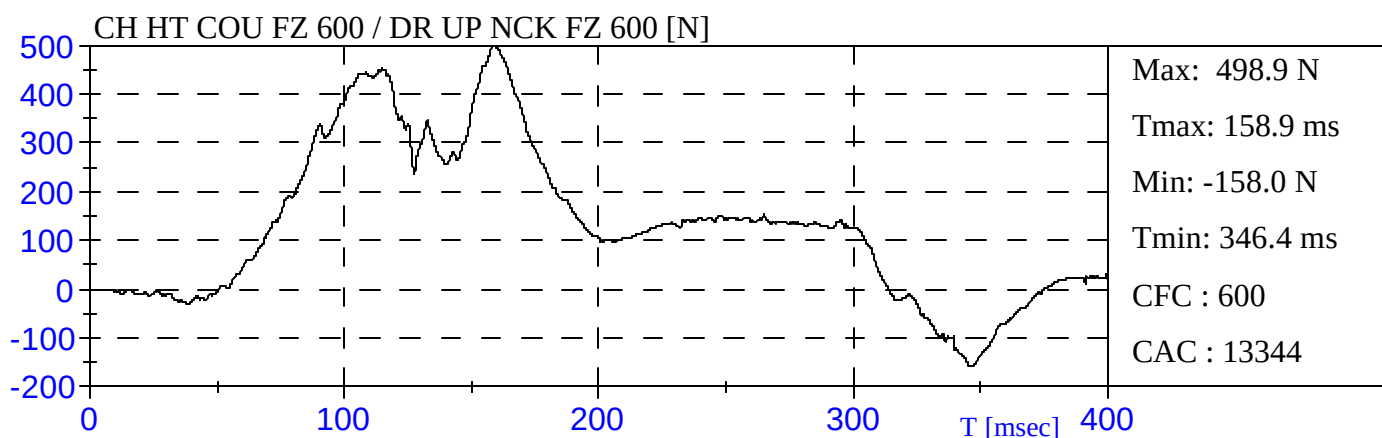
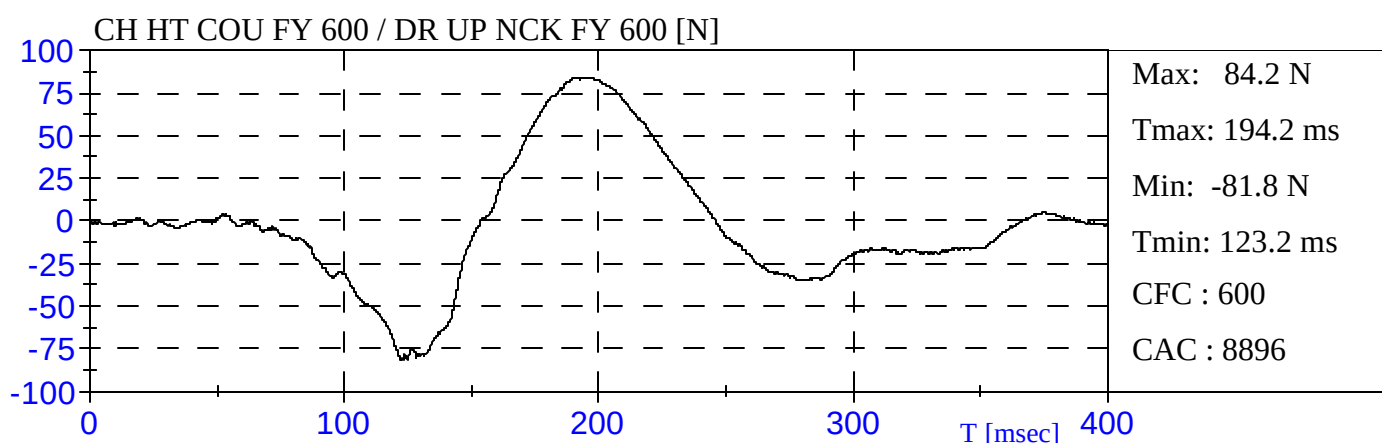
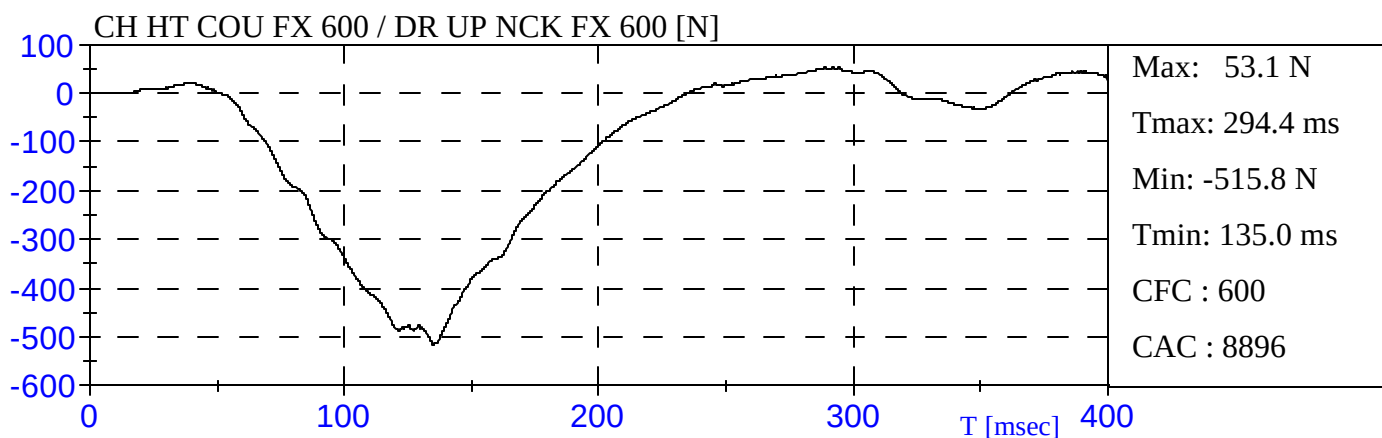
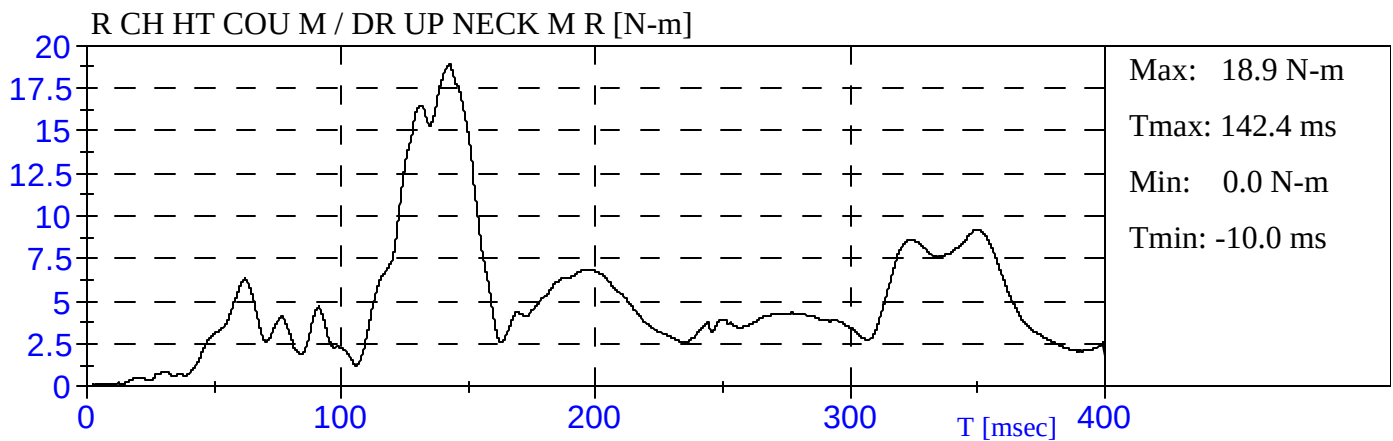
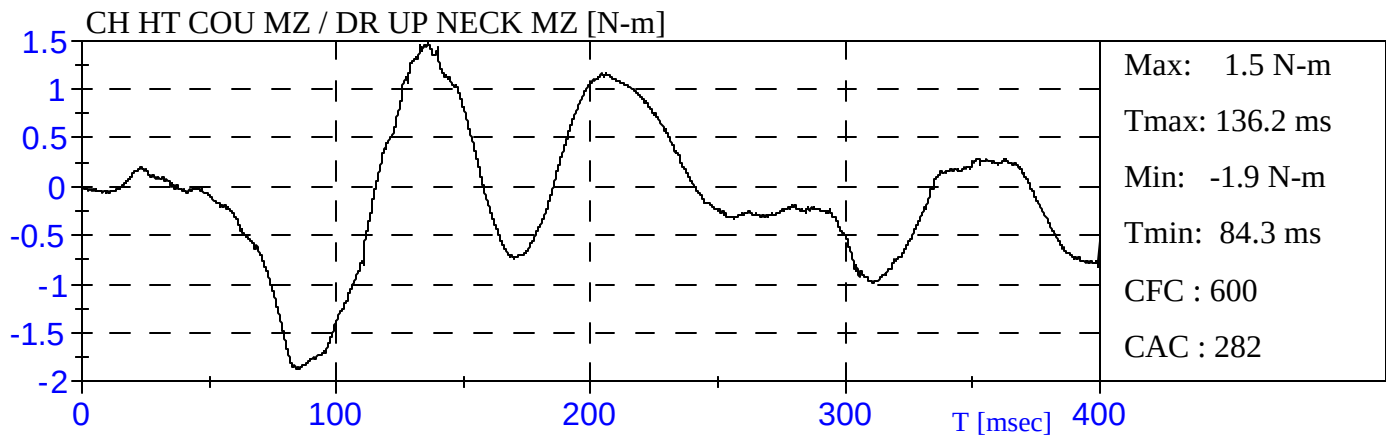
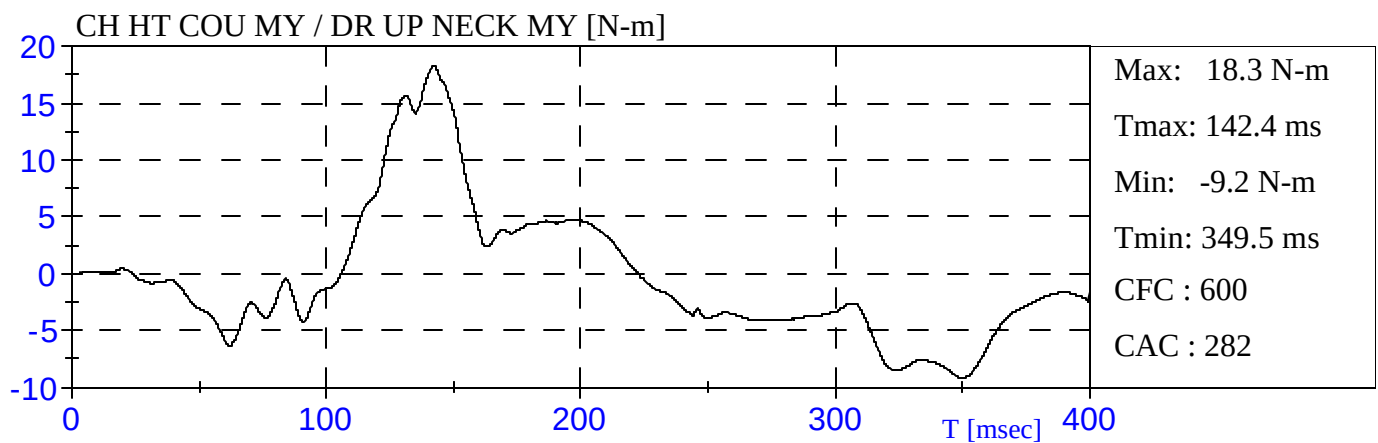
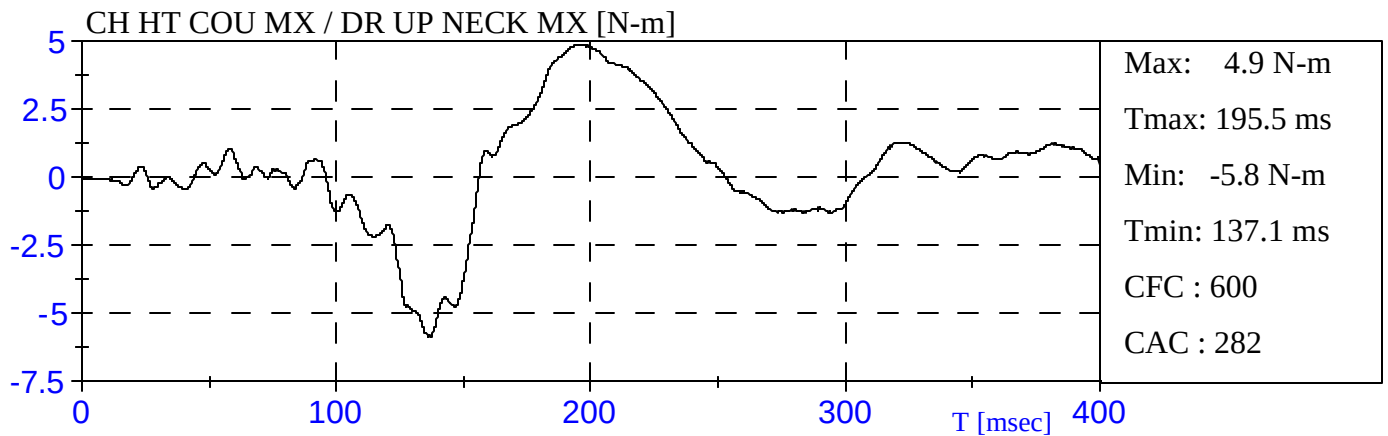


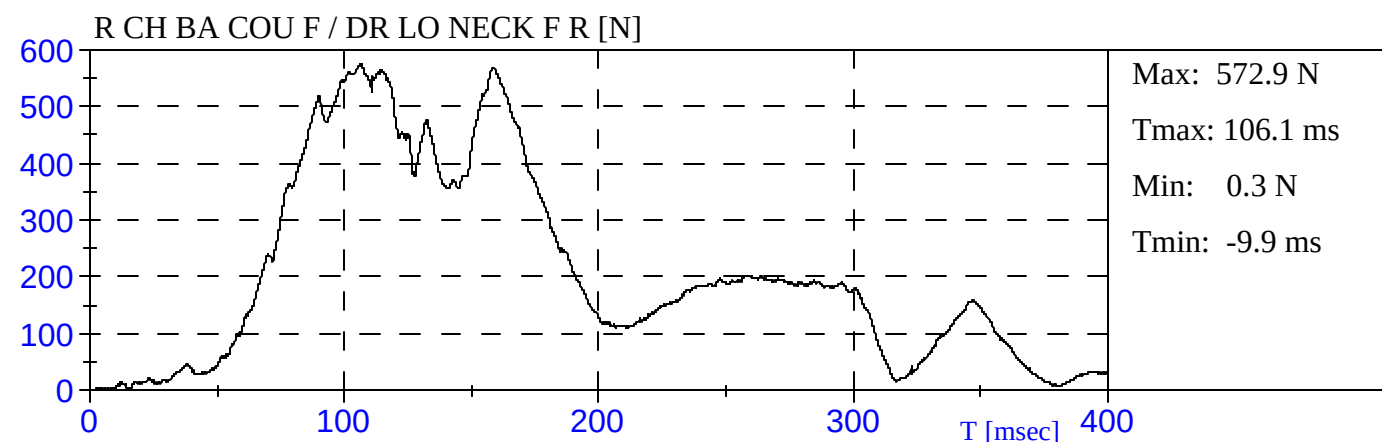
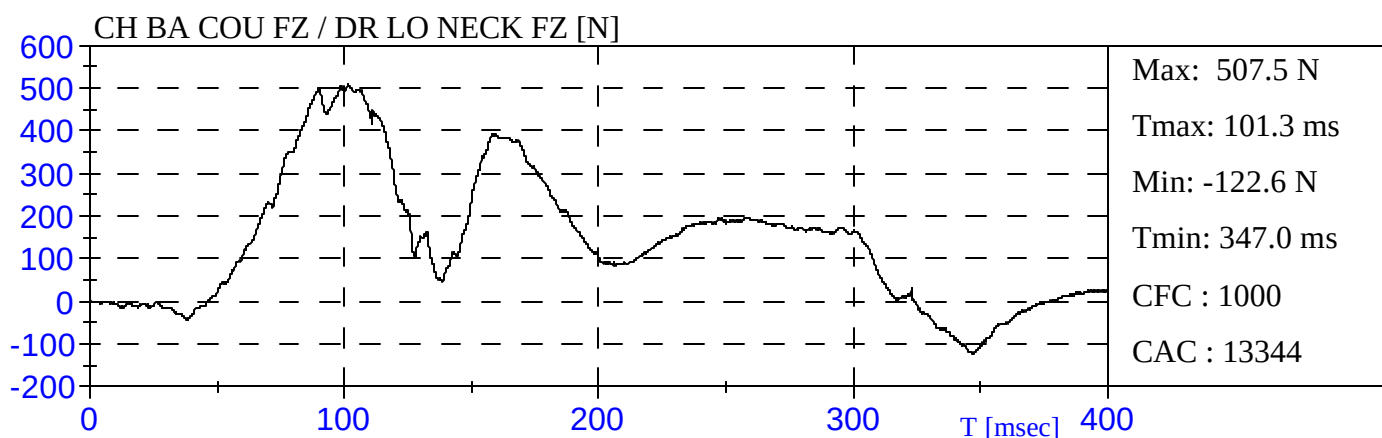
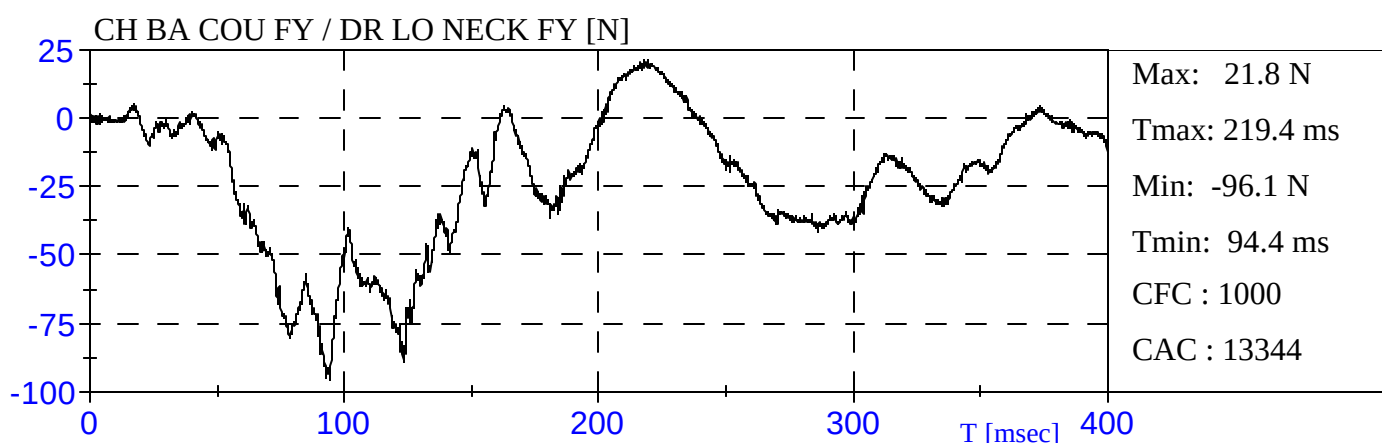
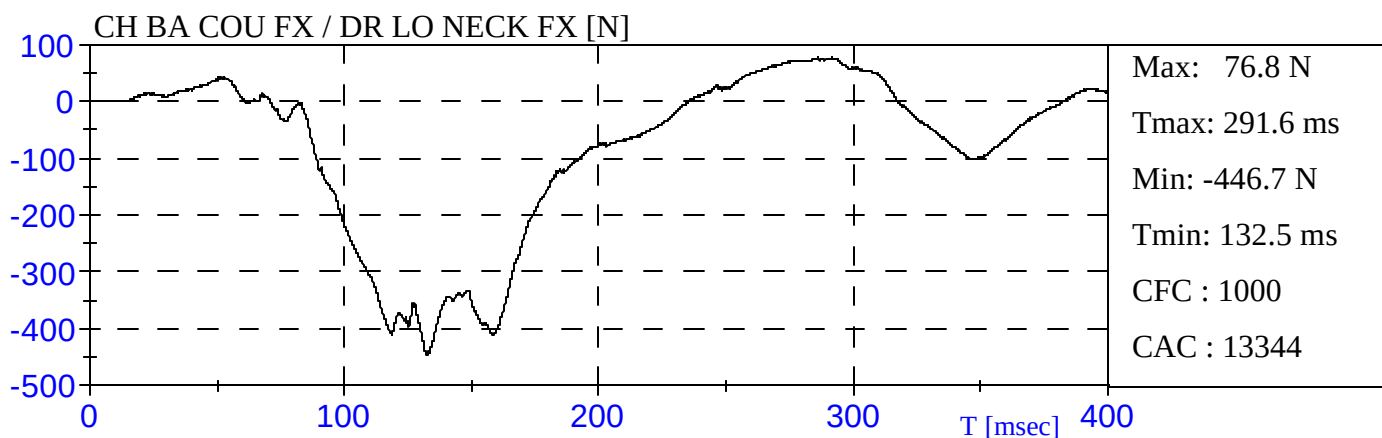
Nom du client Client Name	TRANSPORT CANADA
Type de véhicule Type of Vehicle	FORD WINDSTAR 2002
Numéro de TC Tc Number	TC02-223
Numéro de contrat Contract No	04-5001
Acquisition de données selon Data Acquisition according to	SAE J211/1 MAR 95
Date de l'essai Test date	2004-01-20
Titre du projet Project Title	COLLISIONS DE RECHERCHE FRONTALE DÉCALÉE 40 KM/H - 40% GAUCHE RESEARCH COLLISION TESTS OFFSET FRONTAL 40 KM/H - 40% LEFT
MANNEQUIN / DUMMY	
Chauffeur Driver	HYBRID III 5% F IR
Passager Passenger	HYBRID III 5% F IR
Passager 1 (arrière gauche) Passenger 1 (rear left)	HYBRID III 6Y
Passager 2 (arrière centre) Passenger 2 (rear centre)	HYBRID III 6Y

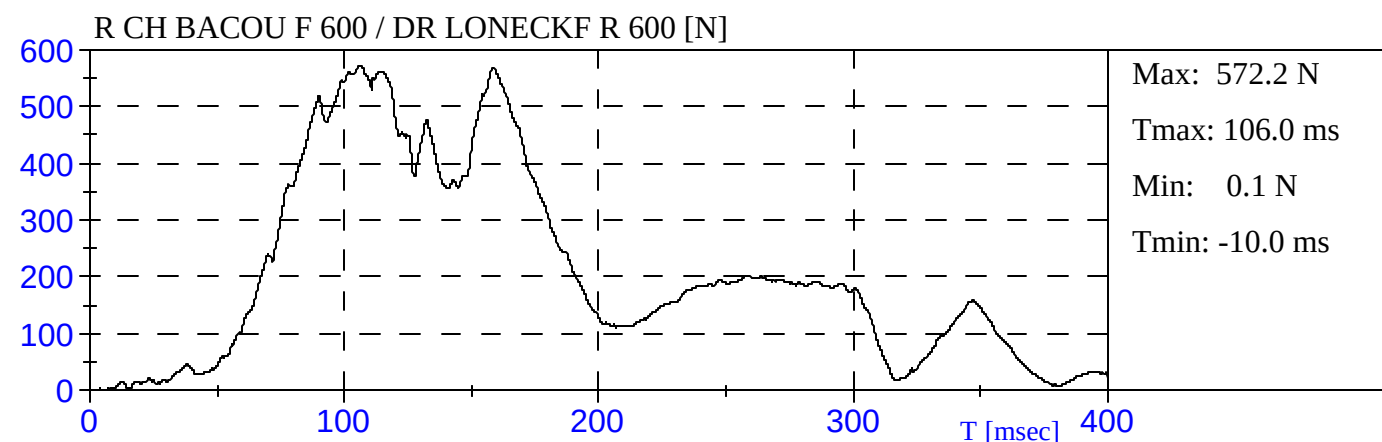
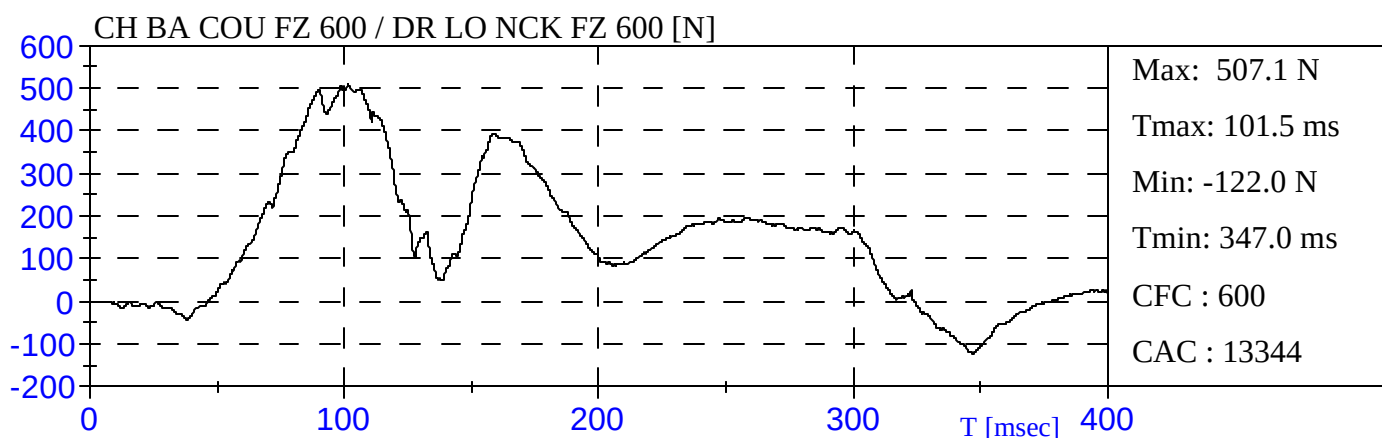
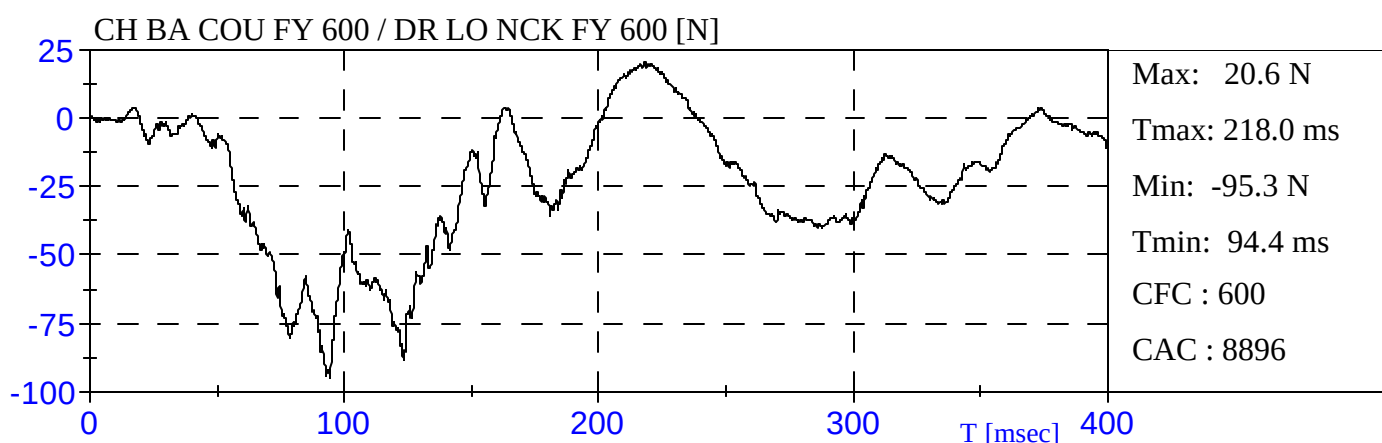
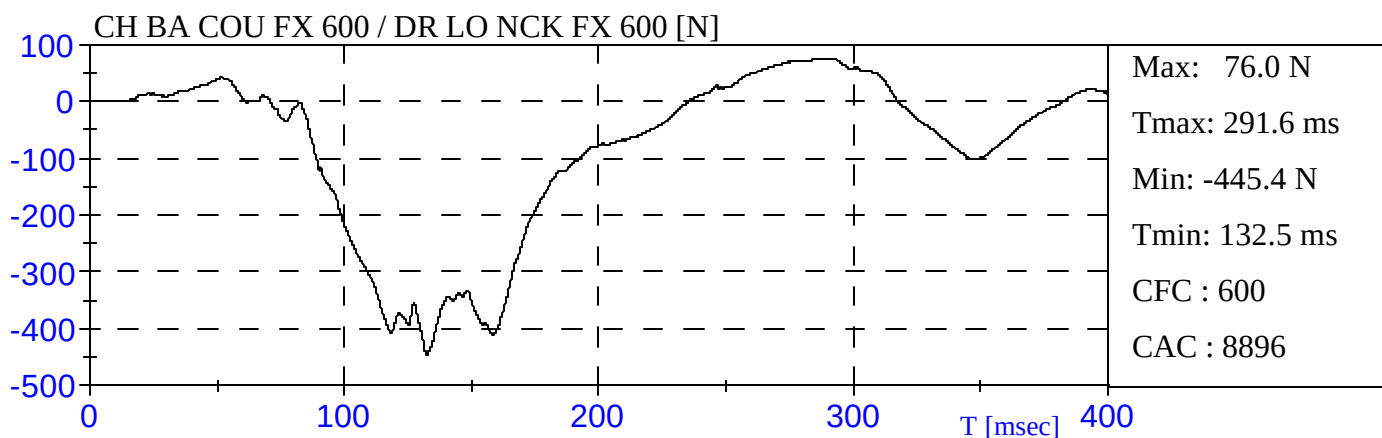


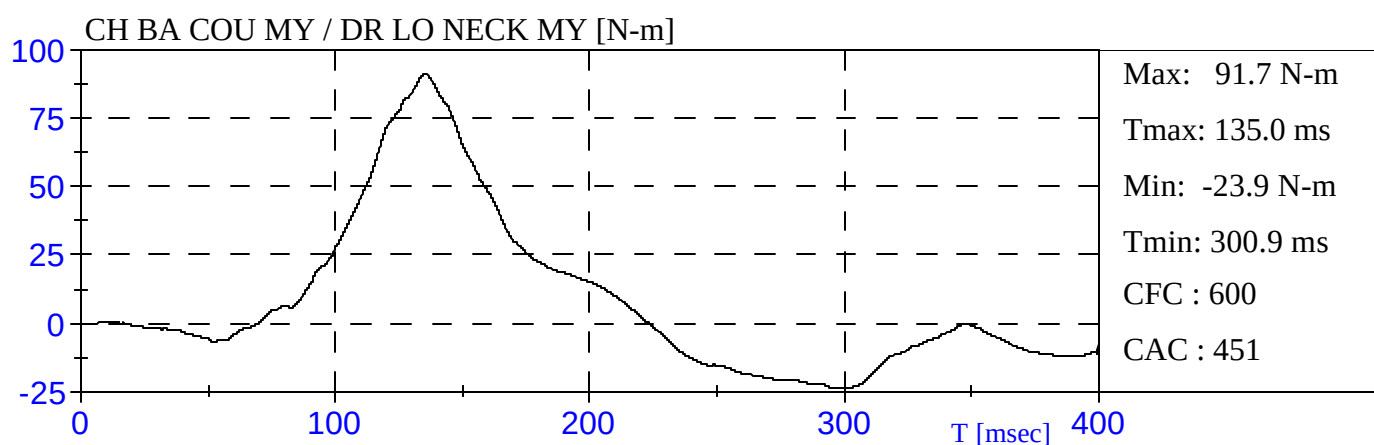
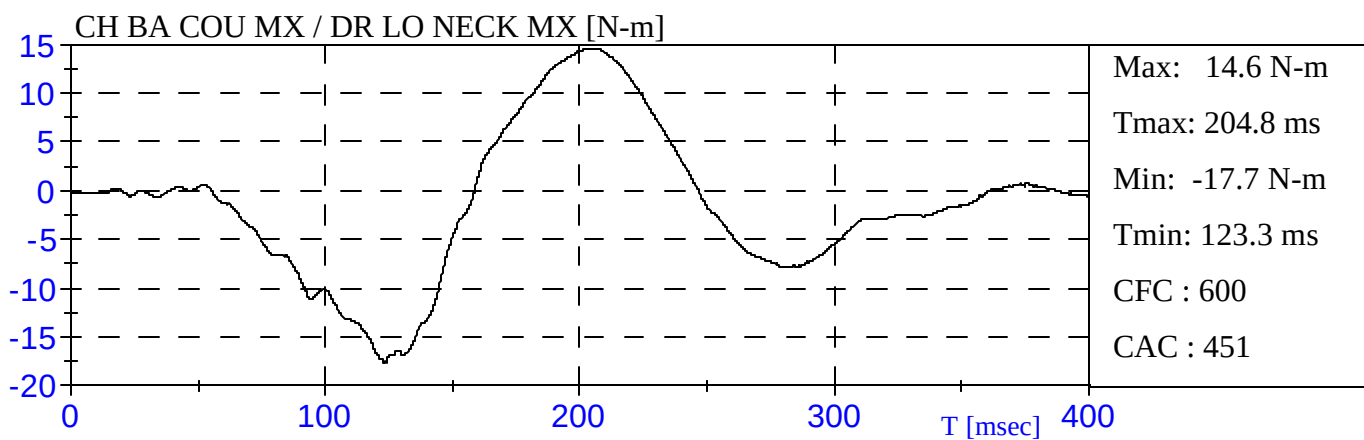


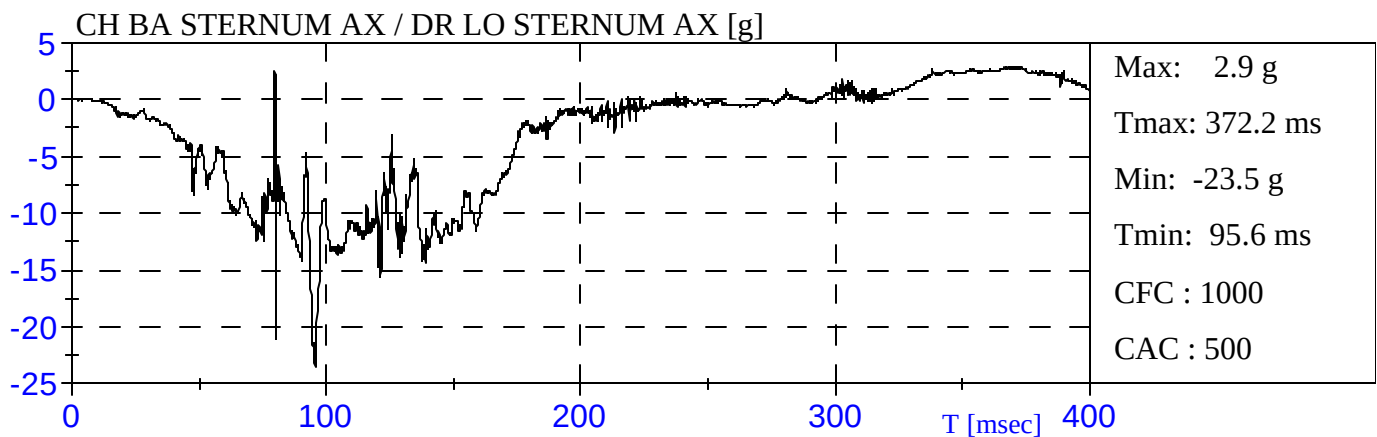
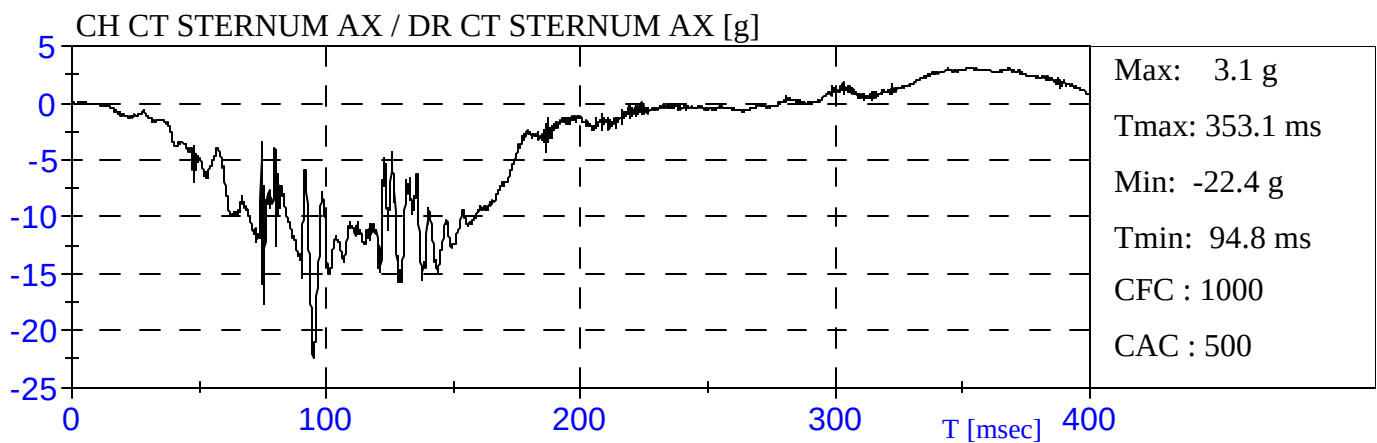
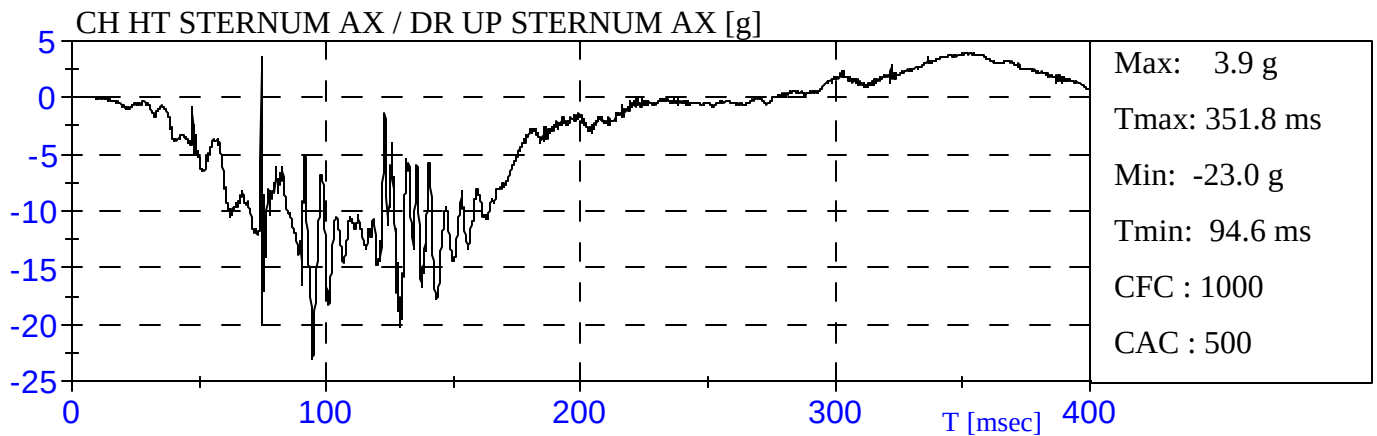


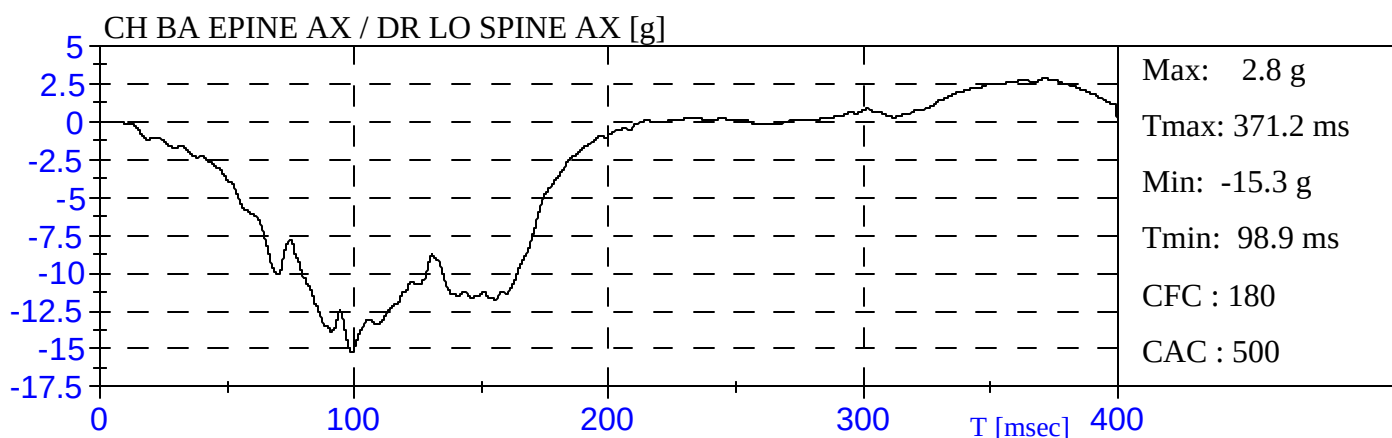
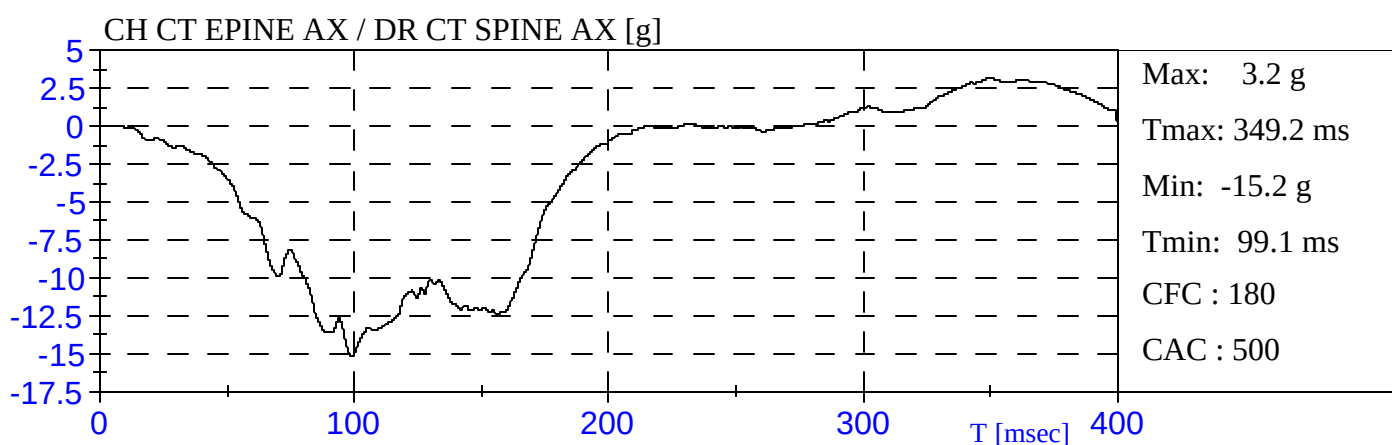
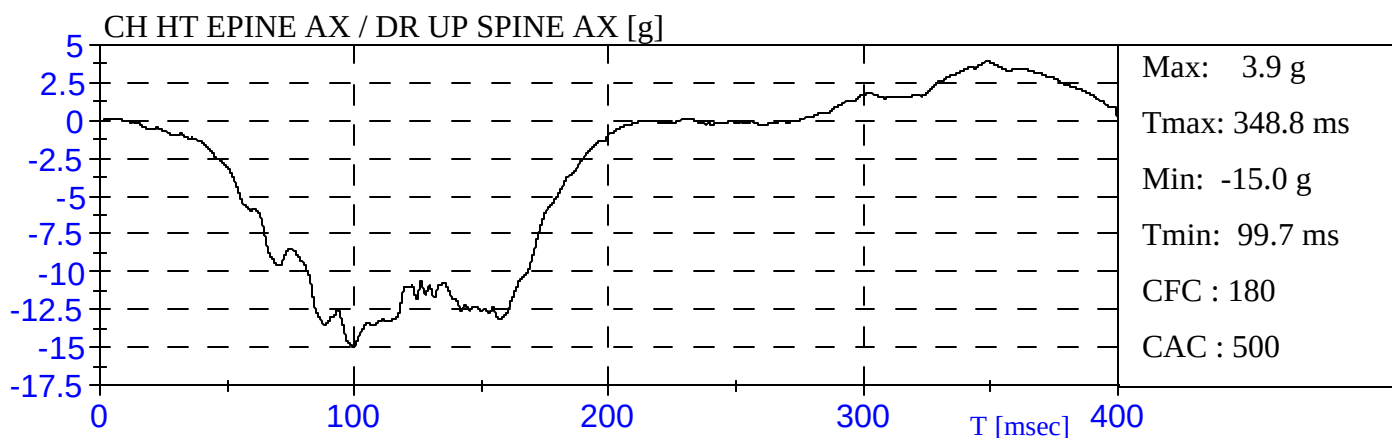


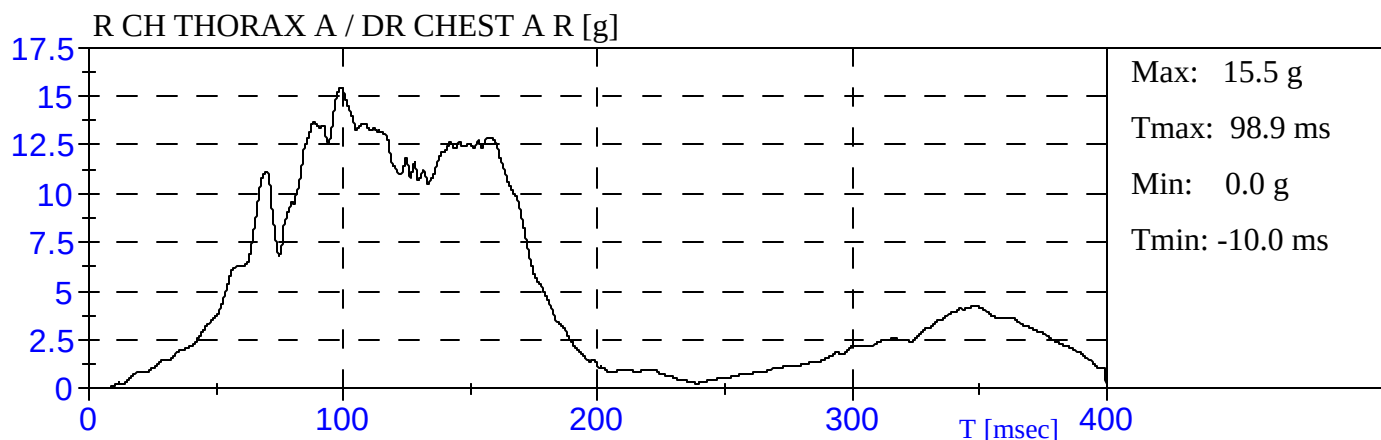
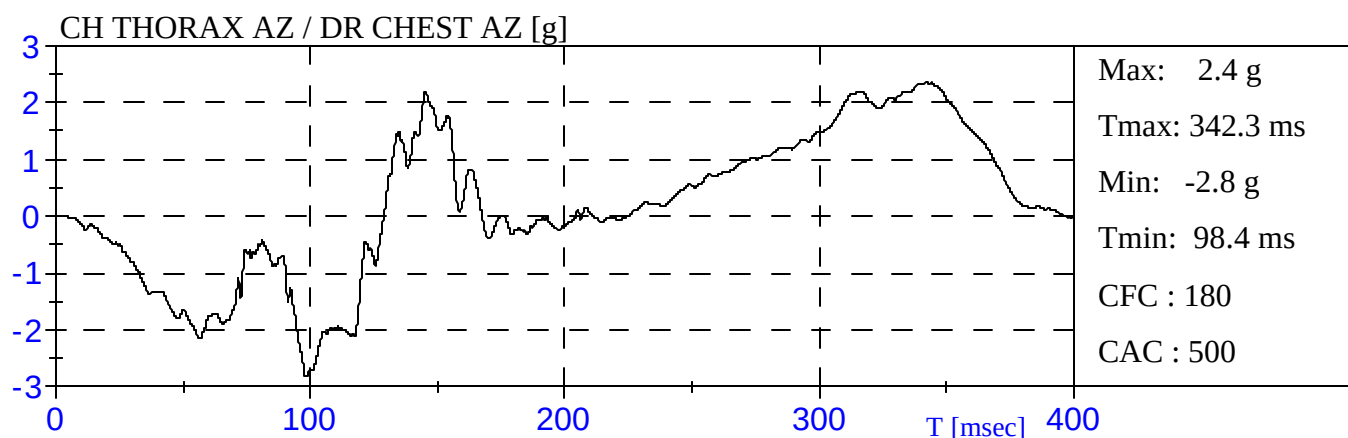
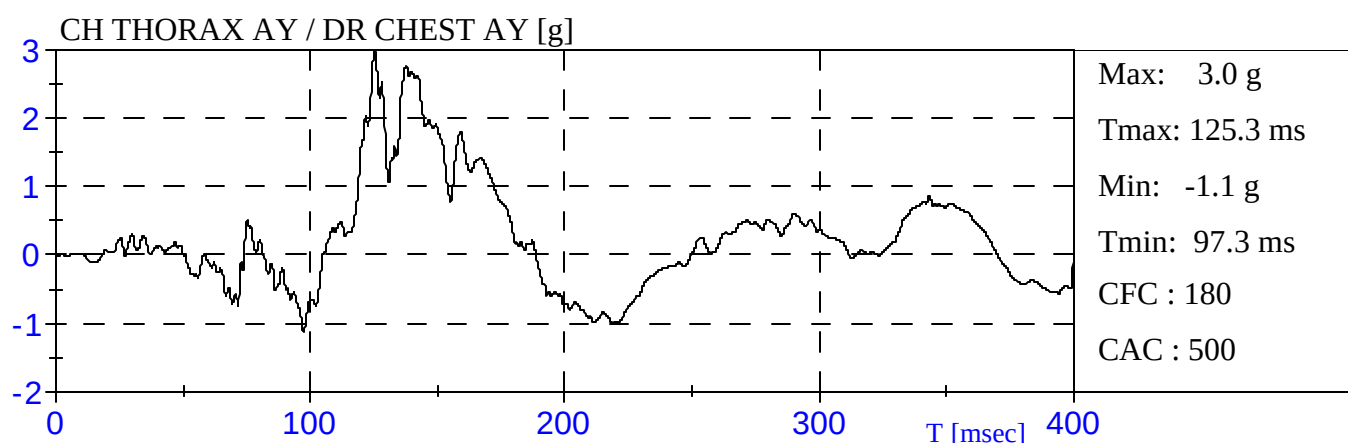
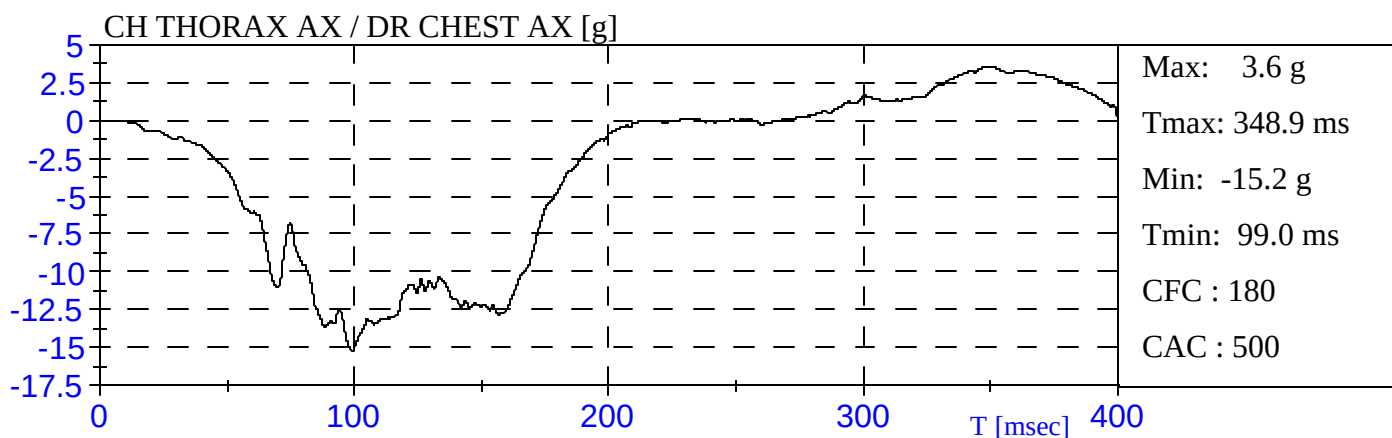


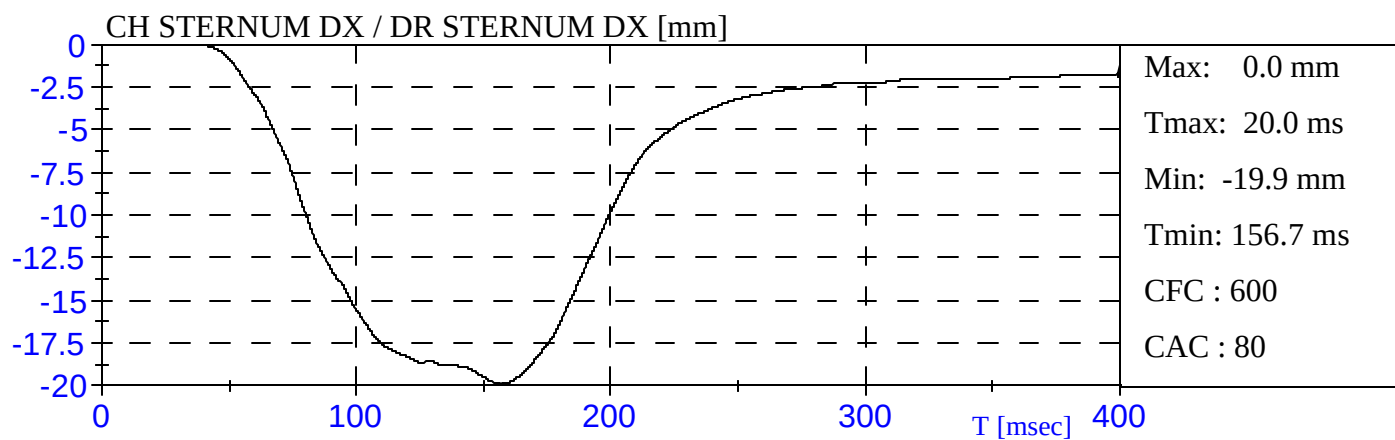


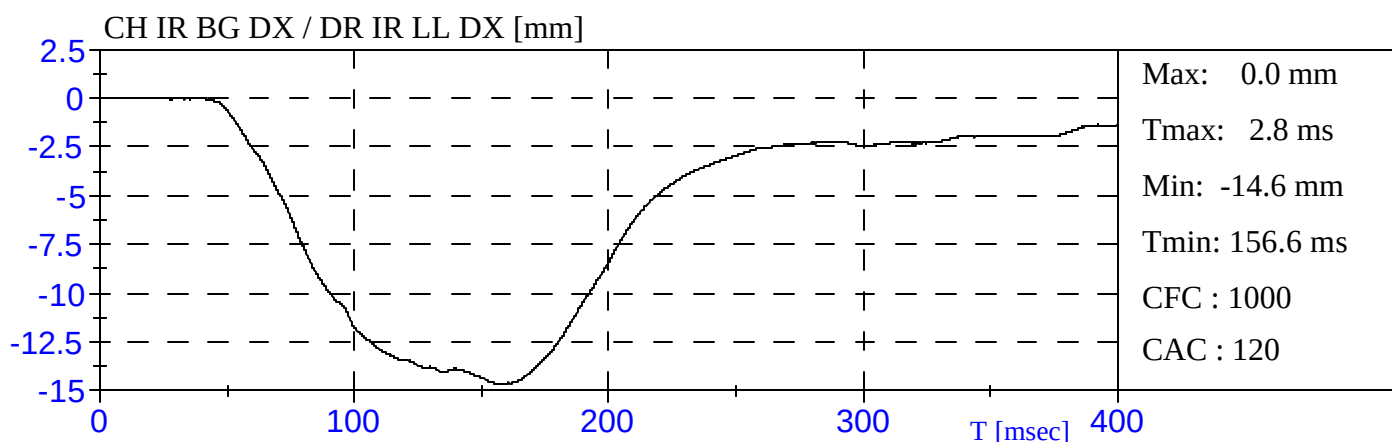
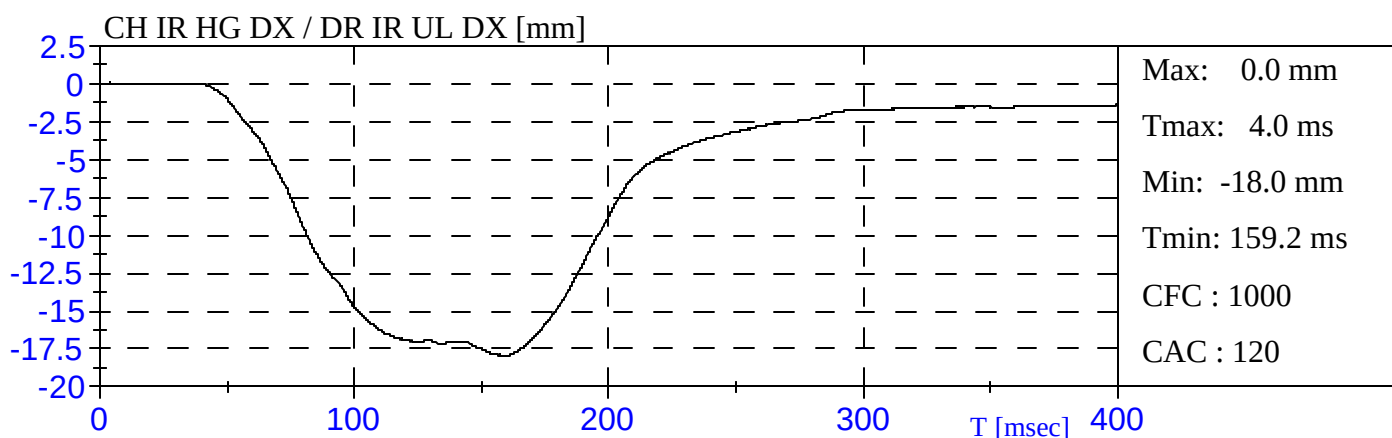
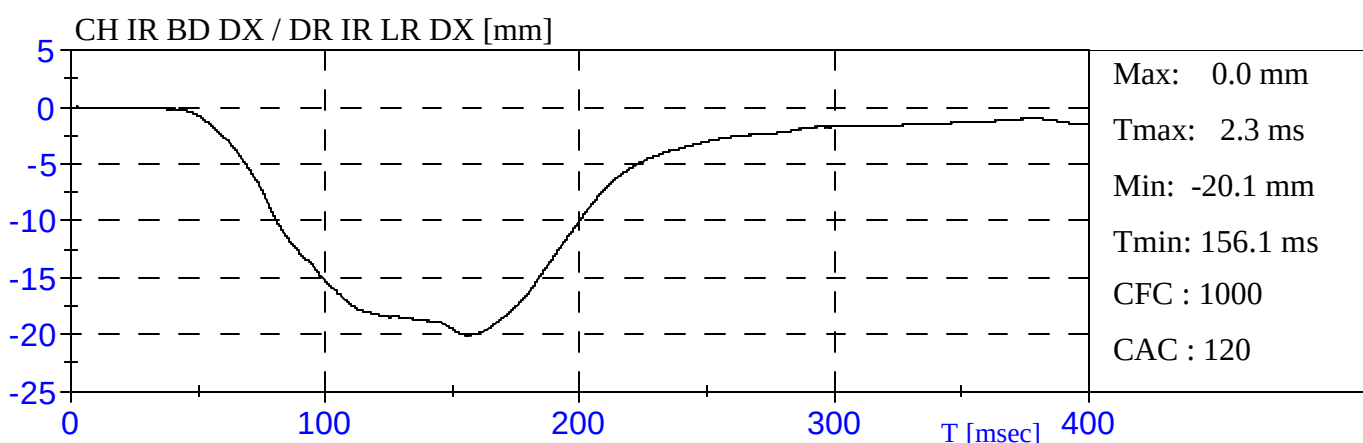
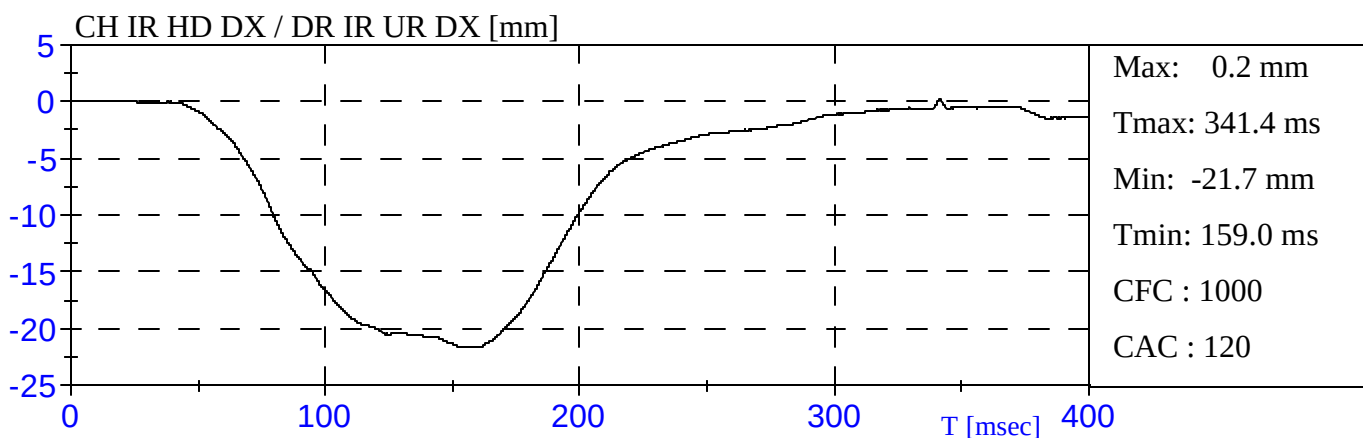


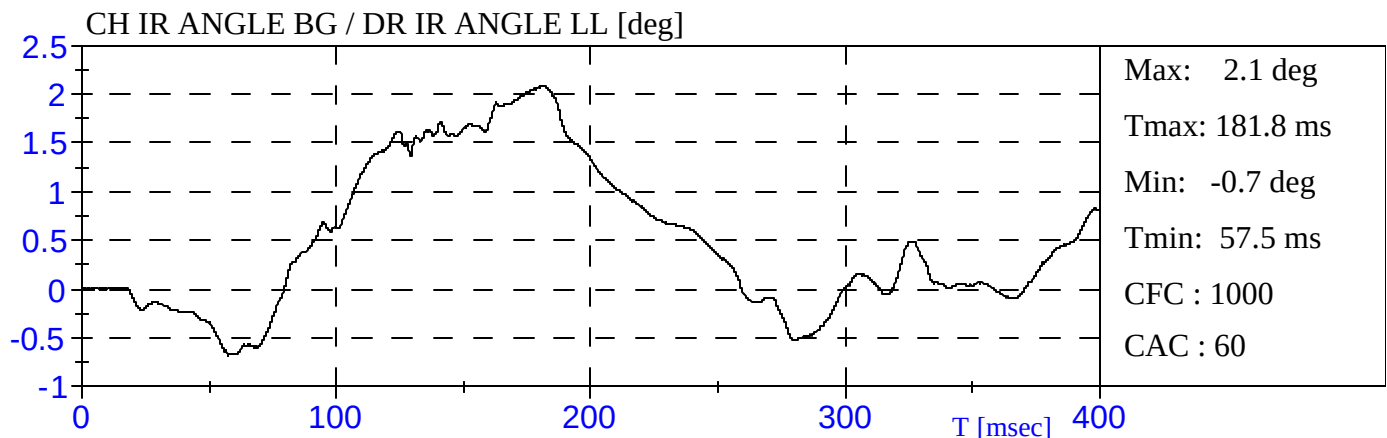
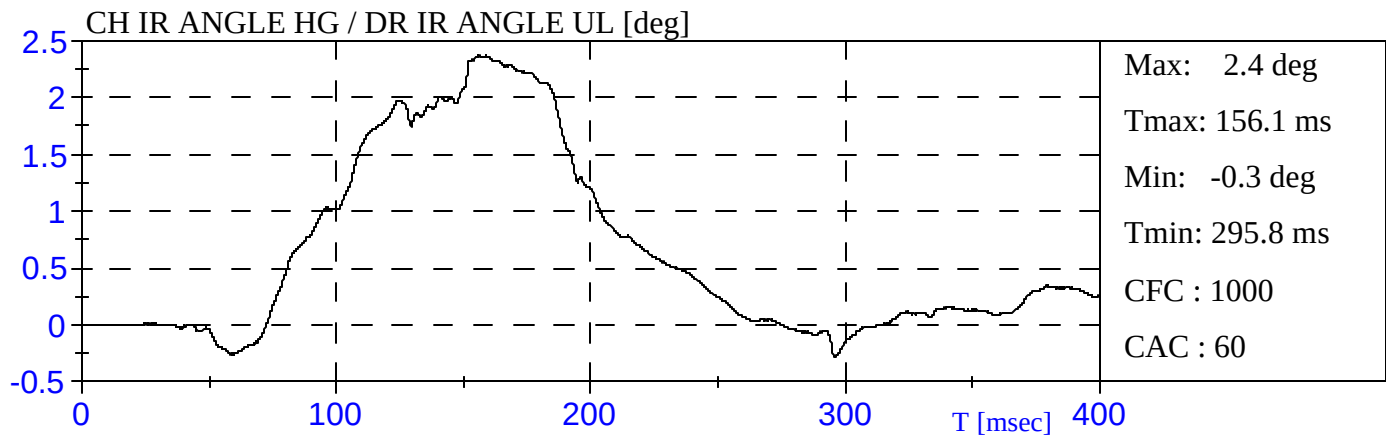
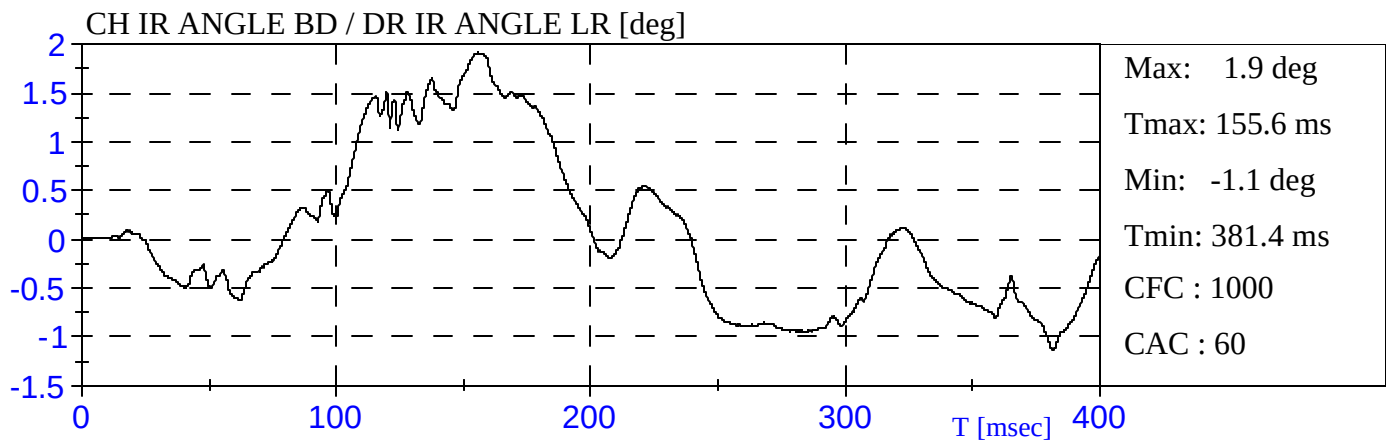
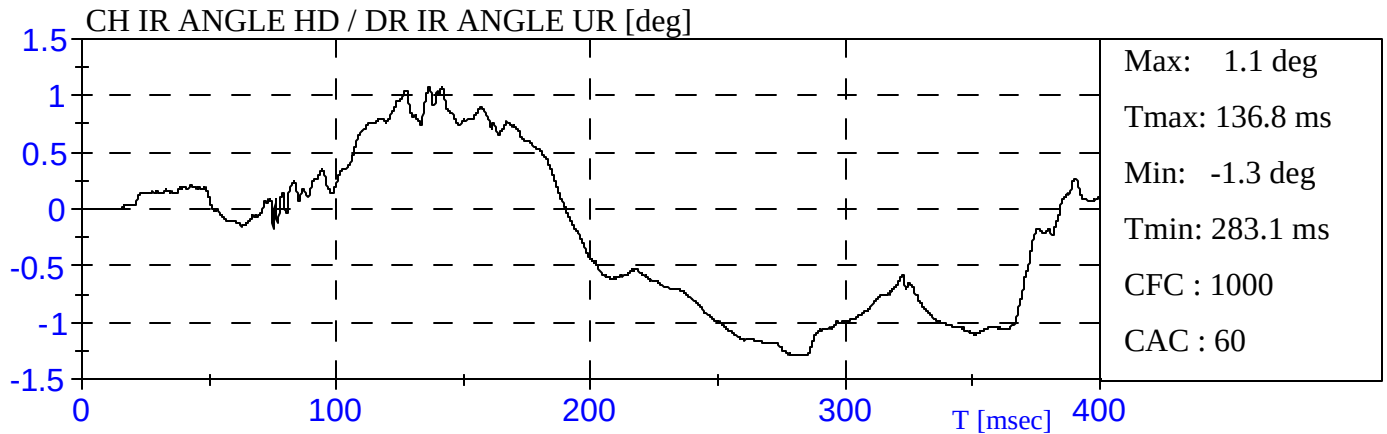


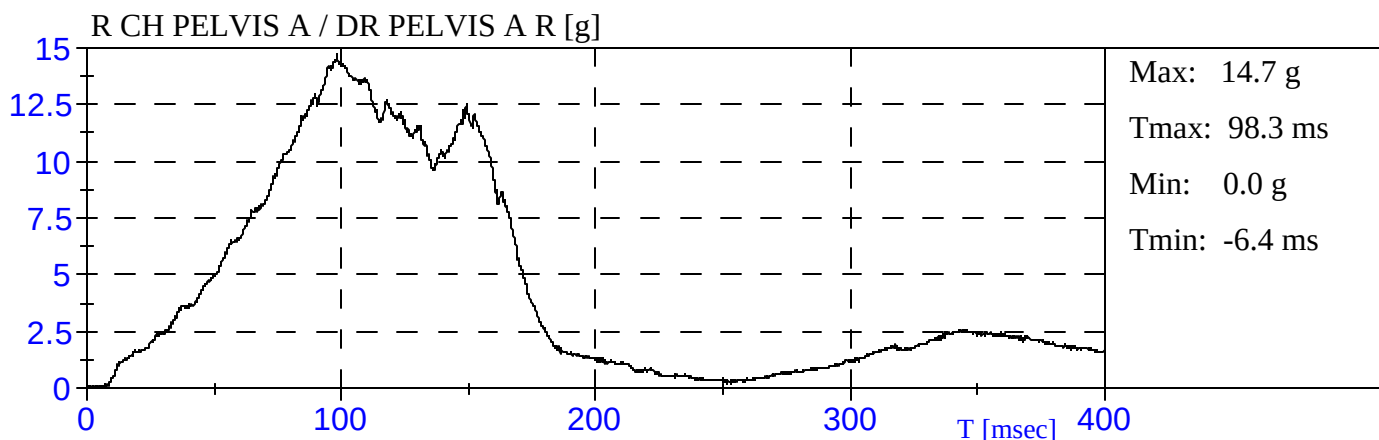
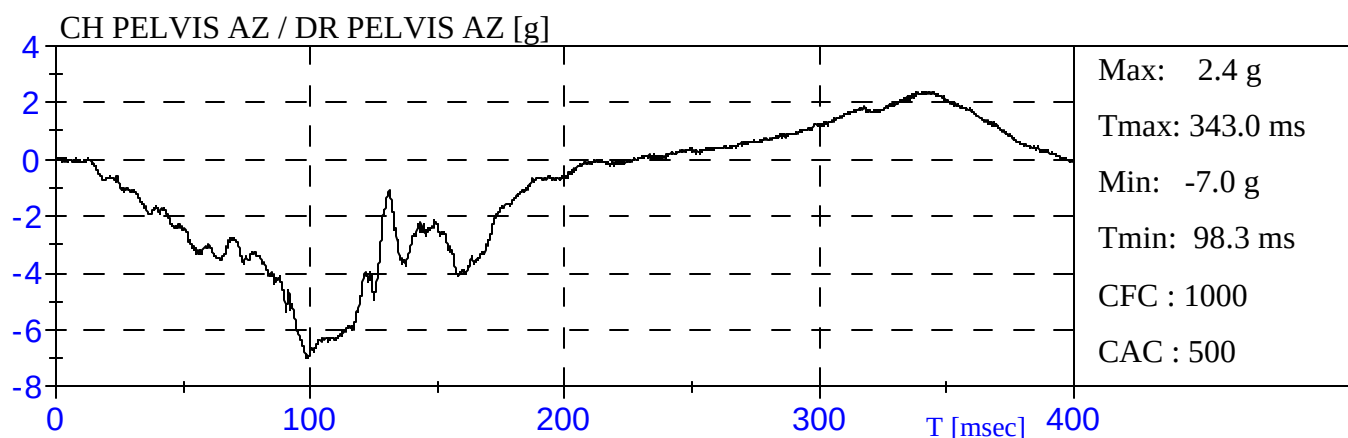
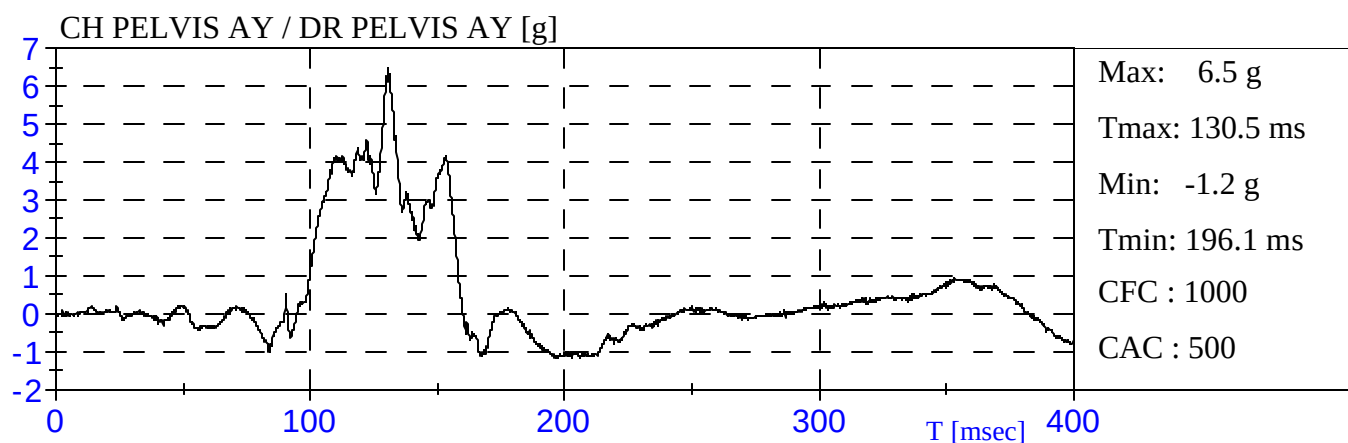
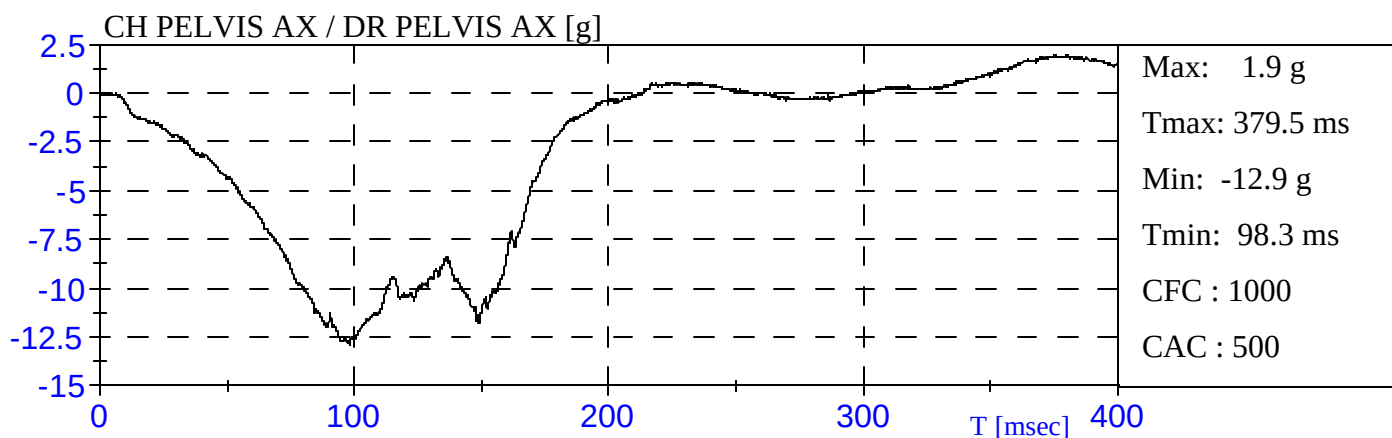


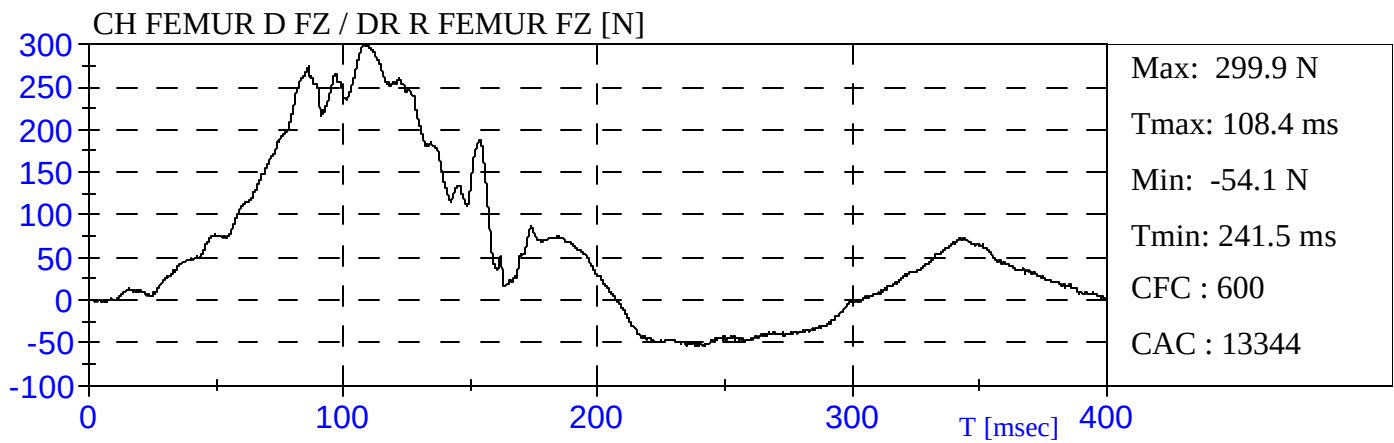
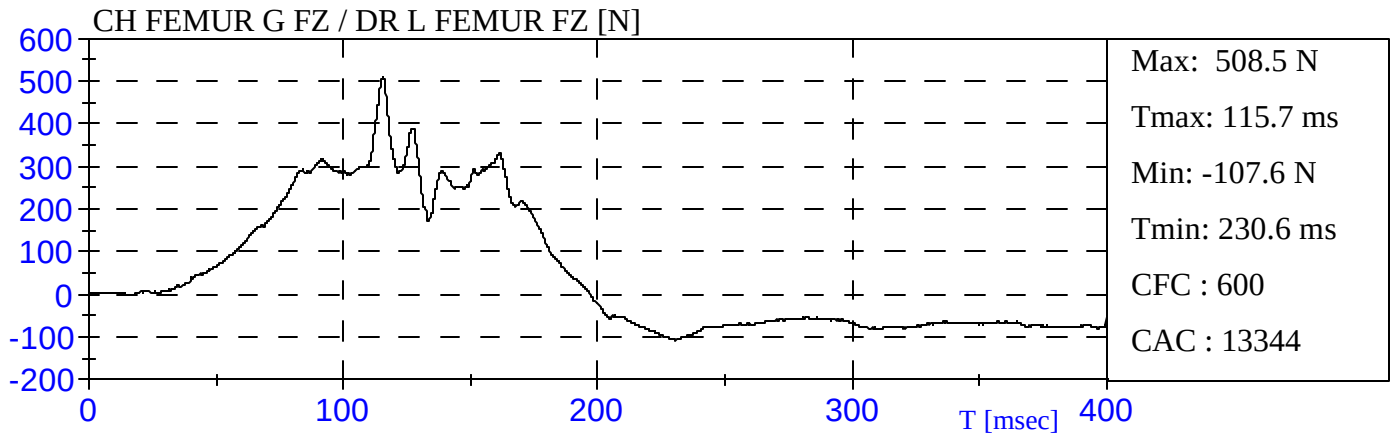


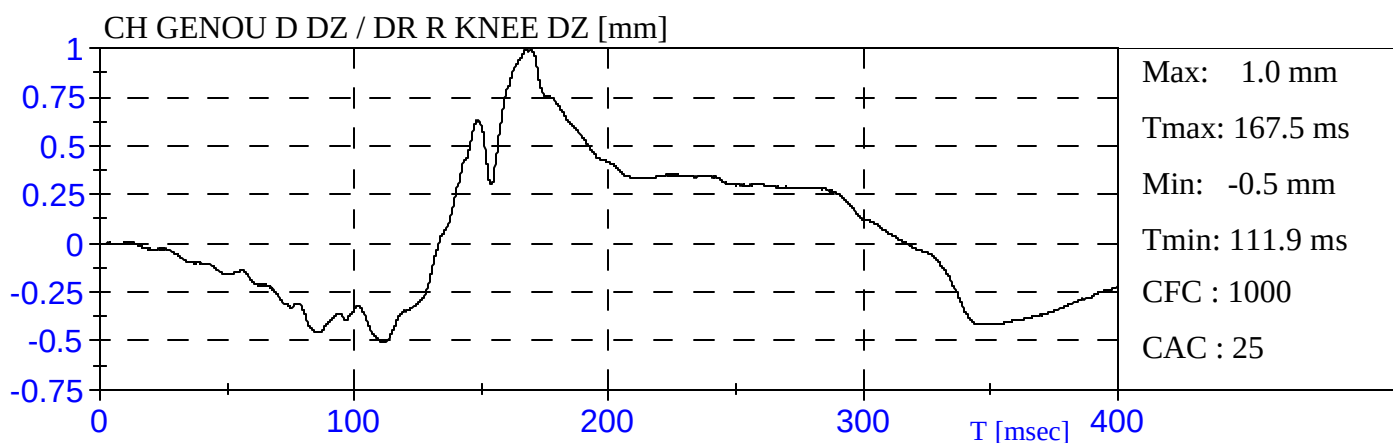
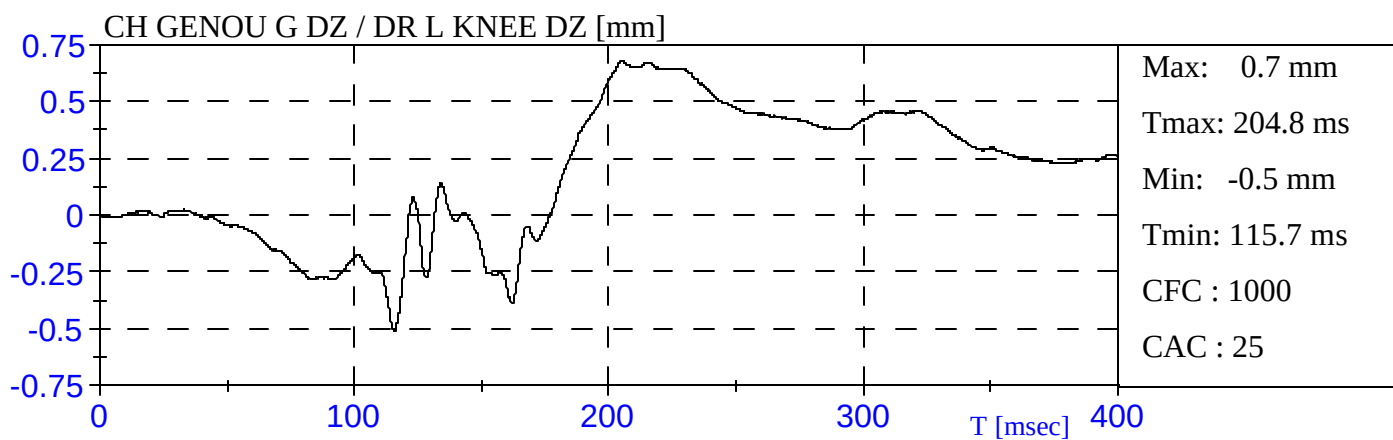


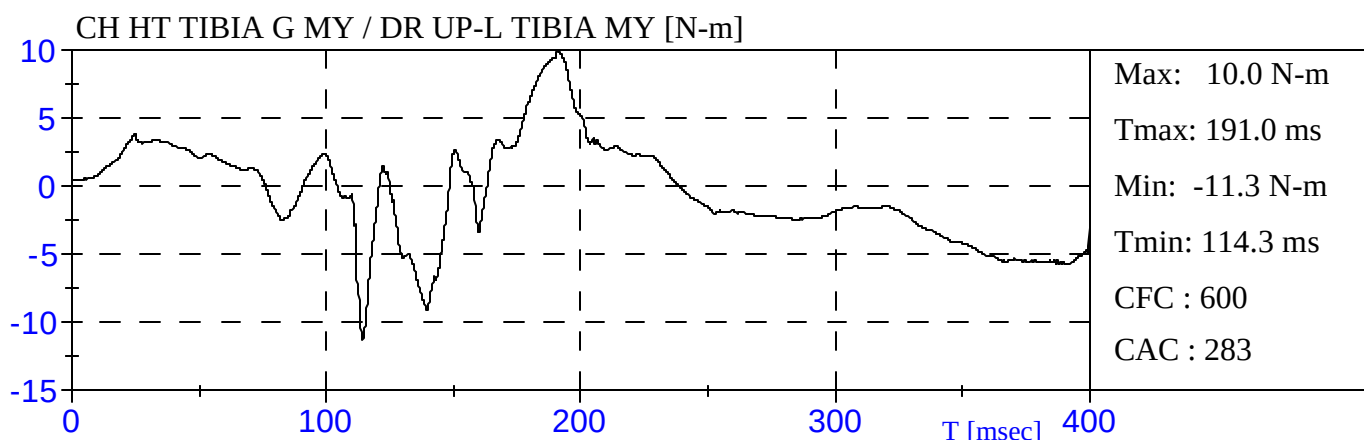
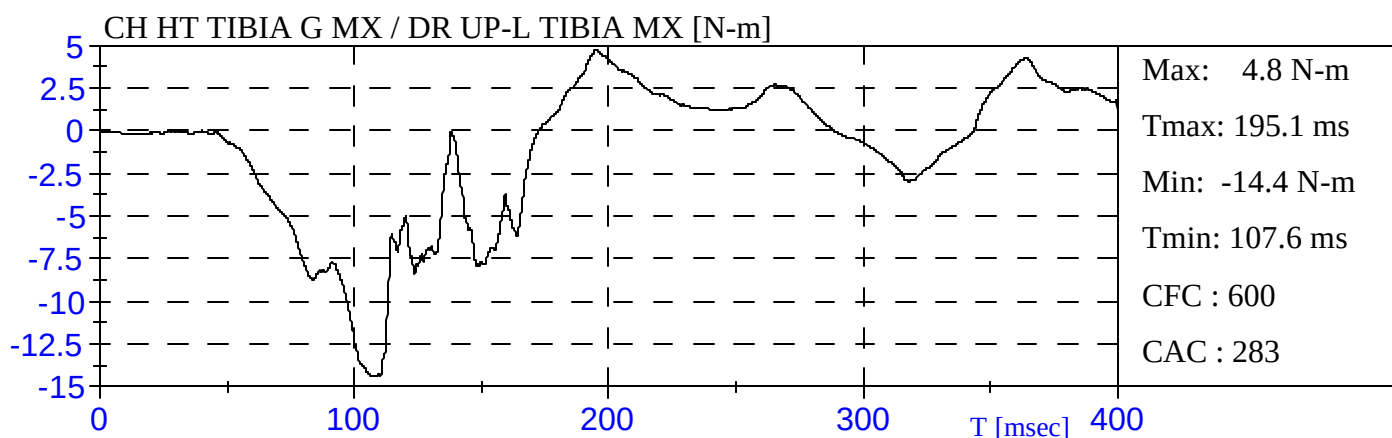
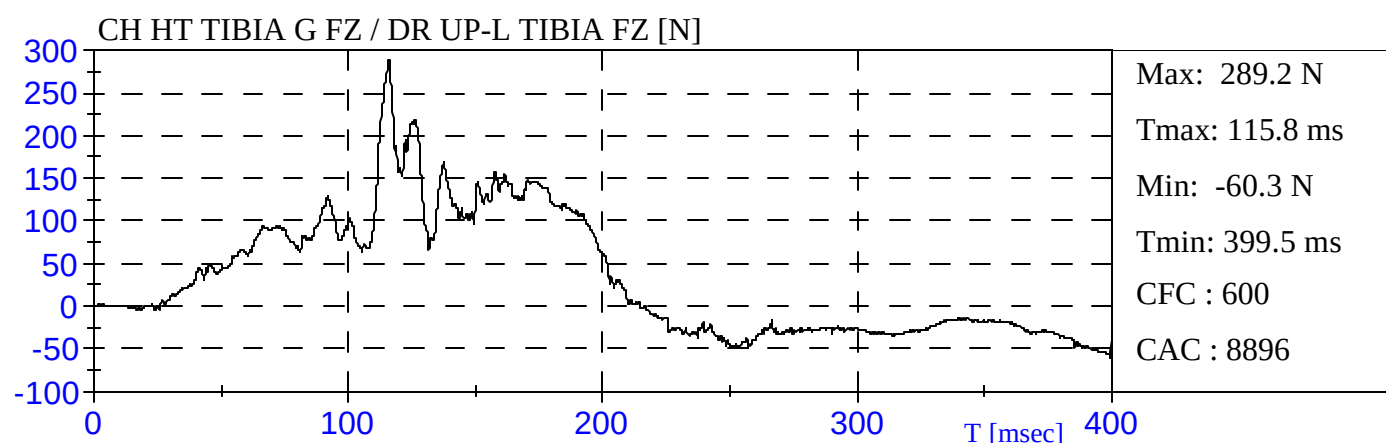
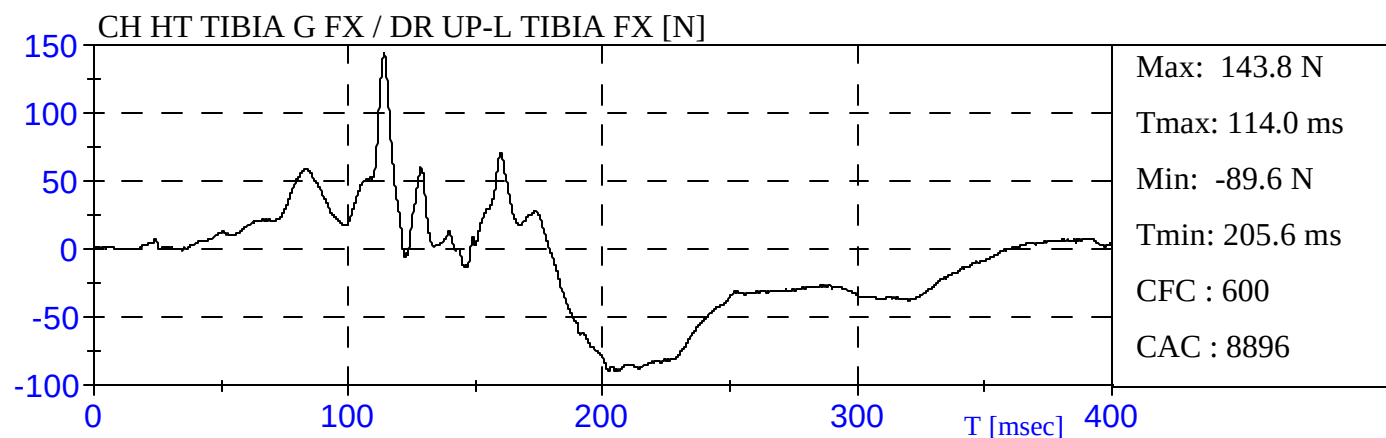


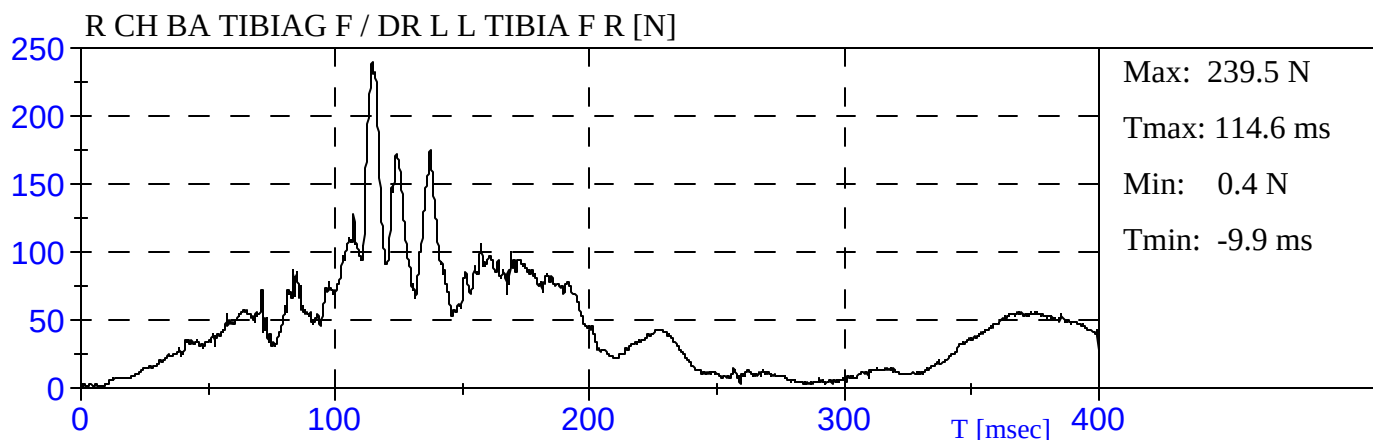
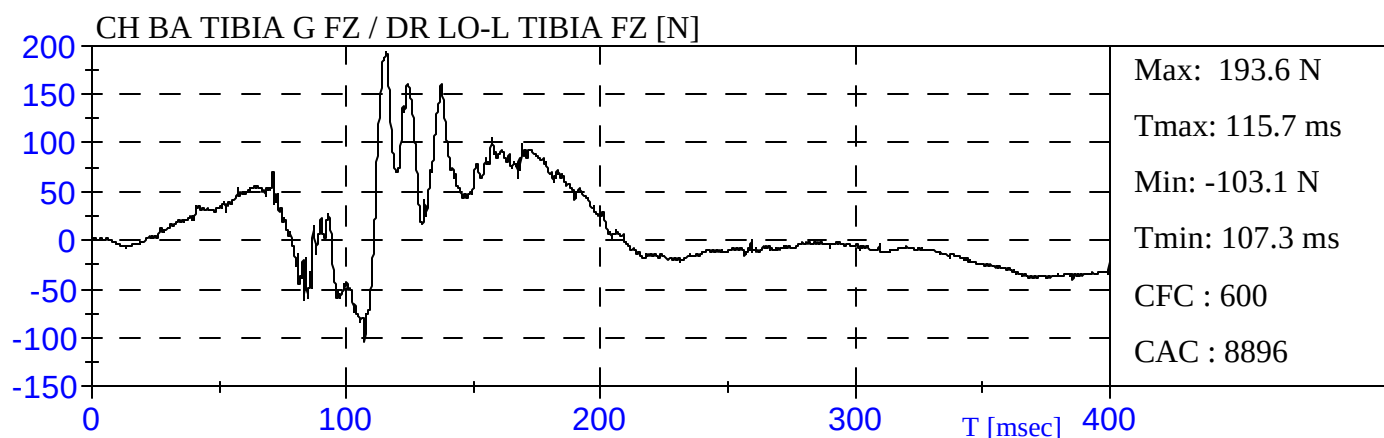
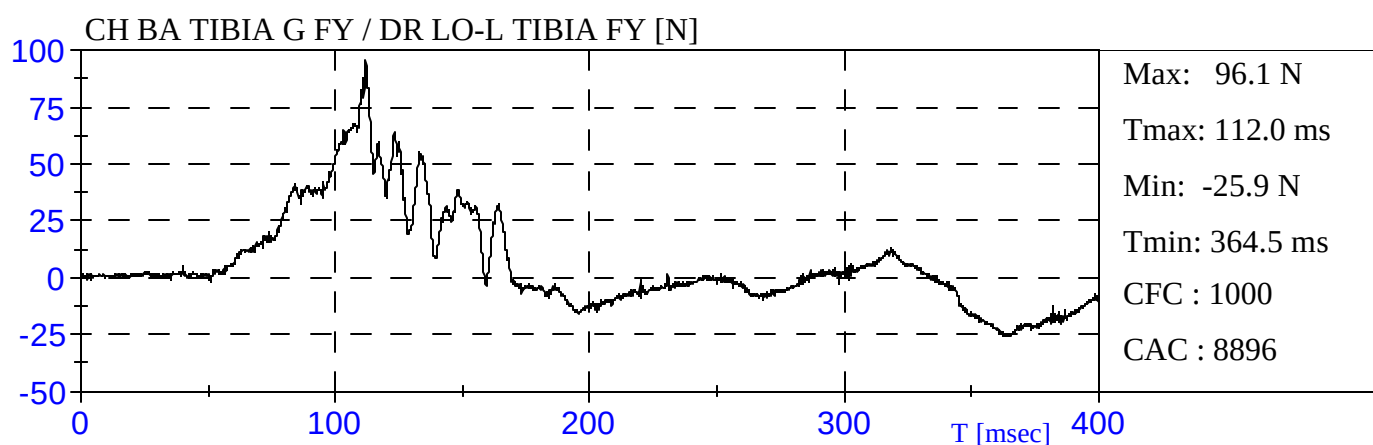
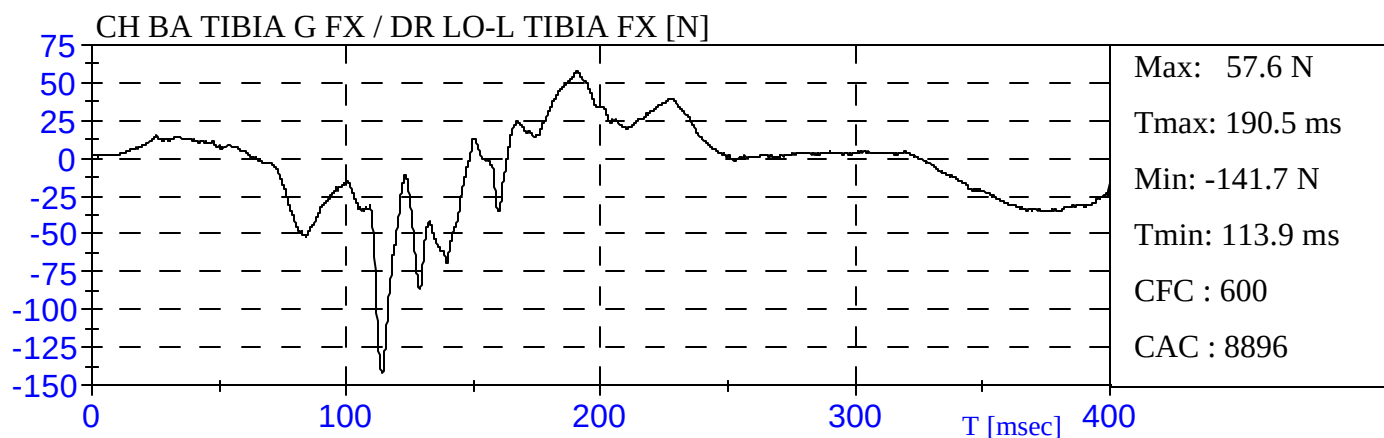


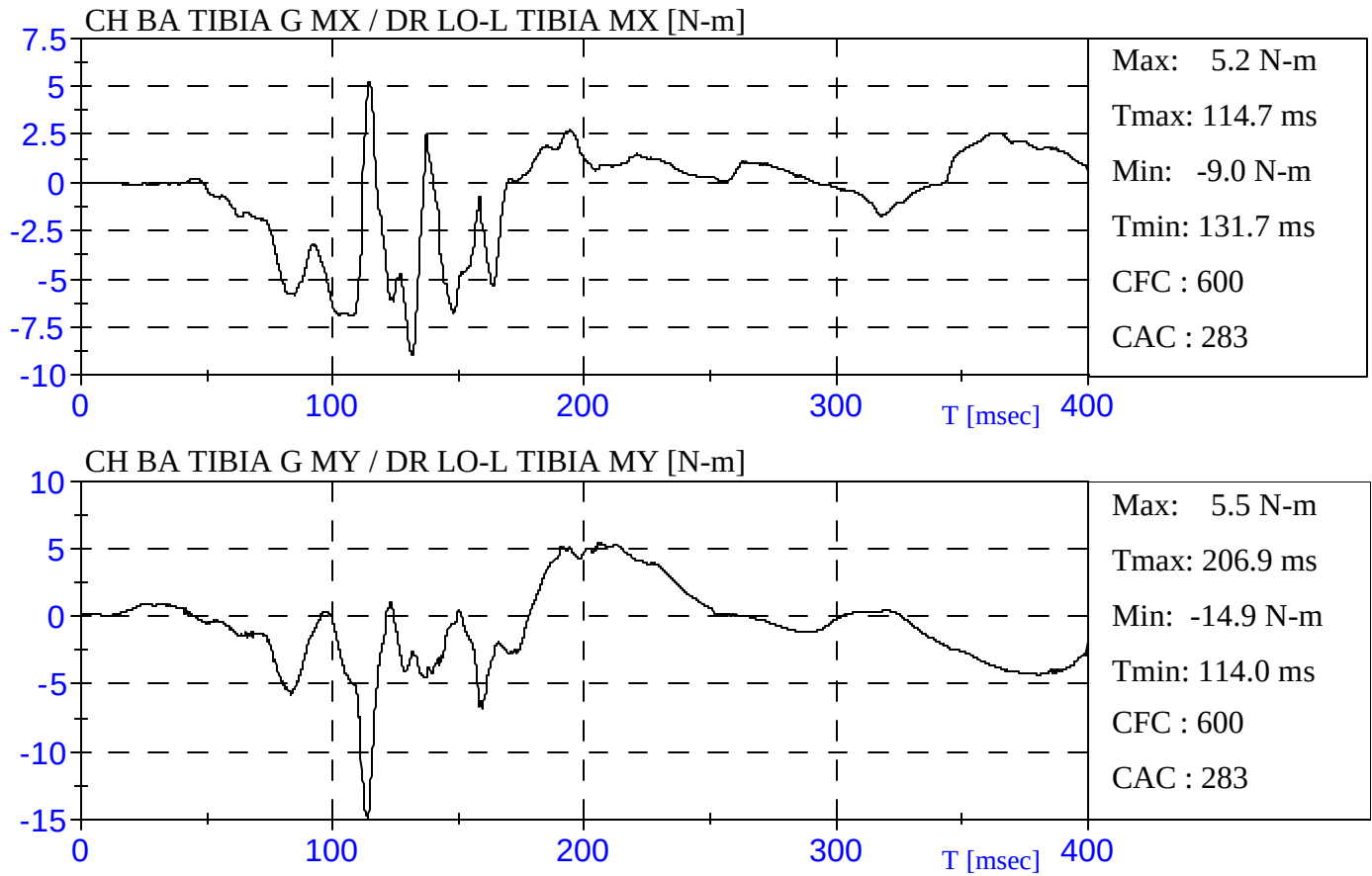


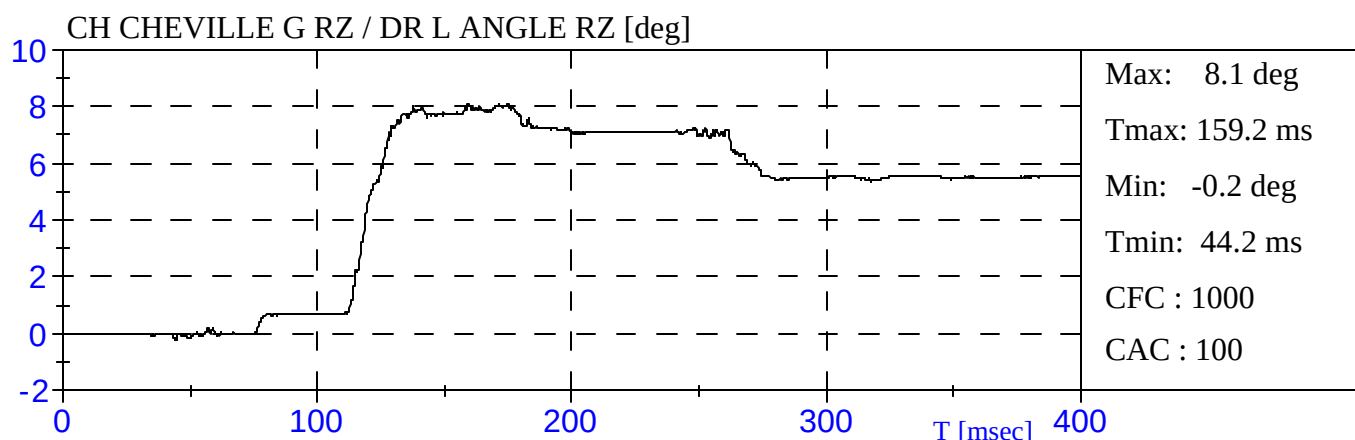
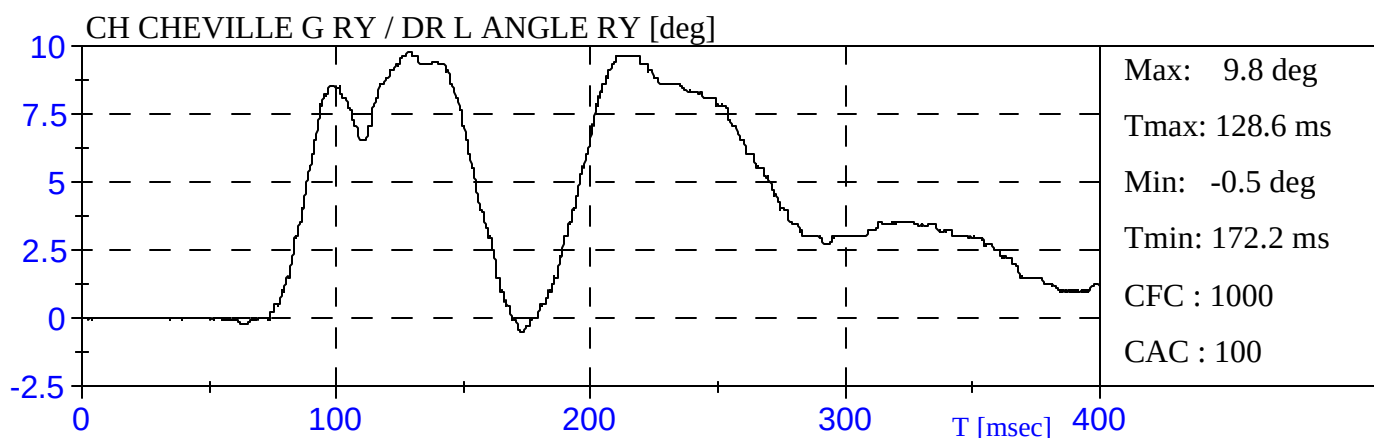
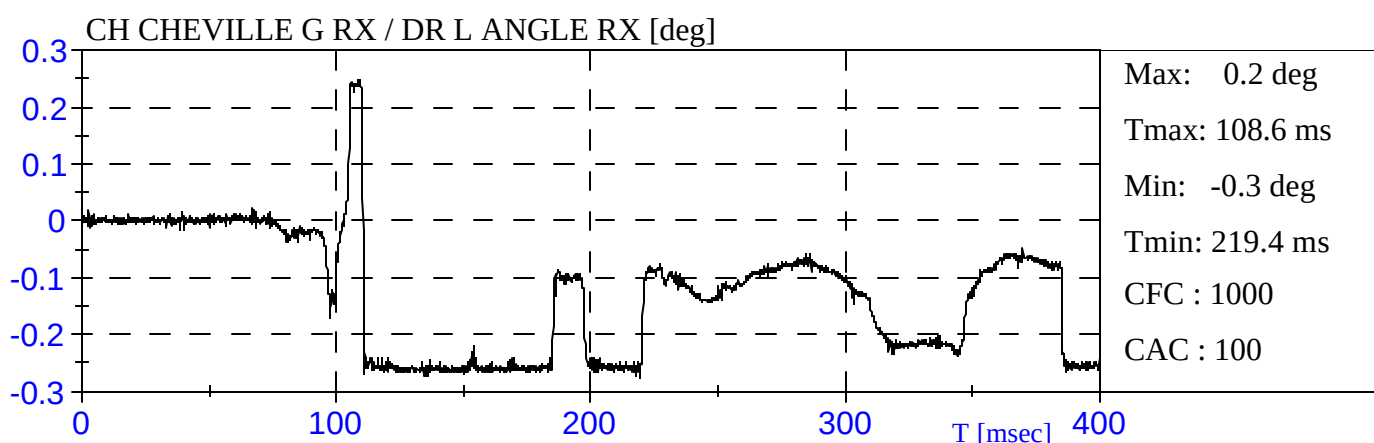
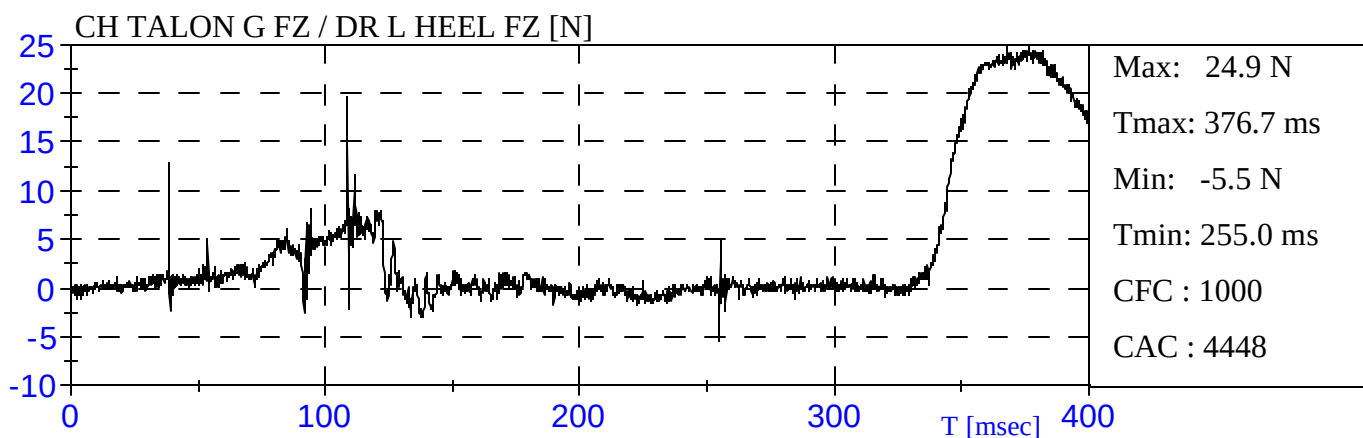


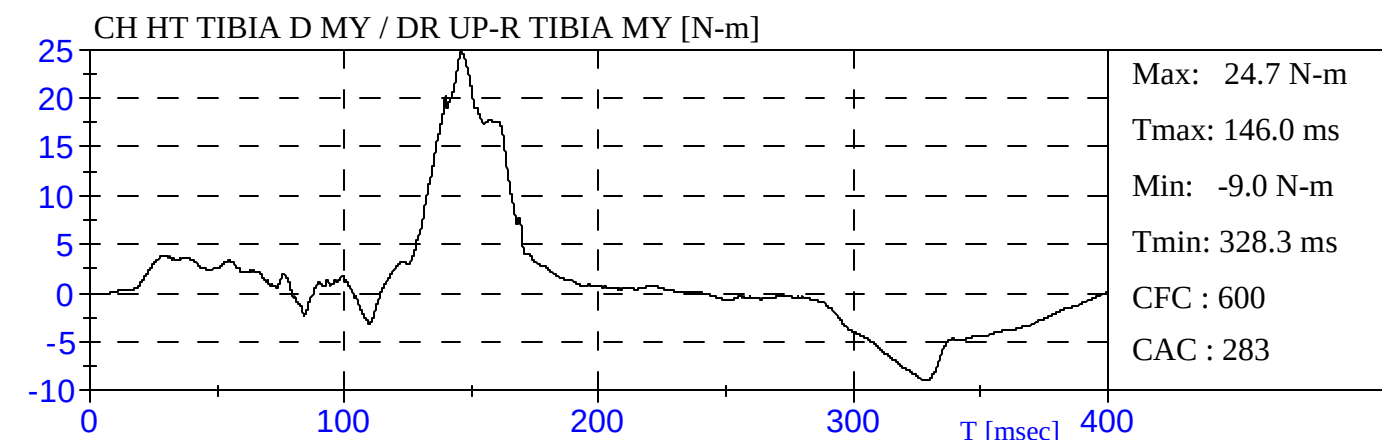
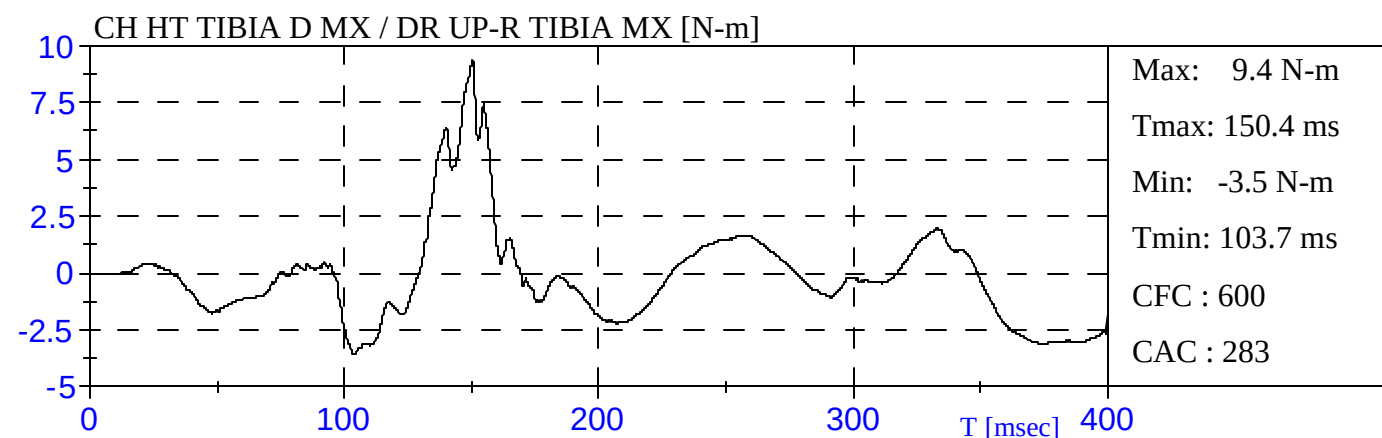
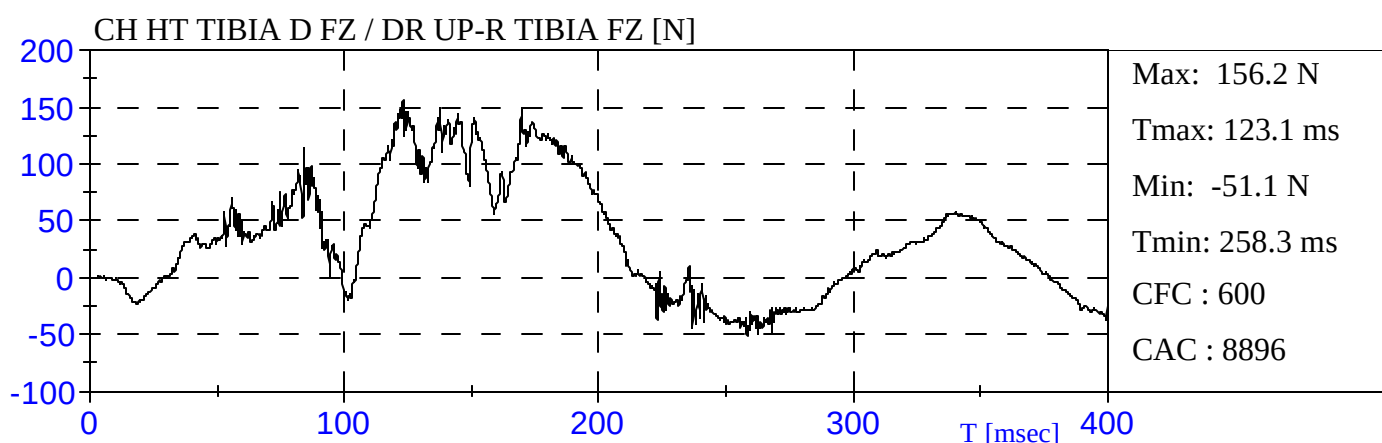
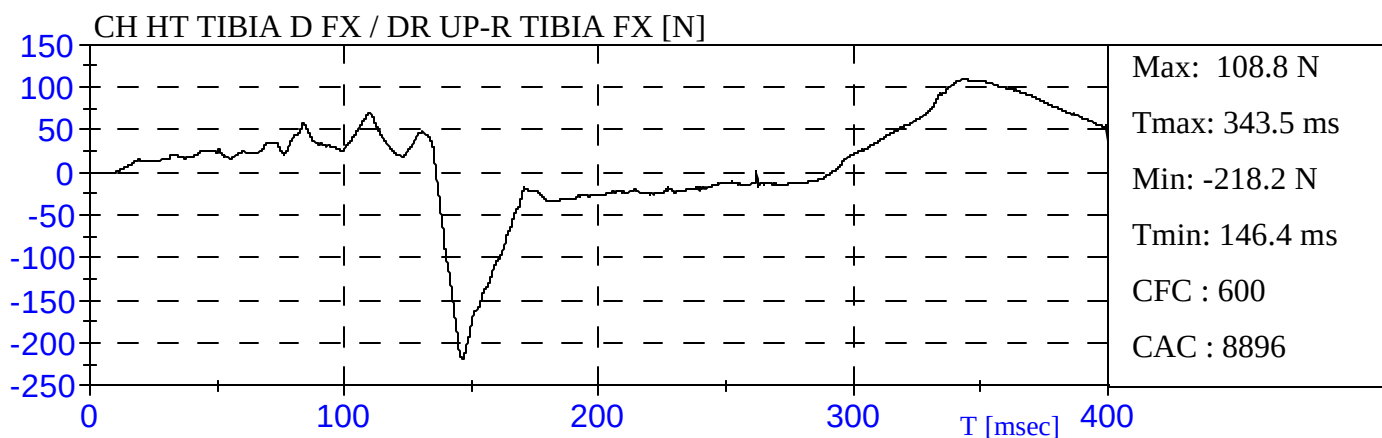


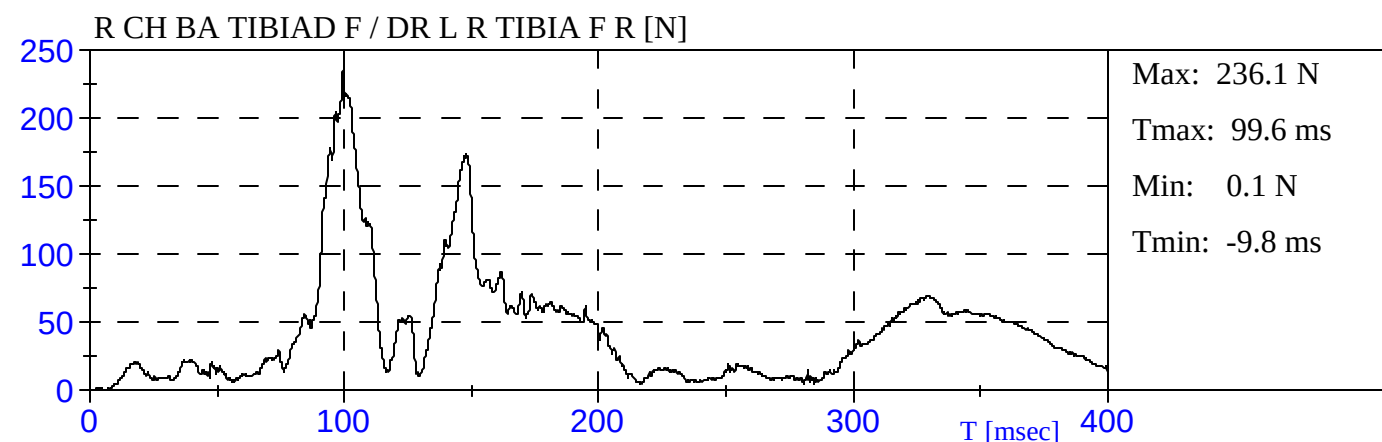
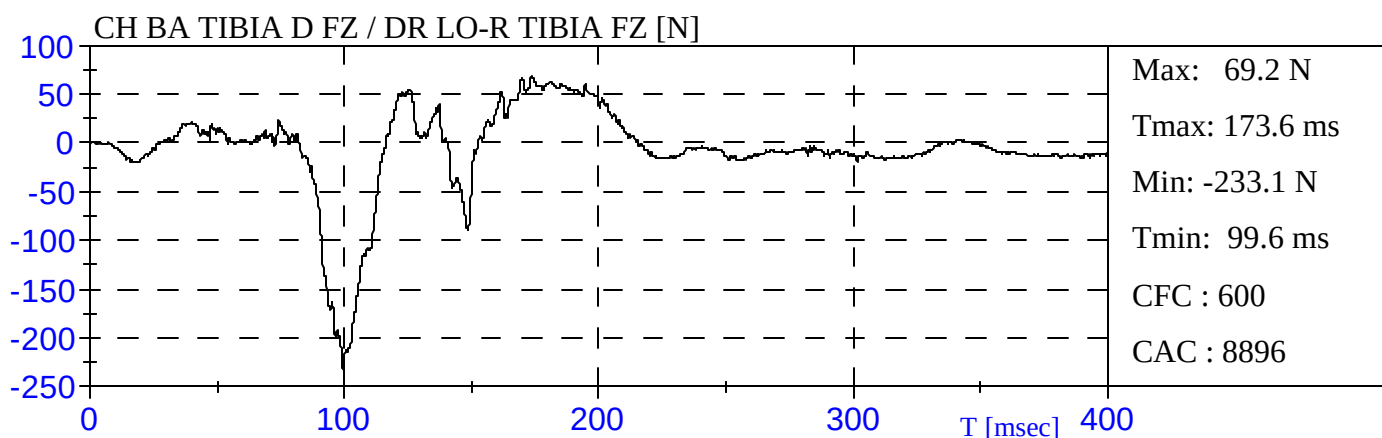
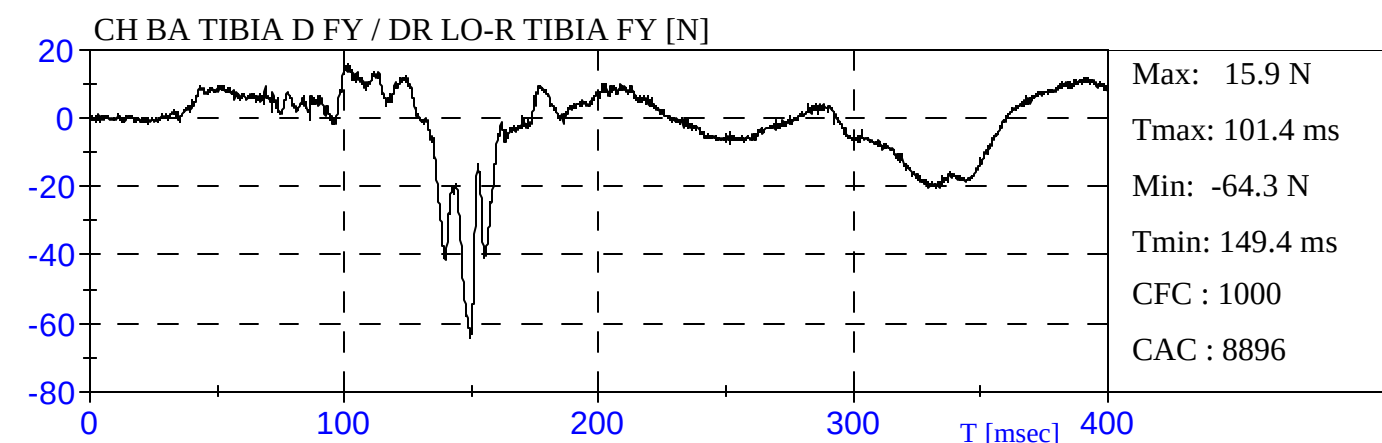
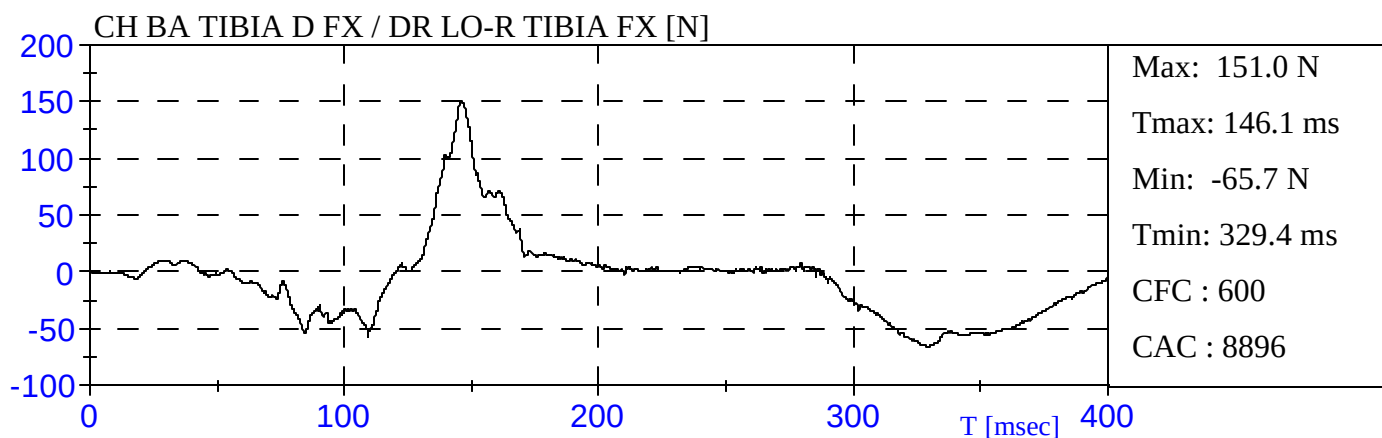


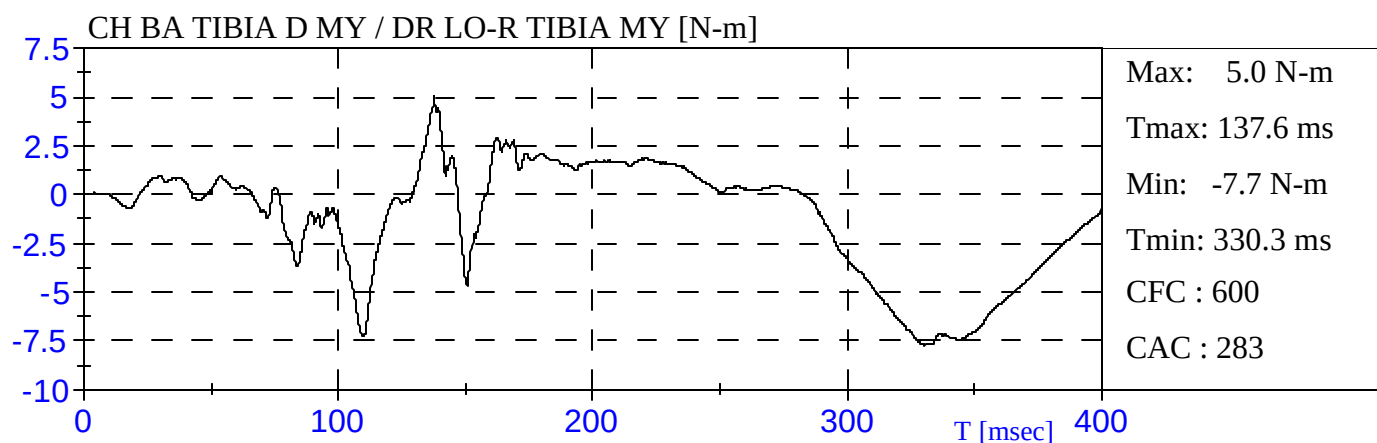
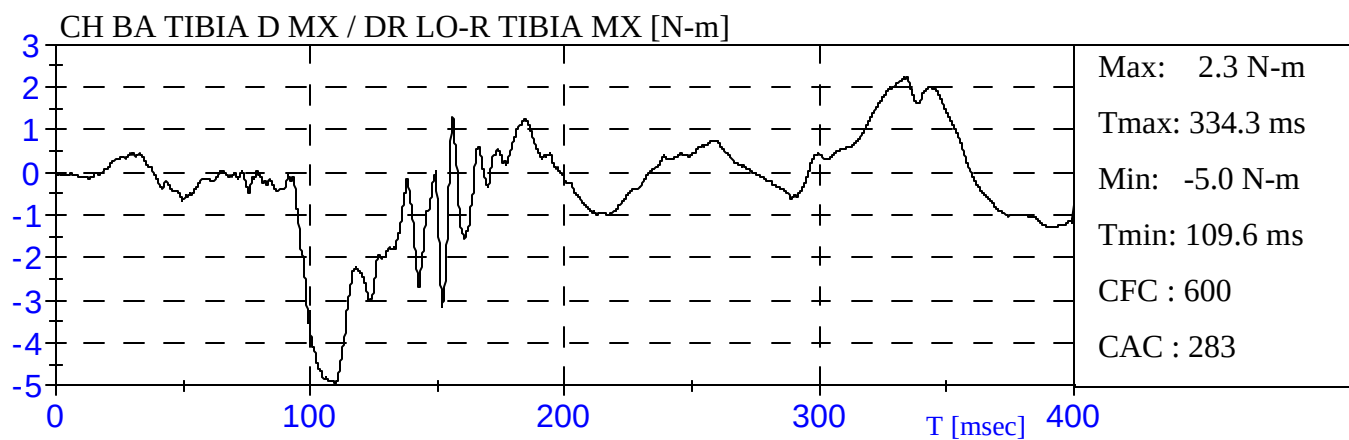


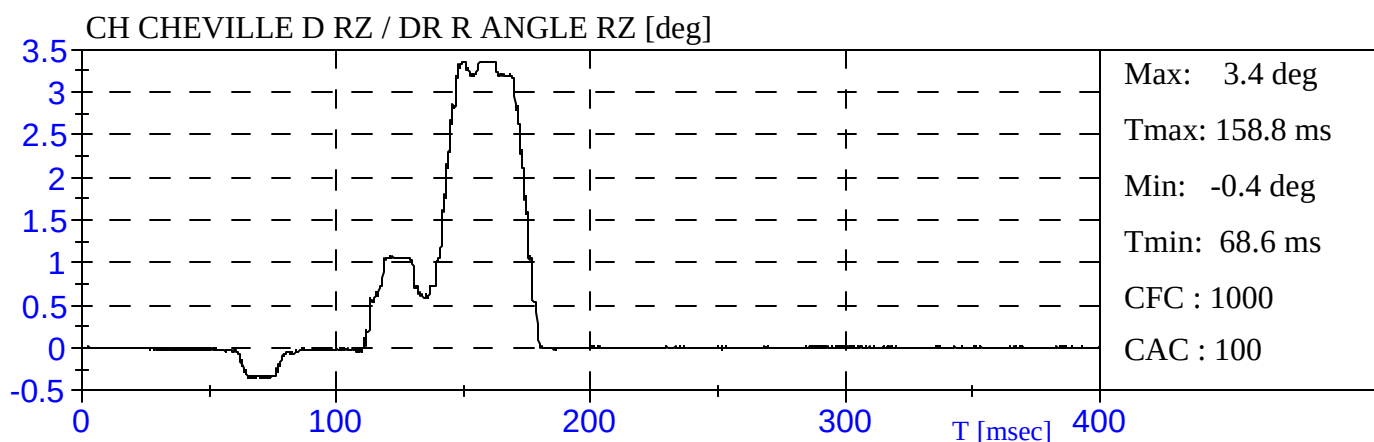
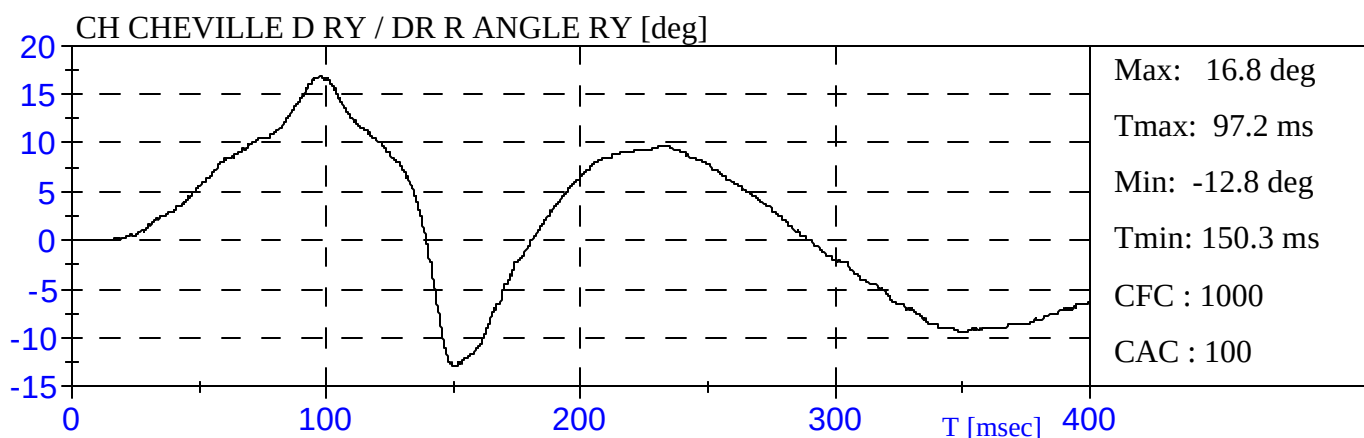
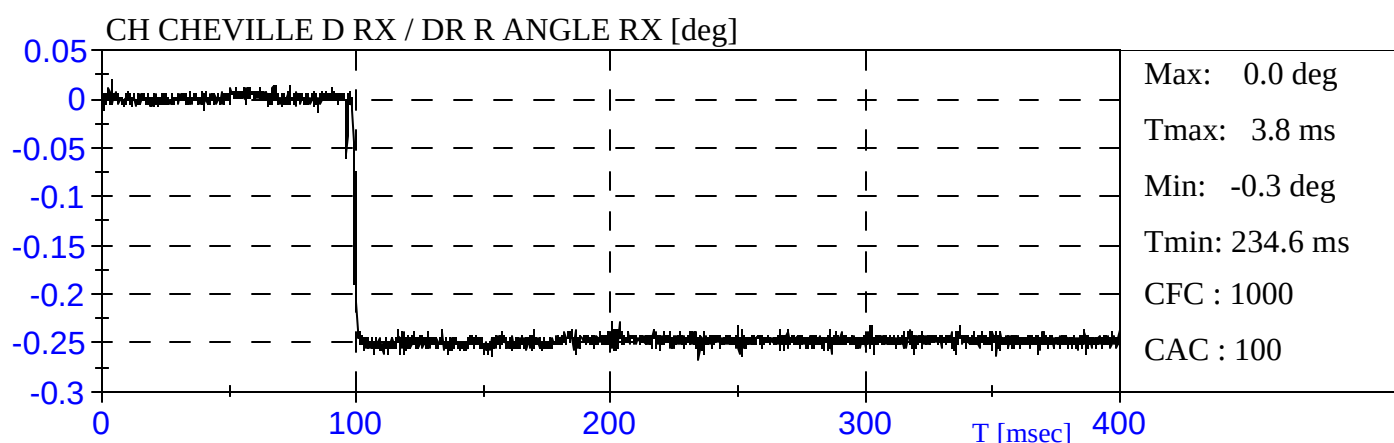
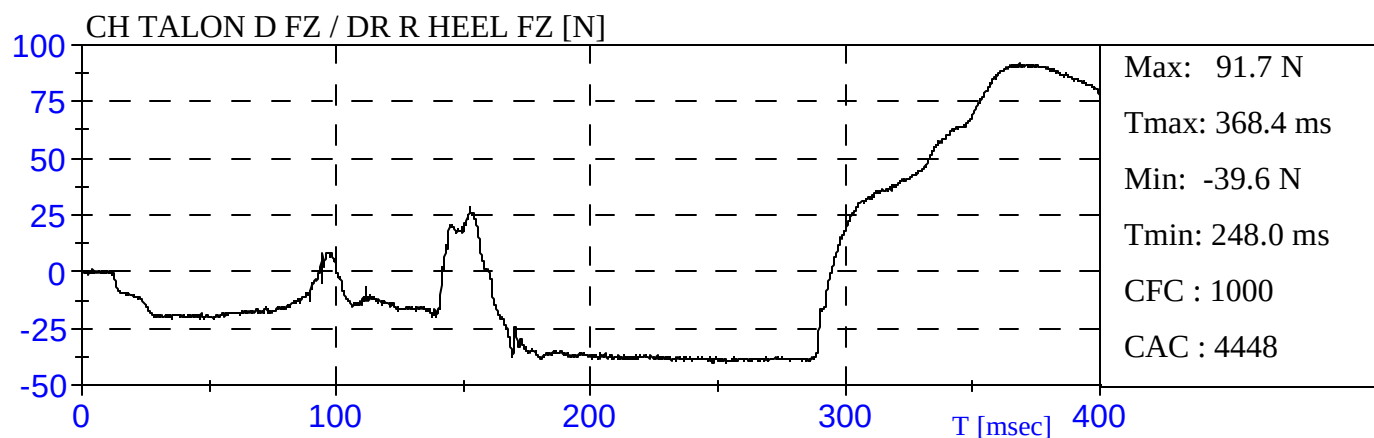


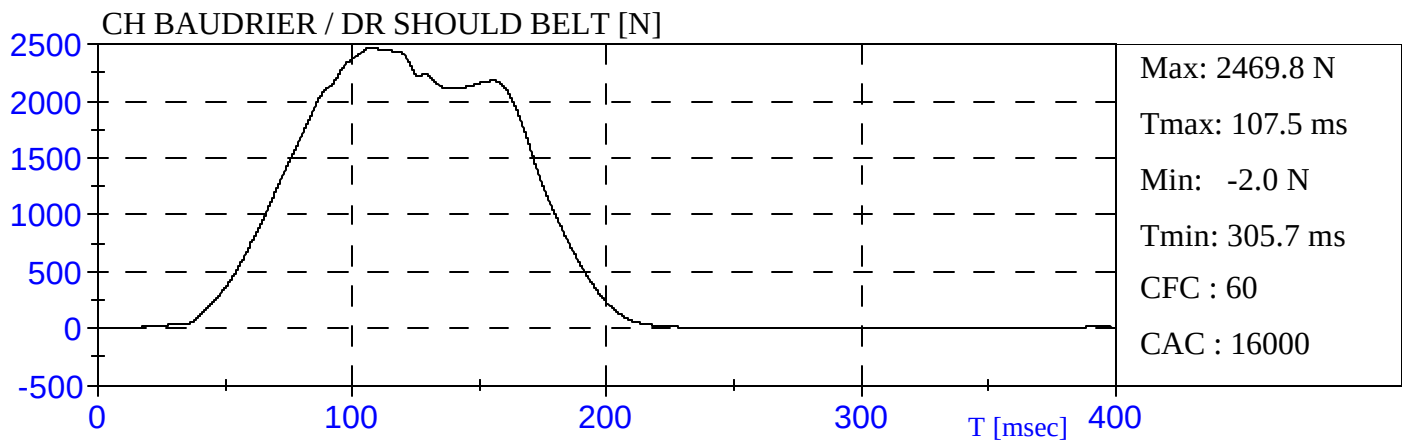
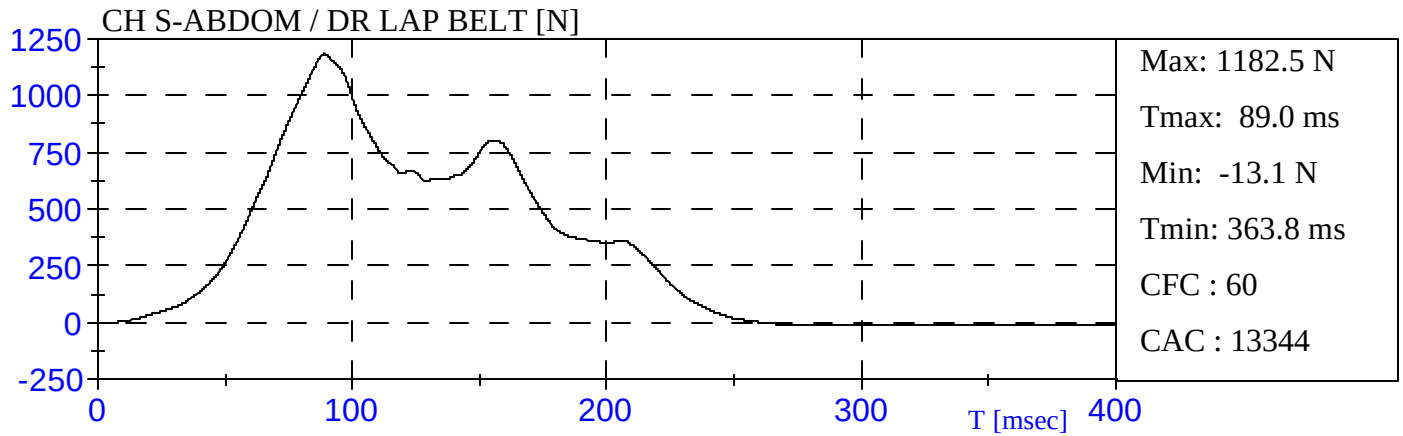


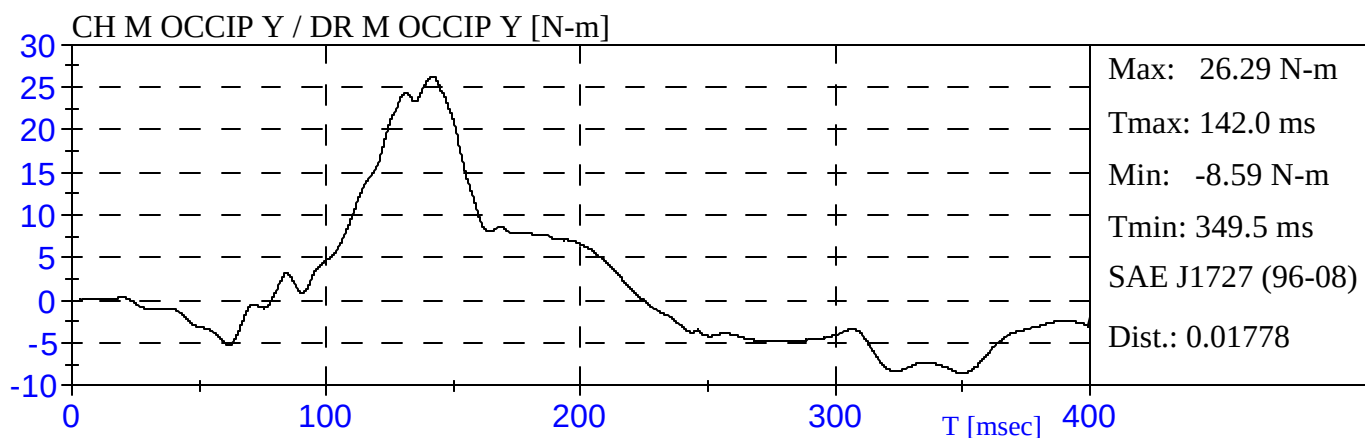


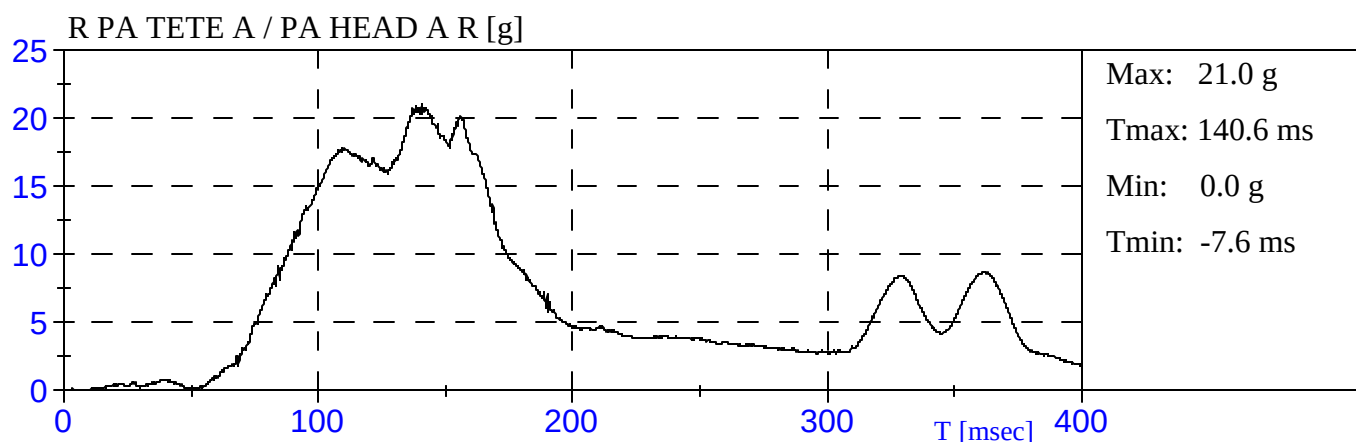
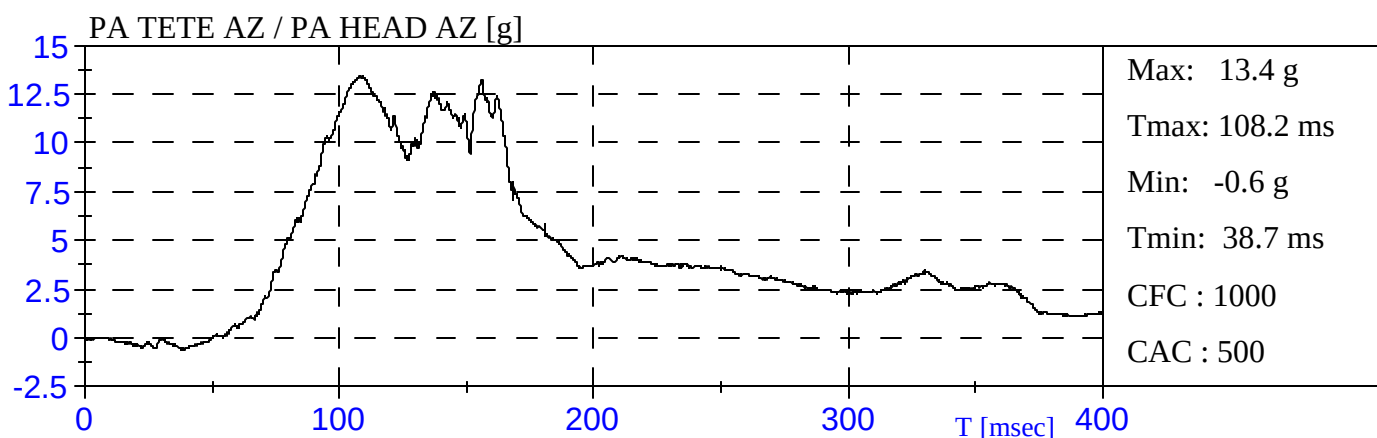
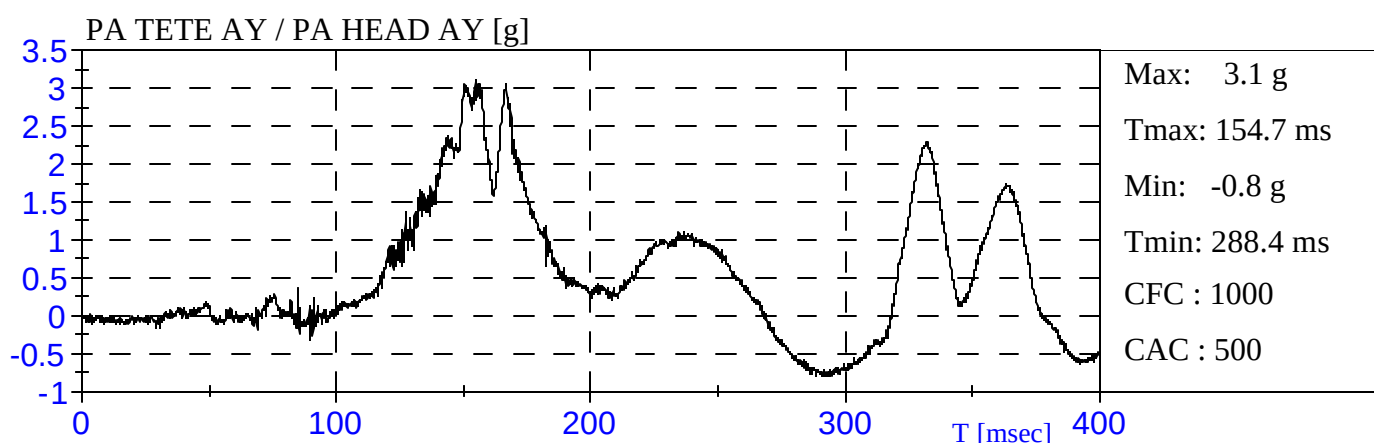
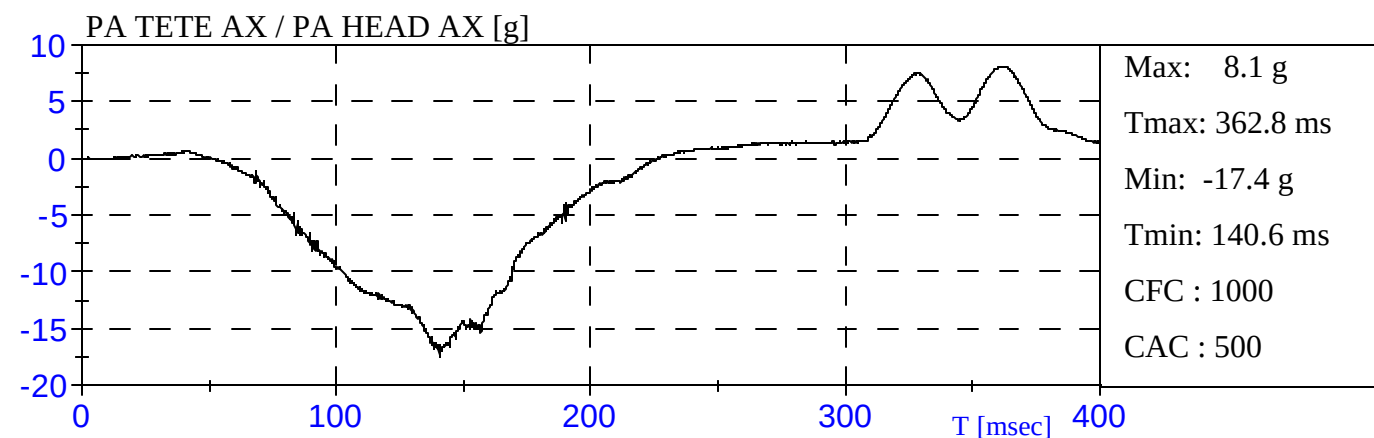


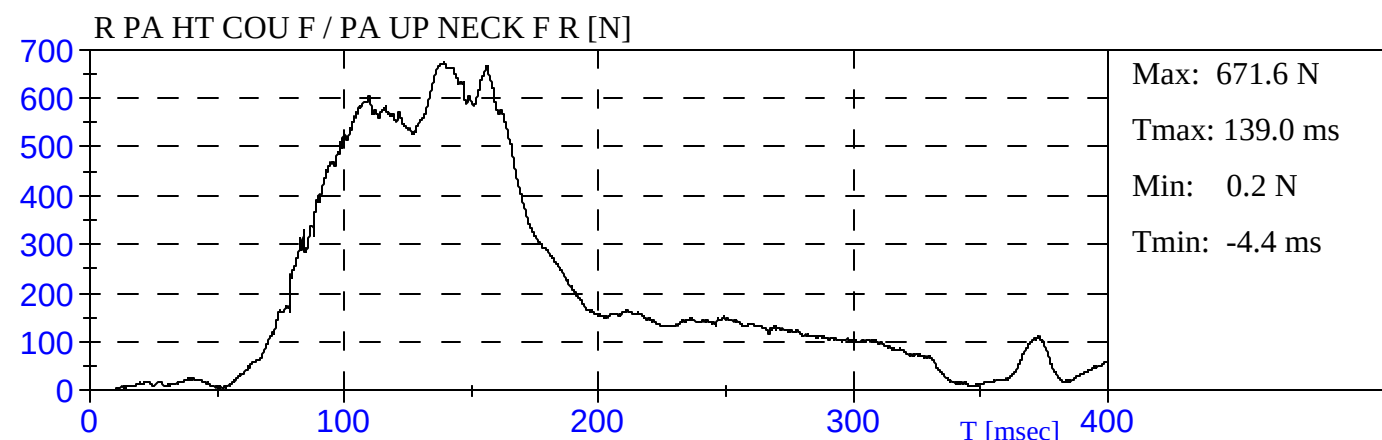
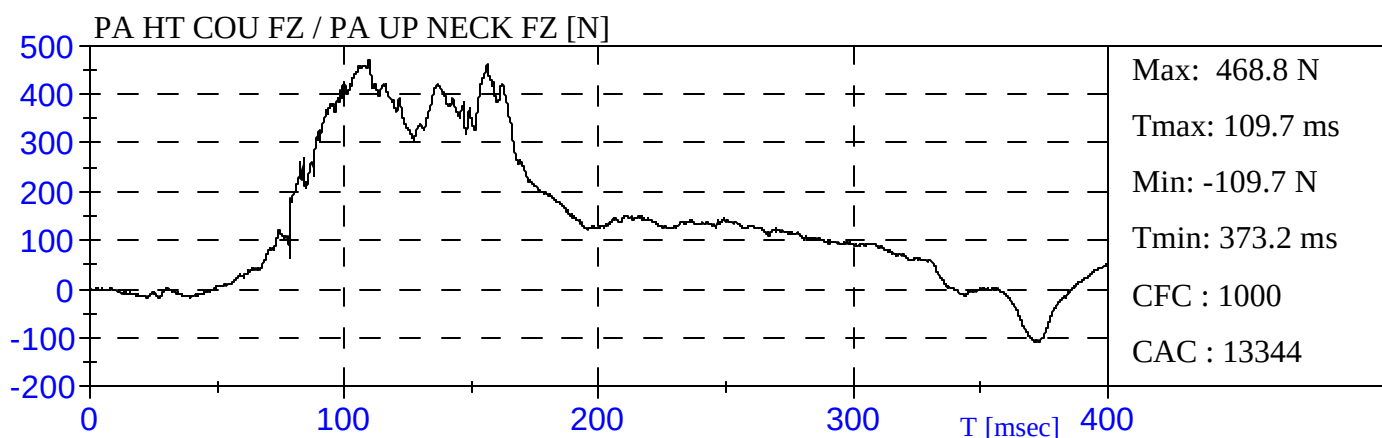
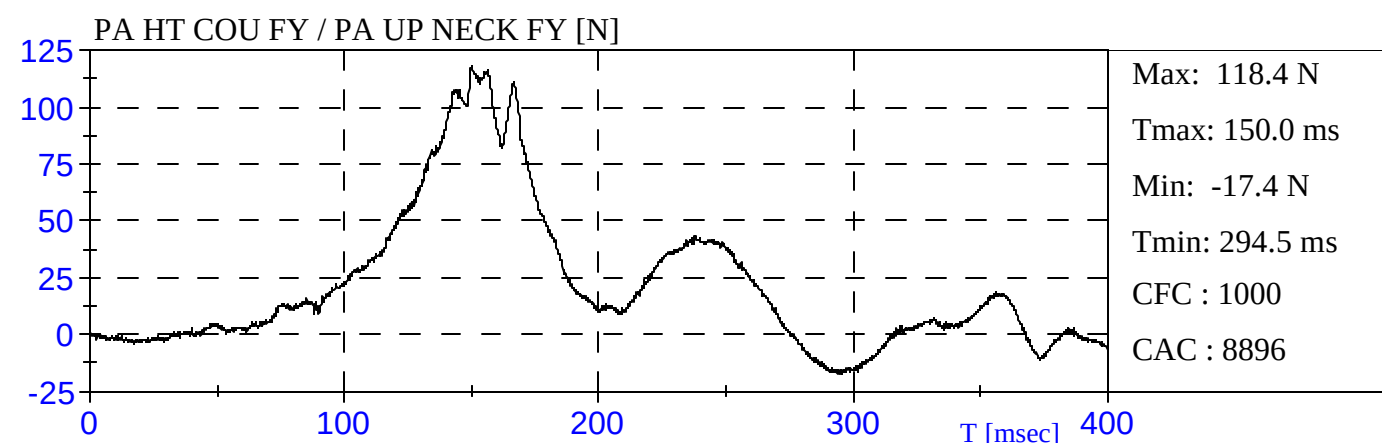
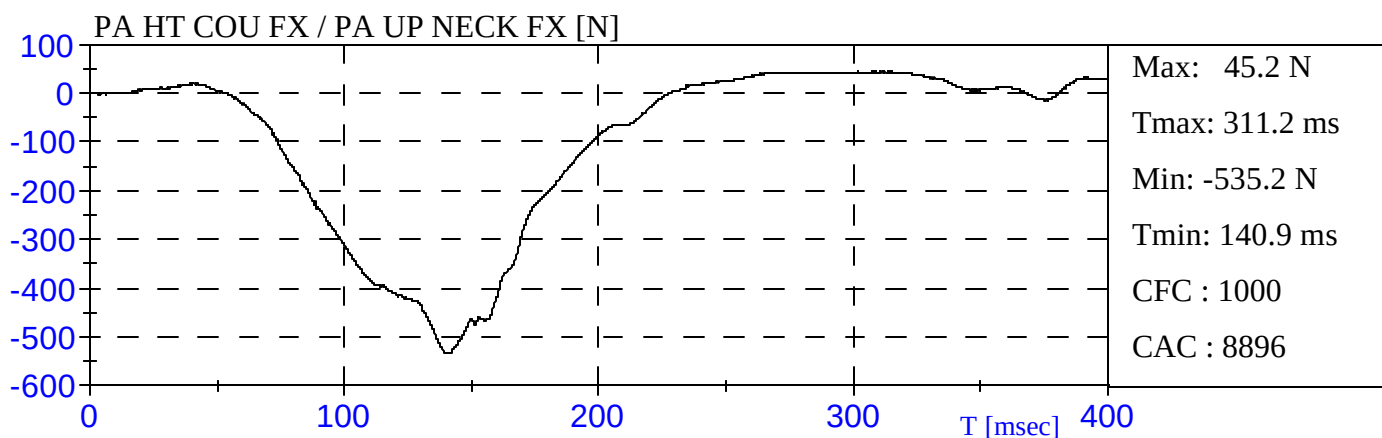


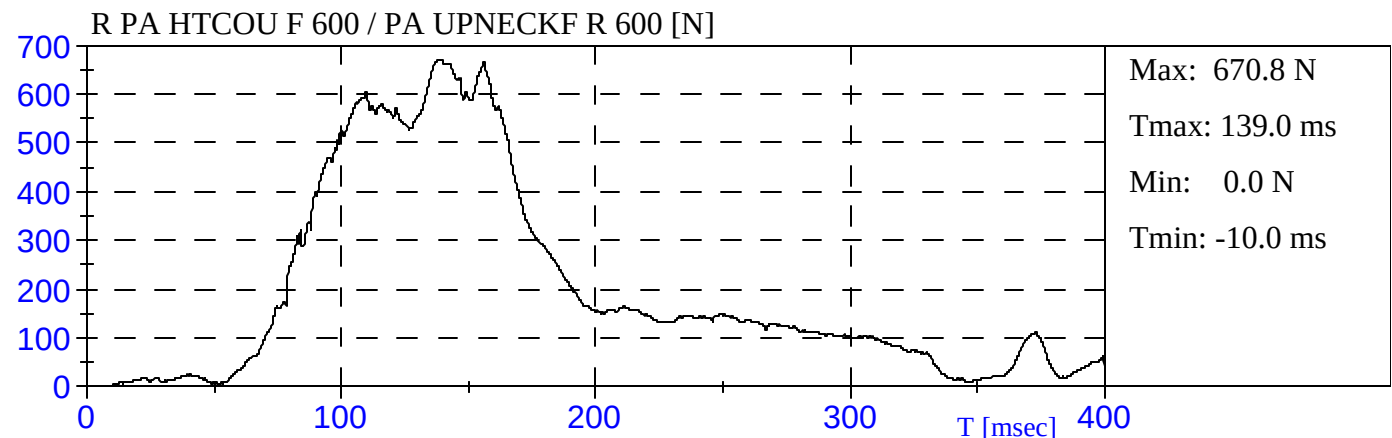
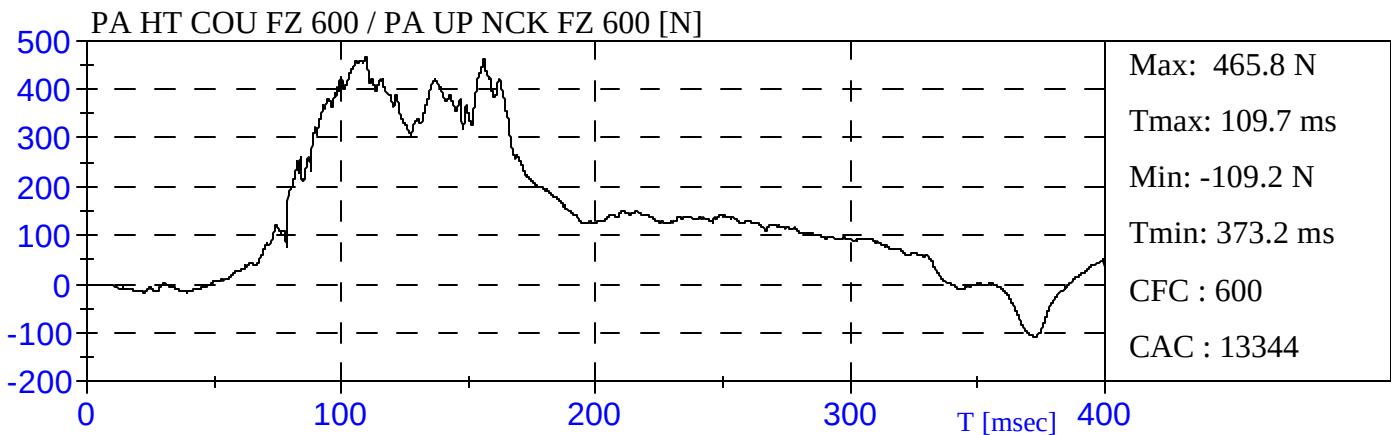
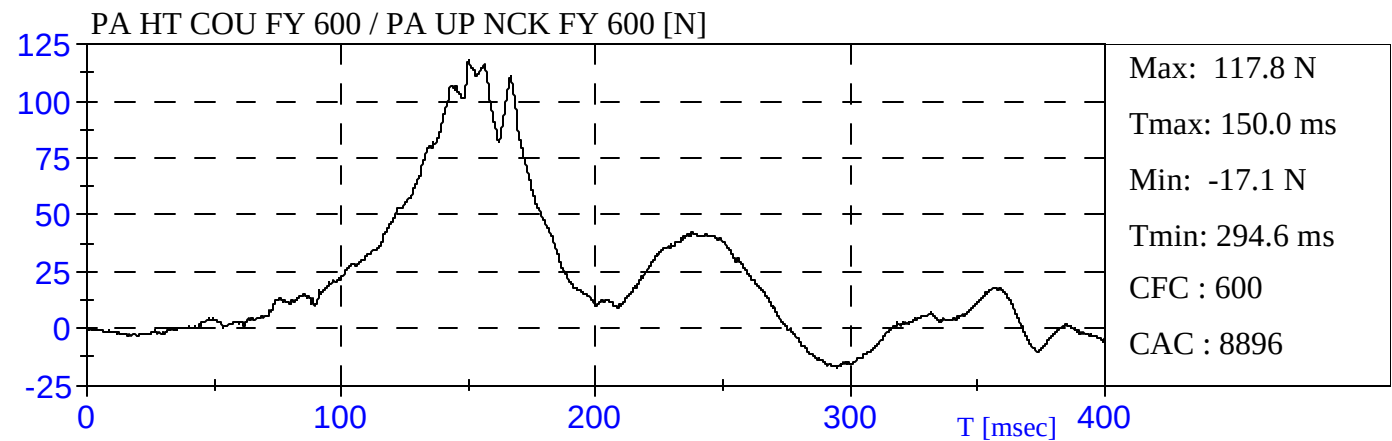
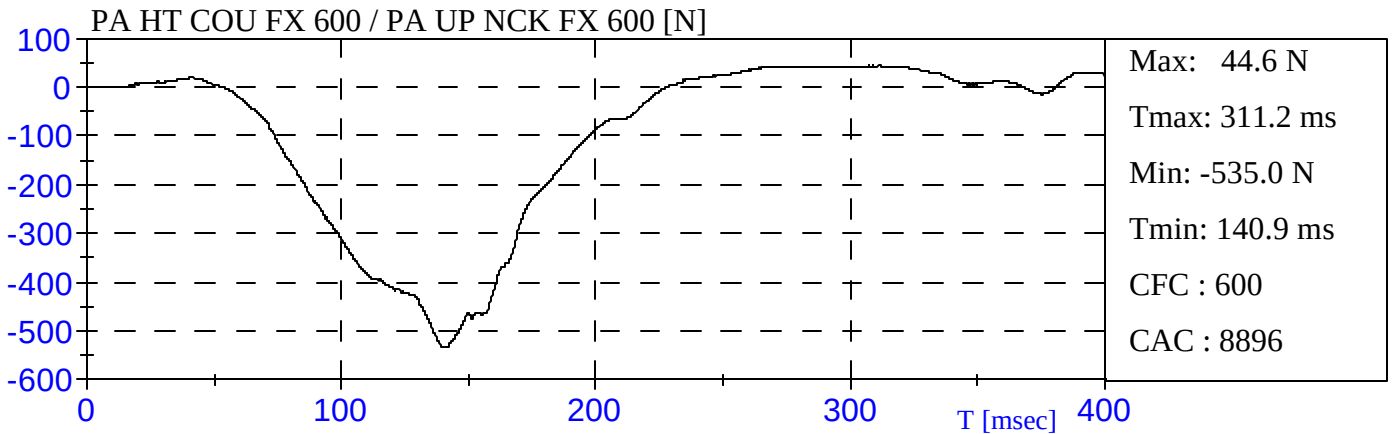


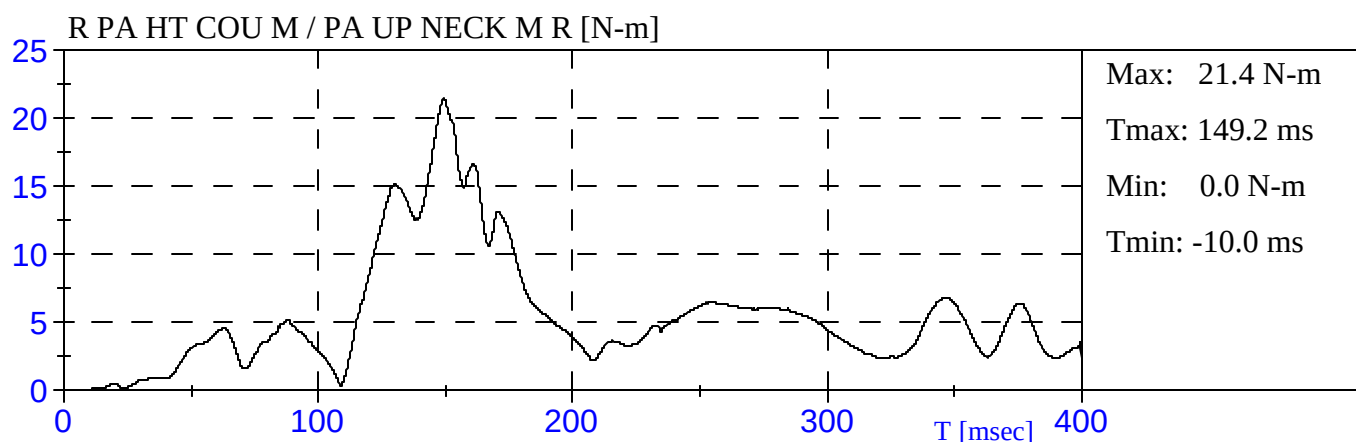
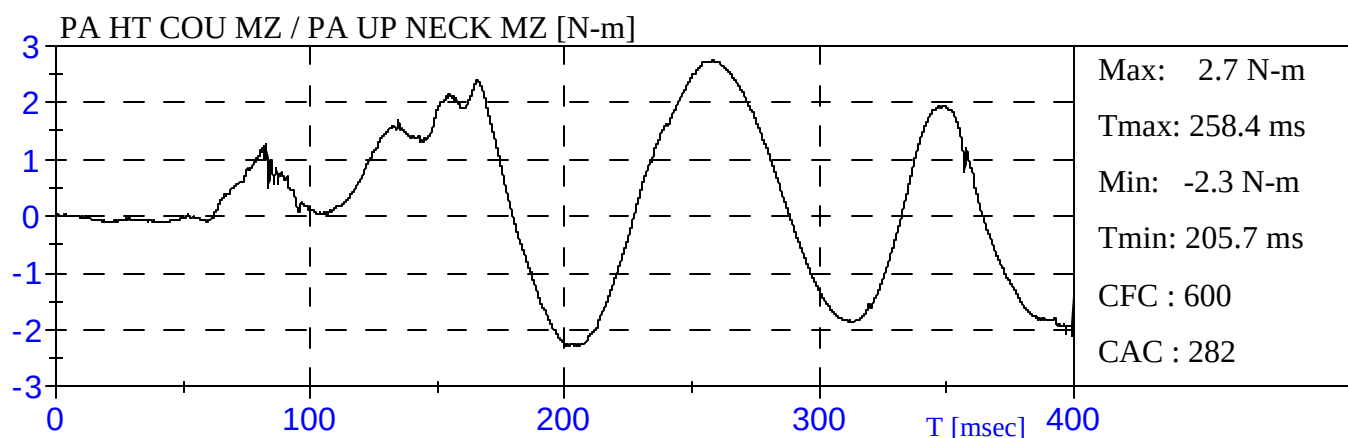
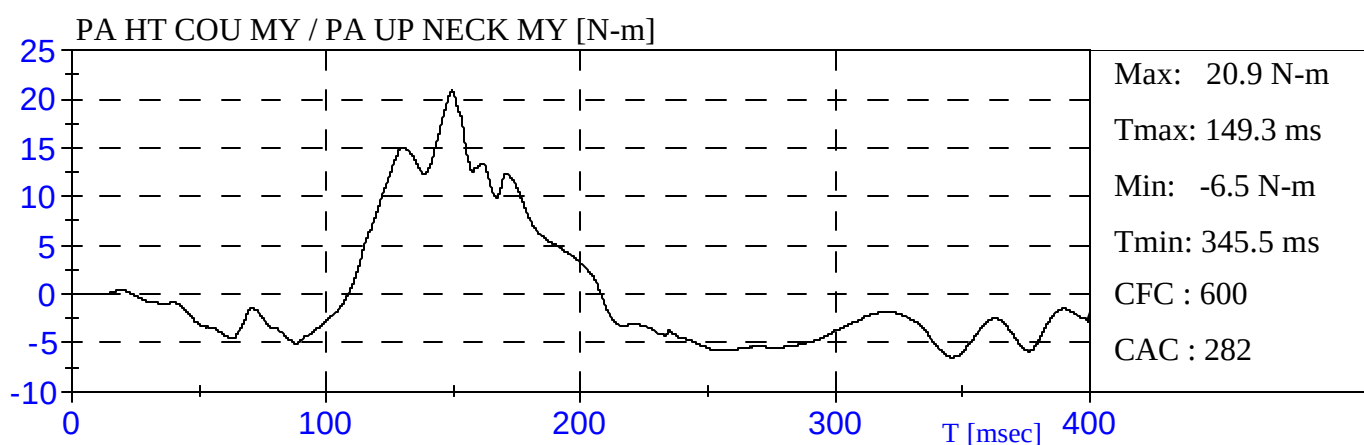
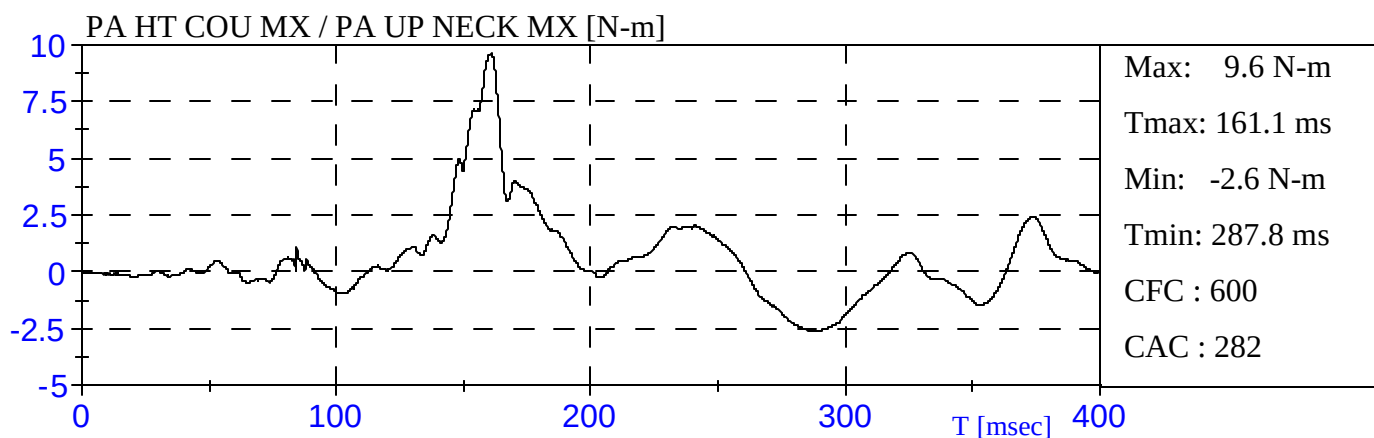


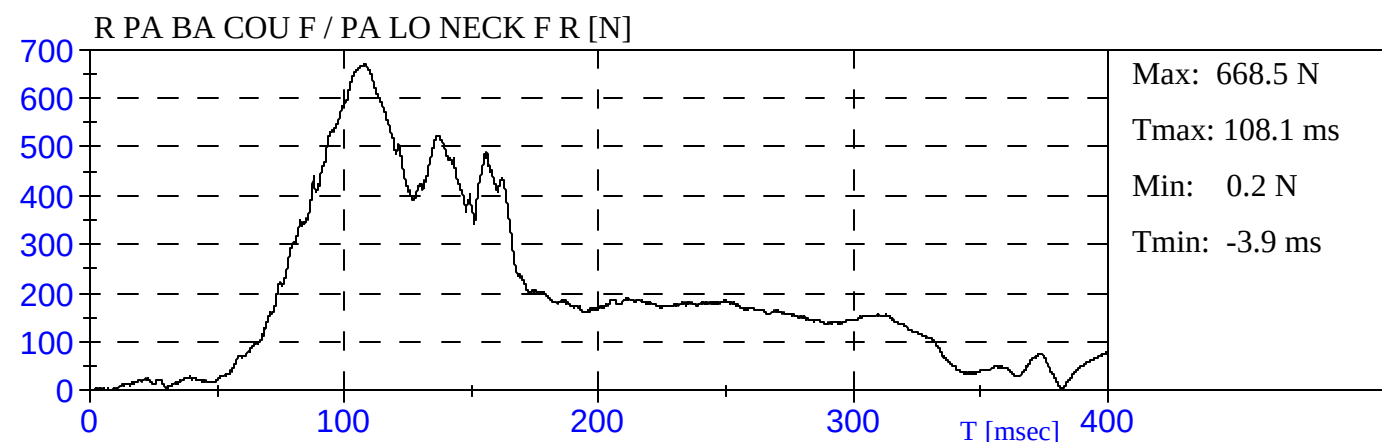
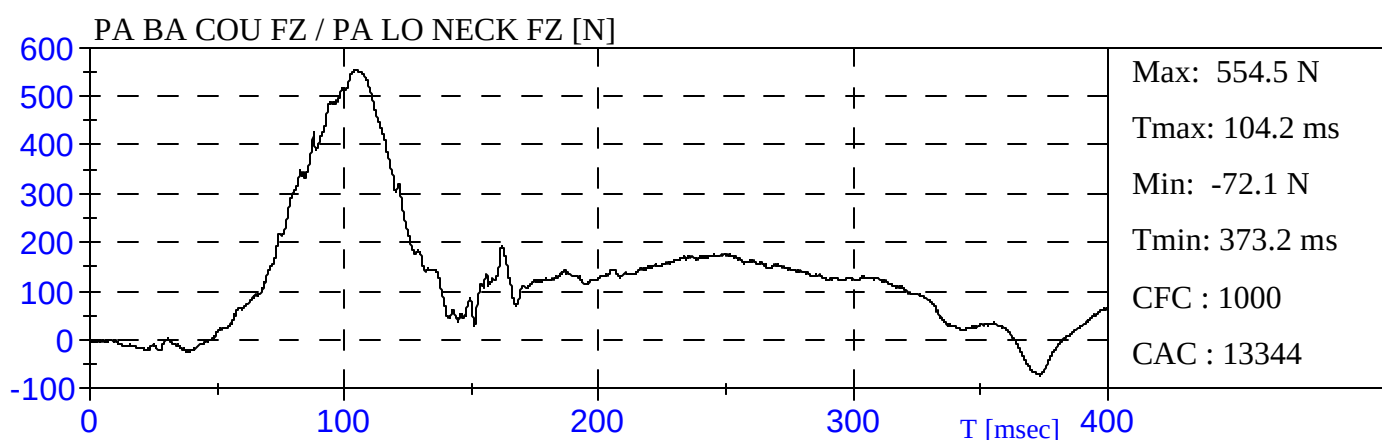
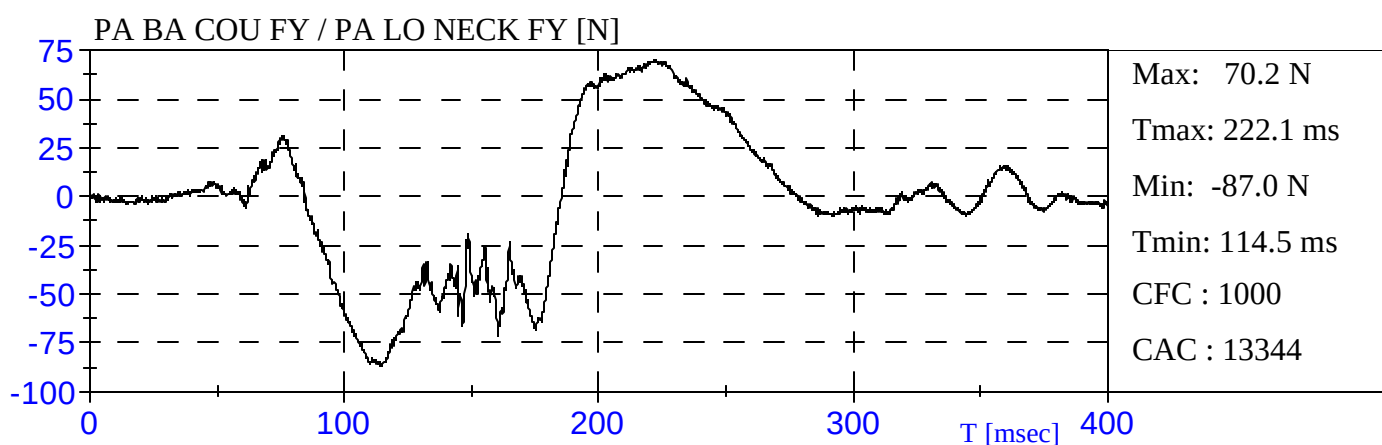
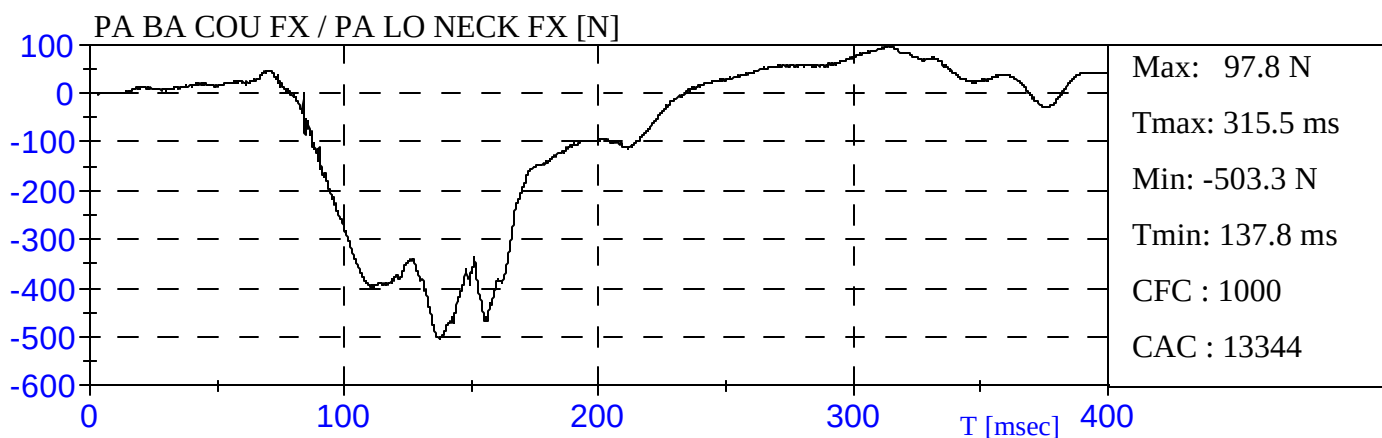


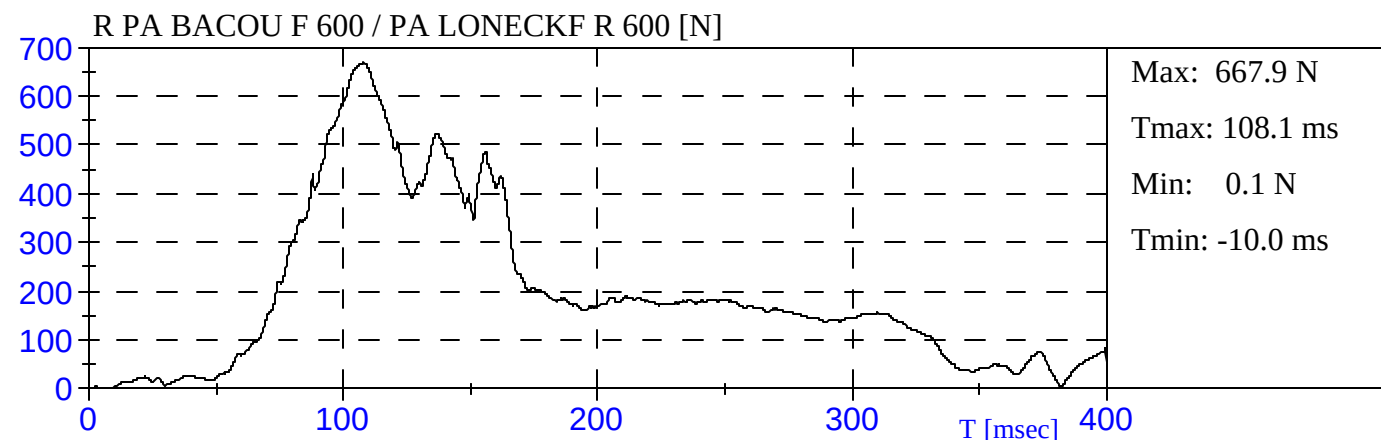
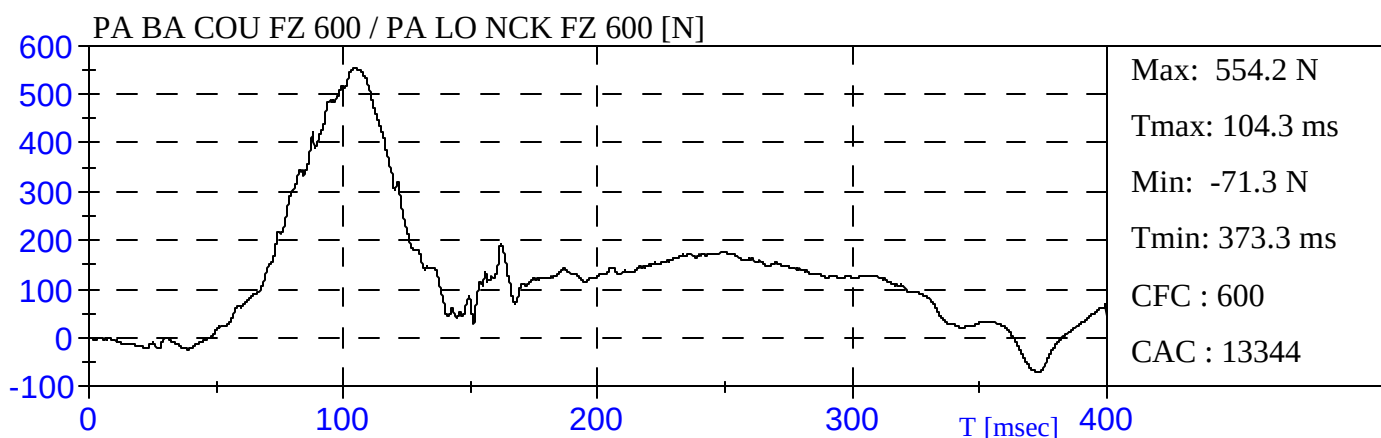
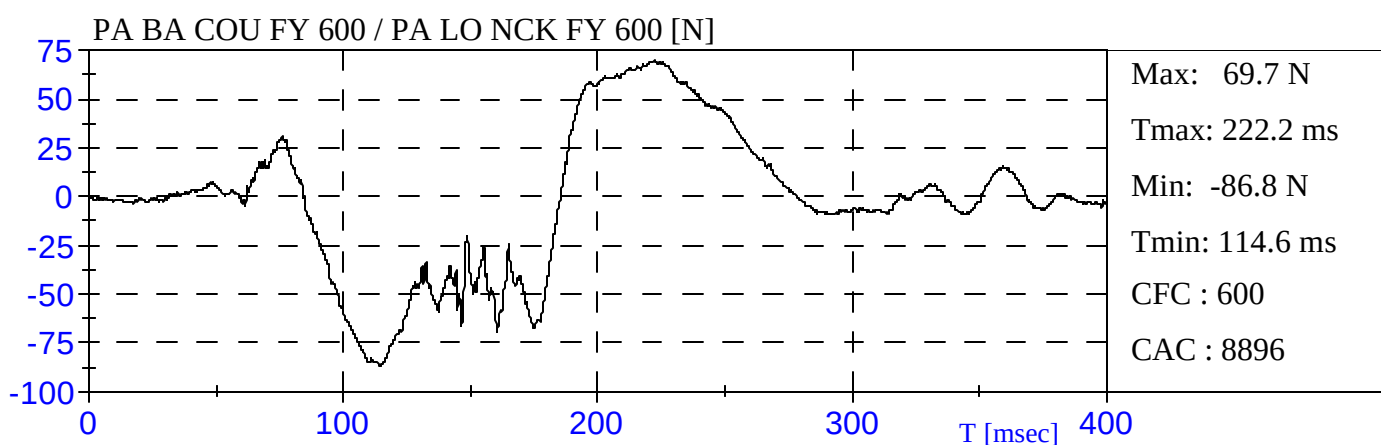
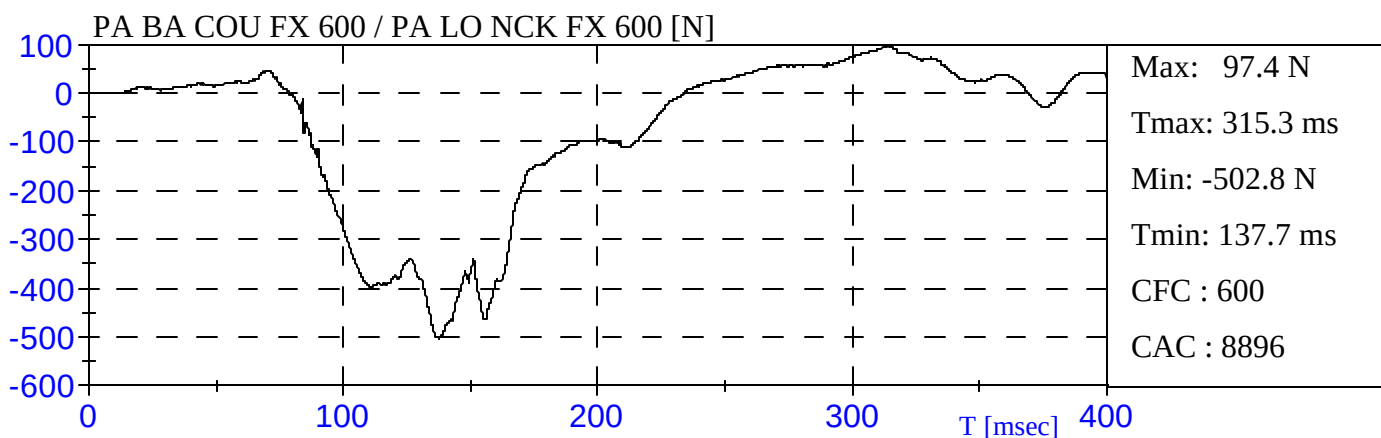


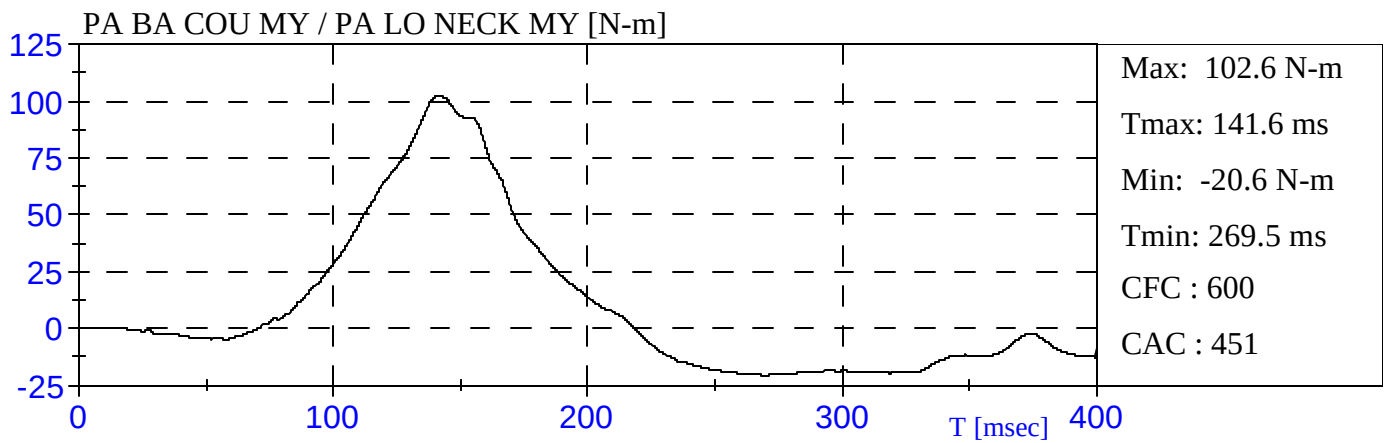
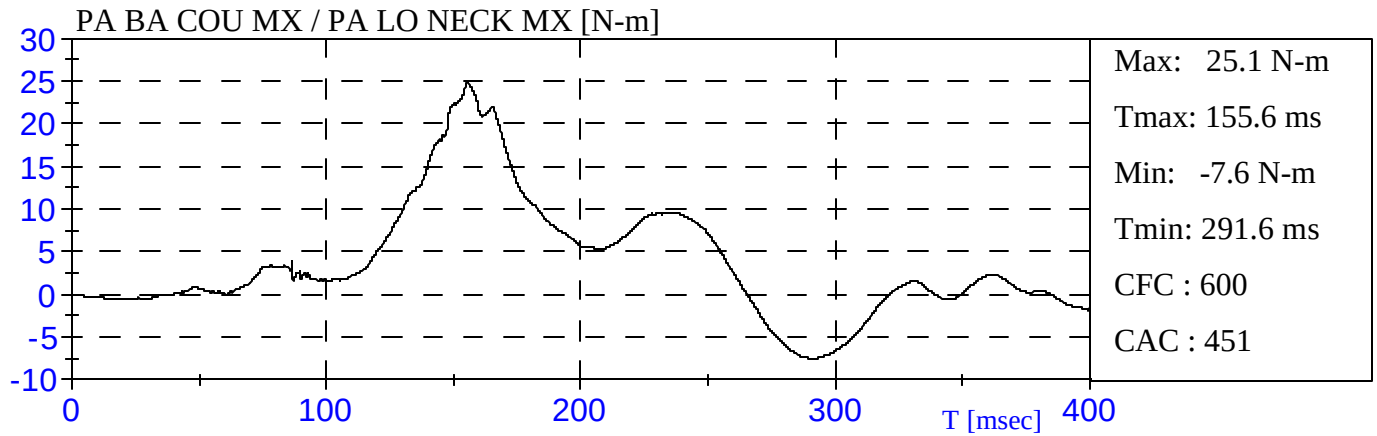


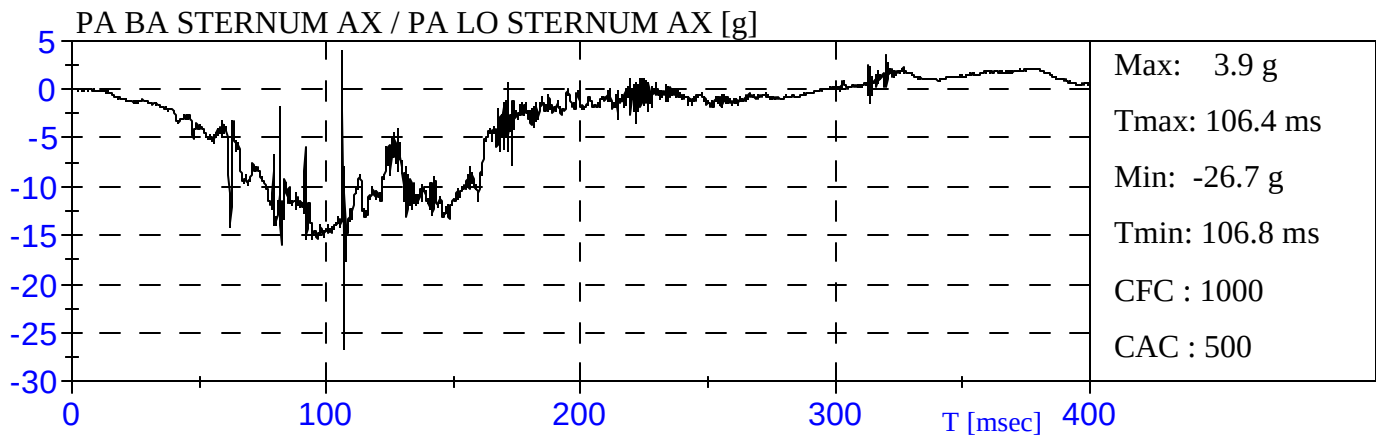
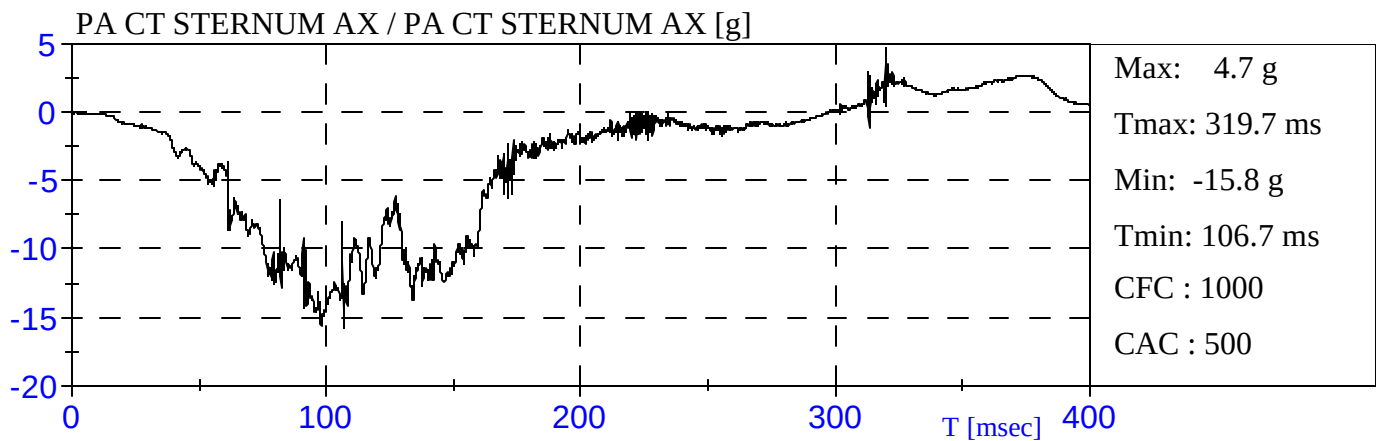
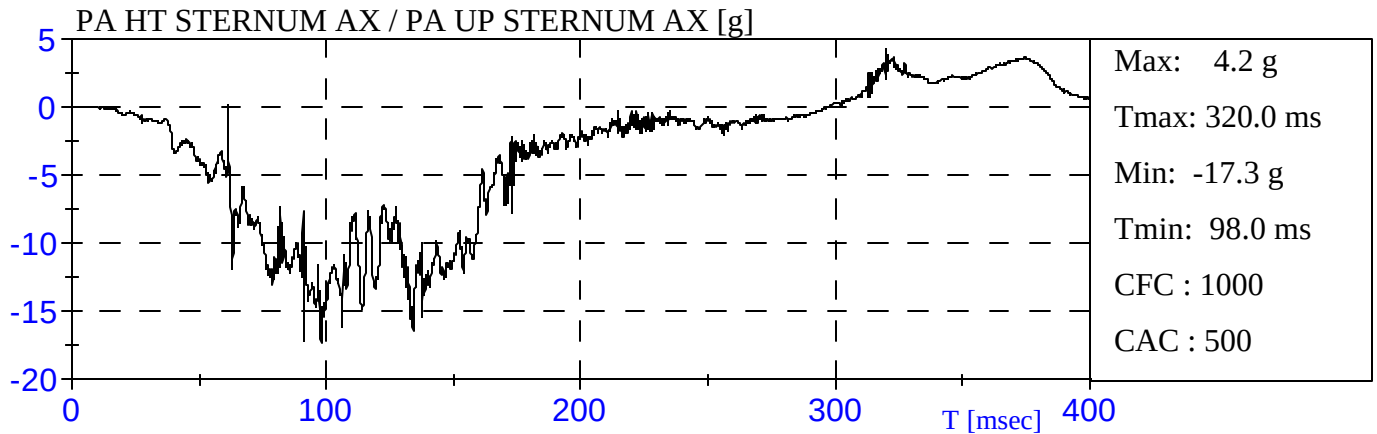


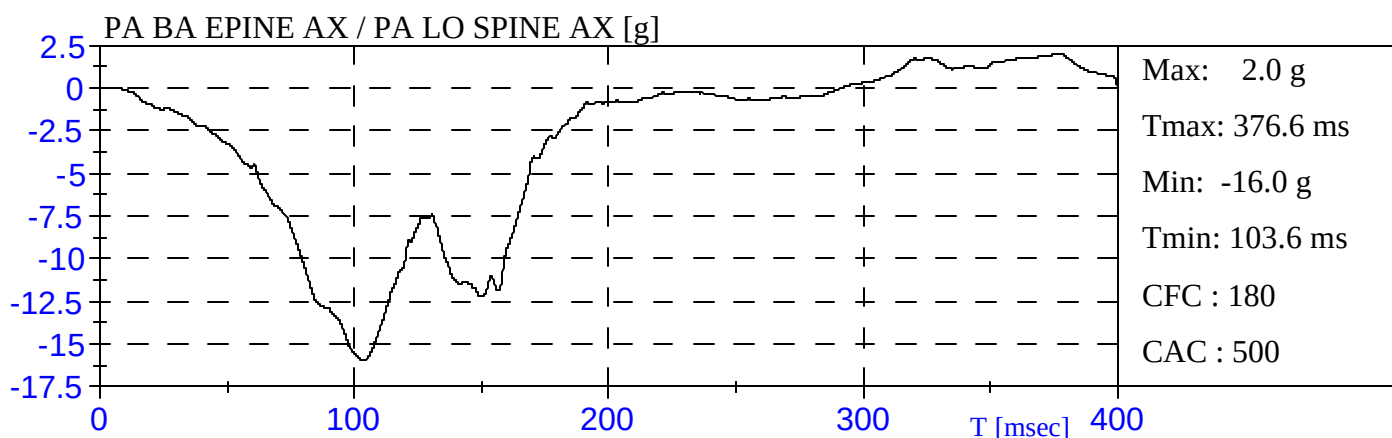
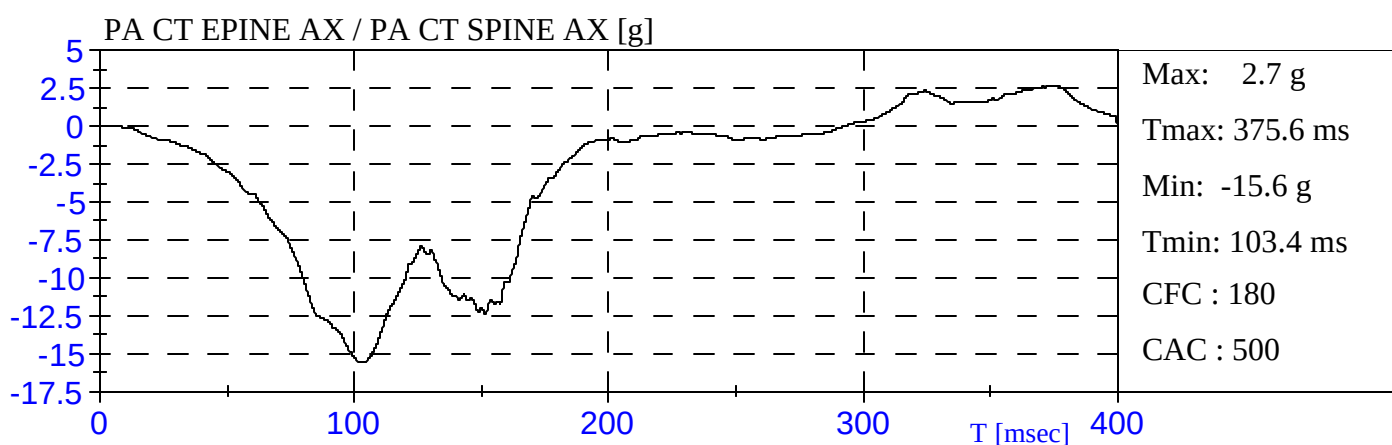
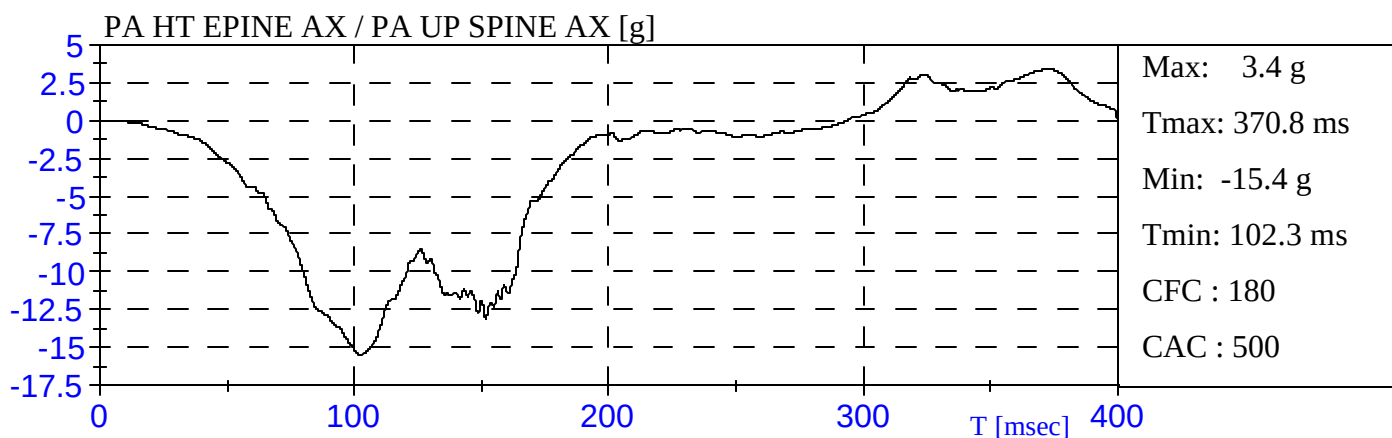


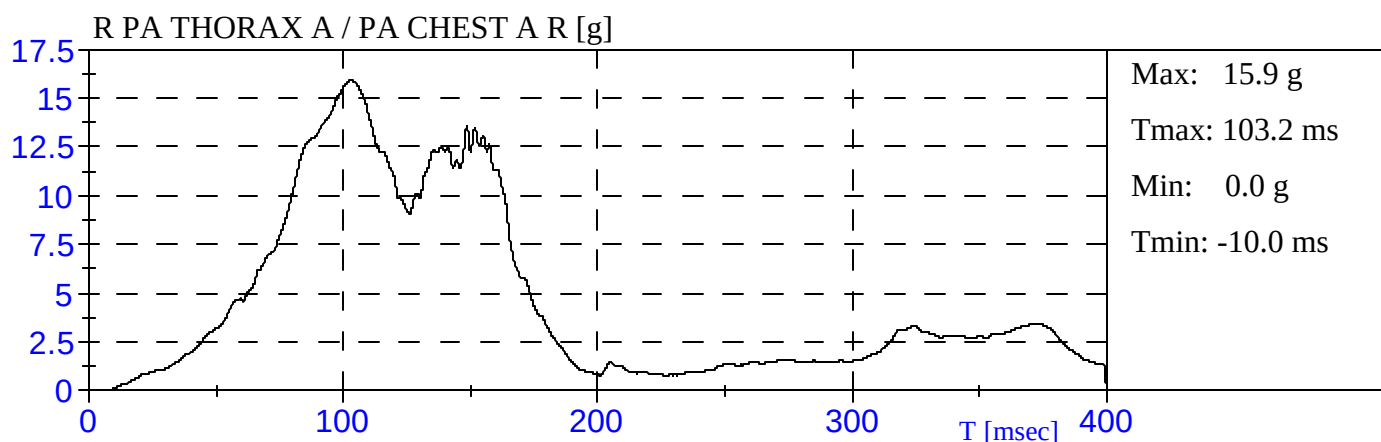
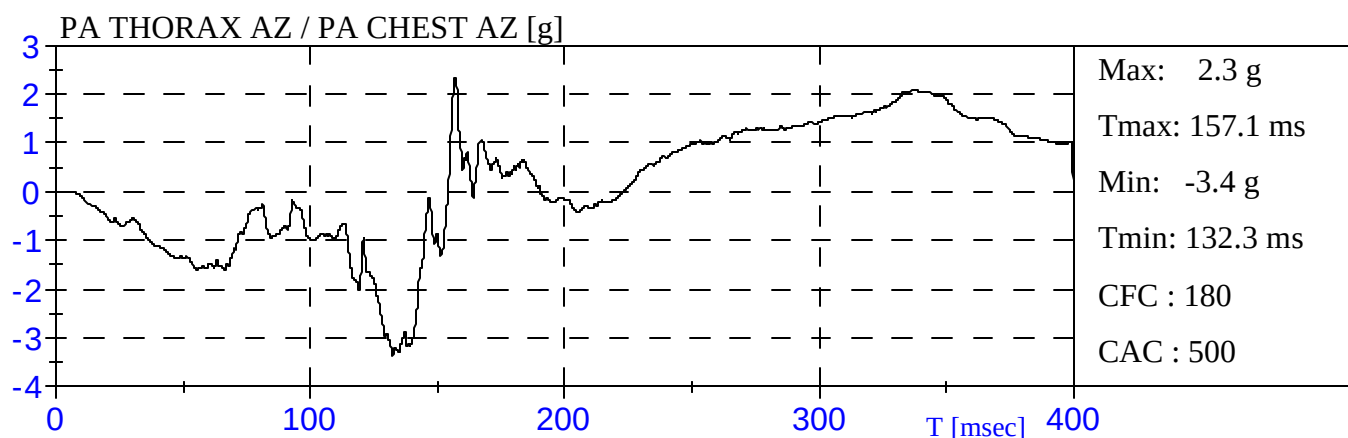
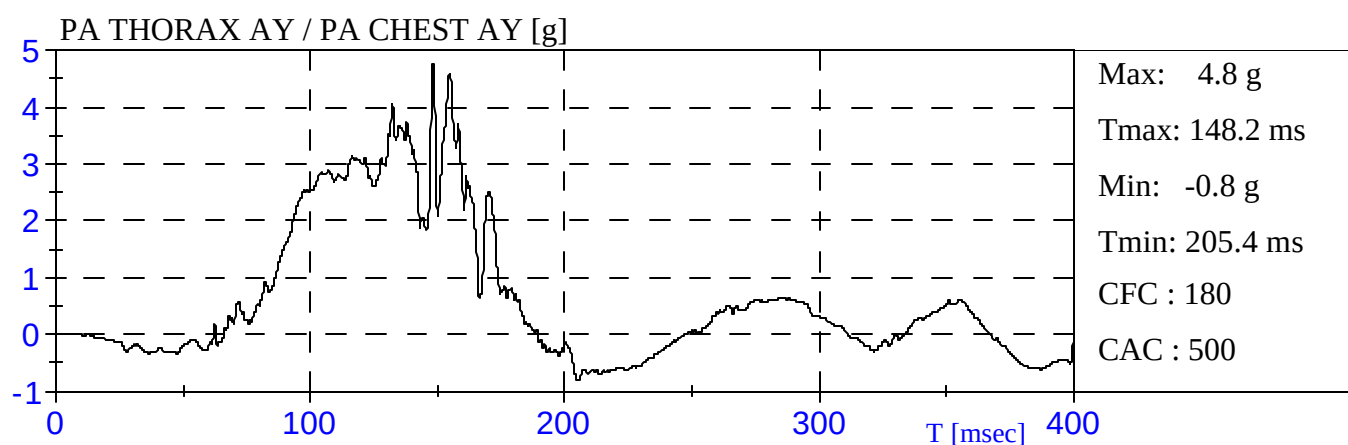
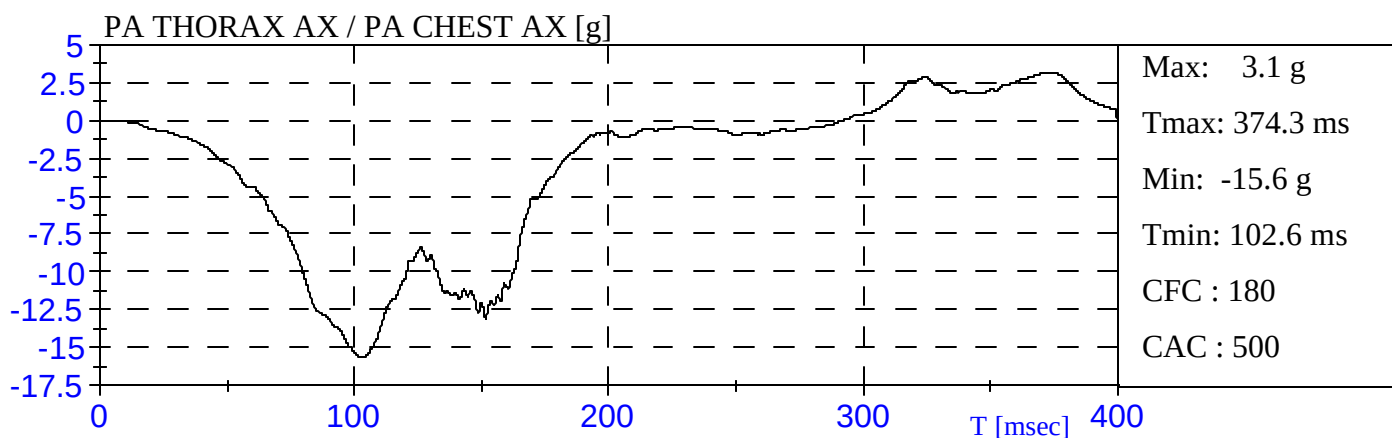


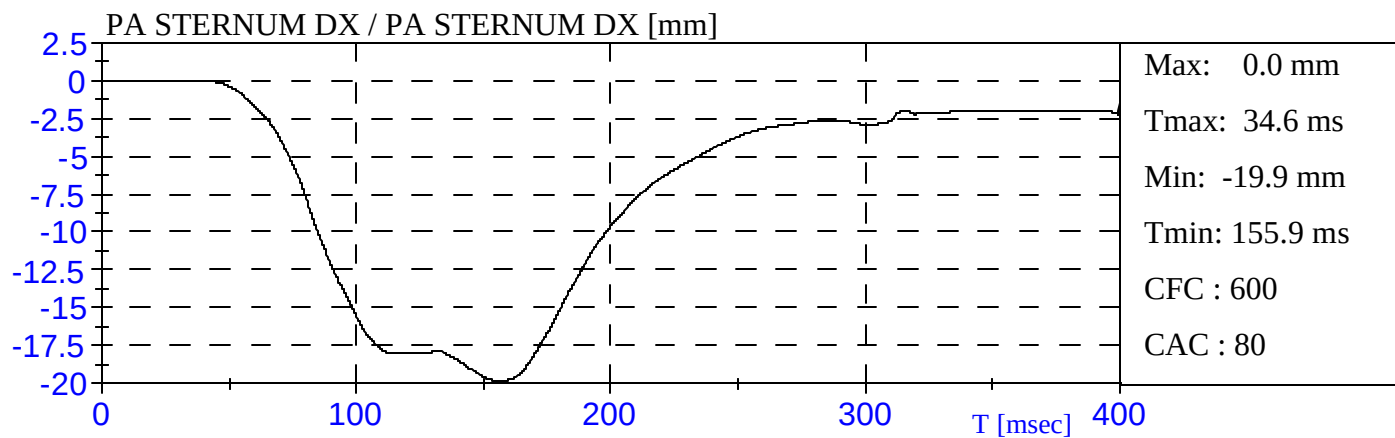


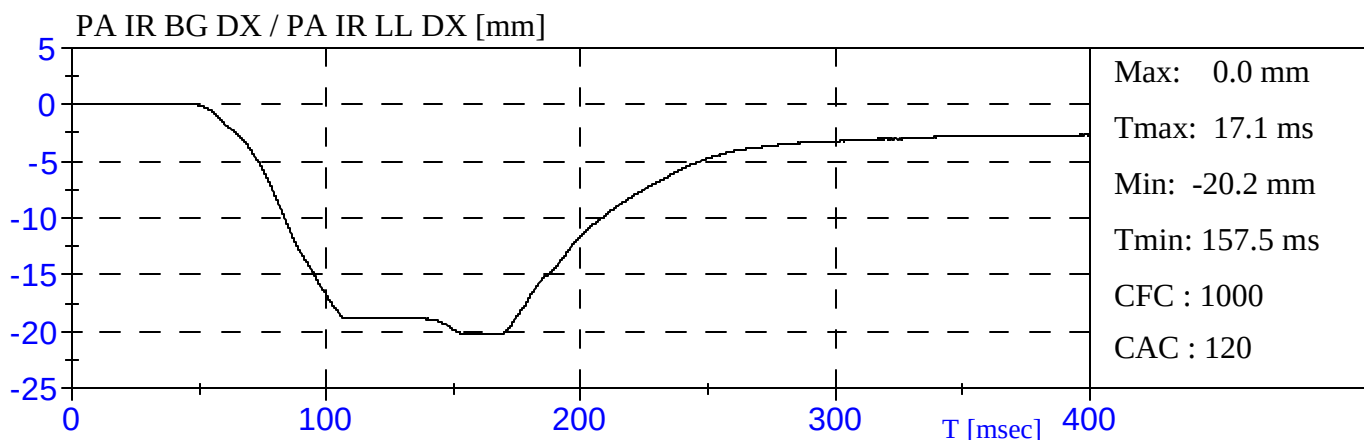
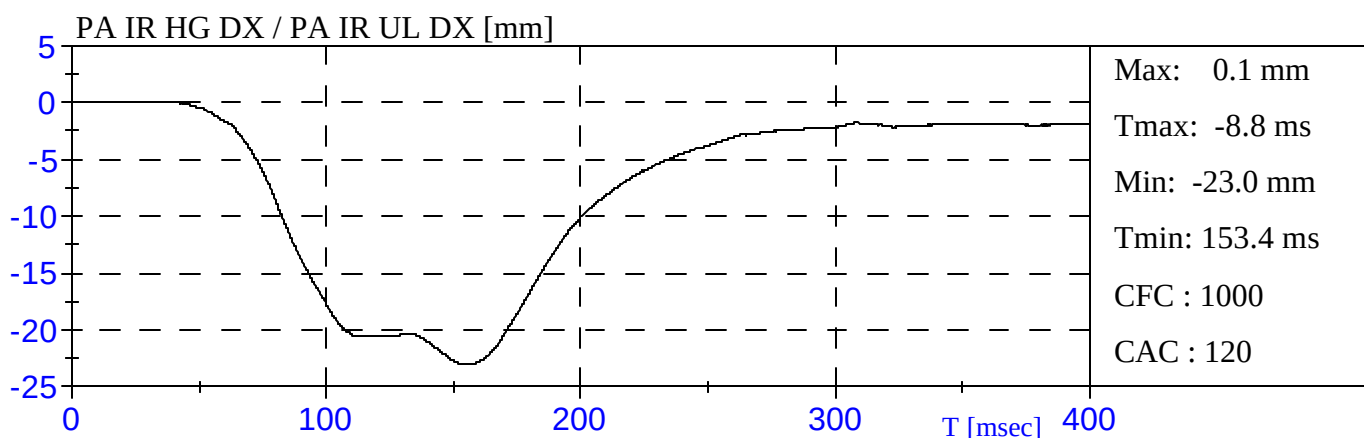
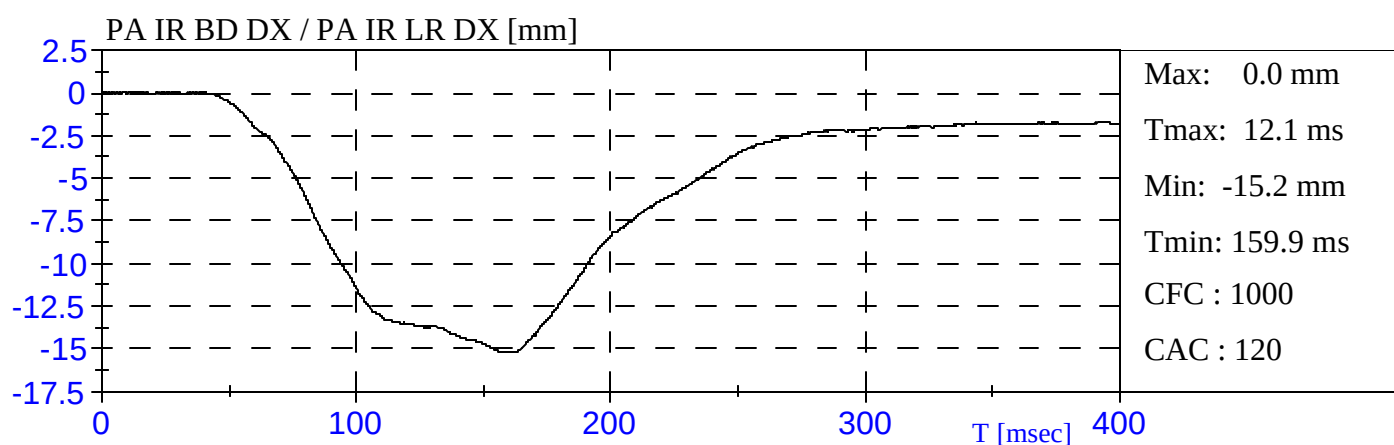
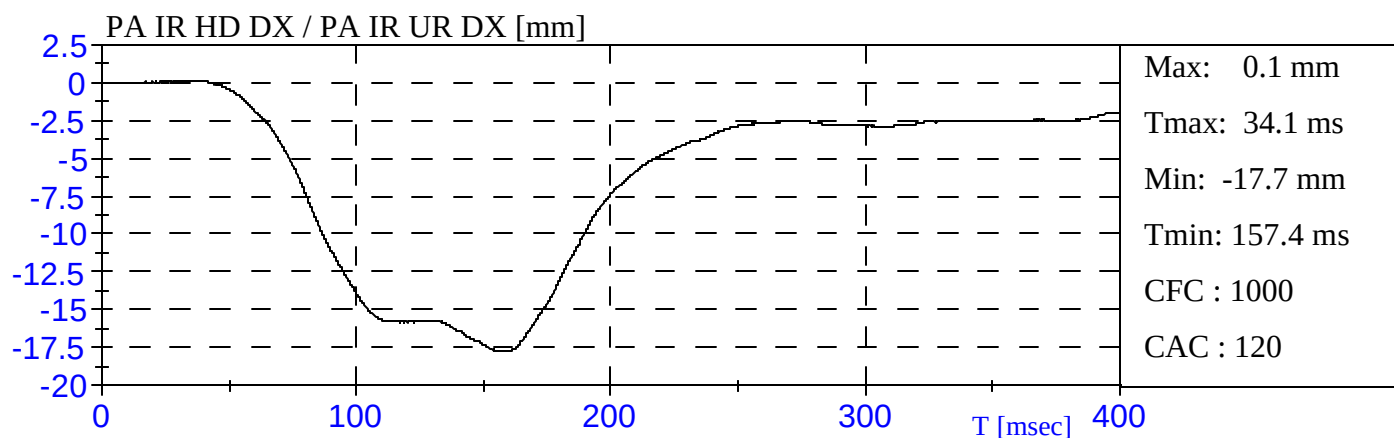


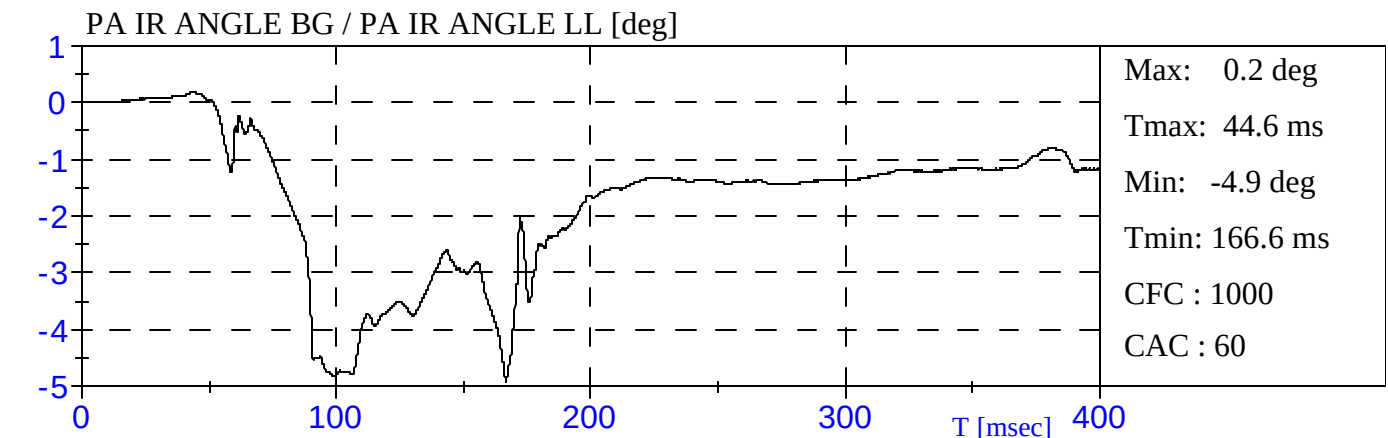
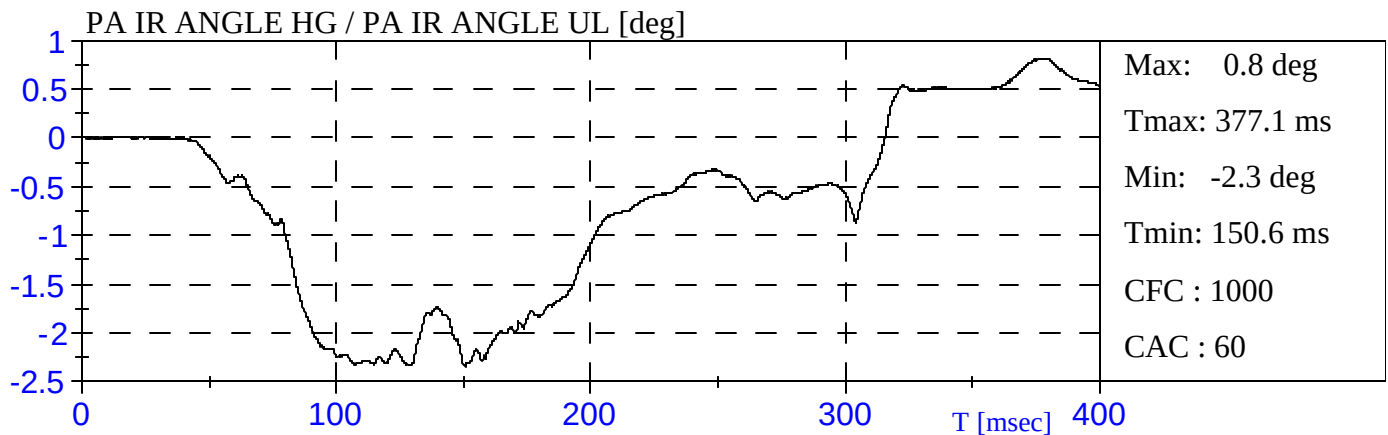
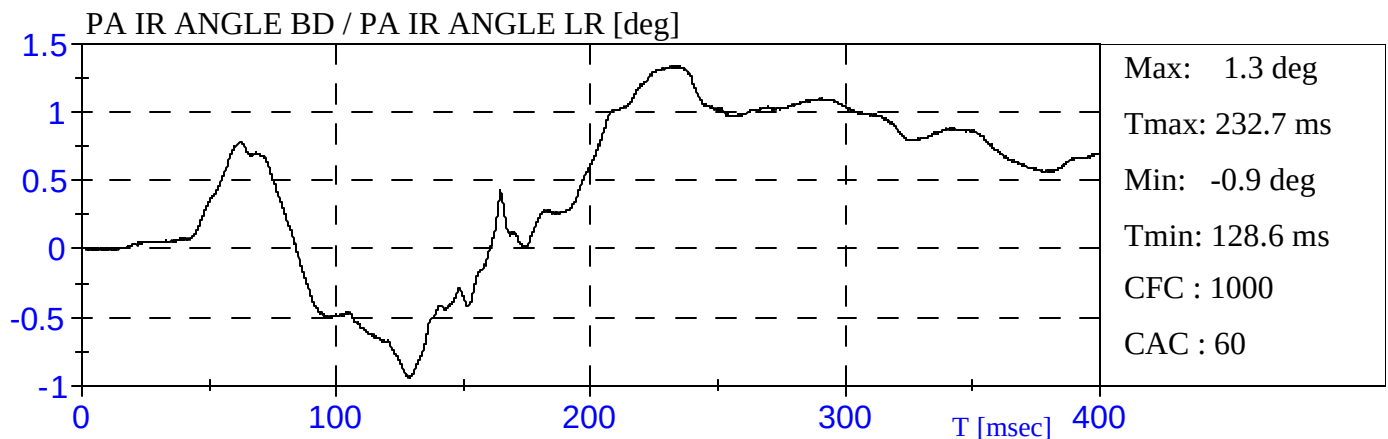
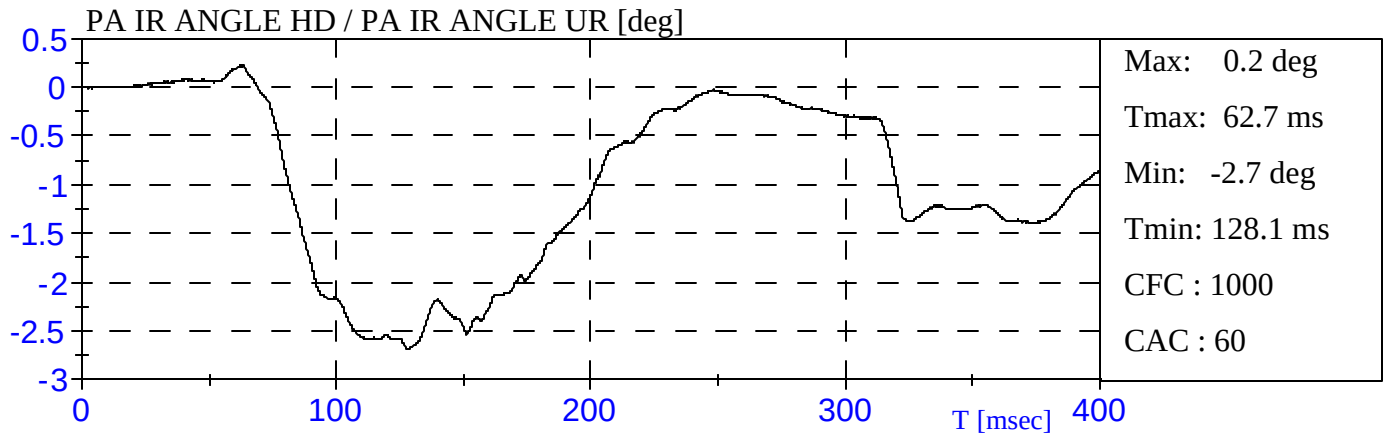


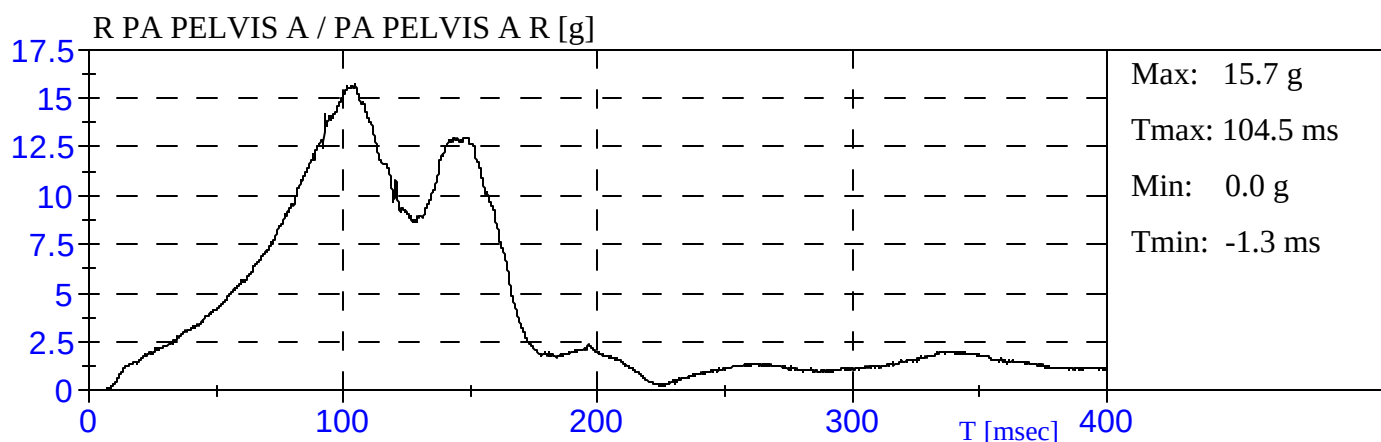
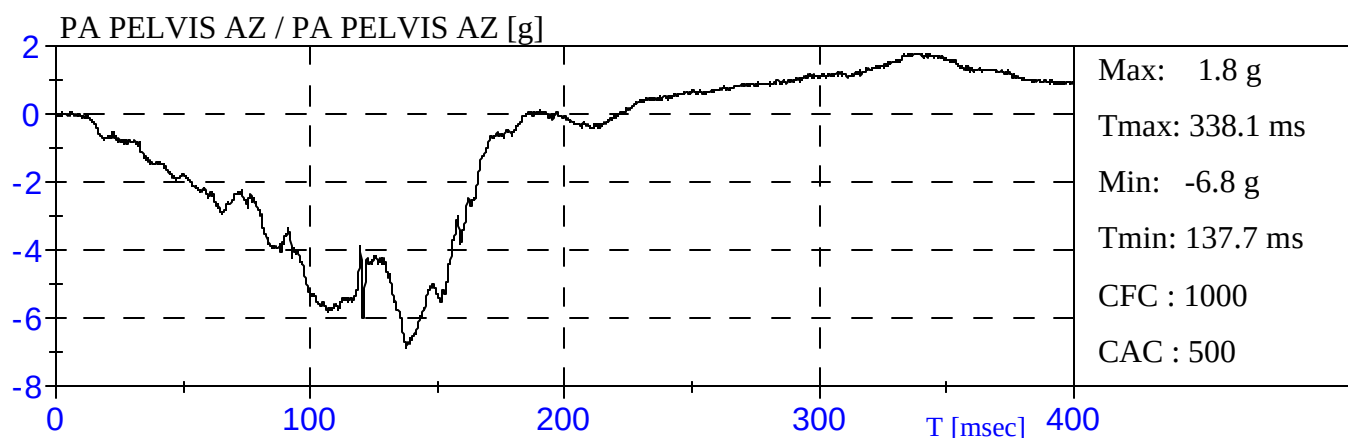
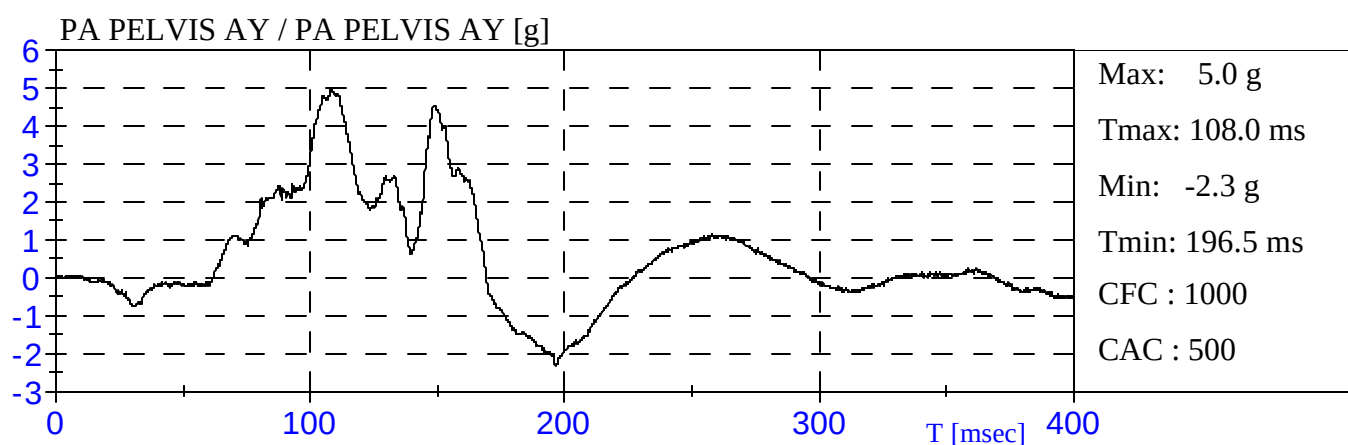
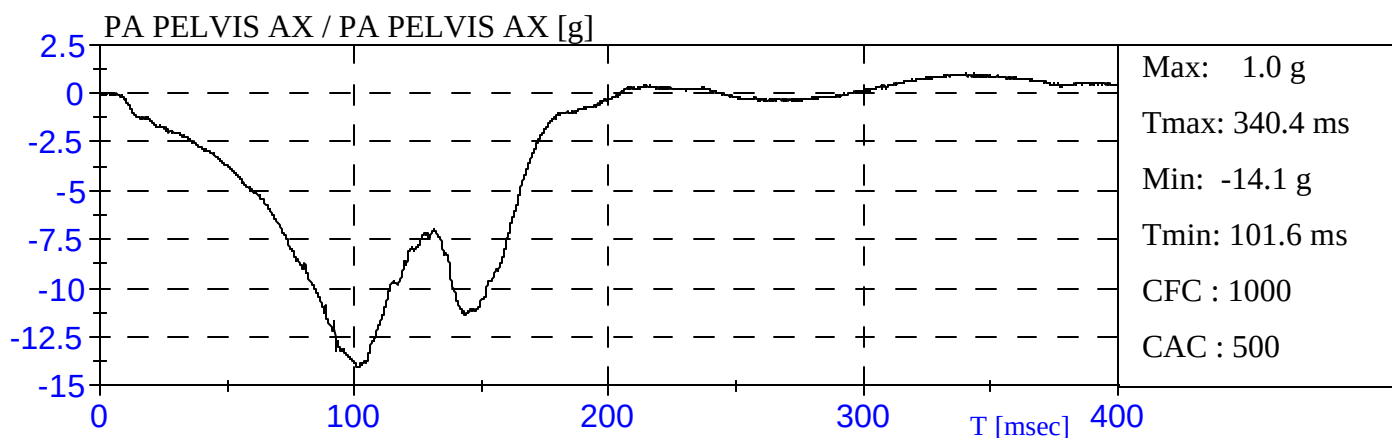


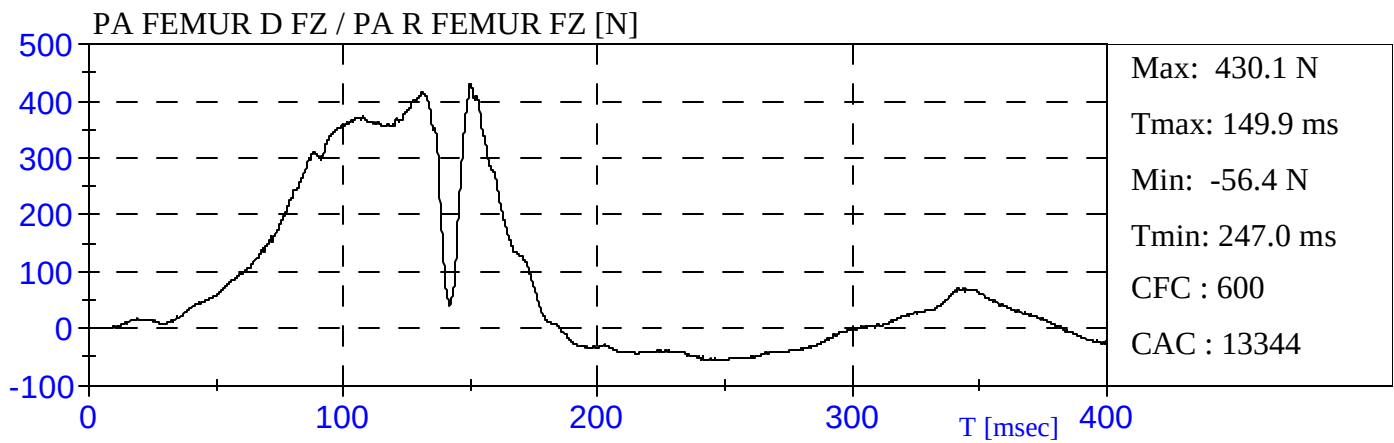
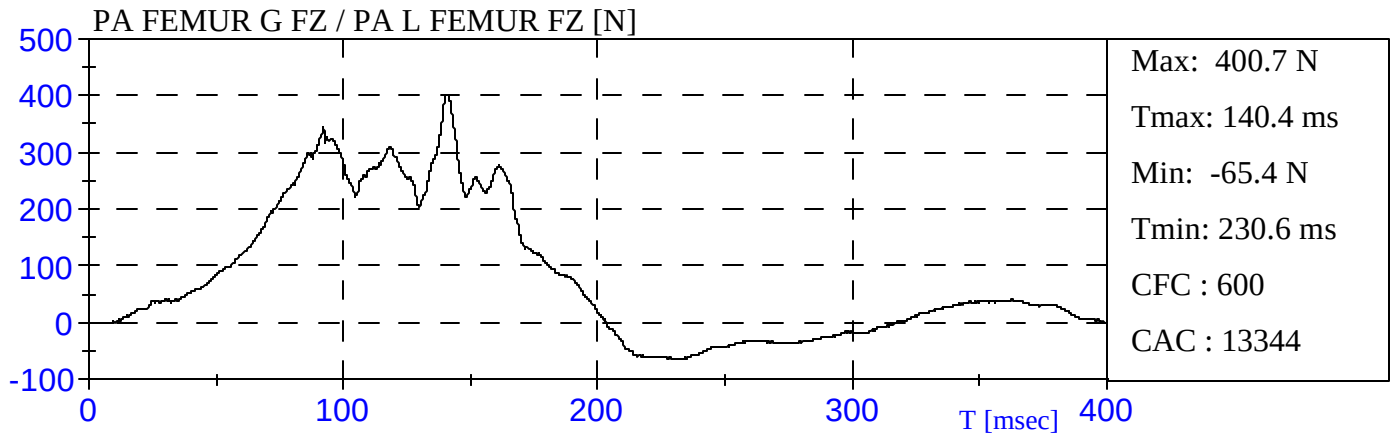


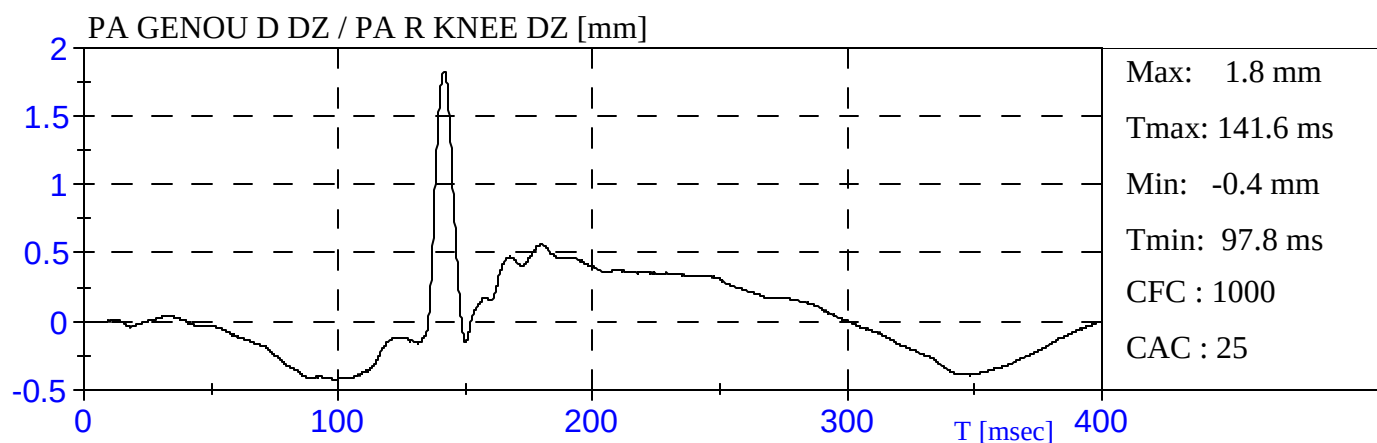
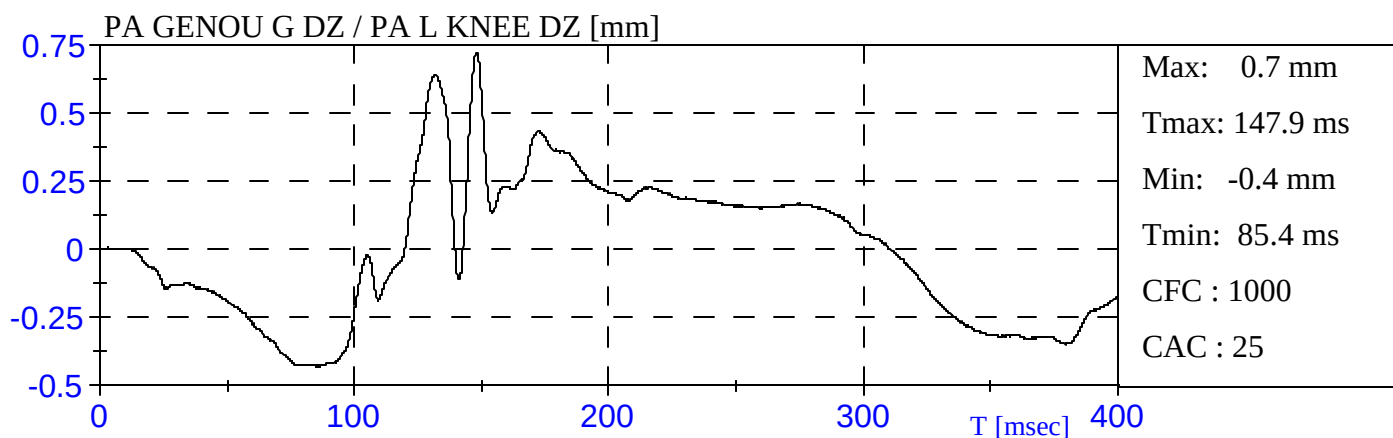


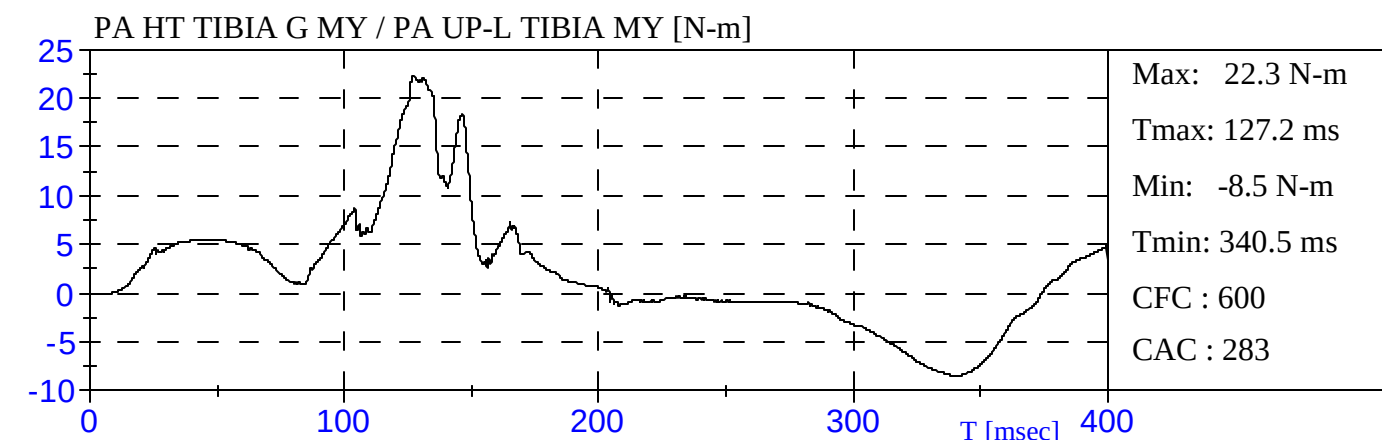
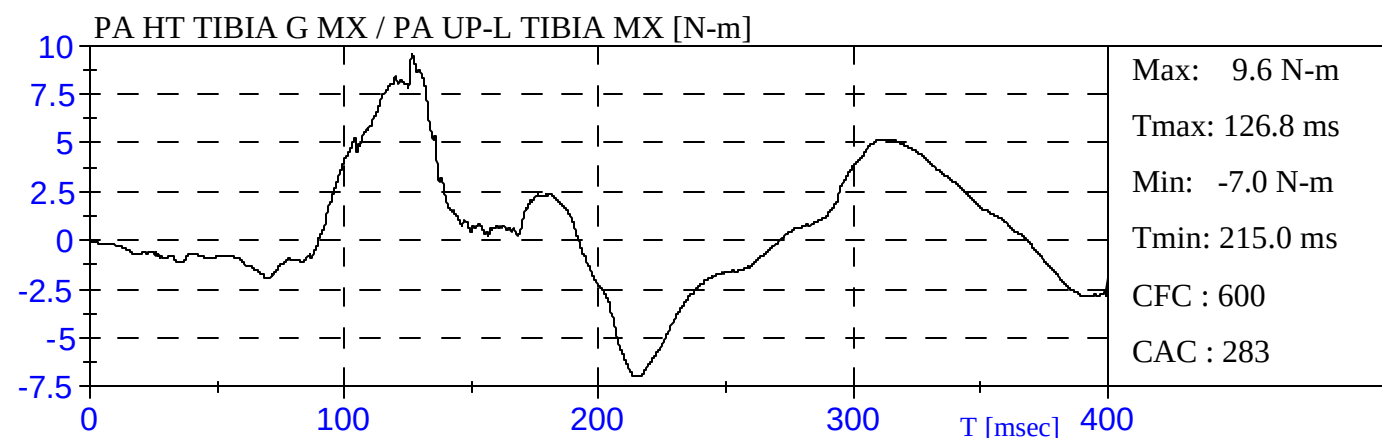
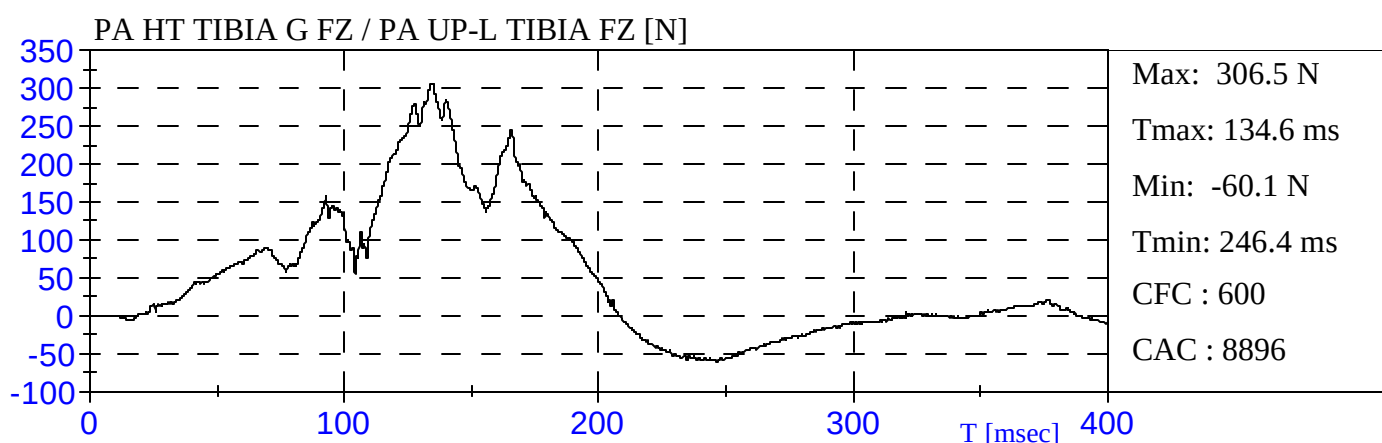
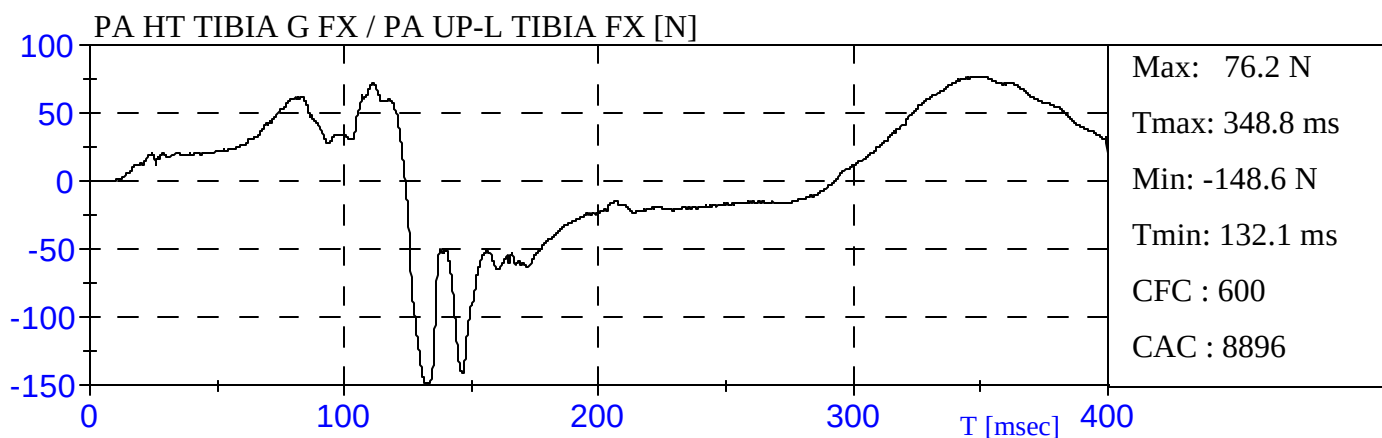


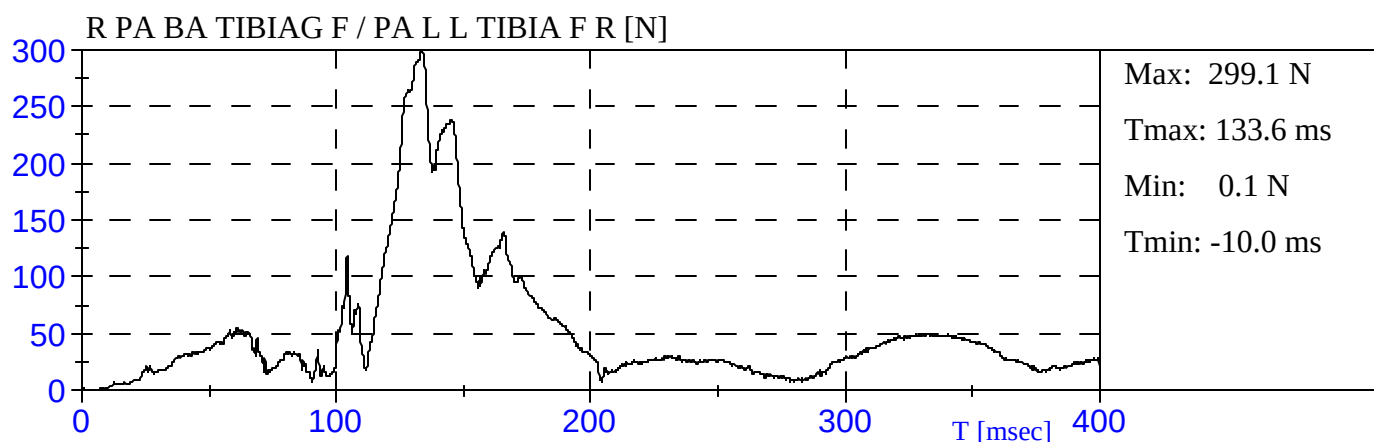
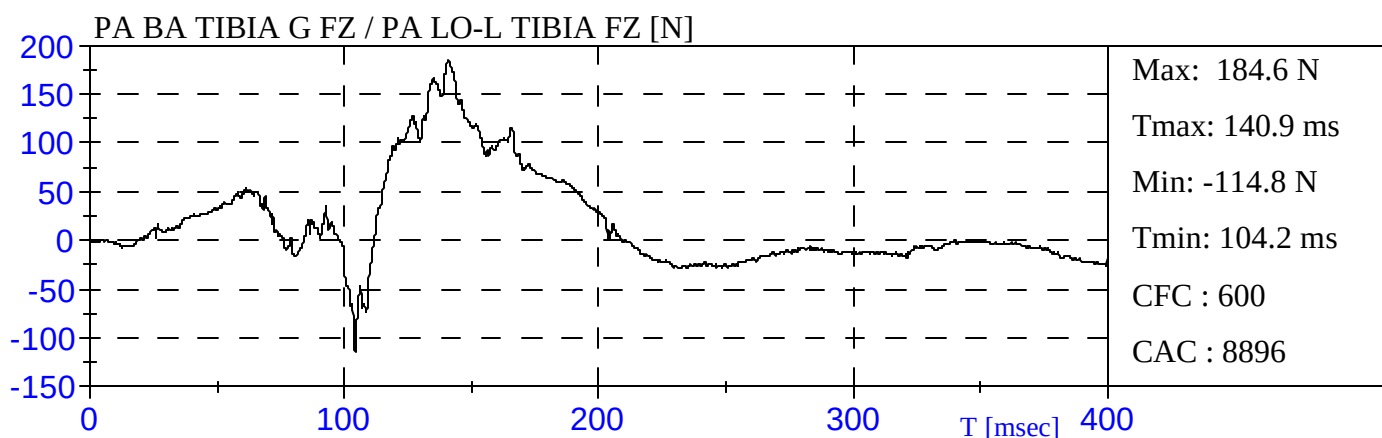
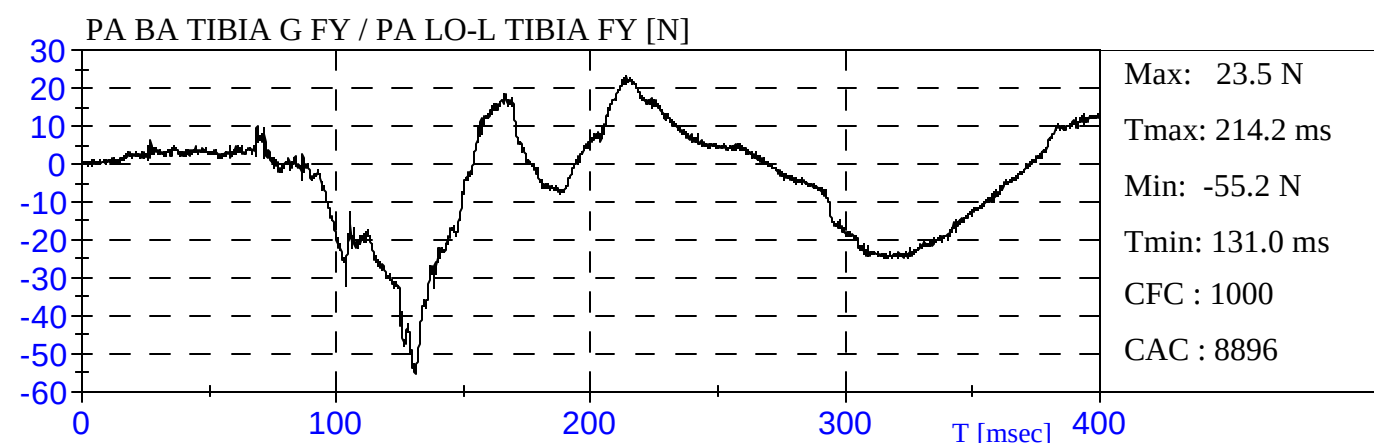
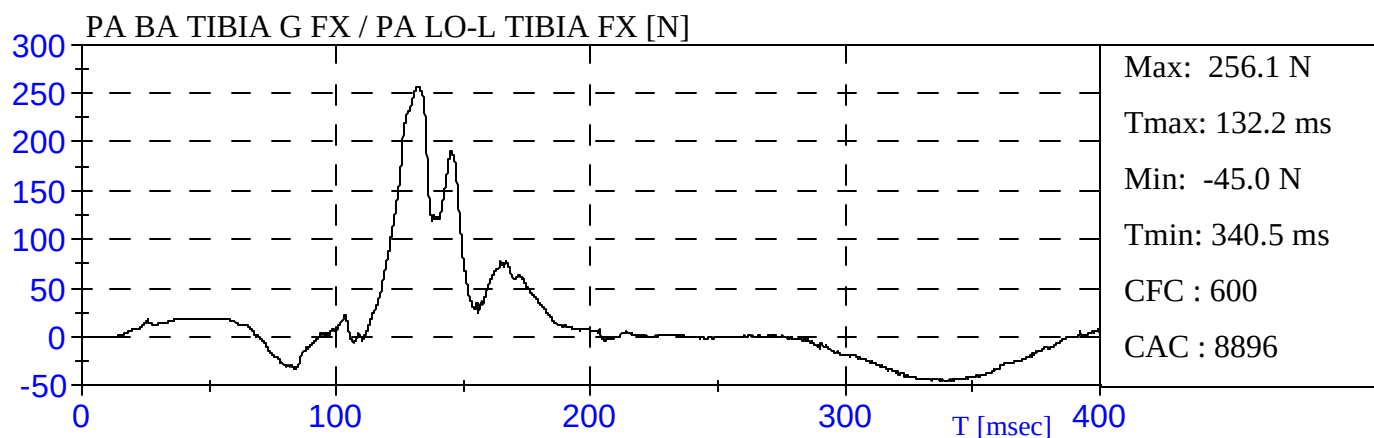


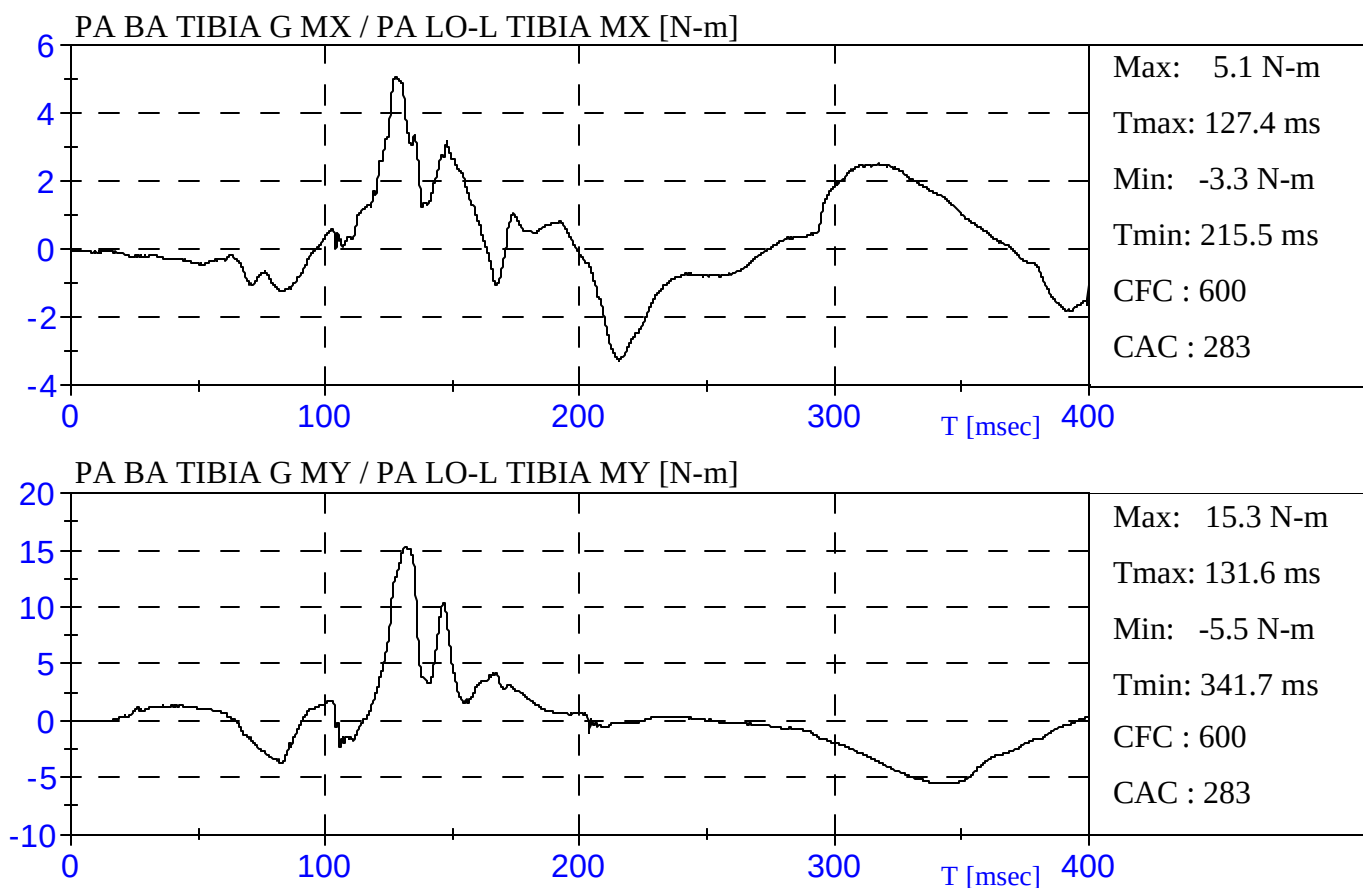




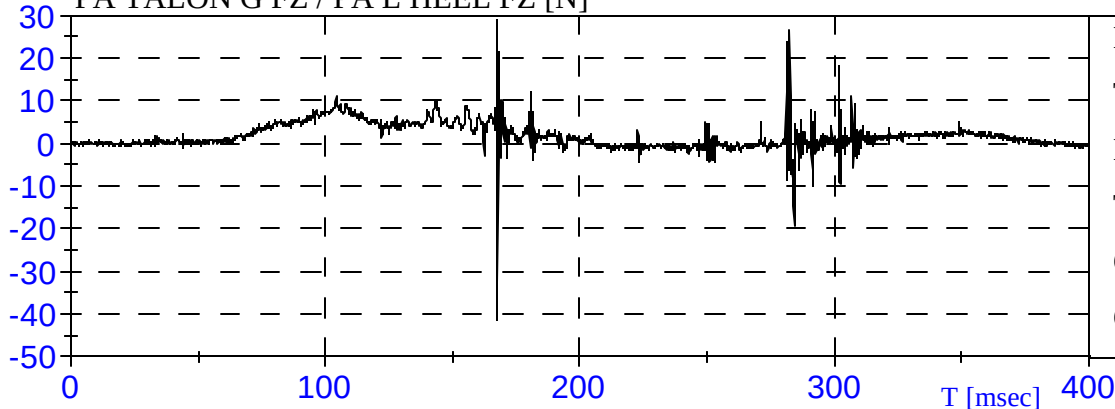






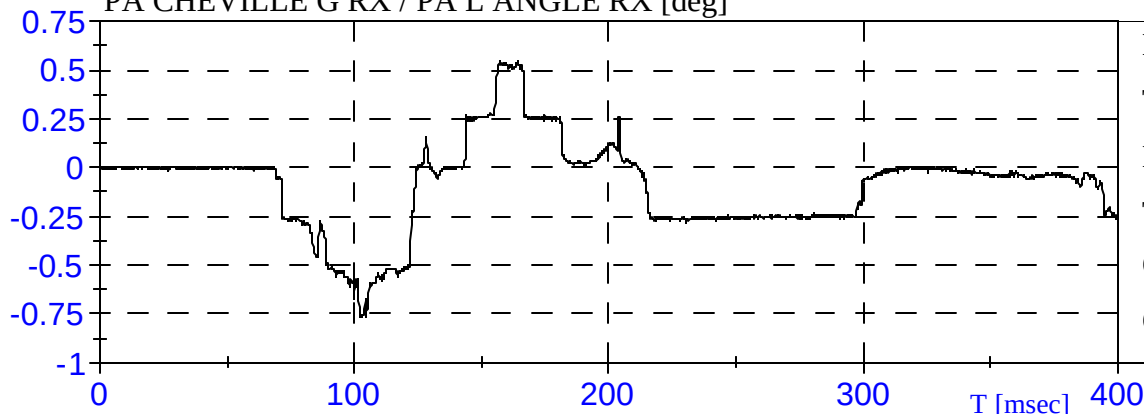


PA TALON G FZ / PA L HEEL FZ [N]



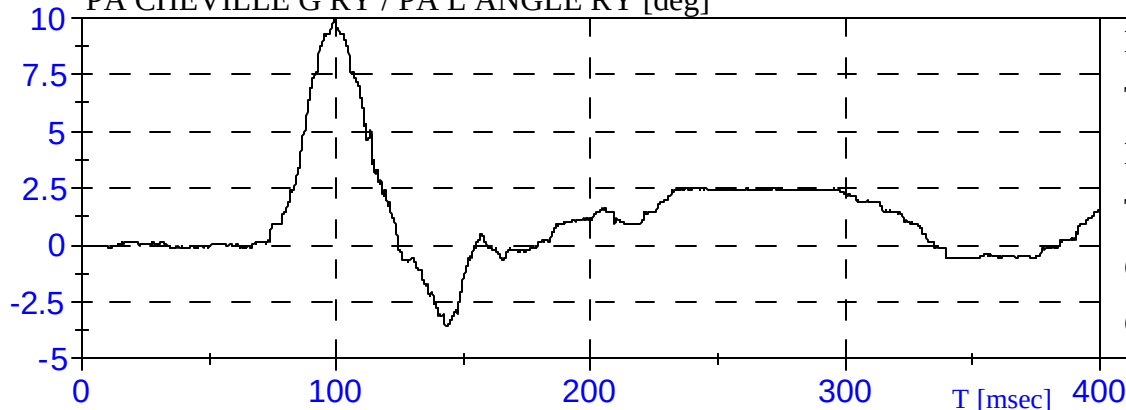
Max: 28.8 N
Tmax: 167.4 ms
Min: -41.6 N
Tmin: 167.7 ms
CFC : 1000
CAC : 4448

PA CHEVILLE G RX / PA L ANGLE RX [deg]



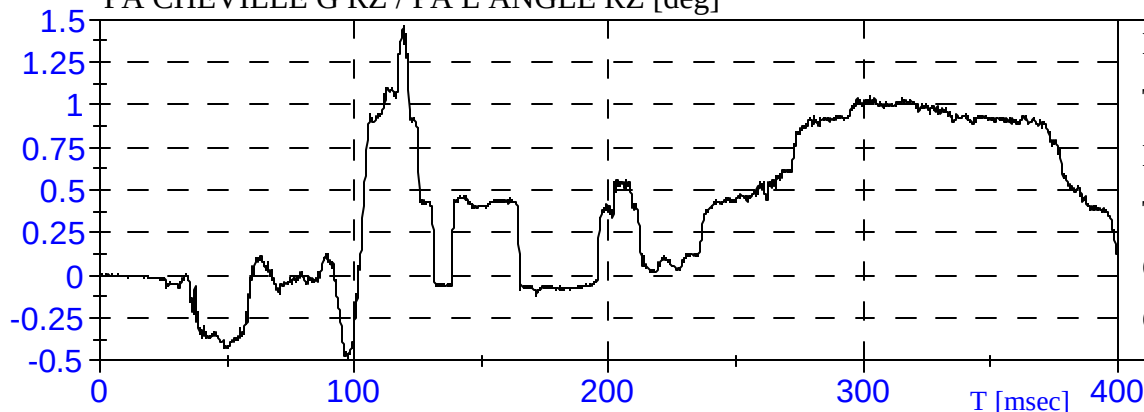
Max: 0.5 deg
Tmax: 164.3 ms
Min: -0.8 deg
Tmin: 104.6 ms
CFC : 1000
CAC : 100

PA CHEVILLE G RY / PA L ANGLE RY [deg]

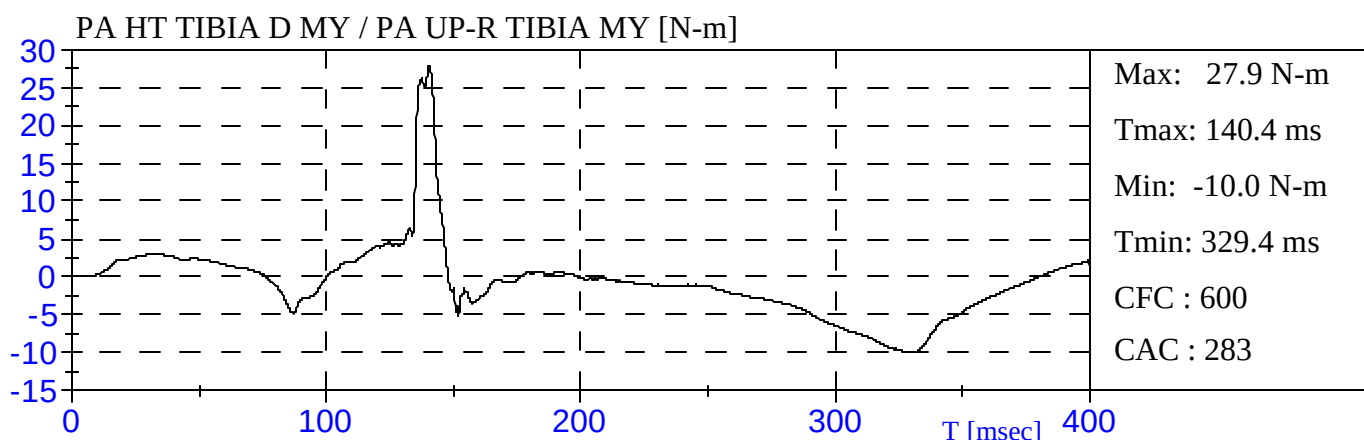
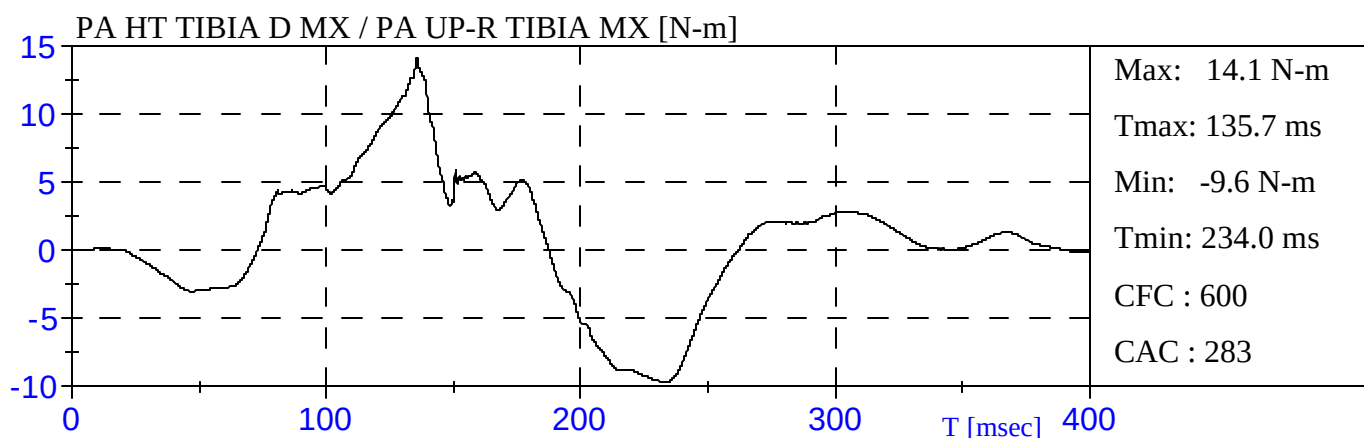
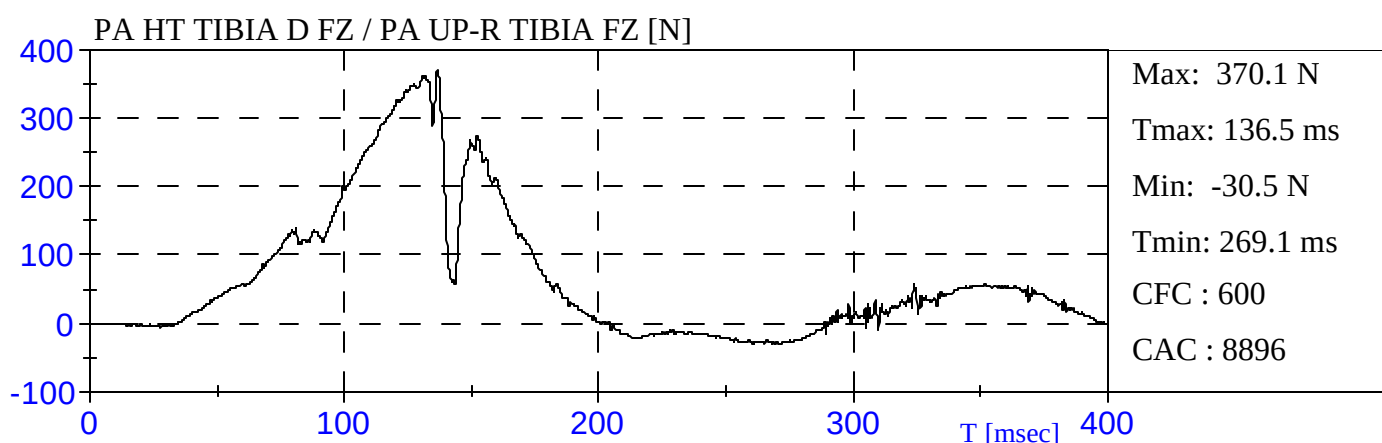
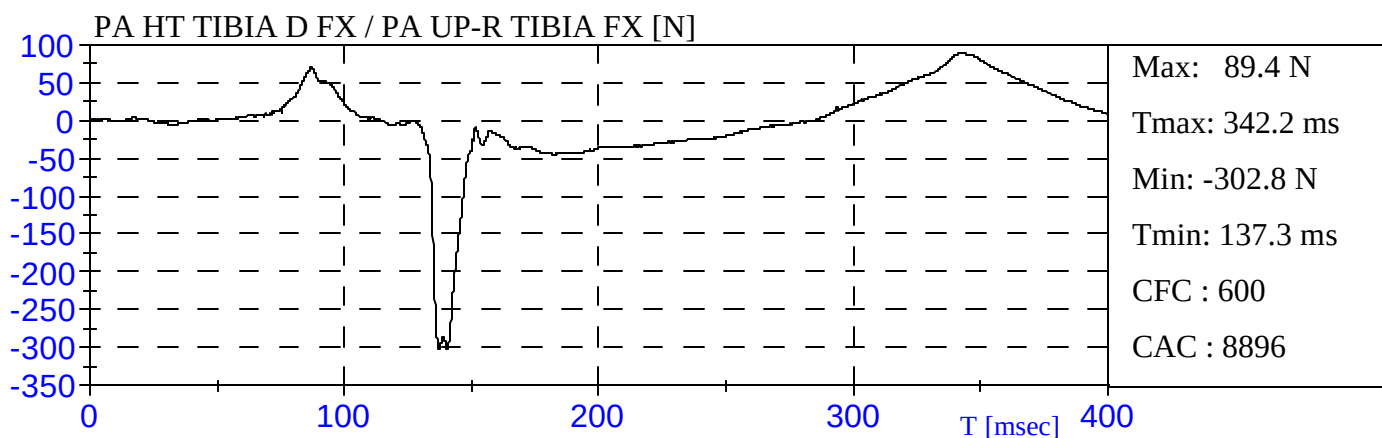


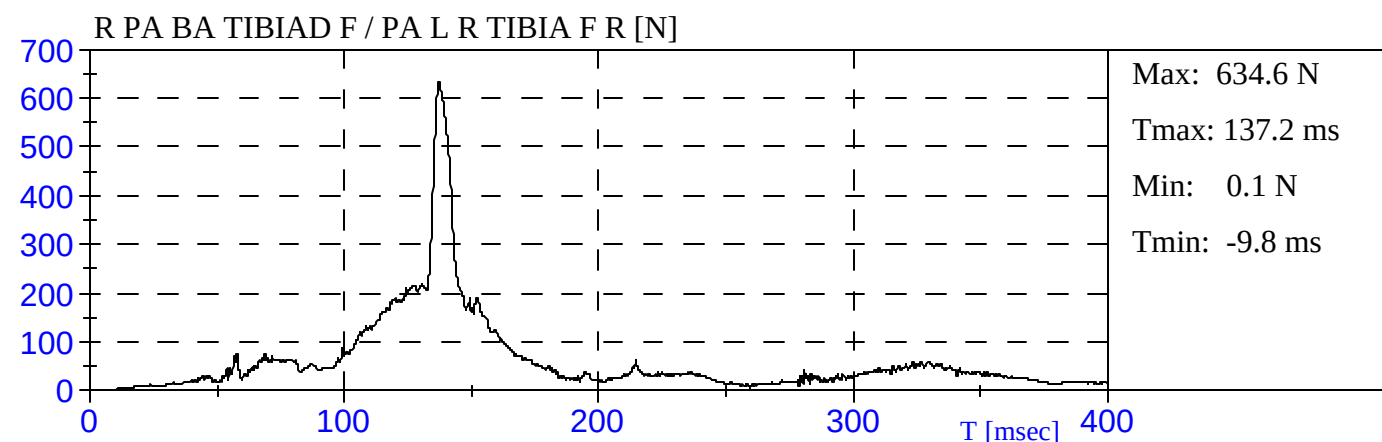
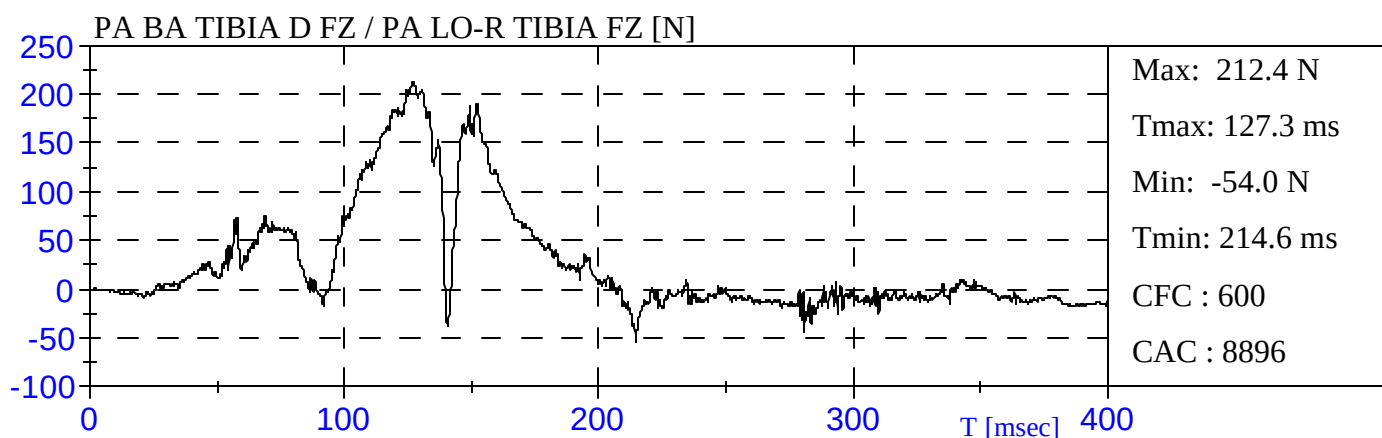
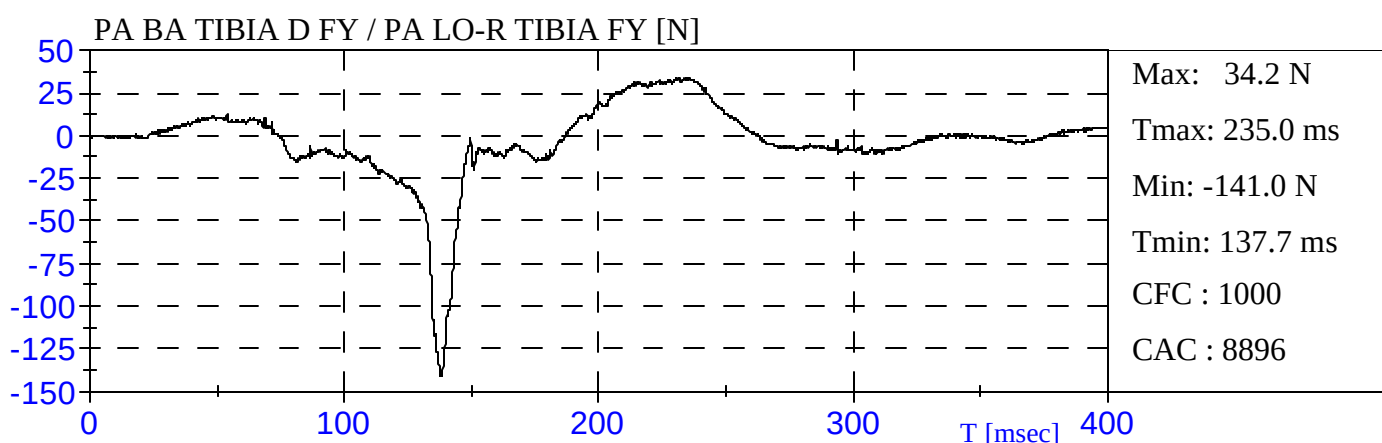
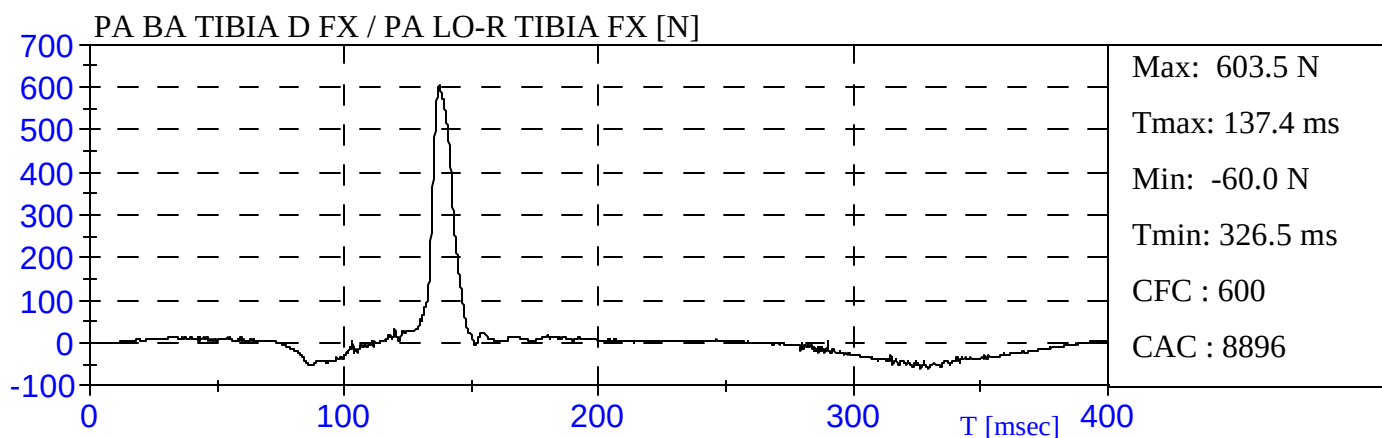
Max: 9.9 deg
Tmax: 99.1 ms
Min: -3.6 deg
Tmin: 142.9 ms
CFC : 1000
CAC : 100

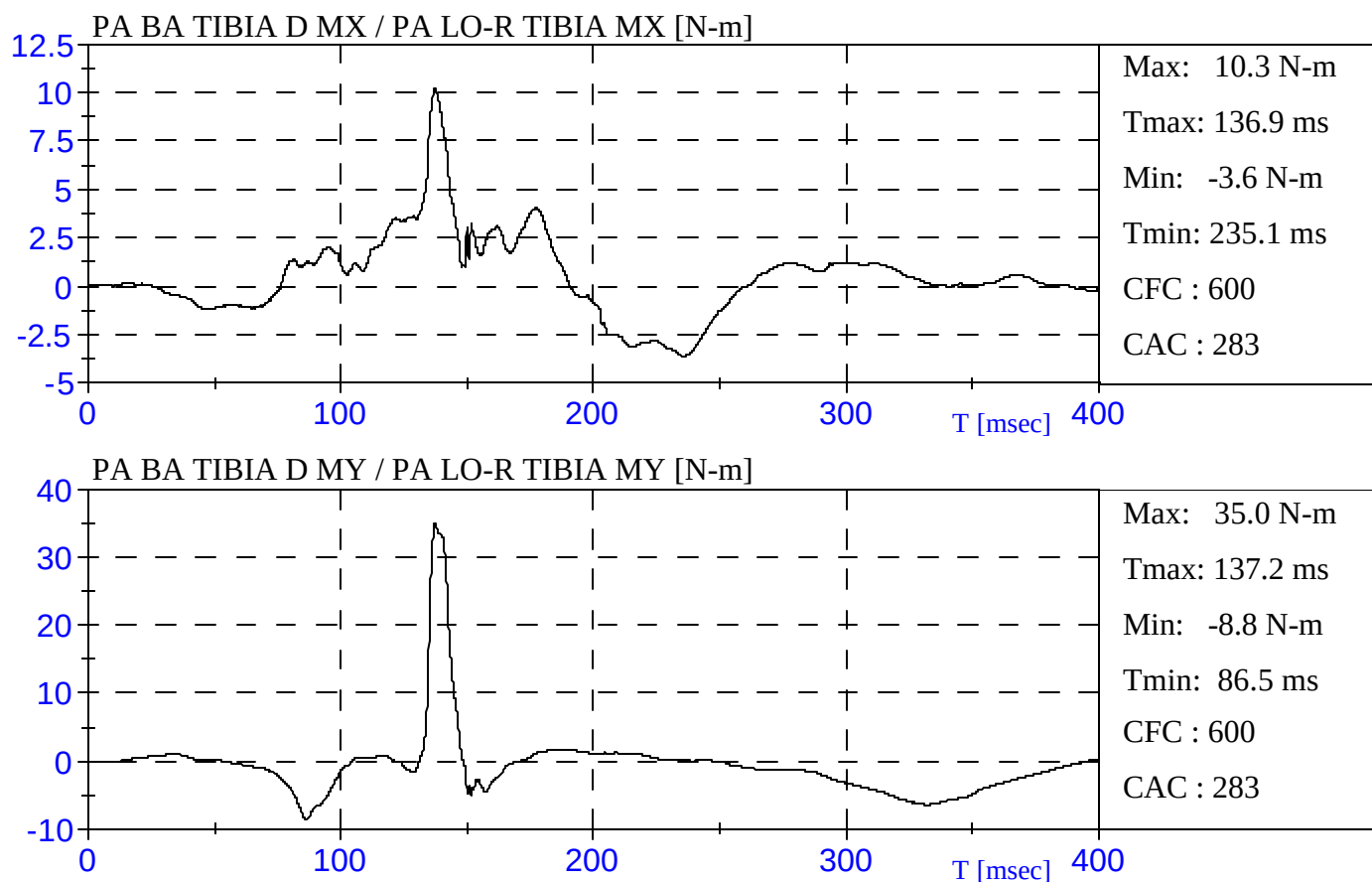
PA CHEVILLE G RZ / PA L ANGLE RZ [deg]

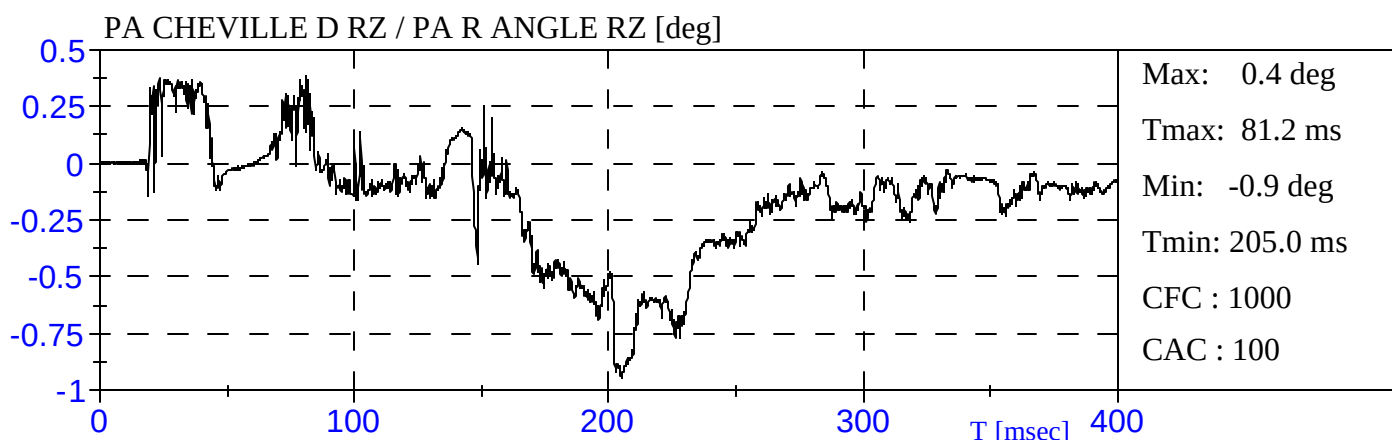
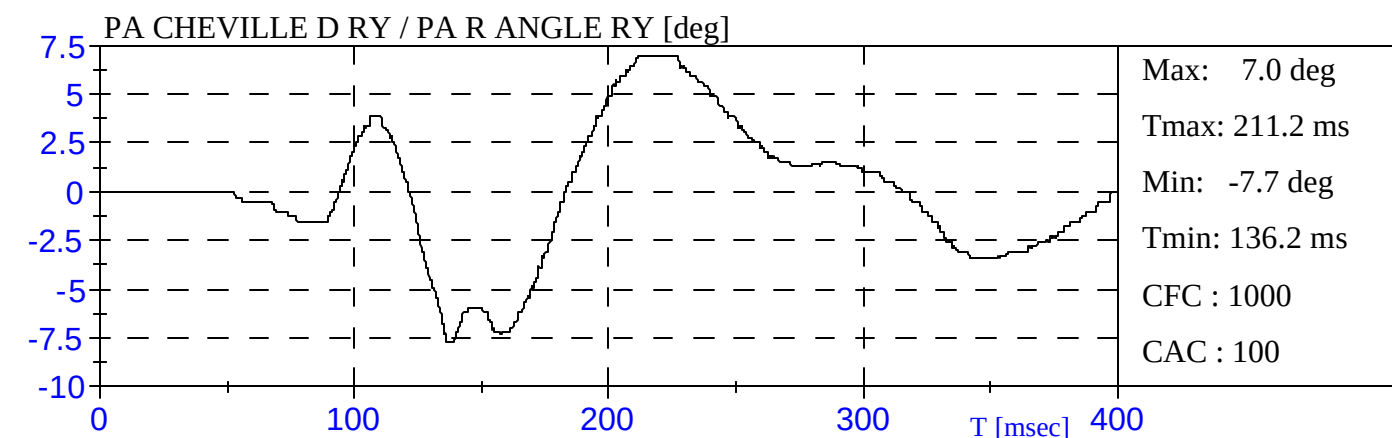
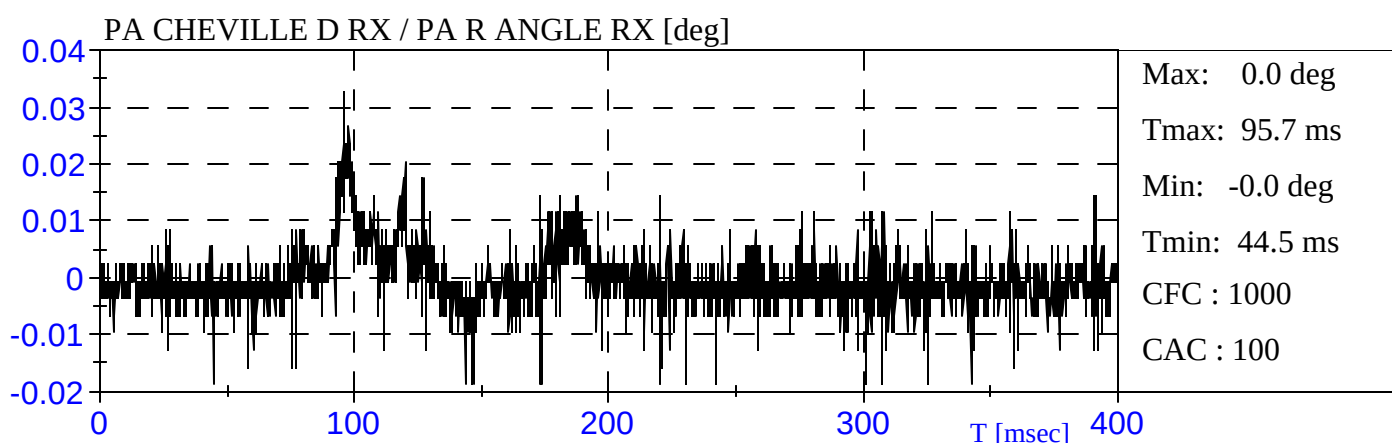
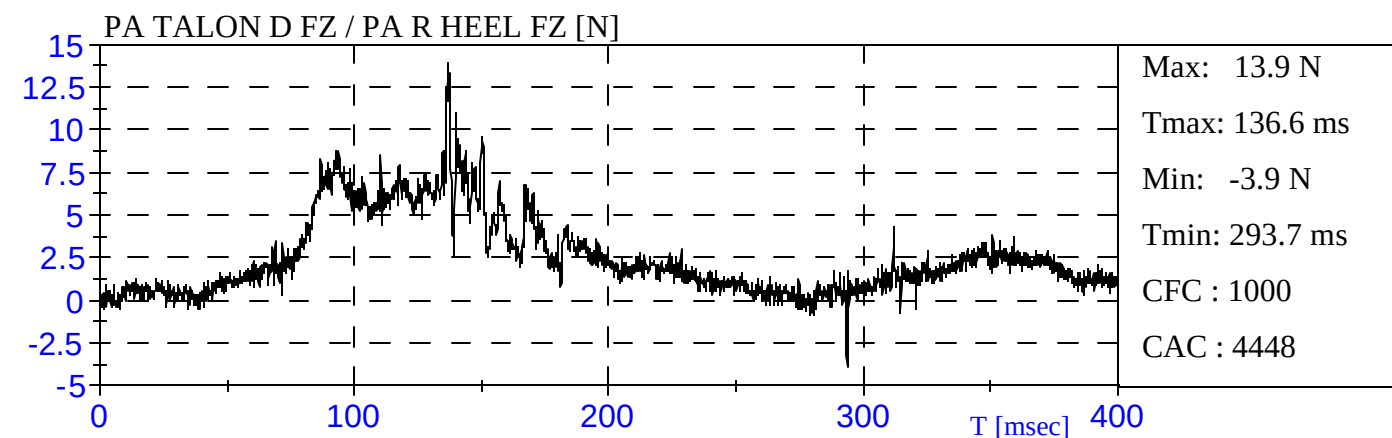


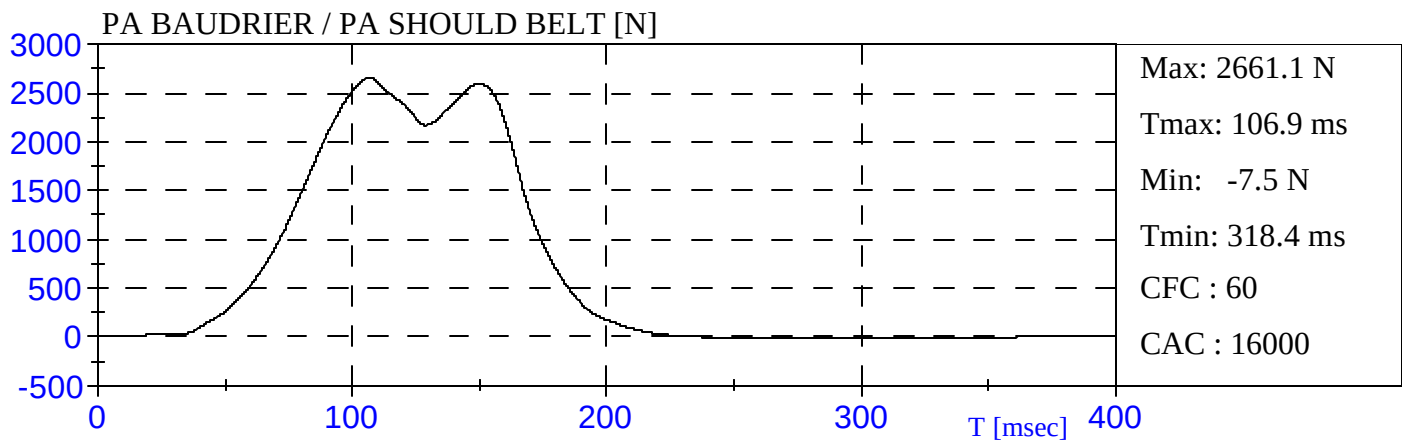
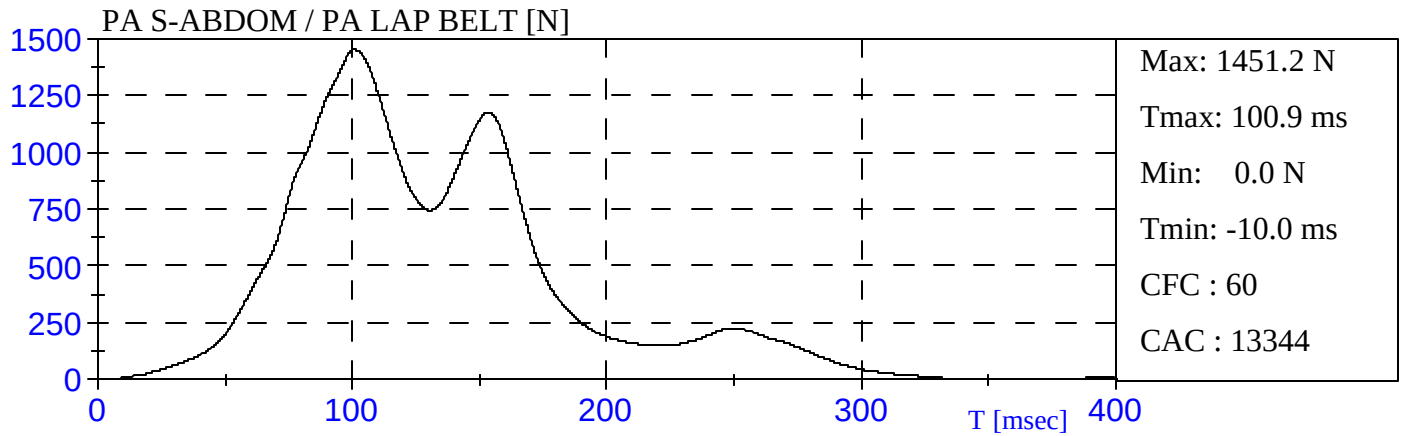
Max: 1.5 deg
Tmax: 119.3 ms
Min: -0.5 deg
Tmin: 97.7 ms
CFC : 1000
CAC : 100

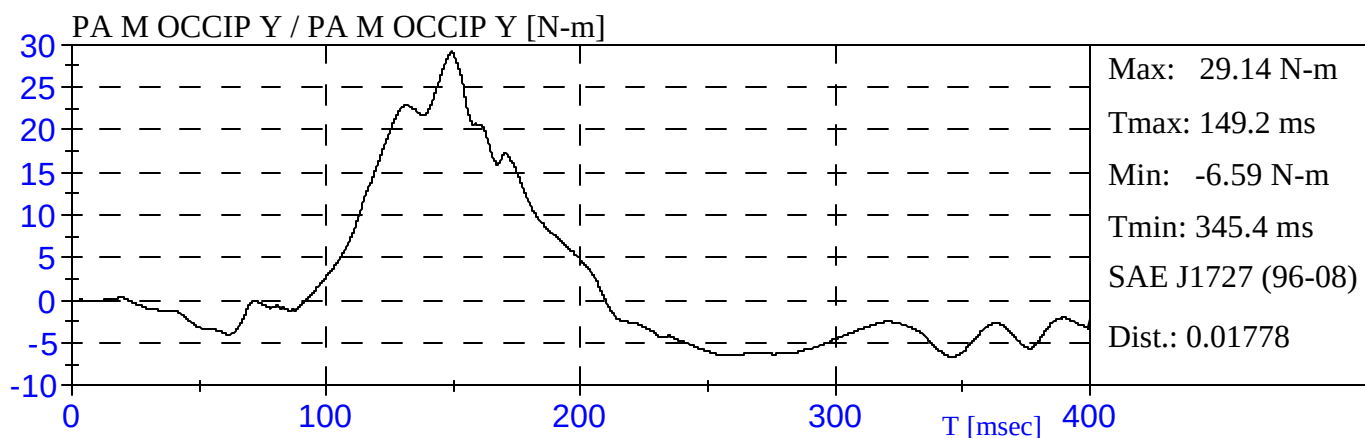


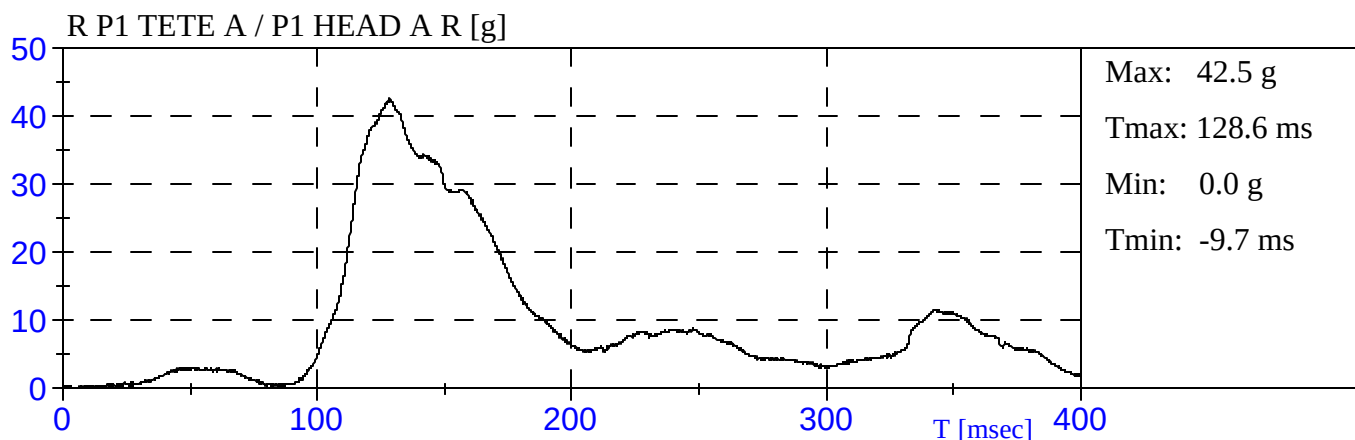
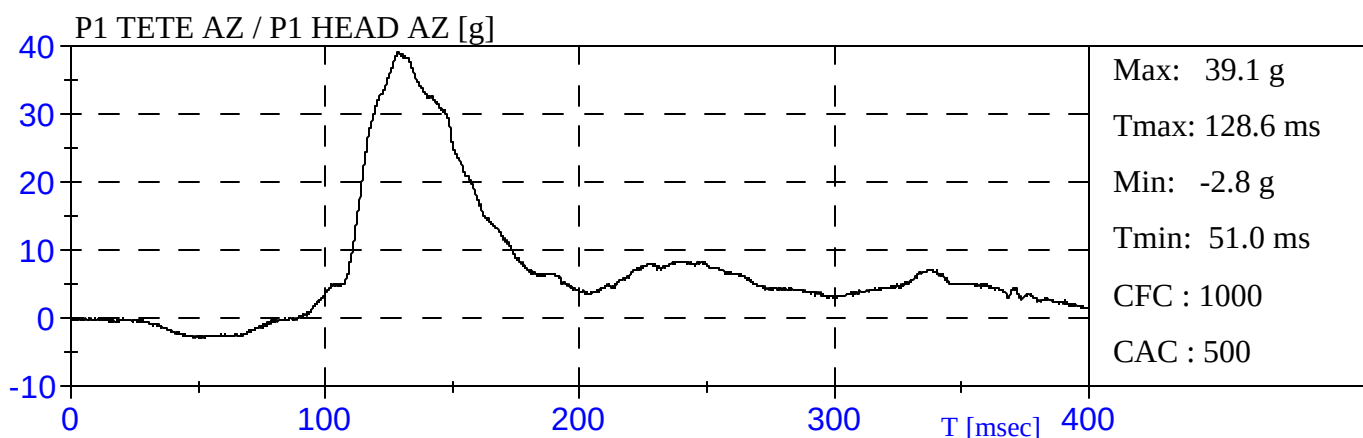
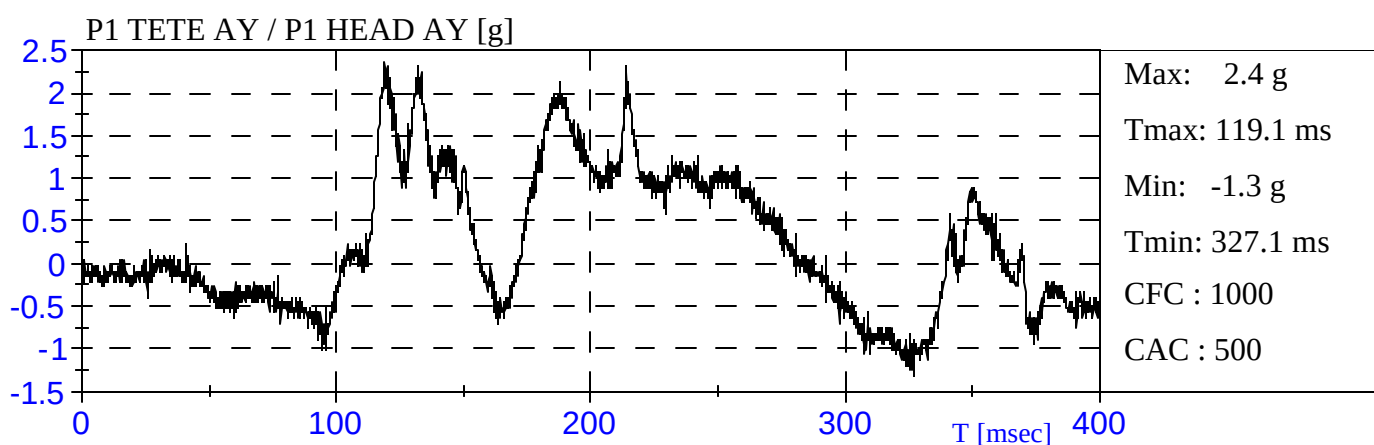
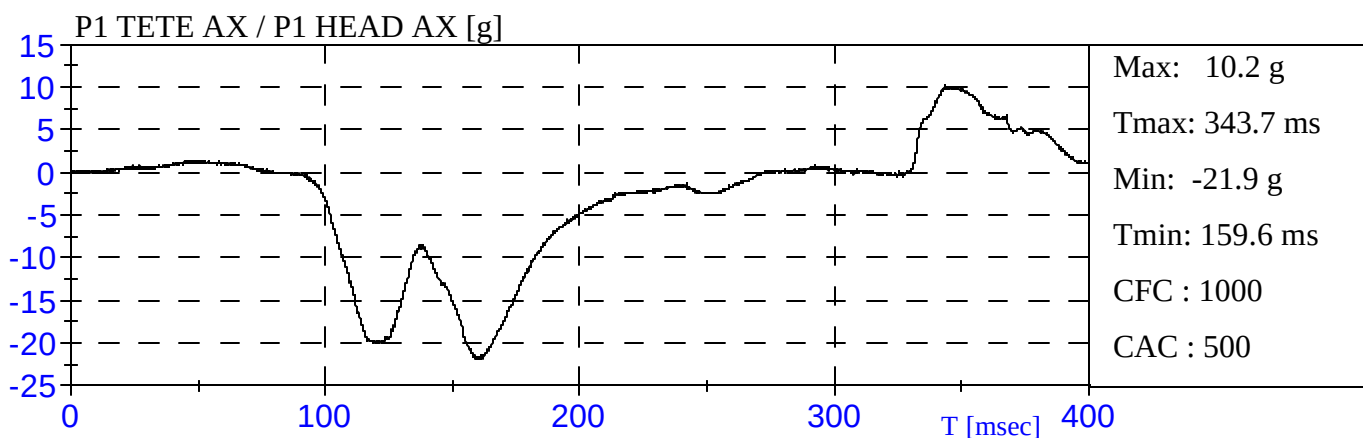


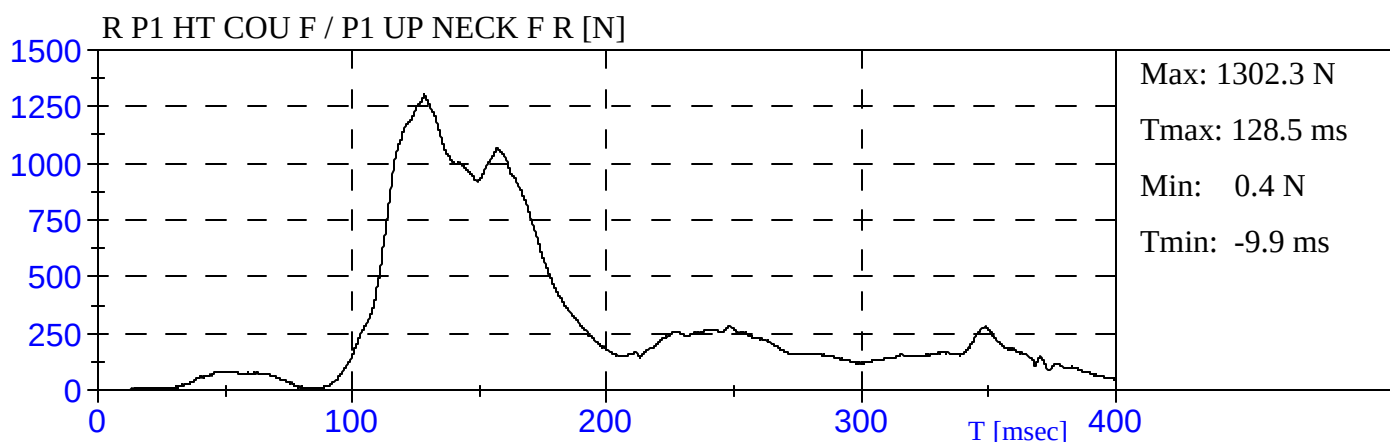
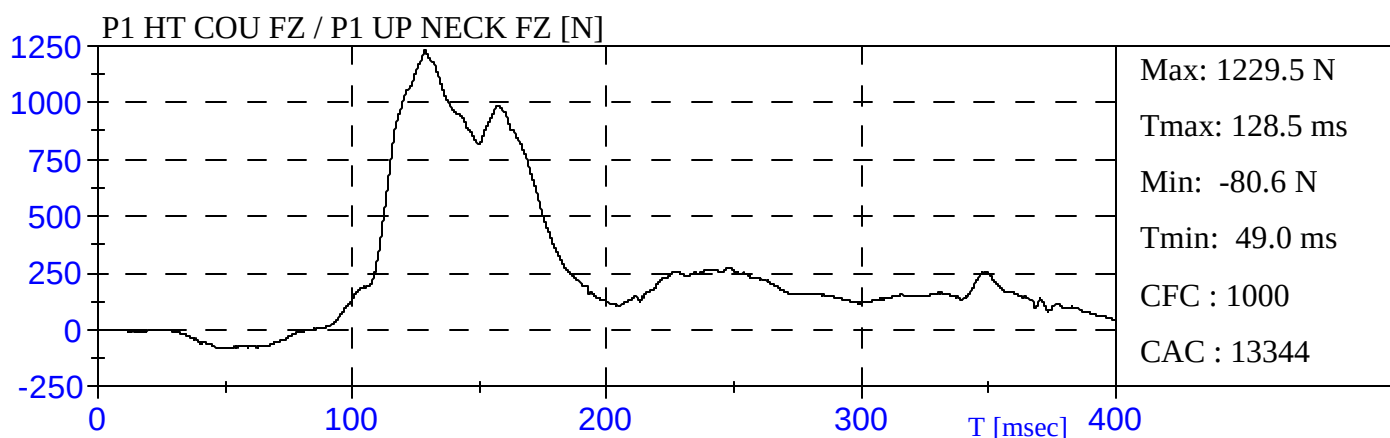
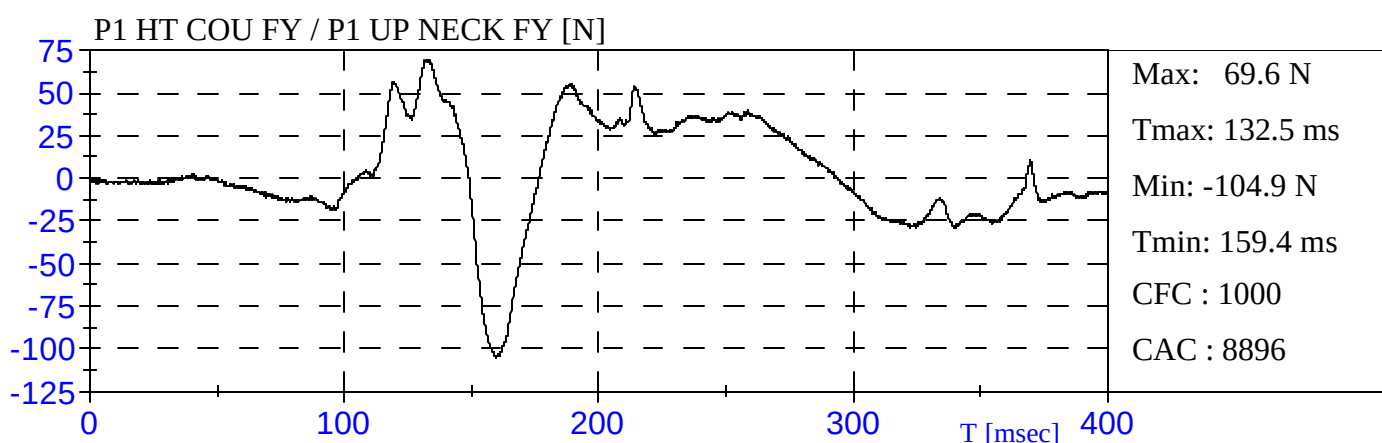
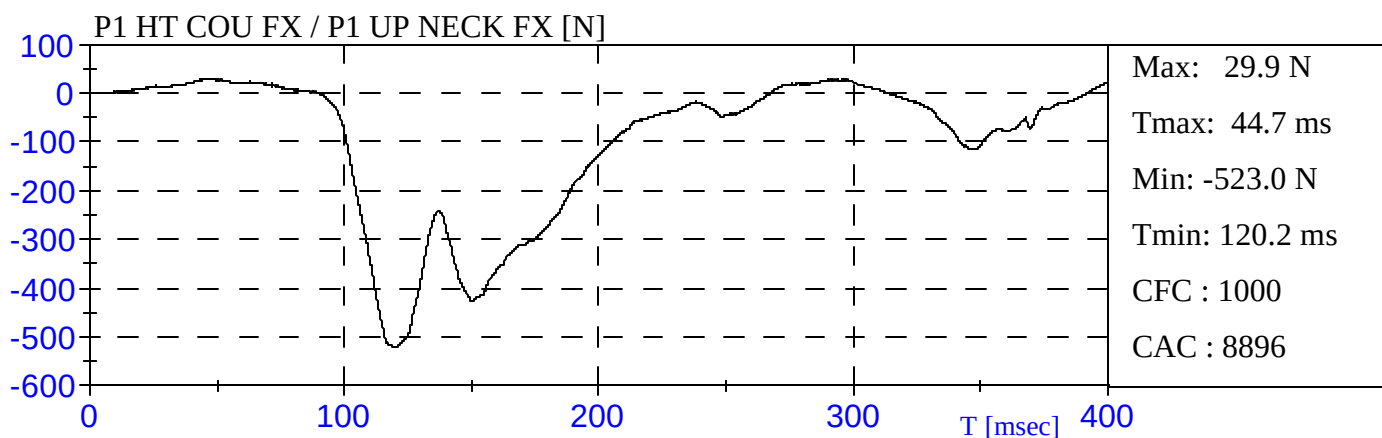


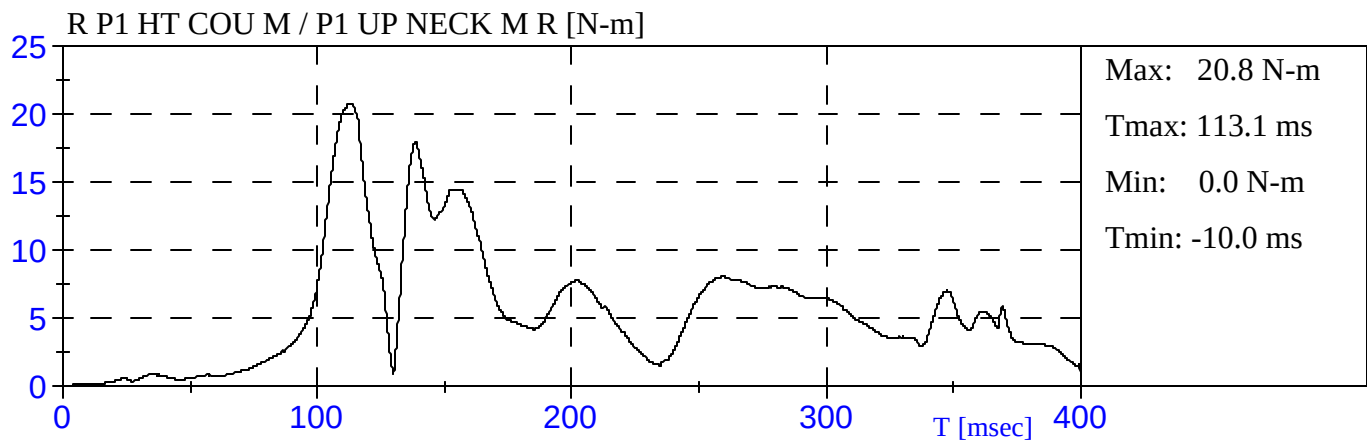
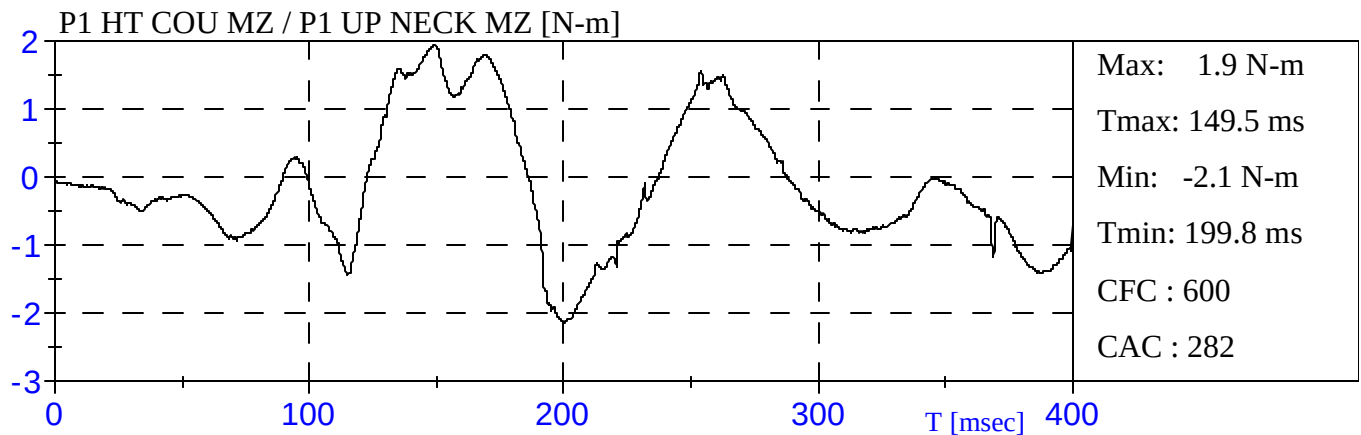
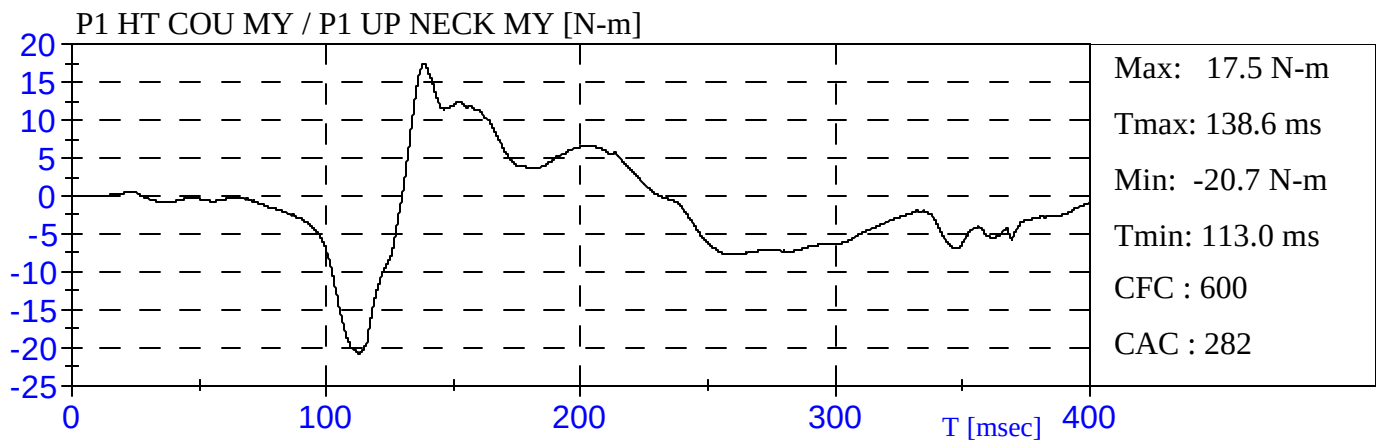
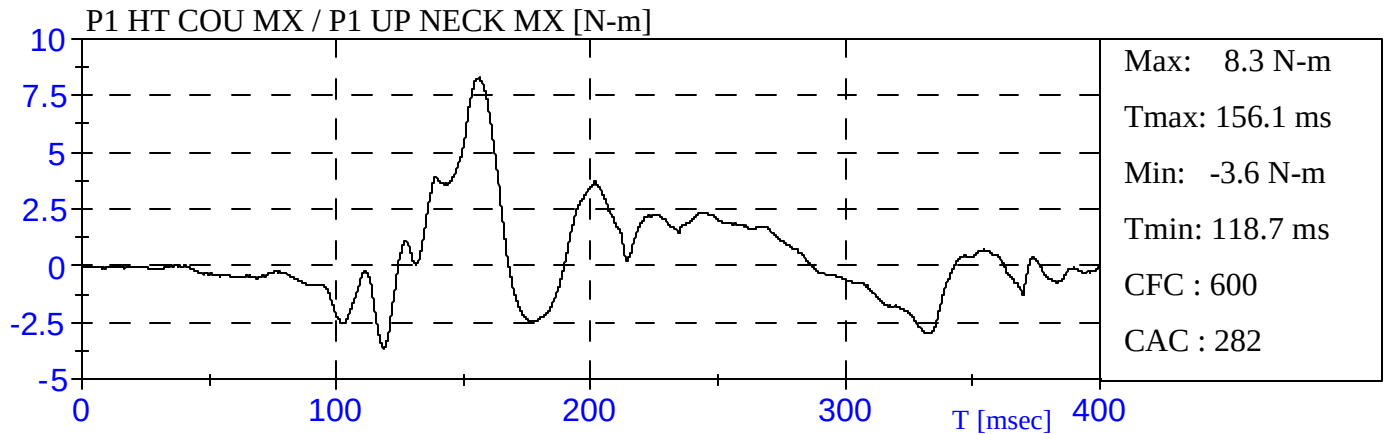


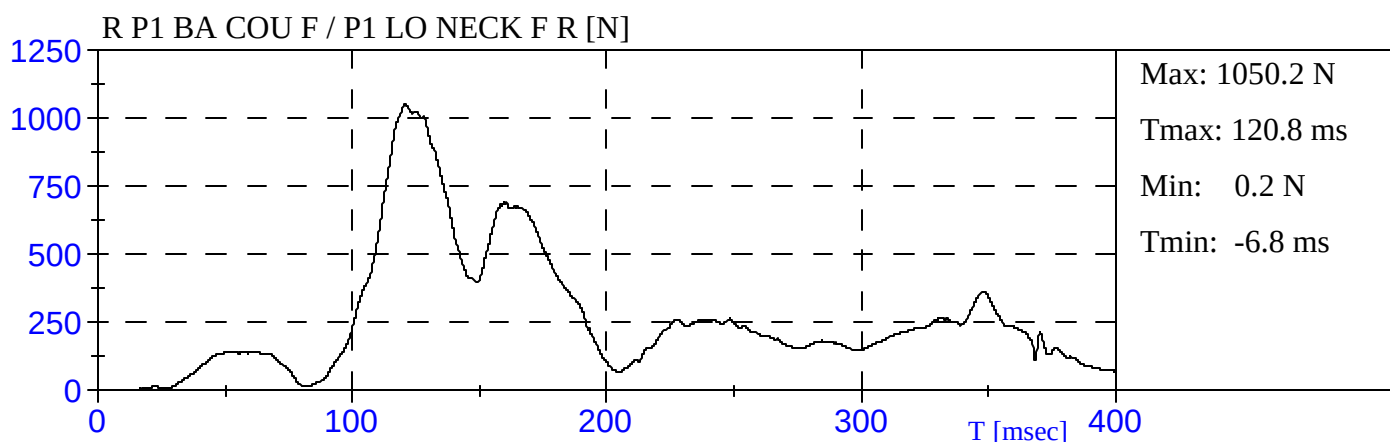
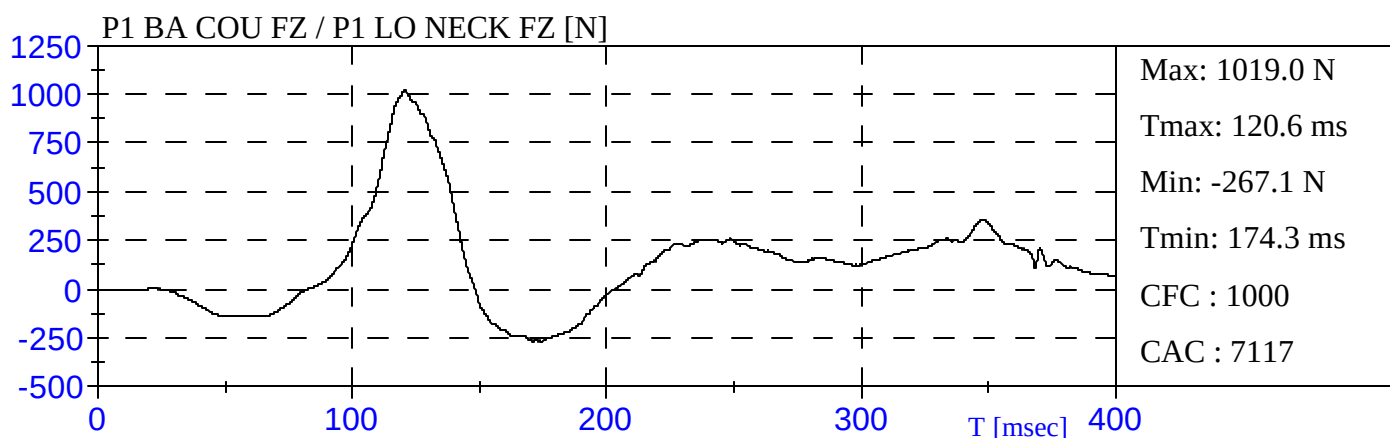
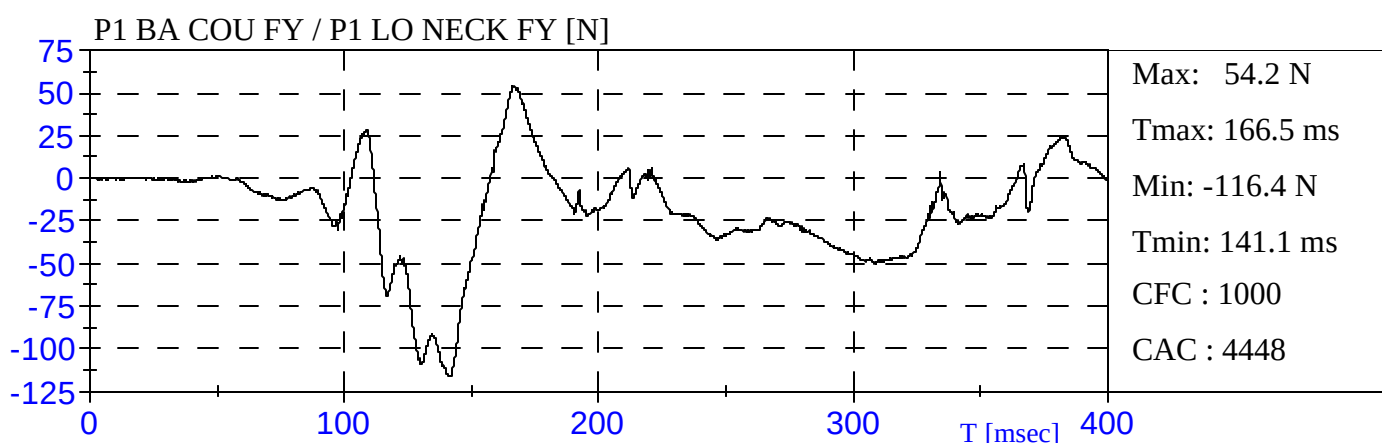
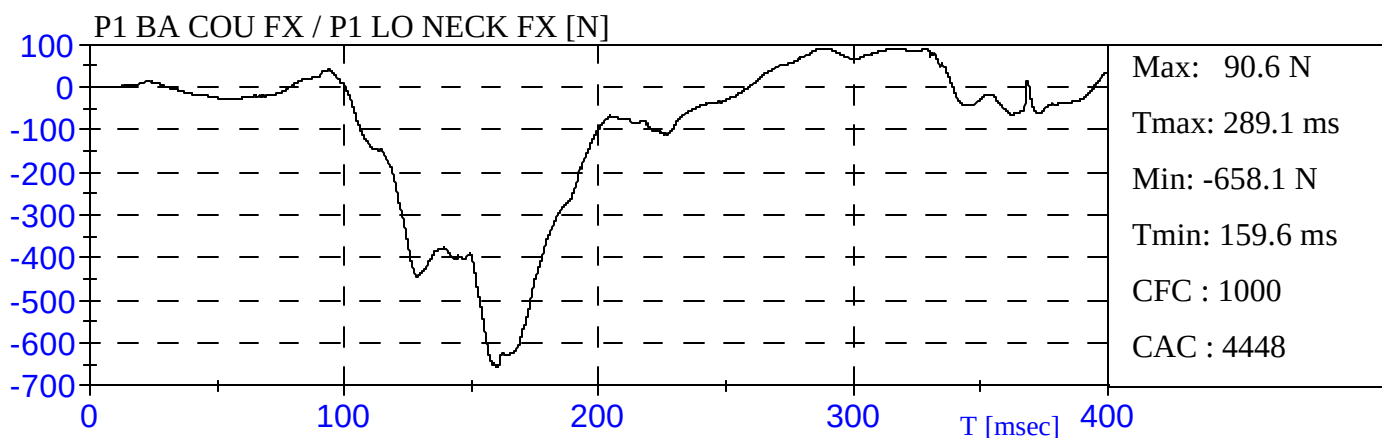


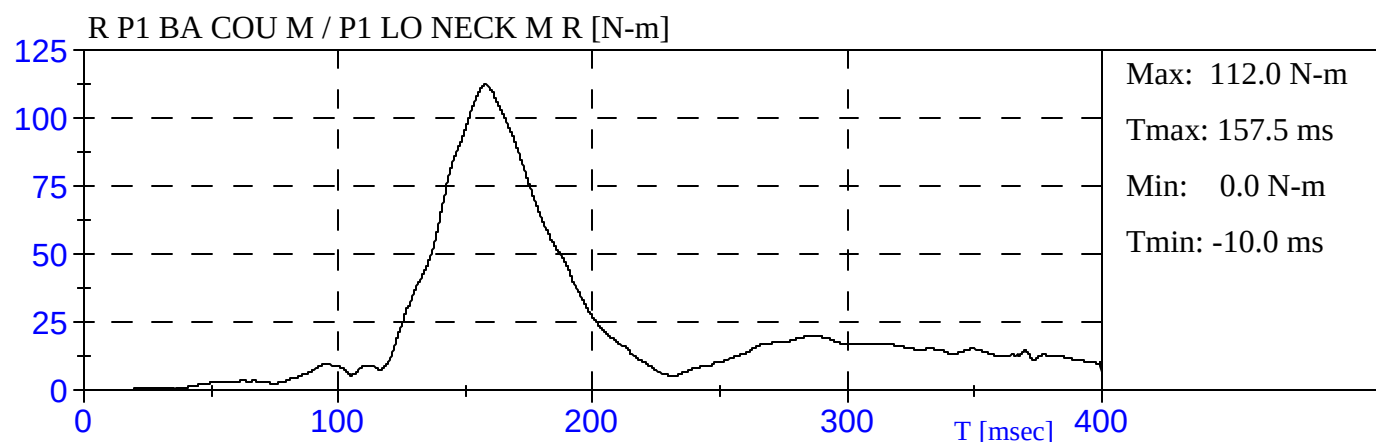
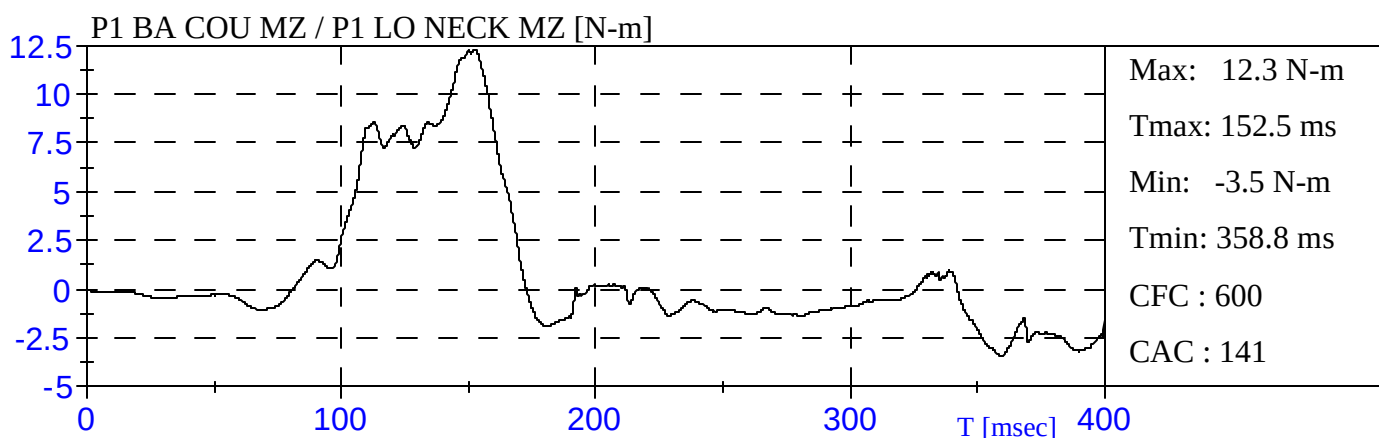
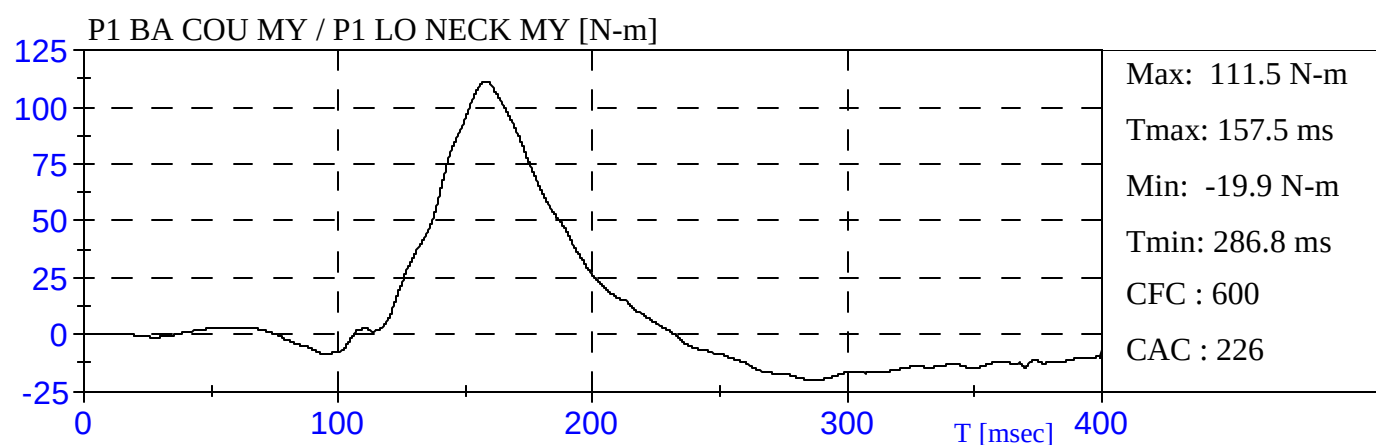
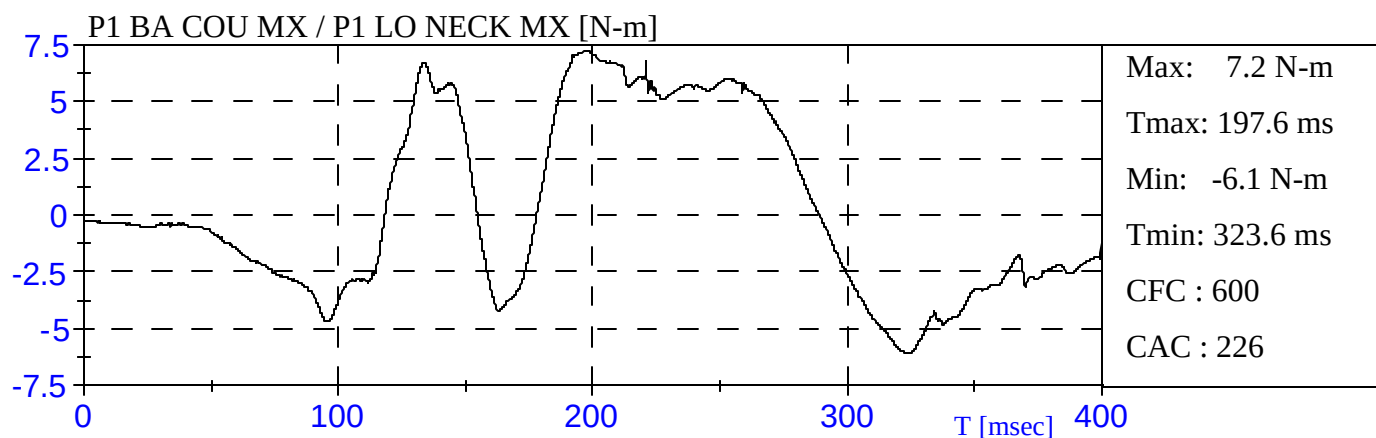


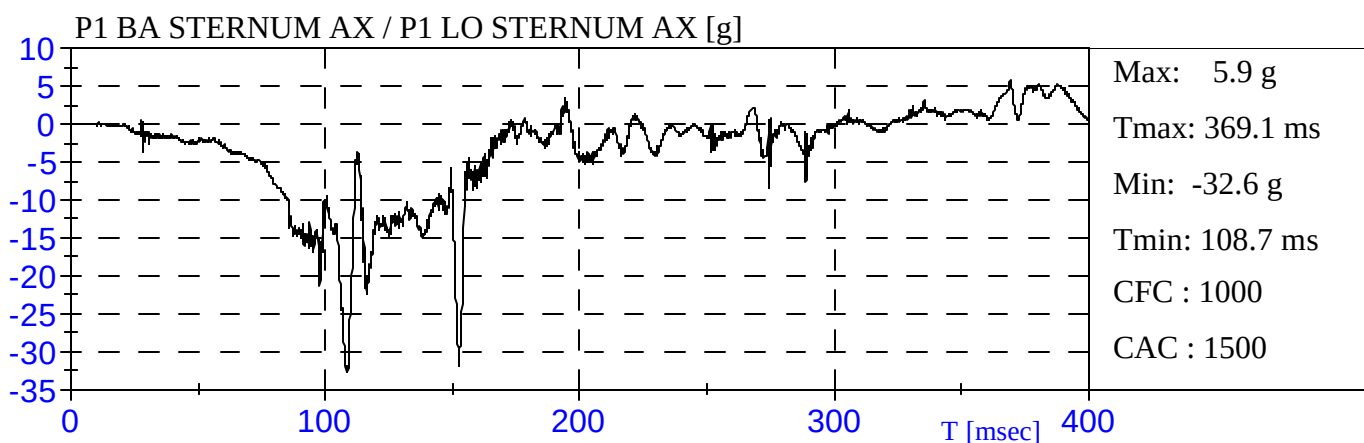
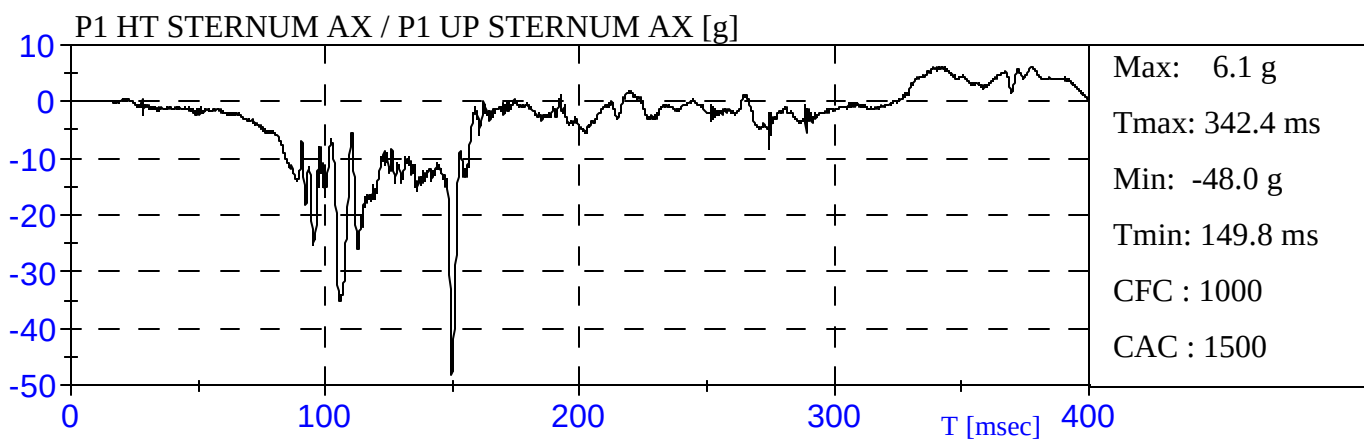


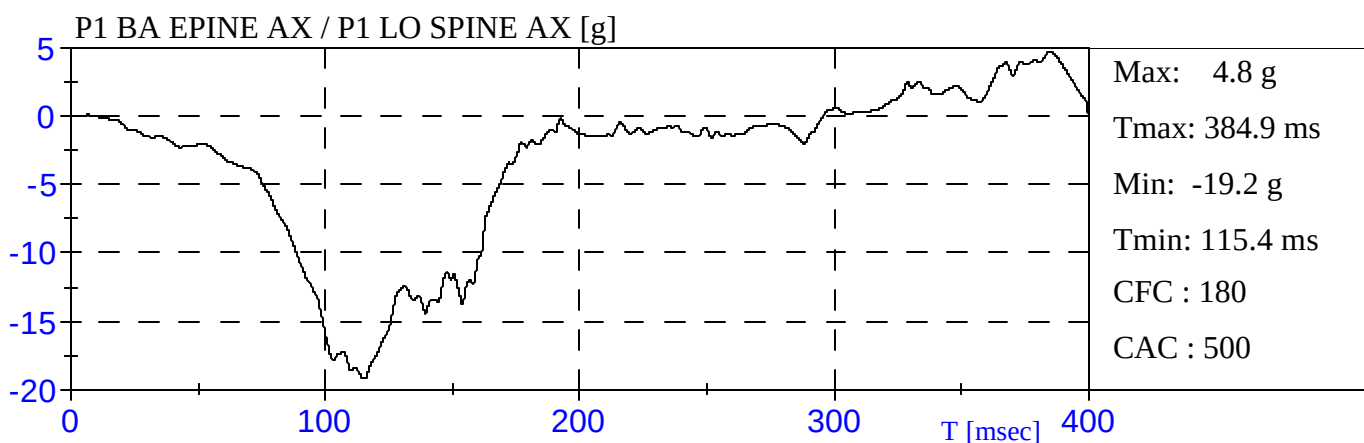
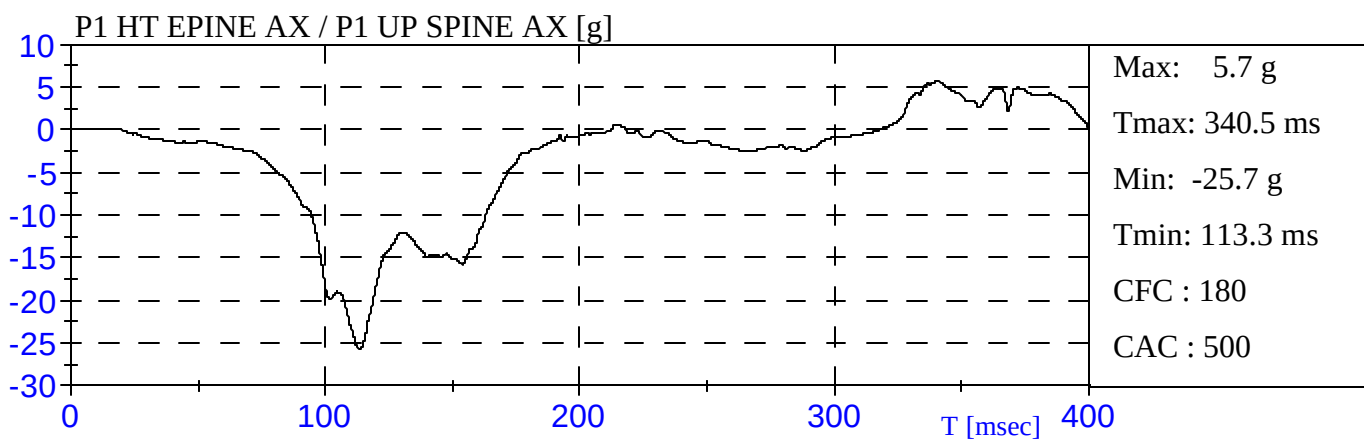


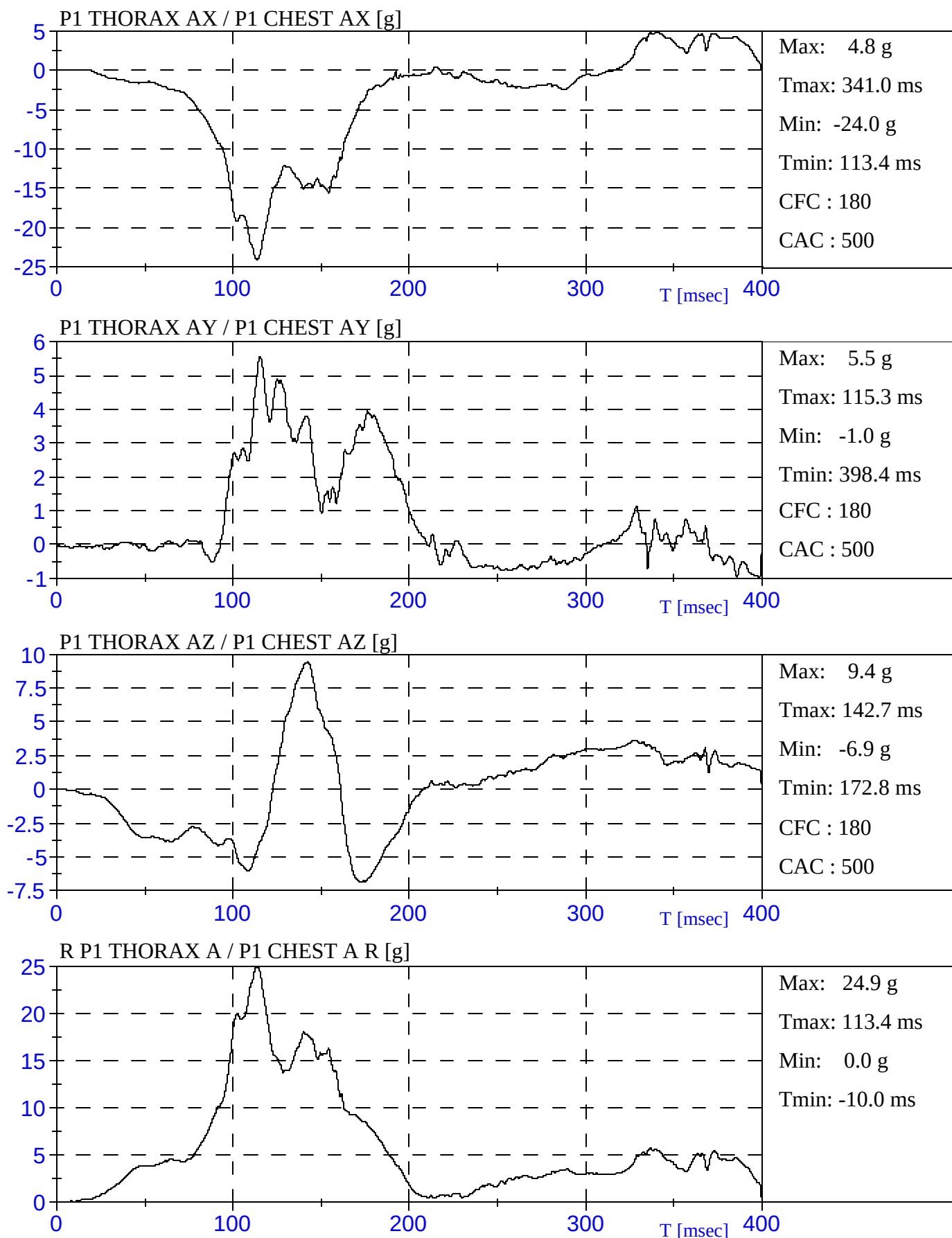


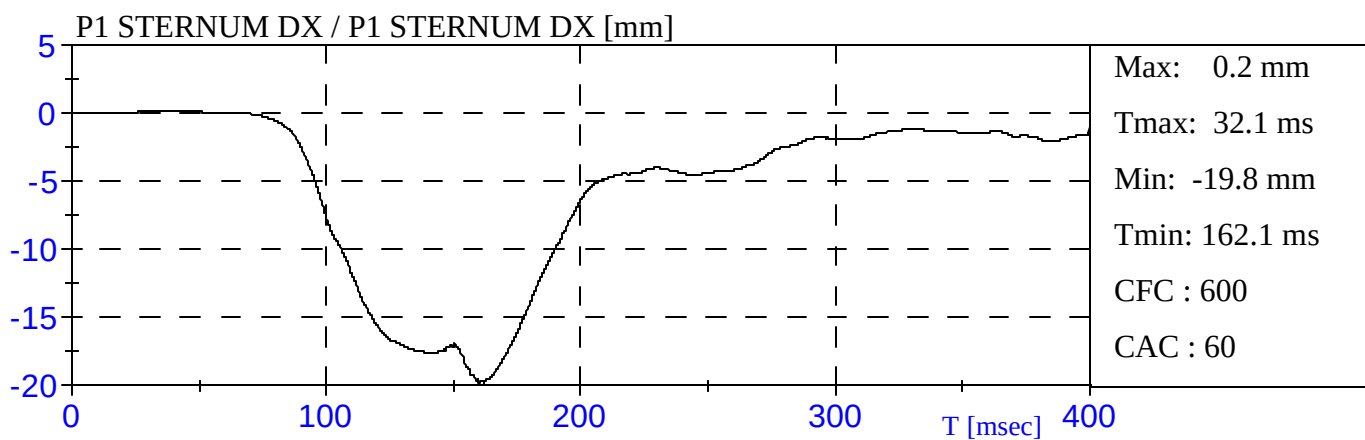


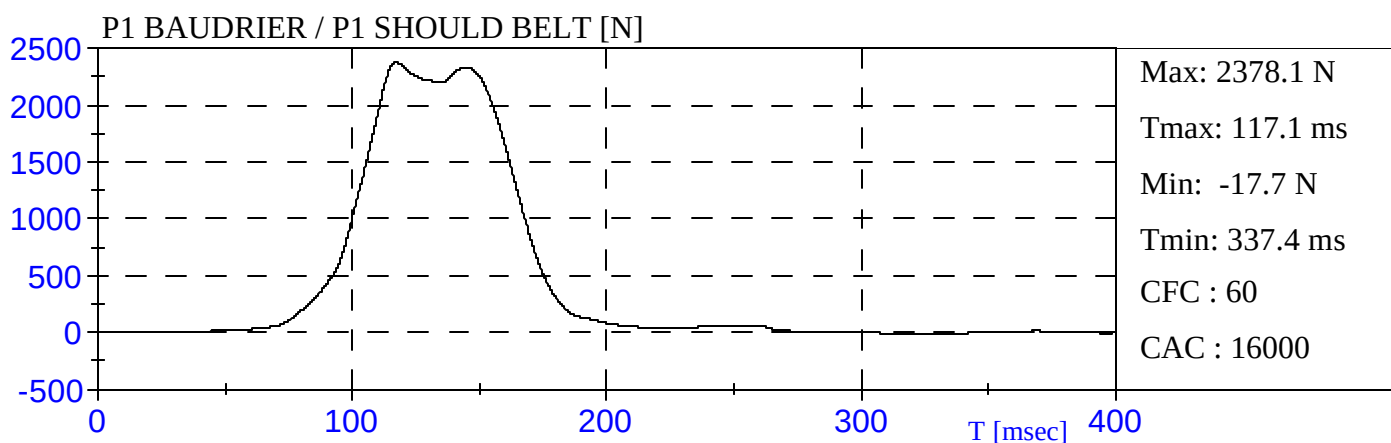
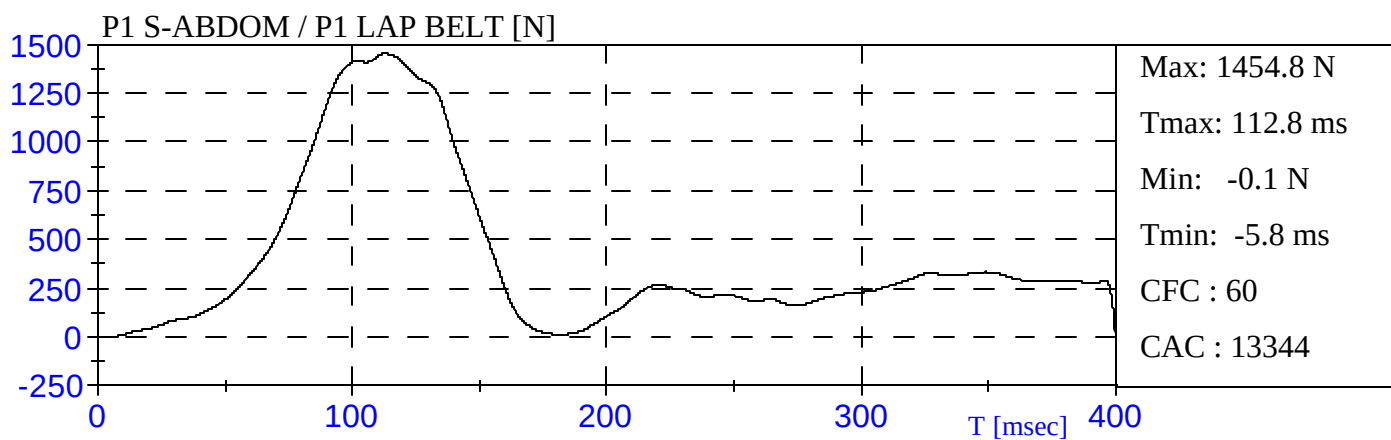


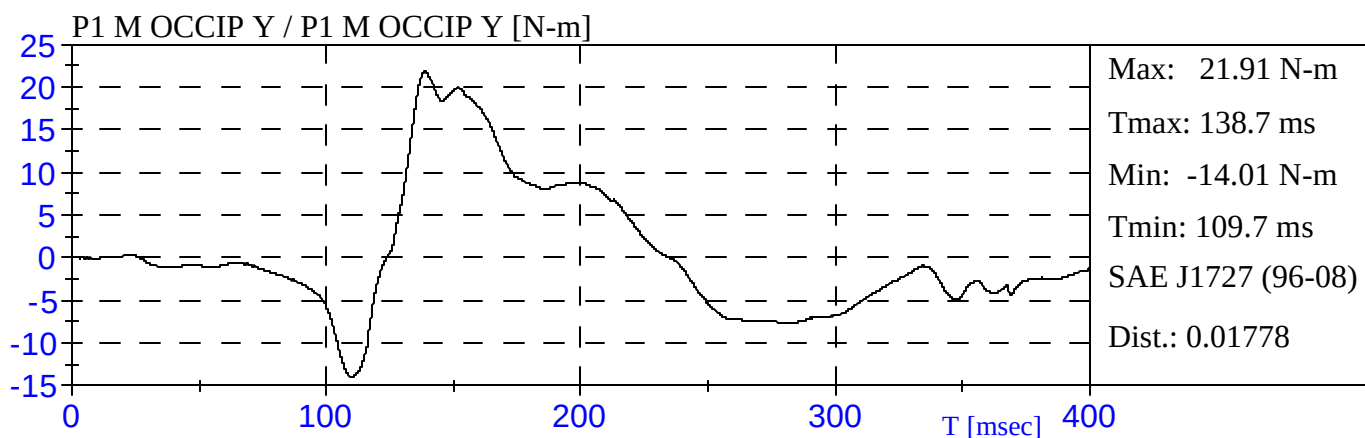


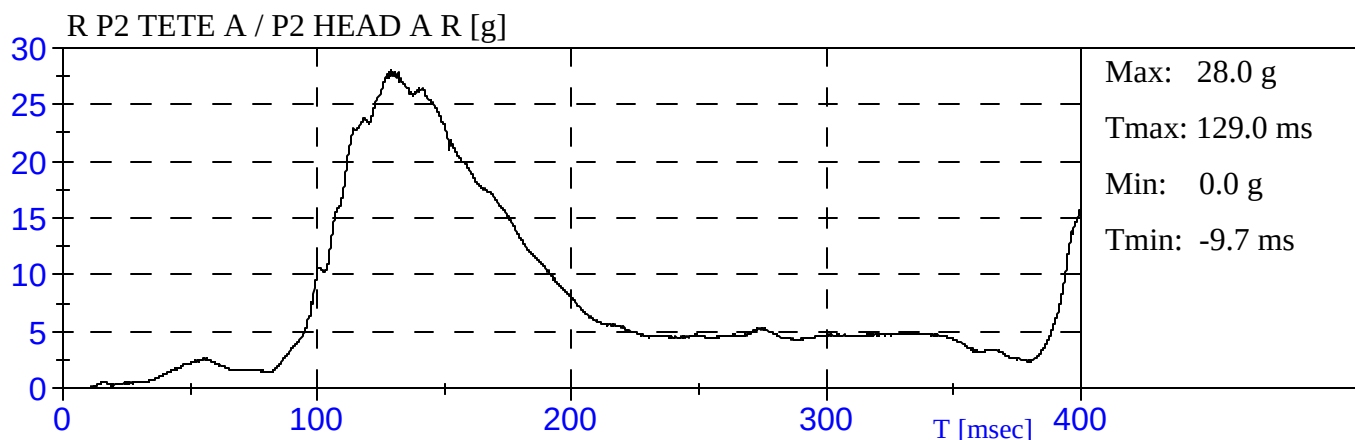
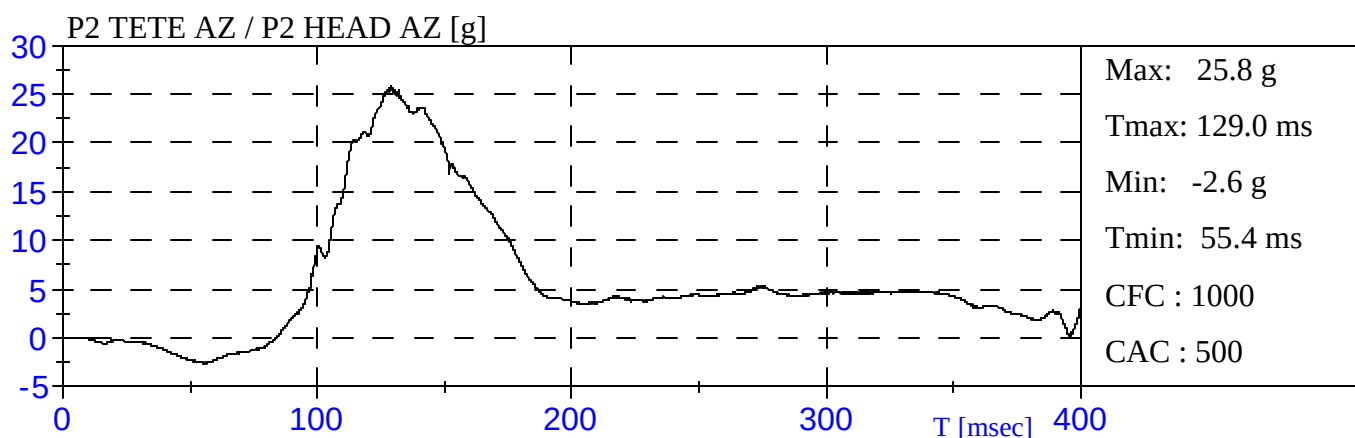
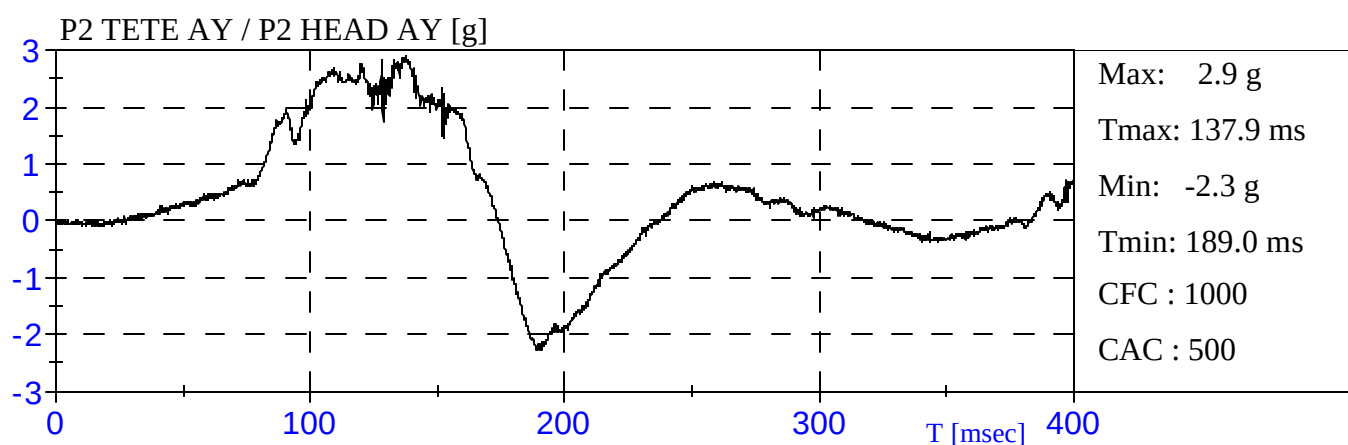
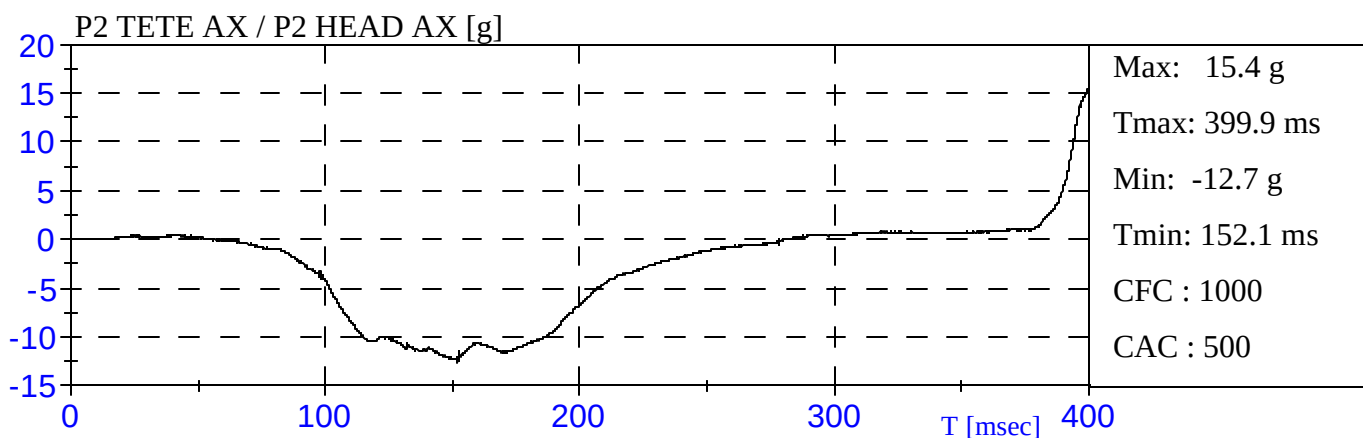


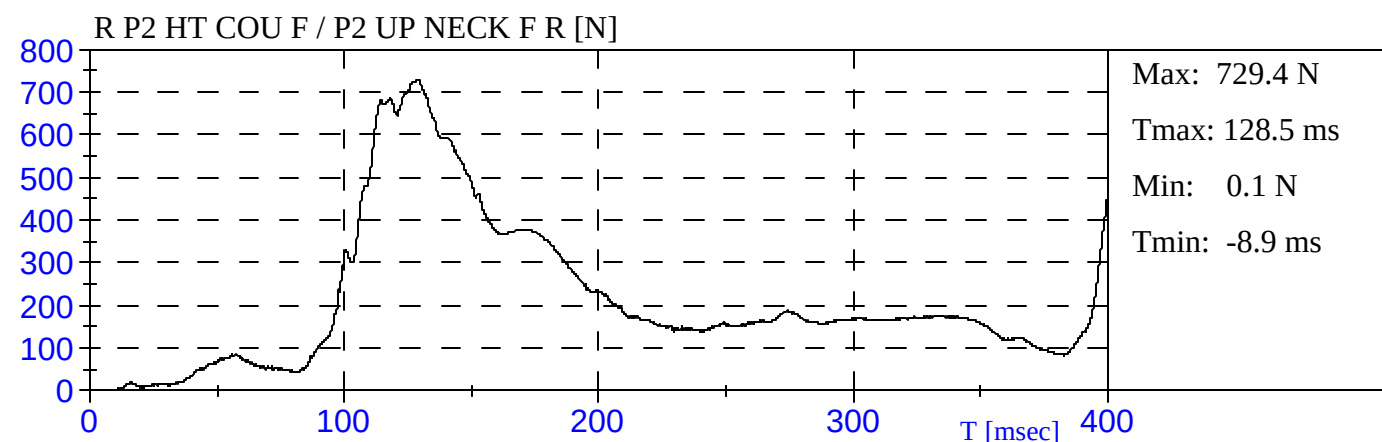
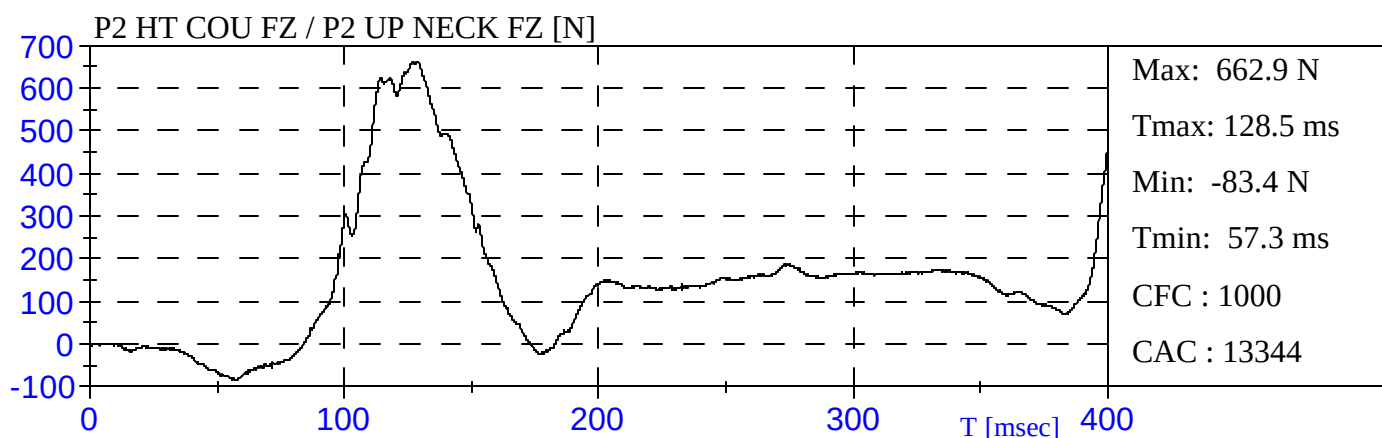
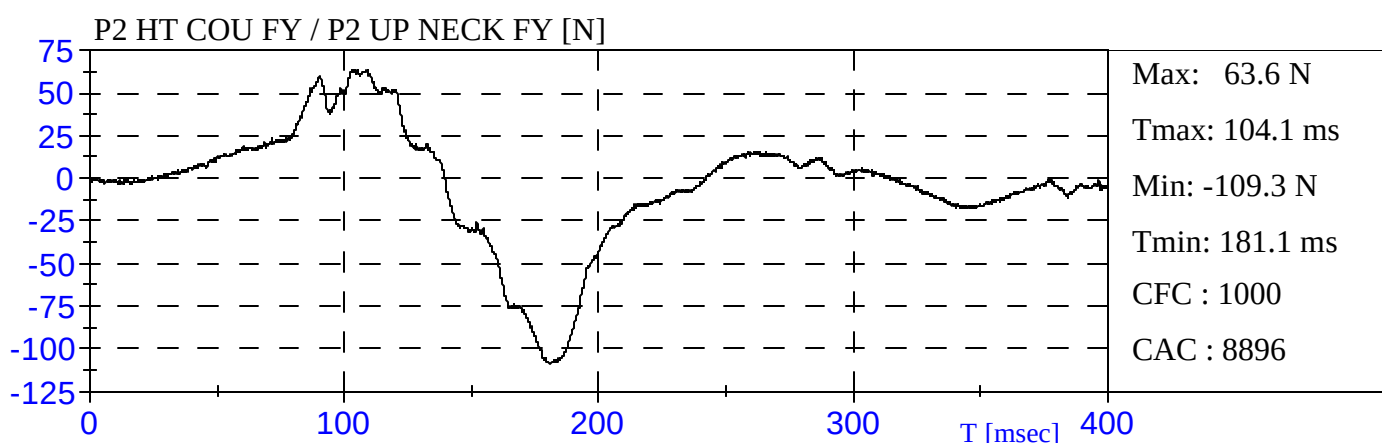
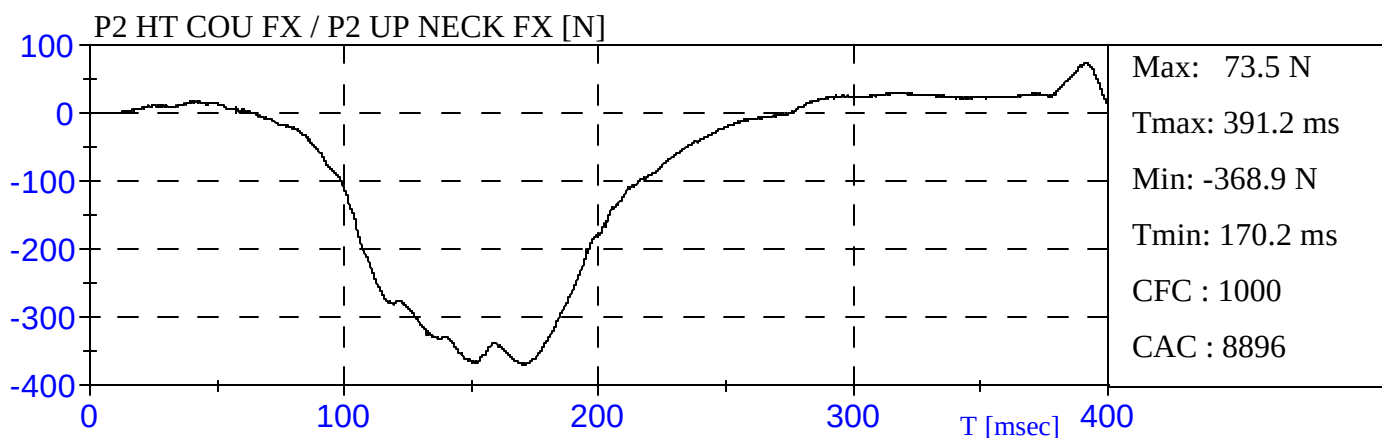


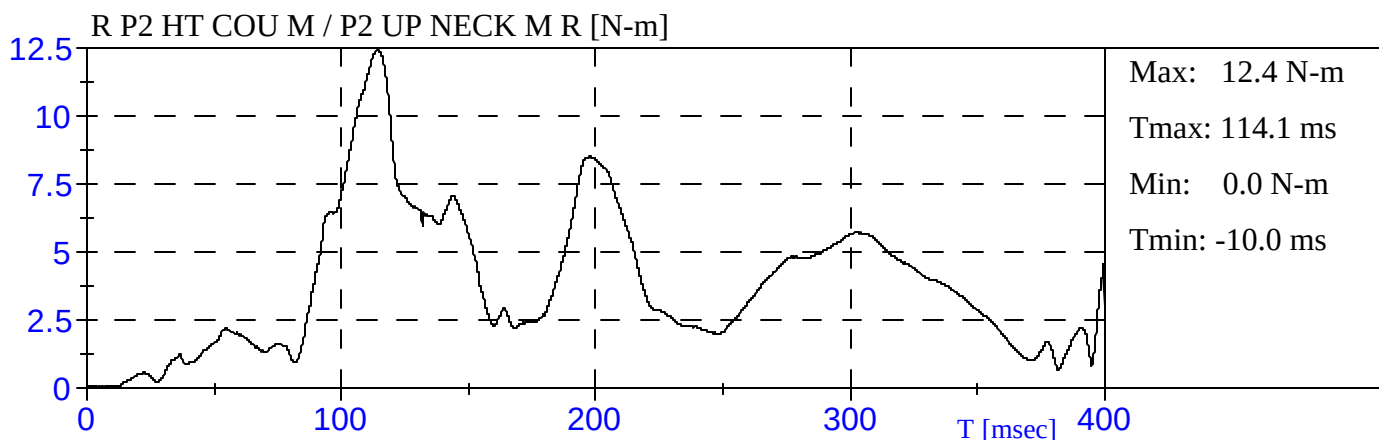
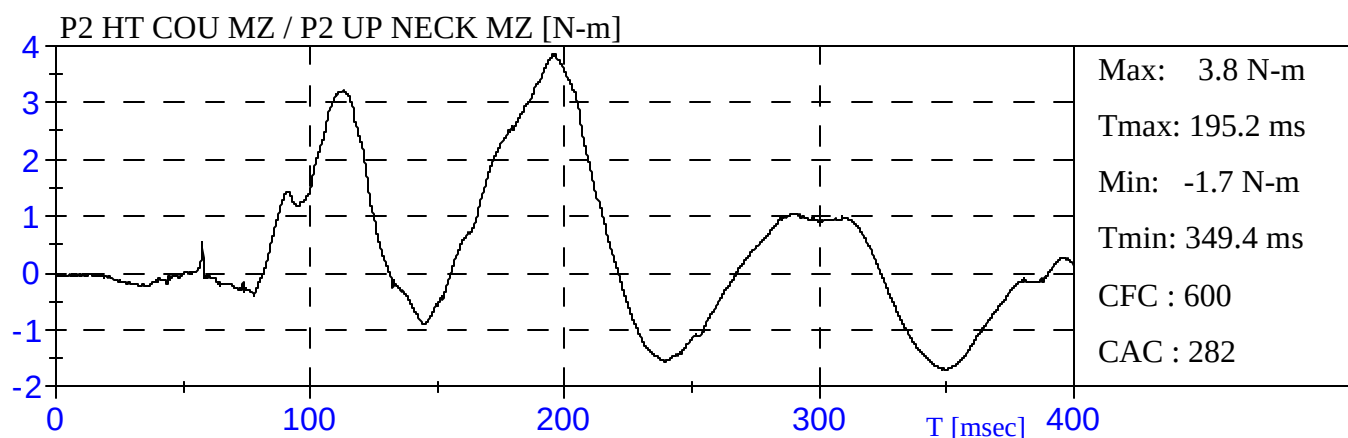
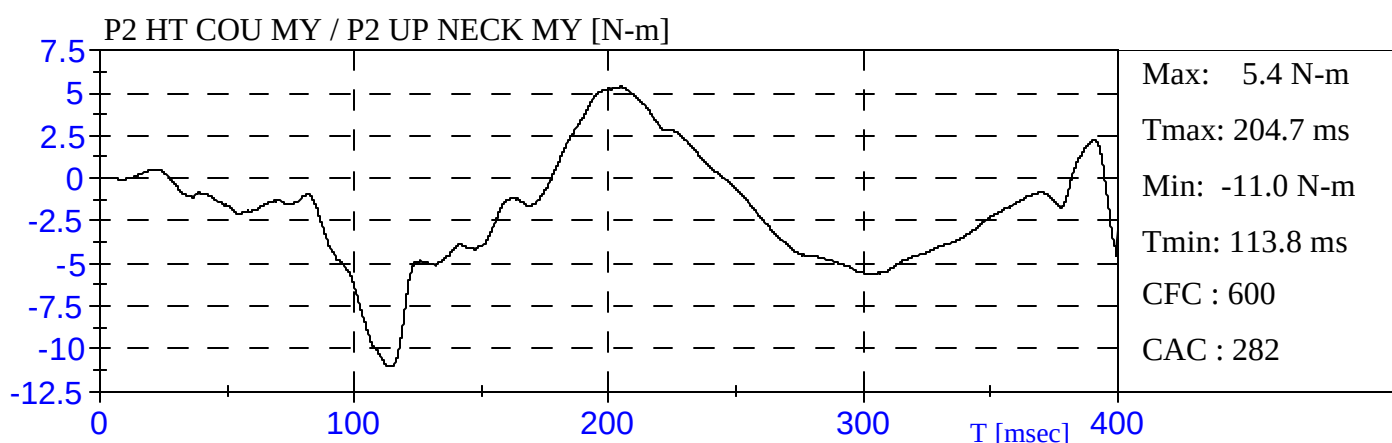
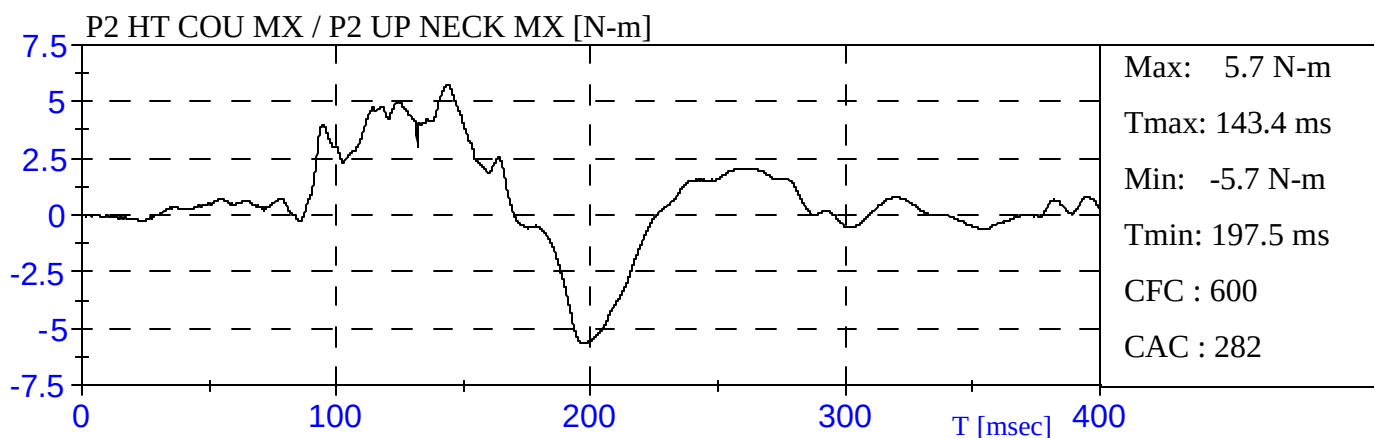


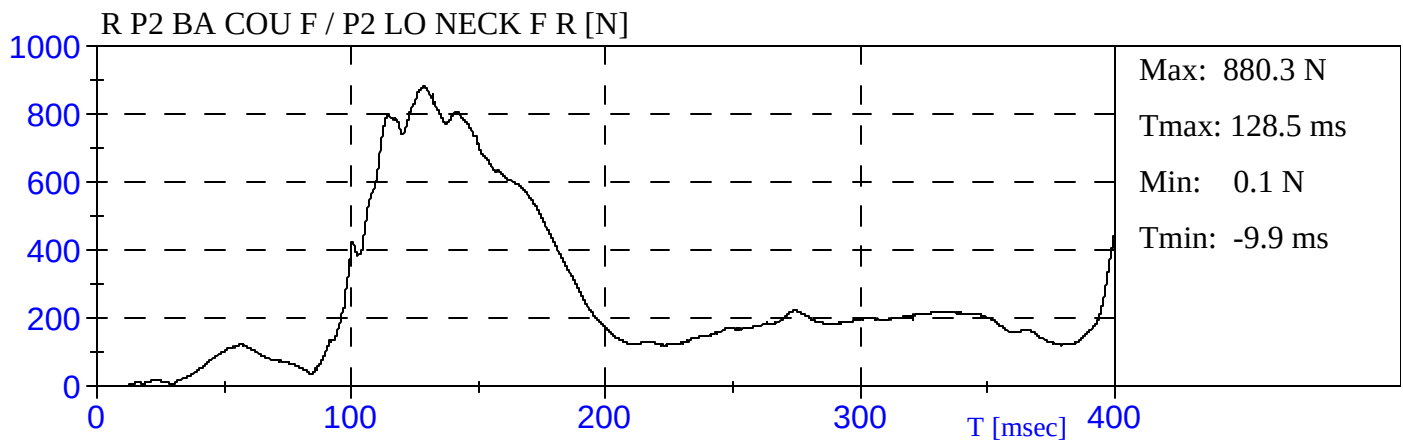
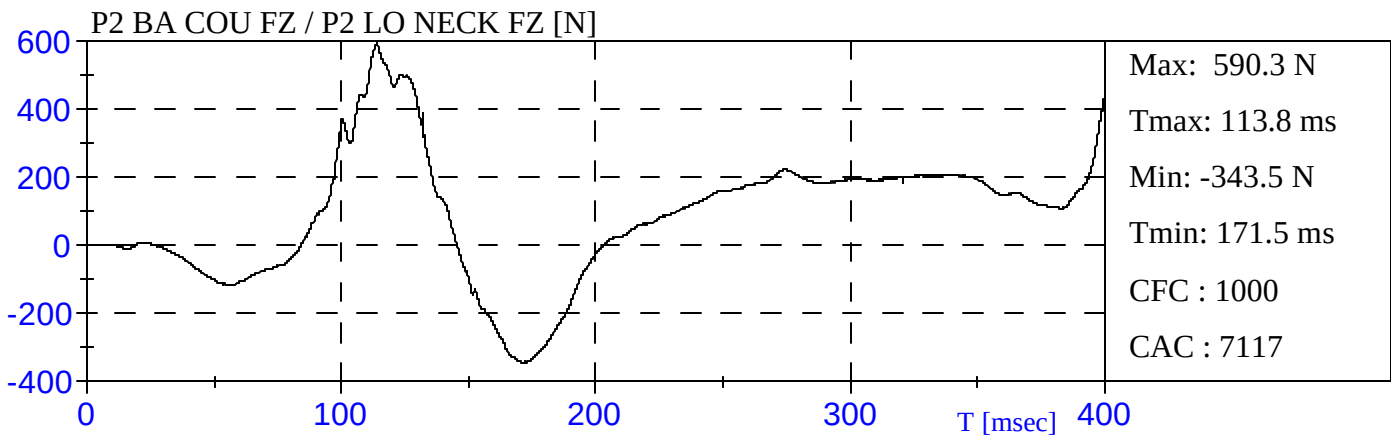
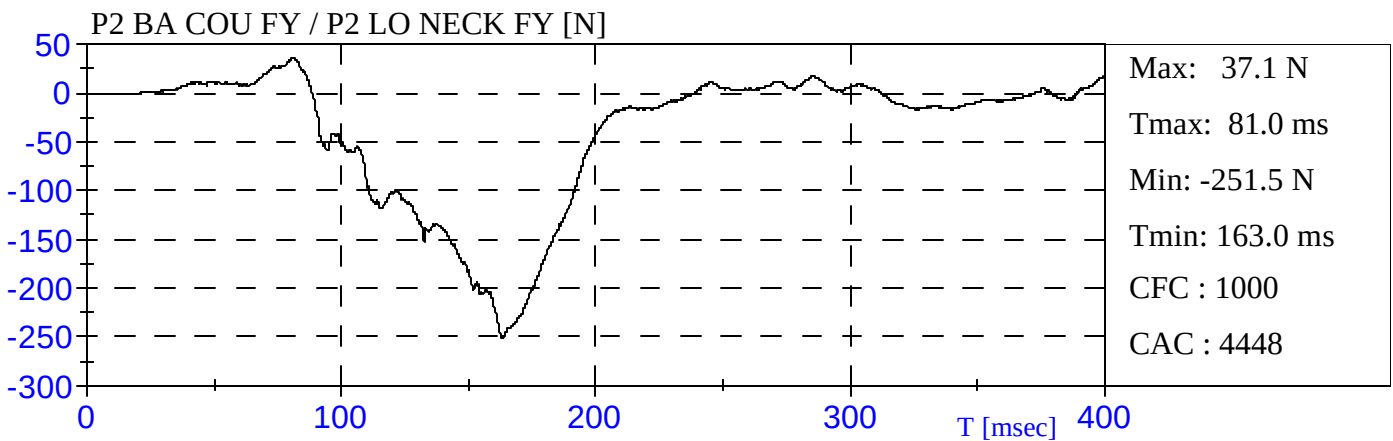
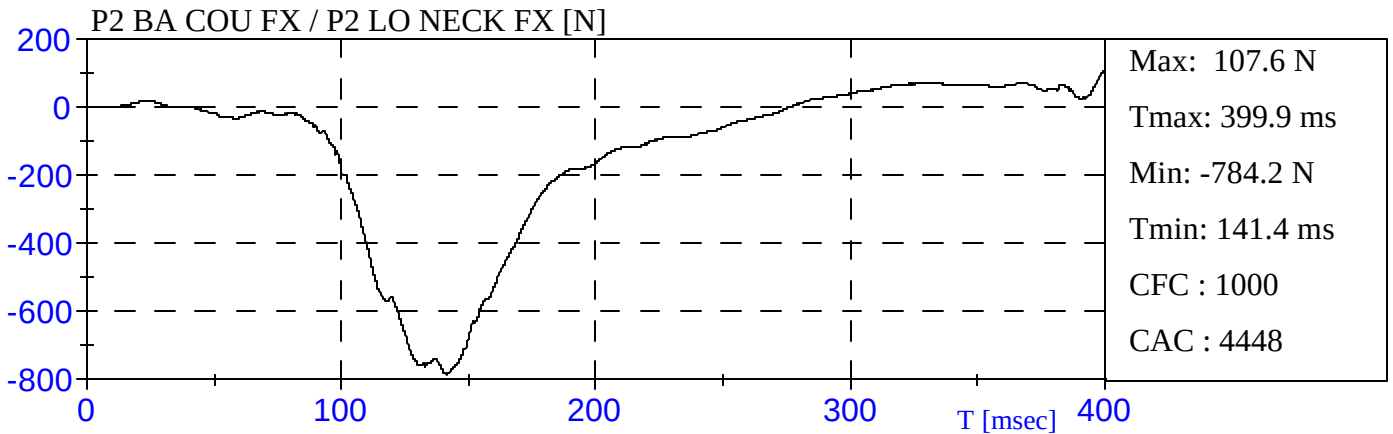


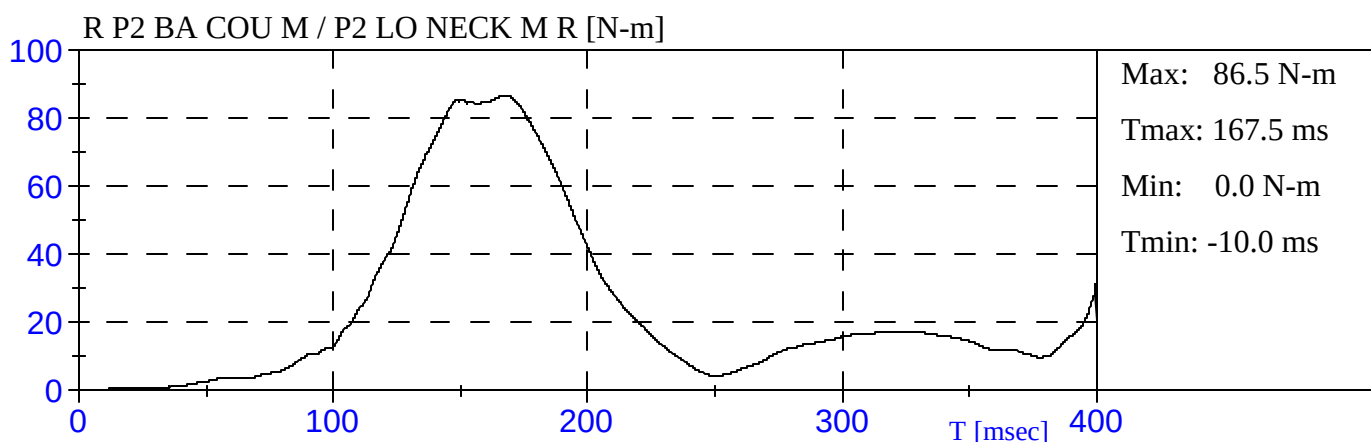
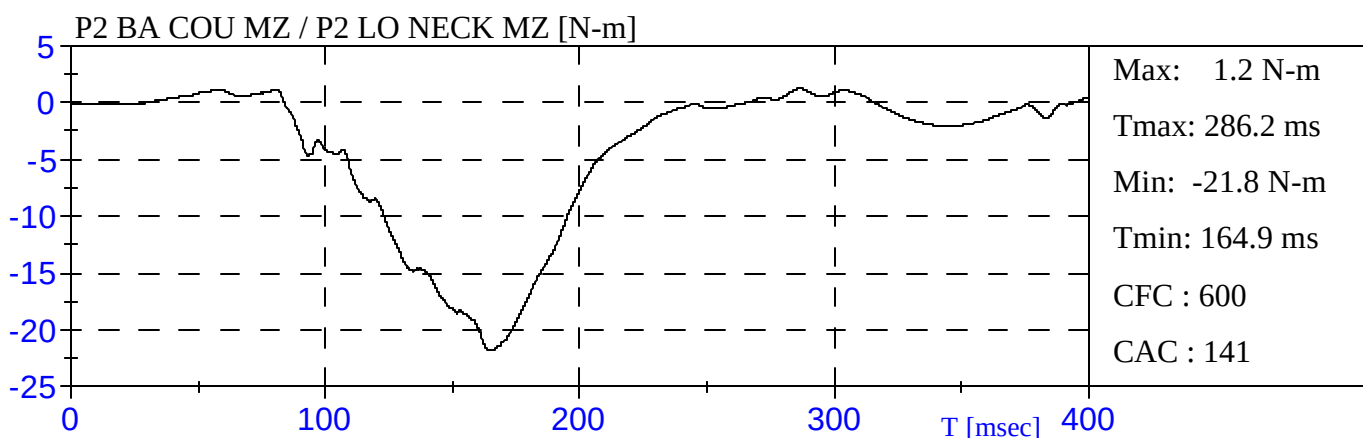
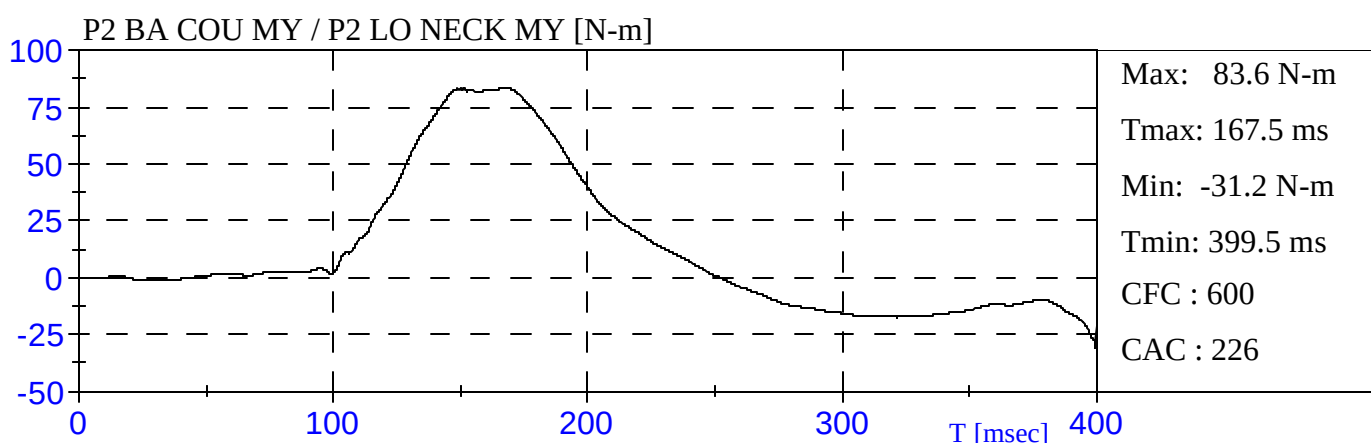
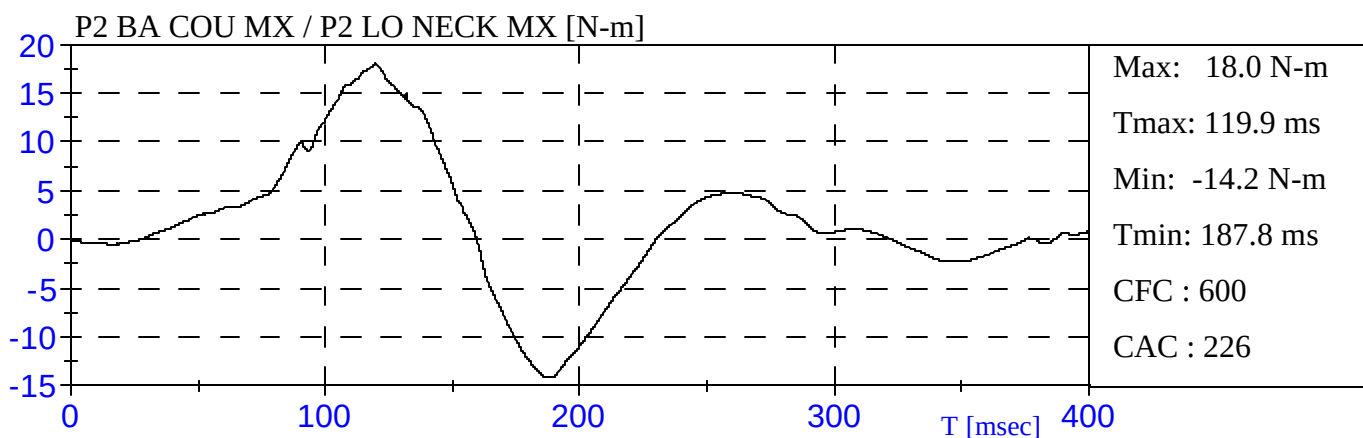


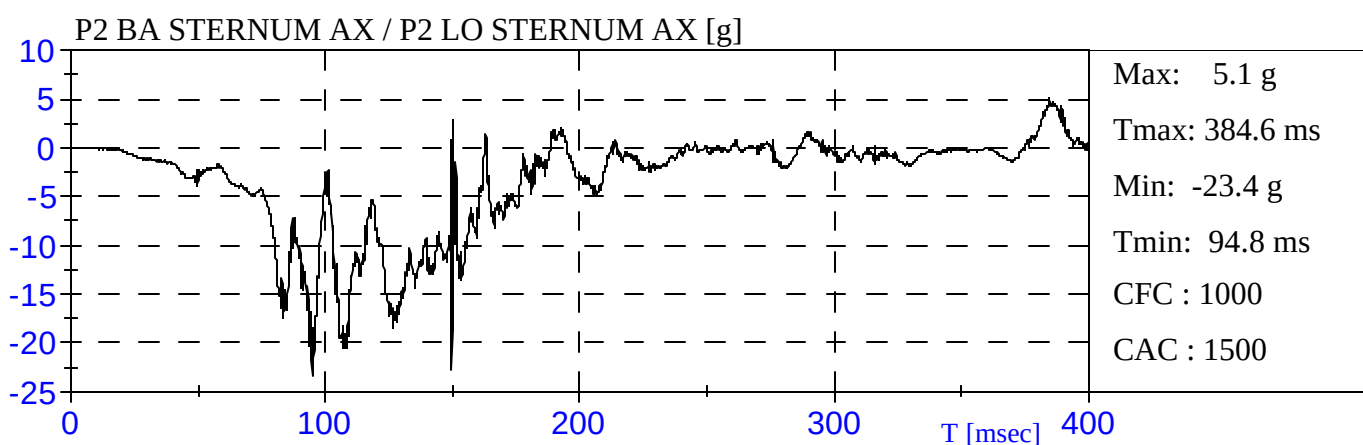
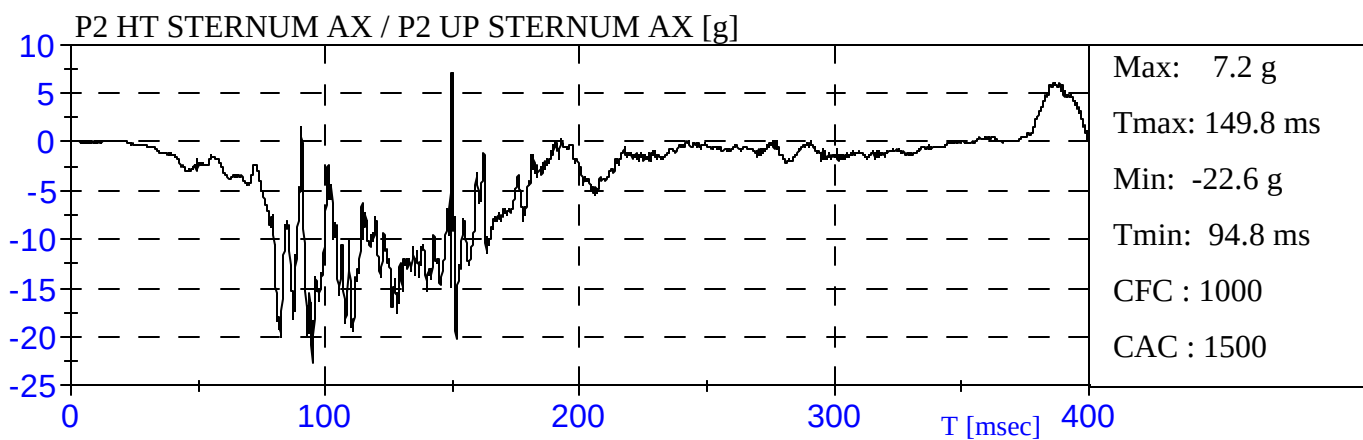




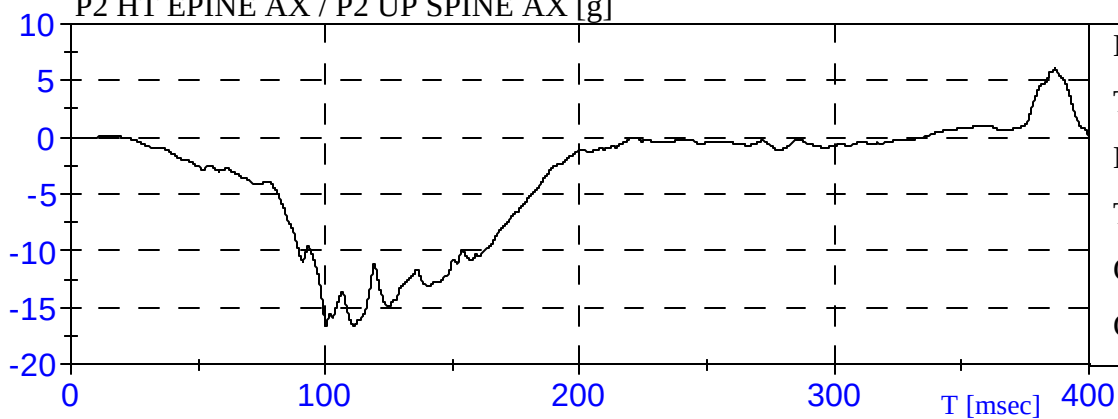






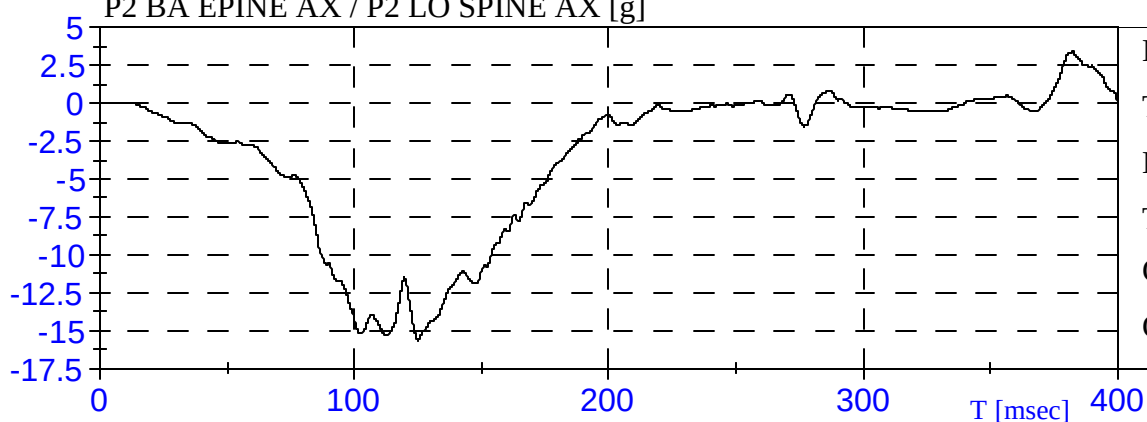


P2 HT EPINE AX / P2 UP SPINE AX [g]

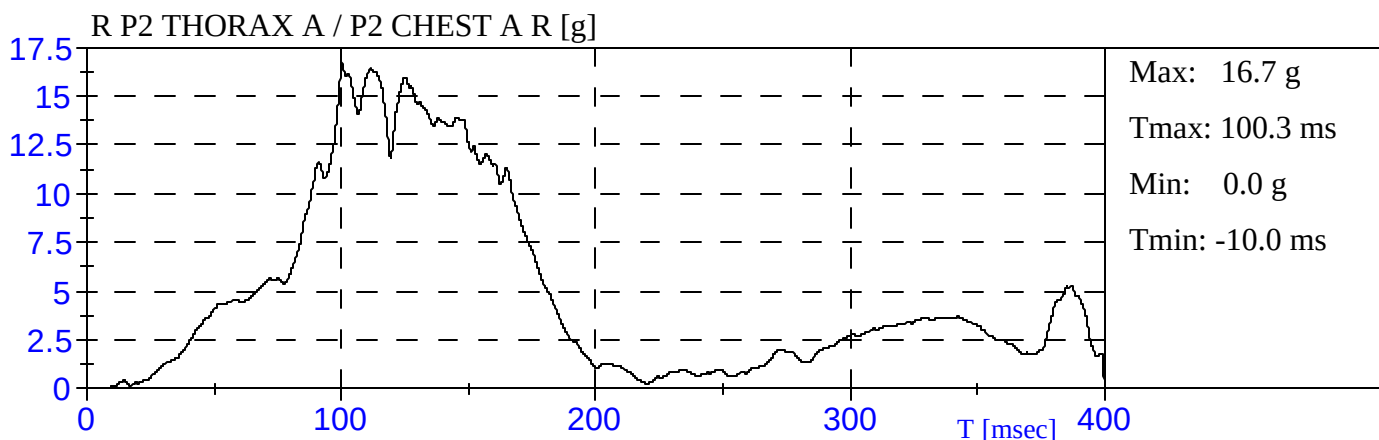
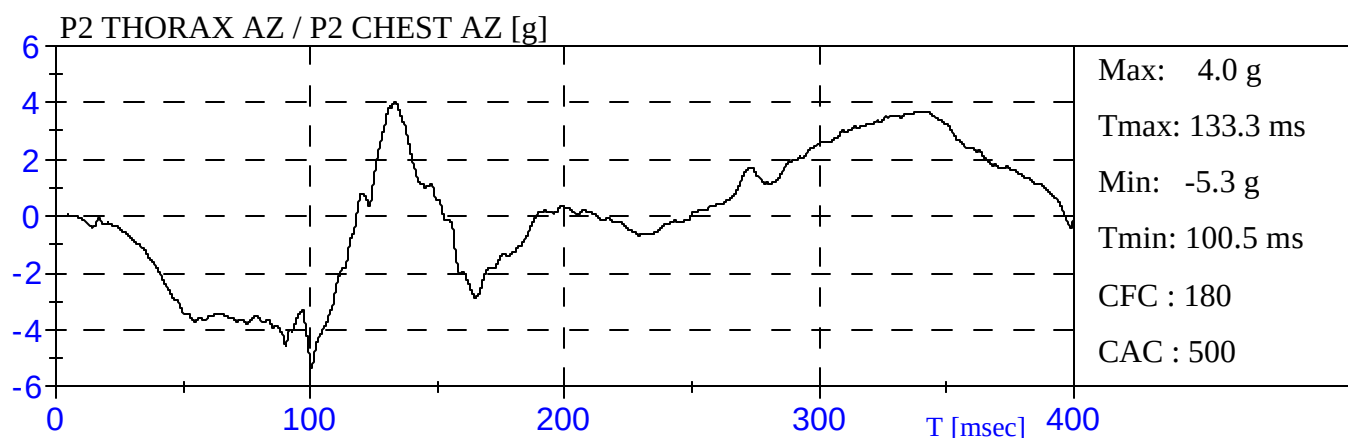
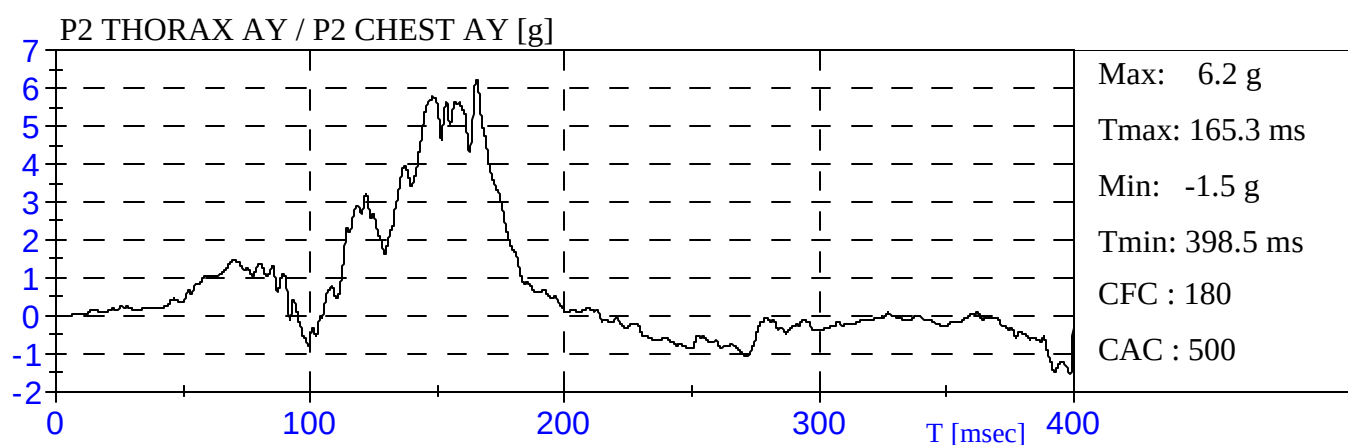
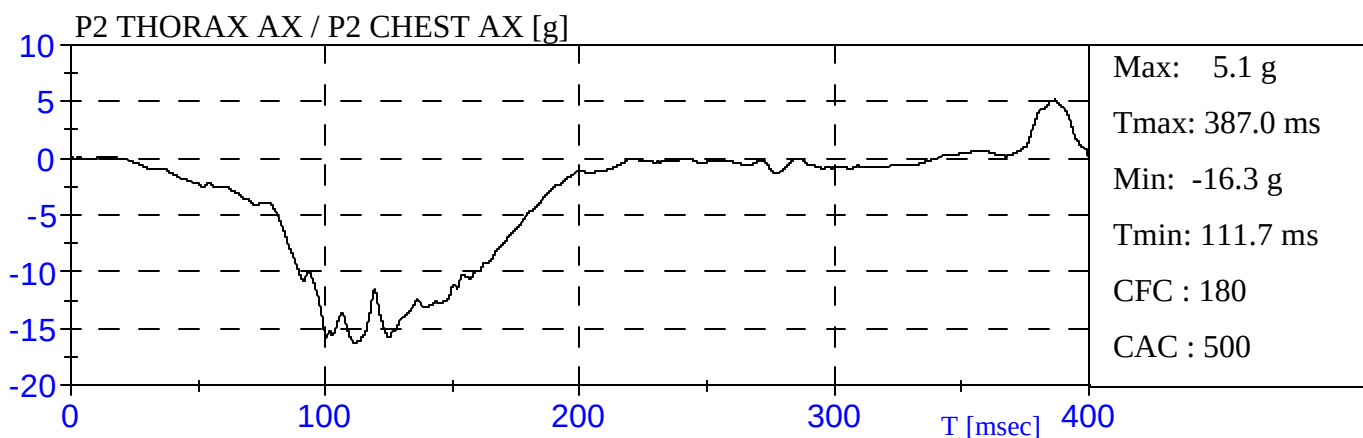


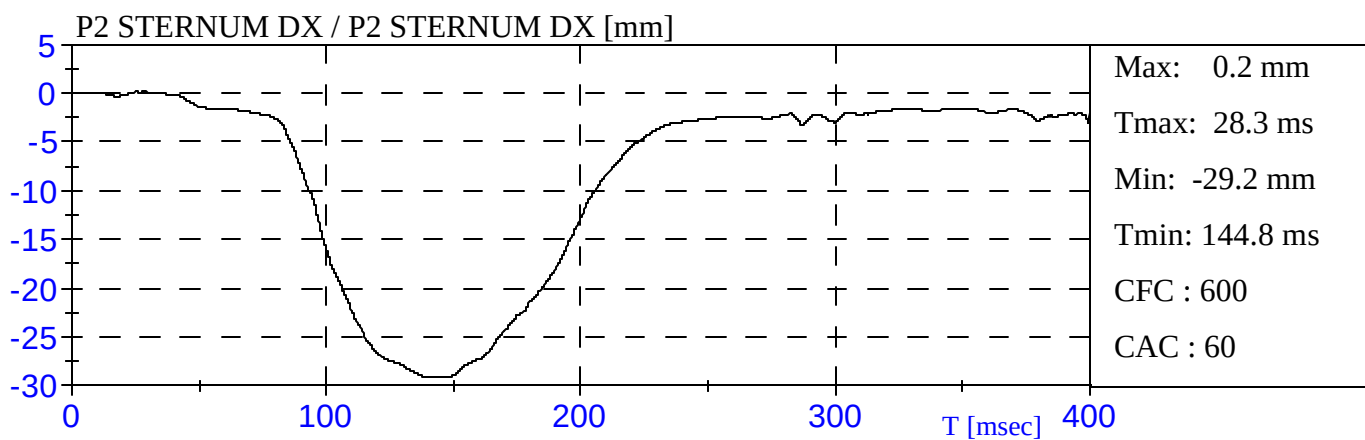
Max: 6.0 g
Tmax: 386.9 ms
Min: -16.6 g
Tmin: 100.2 ms
CFC : 180
CAC : 500

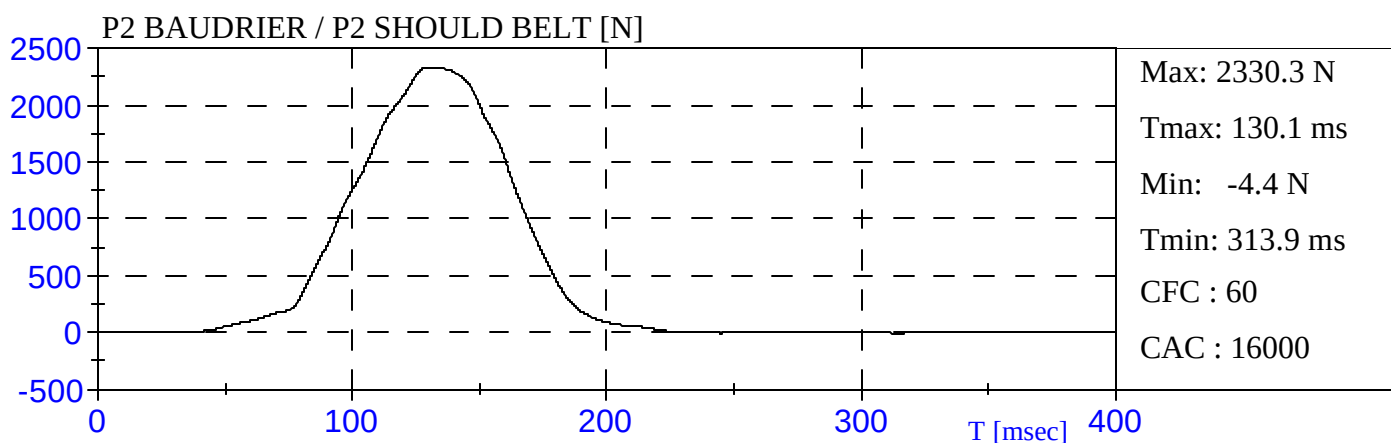
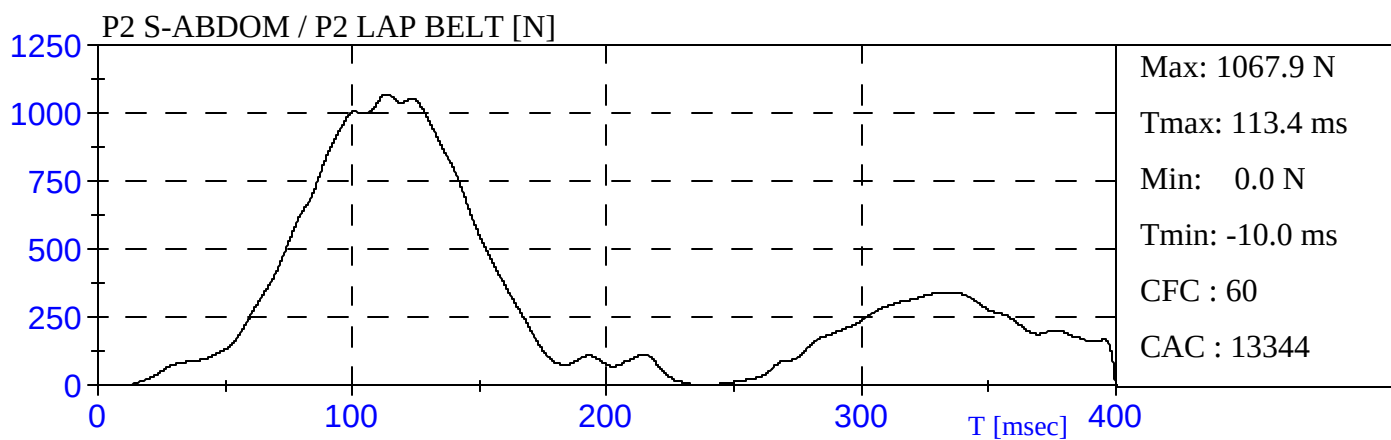
P2 BA EPINE AX / P2 LO SPINE AX [g]

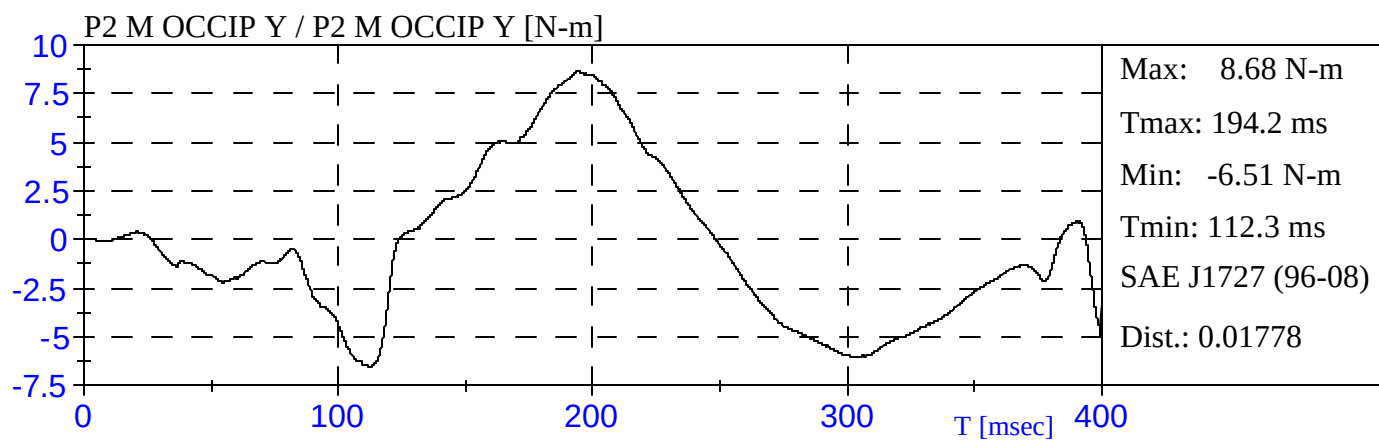


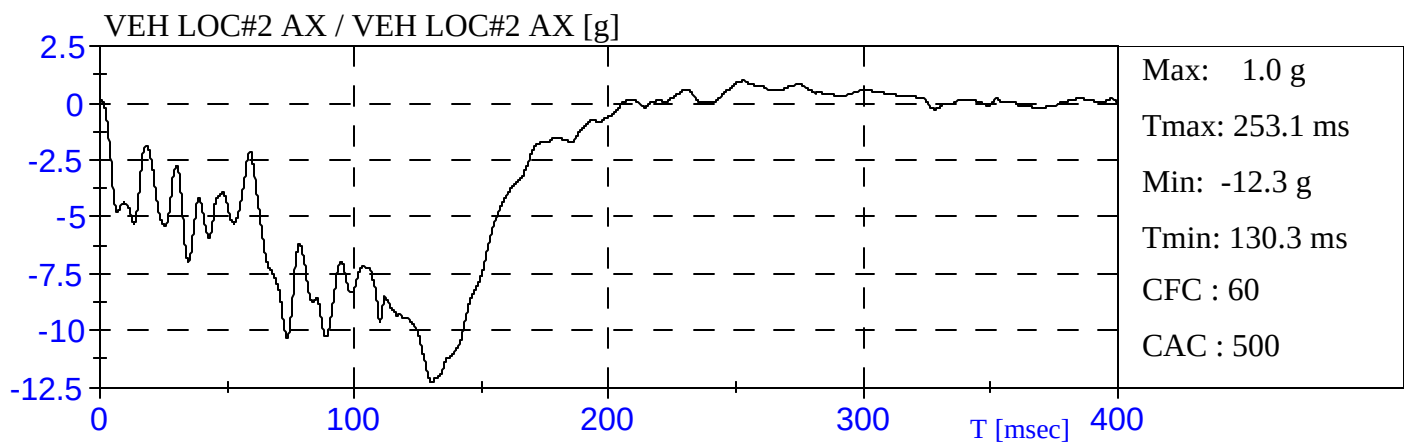
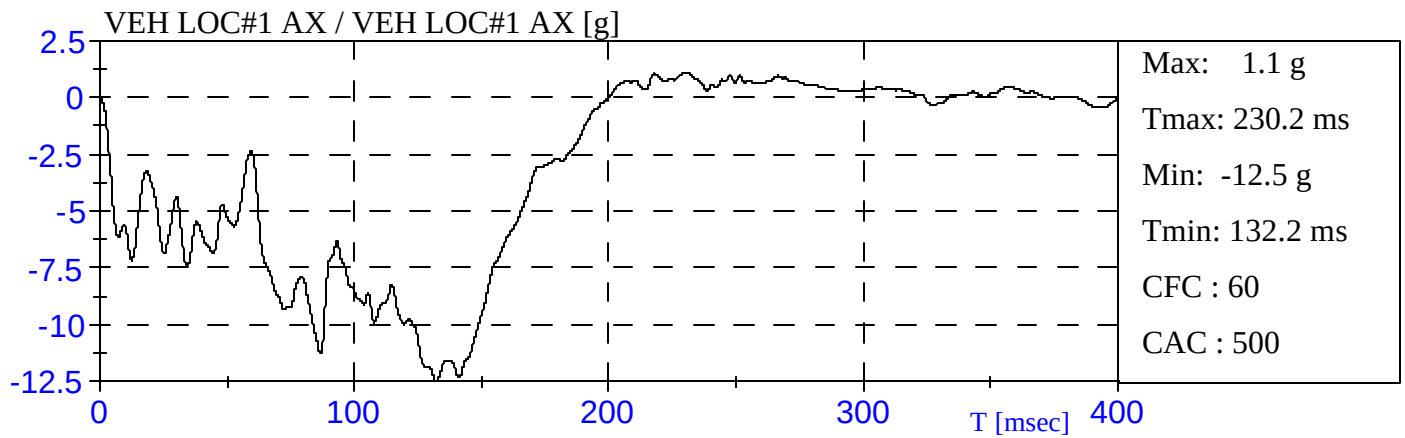
Max: 3.4 g
Tmax: 382.2 ms
Min: -15.6 g
Tmin: 125.0 ms
CFC : 180
CAC : 500

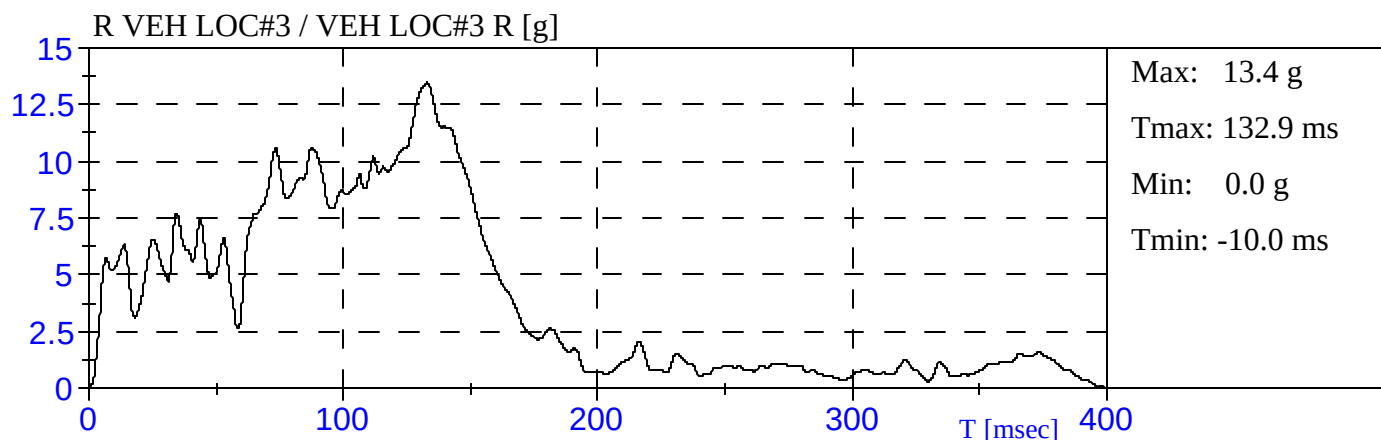
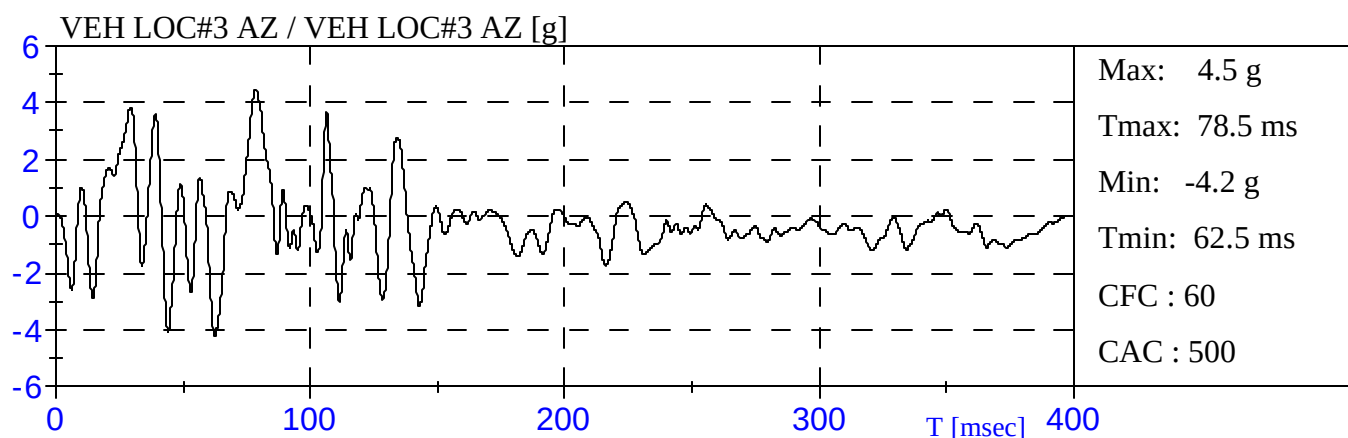
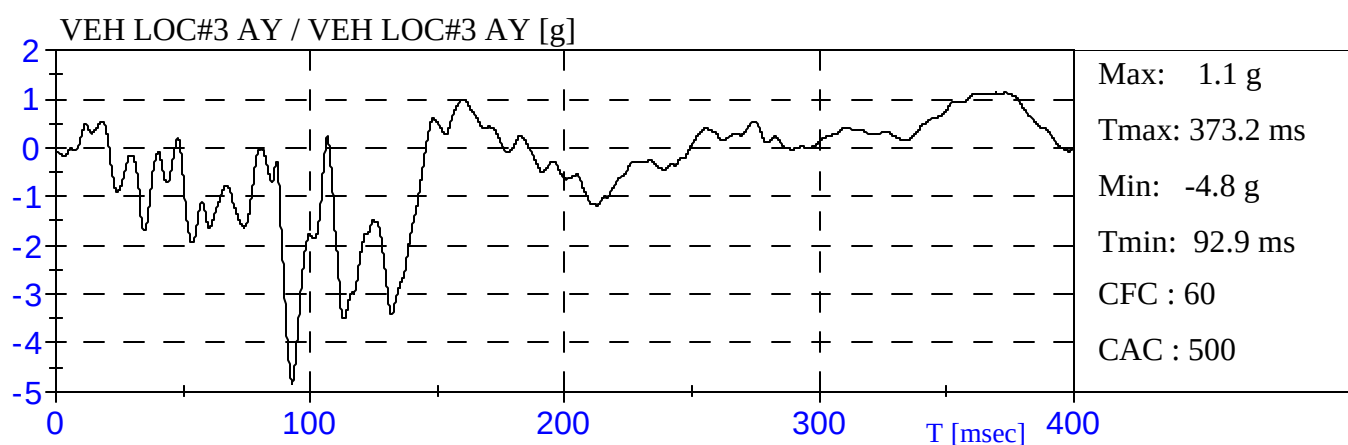
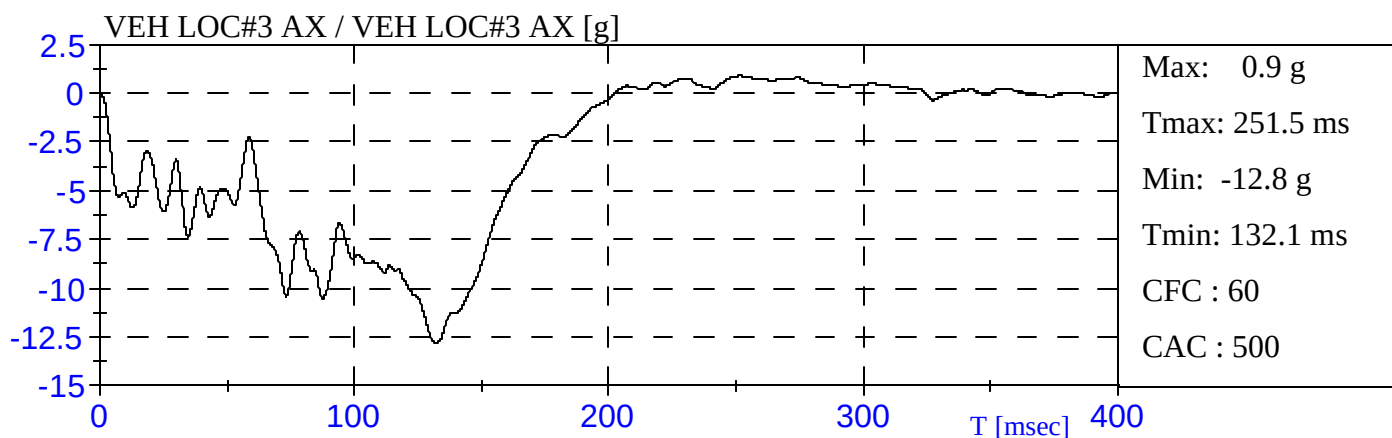


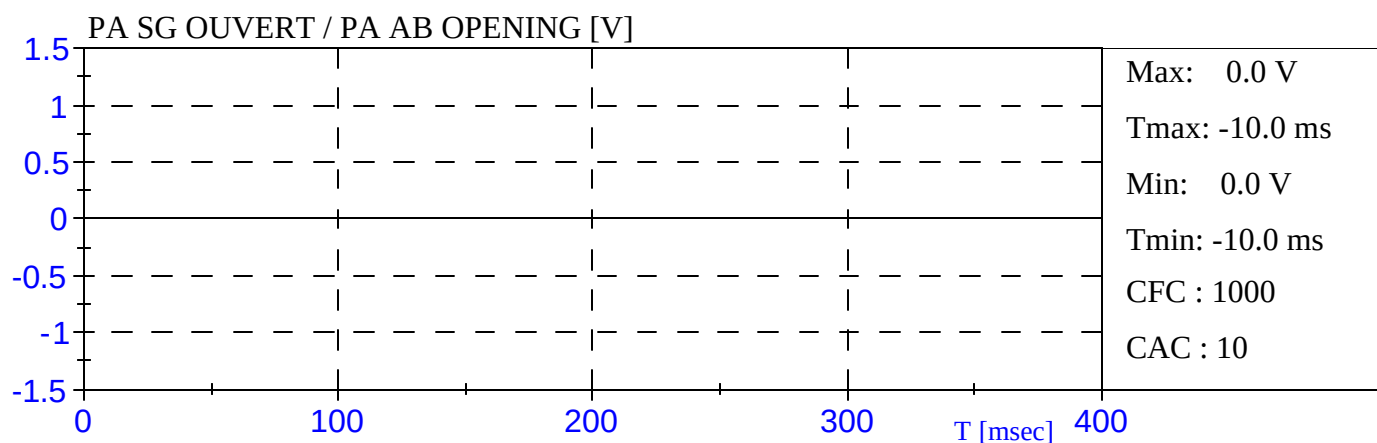
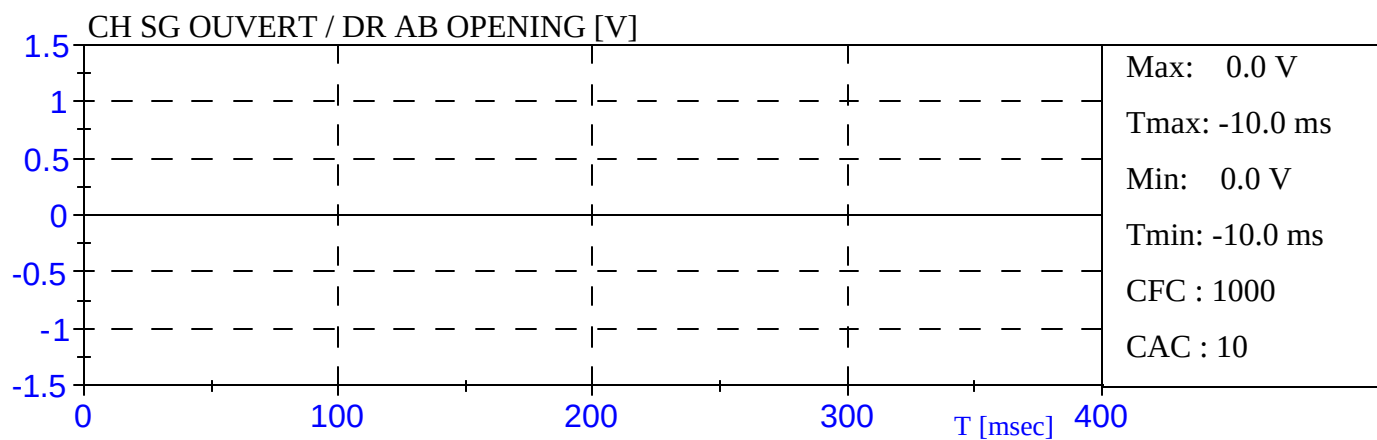


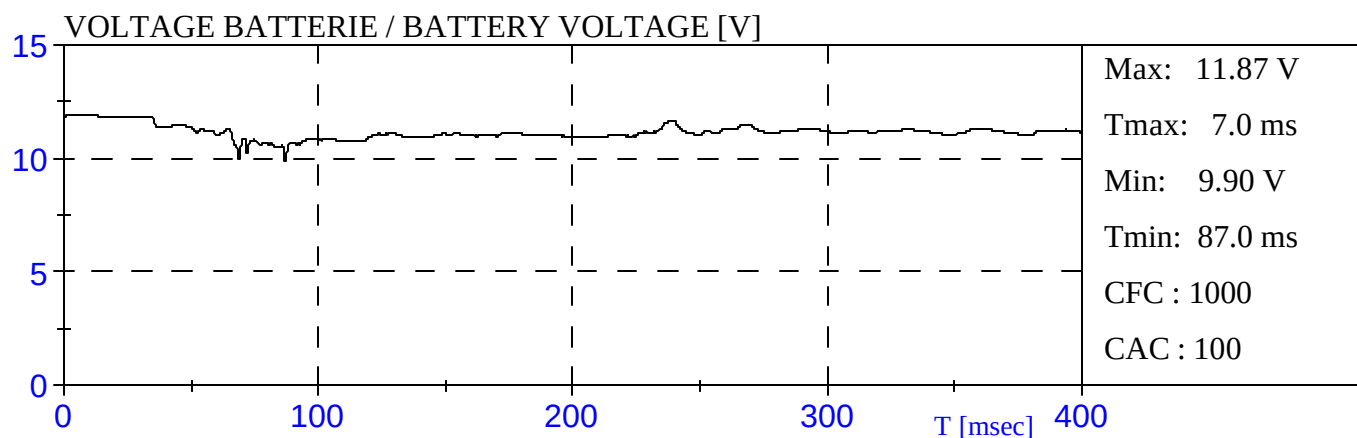


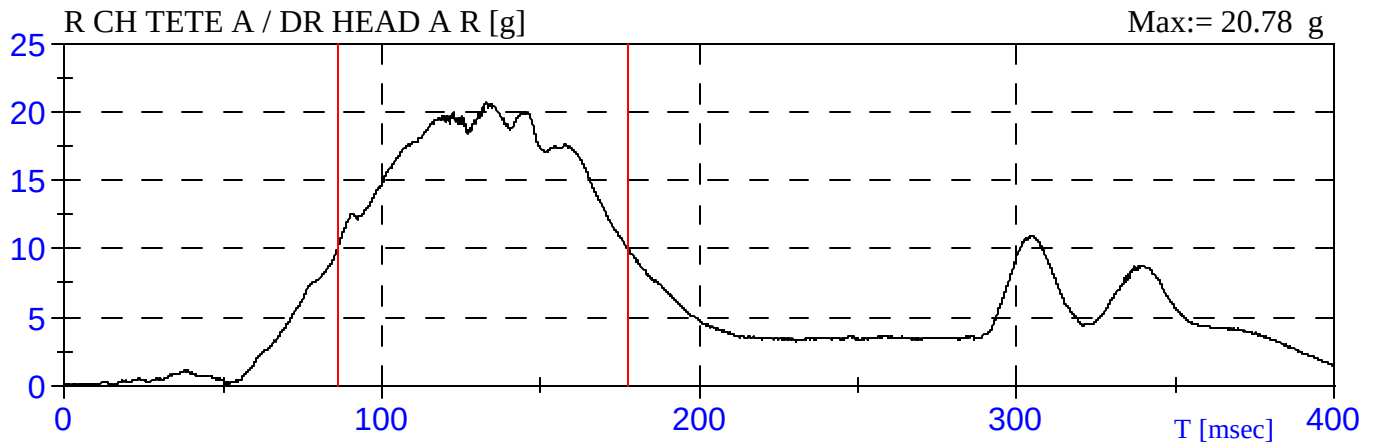








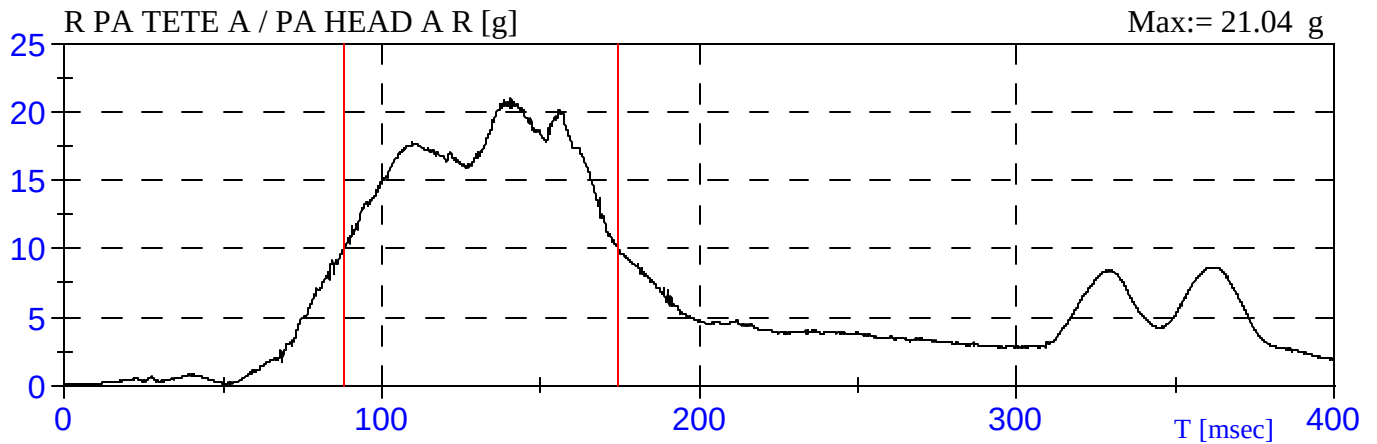




HEAD INJURY CRITERIA (HIC) *
CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 104	HIC(36ms):= 60	HIC(15ms):= 26
T1:= 85.9 ms	T1:= 112.4 ms	T1:= 131.2 ms
T2:= 177.3 ms	T2:= 148.4 ms	T2:= 146.2 ms

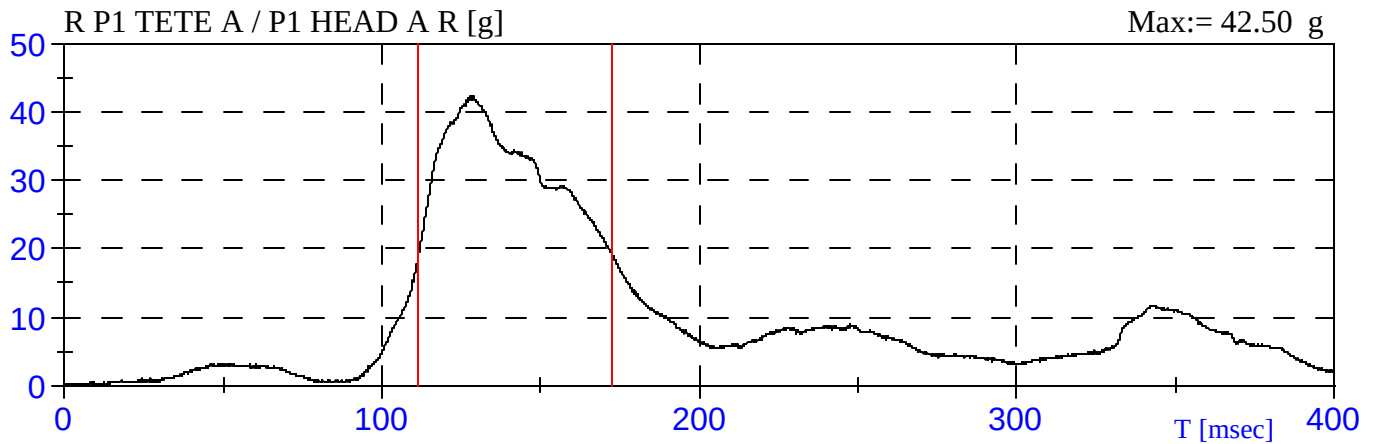
* Selon / According To: SAE J1727 96-08



HEAD INJURY CRITERIA (HIC) *
CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 96	HIC(36ms):= 55	HIC(15ms):= 26
T1:= 87.7 ms	T1:= 128.1 ms	T1:= 134.0 ms
T2:= 174.3 ms	T2:= 164.1 ms	T2:= 149.0 ms

* Selon / According To: SAE J1727 96-08



HEAD INJURY CRITERIA (HIC) *

CRITÈRE DE BLESSURE DE LA TÊTE

HIC:= 350	HIC(36ms):= 285	HIC(15ms):= 152
T1:= 111.6 ms	T1:= 115.2 ms	T1:= 120.0 ms
T2:= 172.3 ms	T2:= 151.2 ms	T2:= 135.0 ms

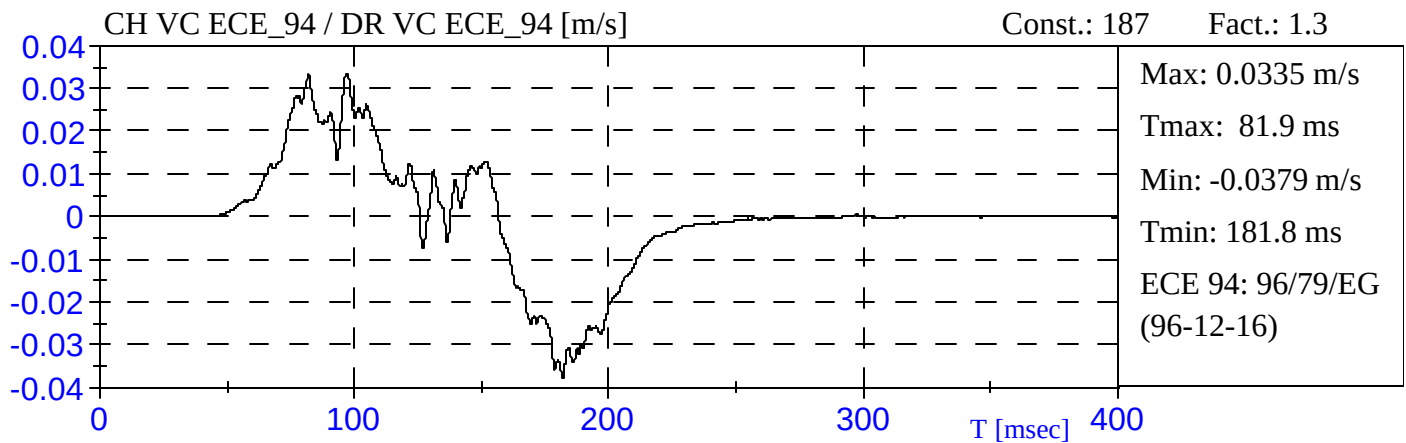
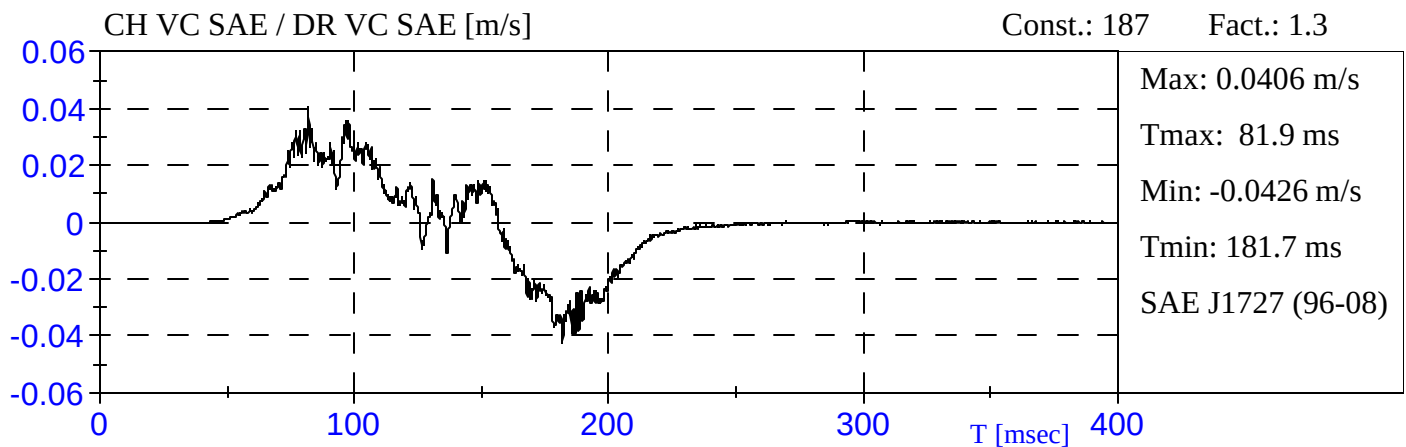
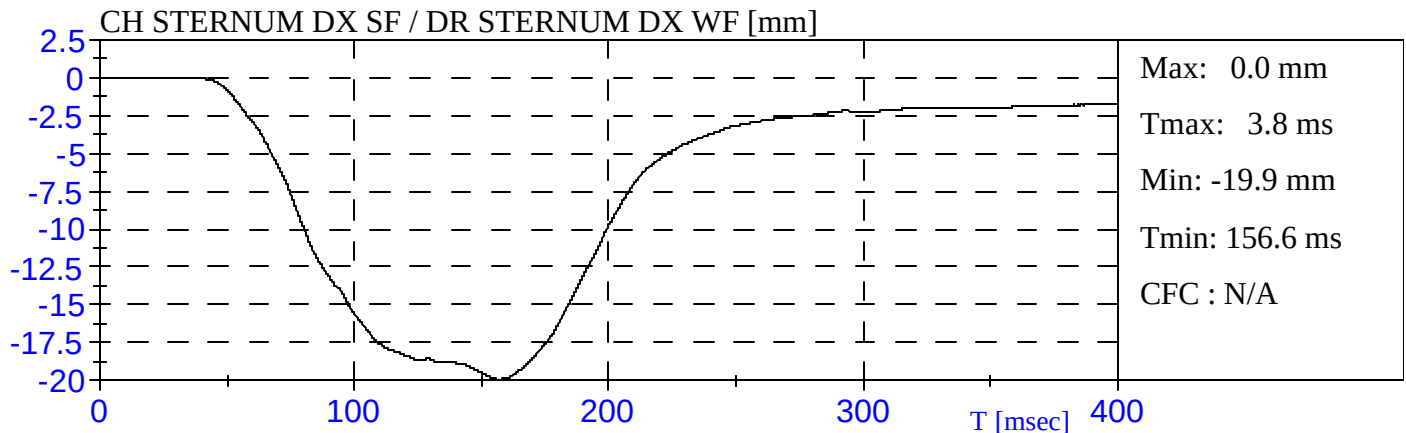
* Selon / According To: SAE J1727 96-08

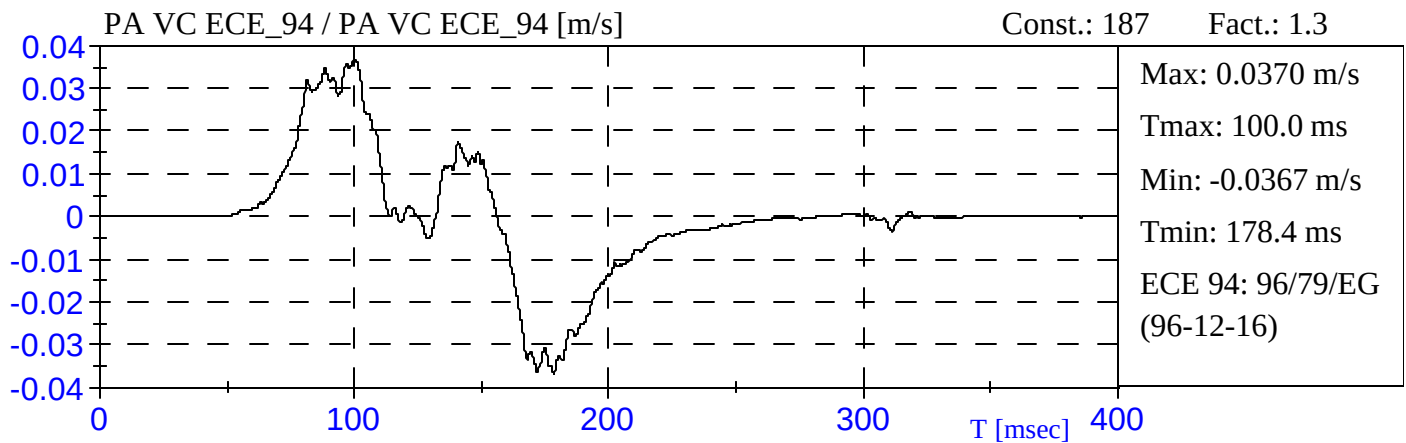
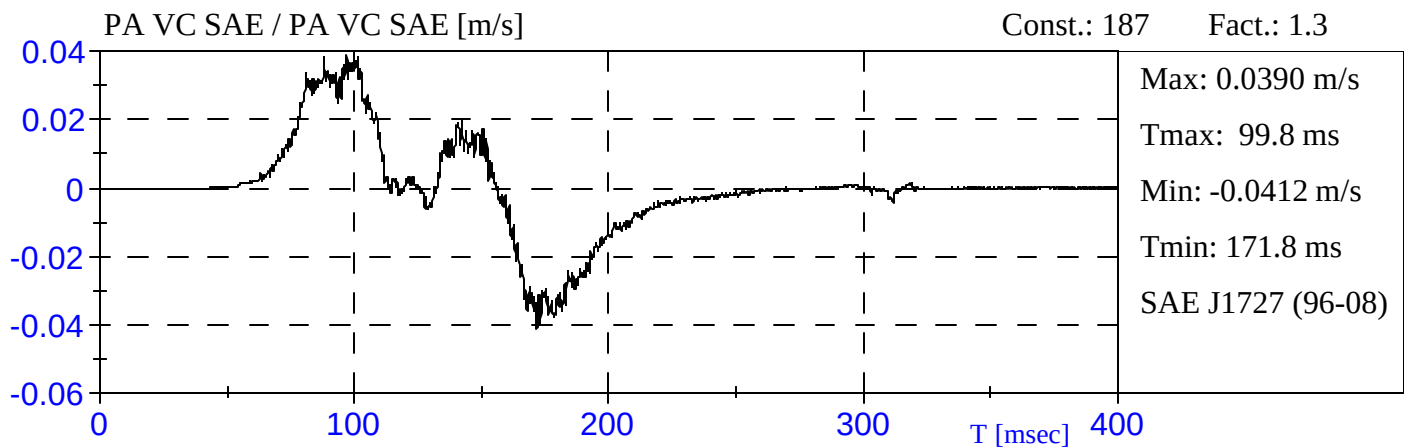
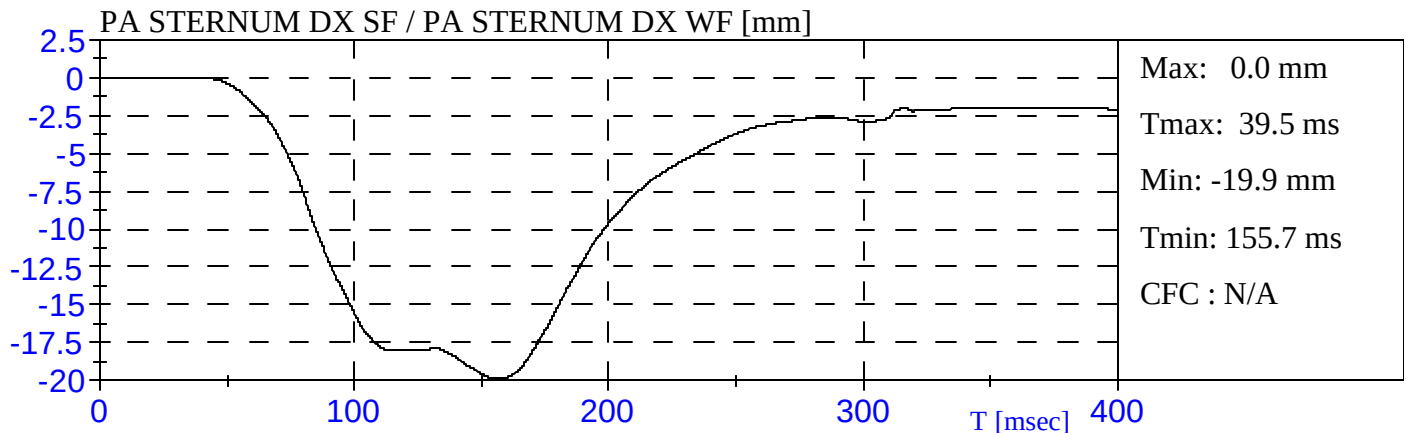


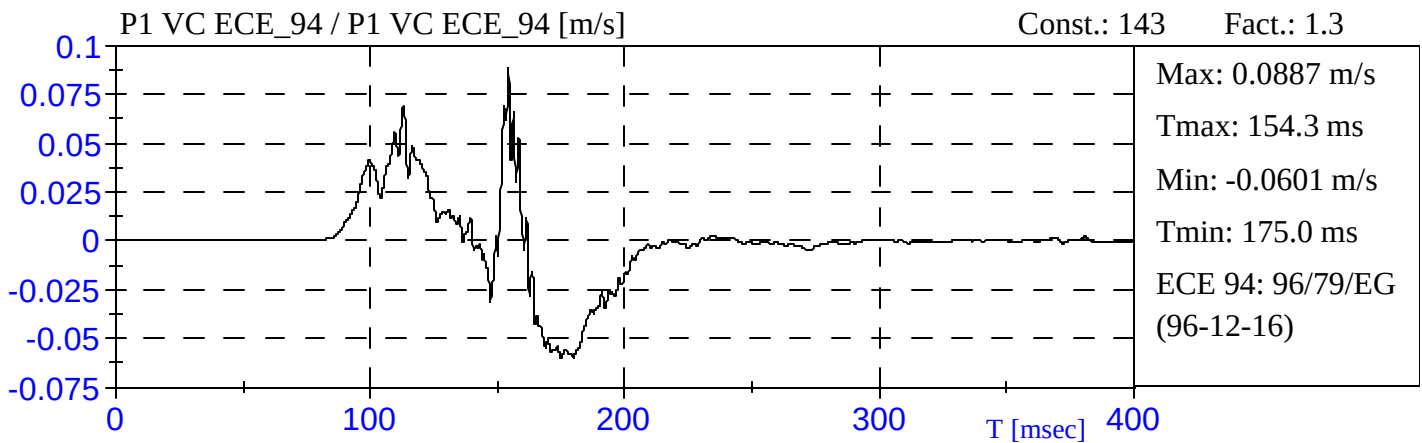
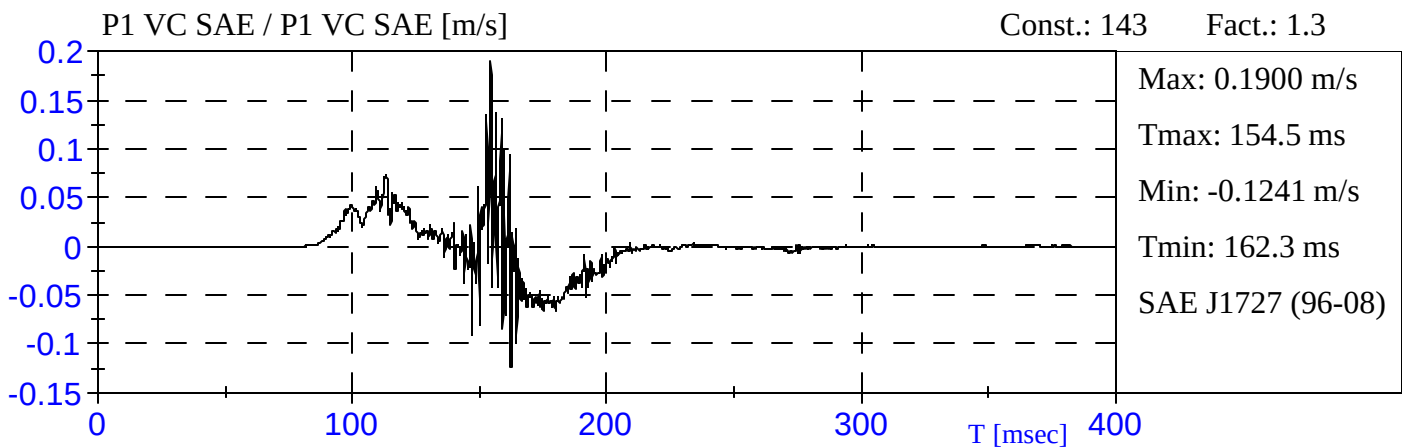
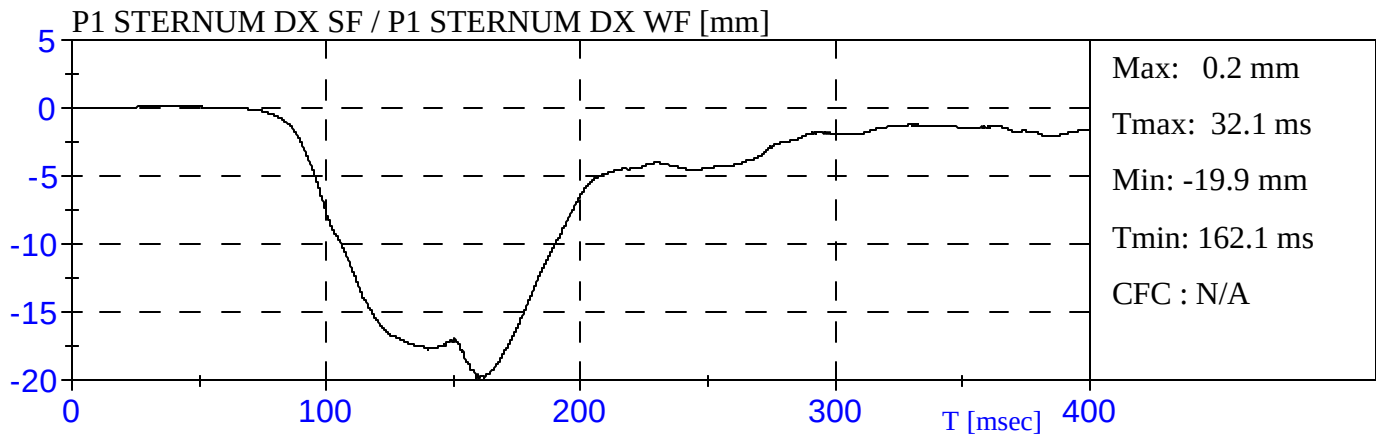
HEAD INJURY CRITERIA (HIC) *
CRITÈRE DE BLESSURE DE LA TÊTE

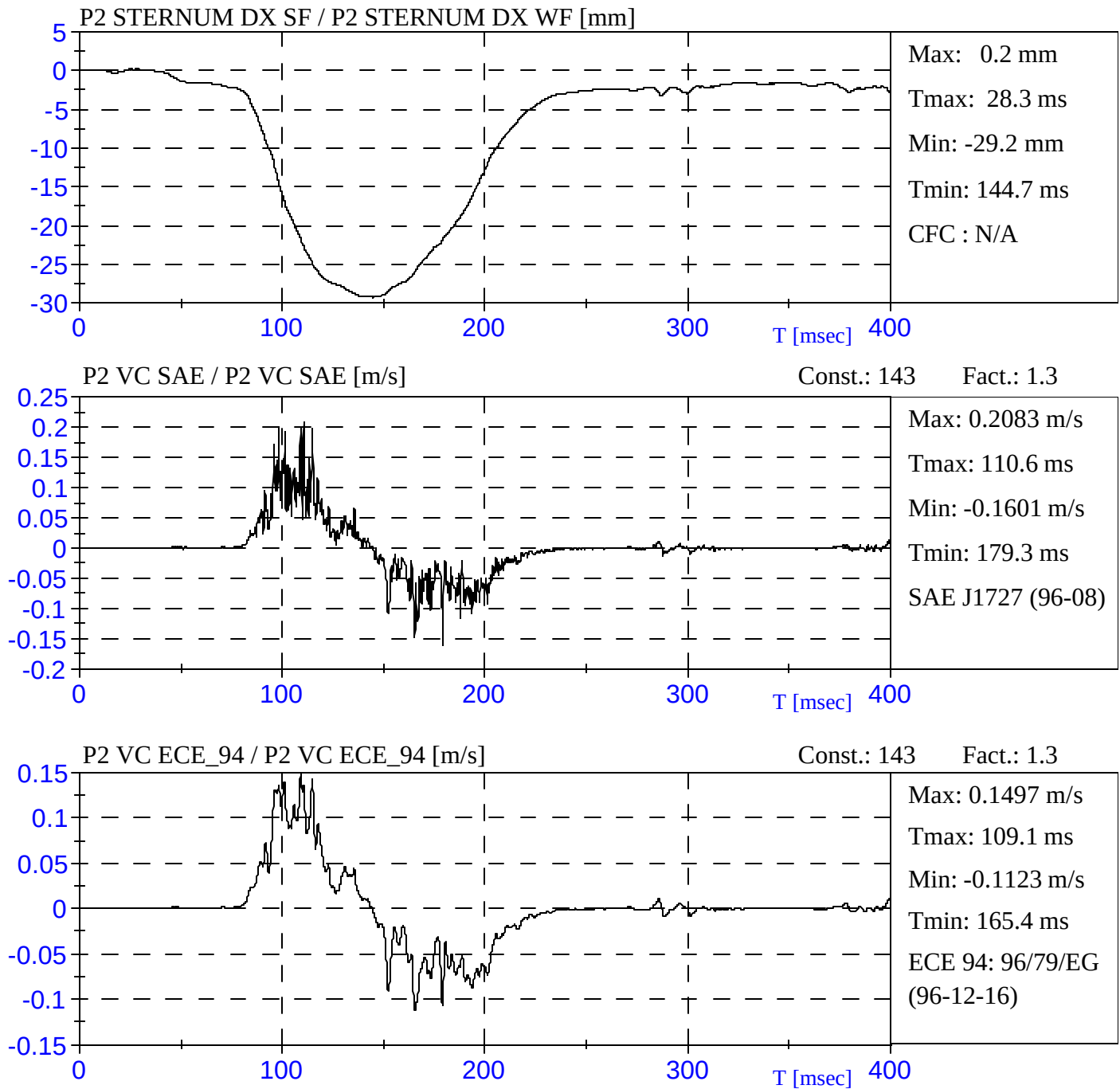
HIC:= 159	HIC(36ms):= 118	HIC(15ms):= 56
T1:= 105.4 ms	T1:= 114.4 ms	T1:= 125.0 ms
T2:= 180.9 ms	T2:= 150.4 ms	T2:= 140.0 ms

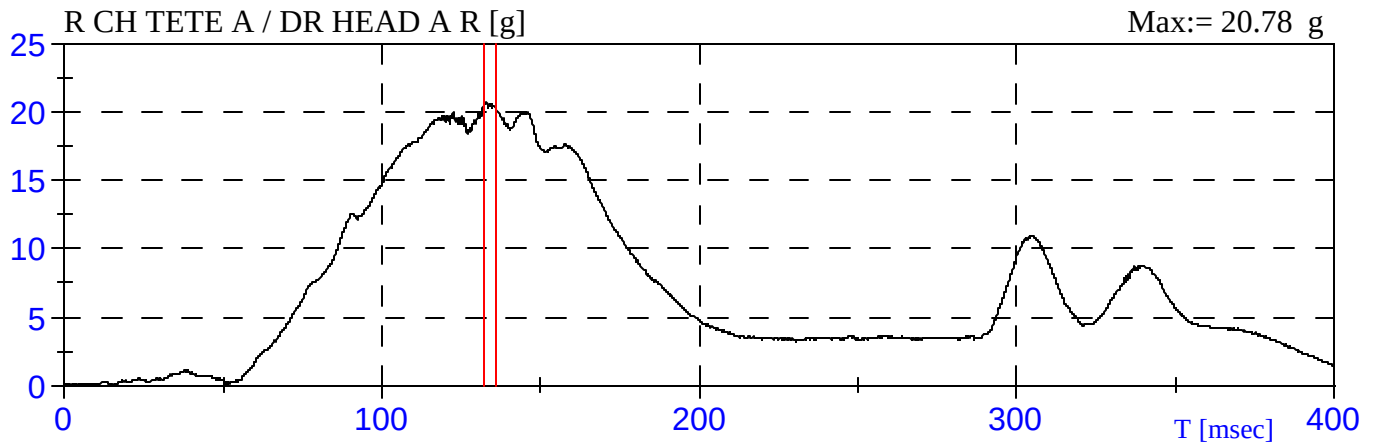
* Selon / According To: SAE J1727 96-08





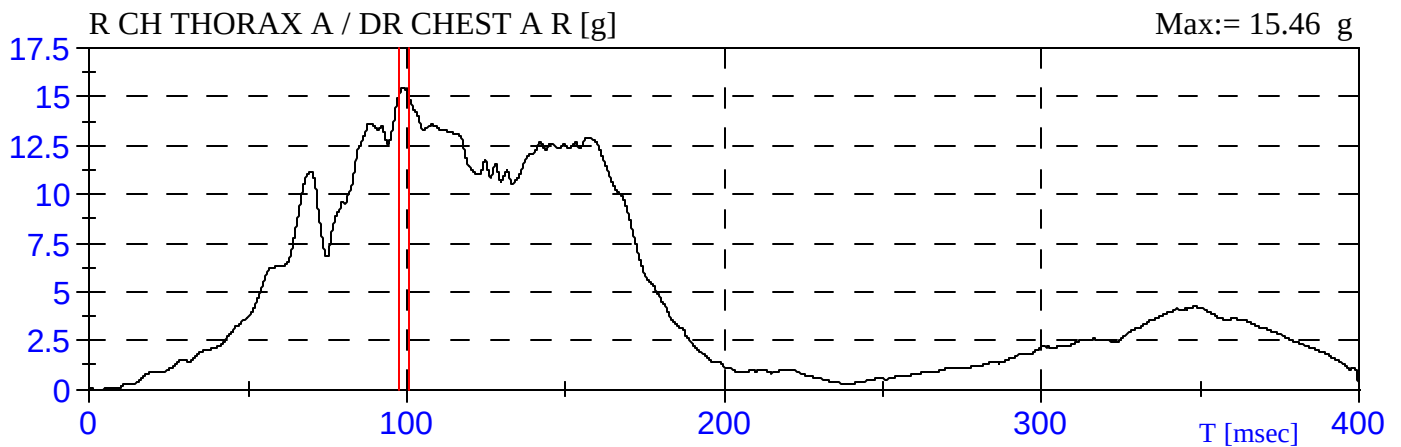






CLIP 3ms *

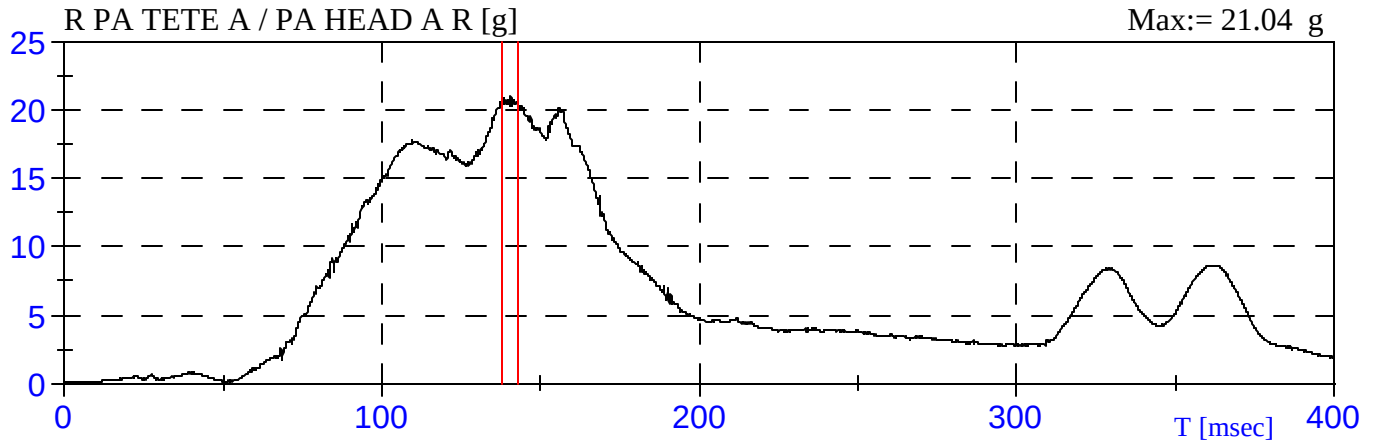
Acc. := 20.31 g	T1:= 132.3 ms	T2:= 135.6 ms
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CLIP 3ms *

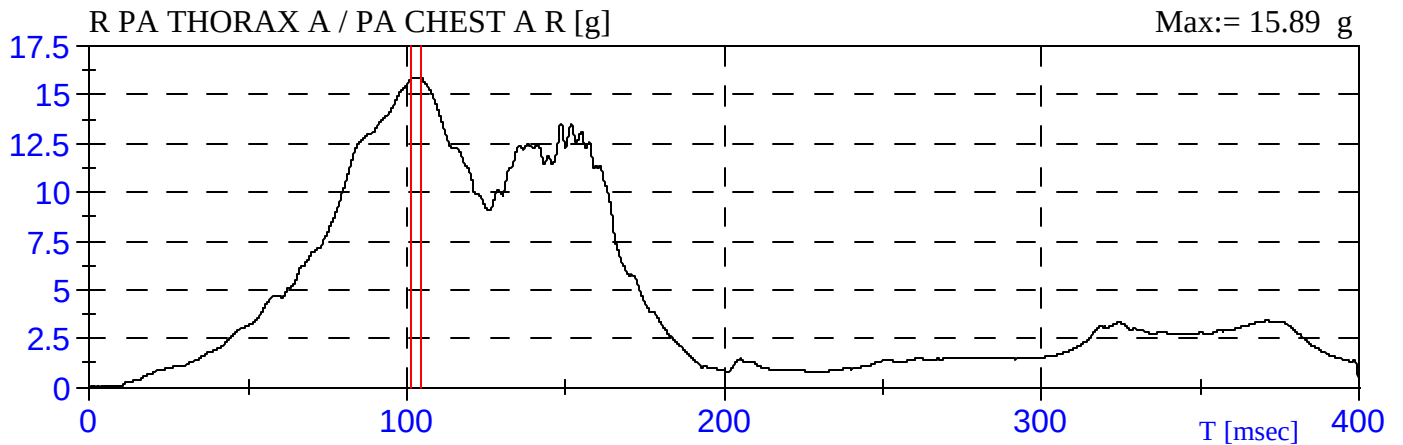
Acc. := 15.05 g	T1:= 97.6 ms	T2:= 100.6 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95



CLIP 3ms *

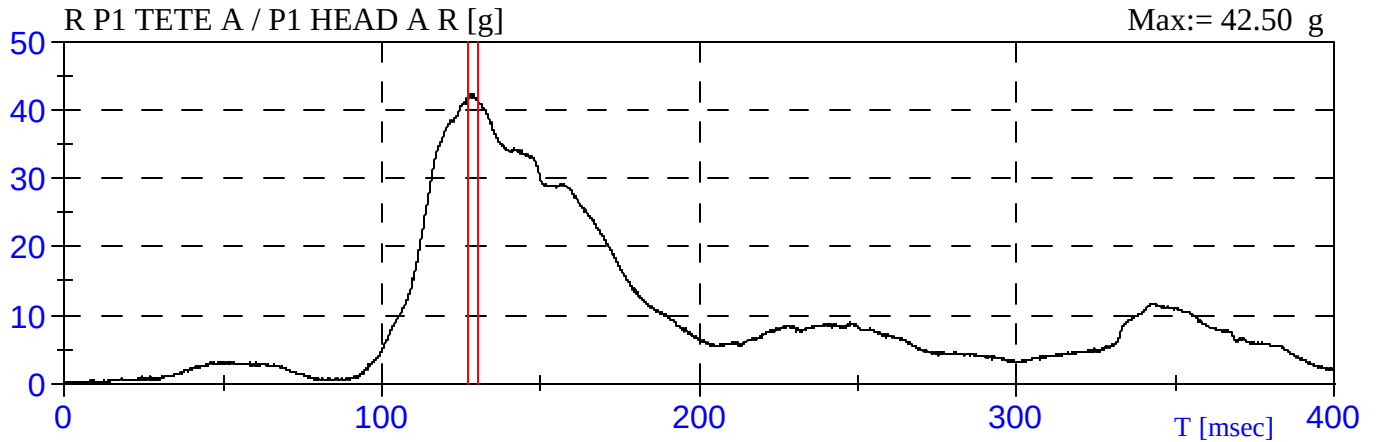
Acc. := 20.28 g	T1:= 137.9 ms	T2:= 143.1 ms
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CLIP 3ms *

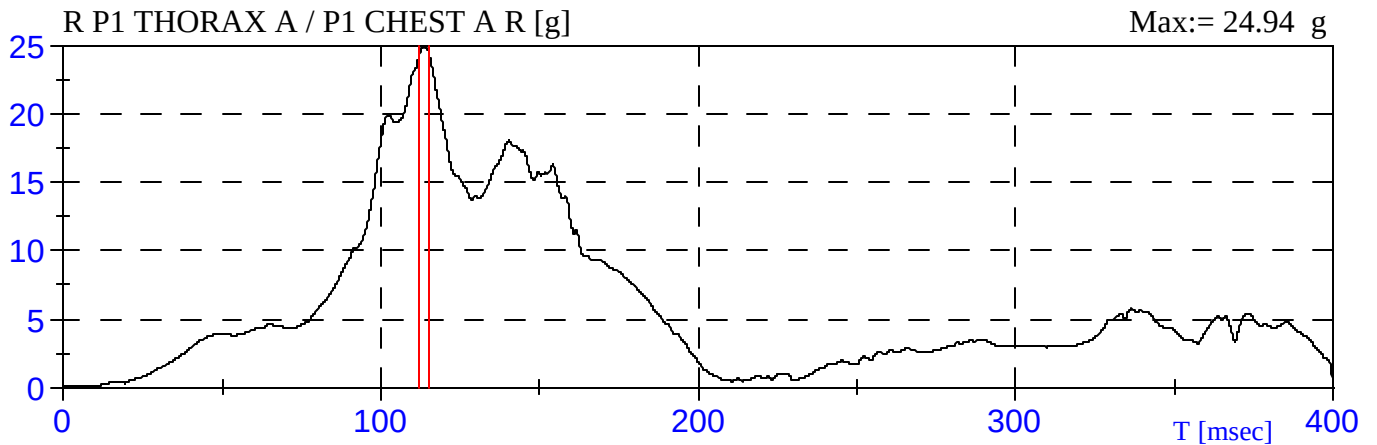
Acc. := 15.83 g	T1:= 101.6 ms	T2:= 104.6 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95



CLIP 3ms *

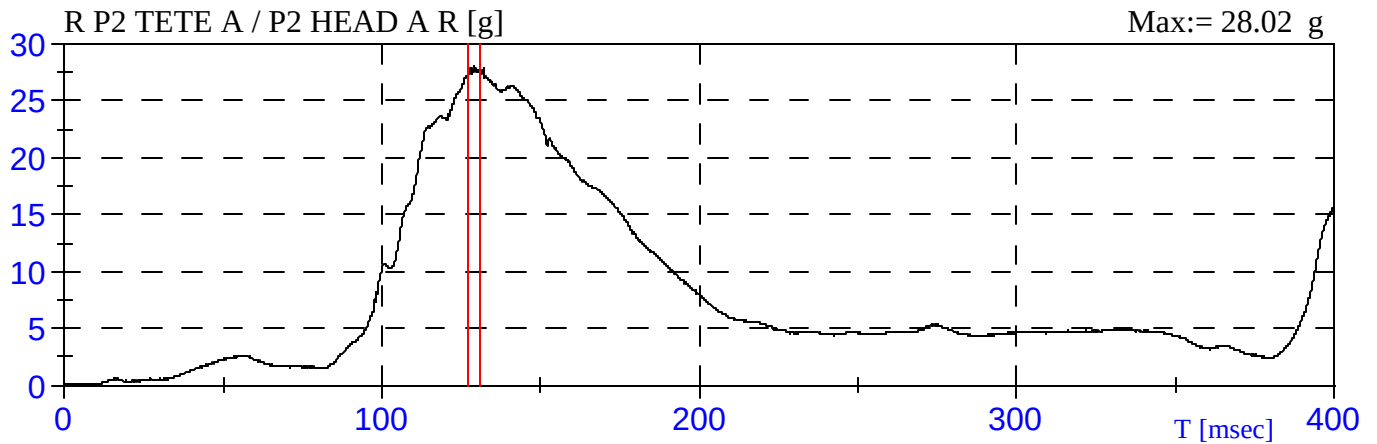
Acc. := 41.59 g	T1:= 126.8 ms	T2:= 129.9 ms
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CLIP 3ms *

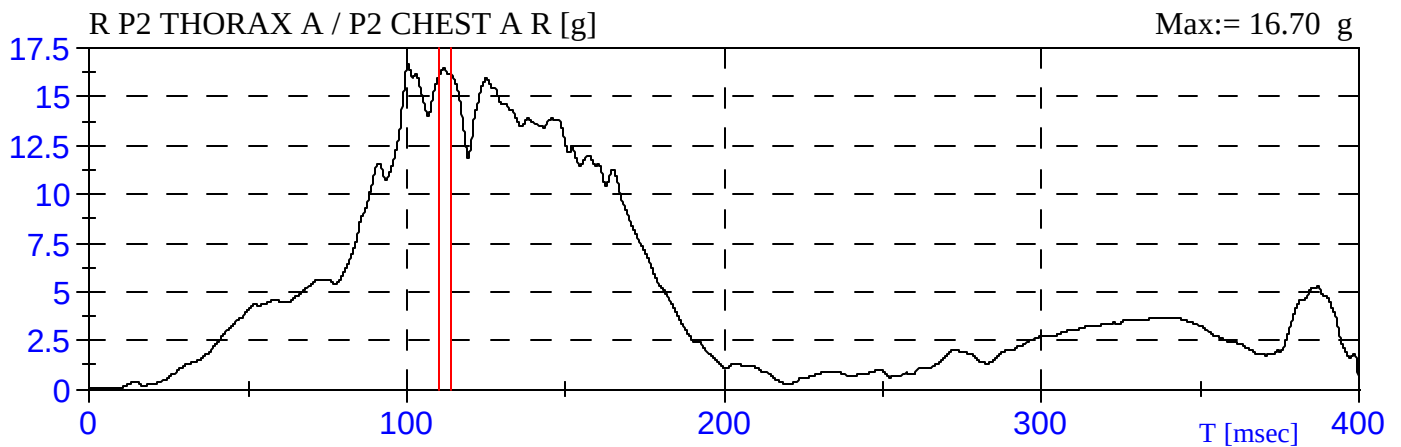
Acc. := 24.43 g	T1:= 112.2 ms	T2:= 115.2 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95



CLIP 3ms *

Acc. := 27.36 g	T1:= 127.0 ms	T2:= 131.0 ms
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CLIP 3ms *

Acc. := 16.18 g	T1:= 110.4 ms	T2:= 114.0 ms
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* Selon / According To: NHTSA CLIP VERSION 2.1 5/95

INDEX DU TIBIA *

TIBIA INDEX *

TI Chauffeur / Driver $M_c := 115 \text{ N-m}$ $F_c := 22.9 \text{ kN}$

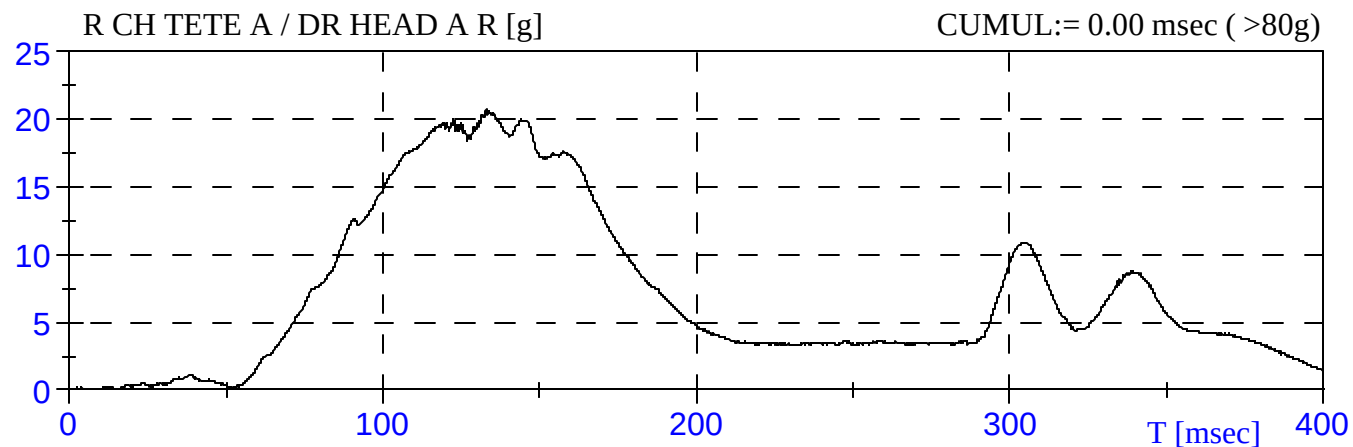
TIBIA	GAUCHE / LEFT	DROIT / RIGHT
HAUT / UPPER	0.137	0.229
BAS / LOWER	0.144	0.081

TI Passager / Passenger $M_c := 115 \text{ N-m}$ $F_c := 22.9 \text{ kN}$

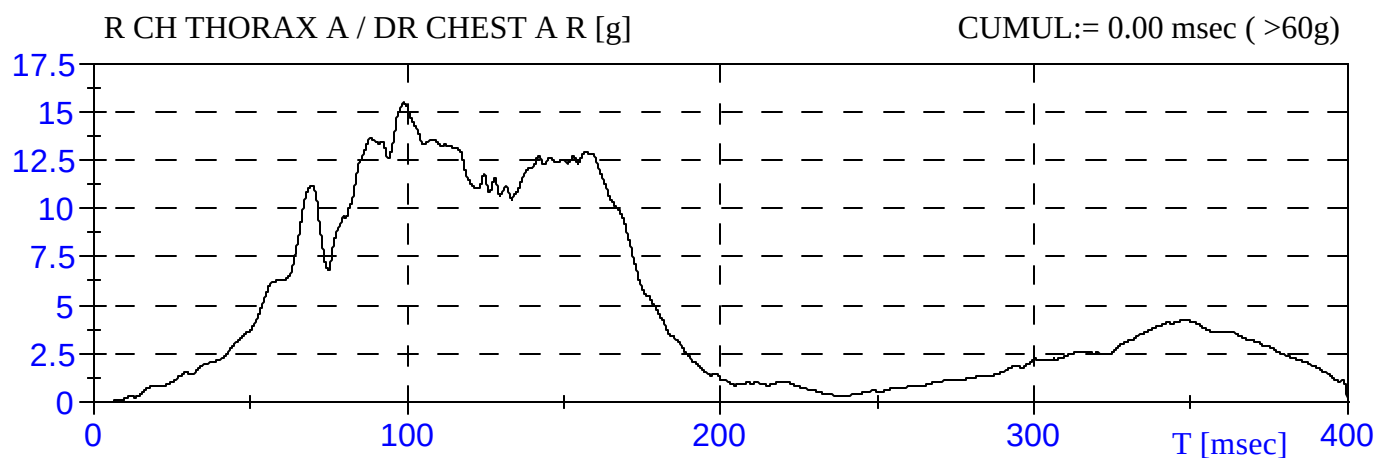
TIBIA	GAUCHE / LEFT	DROIT / RIGHT
HAUT / UPPER	0.223	0.269
BAS / LOWER	0.143	0.323

* Selon / According To: SAE J1727 AUG 96

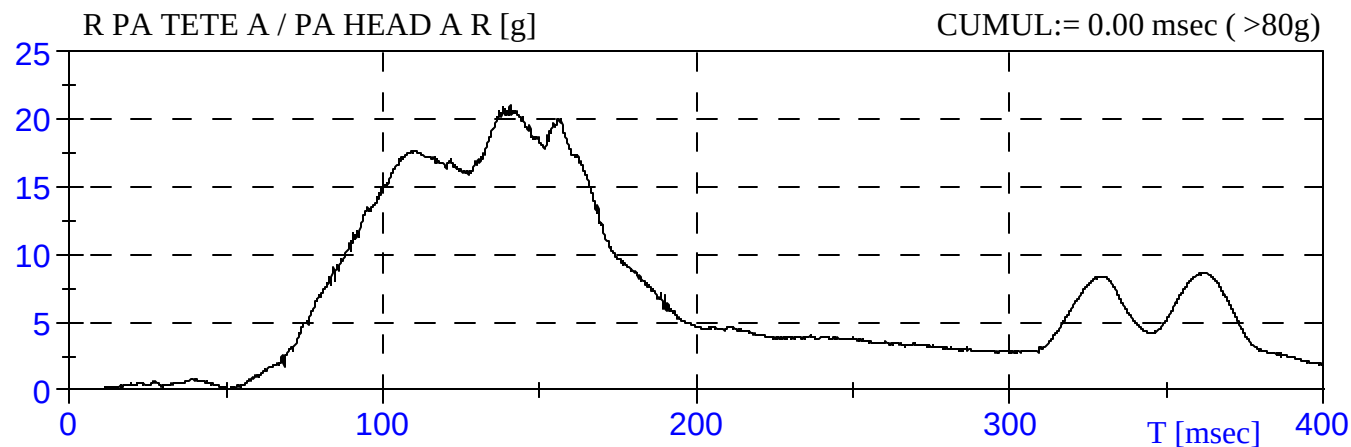
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



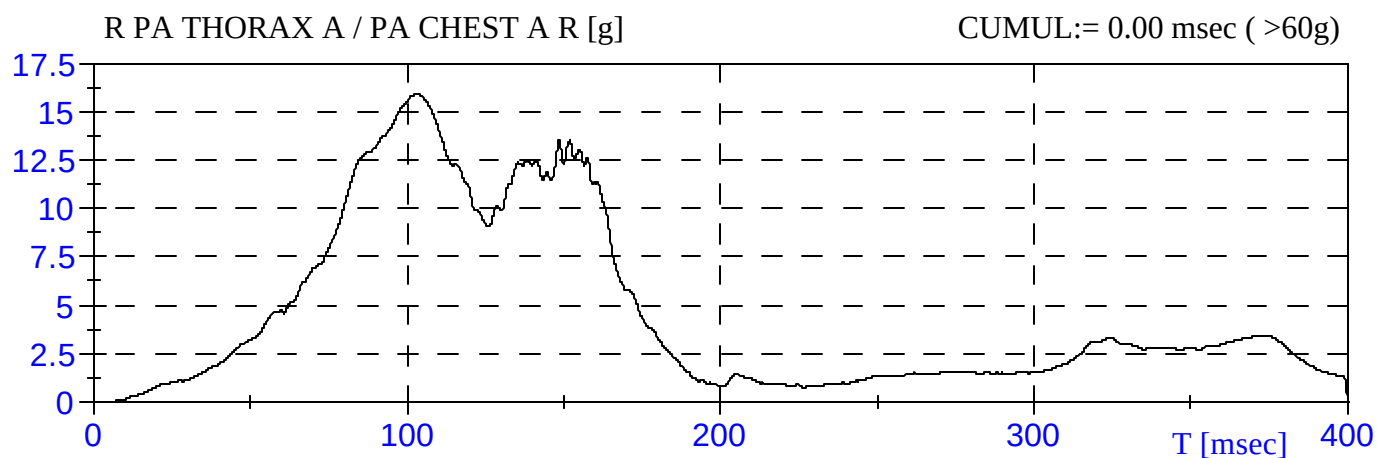
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



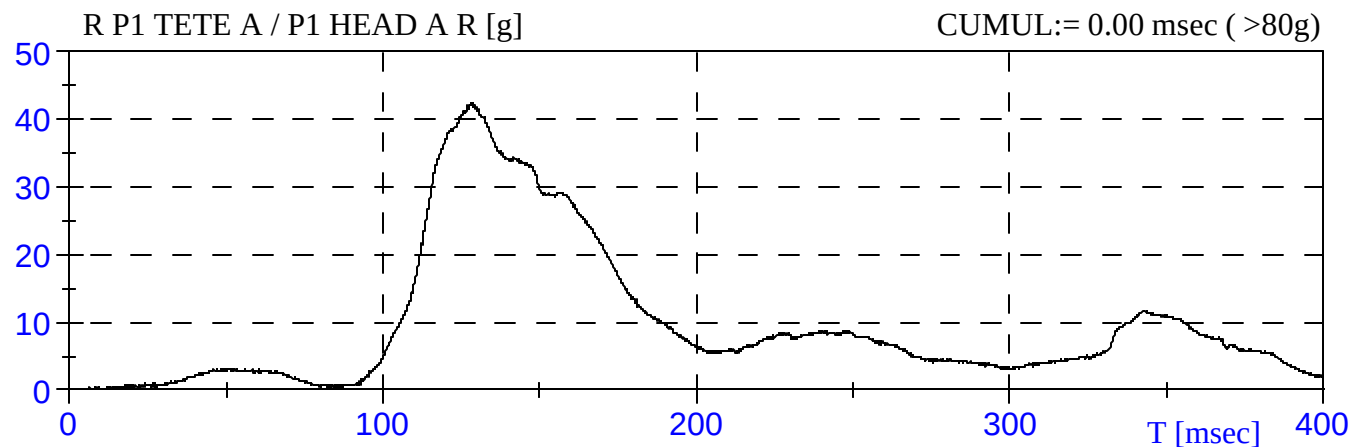
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



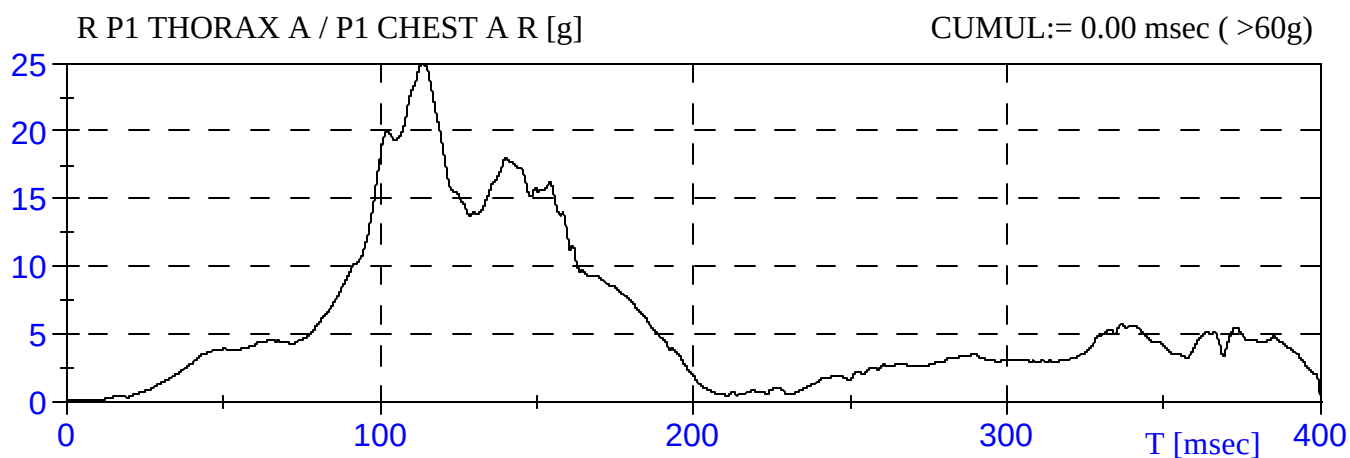
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



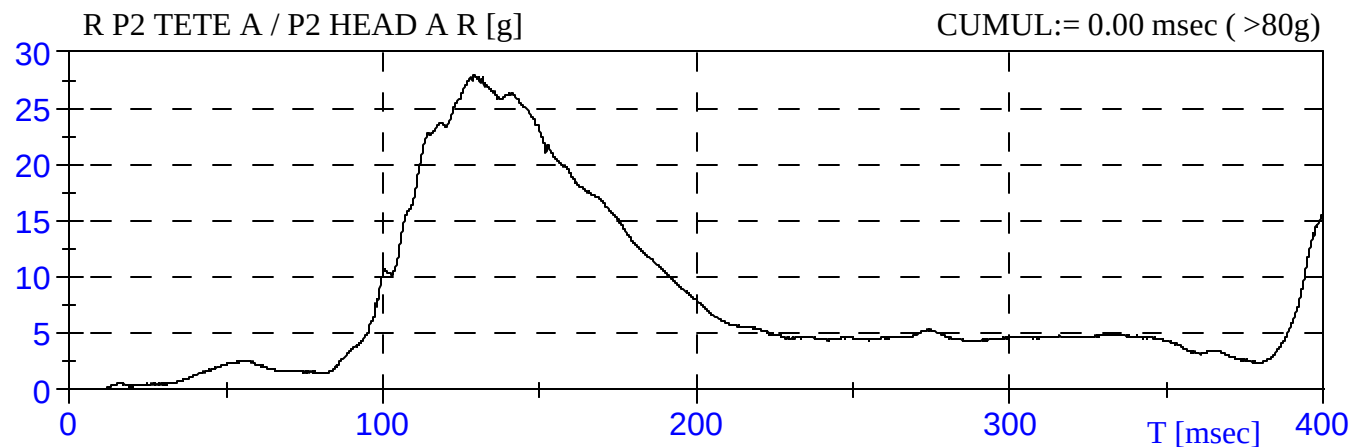
ACCÉLÉRATION DE LA TÊTE >80 g / HEAD ACCELERATION > 80 g



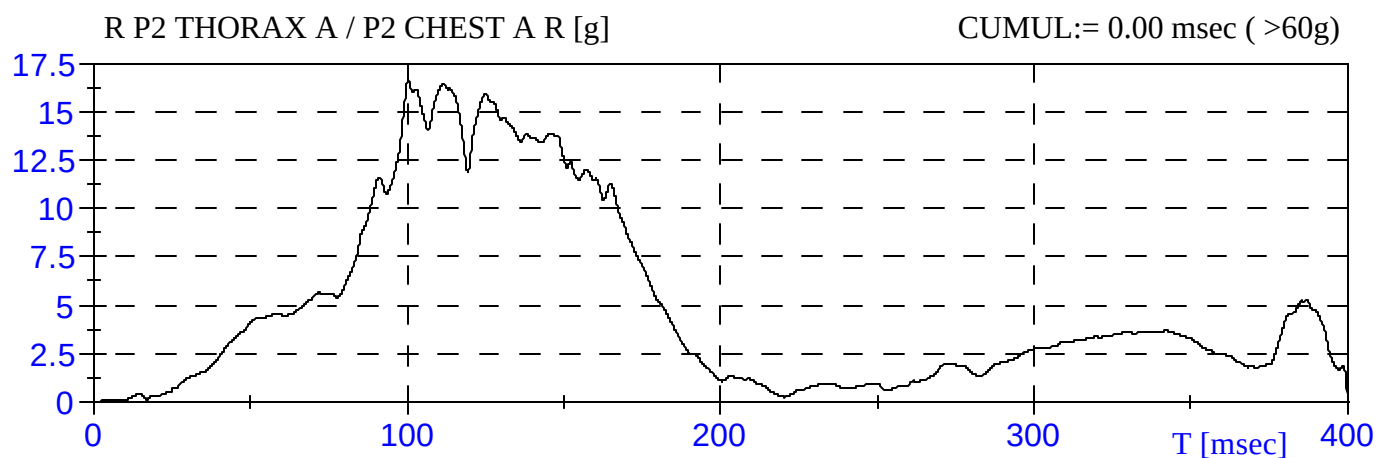
ACCÉLÉRATION DU THORAX >60 g / THORAX ACCELERATION > 60 g



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



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



Chauffeur / Driver

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

Valeurs critiques
Criticals Values

N _{te}	N _{ce}	N _{tf}	N _{cf}	T _c	4287
				C _c	3880
0.10	0.17	0.24	0.00	F _c	155
				E _c	67

Passager / Passenger

$$N_{ij}^* = 0.27$$

Valeurs critiques
Criticals Values

N _{te}	N _{ce}	N _{tf}	N _{cf}	T _c	4287
				C _c	3880
0.13	0.11	0.27	0.01	F _c	155
				E _c	67

* Selon / According To: Federal Register 5/2000

COMMENTAIRES / COMMENTS

P2 HT COU FX,FY,MZ:	Transitoire réparé de 131.6 ms à 132.4 ms.
P2 BA COU FX,FY:	Glitch removed from 131.6 ms to 132.4 ms.
P2 UP NECK FX,FY,MZ:	Glitch removed from 131.6 ms to 132.4 ms.
P2 LO NECK FX,FY:	Glitch removed from 131.6 ms to 132.4 ms.