Dassault Mirage 2000-5 Aerodynamic data built from vspaero; CG (8.4, 0, 0)M, 2021-03-22 22:27

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AeroDetail=MediumHigh, ExternalTanks, Flaps, Gear, GroundEffect, Mach, WakeIterations=3

Model summary

Dependent variable	Independent variables	Axis	Description
CFXB	alpha	DRAG	BASIC DRAG
CFXDED1L	alpha,beta,DED1L	DRAG	DRAG DUE TO ELEVON 1L
CFXDED1R	alpha,beta,DED1R	DRAG	DRAG DUE TO ELEVON 1R
CFXDED2L	alpha,beta,DED2L	DRAG	DRAG DUE TO ELEVON 2L
CFXDED2R	alpha,beta,DED2R	DRAG	DRAG DUE TO ELEVON 2R
CFXDSD1L	alpha	DRAG	DRAG DUE TO LE SLAT 1
CFXDSD2L	alpha	DRAG	DRAG DUE TO LE SLAT 2
CFXDSBL	alpha	DRAG	DRAG DUE TO LOWER SPEEDBRAKE DEFLECTION
CFXmn	mach,alpha	DRAG	DRAG DUE TO MACH
CFXDSBU	alpha	DRAG	DRAG DUE TO UPPER SPEEDBRAKE DEFLECTION
CFXGEAR	alpha	DRAG	DRAG INCREMENT DUE TO GEAR
CFXCTNK	alpha,beta	DRAG	DRAG INCREMENT DUE TO TANK(CENTRE)
CFXLTNK	alpha,beta	DRAG	DRAG INCREMENT DUE TO TANK(LEFT WING)
CFXRTNK	alpha,beta	DRAG	DRAG INCREMENT DUE TO TANK(RIGHT WING)
CFZB	alpha	LIFT	BASIC LIFT
CFZDED1L	alpha,beta,DED1L	LIFT	LIFT DUE TO ELEVON 1L
CFZDED1R	alpha,beta,DED1R	LIFT	LIFT DUE TO ELEVON 1R
CFZDE2L	alpha,beta,DED2L	LIFT	LIFT DUE TO ELEVON 2L
CFZDE2R	alpha,beta,DED2R	LIFT	LIFT DUE TO ELEVON 2R
CFZDSD1L	alpha	LIFT	LIFT DUE TO LE SLAT 1
CFZDSD2L	alpha	LIFT	LIFT DUE TO LE SLAT 2
CFZDEL	alpha	LIFT	LIFT DUE TO LOWER SPEEDBRAKE DEFLECTION
CFZmn	mach,alpha	LIFT	LIFT DUE TO MACH
CFZDSBU	alpha	LIFT	LIFT DUE TO UPPER SPEEDBRAKE DEFLECTION
CFZGEAR	alpha	LIFT	LIFT INCREMENT DUE TO GEAR
CFZCTNK	alpha,beta	LIFT	LIFT INCREMENT DUE TO TANK(CENTRE)
CFZLTNK	alpha,beta	LIFT	LIFT INCREMENT DUE TO TANK(LEFT WING)
CFZRTNK	alpha,beta	LIFT	LIFT INCREMENT DUE TO TANK(RIGHT WING)
CMM1	alpha	PITCH	BASIC PITCHING MOMENT
CMMQ	alpha	PITCH	PITCH DAMPING DERIVATIVE

CMMmnw	mach,alpha	PITCH	PITCH DUE TO MACH
CMMDED1L	alpha,beta,DED1L	PITCH	PITCH MOMENT DUE TO ELEVON 1L
CMMDED1R	alpha,beta,DED1R	PITCH	PITCH MOMENT DUE TO ELEVON 1R
CMMDED2L	alpha,beta,DED2L	PITCH	PITCH MOMENT DUE TO ELEVON 2L
CMMDED2R	alpha,beta,DED2R	PITCH	PITCH MOMENT DUE TO ELEVON 2R
CMMDSD1L	alpha	PITCH	PITCH MOMENT DUE TO LE SLAT 1
CMMDSD2L	alpha	PITCH	PITCH MOMENT DUE TO LE SLAT 2
CMMDSBL	alpha	PITCH	PITCH MOMENT DUE TO LOWER SPEEDBRAKE DEFLECTION
CMMDSBU	alpha	PITCH	PITCH MOMENT DUE TO UPPER SPEEDBRAKE DEFLECTION
CMMGEAR	alpha	PITCH	PITCHING MOMENT INCREMENT DUE TO GEAR
CMMCTNK	alpha,beta	PITCH	PITCHING MOMENT INCREMENT DUE TO TANK(CENTRE)
CMMLTNK	alpha,beta	PITCH	PITCHING MOMENT INCREMENT DUE TO TANK(LEFT WING)
CMMRTNK	alpha,beta	PITCH	PITCHING MOMENT INCREMENT DUE TO TANK(RIGHT WING)
CML1	alpha,beta	ROLL	BASIC ROLLING MOMENT
CMLP	alpha	ROLL	ROLL DAMPING DERIVATIVE
CMLmnw	mach,alpha	ROLL	ROLL DUE TO MACH
CMLDED1L	alpha,beta,DED1L	ROLL	ROLLING MOMENT DUE TO ELEVON 1L DEFLECTION
CMLDED1R	alpha,beta,DED1R	ROLL	ROLLING MOMENT DUE TO ELEVON 1R DEFLECTION
CMLDED2L	alpha,beta,DED2L	ROLL	ROLLING MOMENT DUE TO ELEVON 2L DEFLECTION
CMLDED2R	alpha,beta,DED2R	ROLL	ROLLING MOMENT DUE TO ELEVON 2R DEFLECTION
CMLDRD	alpha,beta,DRD	ROLL	ROLLING MOMENT DUE TO RUDDER DEFLECTION
CMLR	alpha	ROLL	ROLLING MOMENT DUE TO YAW RATE
CMLGEAR	alpha	ROLL	ROLLING MOMENT INCREMENT DUE TO GEAR
CMLCTNK	alpha,beta	ROLL	ROLLING MOMENT INCREMENT DUE TO TANK(CENTRE)
CMLLTNK	alpha,beta	ROLL	ROLLING MOMENT INCREMENT DUE TO TANK(LEFT WING)
CMLRTNK	alpha,beta	ROLL	ROLLING MOMENT INCREMENT DUE TO TANK(RIGHT WING)
CFYB	alpha,beta	SIDE	BASIC SIDE FORCE
CFYDED1L	alpha,beta,DED1L	SIDE	SIDE FORCE DUE TO ELEVON 1L DEFLECTION
CFYDED1R	alpha,beta,DED1R	SIDE	SIDE FORCE DUE TO ELEVON 1R DEFLECTION
CFYDED2L	alpha,beta,DED2L	SIDE	SIDE FORCE DUE TO ELEVON 2L DEFLECTION
CFYDED2R	alpha,beta,DED2R	SIDE	SIDE FORCE DUE TO ELEVON 2R DEFLECTION
CFYP	alpha	SIDE	SIDE FORCE DUE TO ROLL RATE
CFYDRD	alpha,beta,DRD	SIDE	SIDE FORCE DUE TO RUDDER DEFLECTION
CFYR	alpha	SIDE	SIDE FORCE DUE TO YAW RATE
CFYGEAR	alpha	SIDE	SIDE FORCE INCREMENT DUE TO GEAR
CFYCTNK	alpha,beta	SIDE	SIDE FORCE INCREMENT DUE TO TANK(CENTRE)
CFYLTNK	alpha,beta	SIDE	SIDE FORCE INCREMENT DUE TO TANK(LEFT WING)
CFYRTNK	alpha,beta	SIDE	SIDE FORCE INCREMENT DUE TO TANK(RIGHT WING)

CMN1	alpha,beta	YAW	BASIC YAWING MOMENT
CMNR	alpha	YAW	YAW DAMPING DERIVATIVE
CMNDED1L	alpha,beta,DED1L	YAW	YAW MOMENT DUE TO ELEVON 1L
CMNDED1R	alpha,beta,DED1R	YAW	YAW MOMENT DUE TO ELEVON 1R
CMNDED2L	alpha,beta,DED2L	YAW	YAW MOMENT DUE TO ELEVON 2L
CMNDED2R	alpha,beta,DED2R	YAW	YAW MOMENT DUE TO ELEVON 2R
CMNP	alpha	YAW	YAWING MOMENT DUE TO ROLL RATE
CMNDRDr	alpha,beta,DRD	YAW	YAWING MOMENT DUE TO RUDDER DEFLECTION
CMNGEAR	alpha	YAW	YAWING MOMENT INCREMENT DUE TO GEAR
CMNCTNK	alpha,beta	YAW	YAWING MOMENT INCREMENT DUE TO TANK(CENTRE)
CMNLTNK	alpha,beta	YAW	YAWING MOMENT INCREMENT DUE TO TANK(LEFT WING)
CMNRTNK	alpha,beta	YAW	YAWING MOMENT INCREMENT DUE TO TANK(RIGHT WING)

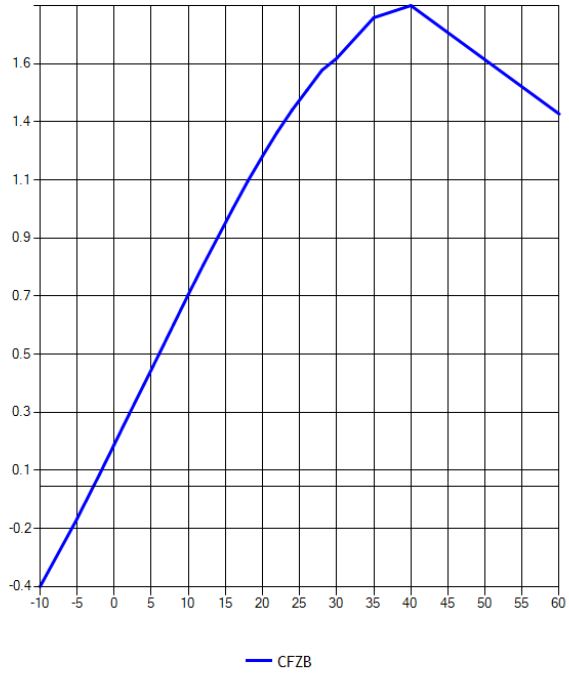
Coefficient Buildup

Axis	Buildup
DRAG	CFXDSD1L*DSD1L + CFXDSD2L*DSD2L + CFXDSBU*DSBU + CFXDSBL*DSBL + CFXGEAR*gear + CFXCTNK*metrics/stores-centre-tank + CFXLTNK*metrics/stores-wing-tank-left + CFXRTNK*metrics/stores-wing-tank-right + CFXB + CFXDED1L + CFXDED1R + CFXDED2L + CFXDED2R + CFXmn
LIFT	CFZDSD1L*DSD1L + CFZDSD2L*DSD2L + CFZDSBU*DSBU + CFZDEL*DSBL + CFZGEAR*gear + CFZCTNK*metrics/stores-centre-tank + CFZLTNK*metrics/stores-wing-tank-left + CFZRTNK*metrics/stores-wing-tank-right + CFZB + CFZDED1L + CFZDED1R + CFZDE2L + CFZDE2R + CFZmn
PITCH	CMMDSD1L*DSD1L + CMMDSD2L*DSD2L + CMMDSBU*DSBU + CMMDSBL*DSBL + CMMGEAR*gear + CMMCTNK*metrics/stores-centre-tank + CMMLTNK*metrics/stores-wing-tank-left + CMMRTNK*metrics/stores-wing-tank-right + CMM1 + CMMQ*QB + CMMDED1L + CMMDED1R + CMMDED2L + CMMDED2R + CMMmnw
SIDE	CFYGEAR*gear + CFYCTNK*metrics/stores-centre-tank + CFYLTNK*metrics/stores-wing-tank-left + CFYRTNK*metrics/stores-wing-tank-right + CFYB + CFYDED1L + CFYDED1R + CFYDED2L + CFYDED2R + CFYDRD + CFYP*PB + CFYR*RB
ROLL	CMLGEAR*gear + CMLCTNK*metrics/stores-centre-tank + CMLLTNK*metrics/stores-wing-tank-left + CMLRTNK*metrics/stores-wing-tank-right + CML1 + CMLDED1L + CMLDED1R + CMLDED2L + CMLDED2R + CMLDRD + CMLP*PB + CMLR*RB + CMLmnw + (DLNB*BETA)
YAW	CMNGEAR*gear + CMNCTNK*metrics/stores-centre-tank + CMNLTNK*metrics/stores-wing-tank-left + CMNRTNK*metrics/stores-wing-tank-right + CMN1 + CMNDED1L + CMNDED1R + CMNDED2L + CMNDED2R + CMNDRDr + CMNP*PB + CMNR*RB + (DCNB*BETA)

LIFT

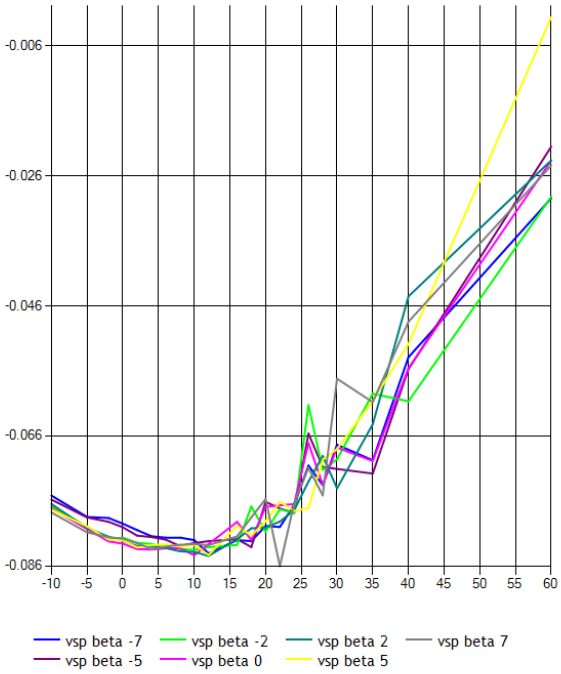
BASIC LIFT

CFZB(alpha)



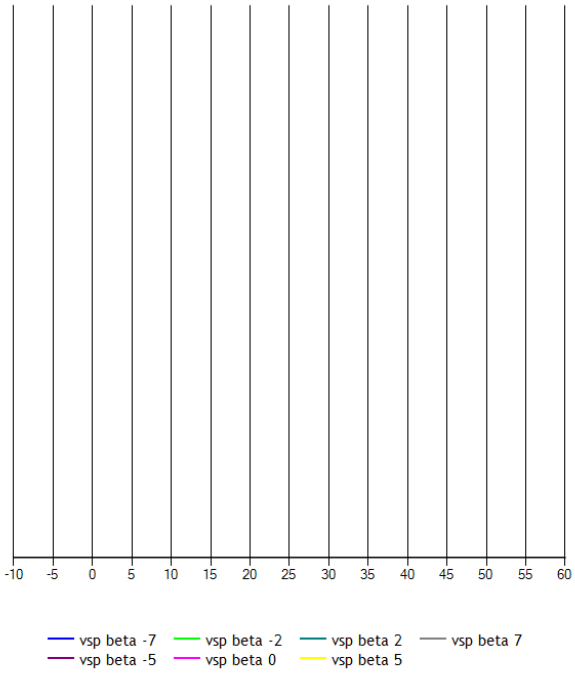
LIFT DUE TO ELEVON 1L

CFZDED1L (alpha,beta,DED1L=-16)



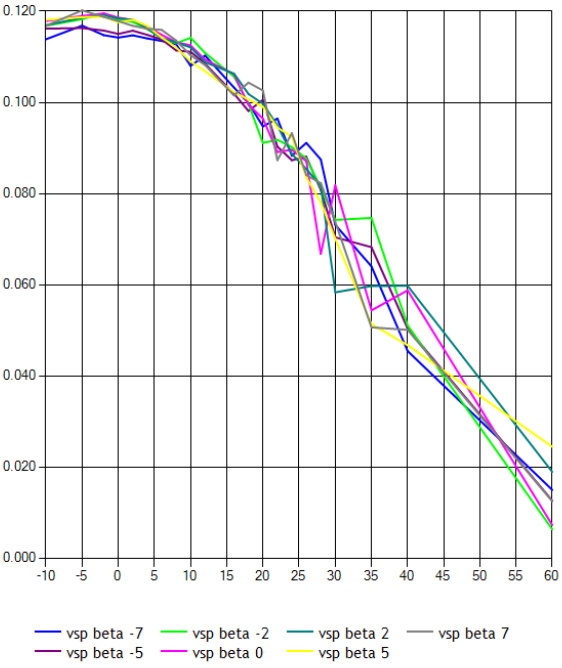
LIFT DUE TO ELEVON 1L

CFZDED1L (alpha,beta,DED1L=0)



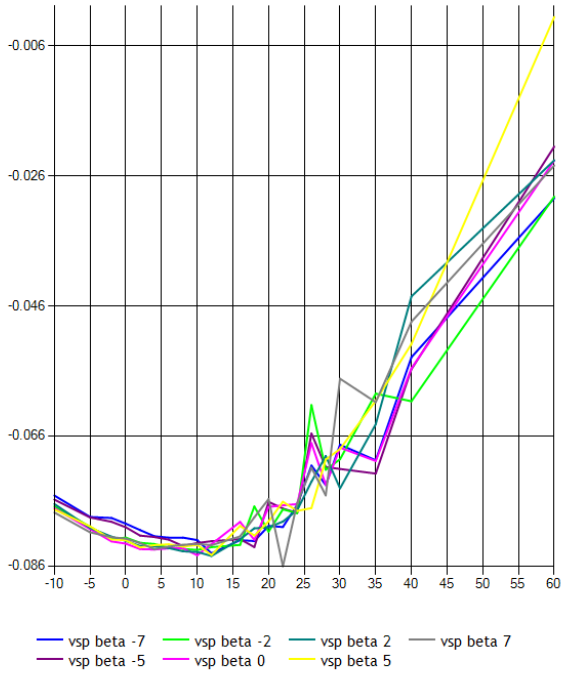
LIFT DUE TO ELEVON 1L

CFZDED1L (alpha,beta,DED1L=25)



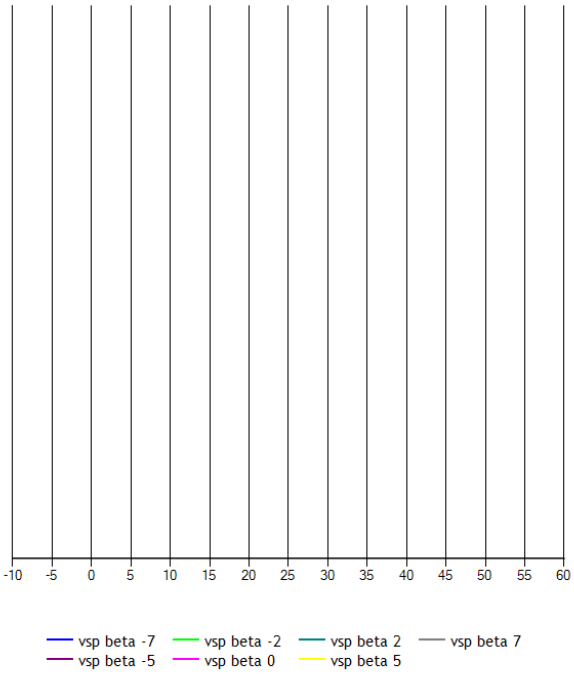
LIFT DUE TO ELEVON 1R

CFZDED1R (alpha,beta,DED1R=-16)



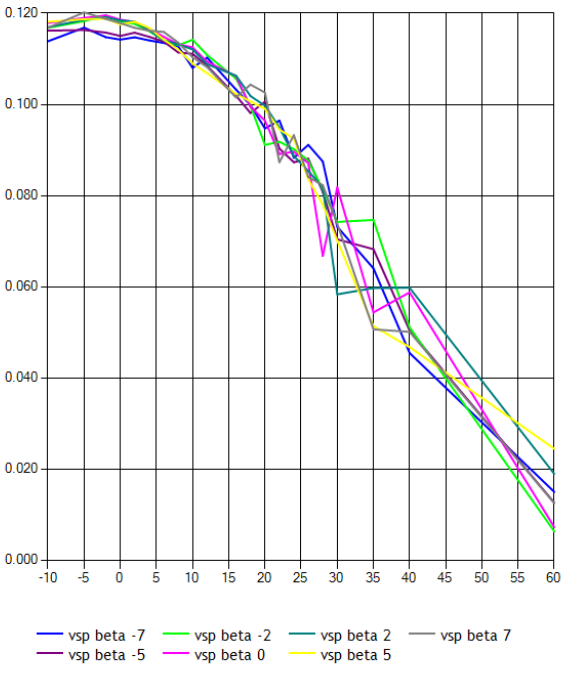
LIFT DUE TO ELEVON 1R

CFZDED1R (alpha,beta,DED1R=0)



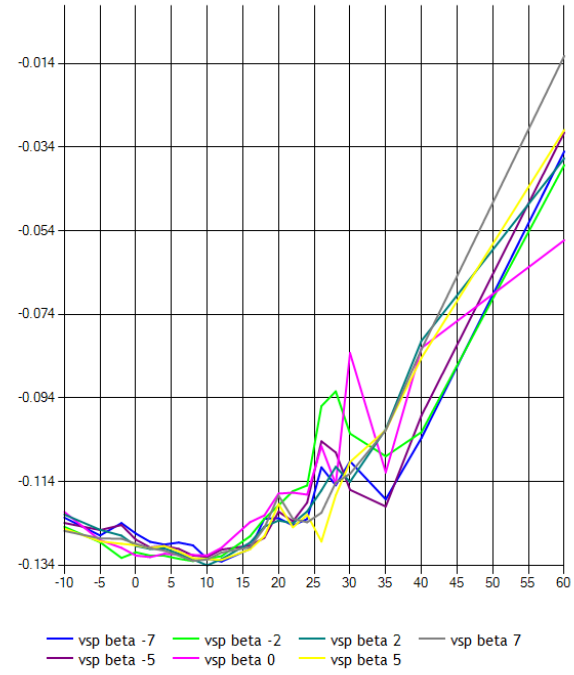
LIFT DUE TO ELEVON 1R

CFZDED1R (alpha,beta,DED1R=25)



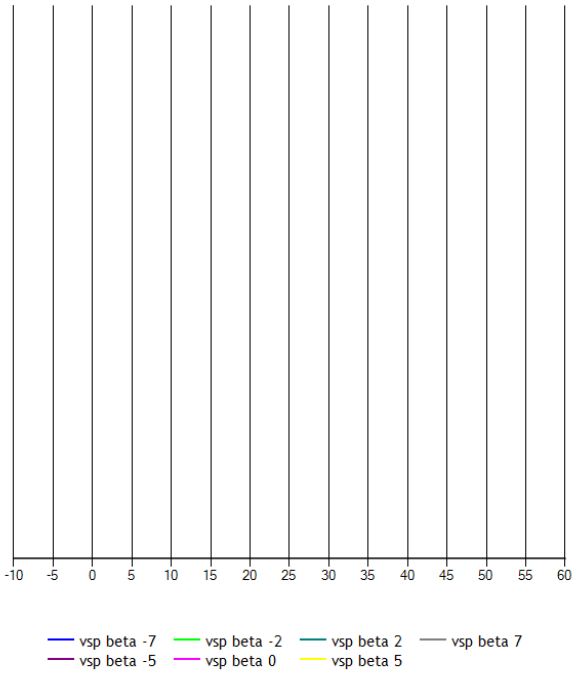
LIFT DUE TO ELEVON 2L

CFZDE2L (alpha,beta,DED2L=-16)



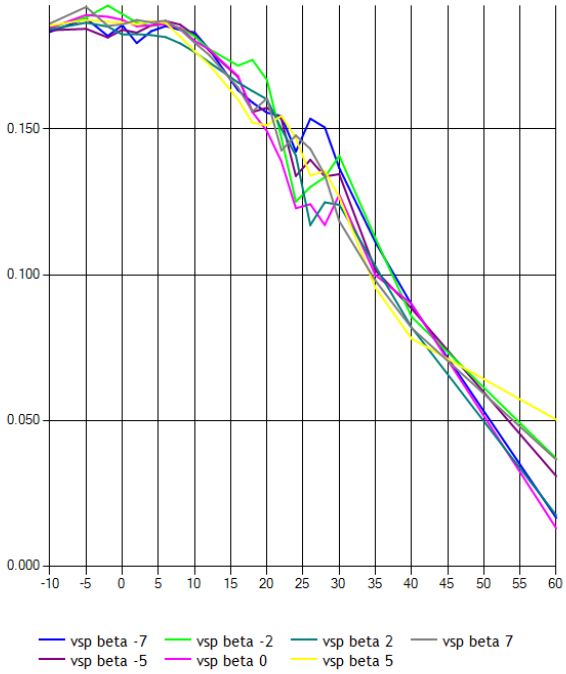
LIFT DUE TO ELEVON 2L

CFZDE2L (alpha,beta,DED2L=0)



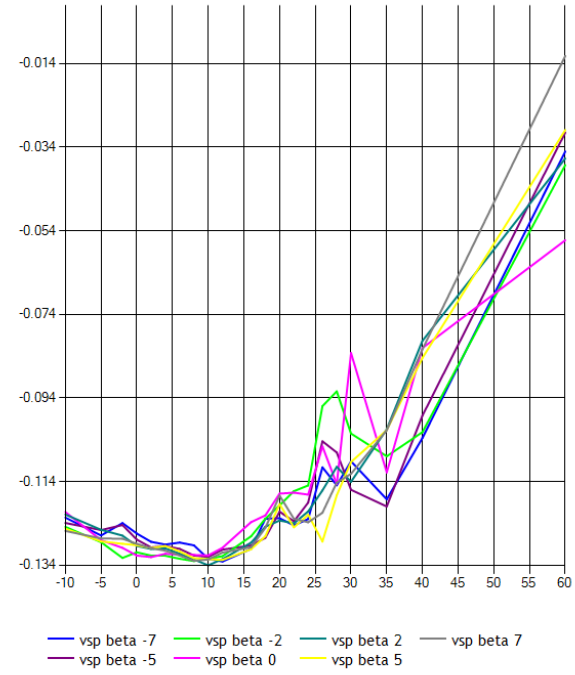
LIFT DUE TO ELEVON 2L

CFZDE2L (alpha,beta,DED2L=25)



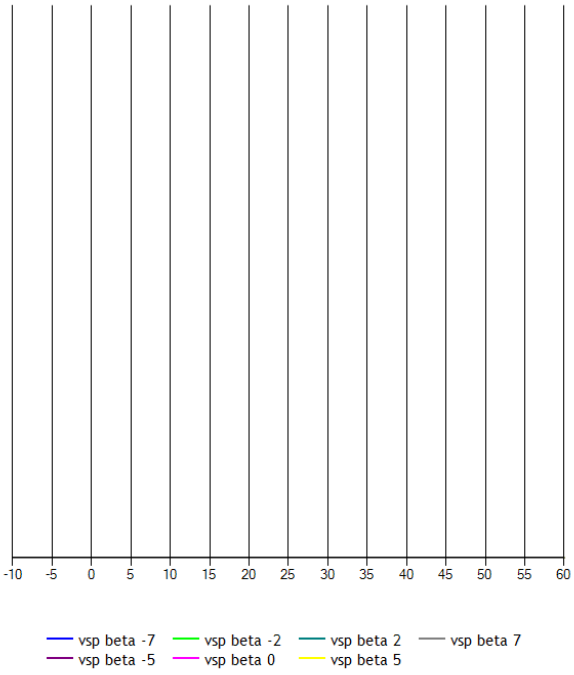
LIFT DUE TO ELEVON 2R

CFZDE2R (alpha,beta,DED2R=-16)



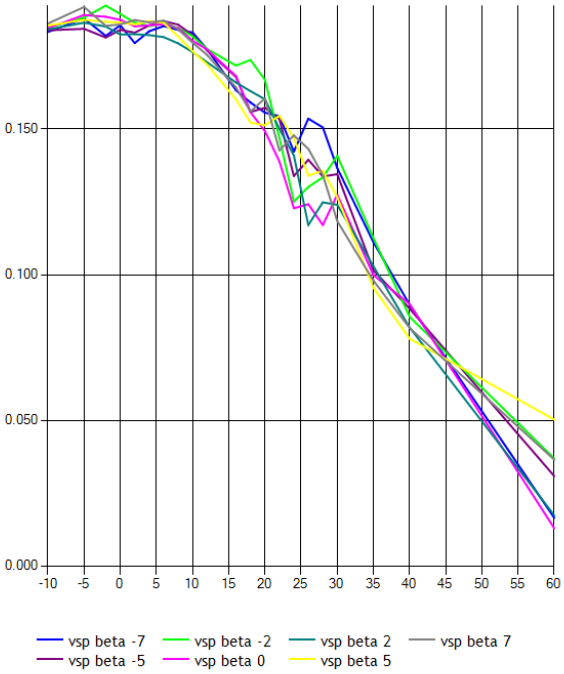
LIFT DUE TO ELEVON 2R

CFZDE2R (alpha,beta,DED2R=0)



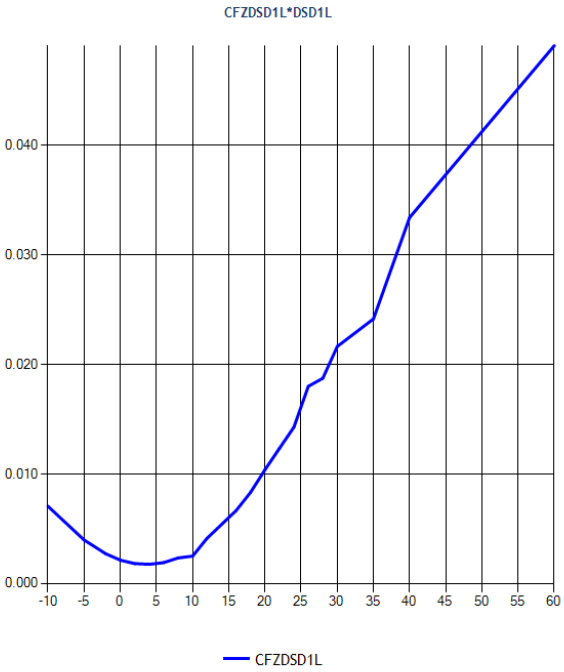
LIFT DUE TO ELEVON 2R

CFZDE2R (alpha,beta,DED2R=25)



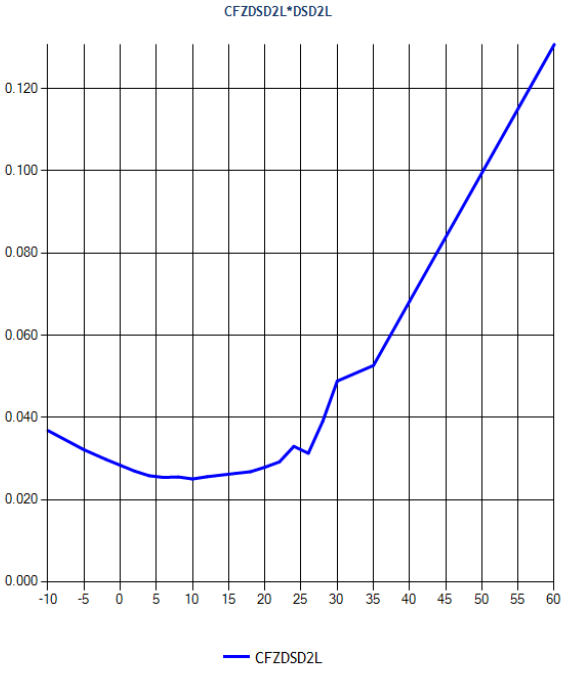
LIFT DUE TO LE SLAT 1

CFZDSD1L(alpha)



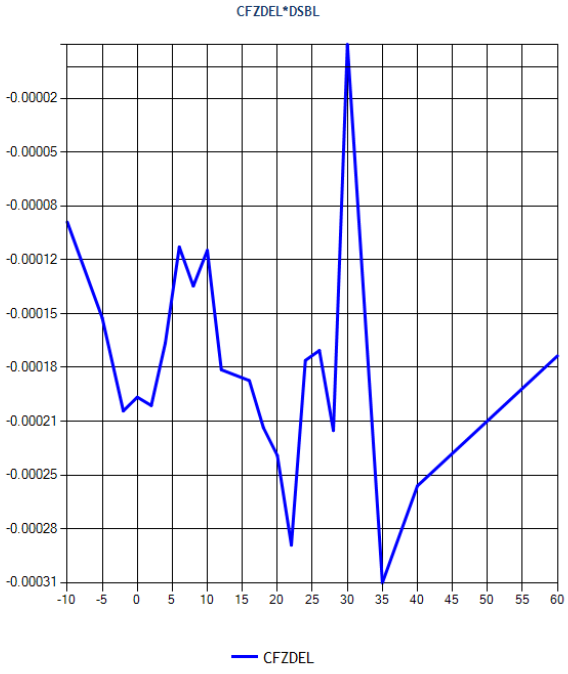
LIFT DUE TO LE SLAT 2

CFZDSD2L(alpha)



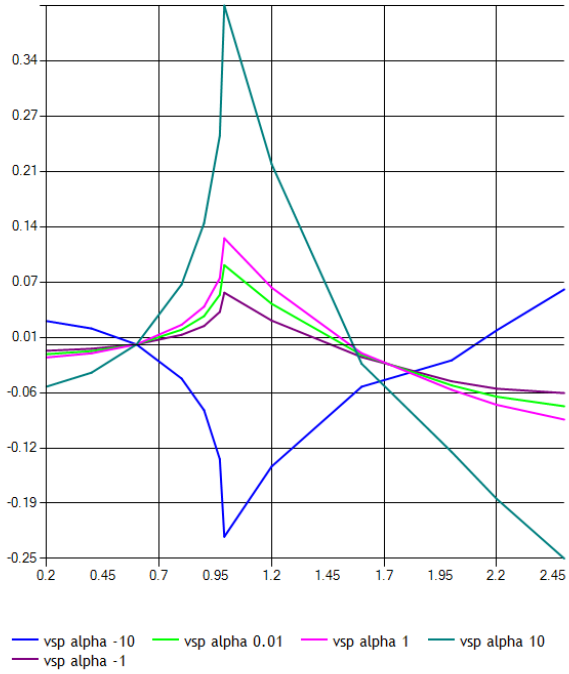
LIFT DUE TO LOWER SPEEDBRAKE DEFLECTION

CFZDEL(alpha)



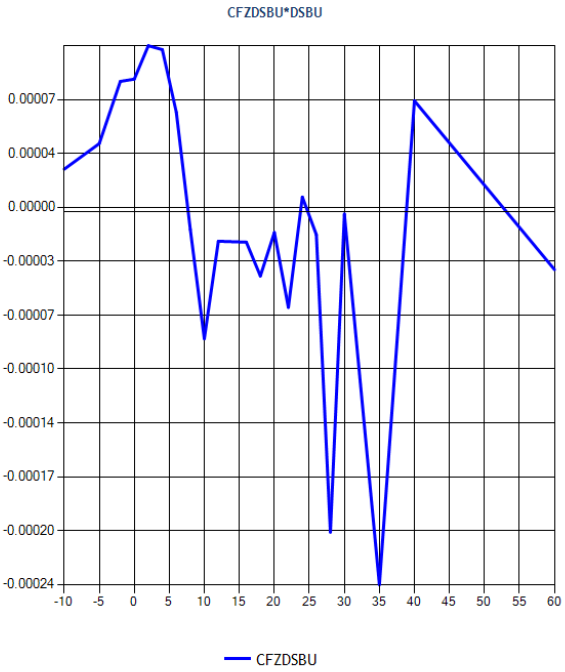
LIFT DUE TO MACH

CFZmn(mach,alpha)



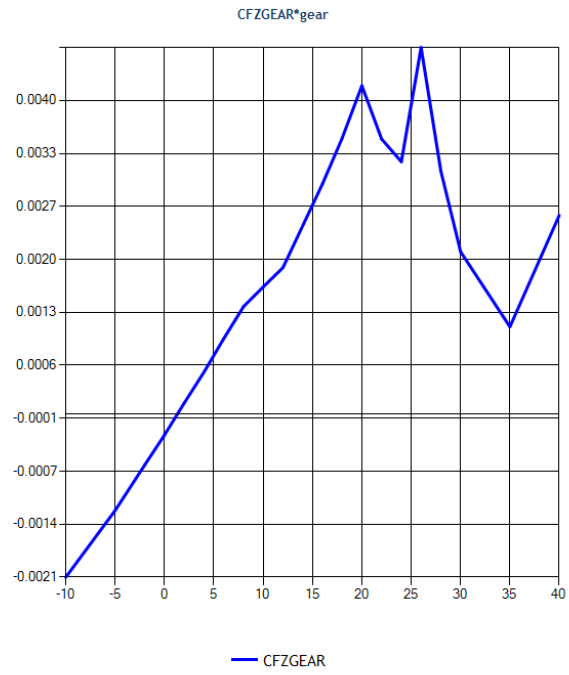
LIFT DUE TO UPPER SPEEDBRAKE DEFLECTION

CFZDSBU(alpha)



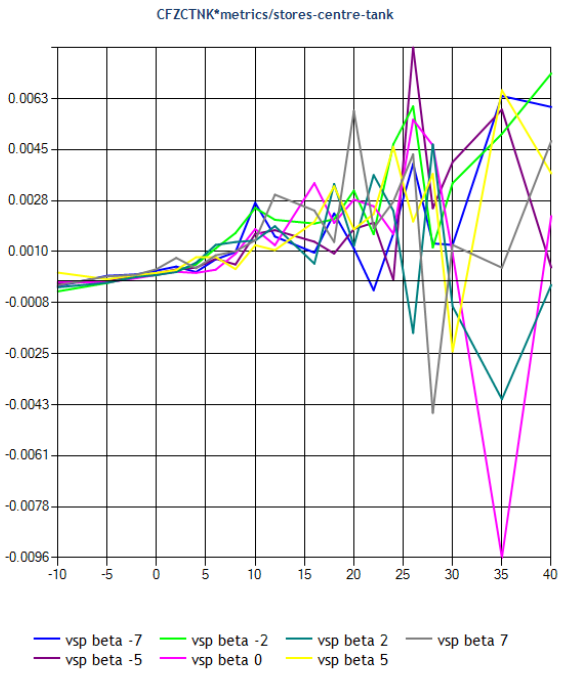
LIFT INCREMENT DUE TO GEAR

CFZGEAR(alpha)



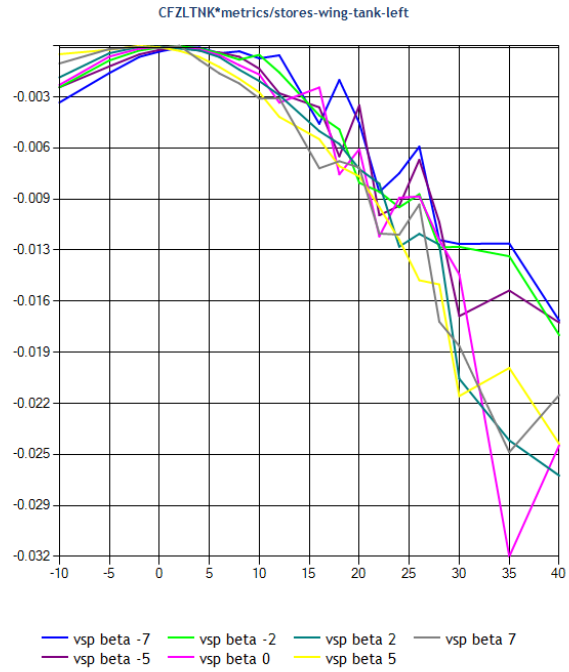
LIFT INCREMENT DUE TO TANK(CENTRE)

CFZCTNK(alpha,beta)



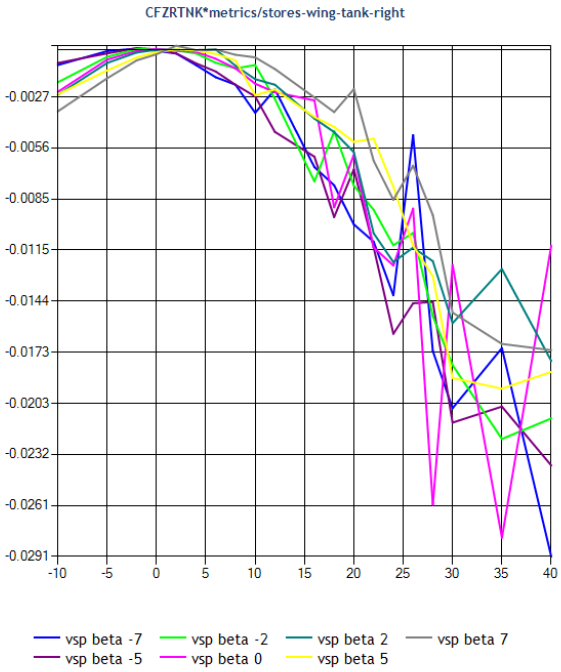
LIFT INCREMENT DUE TO TANK(LEFT WING)

CFZLTNK(alpha,beta)



LIFT INCREMENT DUE TO TANK(RIGHT WING)

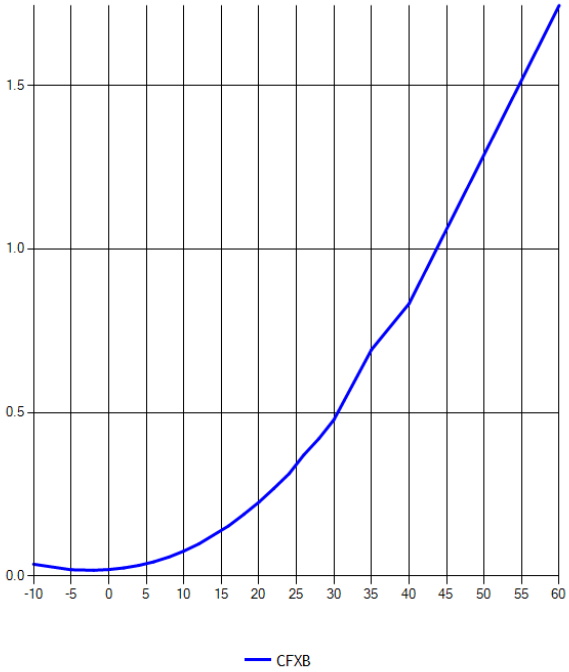
CFZRTNK(alpha,beta)



DRAG

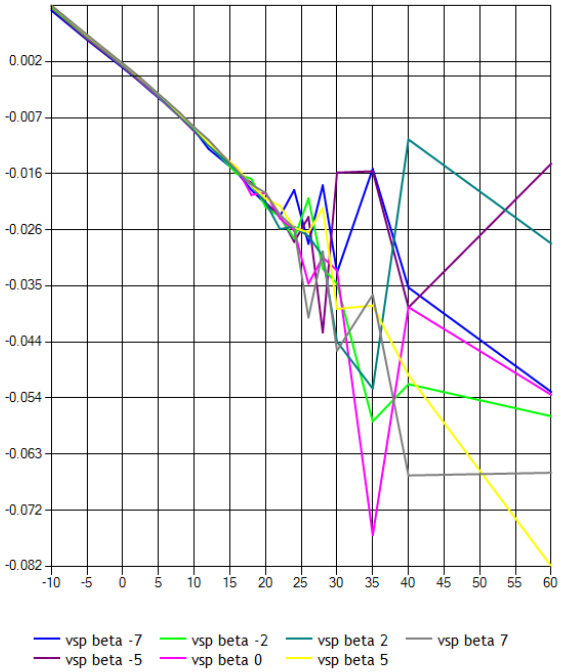
BASIC DRAG

CFXB(alpha)



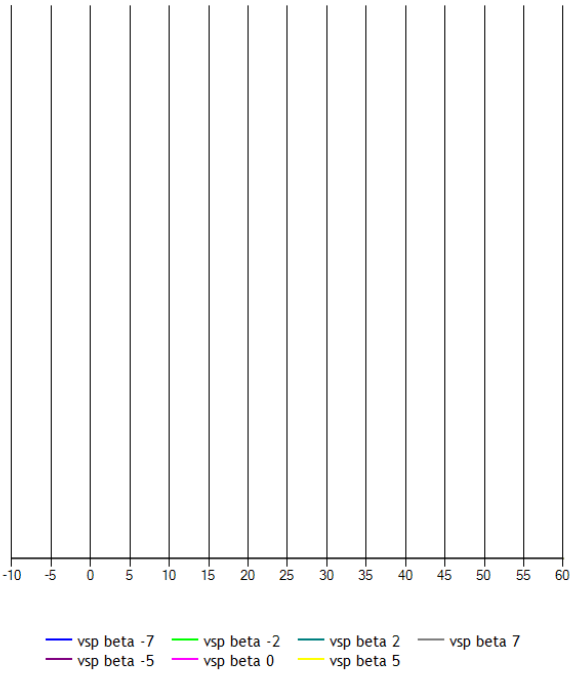
DRAG DUE TO ELEVON 1L

CFXDED1L (alpha,beta,DED1L=-16)



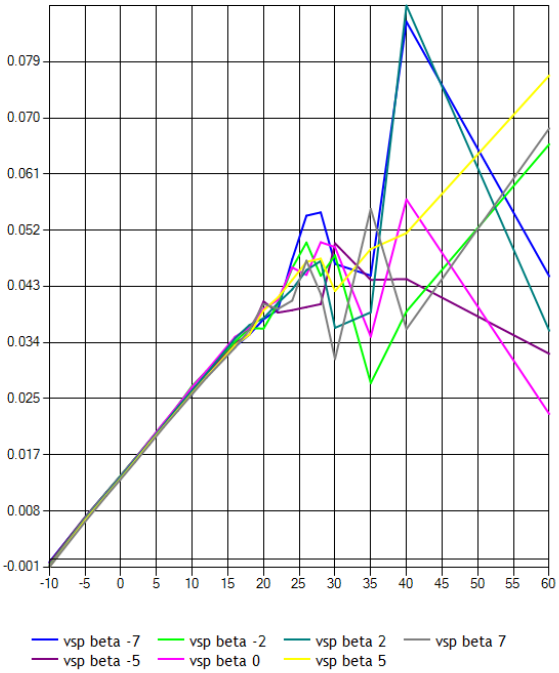
DRAG DUE TO ELEVON 1L

CFXDED1L (alpha,beta,DED1L=0)



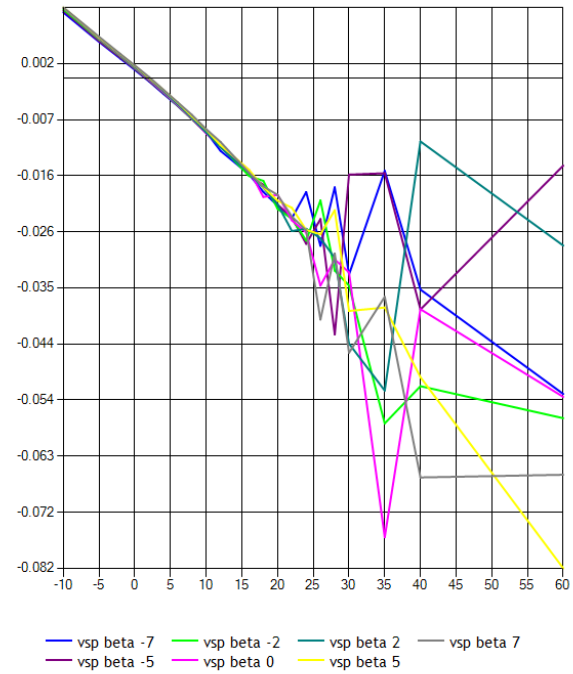
DRAG DUE TO ELEVON 1L

CFXDED1L (alpha,beta,DED1L=25)



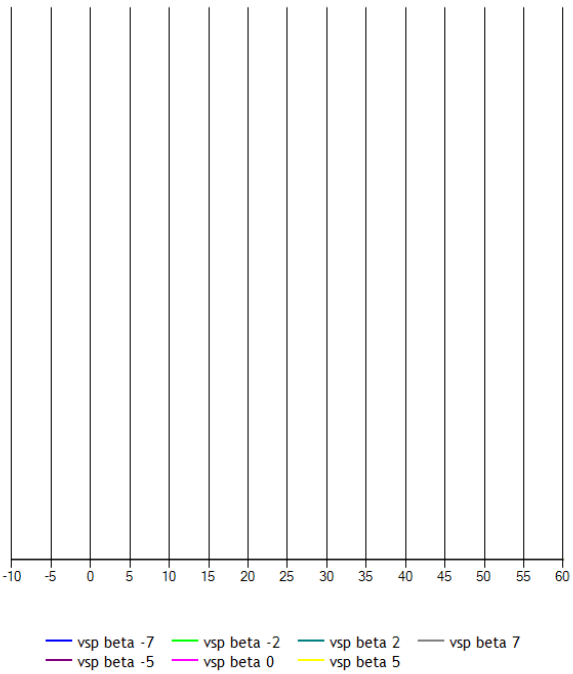
DRAG DUE TO ELEVON 1R

CFXDED1R (alpha,beta,DED1R=-16)



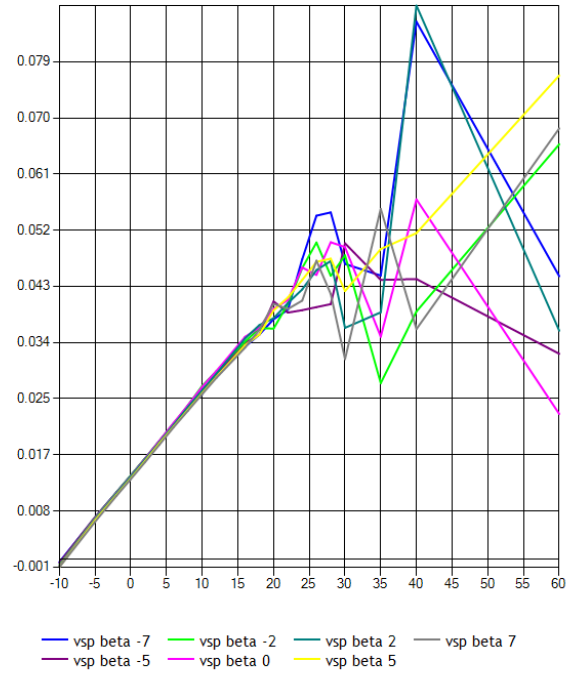
DRAG DUE TO ELEVON 1R

CFXDED1R (alpha,beta,DED1R=0)



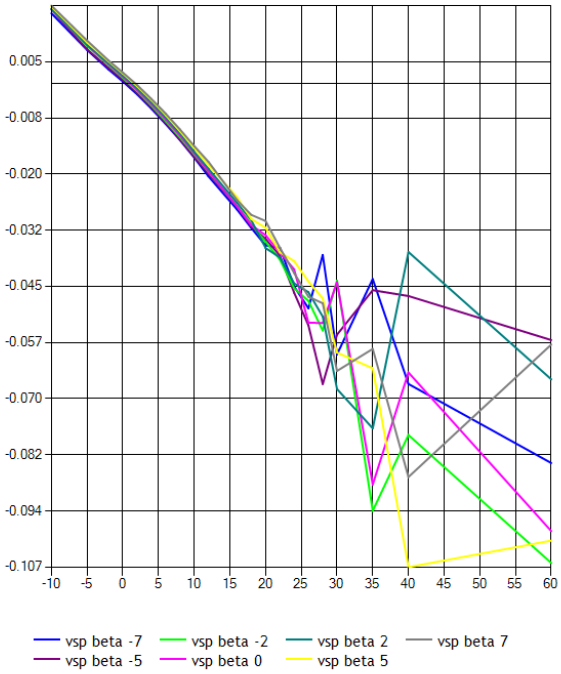
DRAG DUE TO ELEVON 1R

CFXDED1R (alpha,beta,DED1R=25)



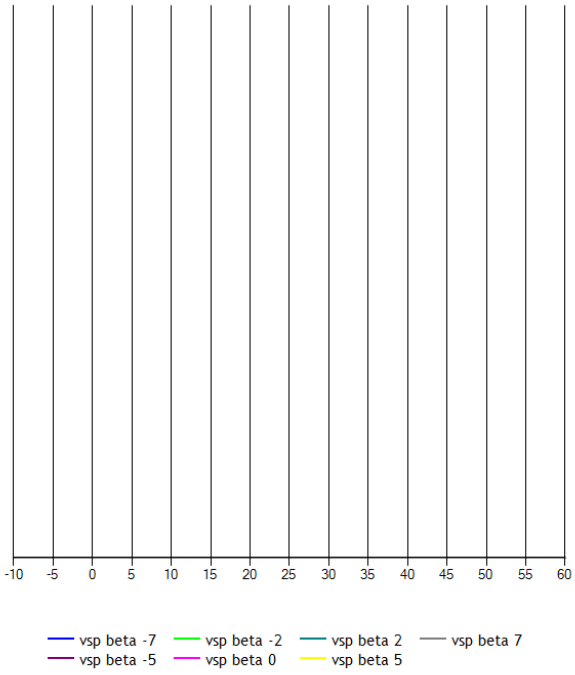
DRAG DUE TO ELEVON 2L

CFXDED2L (alpha,beta,DED2L=-16)



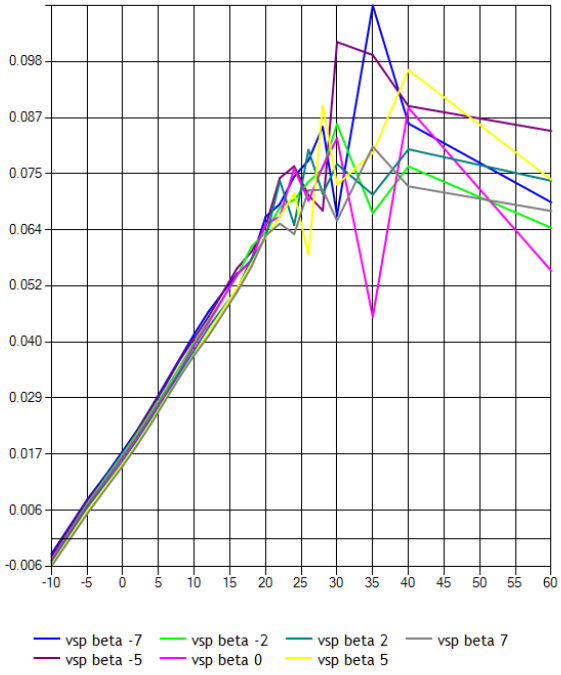
DRAG DUE TO ELEVON 2L

CFXDED2L (alpha,beta,DED2L=0)



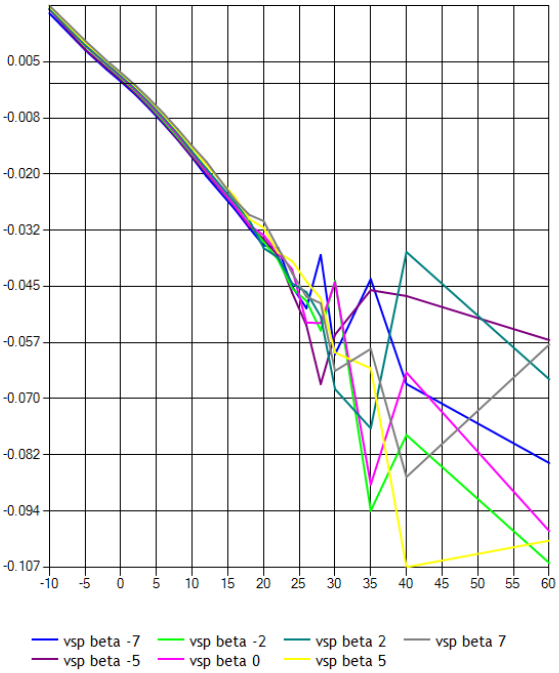
DRAG DUE TO ELEVON 2L

CFXDED2L (alpha,beta,DED2L=25)



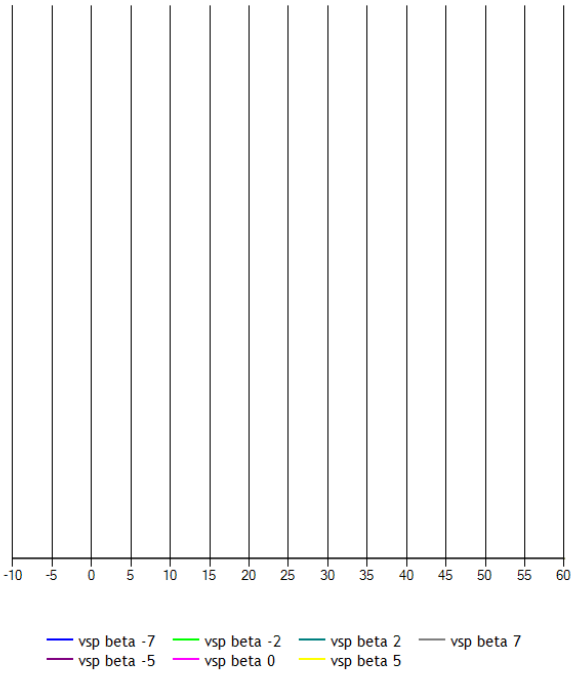
DRAG DUE TO ELEVON 2R

CFXDED2R (alpha,beta,DED2R=-16)



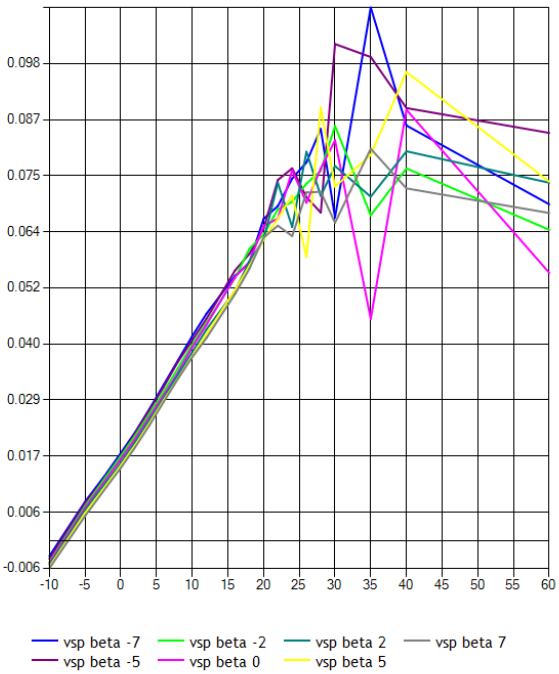
DRAG DUE TO ELEVON 2R

CFXDED2R (alpha,beta,DED2R=0)



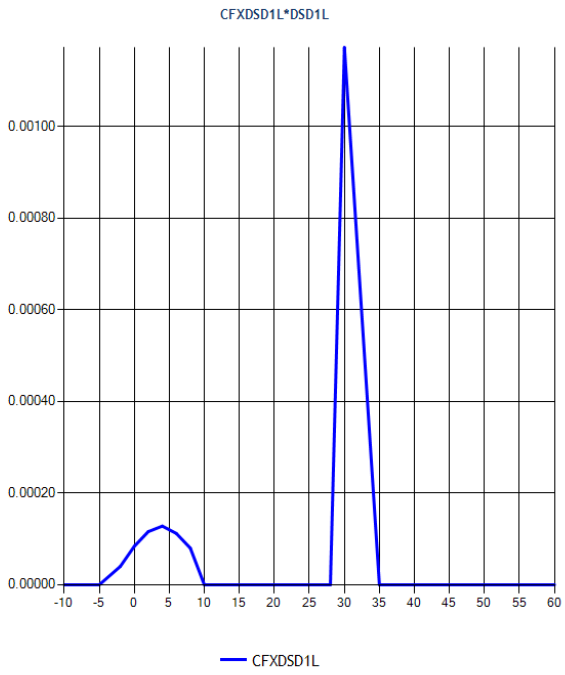
DRAG DUE TO ELEVON 2R

CFXDED2R (alpha,beta,DED2R=25)



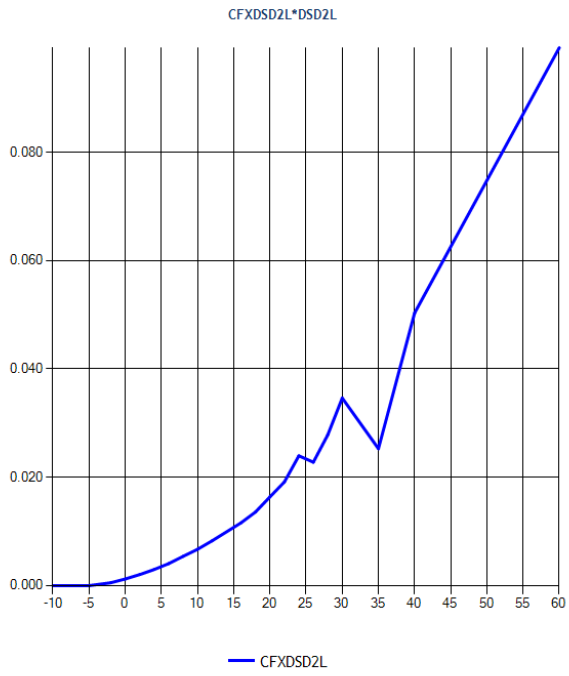
DRAG DUE TO LE SLAT 1

CFXDSD1L(alpha)



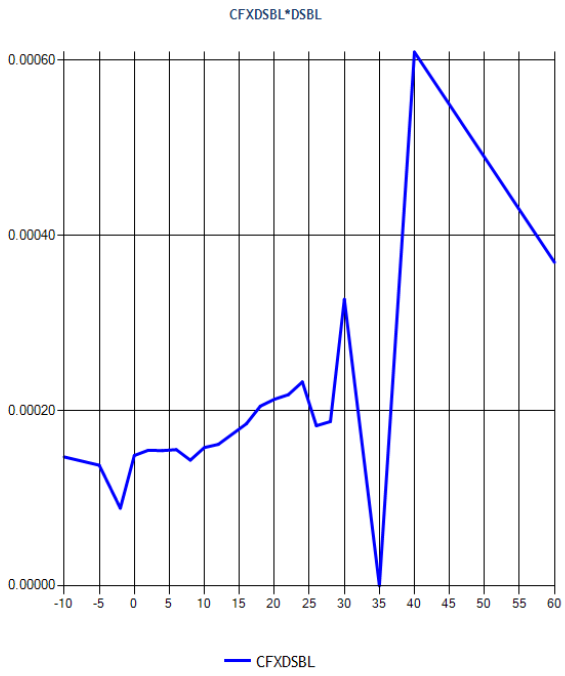
DRAG DUE TO LE SLAT 2

CFXDSD2L(alpha)



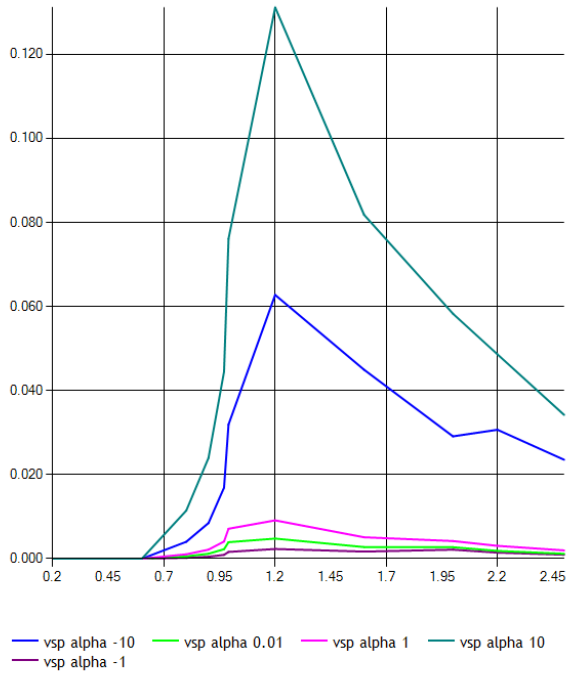
DRAG DUE TO LOWER SPEEDBRAKE DEFLECTION

CFXDSBL(alpha)



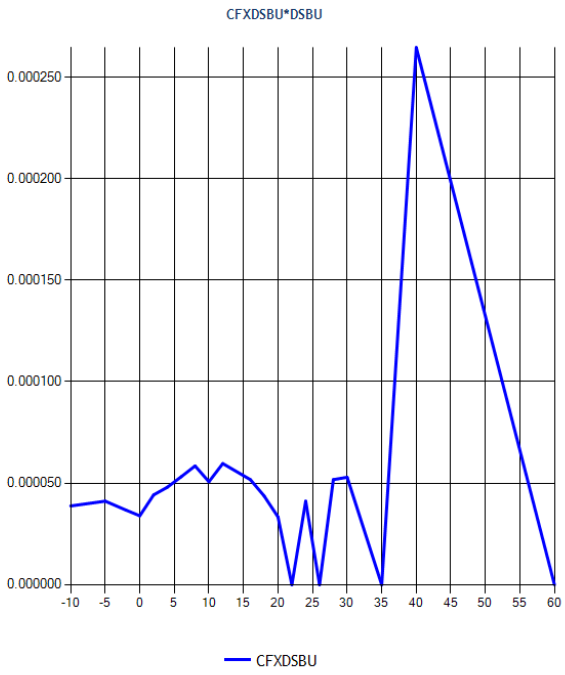
DRAG DUE TO MACH

CFXmn(mach,alpha)



DRAG DUE TO UPPER SPEEDBRAKE DEFLECTION

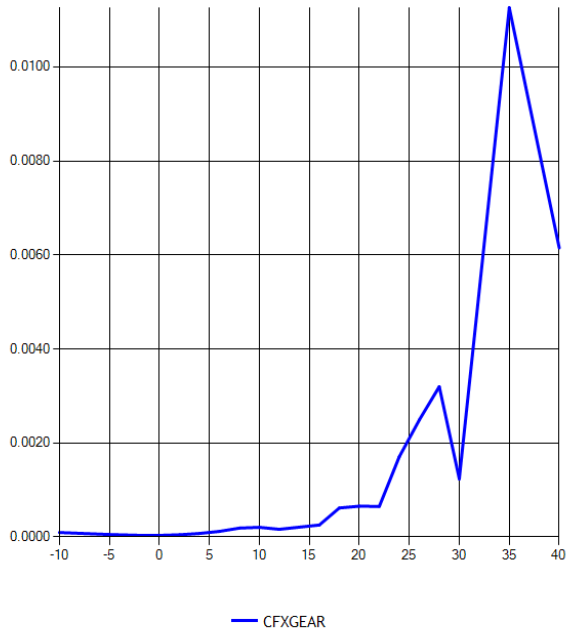
CFXDSBU(alpha)



DRAG INCREMENT DUE TO GEAR

CFXGEAR(alpha)

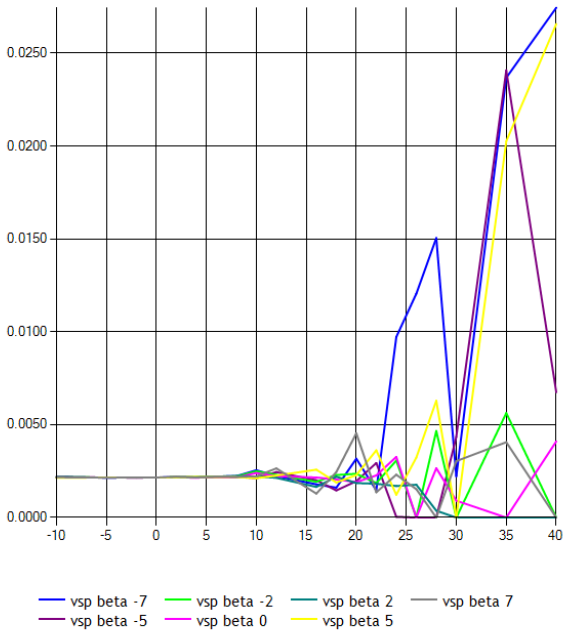
CFXGEAR*gear



DRAG INCREMENT DUE TO TANK(CENTRE)

CFXCTNK(alpha,beta)

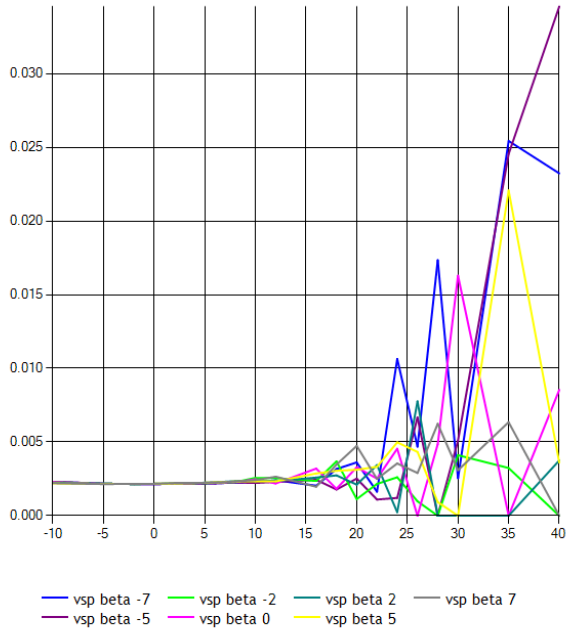
CFXCTNK*metrics/stores-centre-tank



DRAG INCREMENT DUE TO TANK(LEFT WING)

CFXLTNK(alpha,beta)

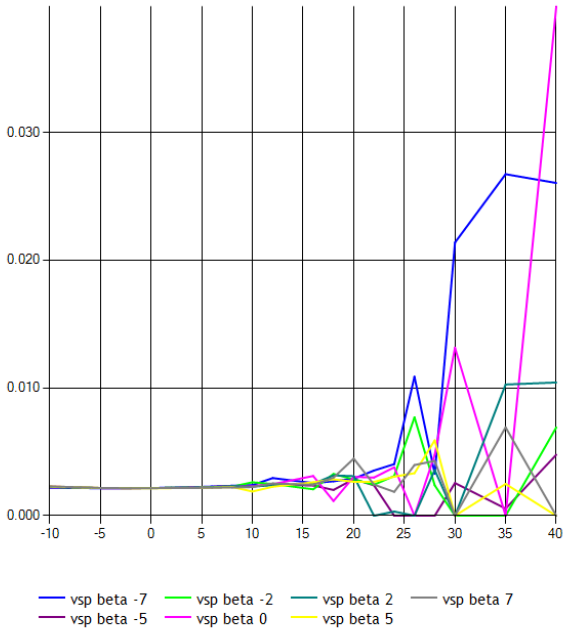
CFXLTNK*metrics/stores-wing-tank-left



DRAG INCREMENT DUE TO TANK(RIGHT WING)

CFXRTNK(alpha,beta)

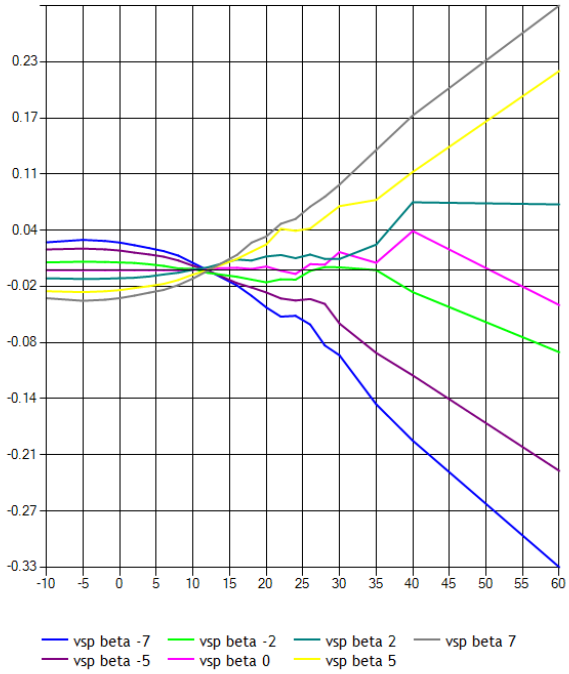
CFXRTNK*metrics/stores-wing-tank-right



SIDE

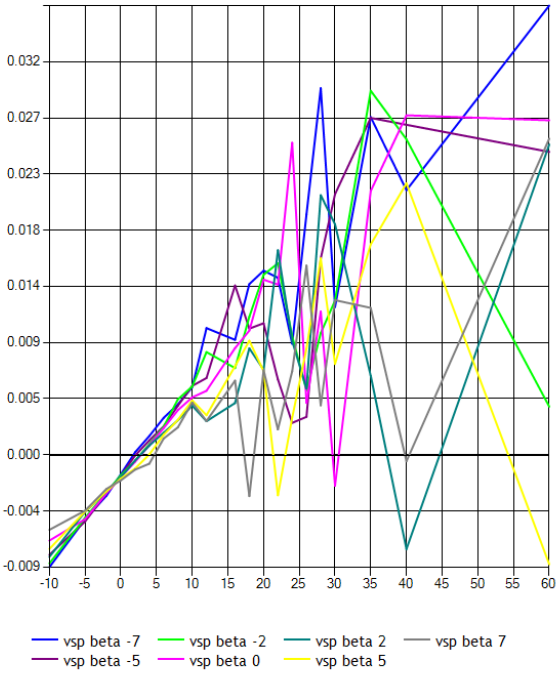
BASIC SIDE FORCE

CFYB(alpha,beta)



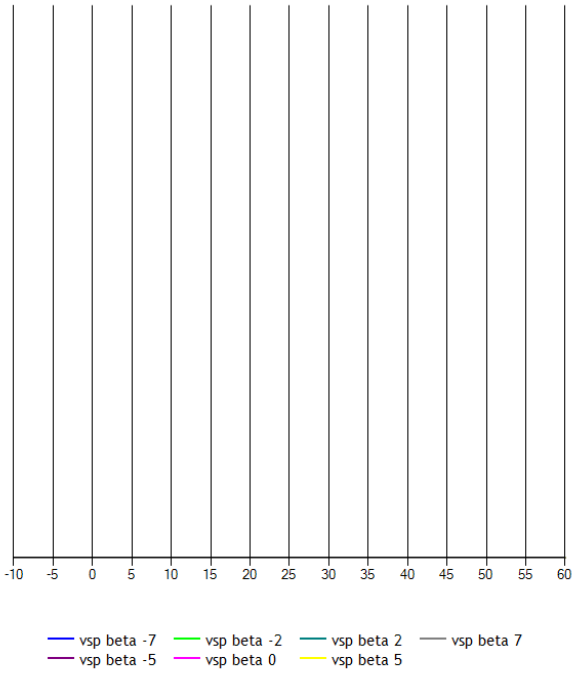
SIDE FORCE DUE TO ELEVON 1L DEFLECTION

CFYDED1L (alpha,beta,DED1L=-16)



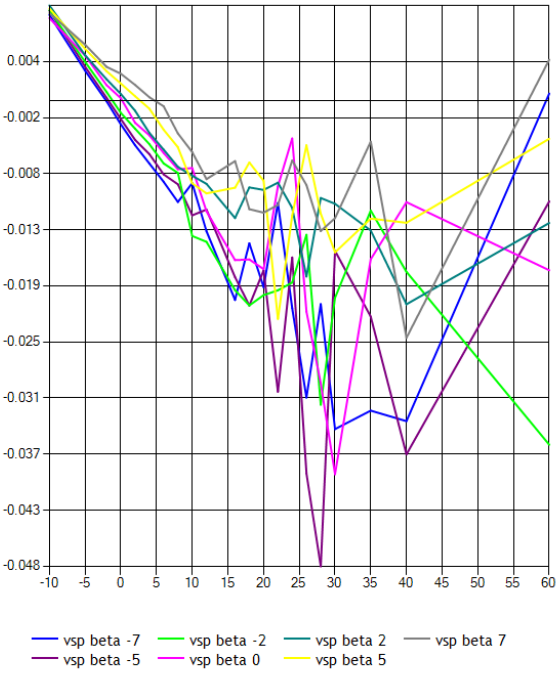
SIDE FORCE DUE TO ELEVON 1L DEFLECTION

CFYDED1L (alpha,beta,DED1L=0)



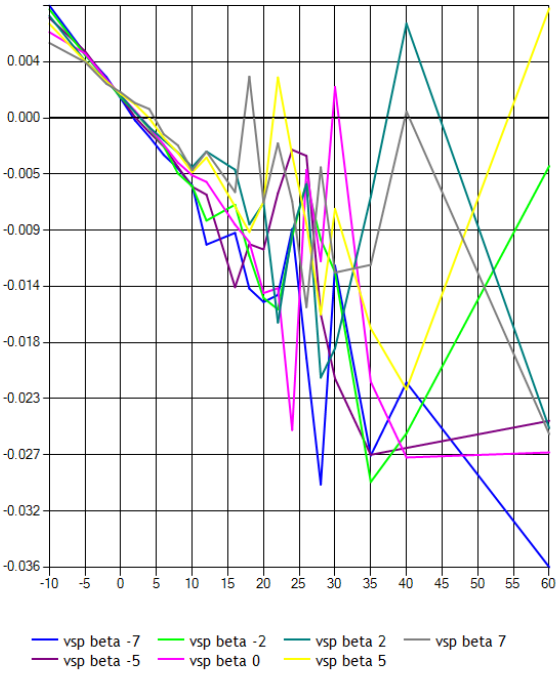
SIDE FORCE DUE TO ELEVON 1L DEFLECTION

CFYDED1L (alpha,beta,DED1L=25)



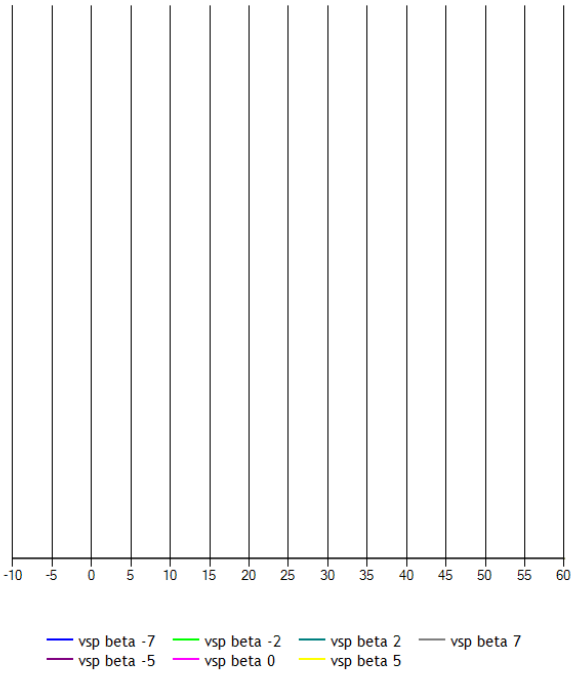
SIDE FORCE DUE TO ELEVON 1R DEFLECTION

CFYDED1R (alpha,beta,DED1R=-16)



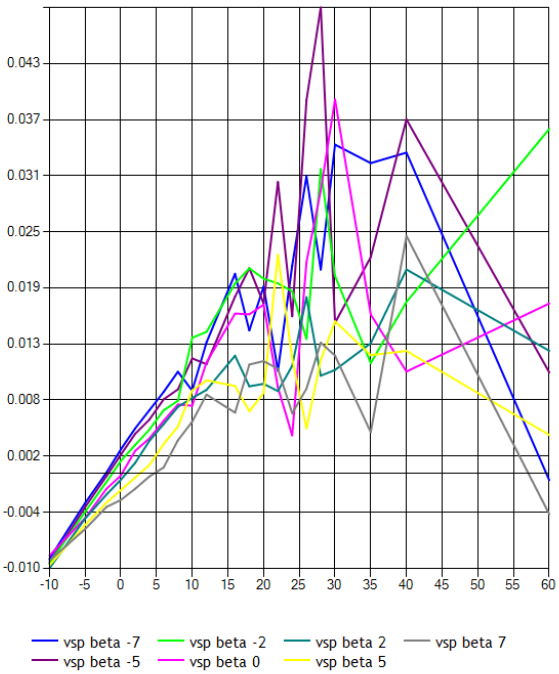
SIDE FORCE DUE TO ELEVON 1R DEFLECTION

CFYDED1R (alpha,beta,DED1R=0)



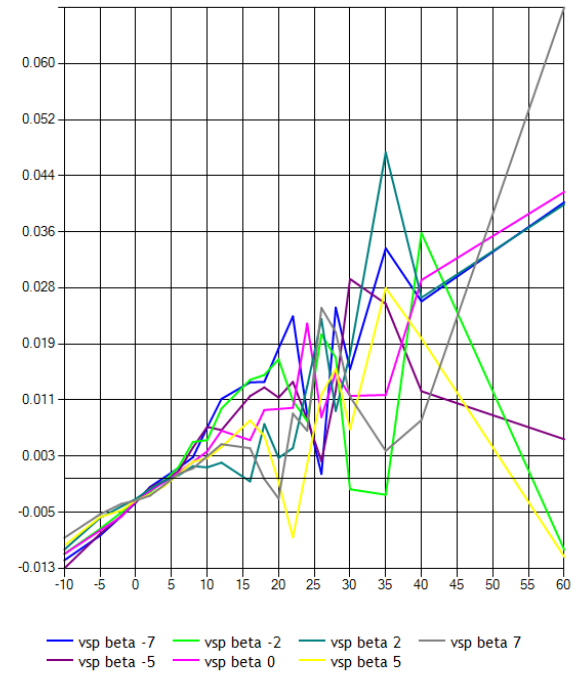
SIDE FORCE DUE TO ELEVON 1R DEFLECTION

CFYDED1R (alpha,beta,DED1R=25)



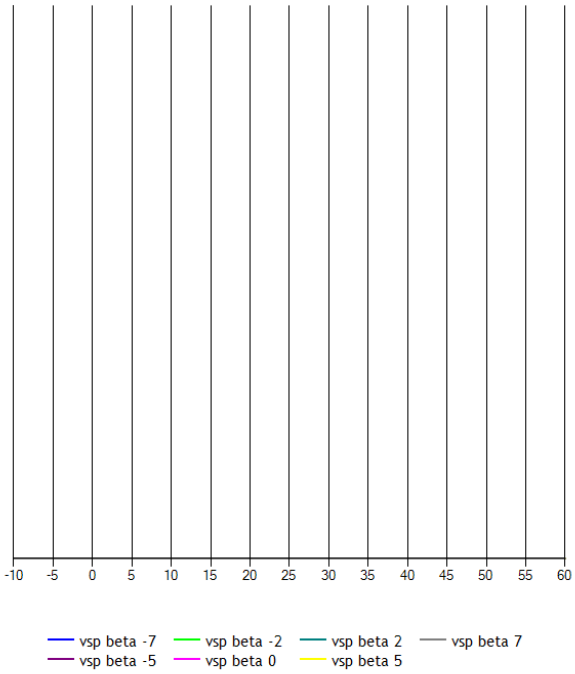
SIDE FORCE DUE TO ELEVON 2L DEFLECTION

CFYDED2L (alpha,beta,DED2L=-16)



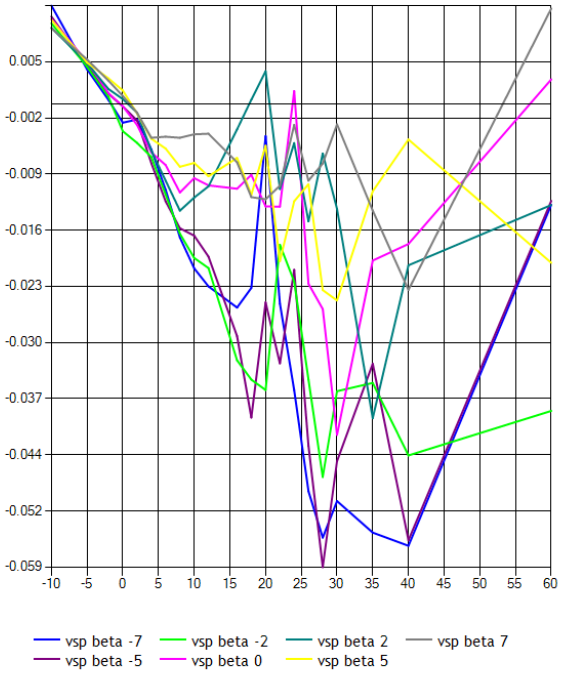
SIDE FORCE DUE TO ELEVON 2L DEFLECTION

CFYDED2L (alpha,beta,DED2L=0)



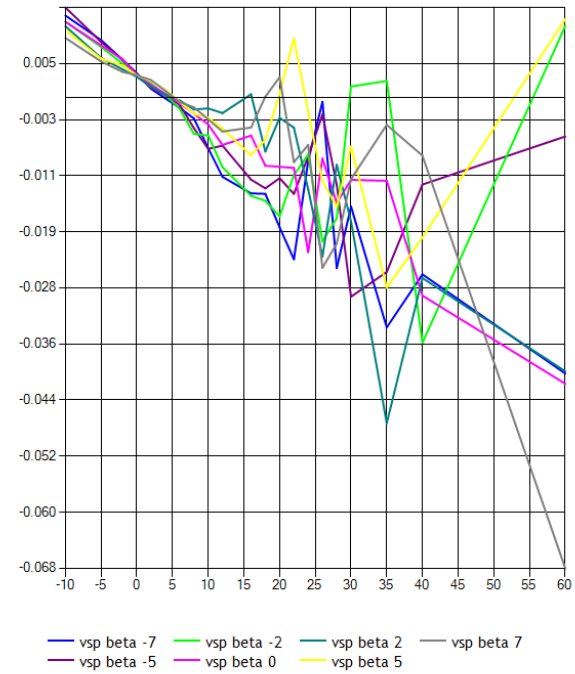
SIDE FORCE DUE TO ELEVON 2L DEFLECTION

CFYDED2L (alpha,beta,DED2L=25)



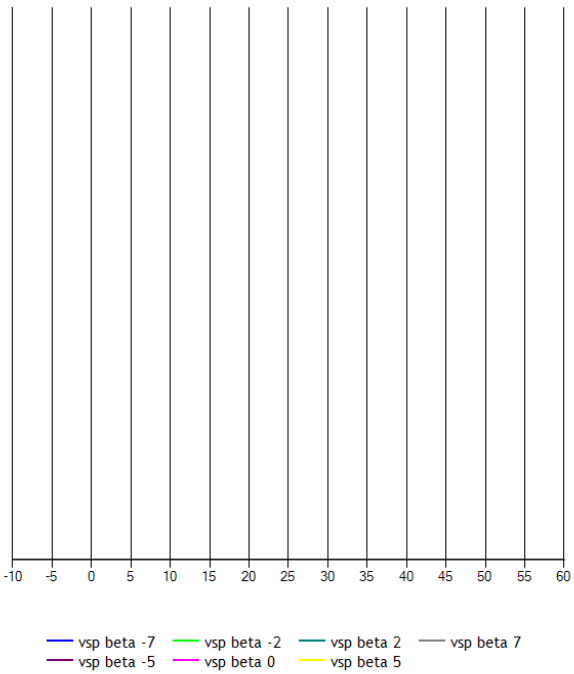
SIDE FORCE DUE TO ELEVON 2R DEFLECTION

CFYDED2R (alpha,beta,DED2R=-16)



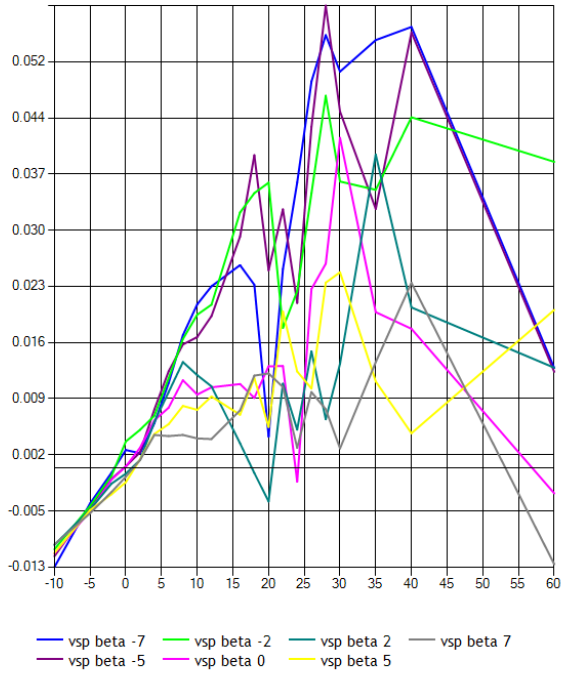
SIDE FORCE DUE TO ELEVON 2R DEFLECTION

CFYDED2R (alpha,beta,DED2R=0)



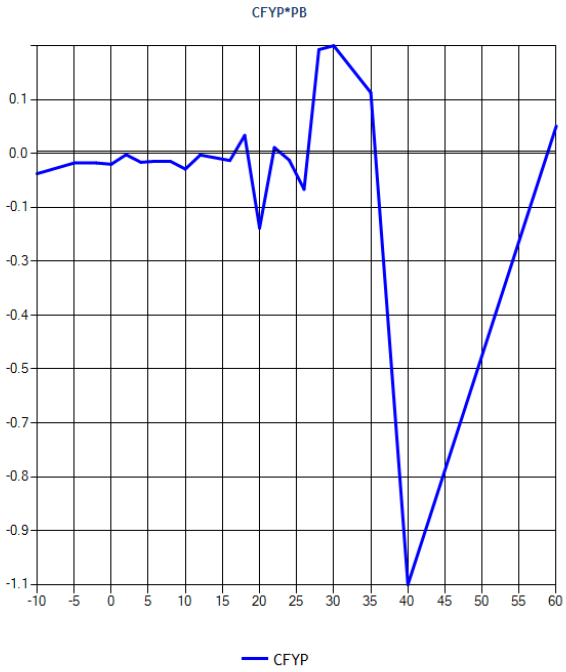
SIDE FORCE DUE TO ELEVON 2R DEFLECTION

CFYDED2R (alpha,beta,DED2R=25)



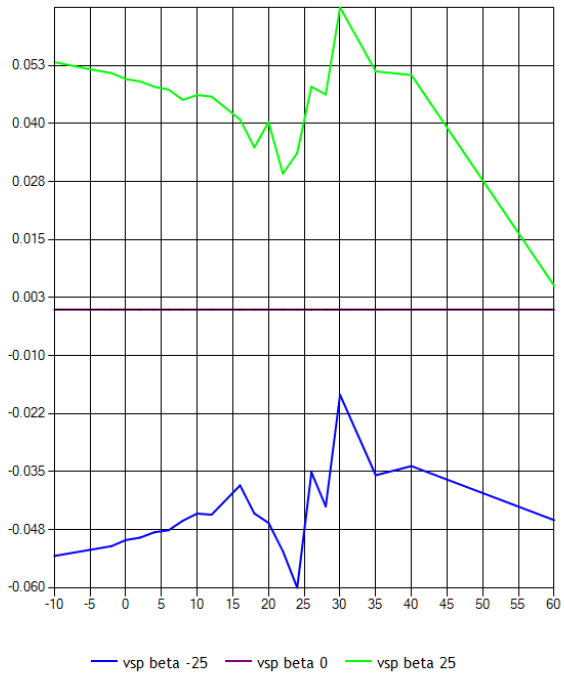
SIDE FORCE DUE TO ROLL RATE

CFYP(alpha)



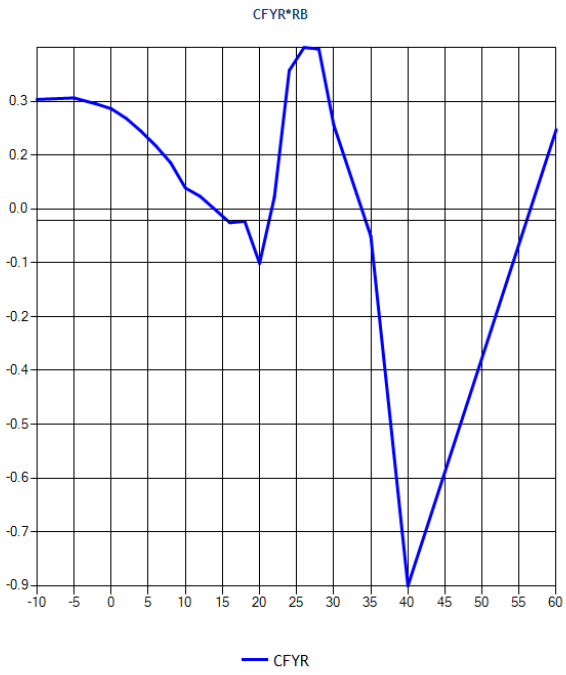
SIDE FORCE DUE TO RUDDER DEFLECTION

CFYDRD (alpha,beta,DRD=0)



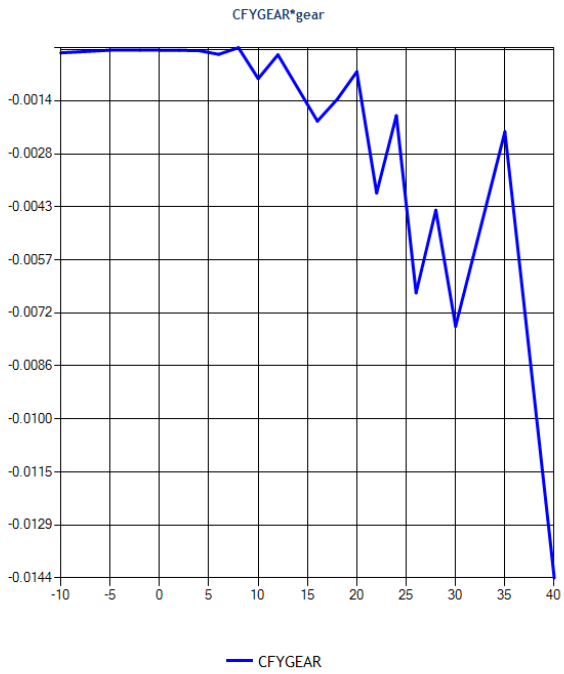
SIDE FORCE DUE TO YAW RATE

CFYR(alpha)



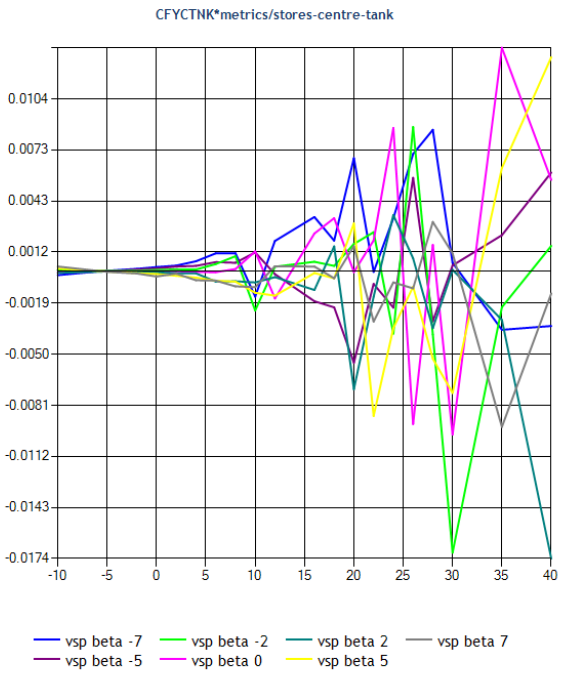
SIDE FORCE INCREMENT DUE TO GEAR

CFYGEAR(alpha)



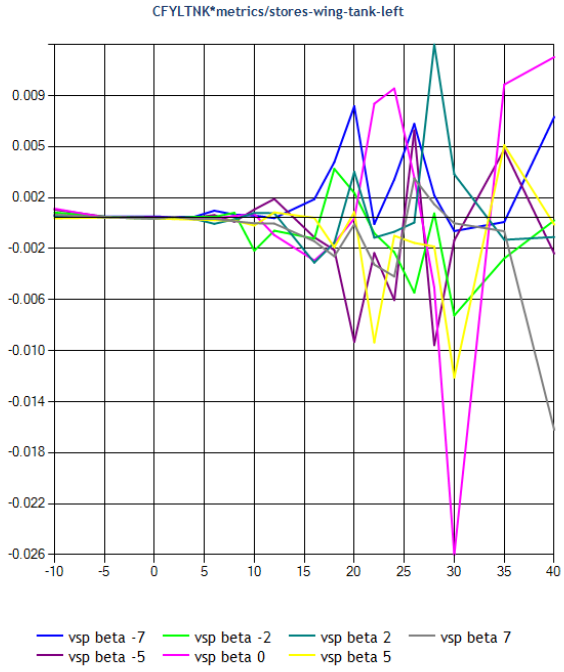
SIDE FORCE INCREMENT DUE TO TANK(CENTRE)

CFYCTNK(alpha,beta)



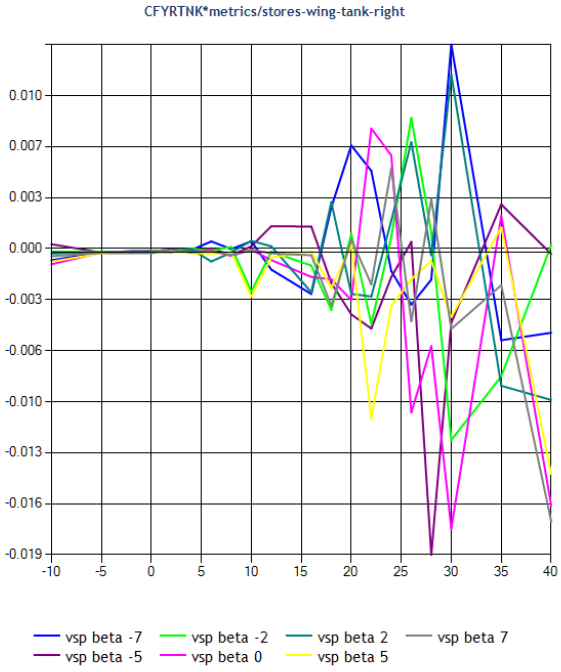
SIDE FORCE INCREMENT DUE TO TANK(LEFT WING)

CFYLTNK(alpha,beta)



SIDE FORCE INCREMENT DUE TO TANK(RIGHT WING)

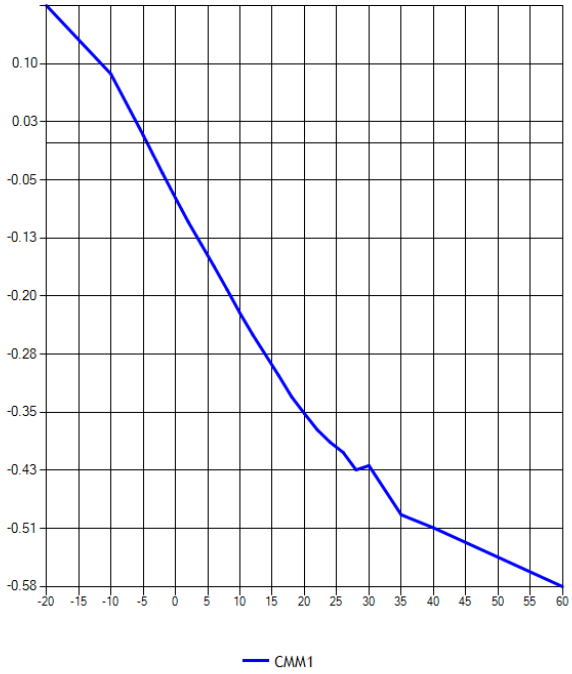
CFYRTNK(alpha,beta)



PITCH

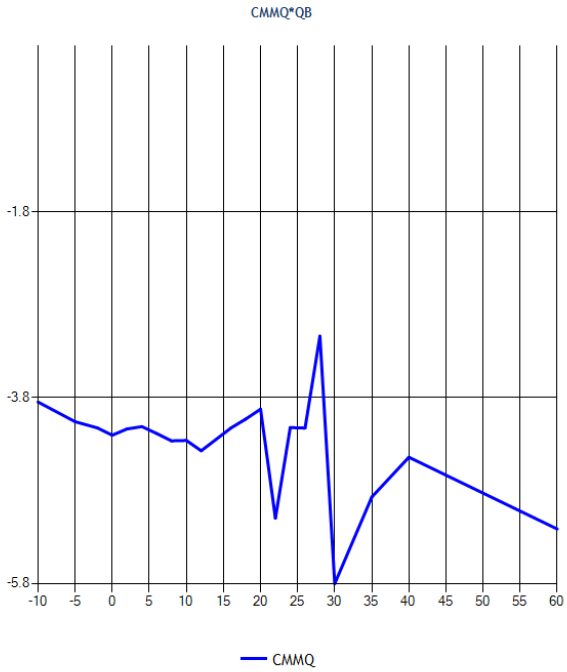
BASIC PITCHING MOMENT

CMM1(alpha)



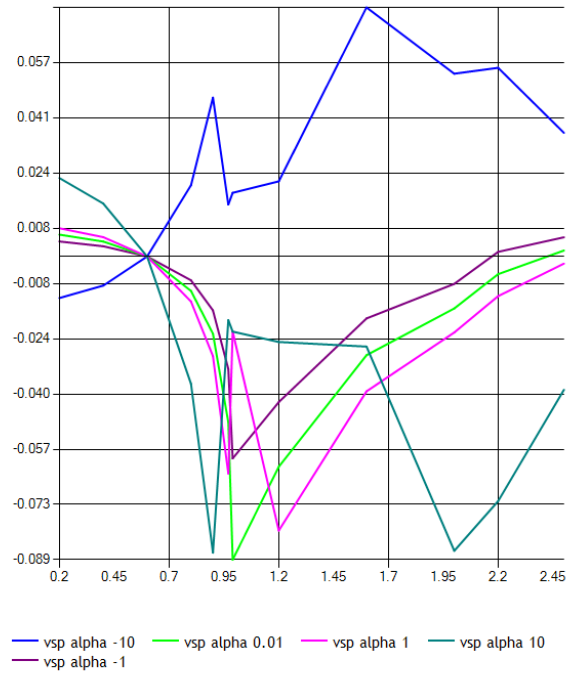
PITCH DAMPING DERIVATIVE

CMMQ(alpha)



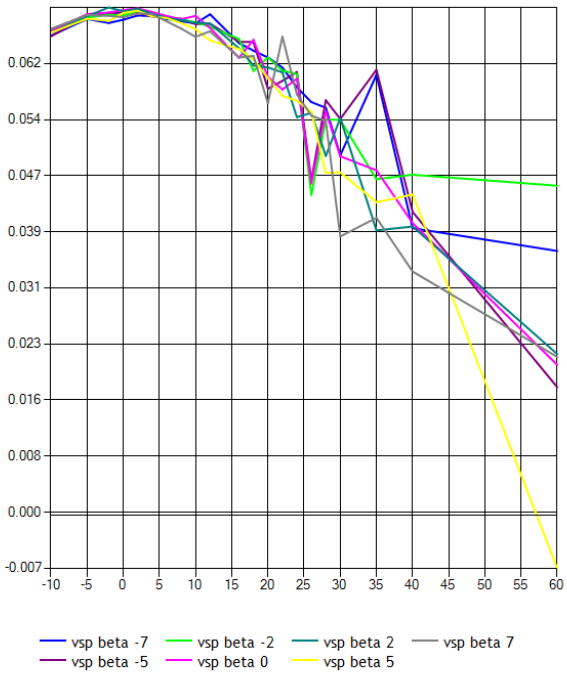
PITCH DUE TO MACH

CMMmnw(mach,alpha)



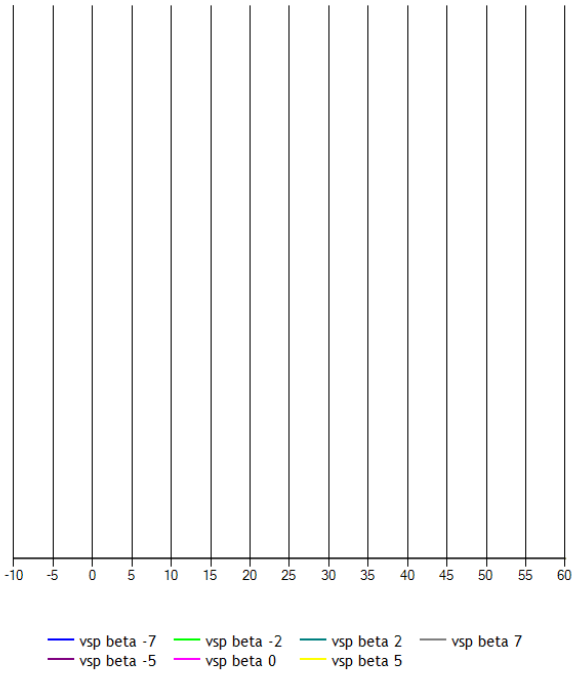
PITCH MOMENT DUE TO ELEVON 1L

CMMDED1L (alpha,beta,DED1L=-16)



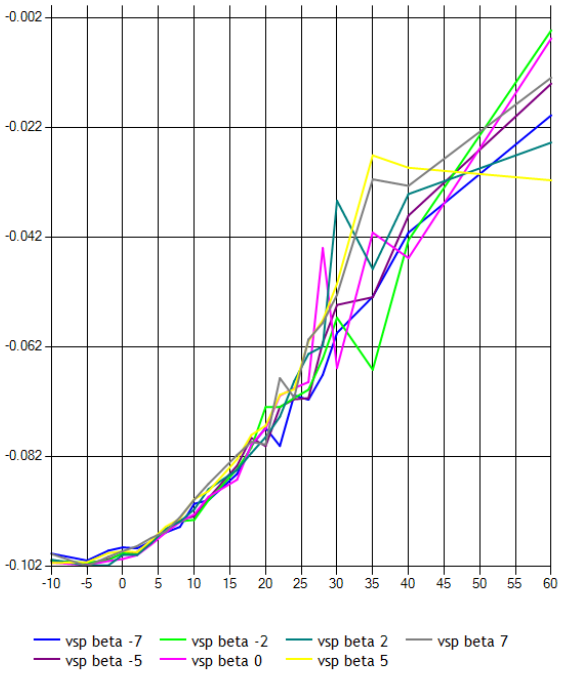
PITCH MOMENT DUE TO ELEVON 1L

CMMDED1L (alpha,beta,DED1L=0)



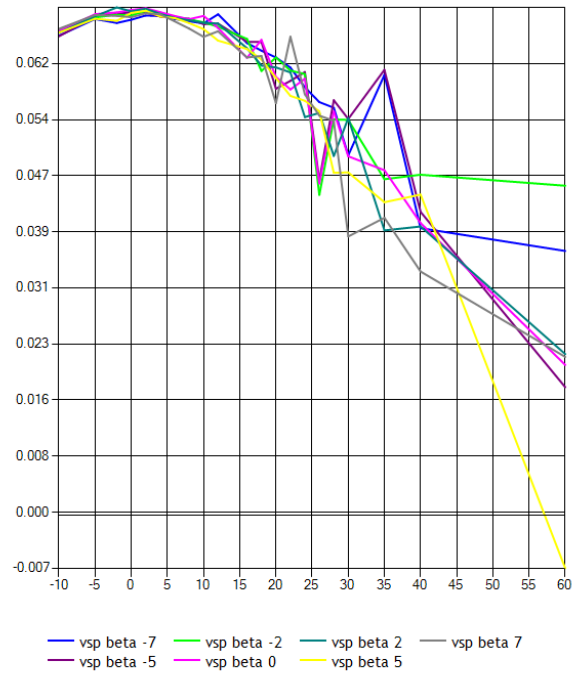
PITCH MOMENT DUE TO ELEVON 1L

CMMDED1L (alpha,beta,DED1L=25)



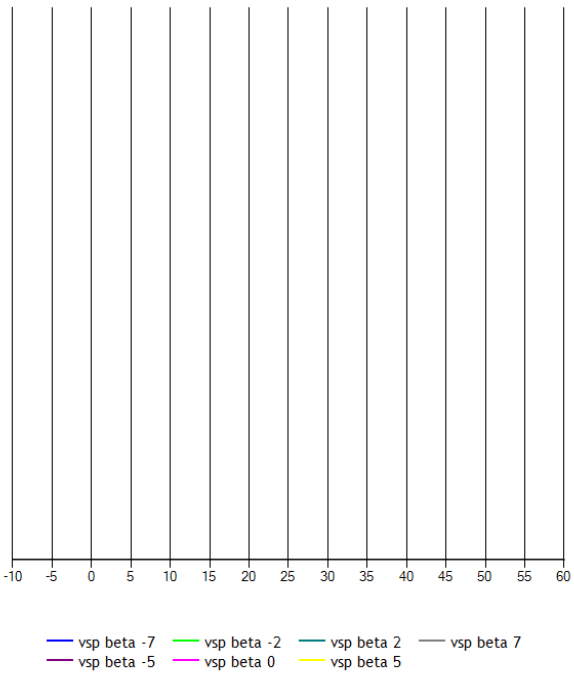
PITCH MOMENT DUE TO ELEVON 1R

CMMDED1R (alpha,beta,DED1R=-16)



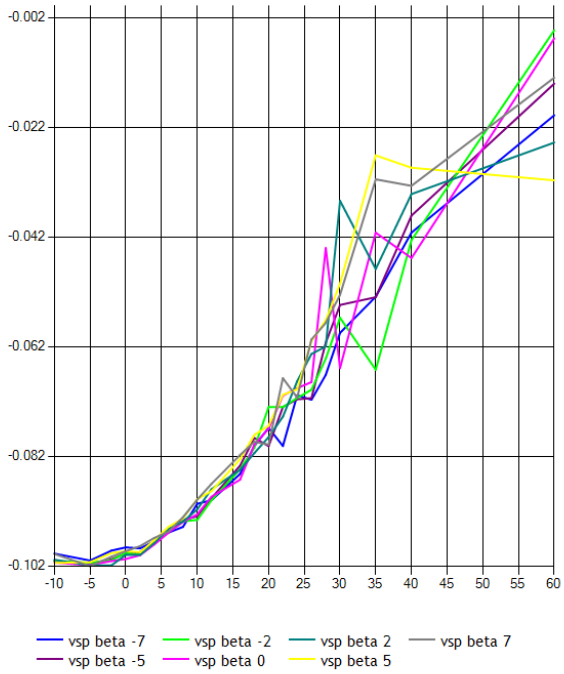
PITCH MOMENT DUE TO ELEVON 1R

CMMDED1R (alpha,beta,DED1R=0)



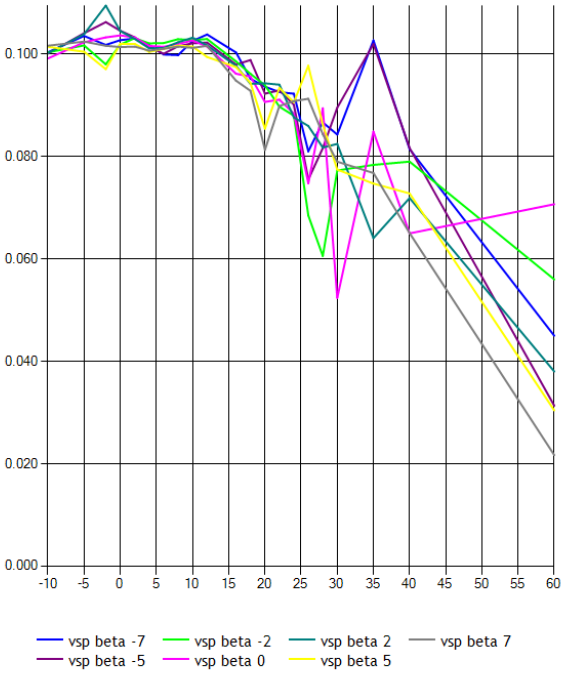
PITCH MOMENT DUE TO ELEVON 1R

CMMDED1R (alpha,beta,DED1R=25)



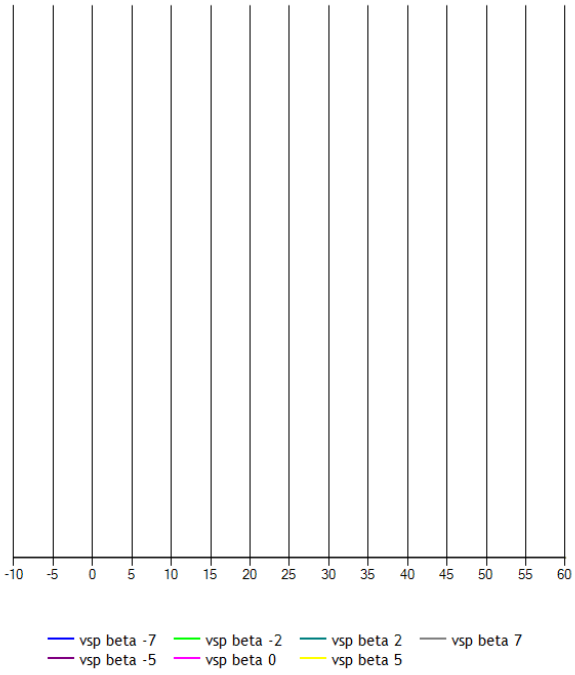
PITCH MOMENT DUE TO ELEVON 2L

CMMDED2L (alpha,beta,DED2L=-16)



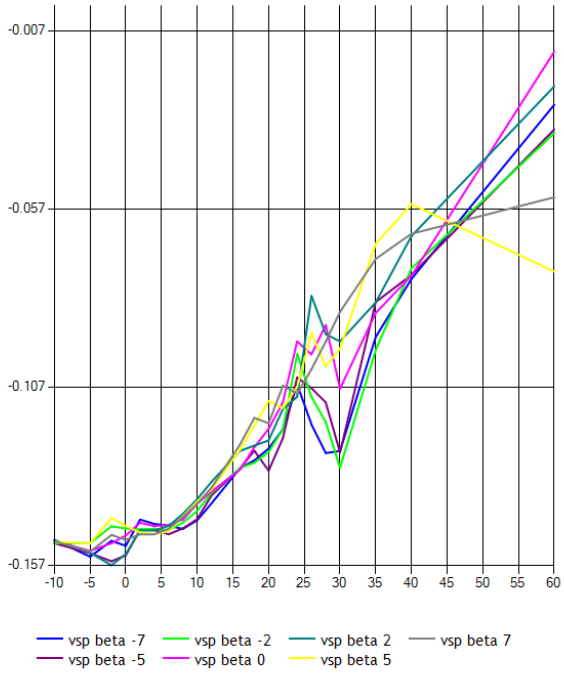
PITCH MOMENT DUE TO ELEVON 2L

CMMDED2L (alpha,beta,DED2L=0)



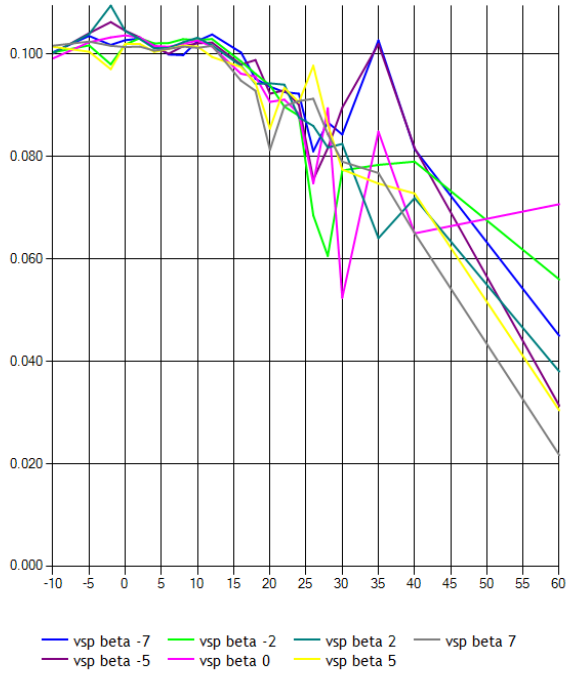
PITCH MOMENT DUE TO ELEVON 2L

CMMDED2L (alpha,beta,DED2L=25)



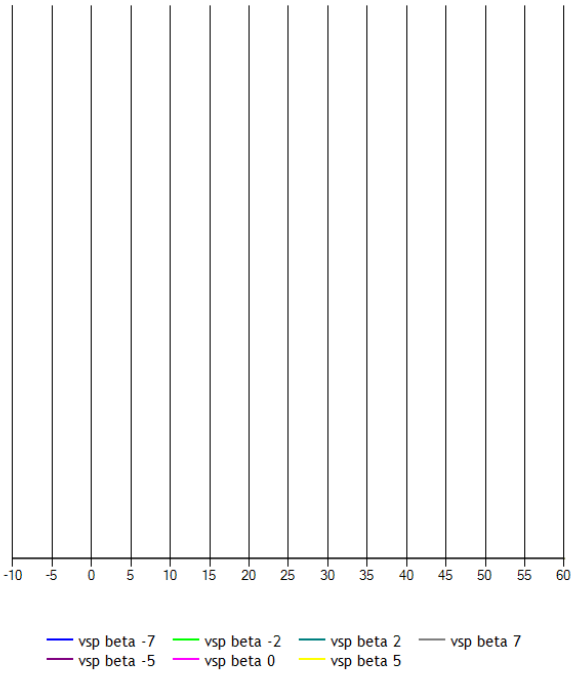
PITCH MOMENT DUE TO ELEVON 2R

CMMDED2R (alpha,beta,DED2R=-16)



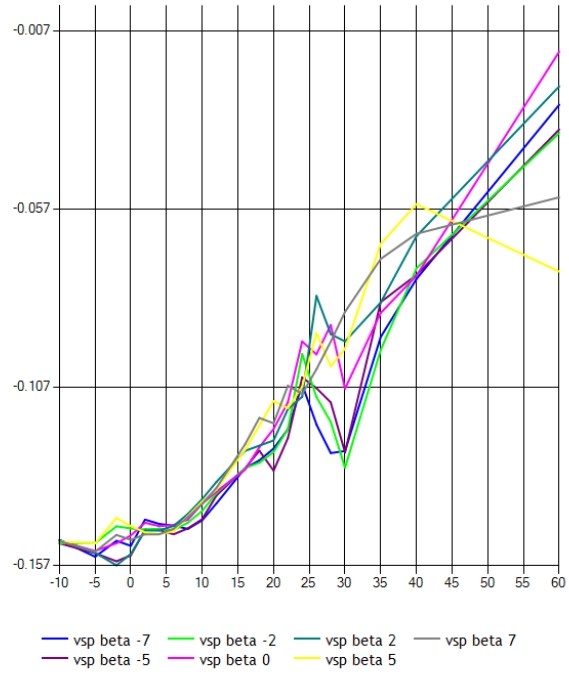
PITCH MOMENT DUE TO ELEVON 2R

CMMDED2R (alpha,beta,DED2R=0)



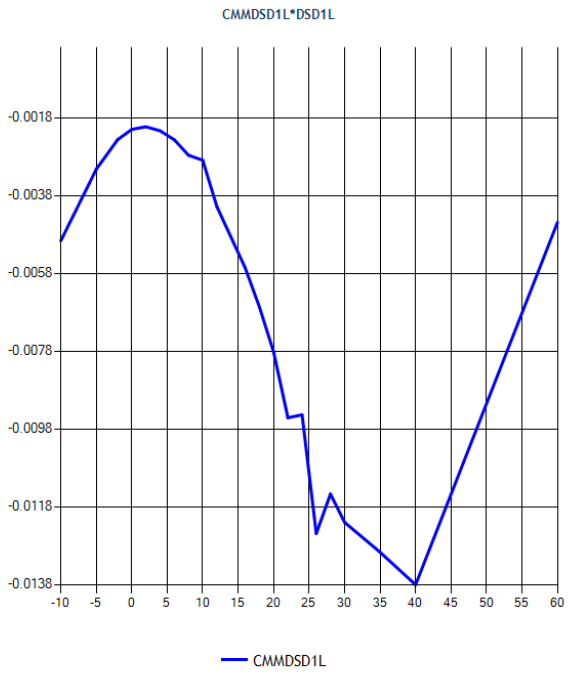
PITCH MOMENT DUE TO ELEVON 2R

CMMDED2R (alpha,beta,DED2R=25)



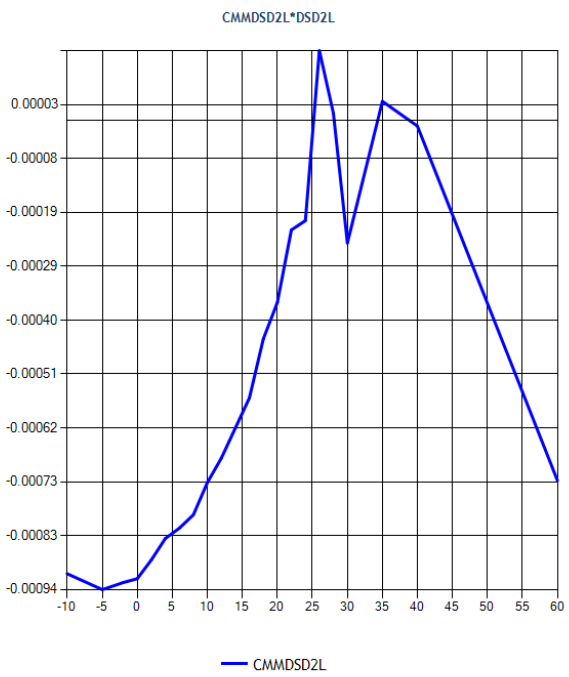
PITCH MOMENT DUE TO LE SLAT 1

CMMDSD1L(alpha)



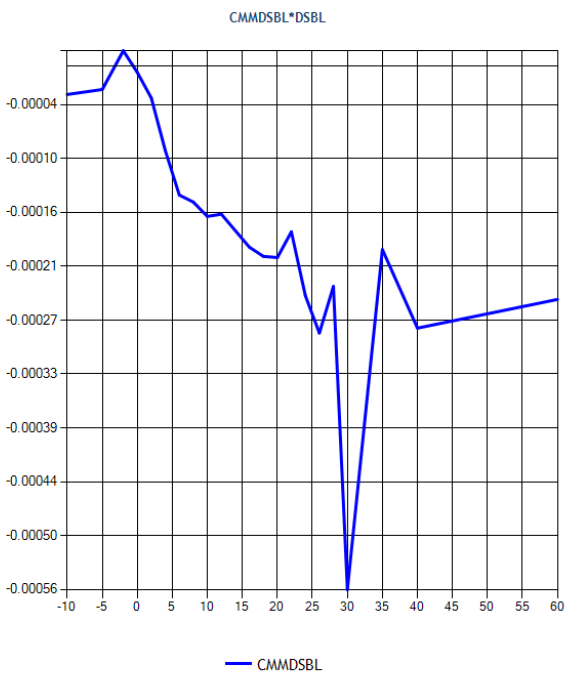
PITCH MOMENT DUE TO LE SLAT 2

CMMDSD2L(alpha)



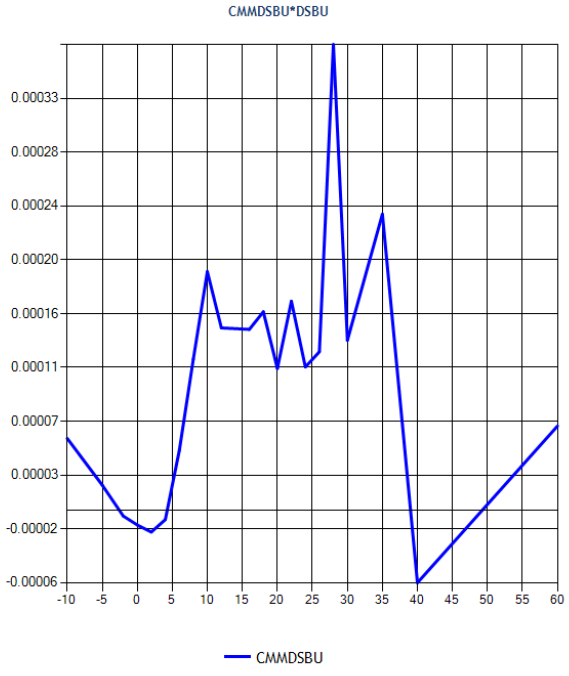
PITCH MOMENT DUE TO LOWER SPEEDBRAKE DEFLECTION

CMMDSBL(alpha)



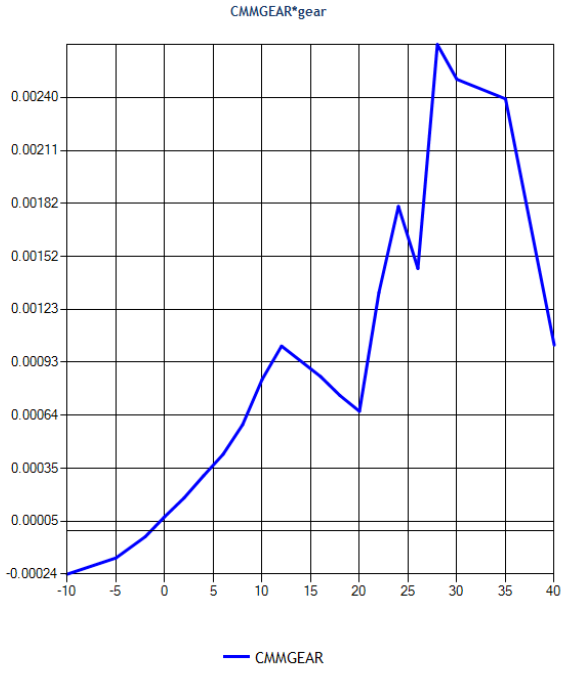
PITCH MOMENT DUE TO UPPER SPEEDBRAKE DEFLECTION

CMMDSBU(alpha)



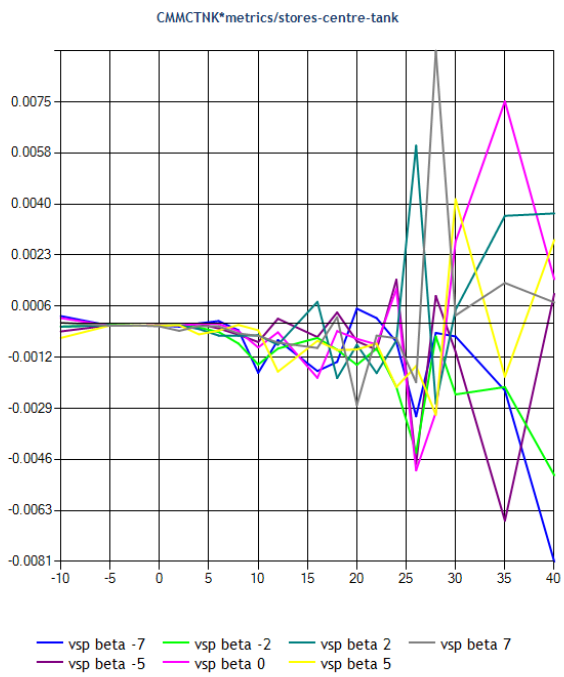
PITCHING MOMENT INCREMENT DUE TO GEAR

CMMGEAR(alpha)



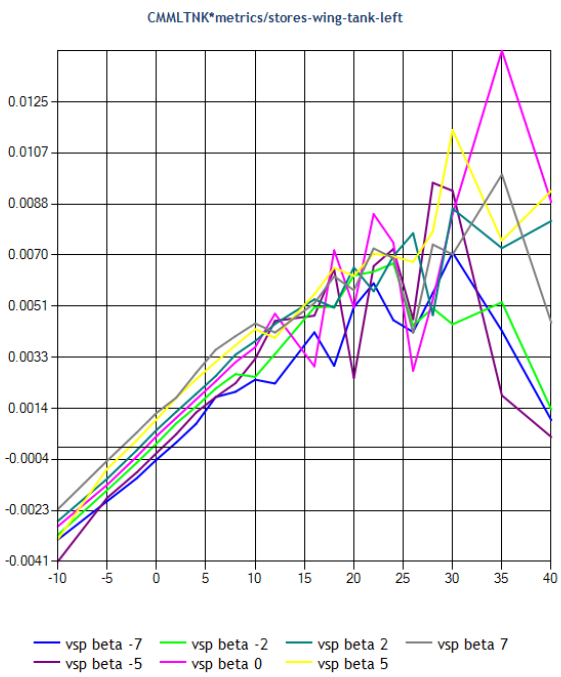
PITCHING MOMENT INCREMENT DUE TO TANK(CENTRE)

CMMCTNK(alpha,beta)



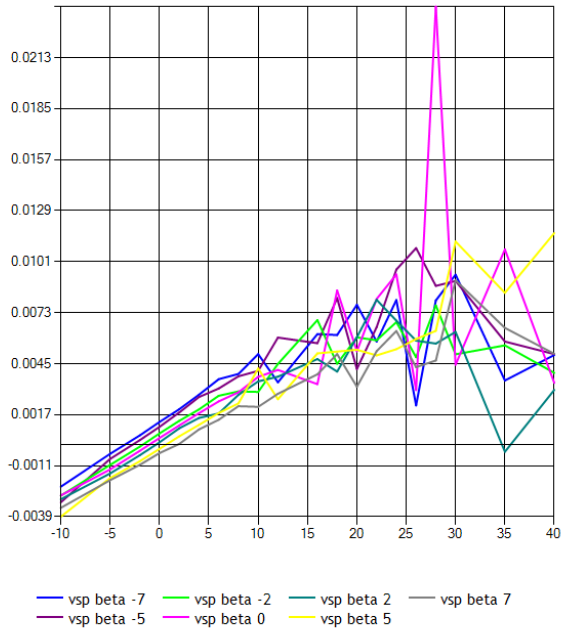
PITCHING MOMENT INCREMENT DUE TO TANK(LEFT WING)

CMMLTNK(alpha,beta)



PITCHING MOMENT INCREMENT DUE TO TANK(RIGHT WING)

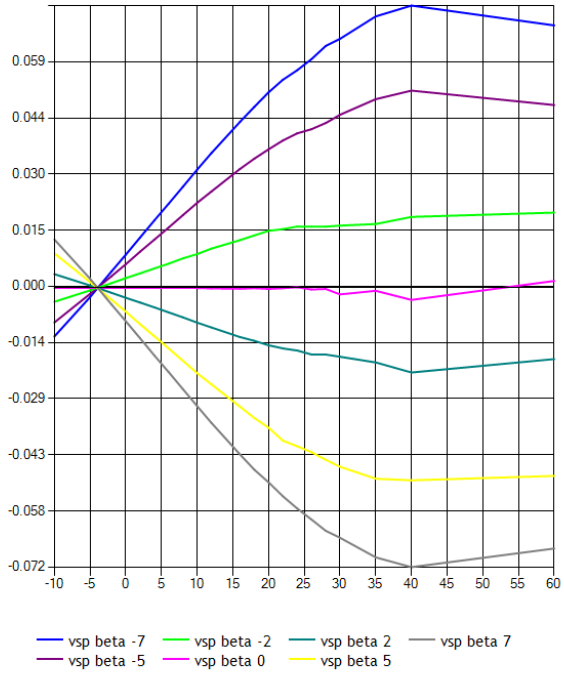
CMMRTNK(alpha,beta)



ROLL

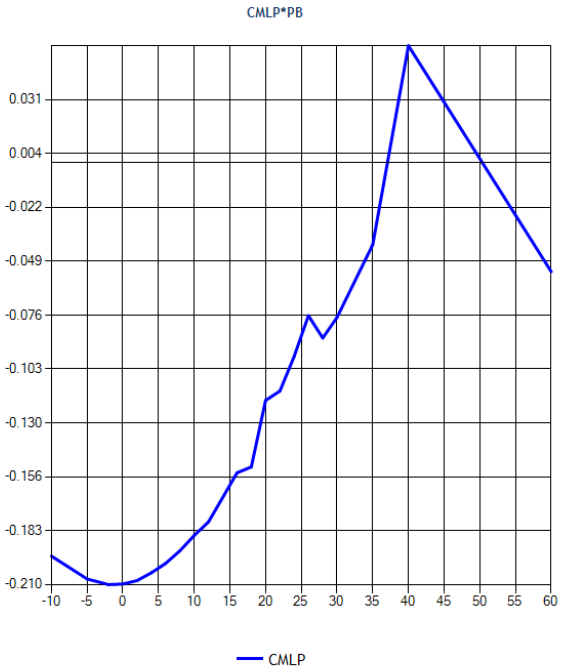
BASIC ROLLING MOMENT

CML1(alpha,beta)



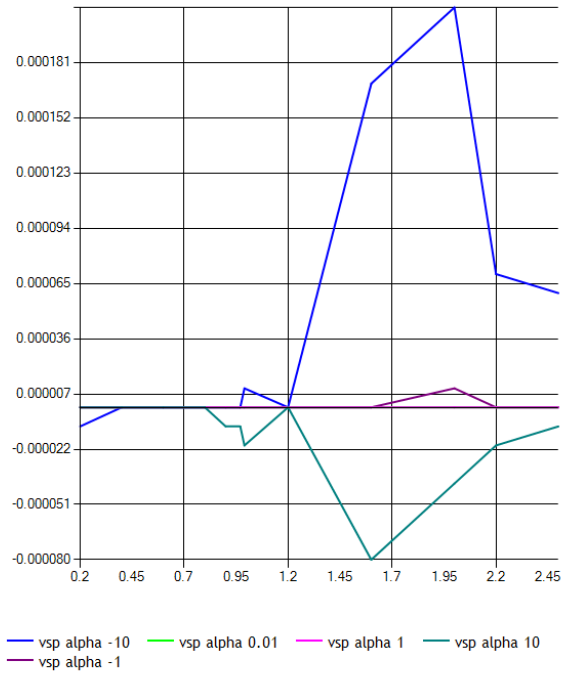
ROLL DAMPING DERIVATIVE

CMLP(alpha)



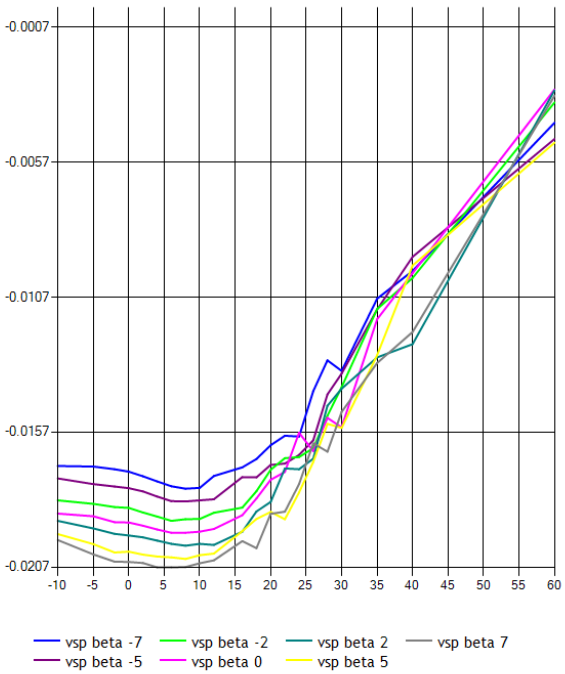
ROLL DUE TO MACH

CMLmnw(mach,alpha)



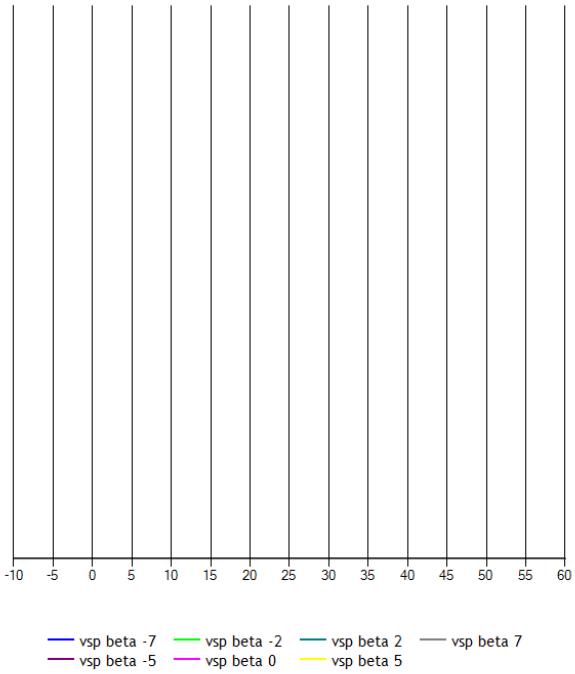
ROLLING MOMENT DUE TO ELEVON 1L DEFLECTION

CMLDED1L (alpha,beta,DED1L=-16)



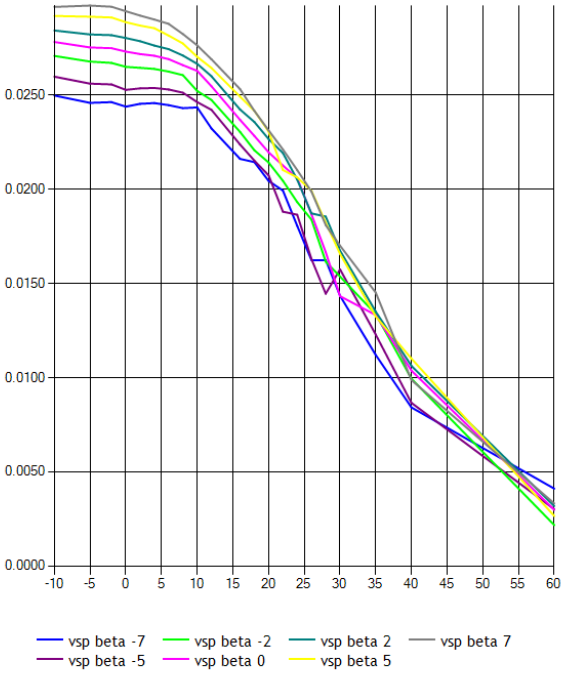
ROLLING MOMENT DUE TO ELEVON 1L DEFLECTION

CMLDED1L (alpha,beta,DED1L=0)



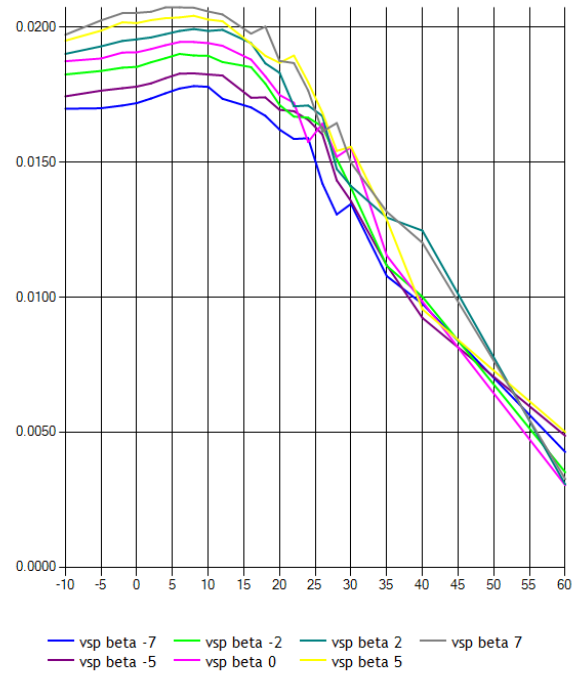
ROLLING MOMENT DUE TO ELEVON 1L DEFLECTION

CMLDED1L (alpha,beta,DED1L=25)



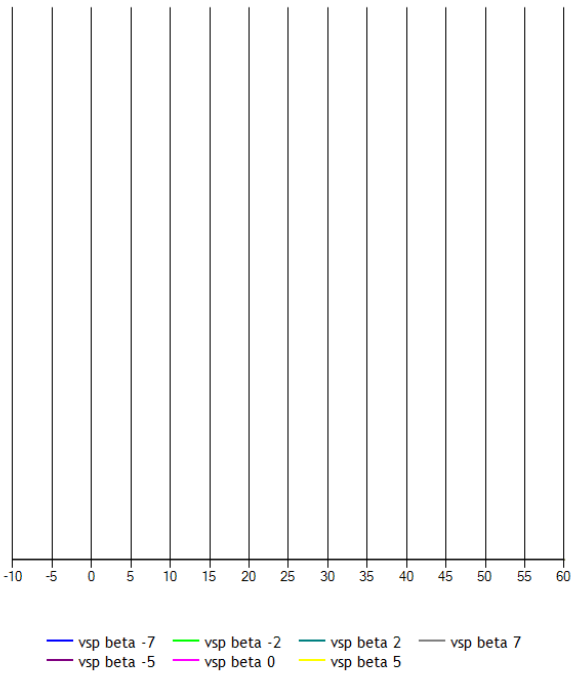
ROLLING MOMENT DUE TO ELEVON 1R DEFLECTION

CMLDED1R (alpha,beta,DED1R=-16)



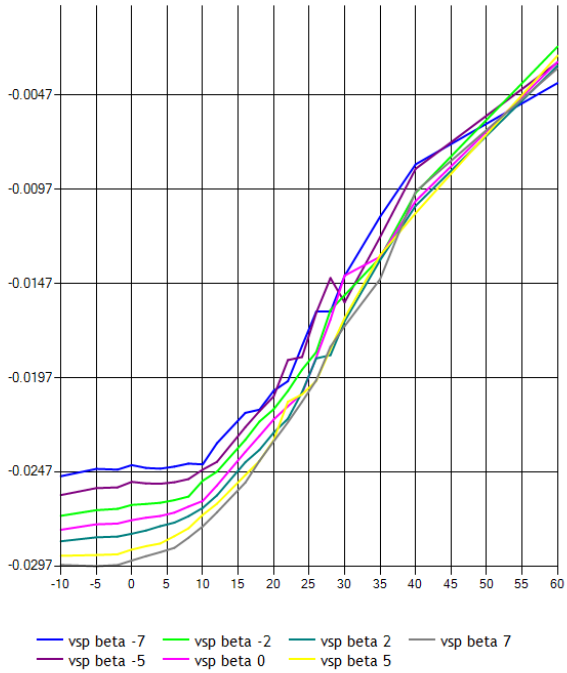
ROLLING MOMENT DUE TO ELEVON 1R DEFLECTION

CMLDED1R (alpha,beta,DED1R=0)



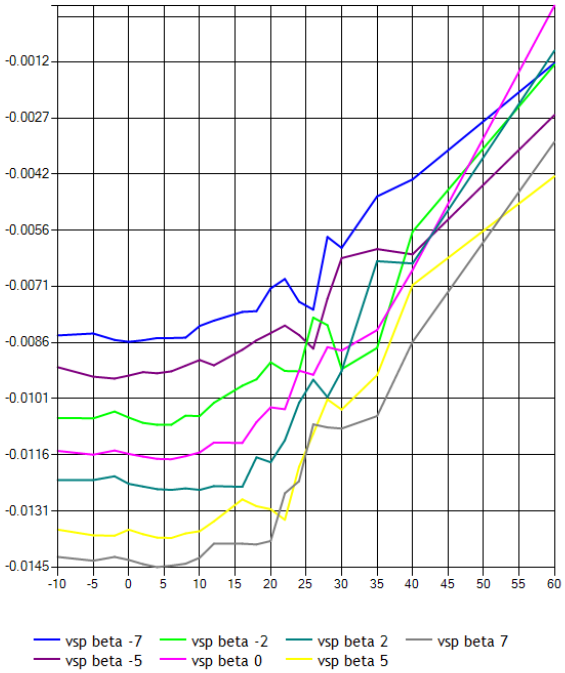
ROLLING MOMENT DUE TO ELEVON 1R DEFLECTION

CMLDED1R (alpha,beta,DED1R=25)



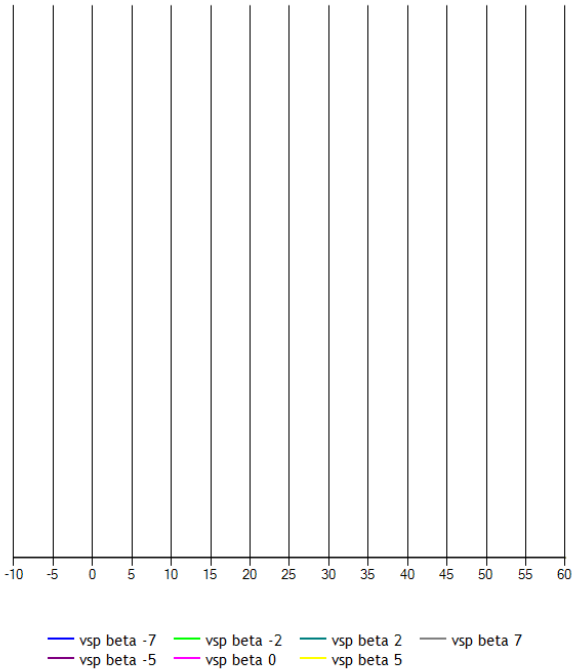
ROLLING MOMENT DUE TO ELEVON 2L DEFLECTION

CMLDED2L (alpha,beta,DED2L=-16)



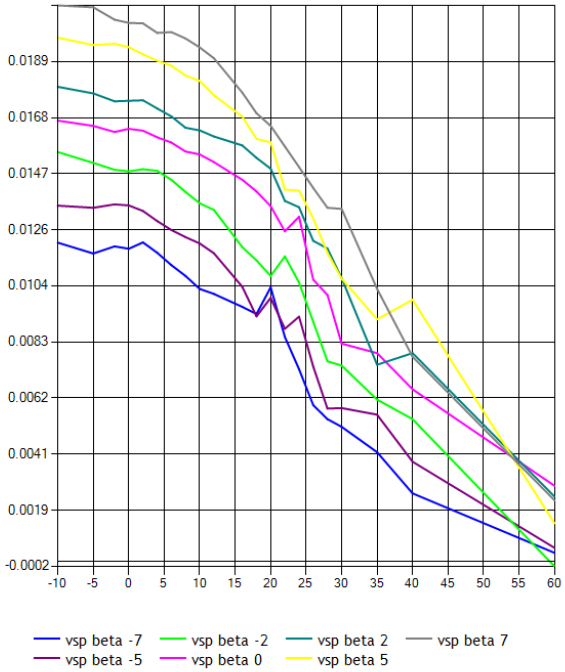
ROLLING MOMENT DUE TO ELEVON 2L DEFLECTION

CMLDED2L (alpha,beta,DED2L=0)



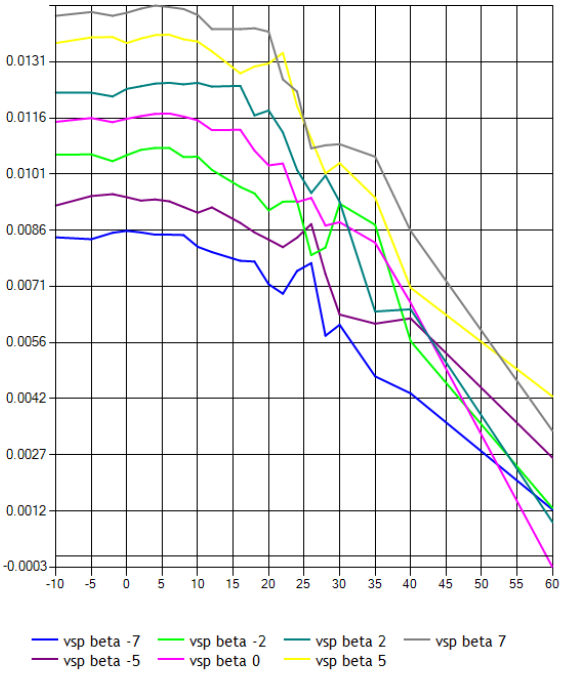
ROLLING MOMENT DUE TO ELEVON 2L DEFLECTION

CMLDED2L (alpha,beta,DED2L=25)



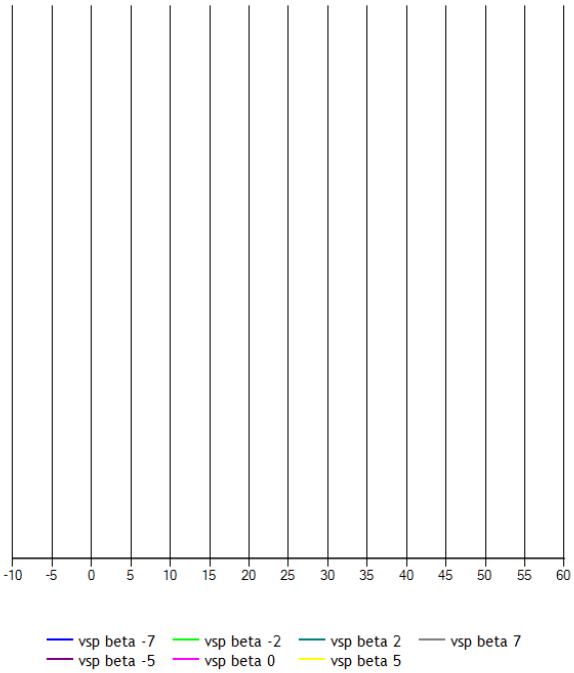
ROLLING MOMENT DUE TO ELEVON 2R DEFLECTION

CMLDED2R (alpha,beta,DED2R=-16)



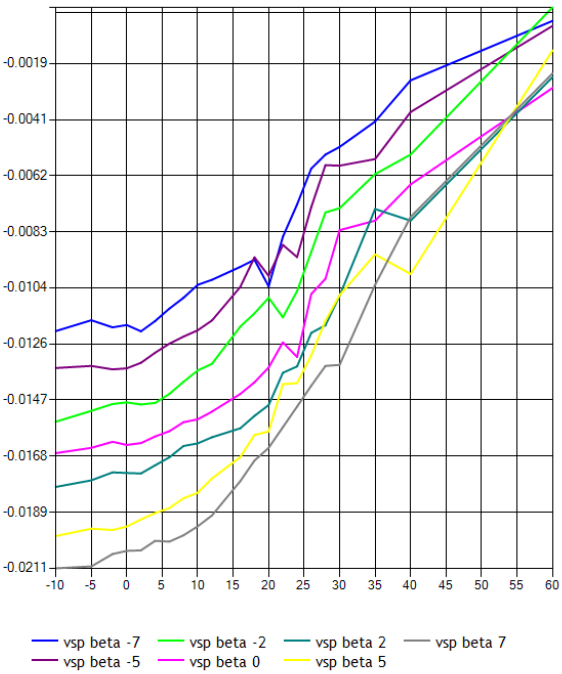
ROLLING MOMENT DUE TO ELEVON 2R DEFLECTION

CMLDED2R (alpha,beta,DED2R=0)



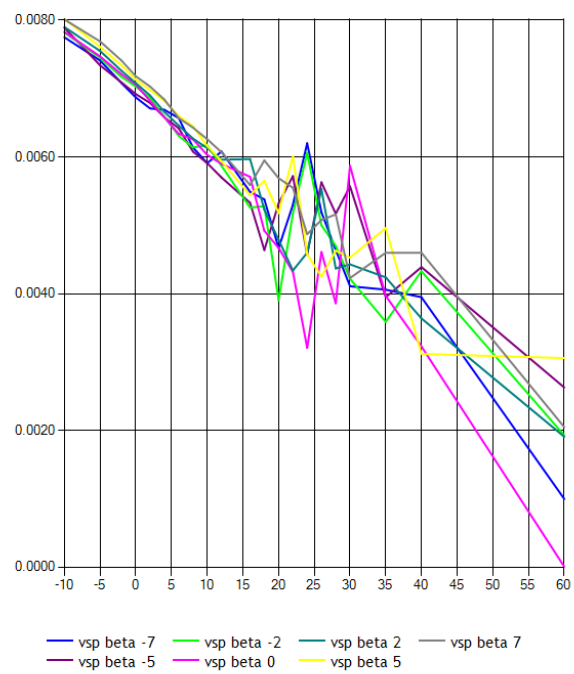
ROLLING MOMENT DUE TO ELEVON 2R DEFLECTION

CMLDED2R (alpha,beta,DED2R=25)



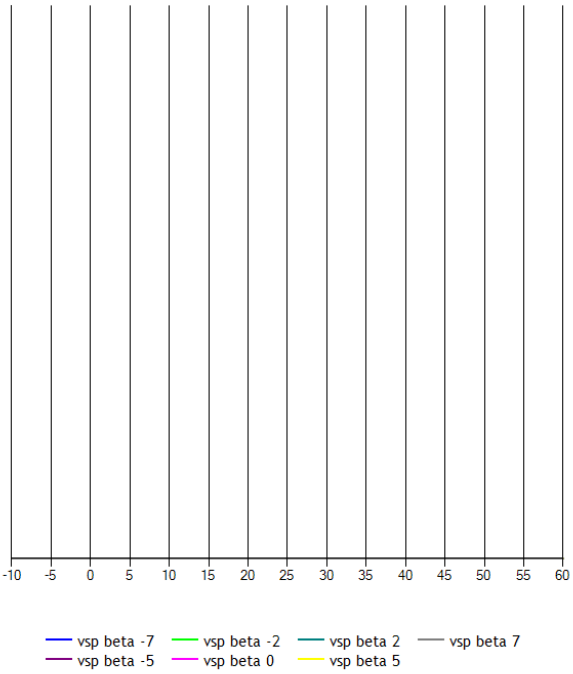
ROLLING MOMENT DUE TO RUDDER DEFLECTION

CMLDRD (alpha,beta,DRD=-25)



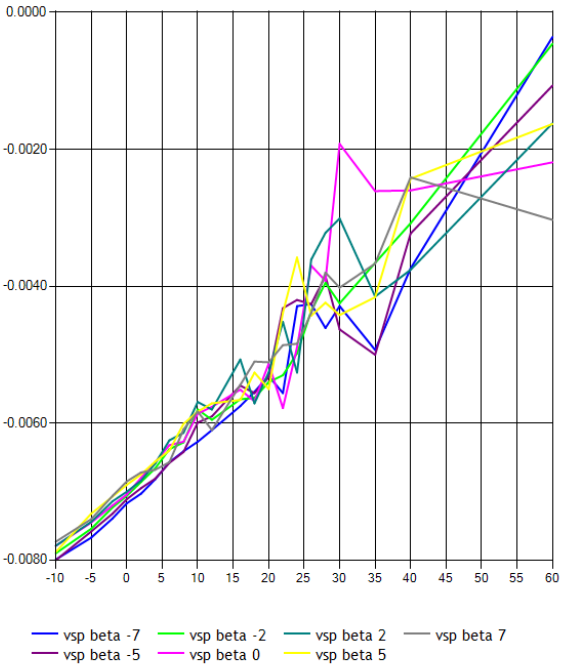
ROLLING MOMENT DUE TO RUDDER DEFLECTION

CMLDRD (alpha,beta,DRD=0)



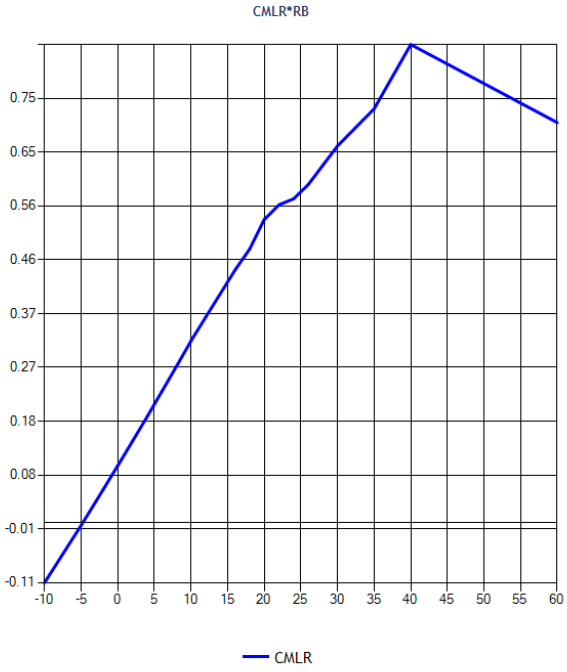
ROLLING MOMENT DUE TO RUDDER DEFLECTION

CMLDRD (alpha,beta,DRD=25)



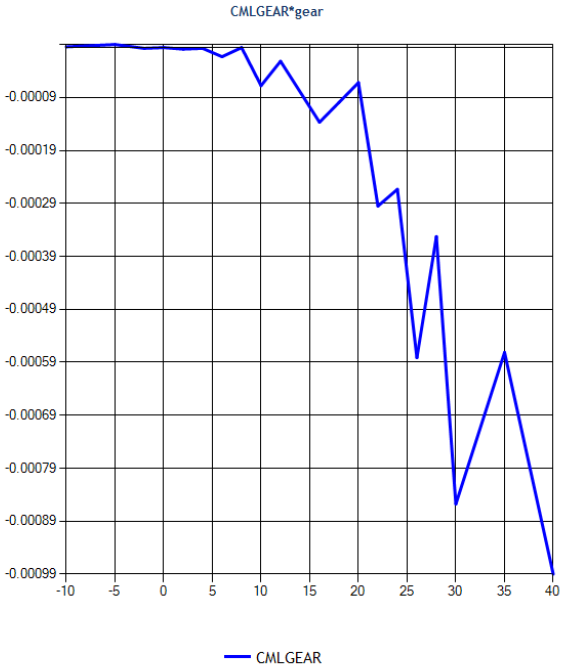
ROLLING MOMENT DUE TO YAW RATE

CMLR(alpha)



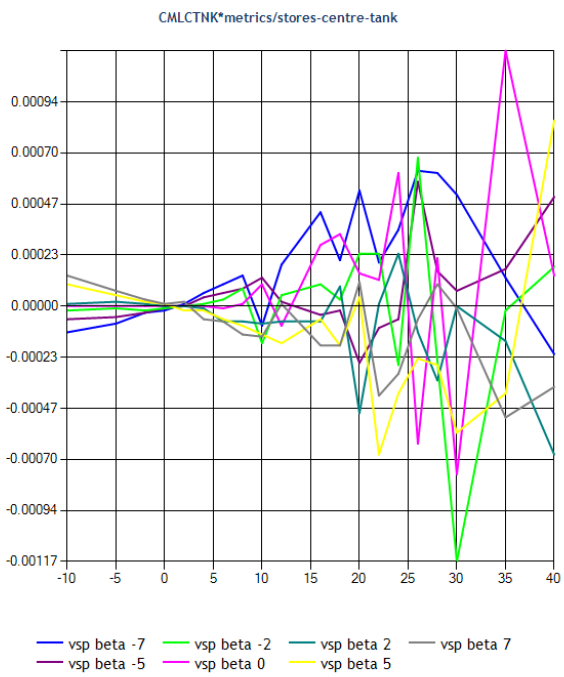
ROLLING MOMENT INCREMENT DUE TO GEAR

CMLGEAR(alpha)



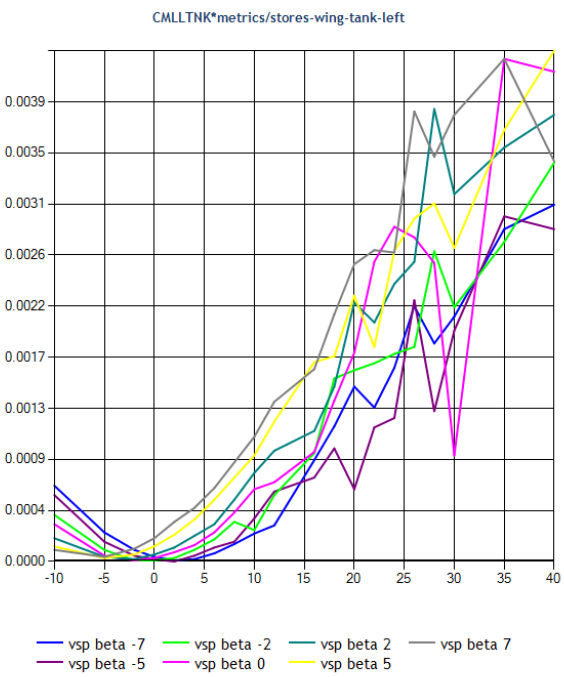
ROLLING MOMENT INCREMENT DUE TO TANK(CENTRE)

CMLCTNK(alpha,beta)



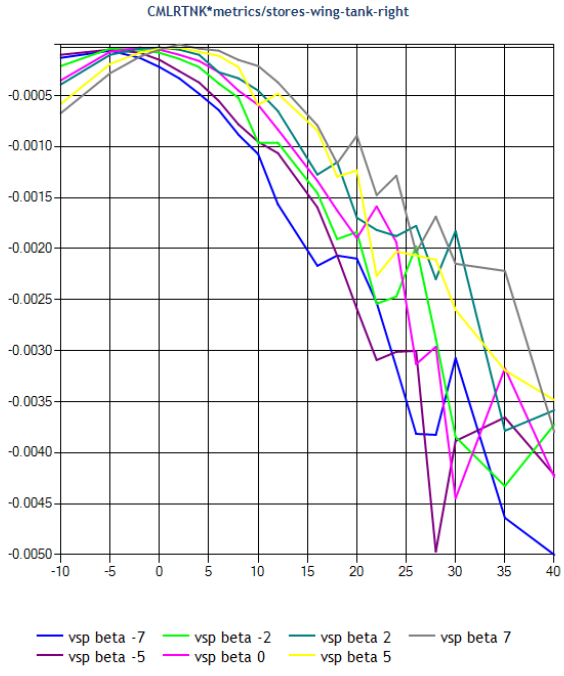
ROLLING MOMENT INCREMENT DUE TO TANK(LEFT WING)

CMLLTNK(alpha,beta)



ROLLING MOMENT INCREMENT DUE TO TANK(RIGHT WING)

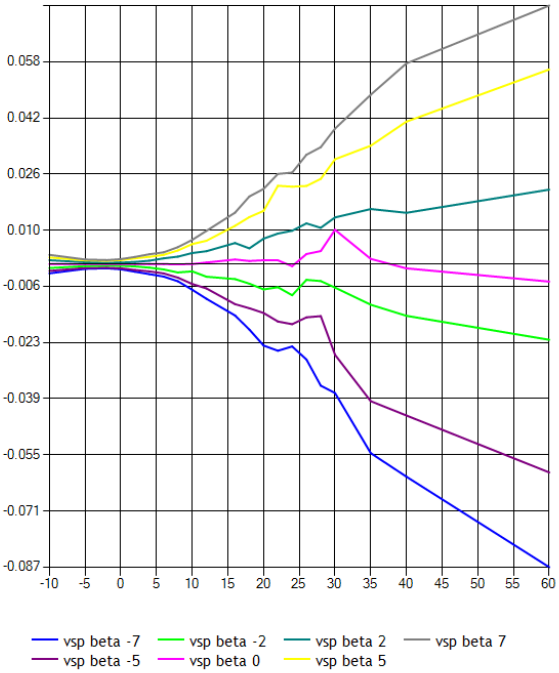
CMLRTNK(alpha,beta)



YAW

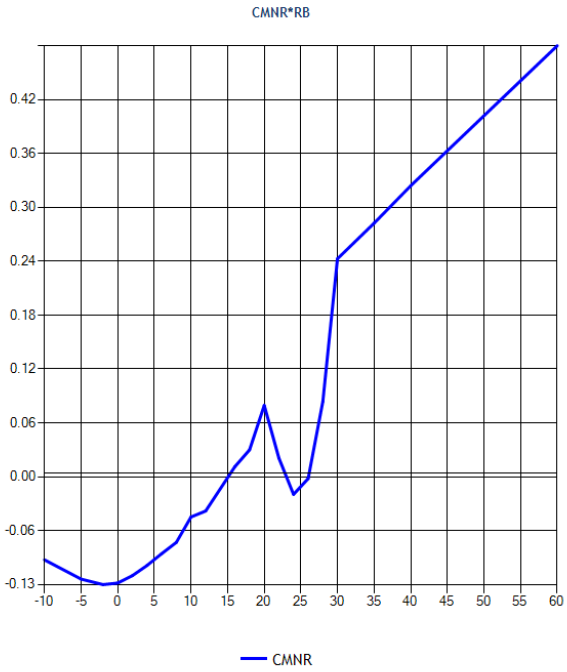
BASIC YAWING MOMENT

CMN1(alpha,beta)



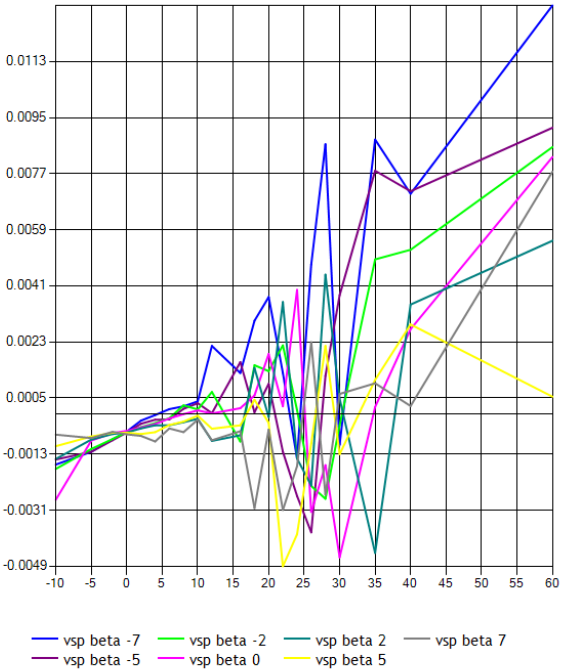
YAW DAMPING DERIVATIVE

CMNR(alpha)



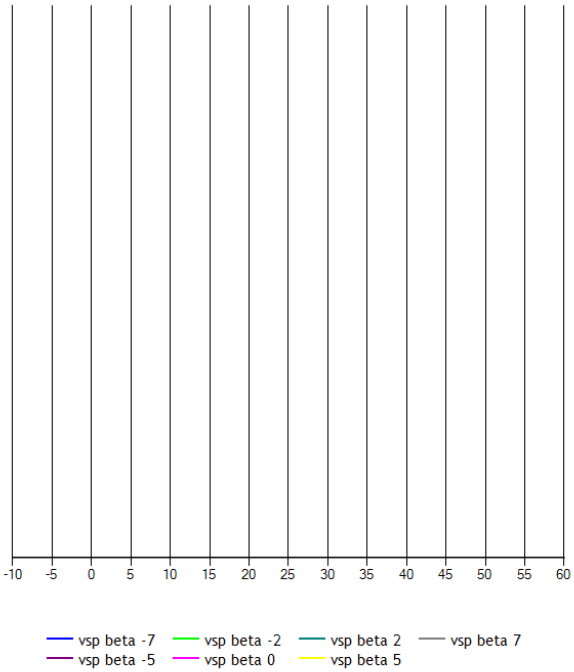
YAW MOMENT DUE TO ELEVON 1L

CMNDED1L (alpha,beta,DED1L=-16)



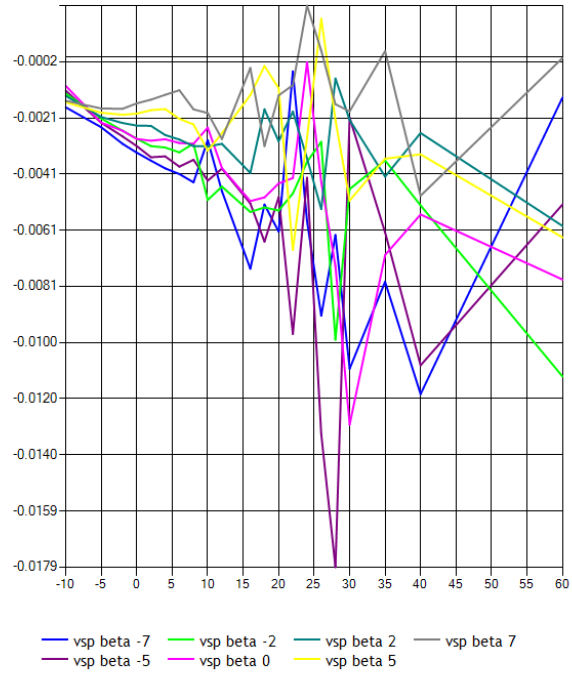
YAW MOMENT DUE TO ELEVON 1L

CMNDED1L (alpha,beta,DED1L=0)



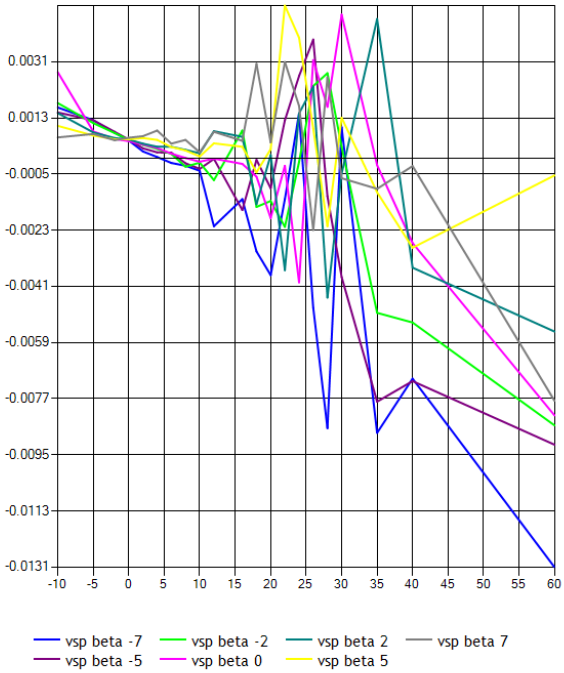
YAW MOMENT DUE TO ELEVON 1L

CMNDED1L (alpha,beta,DED1L=25)



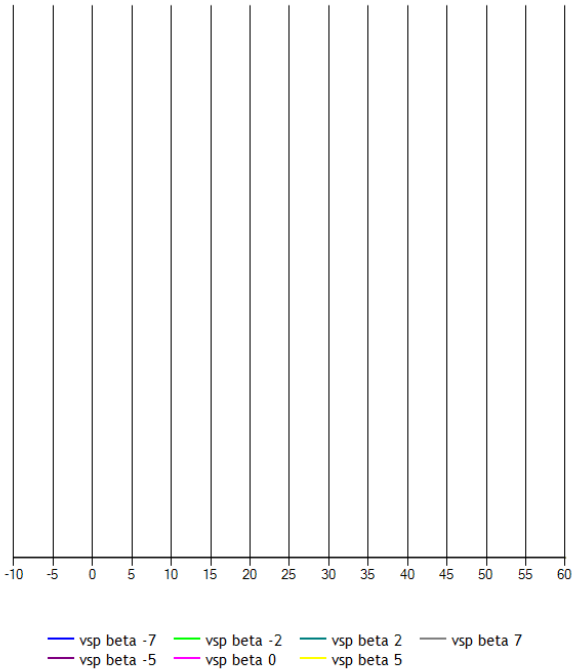
YAW MOMENT DUE TO ELEVON 1R

CMNDED1R (alpha,beta,DED1R=-16)



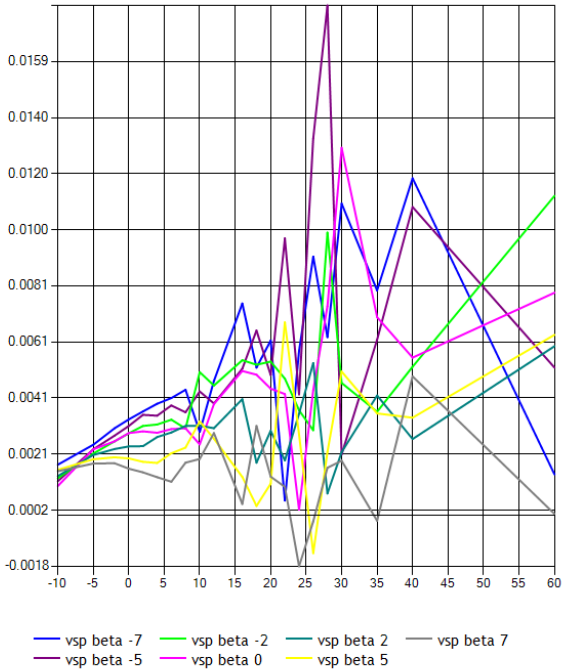
YAW MOMENT DUE TO ELEVON 1R

CMNDED1R (alpha,beta,DED1R=0)



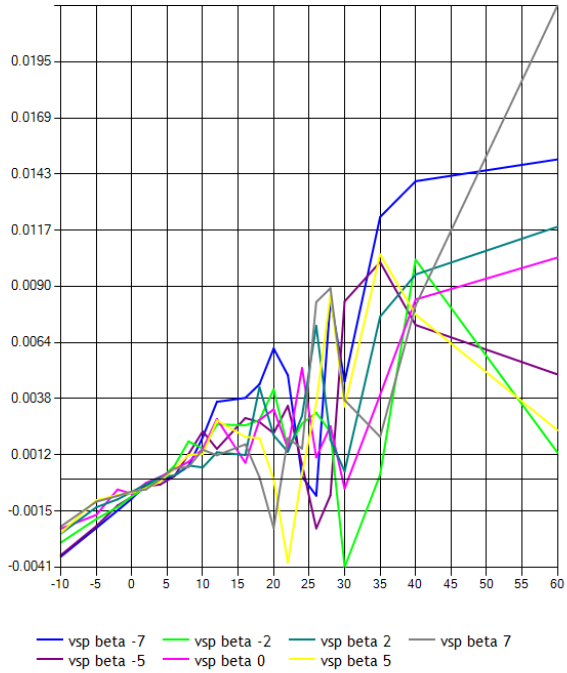
YAW MOMENT DUE TO ELEVON 1R

CMNDED1R (alpha,beta,DED1R=25)



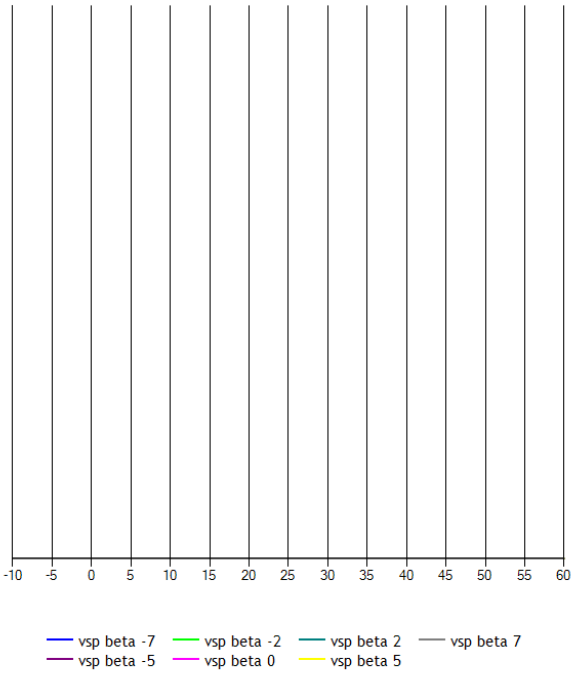
YAW MOMENT DUE TO ELEVON 2L

CMNDED2L (alpha,beta,DED2L=-16)



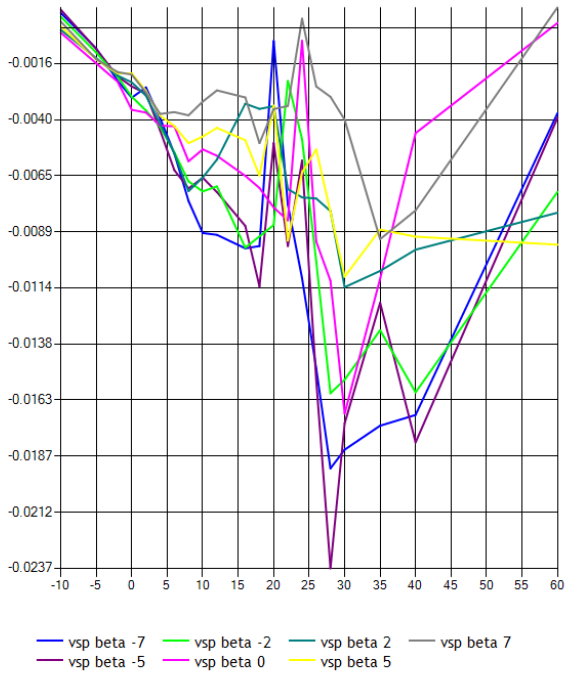
YAW MOMENT DUE TO ELEVON 2L

CMNDED2L (alpha,beta,DED2L=0)



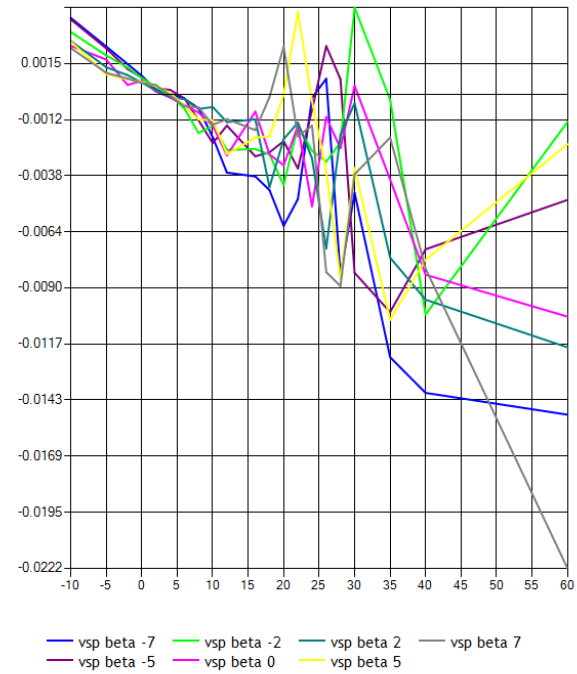
YAW MOMENT DUE TO ELEVON 2L

CMNDED2L (alpha,beta,DED2L=25)



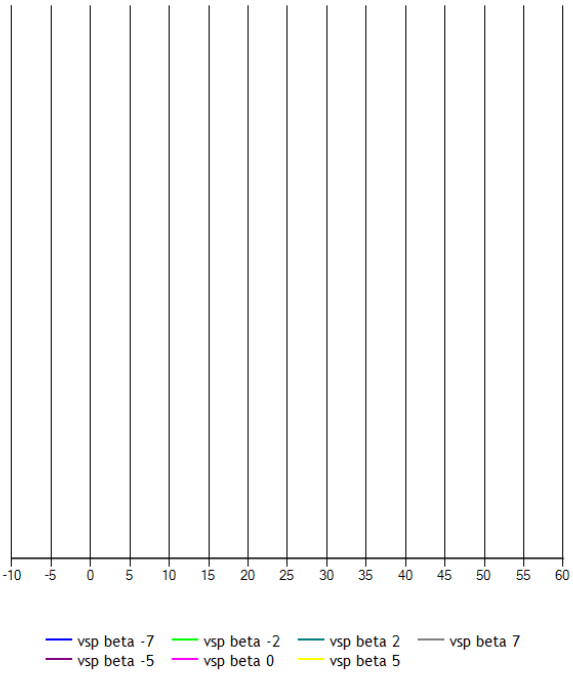
YAW MOMENT DUE TO ELEVON 2R

CMNDED2R (alpha,beta,DED2R=-16)



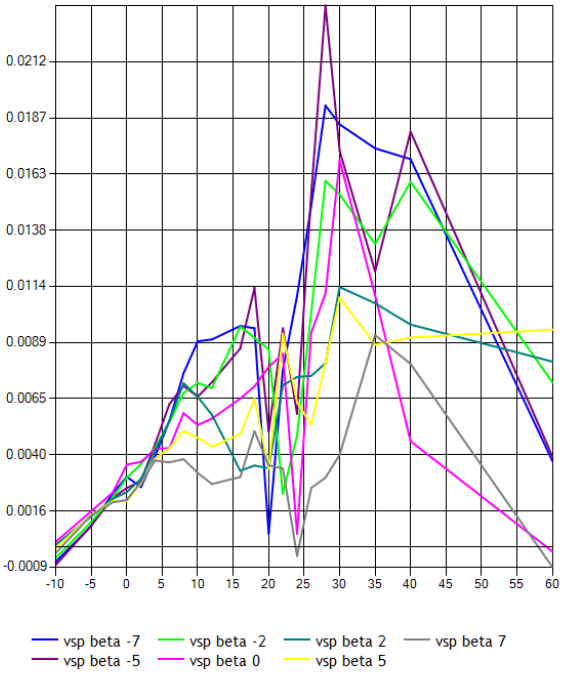
YAW MOMENT DUE TO ELEVON 2R

CMNDED2R (alpha,beta,DED2R=0)



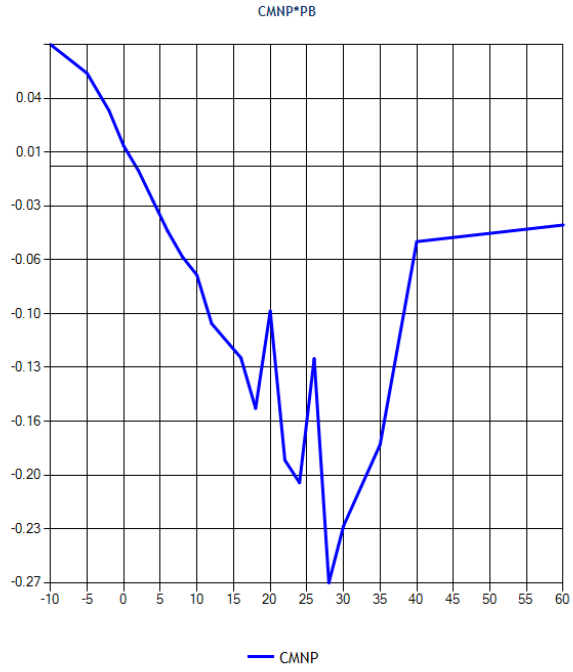
YAW MOMENT DUE TO ELEVON 2R

CMNDED2R (alpha,beta,DED2R=25)



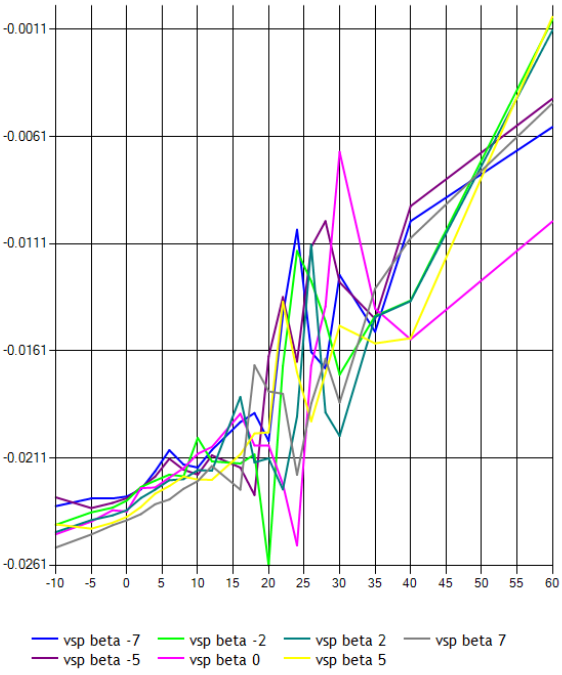
YAWING MOMENT DUE TO ROLL RATE

CMNP(alpha)



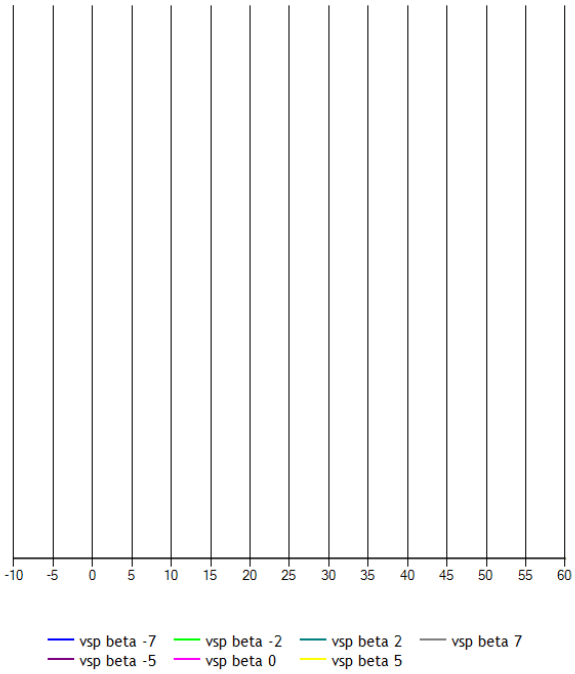
YAWING MOMENT DUE TO RUDDER DEFLECTION

CMNDRDr (alpha,beta,DRD=-25)



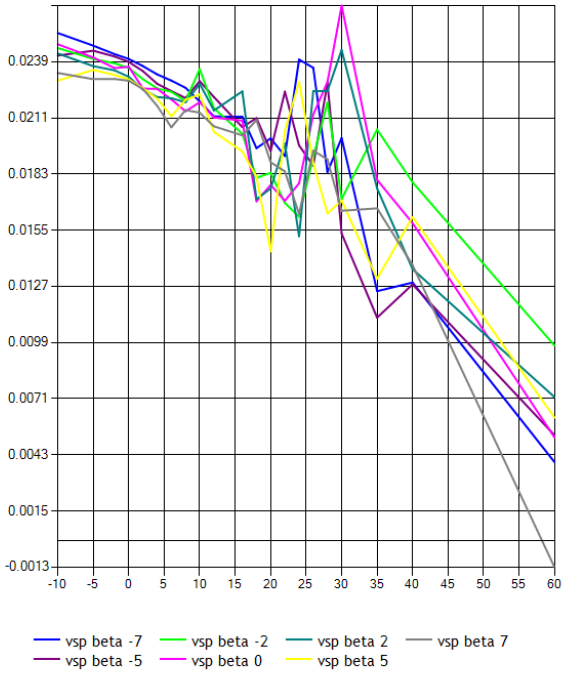
YAWING MOMENT DUE TO RUDDER DEFLECTION

CMNDRDr (alpha,beta,DRD=0)



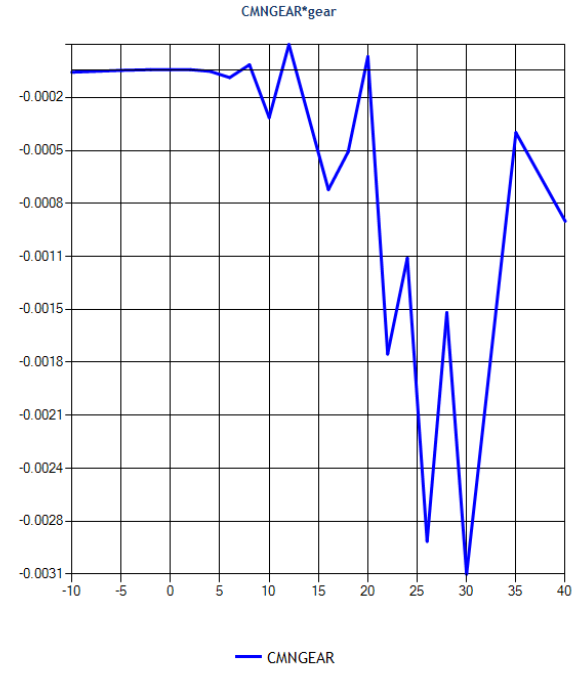
YAWING MOMENT DUE TO RUDDER DEFLECTION

CMNDRDr (alpha,beta,DRD=25)



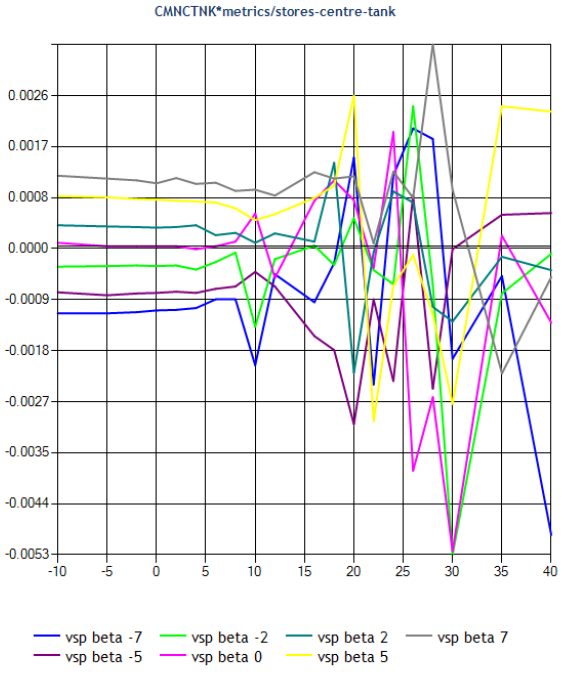
YAWING MOMENT INCREMENT DUE TO GEAR

CMNGEAR(alpha)



YAWING MOMENT INCREMENT DUE TO TANK(CENTRE)

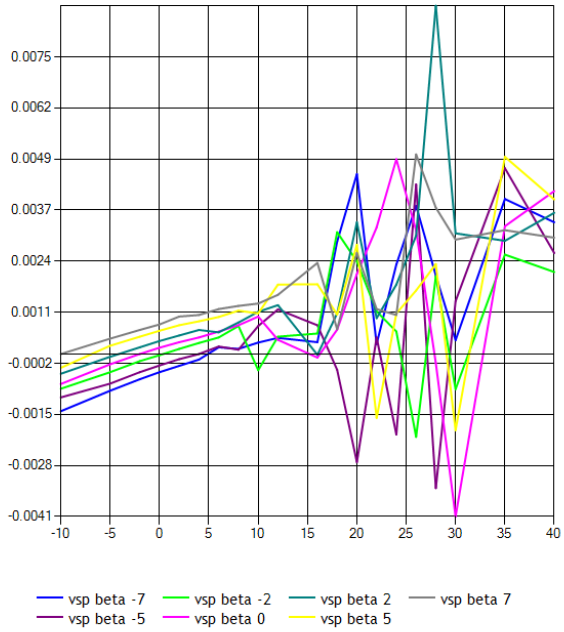
CMNCTNK(alpha,beta)



YAWING MOMENT INCREMENT DUE TO TANK(LEFT WING)

CMNLTNK(alpha,beta)

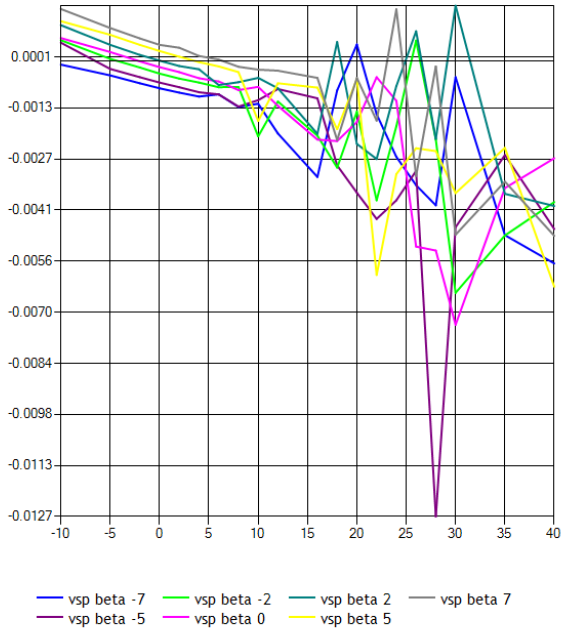
CMNLTNK*metrics/stores-wing-tank-left



YAWING MOMENT INCREMENT DUE TO TANK(RIGHT WING)

CMNRTNK(alpha,beta)

CMNRTNK*metrics/stores-wing-tank-right



References

1. Richard Harrison, rjh@zaretto.com: Mirage 2000-5 Aerodynamic data built from vspaero; AeroRP (8.4, 0, 0)M, ZDAT/AED/2017/09-08, September, 2017: http://www.zaretto.com/sites/zaretto.com/files/Mirage2000-data-data/rjh-zaretto-Mirage2000-aerodynamic-data-vspaero.pdf
2. M. P. Bohn: AERODYNAMICS OF THE NEW GENERATION OF COMBAT AIRCRAFT WITH DELTA WINGS, NASA TM-75793, June 1978: https://ntrs.nasa.gov/archive/nasa/casi.ntrs.nasa.gov/19800013819.pdf

Aircraft Metrics

Element	X	Y	Z	Unit
Aerodynamic Reference Point (CoP)	8.40	0.00	0.00	M
Aircraft CG	8.40	0.00	0.00	M

Element		Unit
Wingspan	9.13	M
Wing Area	41.00	M2
Chord	3.58	M
ClMax	1.90	ND

Mass and balance

Element		Unit
Empty Weight	7500.00	KG
IXX	6262.00	KG*M2
IYY	75686.00	KG*M2
IZZ	78802.00	KG*M2
IXZ	2141.00	KG*M2

Element	X	Y	Z	Unit	Weight

Ground Reactions

Element	X	Y	Z	Unit	Index
NOSE_LG	4.82	0.00	-1.49	M	0
LEFT_MLG	8.60	-1.63	-1.51	M	1
RIGHT_MLG	8.60	1.63	-1.51	M	2
LEFT_WING_TIP	11.71	-4.53	-0.25	M	3
RIGHT_WING_TIP	11.71	4.53	-0.25	M	4
CANOPY	4.27	0.00	1.46	M	5
REAR_CANOPY	5.05	0.00	1.58	M	6
RADOME_FRONT	0.00	0.00	0.00	M	7
VERTICAL_TAIL_FRONT	13.06	0.00	3.63	M	8
VERTICAL_TAIL_REAR	13.72	0.00	3.54	M	9
REAR_BODY_LEFT	13.63	-0.50	0.53	M	10
REAR_BODY_RIGHT	13.63	0.50	0.53	M	11
LOWER_REAR_BODY	13.63	0.00	0.03	M	12
LOWER_MID_REAR_BODY	11.56	0.00	-0.32	M	13
REFUEL_PROBE	1.53	0.55	1.17	M	14
LEFT_STRAKE	5.21	-1.13	0.64	M	15
RIGHT_STRAKE	5.21	1.13	0.64	M	16
FRONT_LOWER_ANTENNA	2.35	0.00	-0.39	M	17
VSTAB_FRONT_ANTENNA	11.98	0.00	3.06	M	18
VSTAB_REAR_ANTENNA	13.74	0.00	2.98	M	19
CHUTE	13.83	0.00	1.21	M	20

Propulsion

Element	X	Y	Z	Unit	Feed
SNECMA_M53-P2	17.95	0.00	0.00	M	backward right feeder fuselage internal tank [3],backward left feeder fuselage internal tank [4]

Tanks

Element	X	Y	Z	Unit	Capacity	Id	Priority	Standpipe
Feed line	1.53	0.55	1.17	M	10 KG	0	1	
forward fuselage internal tank	4.66	1.00	0.00	M	304 KG	1	3	30 KG
Right Wing Tank	8.56	4.00	-0.40	M	523 KG	2	3	30 KG
backward right feeder fuselage internal tank	8.56	0.70	0.00	M	592.6 KG	3	5	30 KG
backward left feeder fuselage internal tank	8.56	-0.70	0.00	M	592.6 KG	4	5	30 KG
forward fuselage internal tank	4.66	0.00	0.00	M	320 KG	5	3	30 KG
forward fuselage internal tank	4.66	-1.00	0.00	M	304 KG	6	3	30 KG

Left Wing Tank	8.56	-4.00	-0.40	M	523 KG	7	3	30 KG
External Tank Center RP522	8.56	0.00	1.00	M	990 KG	8	2	50 KG
External Tank Right RP542	8.56	4.00	1.00	M	1580 KG	9	2	50 KG
External Tank Left RP541	8.56	-4.00	1.00	M	1580 KG	10	2	50 KG
External Tank Right RP501	8.56	4.00	1.00	M	1343 KG	11	2	50 KG
External Tank Left RP502	8.56	-4.00	1.00	M	1343 KG	12	2	50 KG

Systems

Name
Mirage-2000-hydraulics
Mirage-2000-avionics
Mirage-2000-fadec
Mirage-2000-engines-Snecma-M53
Mirage-2000-fcs
Mirage-2000-fuel

Independent variables

Name
aero/alpha-deg
aero/beta-deg
aero/pb
aero/qb
aero/rb
fcs/airbrake-lower
fcs/airbrake-upper
fcs/elevon-1L-pos-deg
fcs/elevon-1R-pos-deg
fcs/elevon-2L-pos-deg
fcs/elevon-2R-pos-deg
fcs/rudder-pos-deg
fcs/slat-1L-pos-deg
fcs/slat-2L-pos-deg
gear/gear-pos-norm
metrics/stores-centre-tank
metrics/stores-wing-tank-left
metrics/stores-wing-tank-right
velocities/mach