Dassault Mirage 2000-5 Aerodynamic data built from vspaero; CG (8.56, 0, 1.422)M, 2019-09-27 07:15

Richard Harrison, rjh@zaretto.com, ZDAT/AED/2017/09-08.

AeroDetail=Full, Gear, Flaps, WakeIterations=2

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 1L
CFXDSD1R	alpha	DRAG	DRAG DUE TO LE SLAT 1R
CFXDSD2L	alpha	DRAG	DRAG DUE TO LE SLAT 2L
CFXDSD2R	alpha	DRAG	DRAG DUE TO LE SLAT 2R
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
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
CFZDSD1L	alpha	LIFT	LIFT DUE TO LE SLAT 1L
CFZDSD1R	alpha	LIFT	LIFT DUE TO LE SLAT 1R
CFZDE2L	alpha	LIFT	LIFT DUE TO LE SLAT 2L
CFZDE2R	alpha	LIFT	LIFT DUE TO LE SLAT 2R
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
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 1L
CMMDSD1R	alpha	PITCH	PITCH MOMENT DUE TO LE SLAT 1R
CMMDSD2L	alpha	PITCH	PITCH MOMENT DUE TO LE SLAT 2L
CMMDSD2R	alpha	PITCH	PITCH MOMENT DUE TO LE SLAT 2R
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
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
CMLDSD1L	alpha	ROLL	ROLLING MOMENT DUE TO LE SLAT 1L DEFLECTION
CMLDSD1R	alpha	ROLL	ROLLING MOMENT DUE TO LE SLAT 1R DEFLECTION
CMLDSD2L	alpha	ROLL	ROLLING MOMENT DUE TO LE SLAT 2L DEFLECTION
CMLDSD2R	alpha	ROLL	ROLLING MOMENT DUE TO LE SLAT 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
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
CFYDSD1L	alpha	SIDE	SIDE FORCE DUE TO LE SLAT 1L DEFLECTION
CFYDSD1R	alpha	SIDE	SIDE FORCE DUE TO LE SLAT 1R DEFLECTION
CFYDSD2L	alpha	SIDE	SIDE FORCE DUE TO LE SLAT 2L DEFLECTION
CFYDSD2R	alpha	SIDE	SIDE FORCE DUE TO LE SLAT 2R DEFLECTION
CFYmn	mach,alpha	SIDE	SIDE FORCE DUE TO MACH
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
CMN1	alpha,beta	YAW	BASIC YAWING MOMENT
CMNR	alpha	YAW	YAW DAMPING DERIVATIVE

CMNmnw	mach,alpha	YAW	YAW DUE TO MACH
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
CMNDSD1L	alpha	YAW	YAW MOMENT DUE TO LE SLAT 1L
CMNDSD1R	alpha	YAW	YAW MOMENT DUE TO LE SLAT 1R
CMNDSD2L	alpha	YAW	YAW MOMENT DUE TO LE SLAT 2L
CMNDSD2R	alpha	YAW	YAW MOMENT DUE TO LE SLAT 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

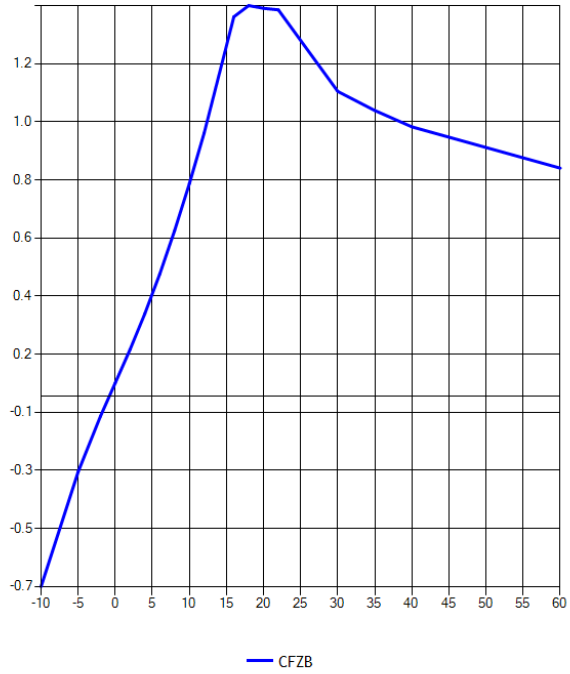
Coefficient Buildup

Axis	Buildup
DRAG	CFXDSD1L*DSD1L + CFXDSD1R*DSD1R + CFXDSD2L*DSD2L + CFXDSD2R*DSD2R + CFXDSBU*DSBU + CFXDSBL*DSBL + CFXGEAR*gear + CFXB + CFXDED1L + CFXDED1R + CFXDED2L + CFXDED2R + CFXmn
SIDE	CFYDSD1L*DSD1L + CFYDSD1R*DSD1R + CFYDSD2L*DSD2L + CFYDSD2R*DSD2R + CFYGEAR*gear + CFYB + CFYDED1L + CFYDED1R + CFYDED2L + CFYDED2R + CFYDRD + CFYP*PB + CFYR*RB + CFYmn
LIFT	CFZDSD1L*DSD1L + CFZDSD1R*DSD1R + CFZDE2L*DSD2L + CFZDE2R*DSD2R + CFZDSBU*DSBU + CFZDEL*DSBL + CFZGEAR*gear + CFZB + CFZDED1L + CFZDED1R + CFZDE2L + CFZDE2R + CFZmn
ROLL	CMLDSD1L*DSD1L + CMLDSD1R*DSD1R + CMLDSD2L*DSD2L + CMLDSD2R*DSD2R + CMLGEAR*gear + CML1 + CMLDED1L + CMLDED1R + CMLDED2L + CMLDED2R + CMLDRD + CMLP*PB + CMLR*RB + CMLmnw + (DLNB*BETA)
PITCH	CMMDSD1L*DSD1L + CMMDSD1R*DSD1R + CMMDSD2L*DSD2L + CMMDSD2R*DSD2R + CMMDSBU*DSBU + CMMDSBL*DSBL + CMMGEAR*gear + CMM1 + CMMQ*QB + CMMDED1L + CMMDED1R + CMMDED2L + CMMDED2R + CMMmnw
YAW	CMNDSD1L*DSD1L + CMNDSD1R*DSD1R + CMNDSD2L*DSD2L + CMNDSD2R*DSD2R + CMNGEAR*gear + CMN1 + CMNDED1L + CMNDED1R + CMNDED2L + CMNDED2R + CMNDRDr + CMNP*PB + CMNR*RB + CMNmnw + (DCNB*BETA)

LIFT

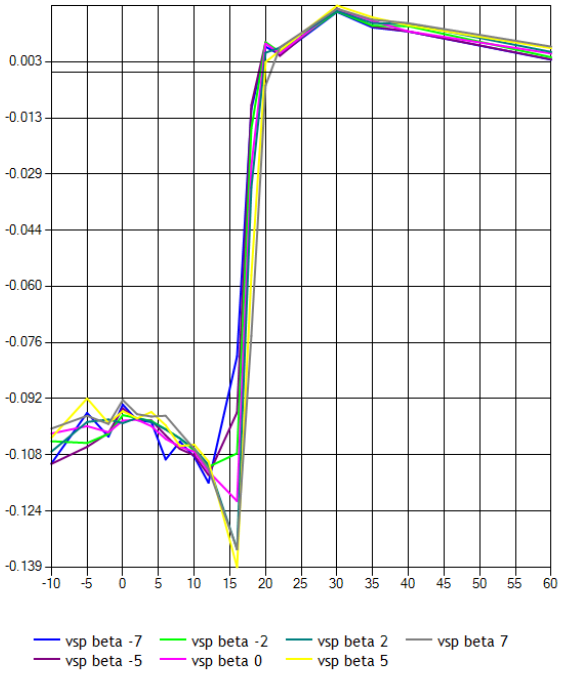
BASIC LIFT

CFZB(alpha)



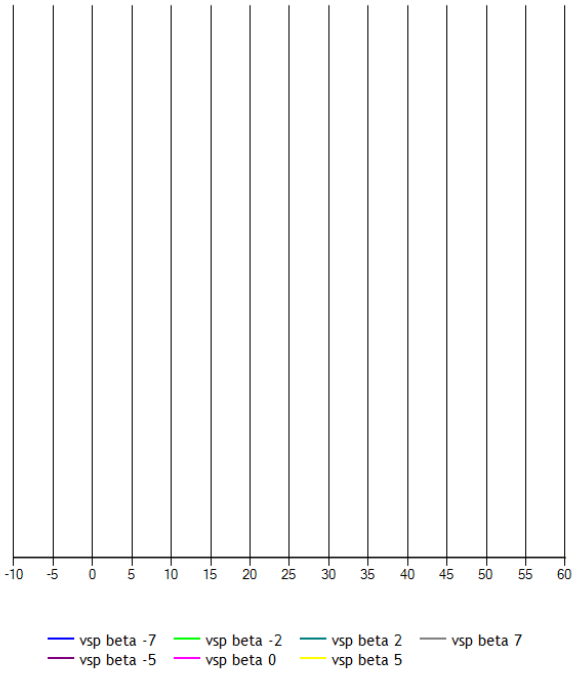
LIFT DUE TO ELEVON 1L

CFZDED1L (alpha,beta,DED1L=-16)



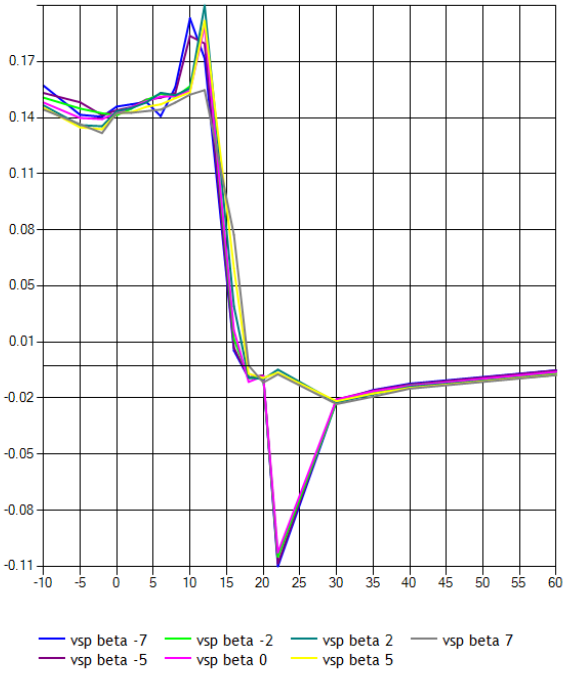
LIFT DUE TO ELEVON 1L

CFZDED1L (alpha,beta,DED1L=0)



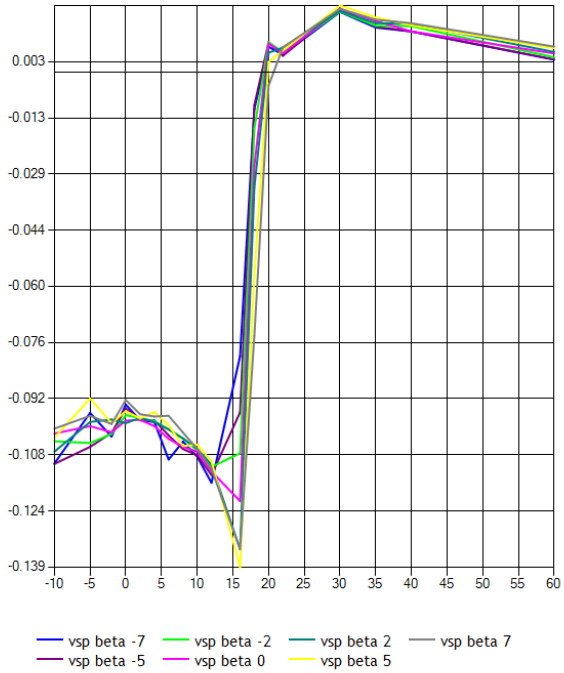
LIFT DUE TO ELEVON 1L

CFZDED1L (alpha,beta,DED1L=25)



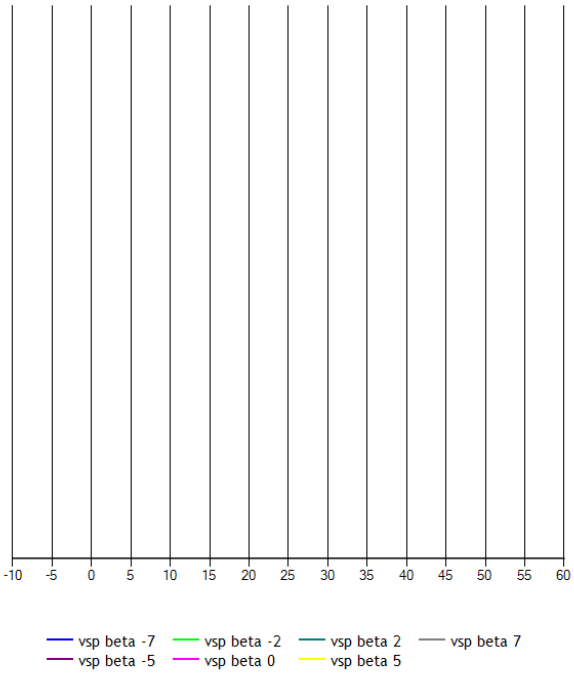
LIFT DUE TO ELEVON 1R

CFZDED1R (alpha,beta,DED1R=-16)



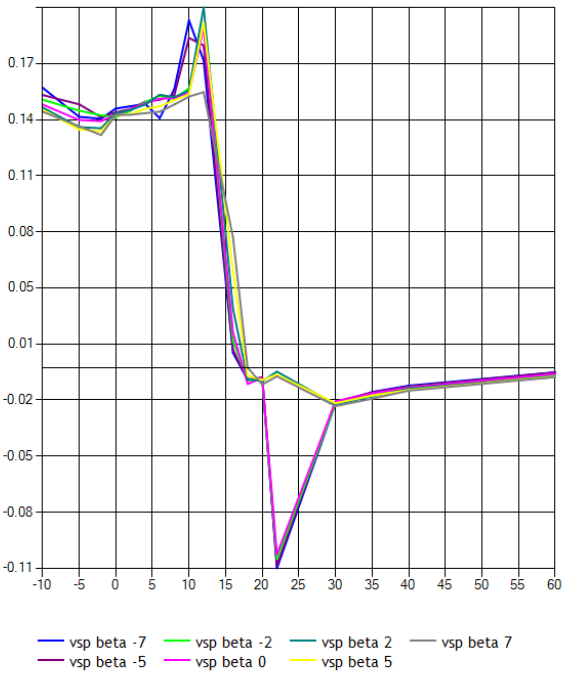
LIFT DUE TO ELEVON 1R

CFZDED1R (alpha,beta,DED1R=0)



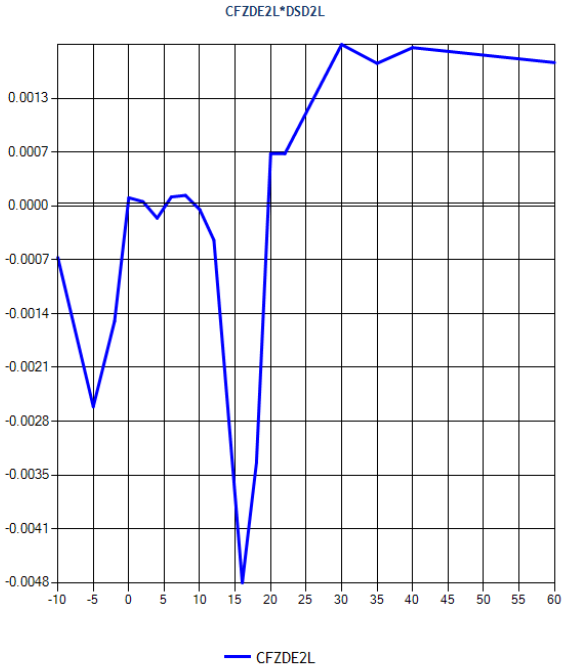
LIFT DUE TO ELEVON 1R

CFZDED1R (alpha,beta,DED1R=25)



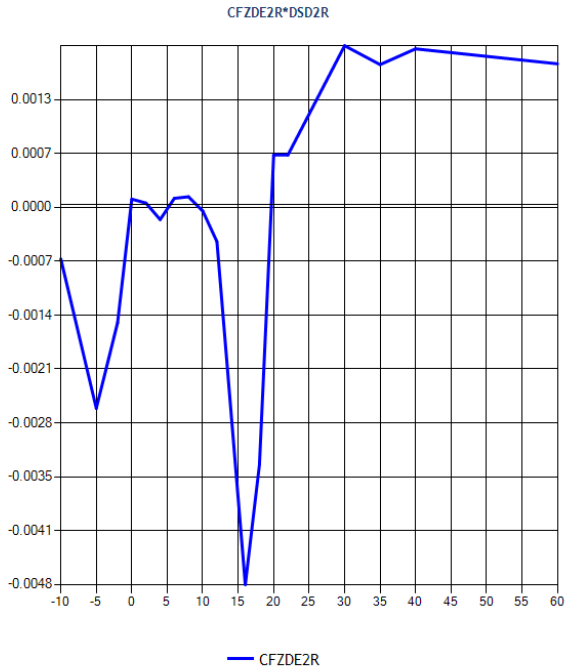
LIFT DUE TO LE SLAT 2L

CFZDE2L(alpha)



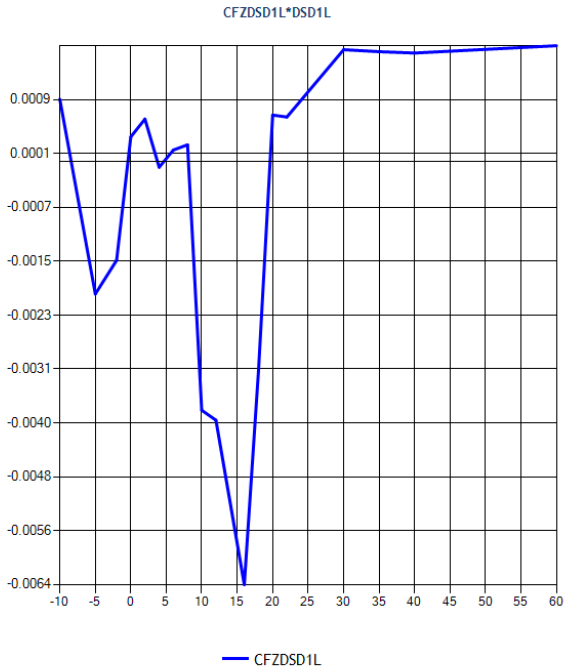
LIFT DUE TO LE SLAT 2R

CFZDE2R(alpha)



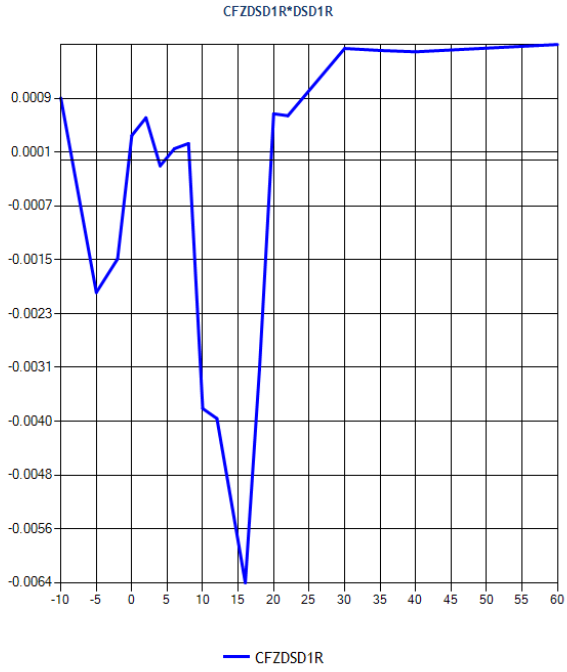
LIFT DUE TO LE SLAT 1L

CFZDSD1L(alpha)



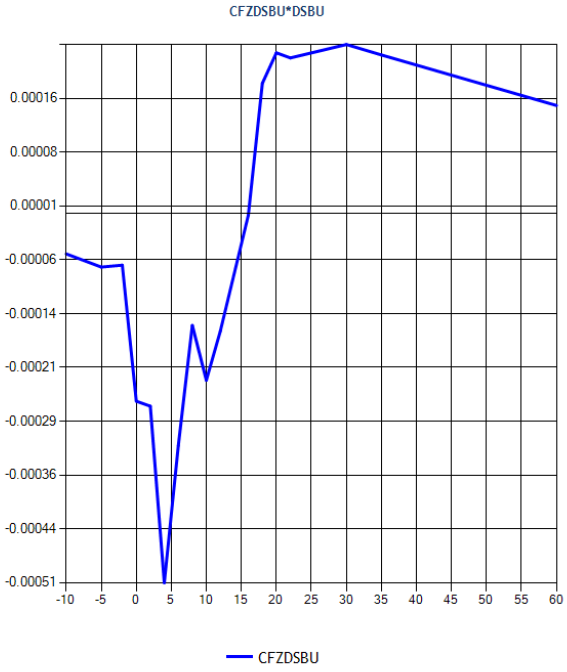
LIFT DUE TO LE SLAT 1R

CFZDSD1R(alpha)



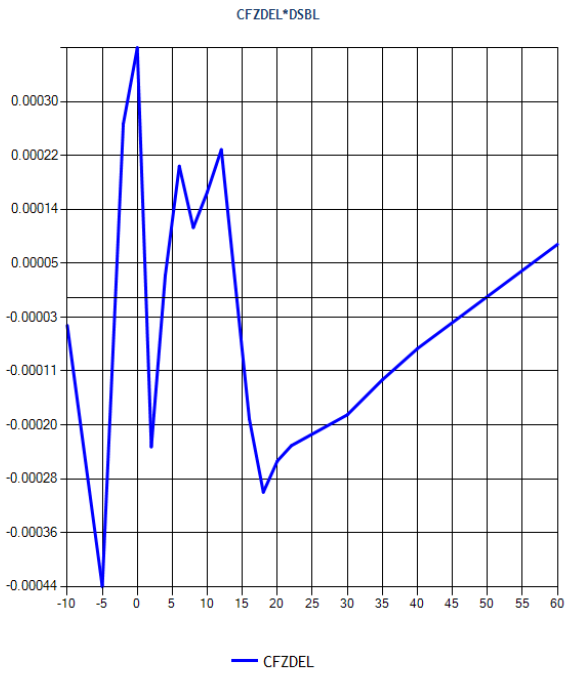
LIFT DUE TO UPPER SPEEDBRAKE DEFLECTION

CFZDSBU(alpha)



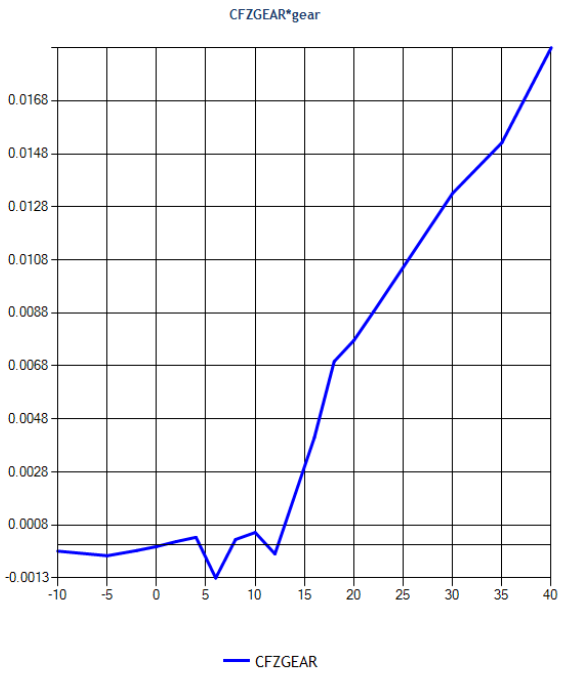
LIFT DUE TO LOWER SPEEDBRAKE DEFLECTION

CFZDEL(alpha)



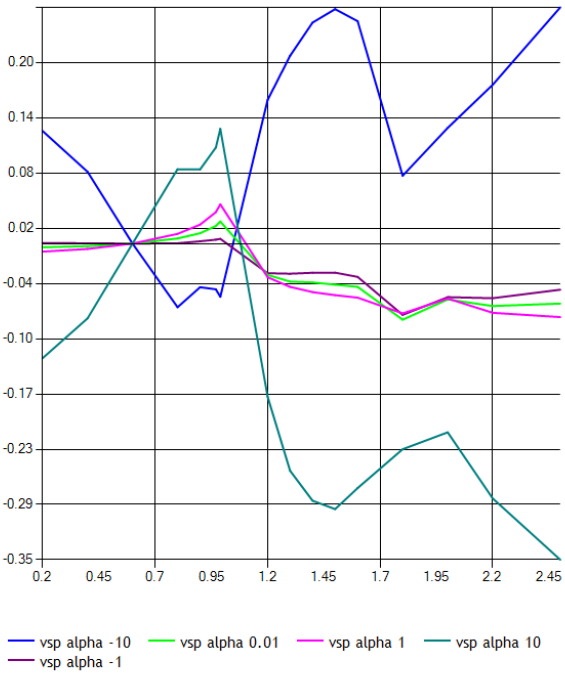
LIFT INCREMENT DUE TO GEAR

CFZGEAR(alpha)



LIFT DUE TO MACH

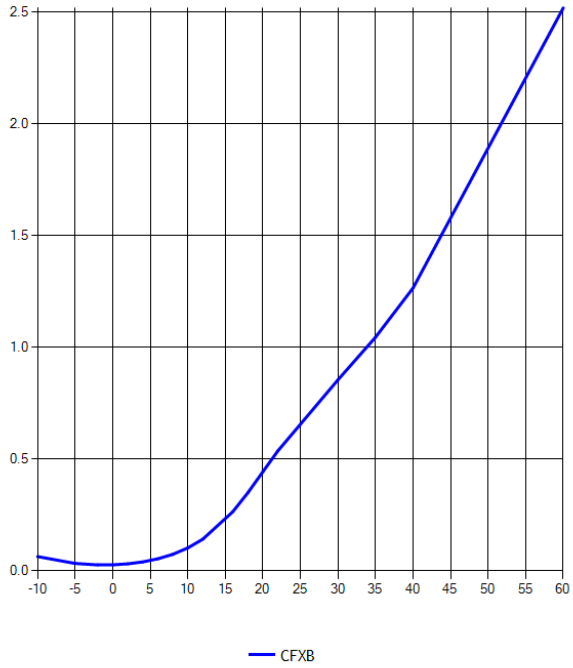
CFZmn(mach,alpha)



DRAG

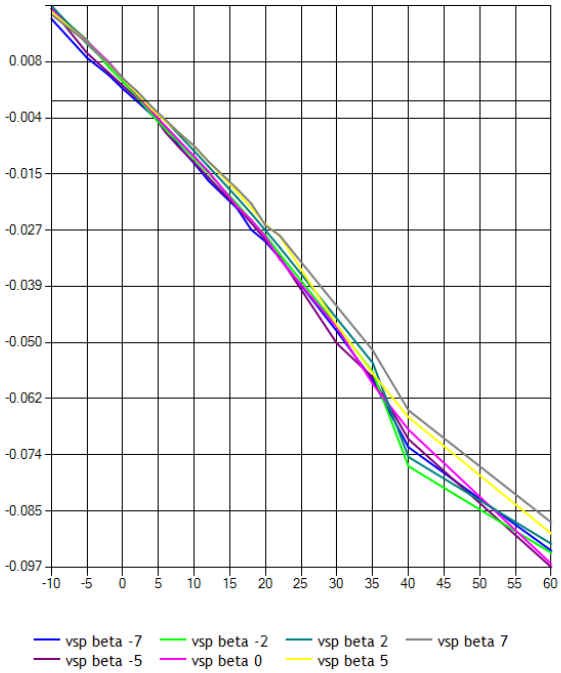
BASIC DRAG

CFXB(alpha)



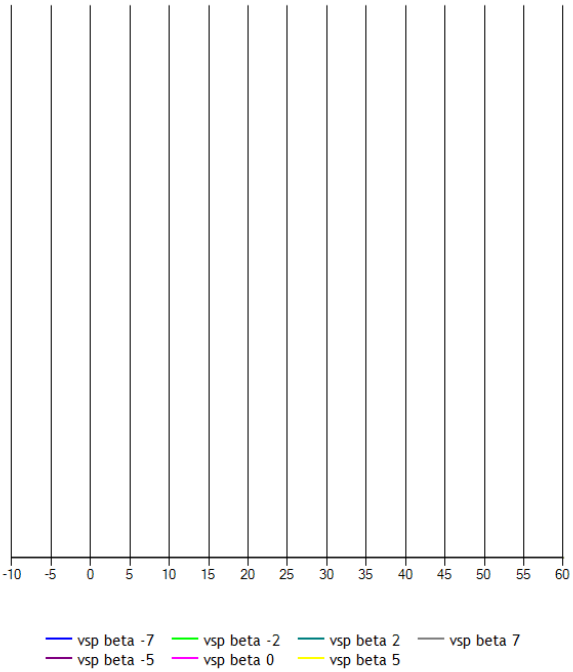
DRAG DUE TO ELEVON 1L

CFXDED1L (alpha,beta,DED1L=-16)



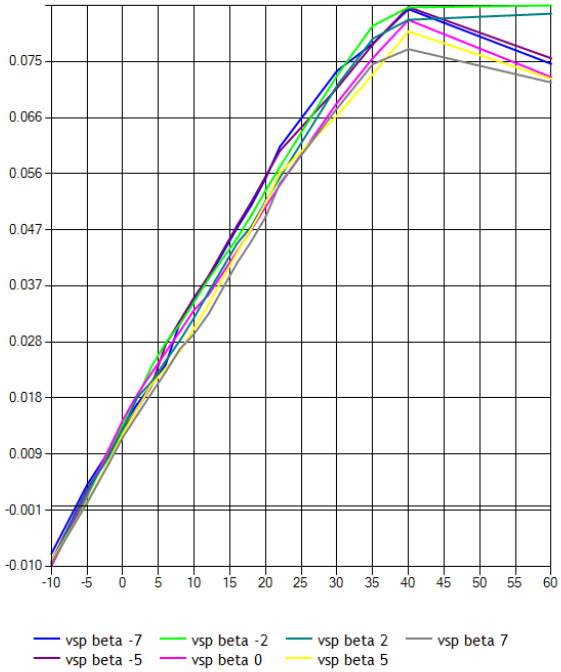
DRAG DUE TO ELEVON 1L

CFXDED1L (alpha,beta,DED1L=0)



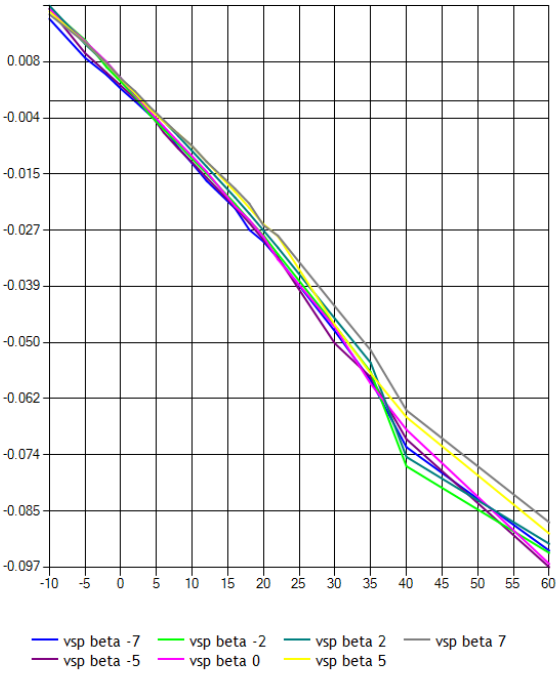
DRAG DUE TO ELEVON 1L

CFXDED1L (alpha,beta,DED1L=25)



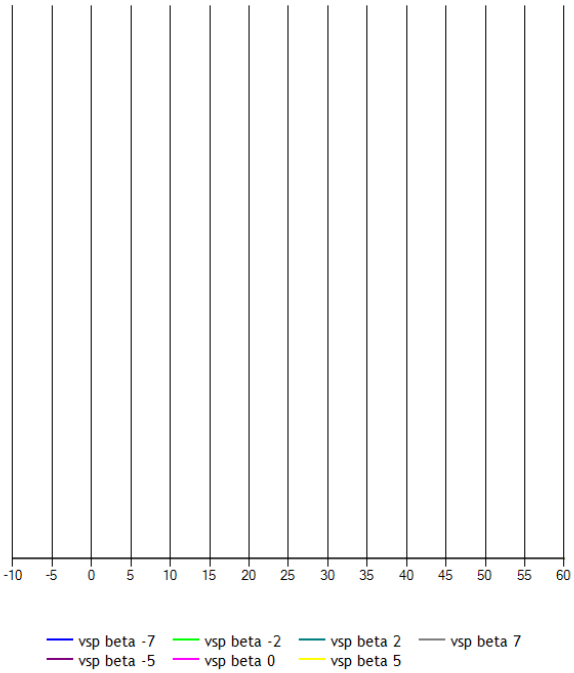
DRAG DUE TO ELEVON 1R

CFXDED1R (alpha,beta,DED1R=-16)



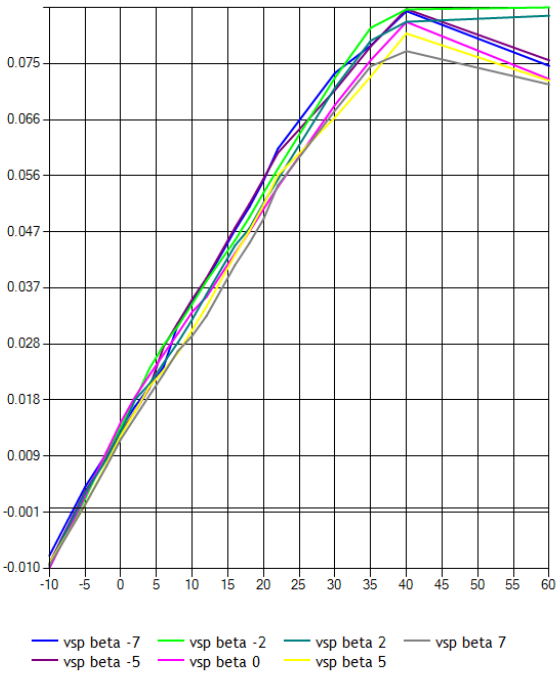
DRAG DUE TO ELEVON 1R

CFXDED1R (alpha,beta,DED1R=0)



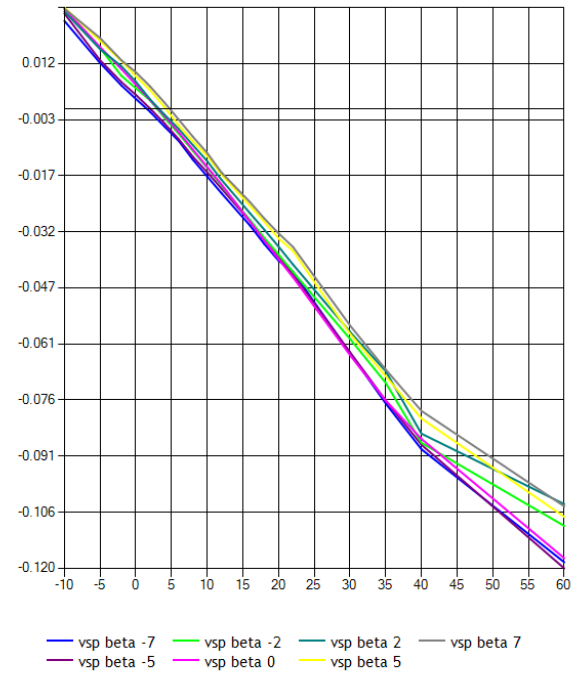
DRAG DUE TO ELEVON 1R

CFXDED1R (alpha,beta,DED1R=25)



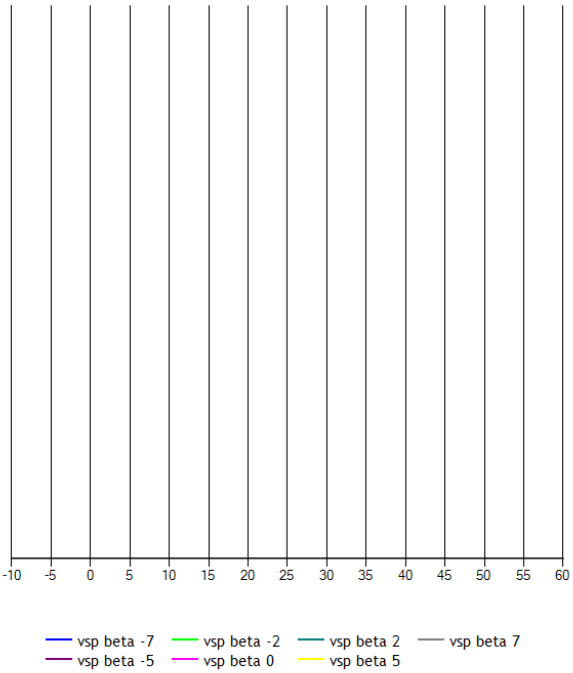
DRAG DUE TO ELEVON 2L

CFXDED2L (alpha,beta,DED2L=-16)



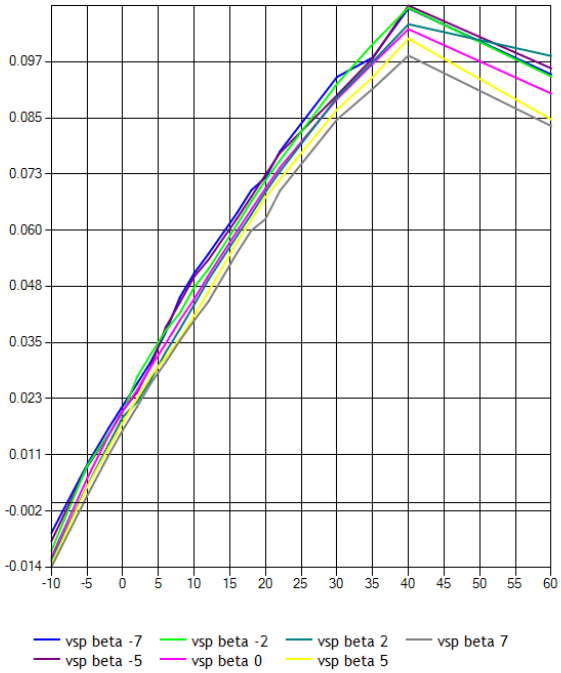
DRAG DUE TO ELEVON 2L

CFXDED2L (alpha,beta,DED2L=0)



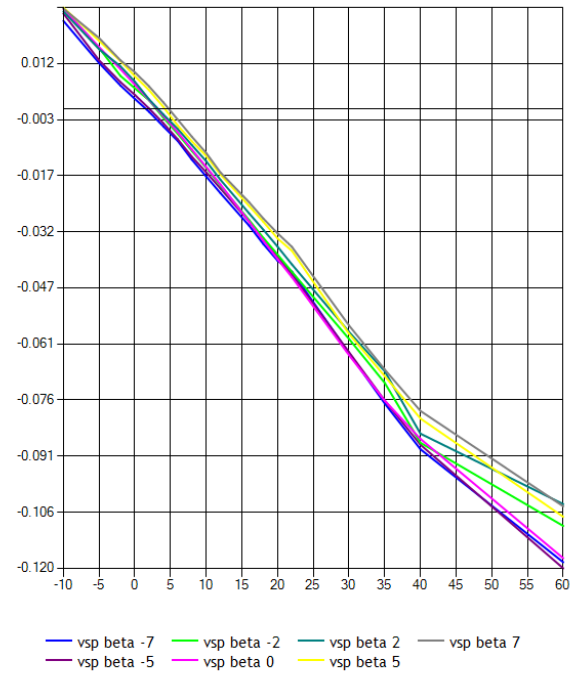
DRAG DUE TO ELEVON 2L

CFXDED2L (alpha,beta,DED2L=25)



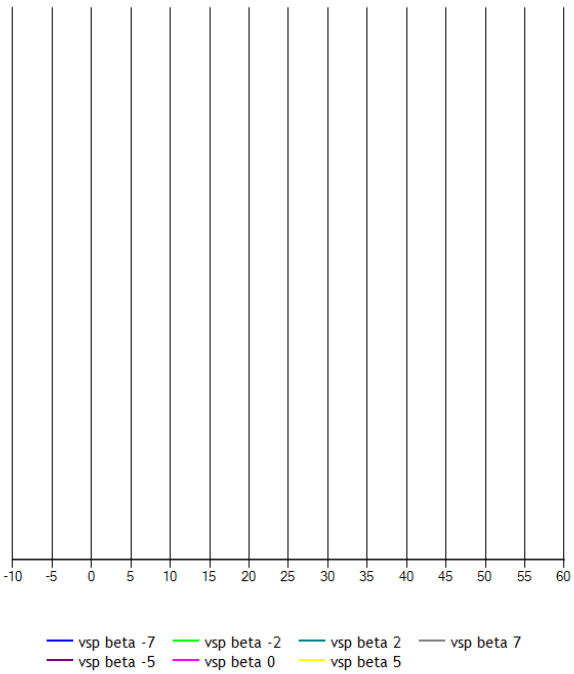
DRAG DUE TO ELEVON 2R

CFXDED2R (alpha,beta,DED2R=-16)



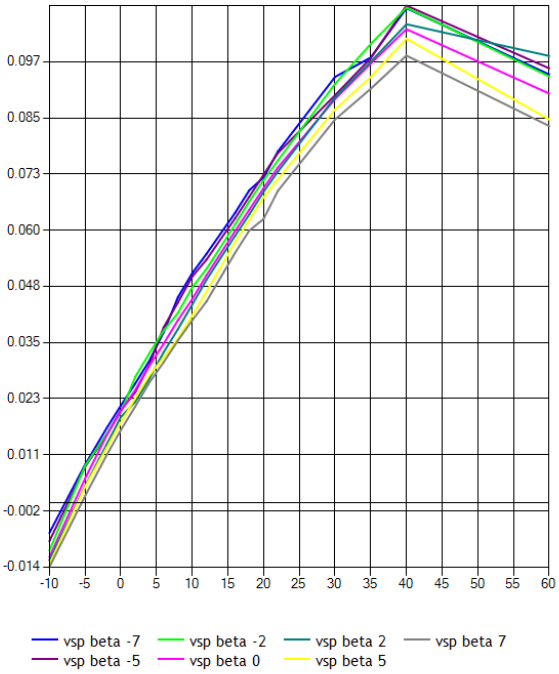
DRAG DUE TO ELEVON 2R

CFXDED2R (alpha,beta,DED2R=0)



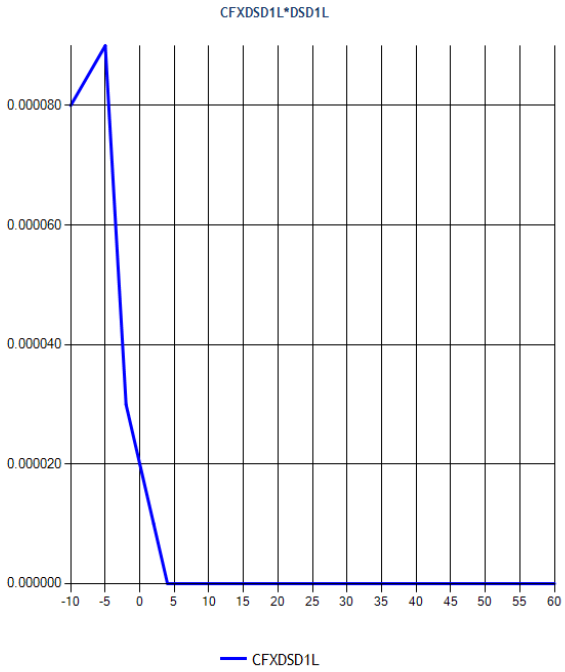
DRAG DUE TO ELEVON 2R

CFXDED2R (alpha,beta,DED2R=25)



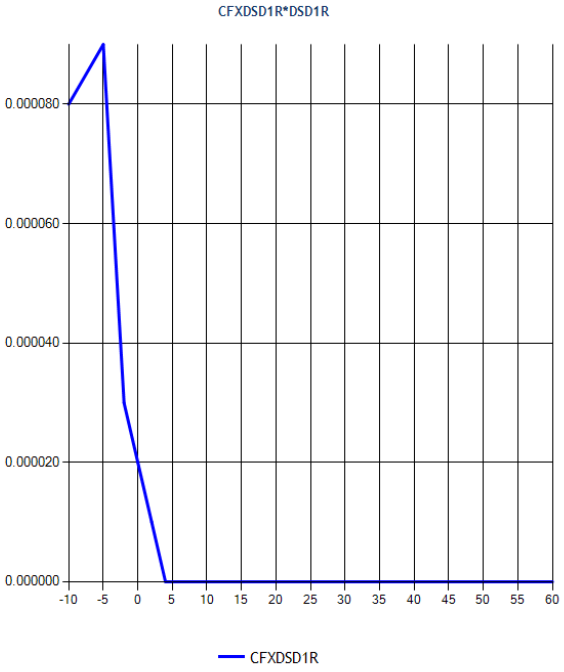
DRAG DUE TO LE SLAT 1L

CFXDSD1L(alpha)



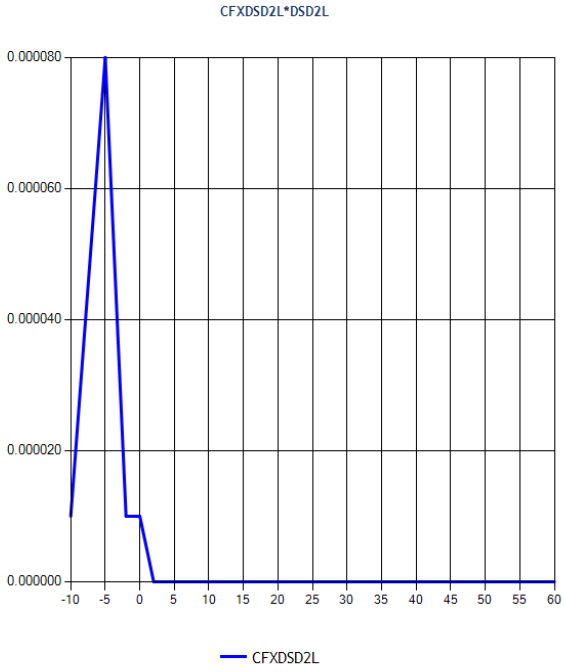
DRAG DUE TO LE SLAT 1R

CFXDSD1R(alpha)



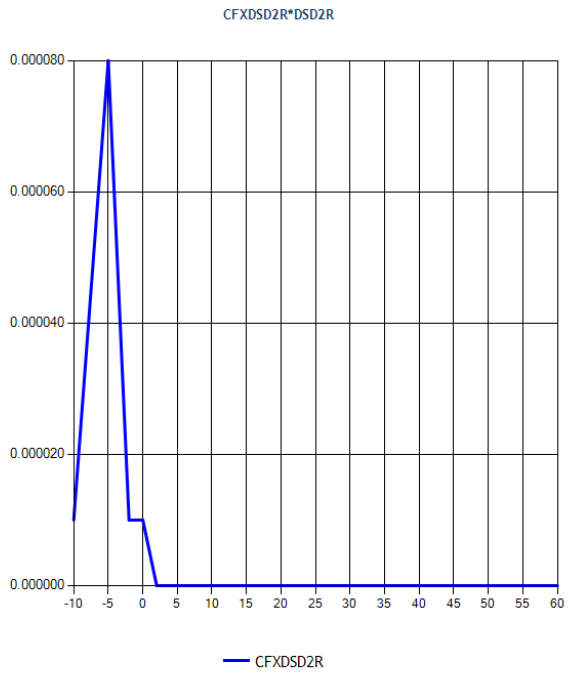
DRAG DUE TO LE SLAT 2L

CFXDSD2L(alpha)



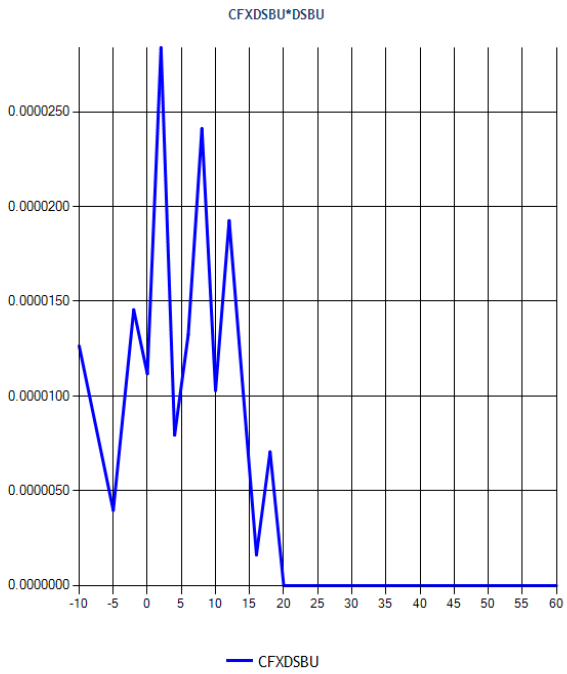
DRAG DUE TO LE SLAT 2R

CFXDSD2R(alpha)



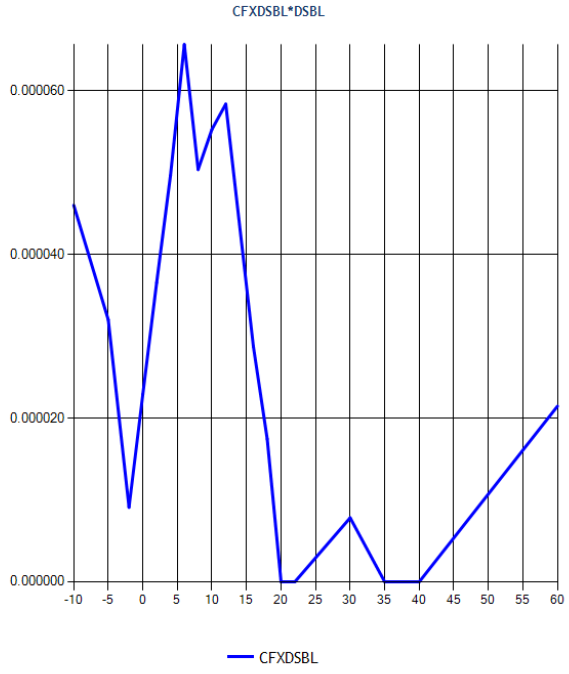
DRAG DUE TO UPPER SPEEDBRAKE DEFLECTION

CFXDSBU(alpha)



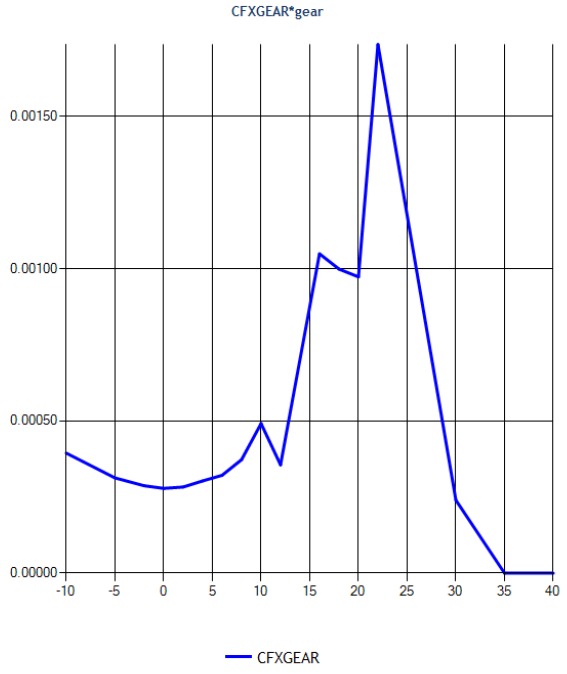
DRAG DUE TO LOWER SPEEDBRAKE DEFLECTION

CFXDSBL(alpha)



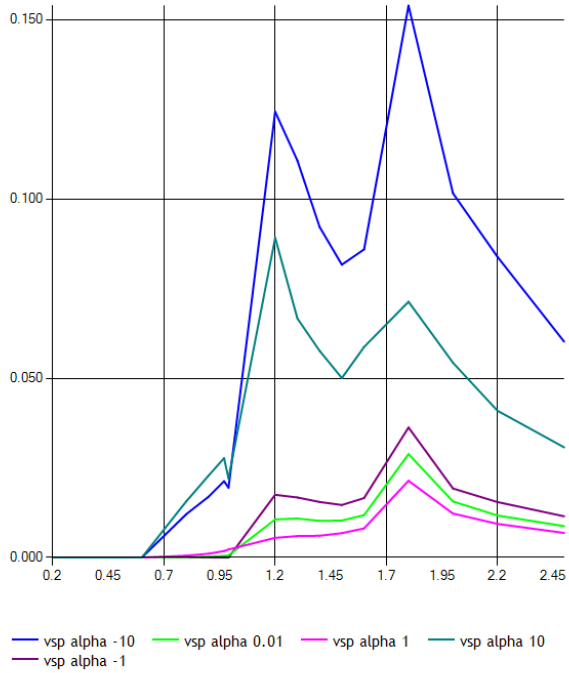
DRAG INCREMENT DUE TO GEAR

CFXGEAR(alpha)



DRAG DUE TO MACH

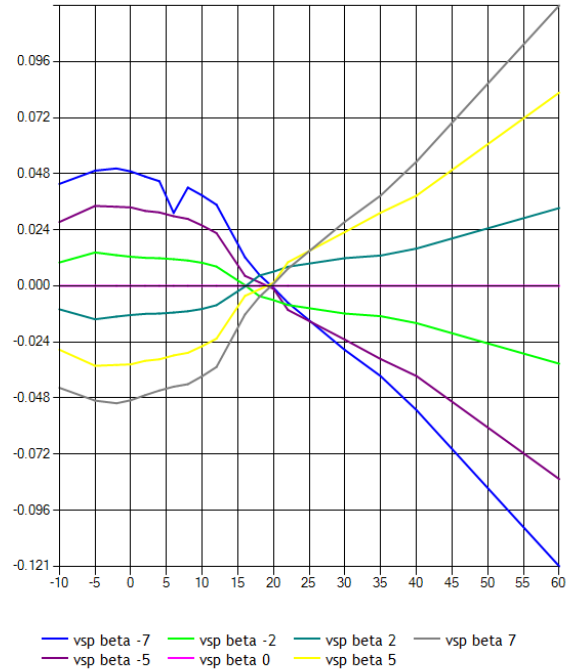
CFXmn(mach,alpha)



SIDE

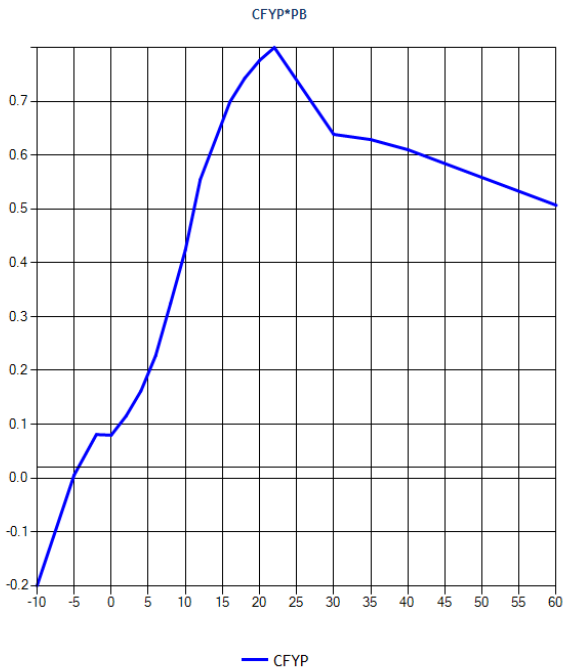
BASIC SIDE FORCE

CFYB(alpha,beta)



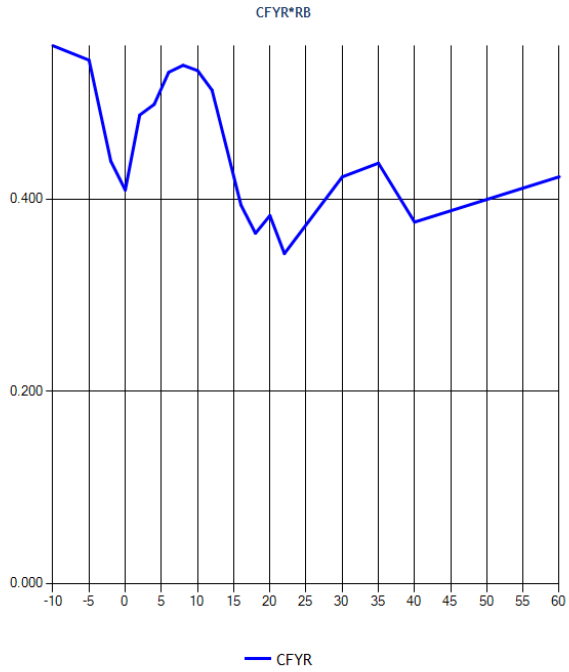
SIDE FORCE DUE TO ROLL RATE

CFYP(alpha)



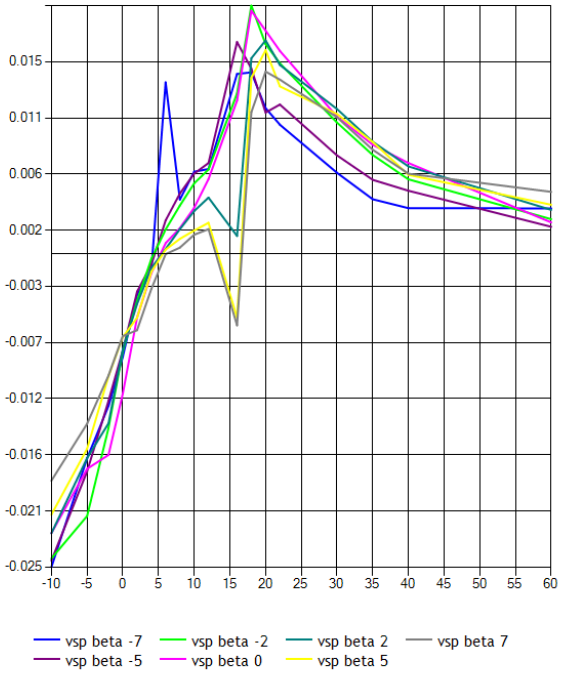
SIDE FORCE DUE TO YAW RATE

CFYR(alpha)



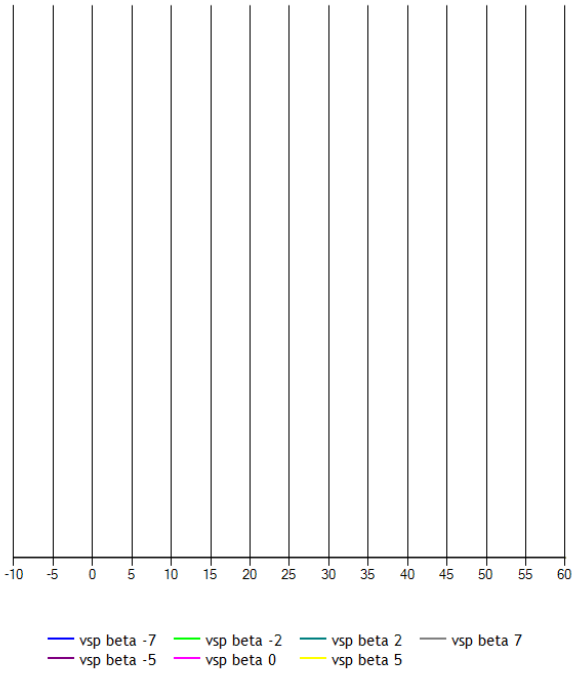
SIDE FORCE DUE TO ELEVON 1L DEFLECTION

CFYDED1L (alpha,beta,DED1L=-16)



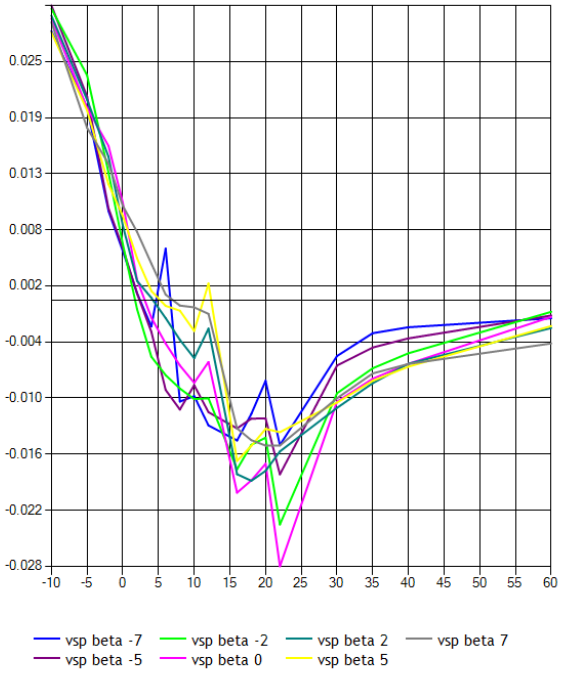
SIDE FORCE DUE TO ELEVON 1L DEFLECTION

CFYDED1L (alpha,beta,DED1L=0)



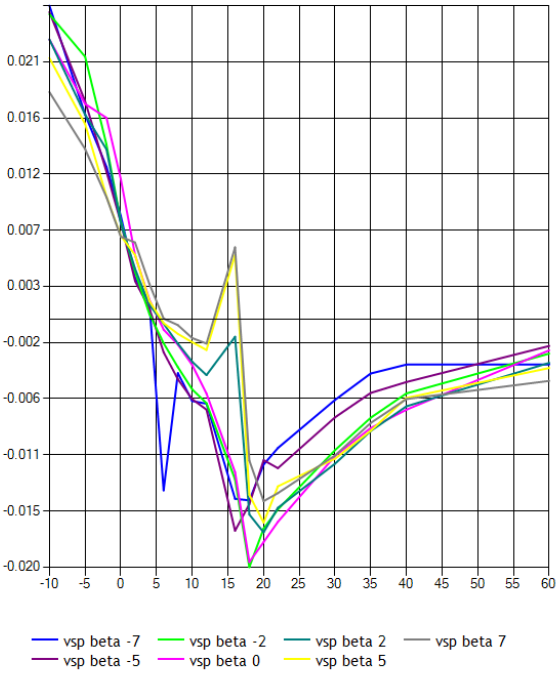
SIDE FORCE DUE TO ELEVON 1L DEFLECTION

CFYDED1L (alpha,beta,DED1L=25)



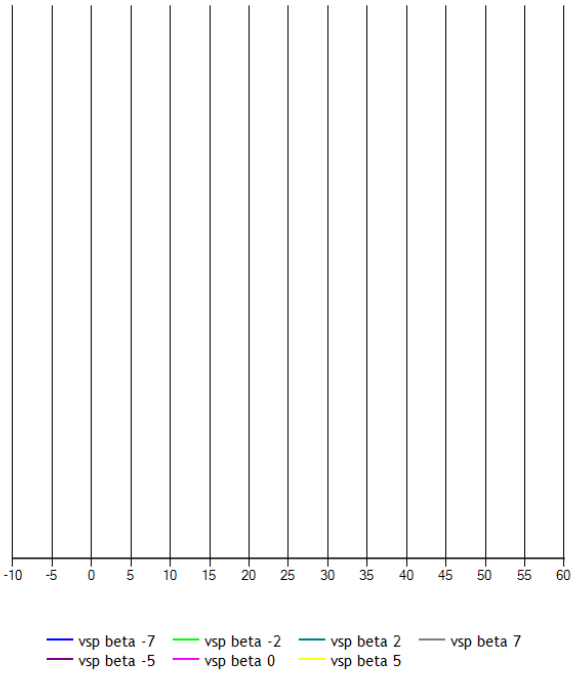
SIDE FORCE DUE TO ELEVON 1R DEFLECTION

CFYDED1R (alpha,beta,DED1R=-16)



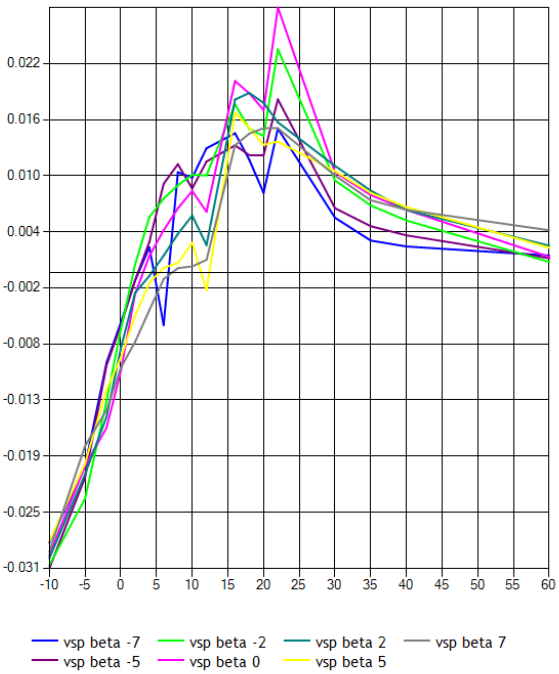
SIDE FORCE DUE TO ELEVON 1R DEFLECTION

CFYDED1R (alpha,beta,DED1R=0)



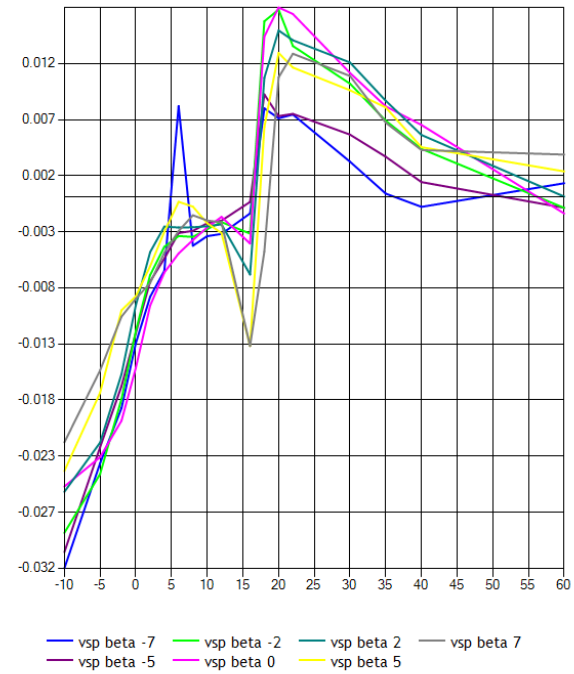
SIDE FORCE DUE TO ELEVON 1R DEFLECTION

CFYDED1R (alpha,beta,DED1R=25)



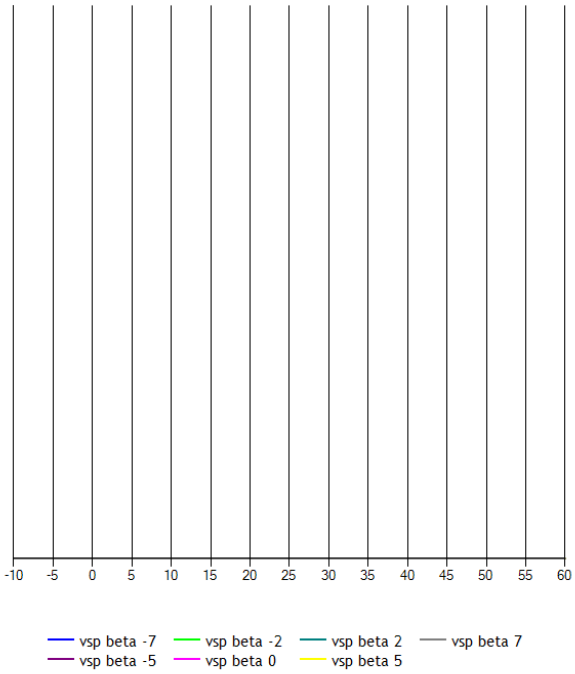
SIDE FORCE DUE TO ELEVON 2L DEFLECTION

CFYDED2L (alpha,beta,DED2L=-16)



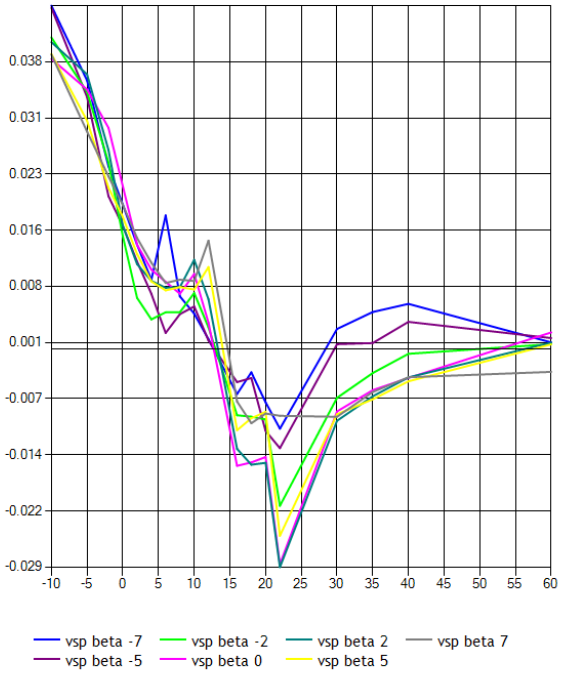
SIDE FORCE DUE TO ELEVON 2L DEFLECTION

CFYDED2L (alpha,beta,DED2L=0)



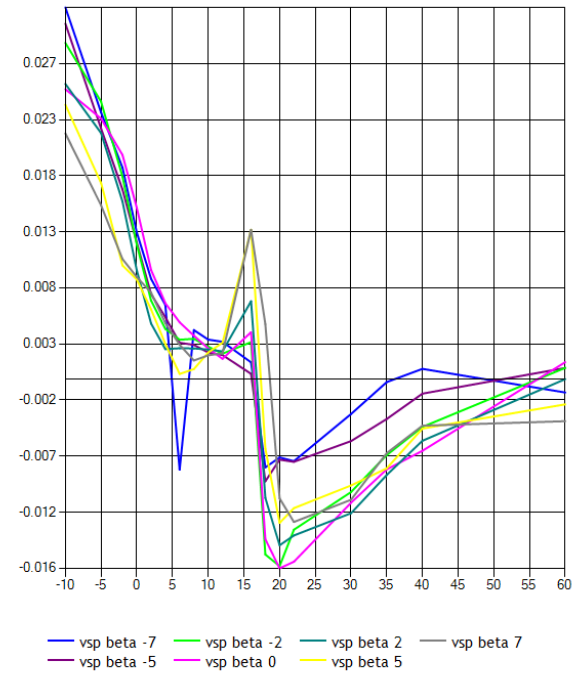
SIDE FORCE DUE TO ELEVON 2L DEFLECTION

CFYDED2L (alpha,beta,DED2L=25)



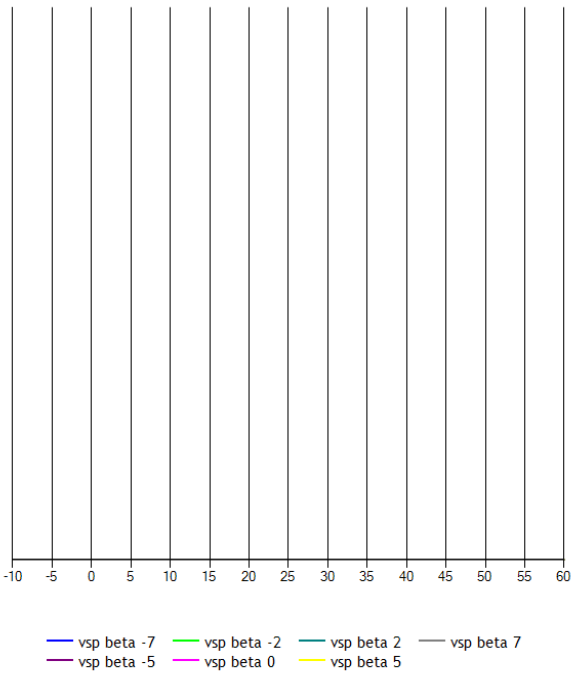
SIDE FORCE DUE TO ELEVON 2R DEFLECTION

CFYDED2R (alpha,beta,DED2R=-16)



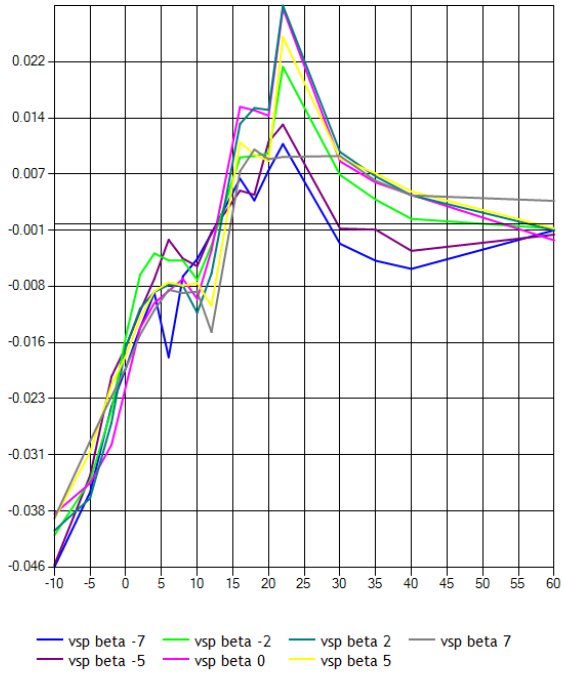
SIDE FORCE DUE TO ELEVON 2R DEFLECTION

CFYDED2R (alpha,beta,DED2R=0)



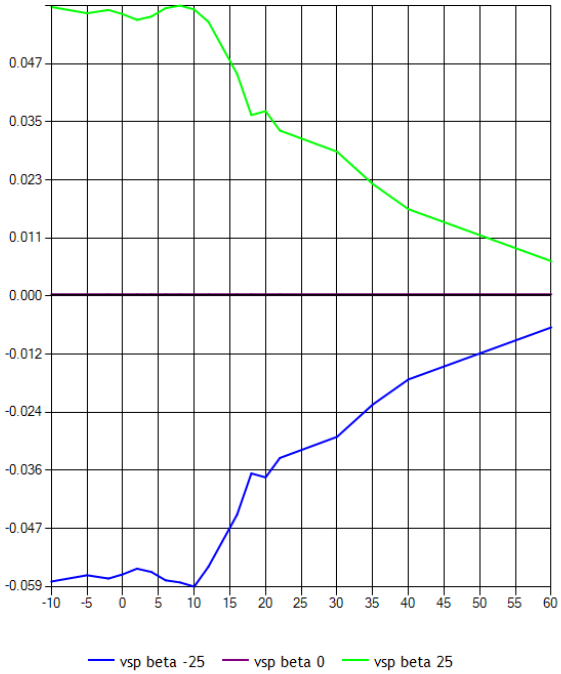
SIDE FORCE DUE TO ELEVON 2R DEFLECTION

CFYDED2R (alpha,beta,DED2R=25)



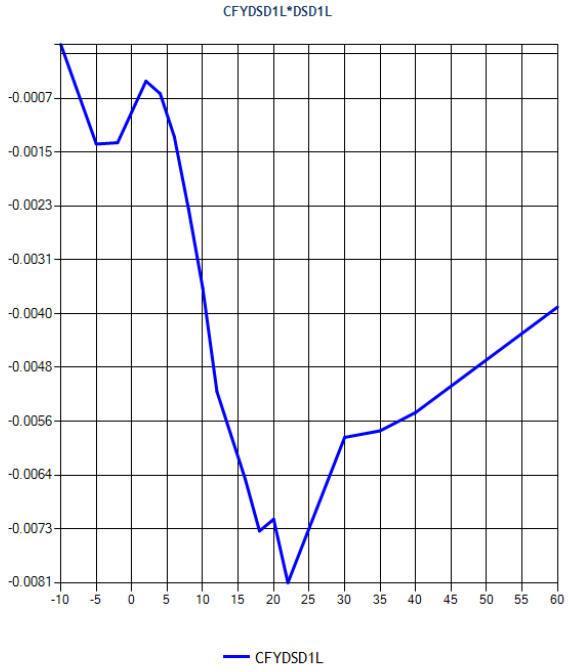
SIDE FORCE DUE TO RUDDER DEFLECTION

CFYDRD (alpha,beta,DRD=0)



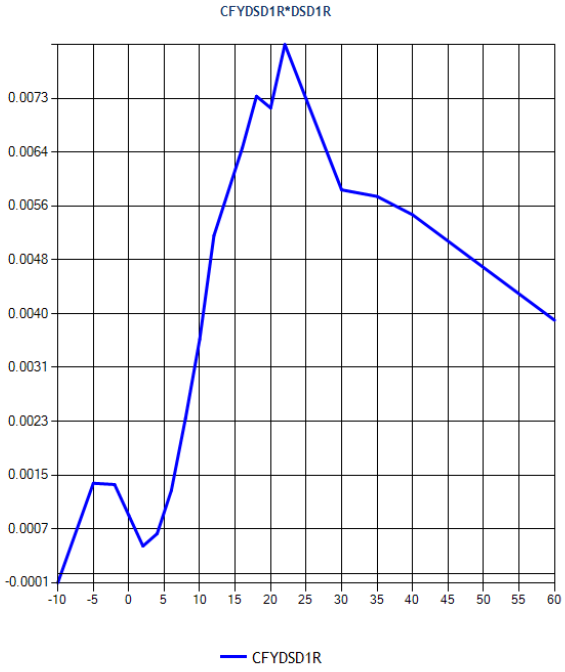
SIDE FORCE DUE TO LE SLAT 1L DEFLECTION

CFYDSD1L(alpha)



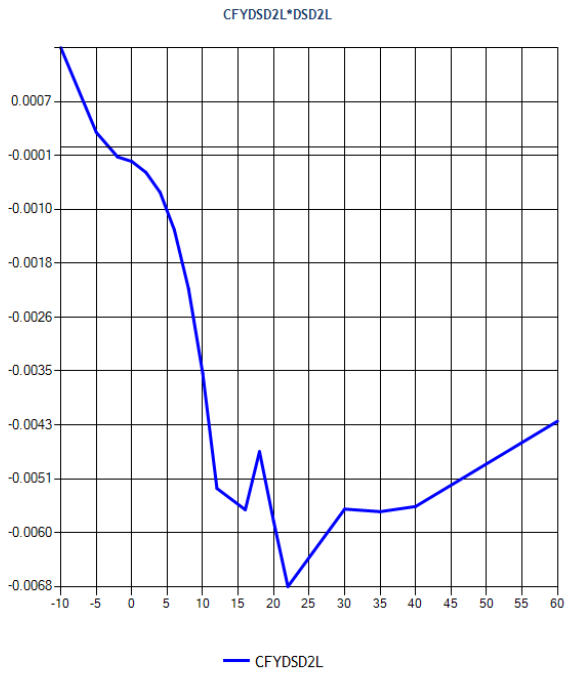
SIDE FORCE DUE TO LE SLAT 1R DEFLECTION

CFYDSD1R(alpha)



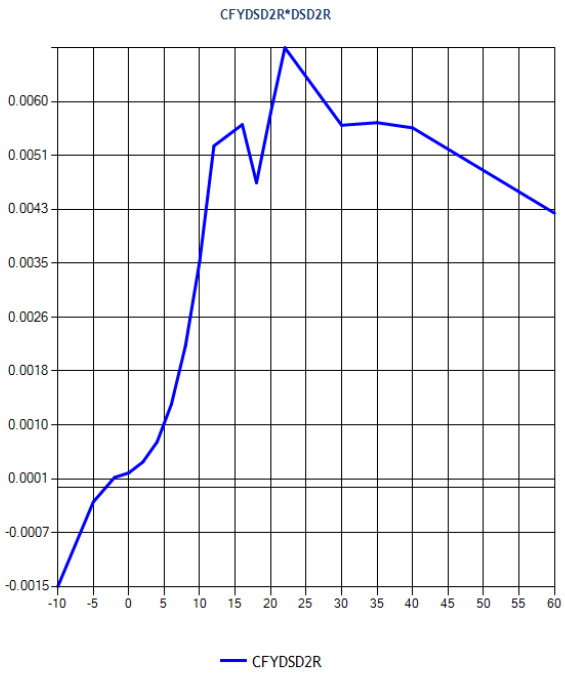
SIDE FORCE DUE TO LE SLAT 2L DEFLECTION

CFYDSD2L(alpha)



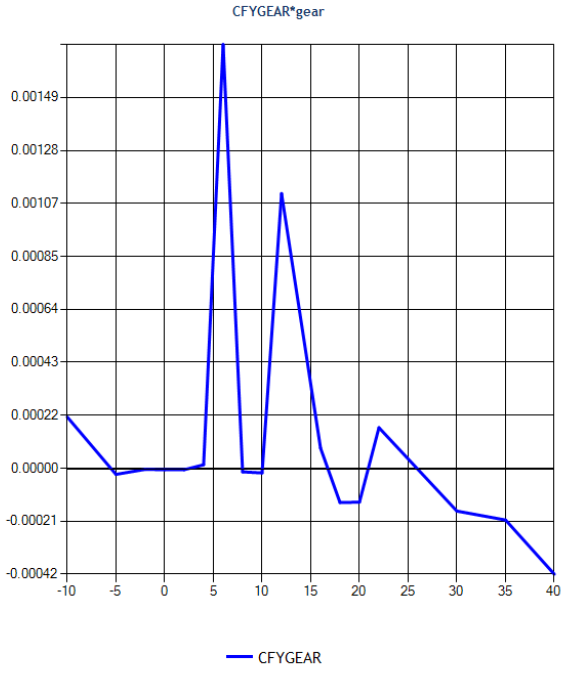
SIDE FORCE DUE TO LE SLAT 2R DEFLECTION

CFYDSD2R(alpha)



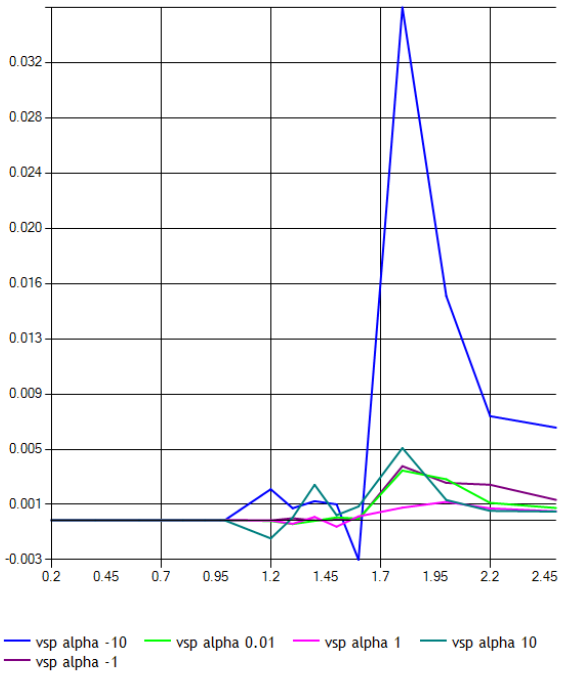
SIDE FORCE INCREMENT DUE TO GEAR

CFYGEAR(alpha)



SIDE FORCE DUE TO MACH

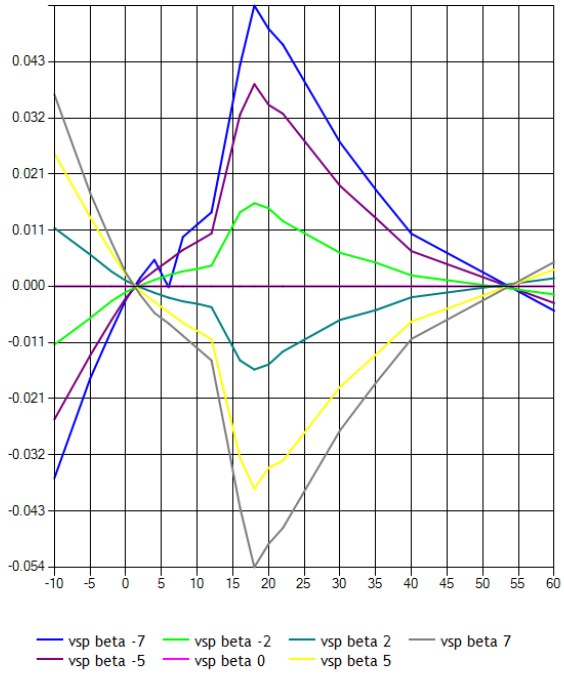
CFYmn(mach,alpha)



ROLL

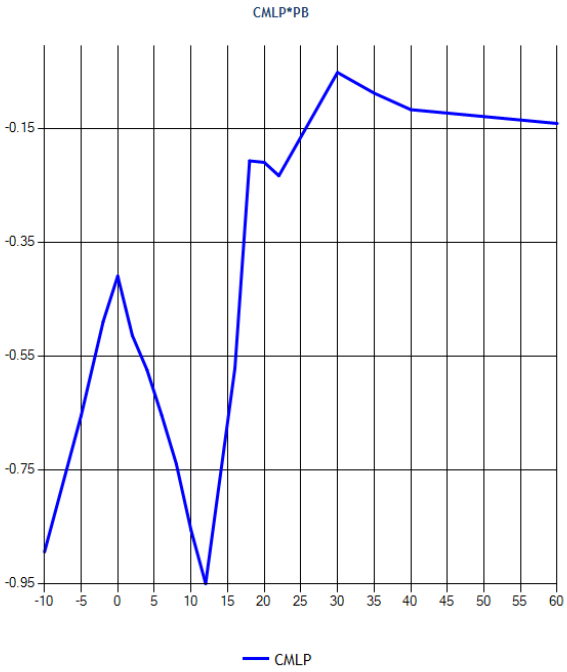
BASIC ROLLING MOMENT

CML1(alpha,beta)



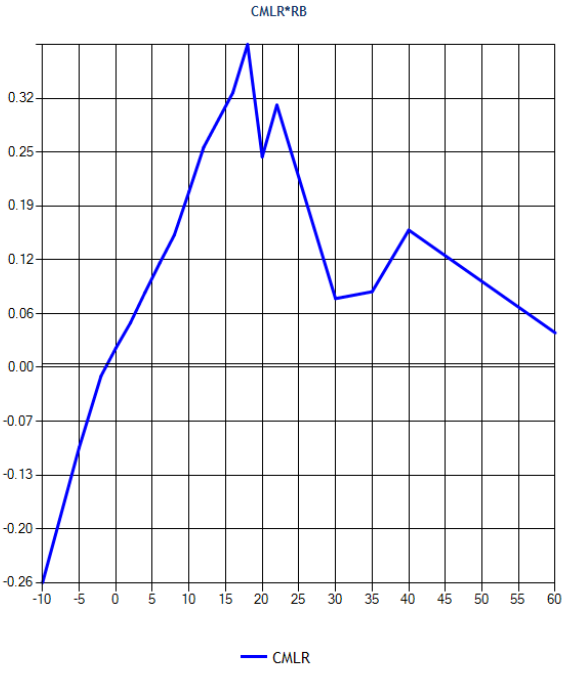
ROLL DAMPING DERIVATIVE

CMLP(alpha)



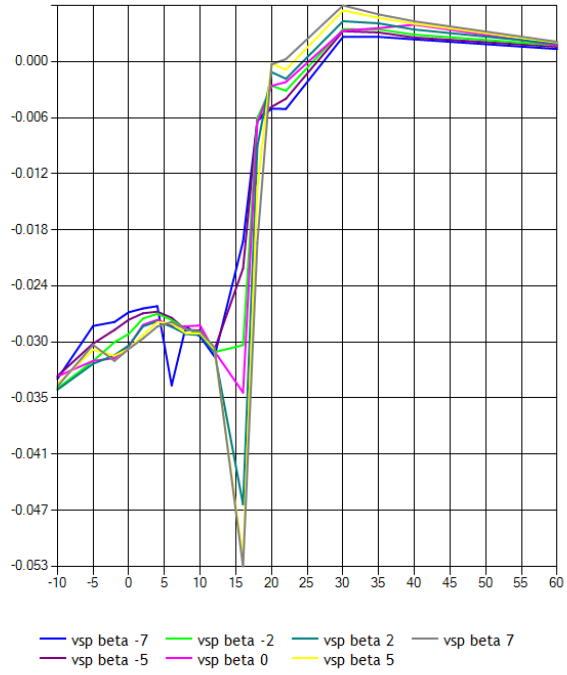
ROLLING MOMENT DUE TO YAW RATE

CMLR(alpha)



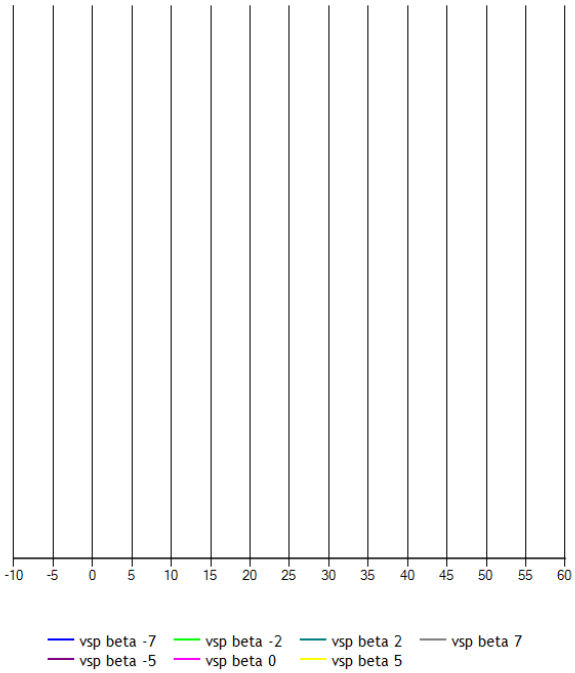
ROLLING MOMENT DUE TO ELEVON 1L DEFLECTION

CMLDED1L (alpha,beta,DED1L=-16)



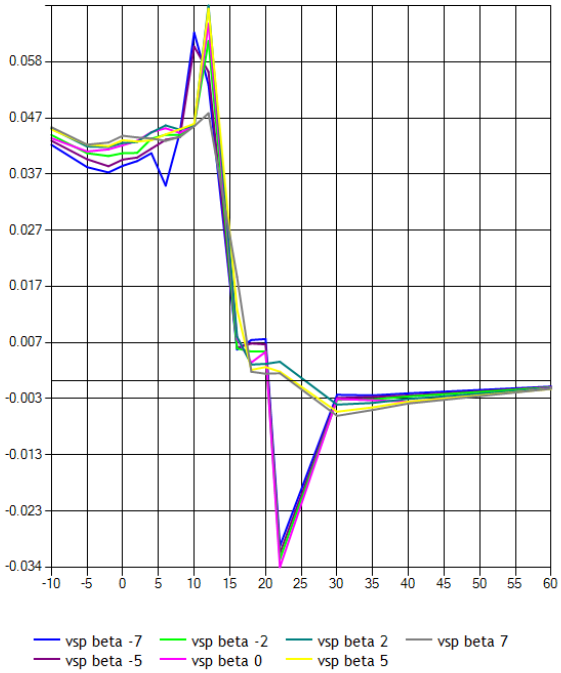
ROLLING MOMENT DUE TO ELEVON 1L DEFLECTION

CMLDED1L (alpha,beta,DED1L=0)



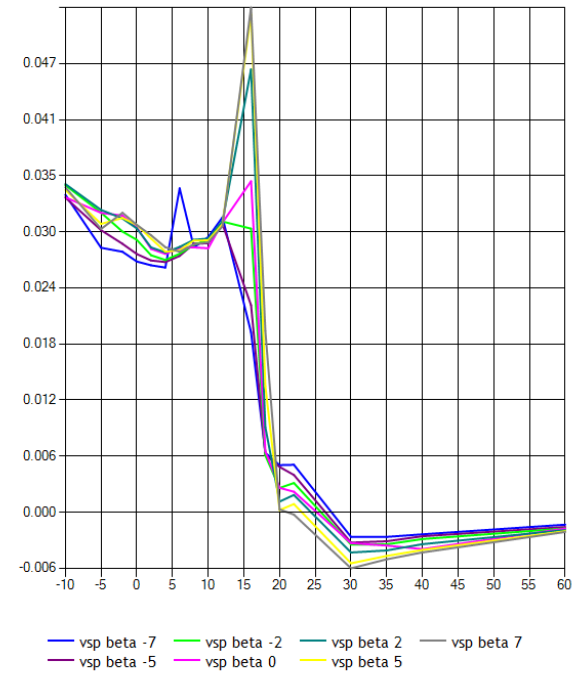
ROLLING MOMENT DUE TO ELEVON 1L DEFLECTION

CMLDED1L (alpha,beta,DED1L=25)



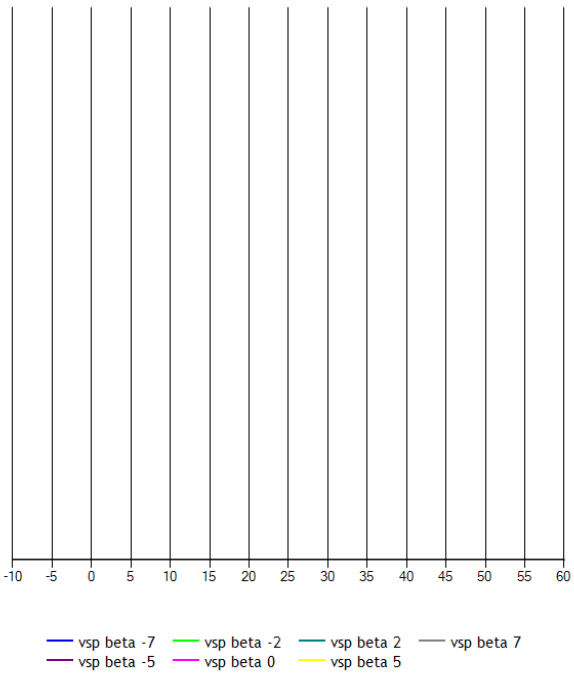
ROLLING MOMENT DUE TO ELEVON 1R DEFLECTION

CMLDED1R (alpha,beta,DED1R=-16)



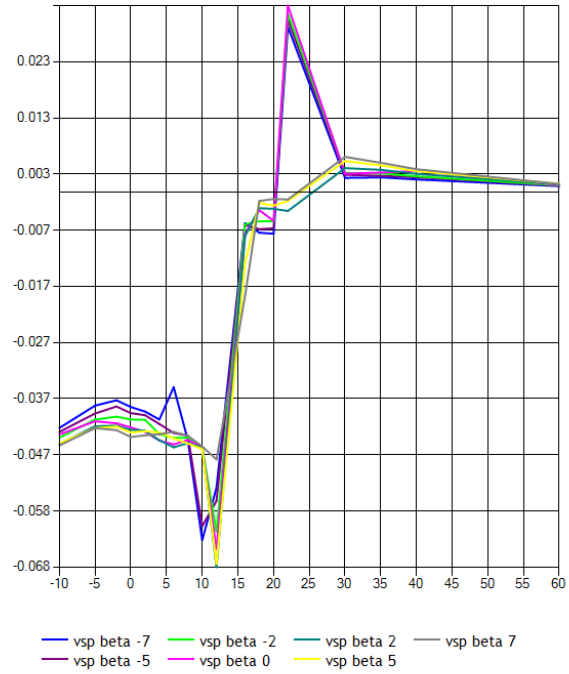
ROLLING MOMENT DUE TO ELEVON 1R DEFLECTION

CMLDED1R (alpha,beta,DED1R=0)



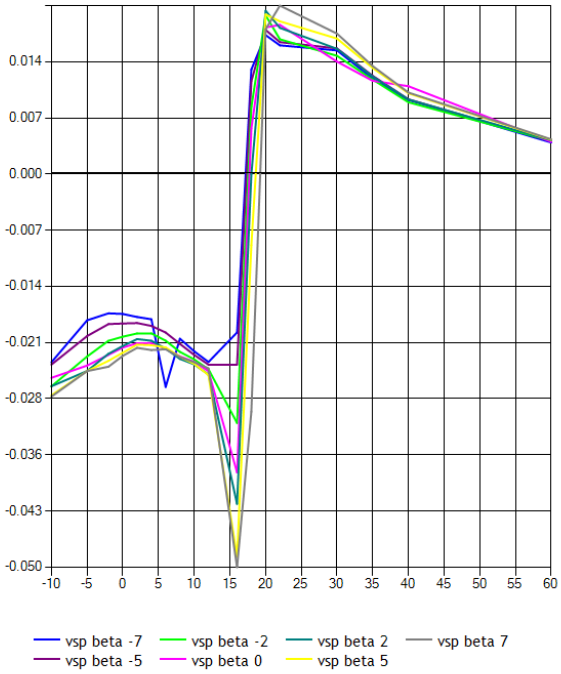
ROLLING MOMENT DUE TO ELEVON 1R DEFLECTION

CMLDED1R (alpha,beta,DED1R=25)



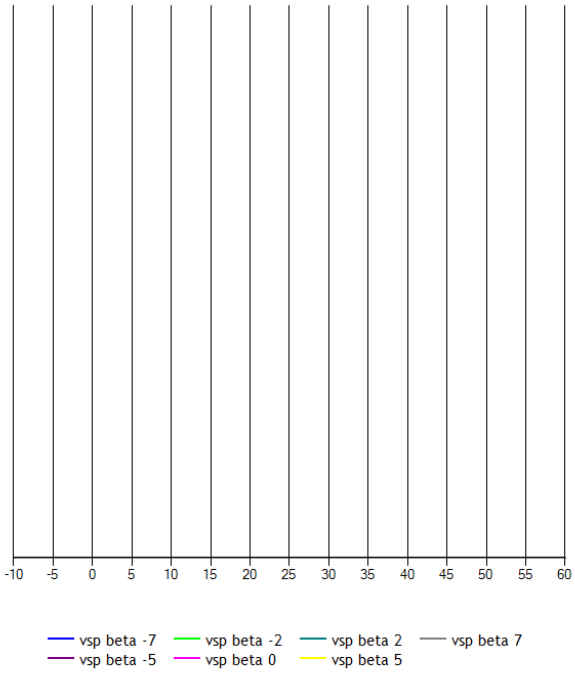
ROLLING MOMENT DUE TO ELEVON 2L DEFLECTION

CMLDED2L (alpha,beta,DED2L=-16)



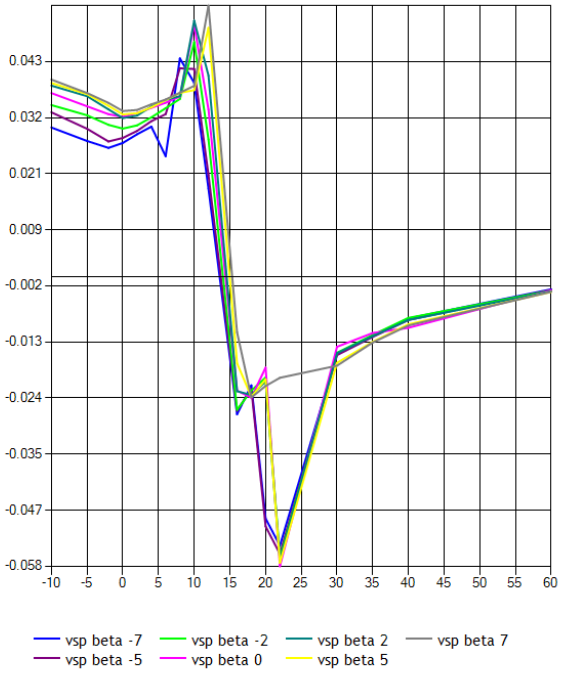
ROLLING MOMENT DUE TO ELEVON 2L DEFLECTION

CMLDED2L (alpha,beta,DED2L=0)



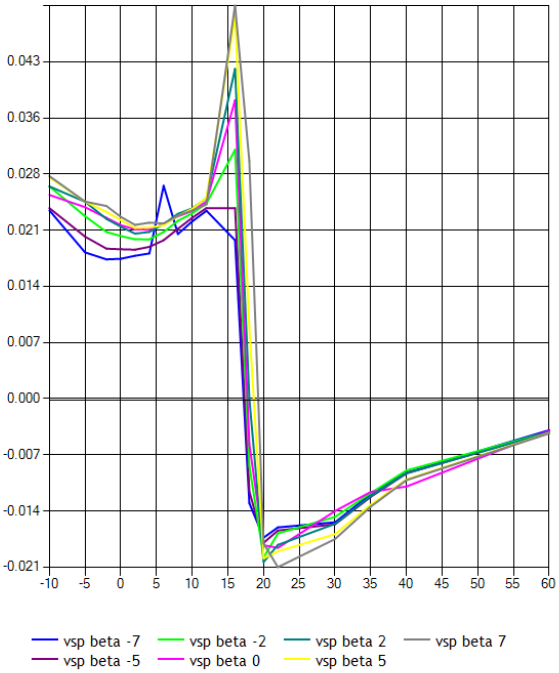
ROLLING MOMENT DUE TO ELEVON 2L DEFLECTION

CMLDED2L (alpha,beta,DED2L=25)



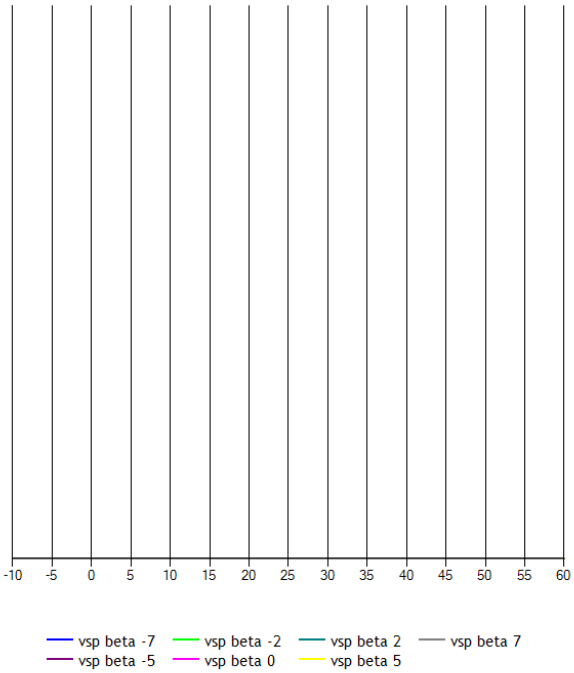
ROLLING MOMENT DUE TO ELEVON 2R DEFLECTION

CMLDED2R (alpha,beta,DED2R=-16)



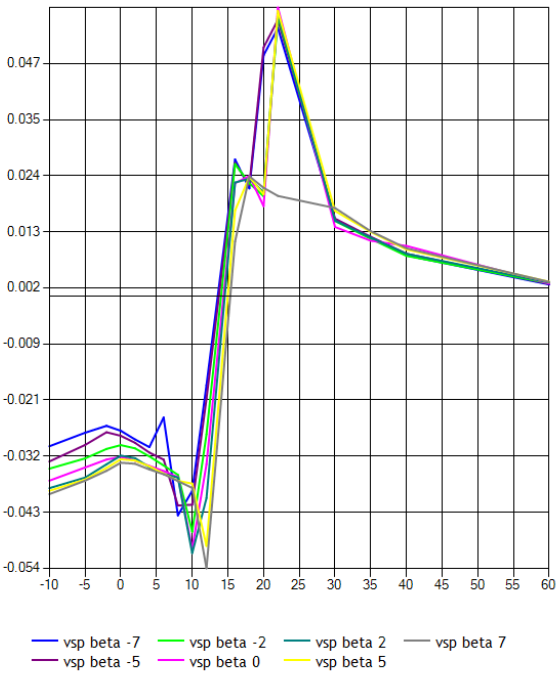
ROLLING MOMENT DUE TO ELEVON 2R DEFLECTION

CMLDED2R (alpha,beta,DED2R=0)



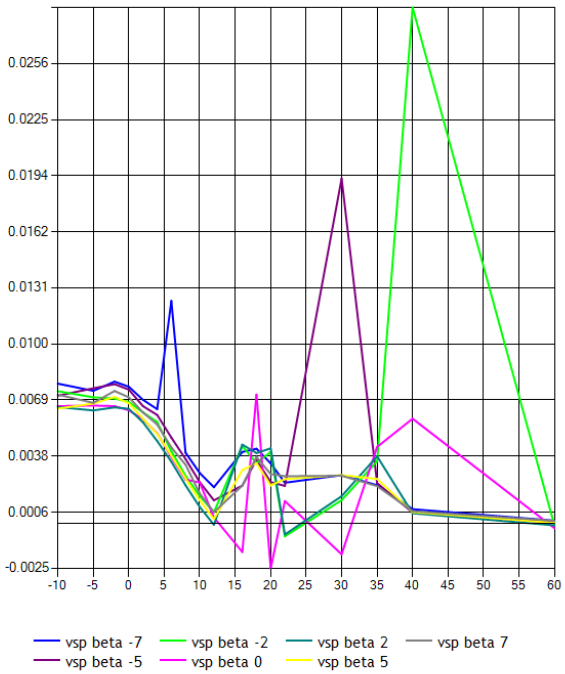
ROLLING MOMENT DUE TO ELEVON 2R DEFLECTION

CMLDED2R (alpha,beta,DED2R=25)



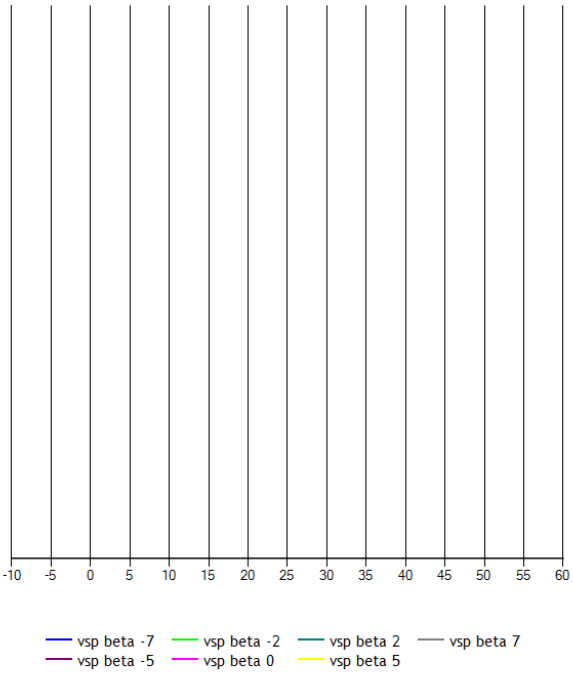
ROLLING MOMENT DUE TO RUDDER DEFLECTION

CMLDRD (alpha,beta,DRD=-25)



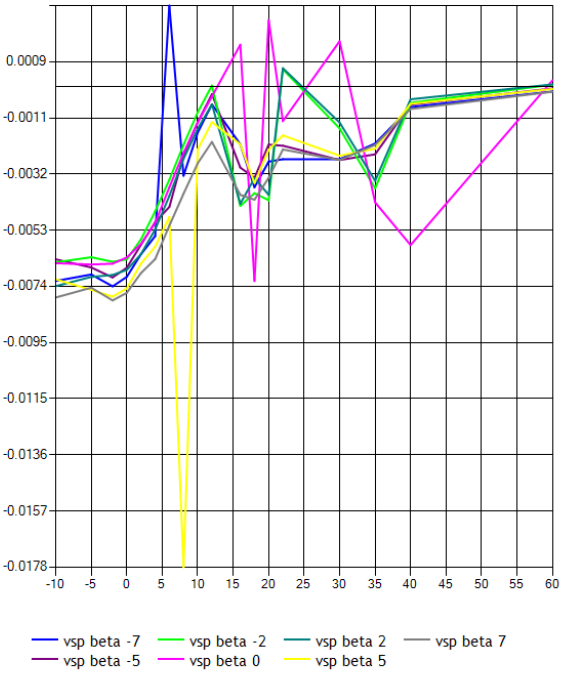
ROLLING MOMENT DUE TO RUDDER DEFLECTION

CMLDRD (alpha,beta,DRD=0)



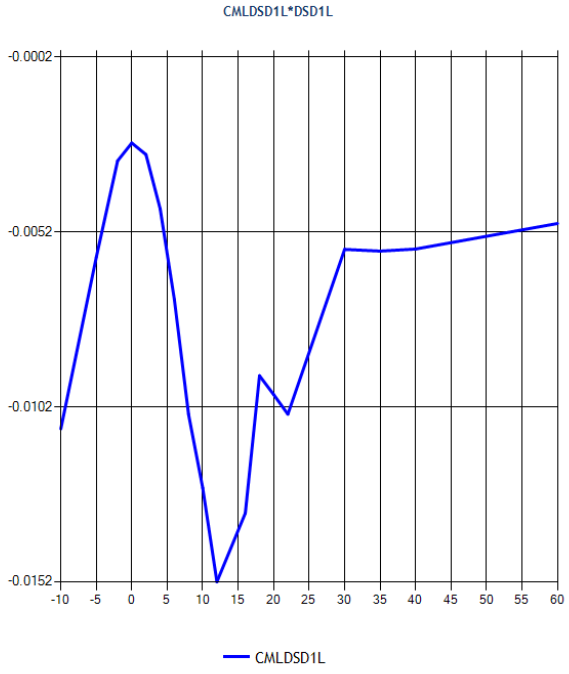
ROLLING MOMENT DUE TO RUDDER DEFLECTION

CMLDRD (alpha,beta,DRD=25)



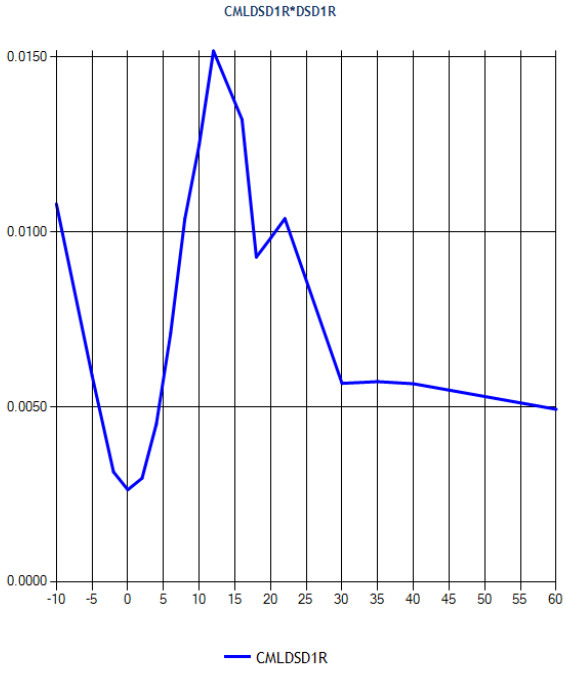
ROLLING MOMENT DUE TO LE SLAT 1L DEFLECTION

CMLDSD1L(alpha)



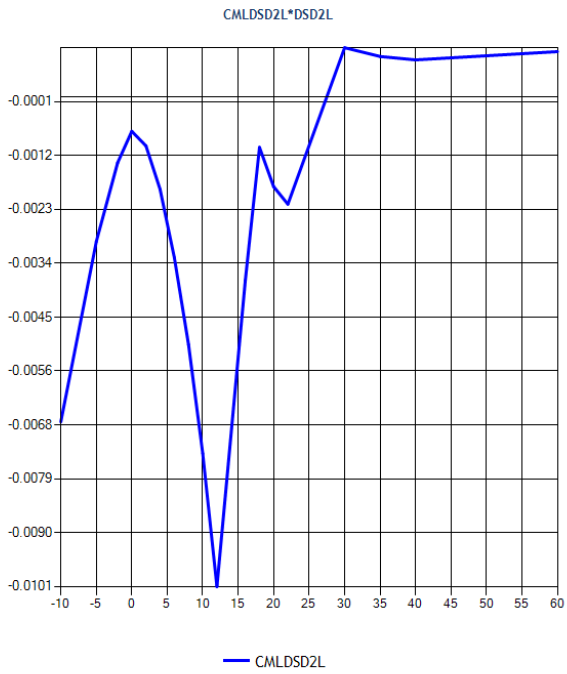
ROLLING MOMENT DUE TO LE SLAT 1R DEFLECTION

CMLDSD1R(alpha)



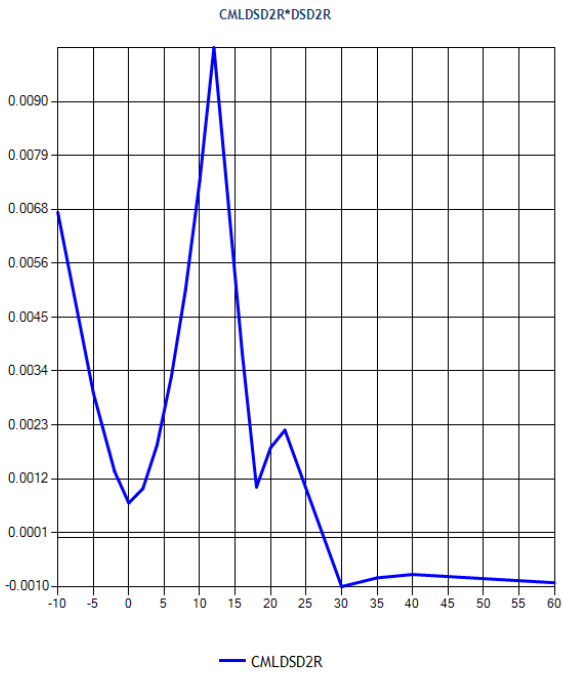
ROLLING MOMENT DUE TO LE SLAT 2L DEFLECTION

CMLDSD2L(alpha)



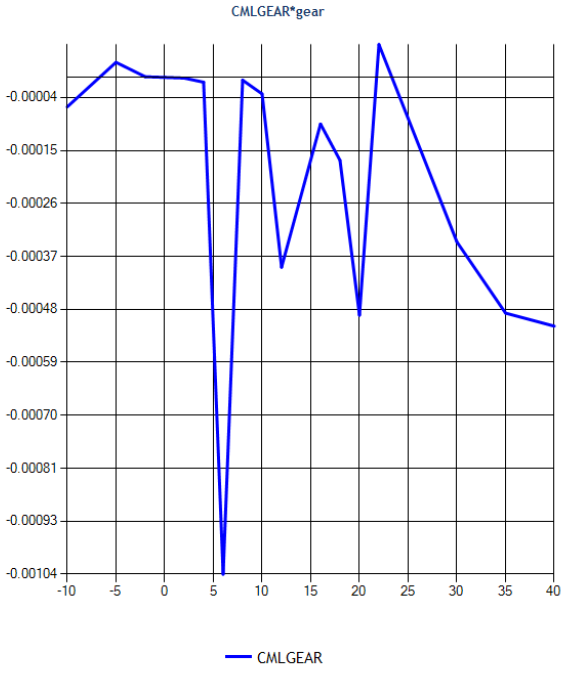
ROLLING MOMENT DUE TO LE SLAT 2R DEFLECTION

CMLDSD2R(alpha)



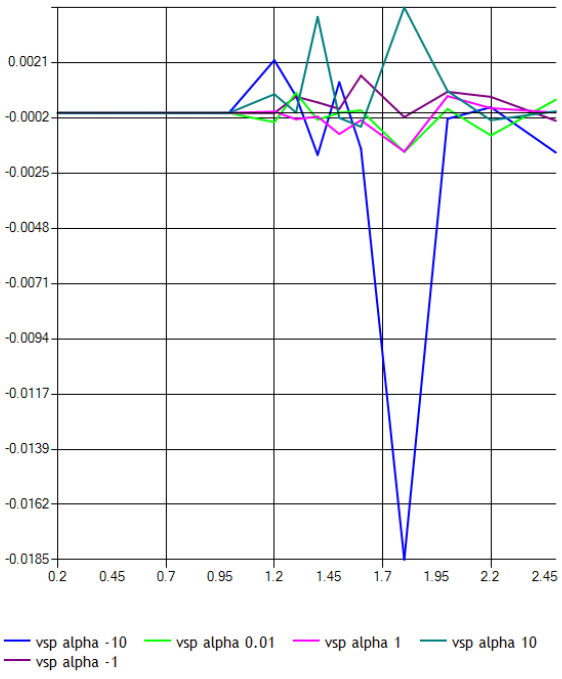
ROLLING MOMENT INCREMENT DUE TO GEAR

CMLGEAR(alpha)



ROLL DUE TO MACH

CMLmnw(mach,alpha)



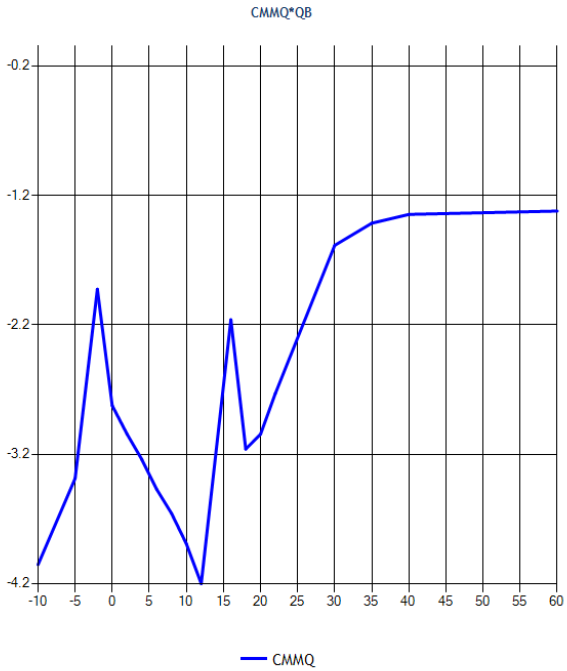
PITCH

BASIC PITCHING MOMENT

CMM1(alpha)

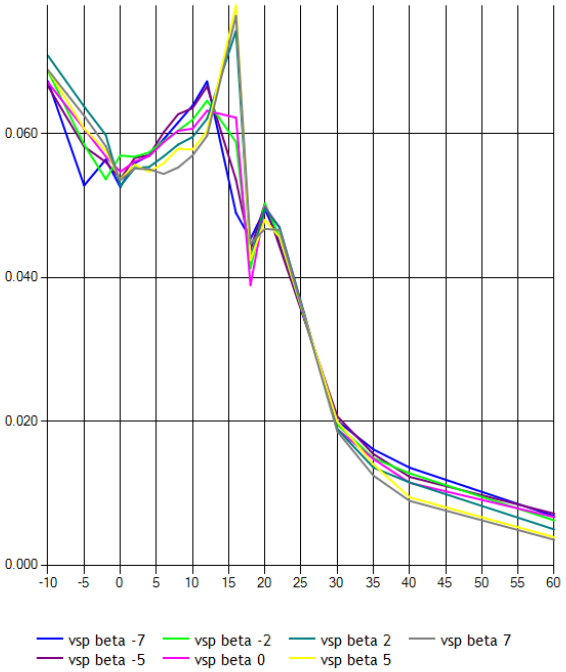
PITCH DAMPING DERIVATIVE

CMMQ(alpha)



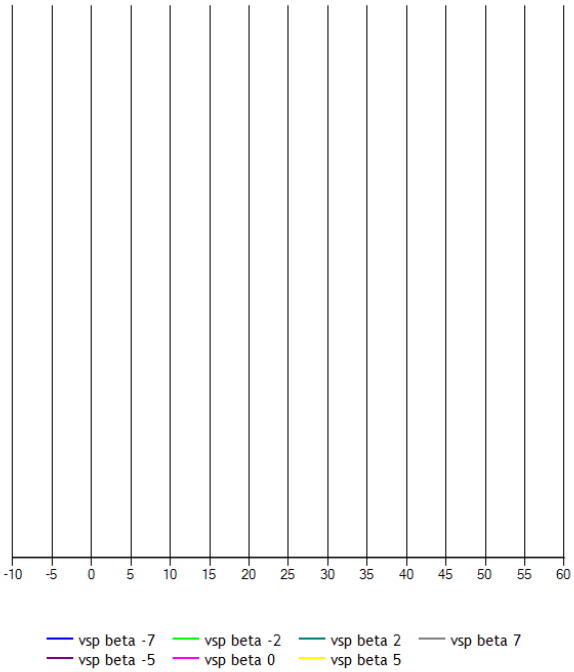
PITCH MOMENT DUE TO ELEVON 1L

CMMDED1L (alpha,beta,DED1L=-16)



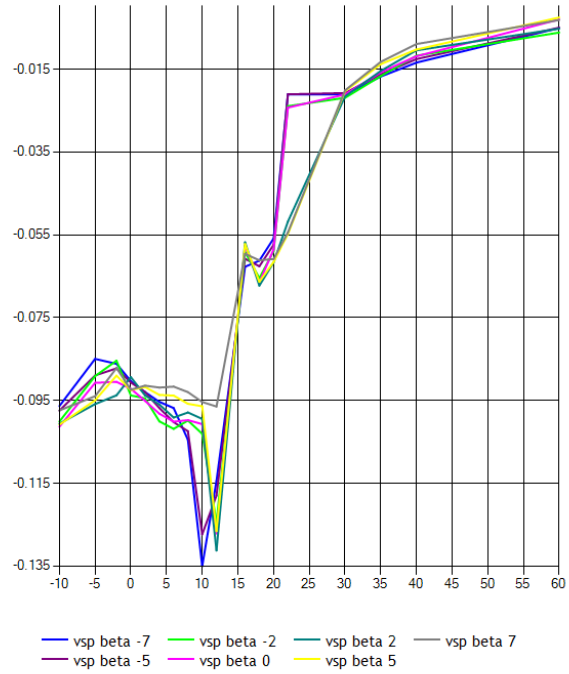
PITCH MOMENT DUE TO ELEVON 1L

CMMDED1L (alpha,beta,DED1L=0)



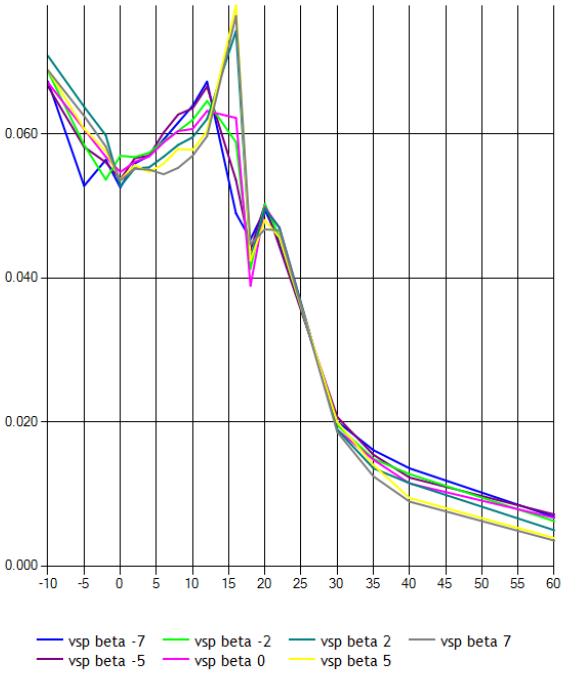
PITCH MOMENT DUE TO ELEVON 1L

CMMDED1L (alpha,beta,DED1L=25)



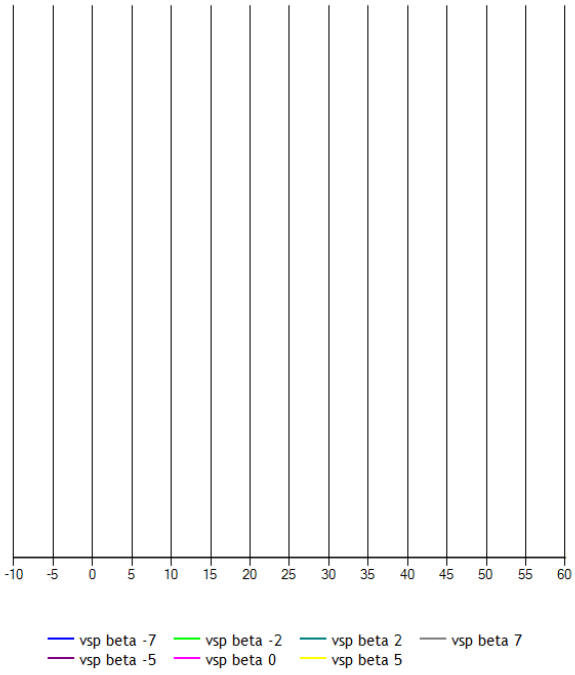
PITCH MOMENT DUE TO ELEVON 1R

CMMDED1R (alpha,beta,DED1R=-16)



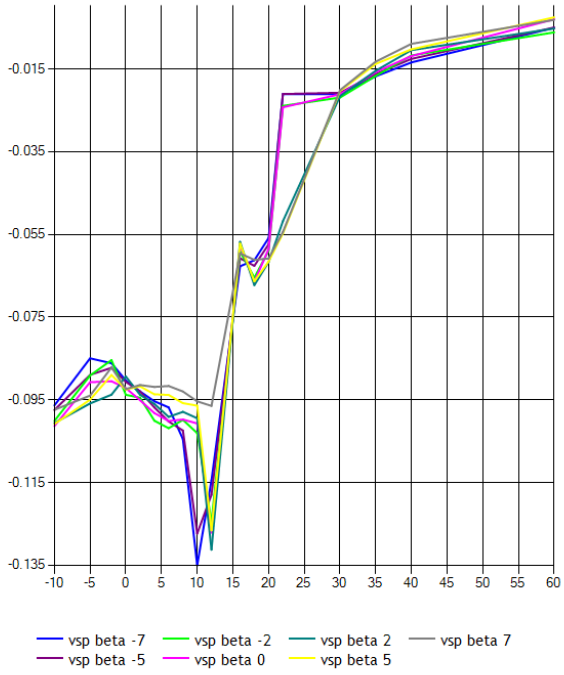
PITCH MOMENT DUE TO ELEVON 1R

CMMDED1R (alpha,beta,DED1R=0)



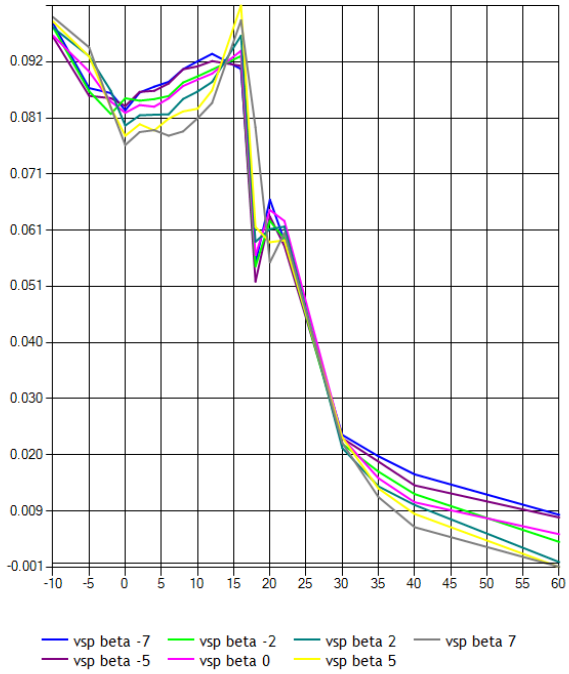
PITCH MOMENT DUE TO ELEVON 1R

CMMDED1R (alpha,beta,DED1R=25)



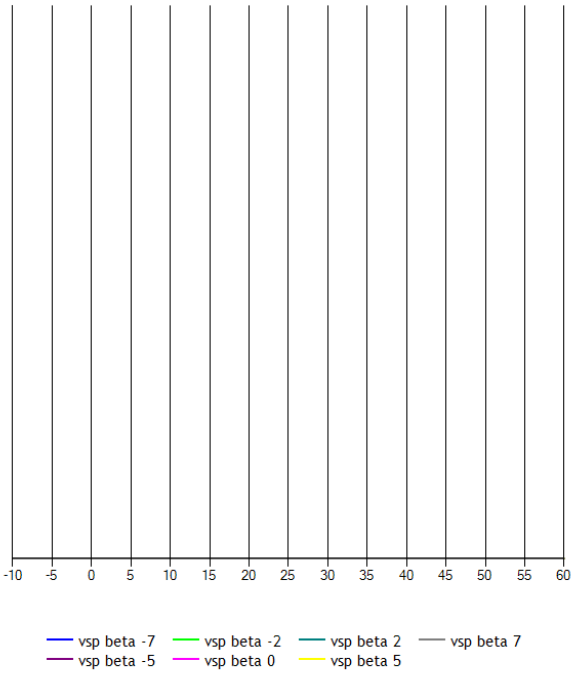
PITCH MOMENT DUE TO ELEVON 2L

CMMDED2L (alpha,beta,DED2L=-16)



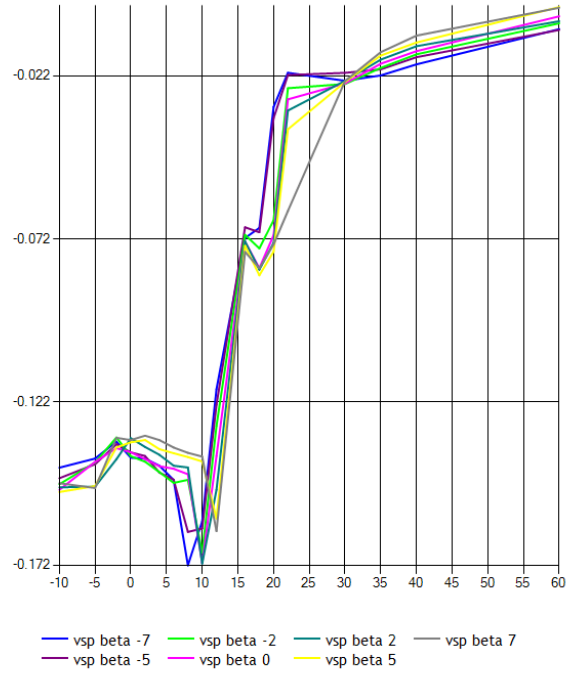
PITCH MOMENT DUE TO ELEVON 2L

CMMDED2L (alpha,beta,DED2L=0)



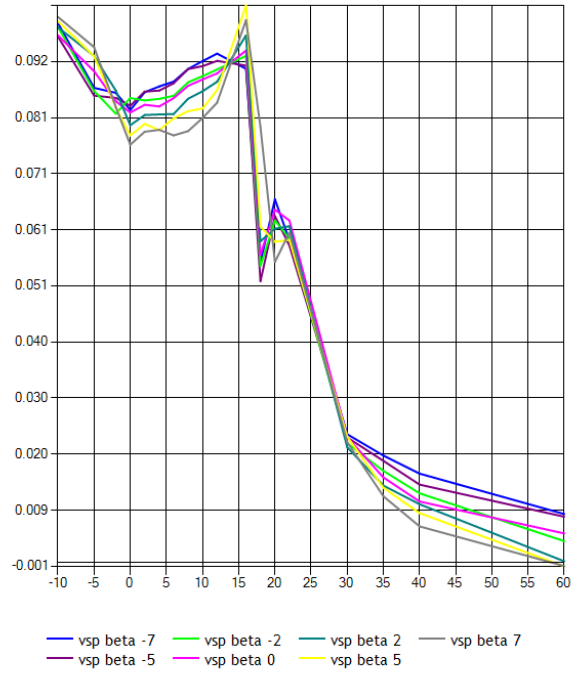
PITCH MOMENT DUE TO ELEVON 2L

CMMDED2L (alpha,beta,DED2L=25)



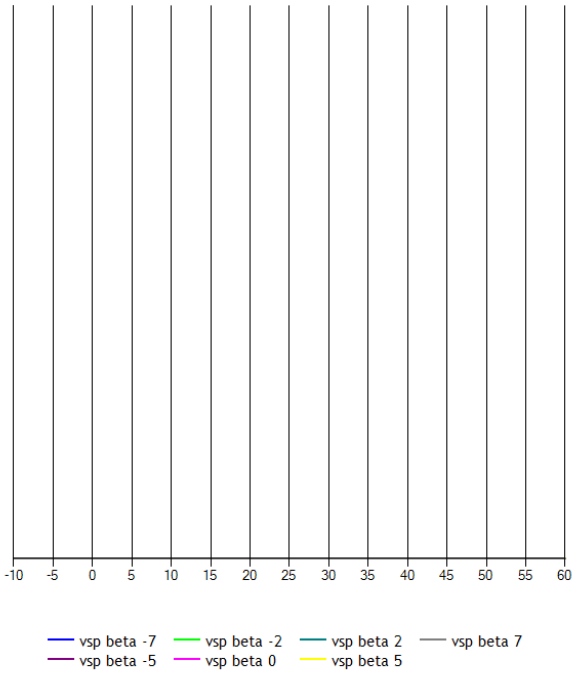
PITCH MOMENT DUE TO ELEVON 2R

CMMDED2R (alpha,beta,DED2R=-16)



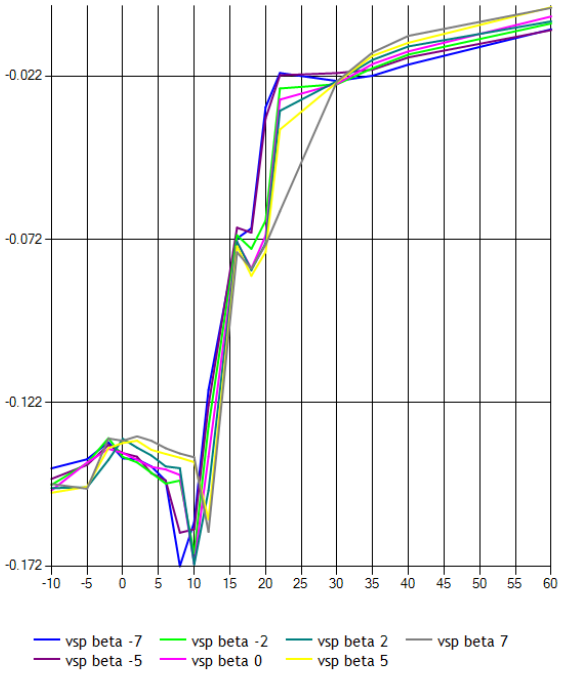
PITCH MOMENT DUE TO ELEVON 2R

CMMDED2R (alpha,beta,DED2R=0)



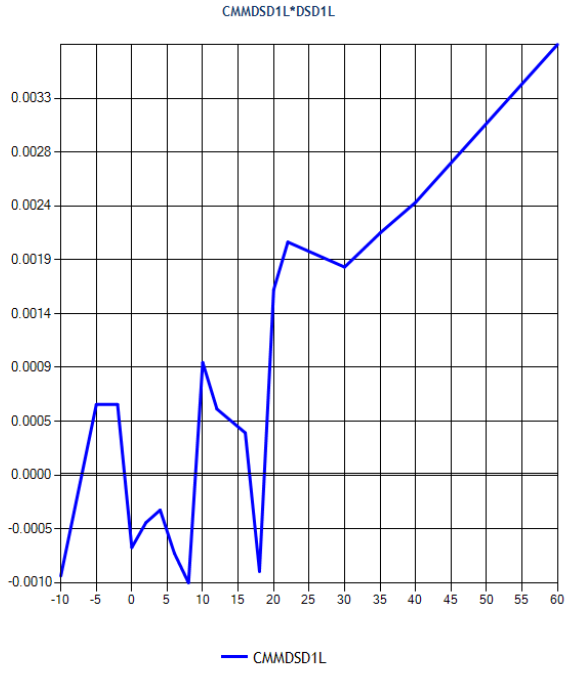
PITCH MOMENT DUE TO ELEVON 2R

CMMDED2R (alpha,beta,DED2R=25)



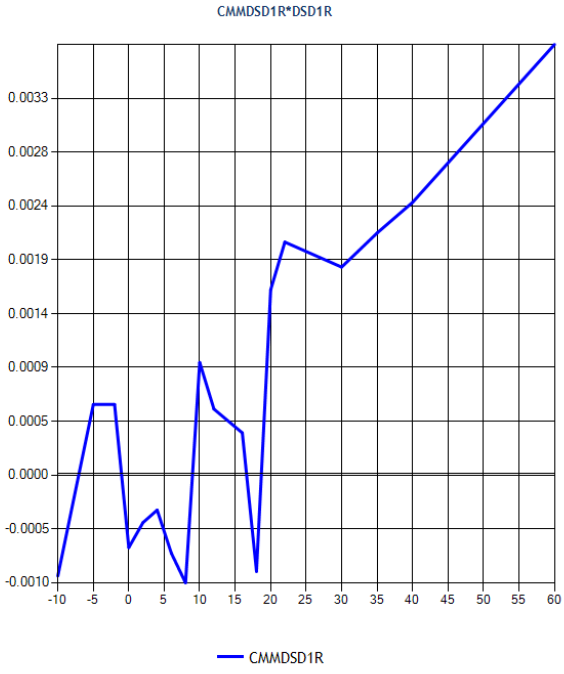
PITCH MOMENT DUE TO LE SLAT 1L

CMMDSD1L(alpha)



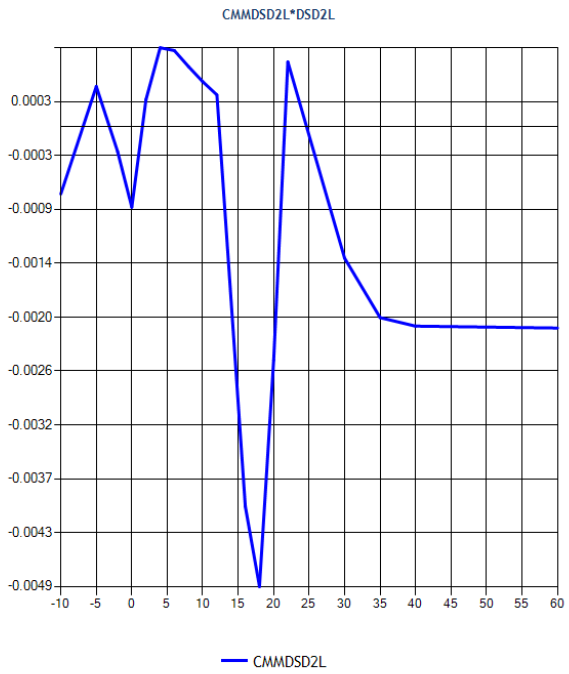
PITCH MOMENT DUE TO LE SLAT 1R

CMMDSD1R(alpha)



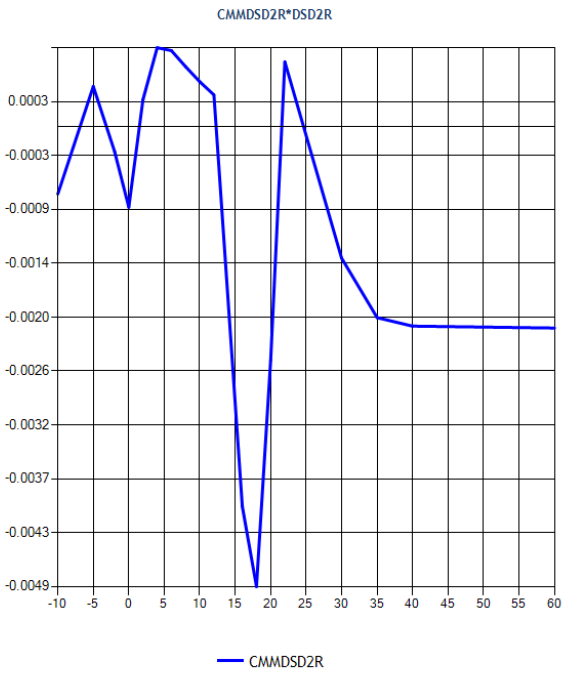
PITCH MOMENT DUE TO LE SLAT 2L

CMMDSD2L(alpha)



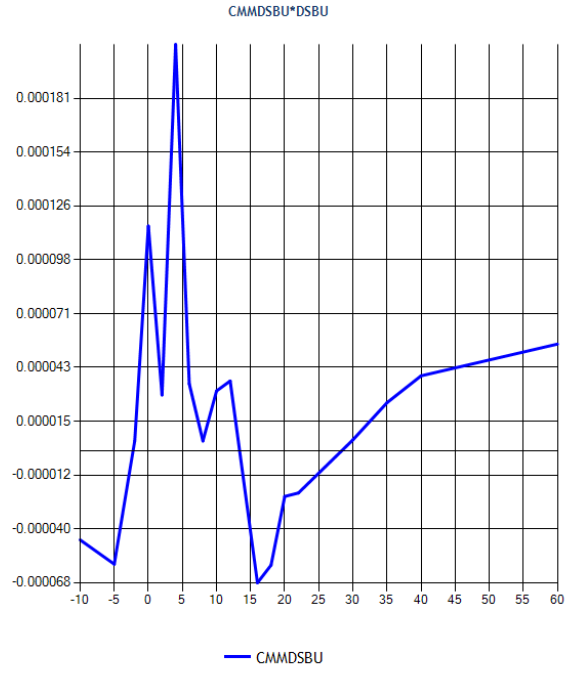
PITCH MOMENT DUE TO LE SLAT 2R

CMMDSD2R(alpha)



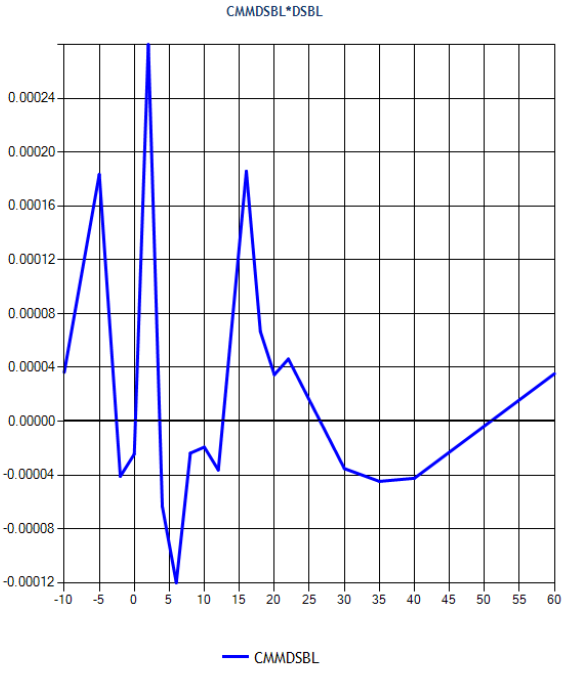
PITCH MOMENT DUE TO UPPER SPEEDBRAKE DEFLECTION

CMMDSBU(alpha)



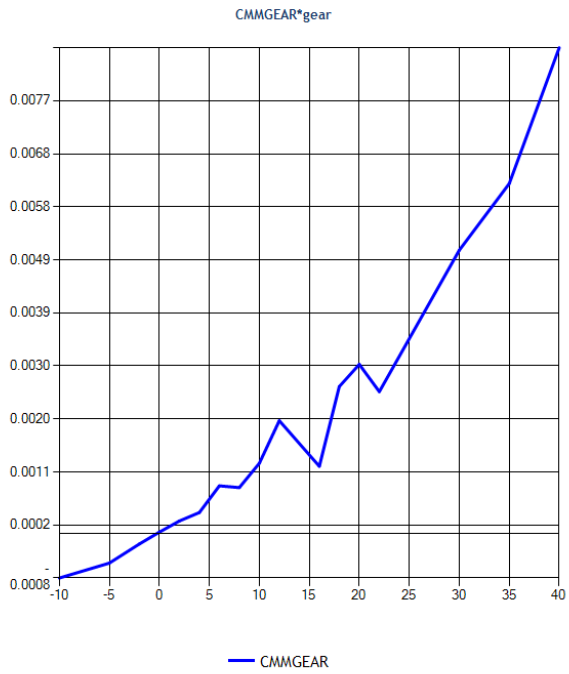
PITCH MOMENT DUE TO LOWER SPEEDBRAKE DEFLECTION

CMMDSBL(alpha)



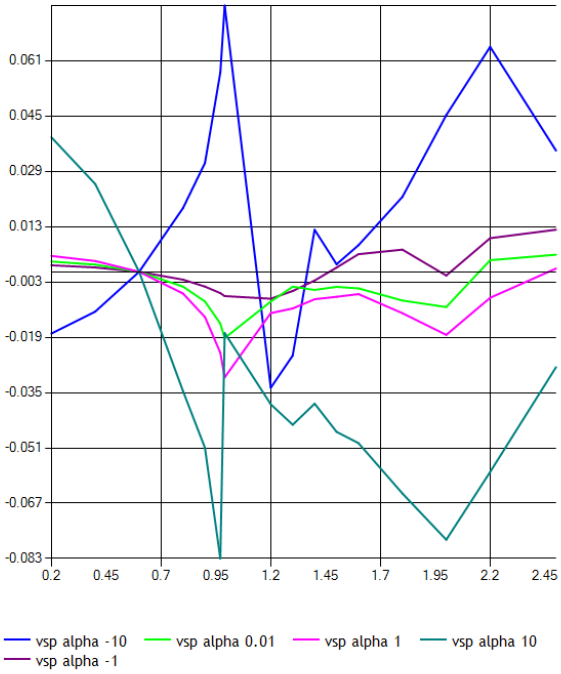
PITCHING MOMENT INCREMENT DUE TO GEAR

CMMGEAR(alpha)



PITCH DUE TO MACH

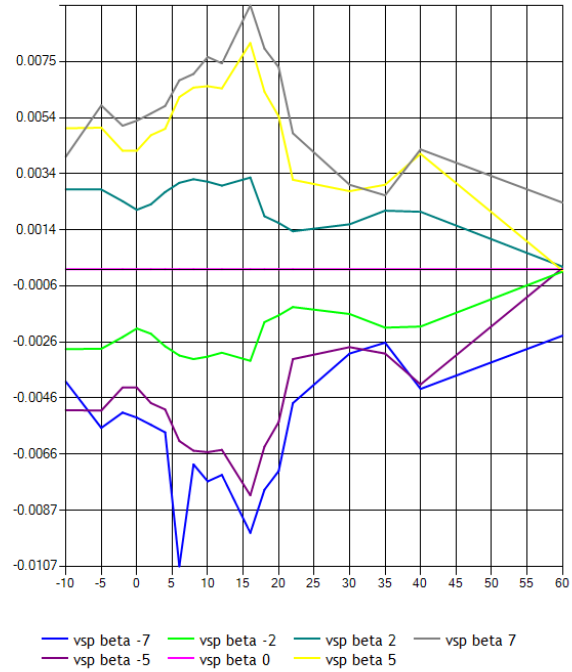
CMMmnw(mach,alpha)



YAW

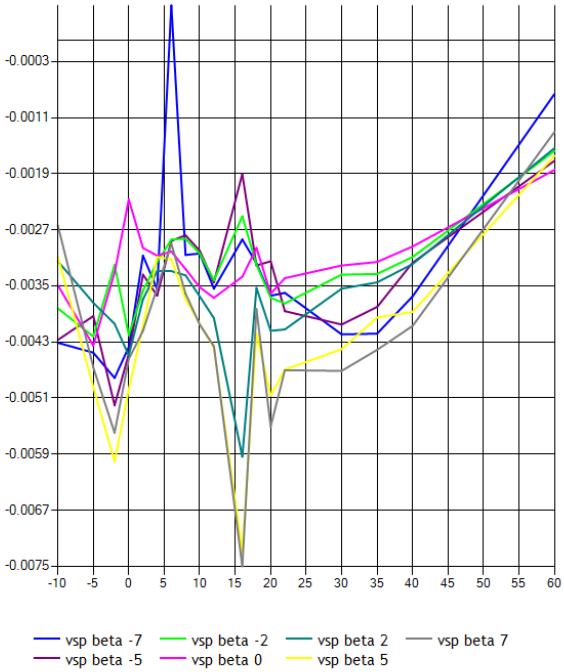
BASIC YAWING MOMENT

CMN1(alpha,beta)



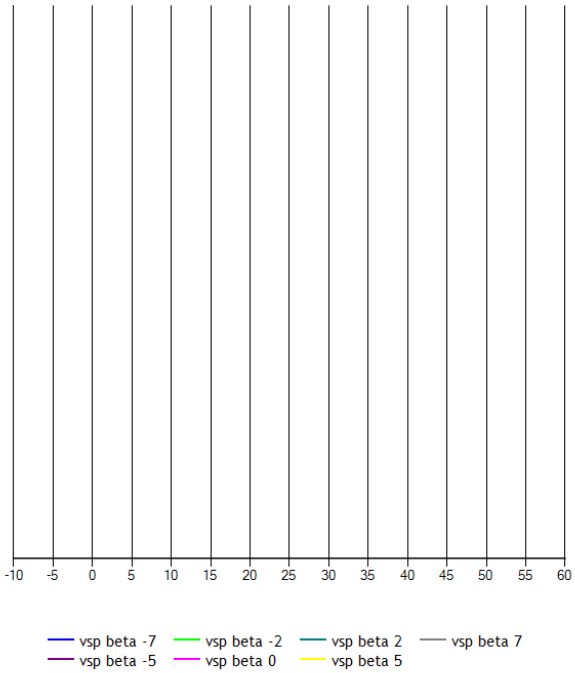
YAW MOMENT DUE TO ELEVON 1L

CMNDED1L (alpha,beta,DED1L=-16)



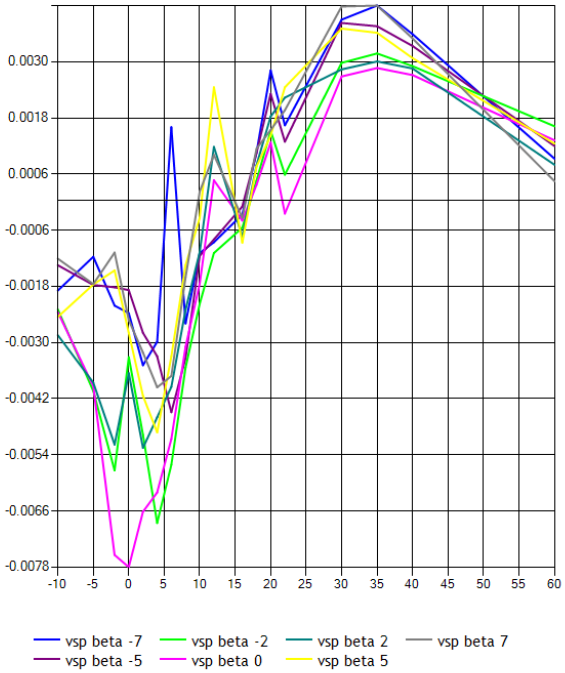
YAW MOMENT DUE TO ELEVON 1L

CMNDED1L (alpha,beta,DED1L=0)



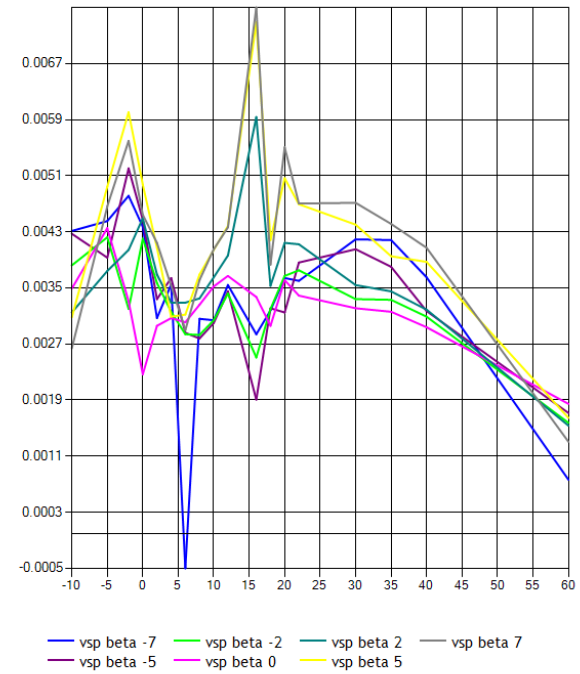
YAW MOMENT DUE TO ELEVON 1L

CMNDED1L (alpha,beta,DED1L=25)



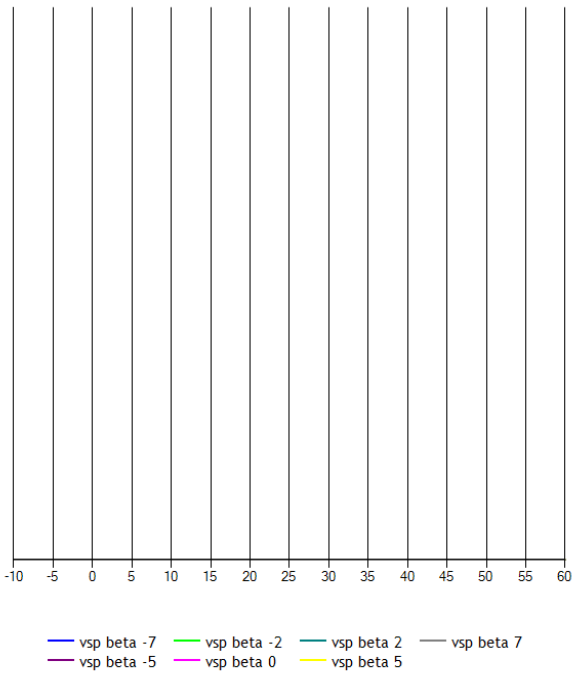
YAW MOMENT DUE TO ELEVON 1R

CMNDED1R (alpha,beta,DED1R=-16)



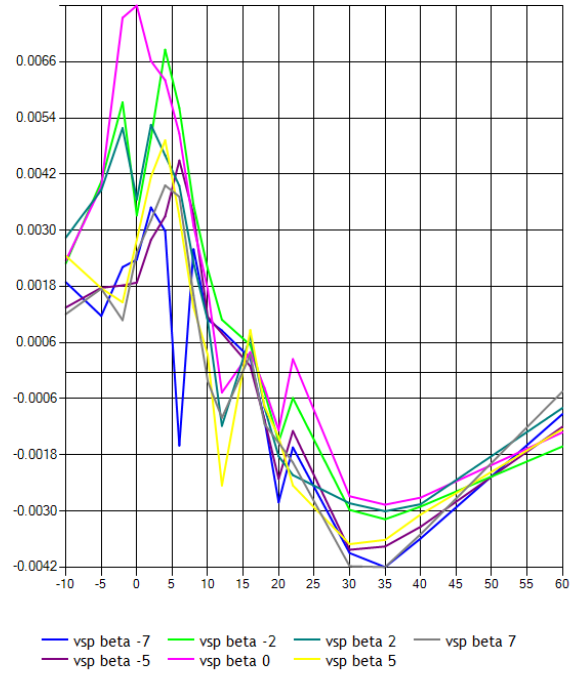
YAW MOMENT DUE TO ELEVON 1R

CMNDED1R (alpha,beta,DED1R=0)



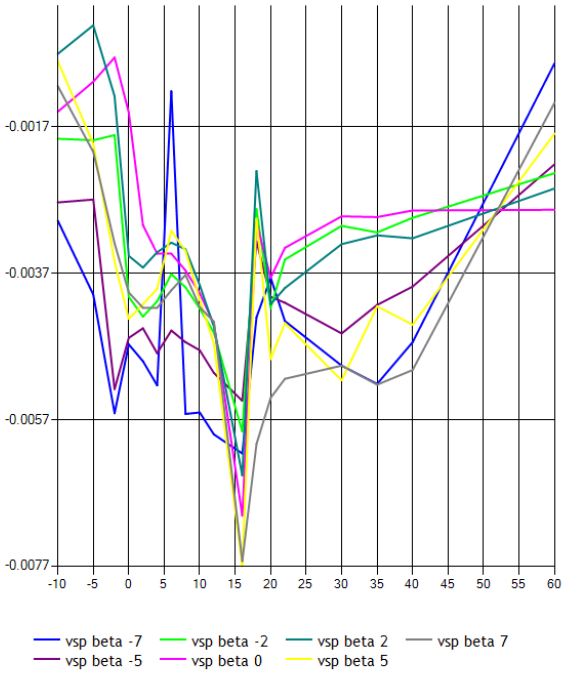
YAW MOMENT DUE TO ELEVON 1R

CMNDED1R (alpha,beta,DED1R=25)



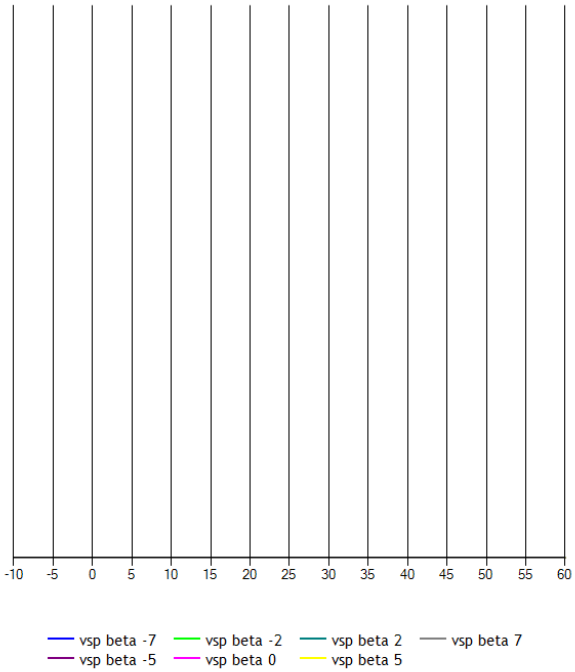
YAW MOMENT DUE TO ELEVON 2L

CMNDED2L (alpha,beta,DED2L=-16)



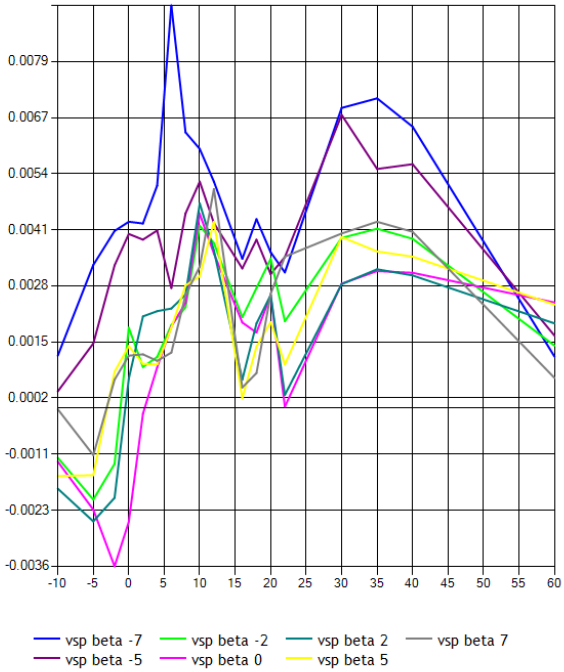
YAW MOMENT DUE TO ELEVON 2L

CMNDED2L (alpha,beta,DED2L=0)



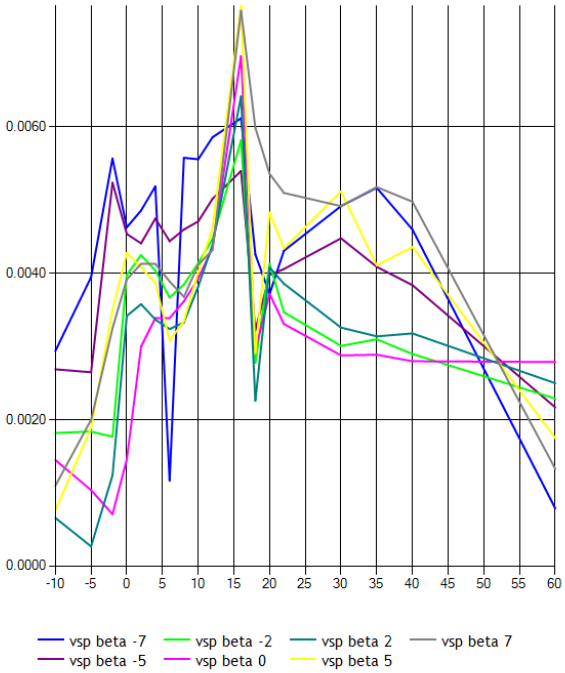
YAW MOMENT DUE TO ELEVON 2L

CMNDED2L (alpha,beta,DED2L=25)



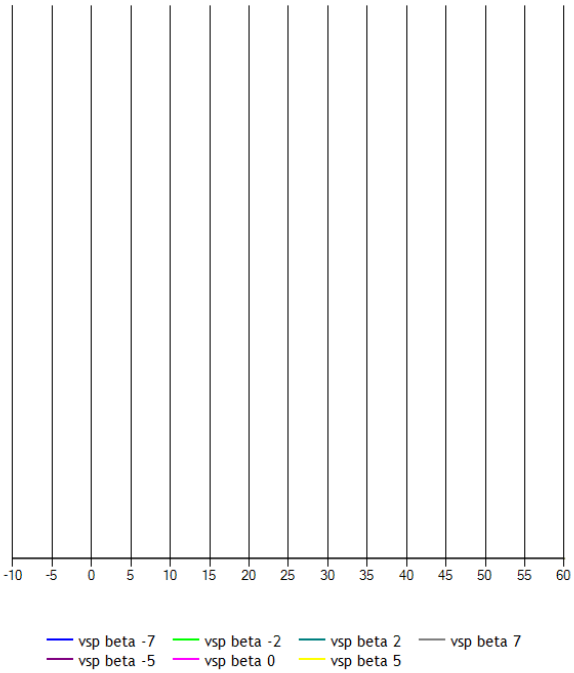
YAW MOMENT DUE TO ELEVON 2R

CMNDED2R (alpha,beta,DED2R=-16)



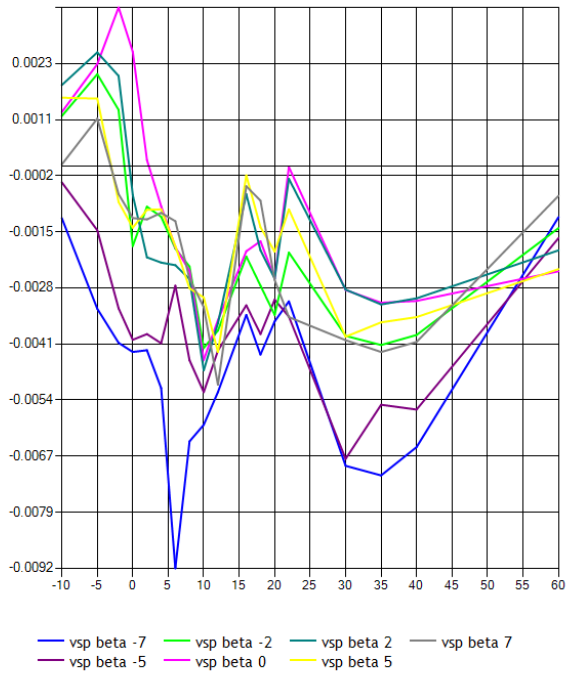
YAW MOMENT DUE TO ELEVON 2R

CMNDED2R (alpha,beta,DED2R=0)



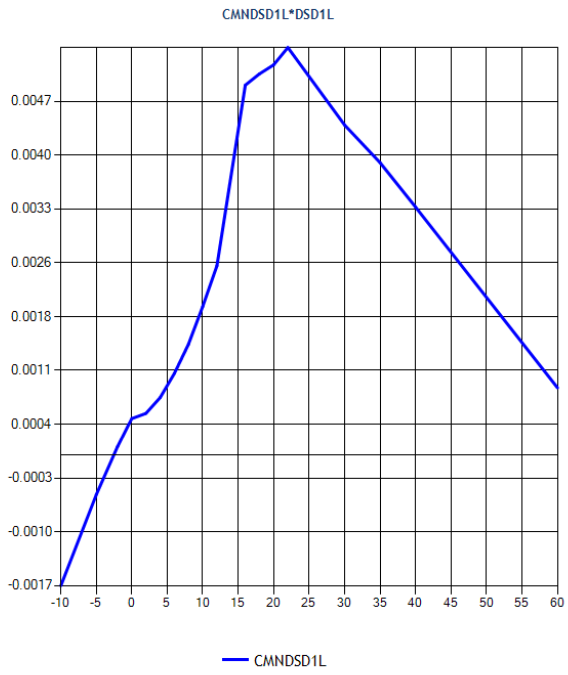
YAW MOMENT DUE TO ELEVON 2R

CMNDED2R (alpha,beta,DED2R=25)



YAW MOMENT DUE TO LE SLAT 1L

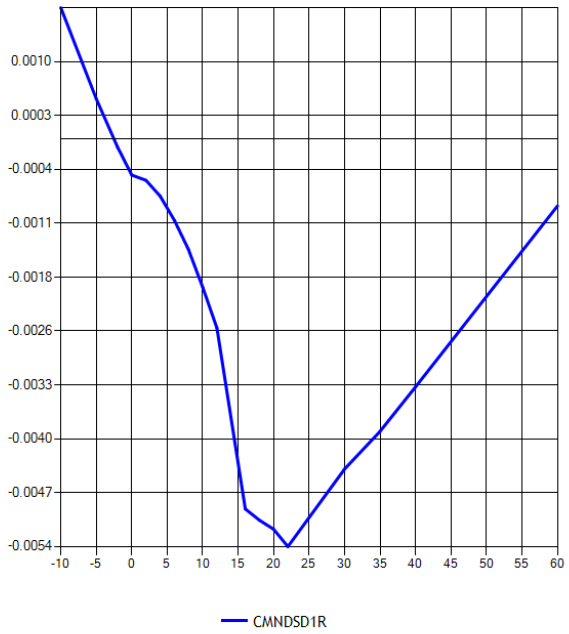
CMNDSD1L(alpha)



YAW MOMENT DUE TO LE SLAT 1R

CMNDSD1R(alpha)

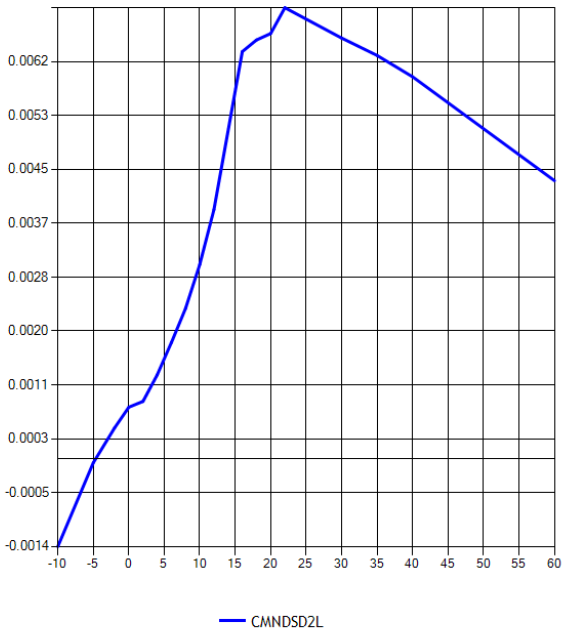
CMNDSD1R*DSD1R



YAW MOMENT DUE TO LE SLAT 2L

CMNDSD2L(alpha)

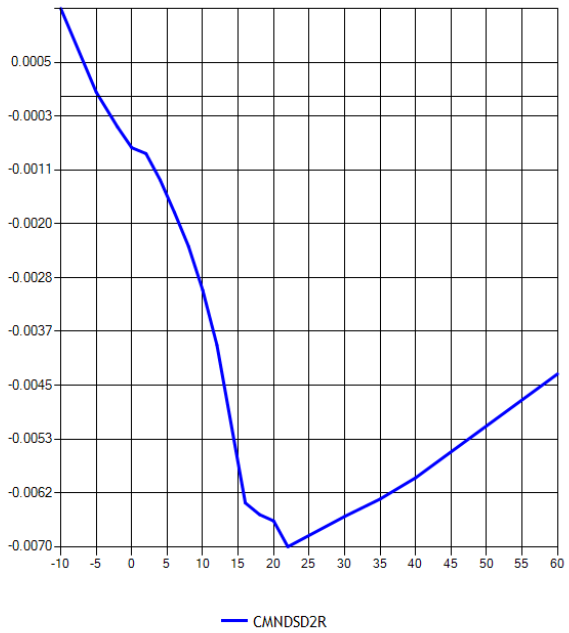
CMNDSD2L*DSD2L



YAW MOMENT DUE TO LE SLAT 2R

CMNDSD2R(alpha)

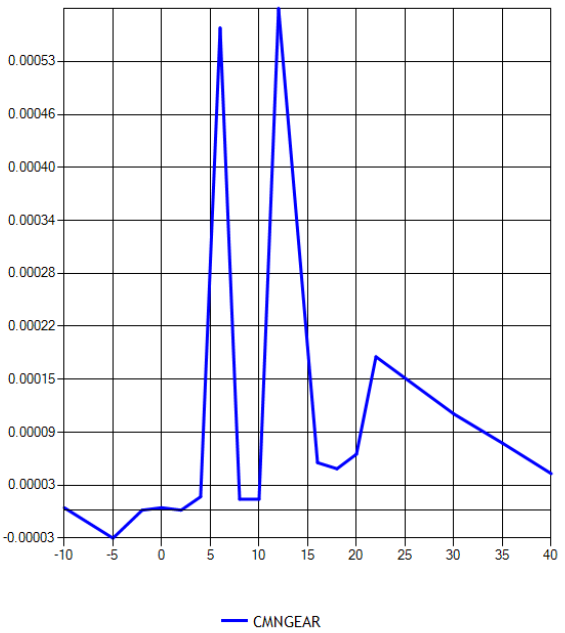
CMNDSD2R*DSD2R



YAWING MOMENT INCREMENT DUE TO GEAR

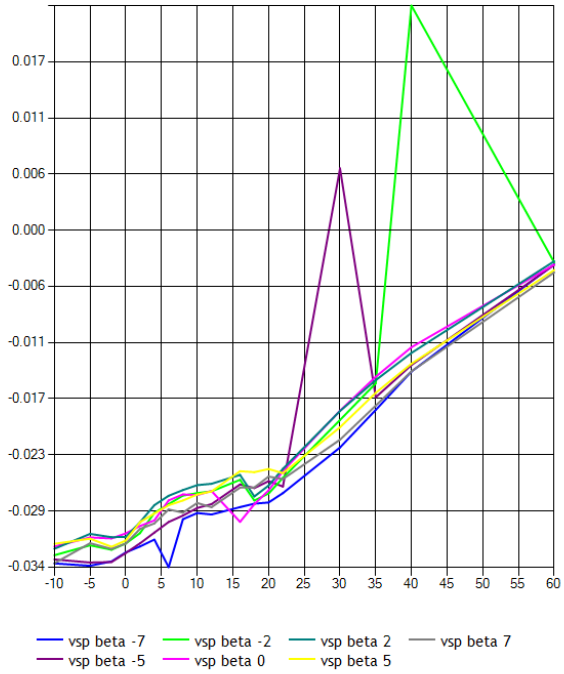
CMNGEAR(alpha)

CMNGEAR*gear



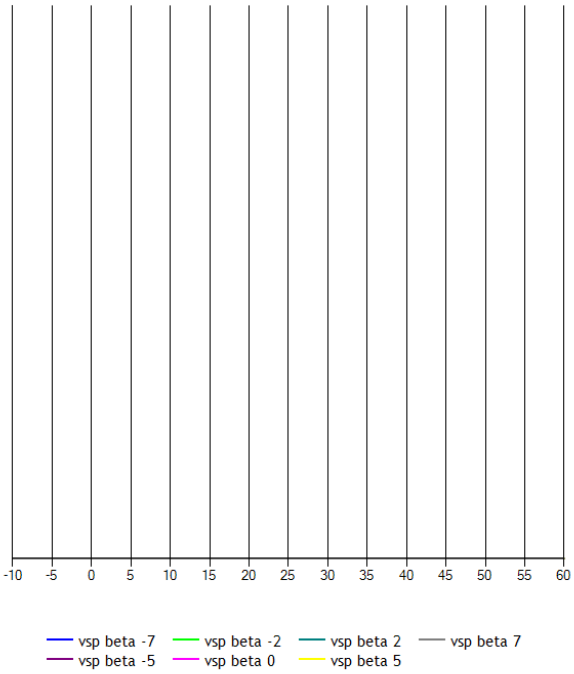
YAWING MOMENT DUE TO RUDDER DEFLECTION

CMNDRDr (alpha,beta,DRD=-25)



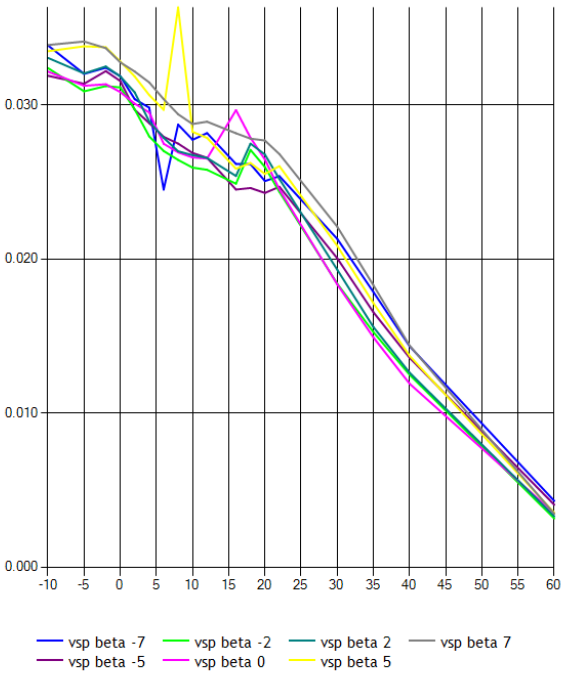
YAWING MOMENT DUE TO RUDDER DEFLECTION

CMNDRDr (alpha,beta,DRD=0)



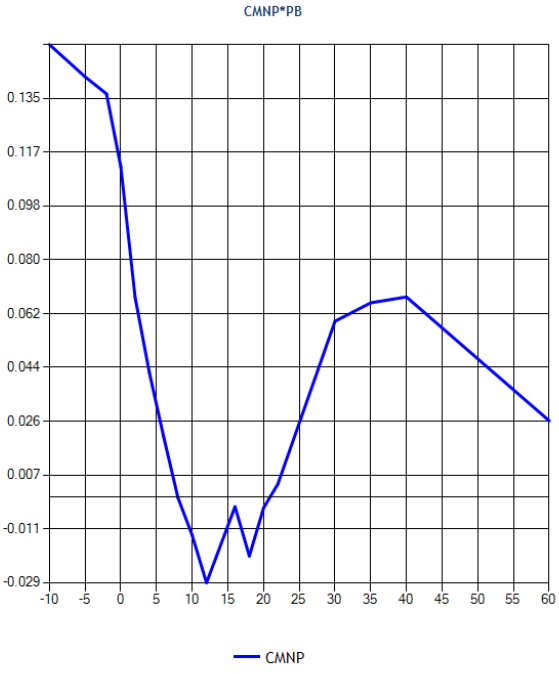
YAWING MOMENT DUE TO RUDDER DEFLECTION

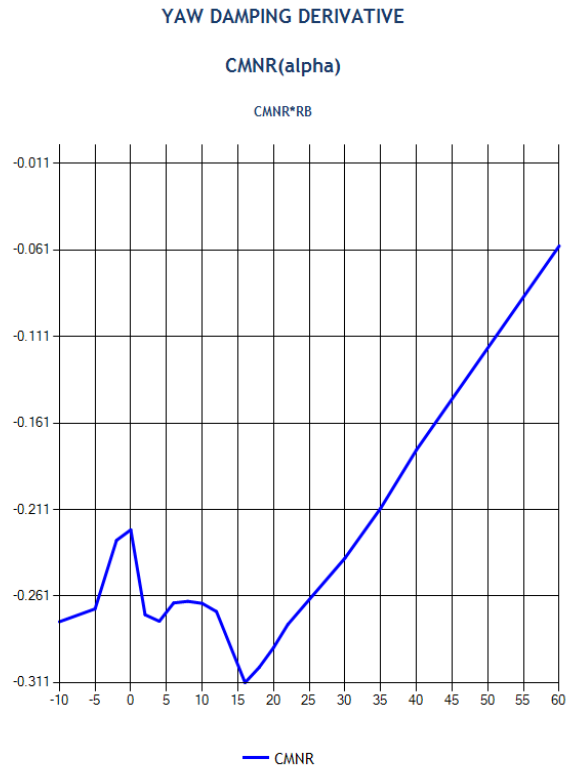
CMNDRDr (alpha,beta,DRD=25)

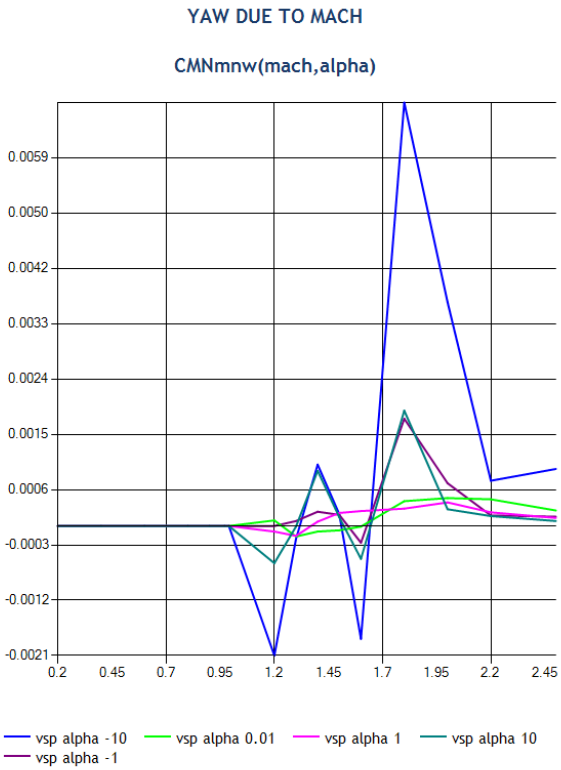


YAWING MOMENT DUE TO ROLL RATE

CMNP(alpha)







References

1. Richard Harrison, rjh@zaretto.com: Mirage 2000-5 Aerodynamic data built from vspaero; AeroRP (8.56, 0, 1.422)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

Aircraft Metrics

Element	X	Y	Z	Unit
Aerodynamic Reference Point (CoP)	8.56	0.00	1.42	M
Aircraft CG	8.56	0.00	1.42	M

Element		Unit
Wingspan	7.87	M
Wing Area	28.17	M2
ClMax	-1.00	ND

Mass and balance

Element		Unit
Empty Weight	28000.00	LBS
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	4.01	0.00	-2.73	M	0
LEFT_MLG	8.96	-1.80	-2.65	M	1
RIGHT_MLG	8.96	1.80	-2.65	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	18.11	0.00	1.42	M	Feed line [0],External Tank [1],Right Wing Tank [2],Left Wing Tank [3],Main Tank [4]

Tanks

Element	X	Y	Z	Unit	Capacity	Id	Priority	Standpipe
Feed line	8.56	0.00	1.42	M	10 LBS	0	1	
External Tank	8.56	0.00	0.01	M	1200 KG	1	2	50 KG
Right Wing Tank	8.56	4.00	1.02	M	385 LBS	2	3	100 LBS
Left Wing Tank	8.56	-4.00	1.02	M	385 LBS	3	3	100 LBS
Main Tank	8.56	0.00	1.42	M	2128 KG	4	4	50 KG

Systems

Name
Mirage-2000-hydraulics

Mirage-2000-electrics
Mirage-2000-avionics
Mirage-2000-ecs
Mirage-2000-fadec
Mirage-2000-engines-Snecma-M53
Mirage-2000-fcs

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-1R-pos-deg
fcs/slat-2L-pos-deg
fcs/slat-2R-pos-deg
gear/gear-pos-norm
velocities/mach