



Quasi-Steady-State Report

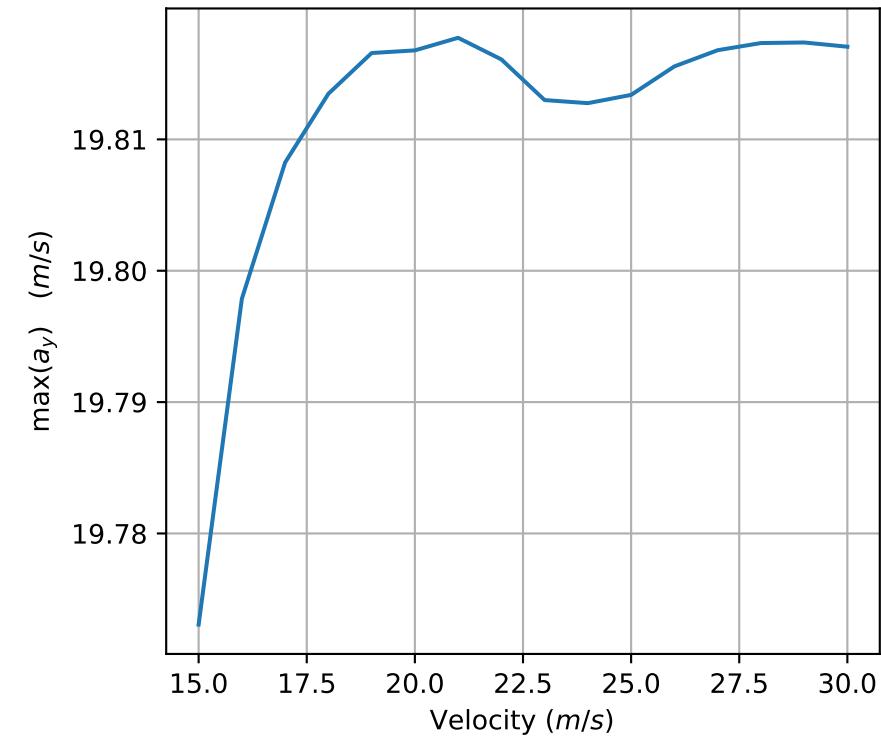
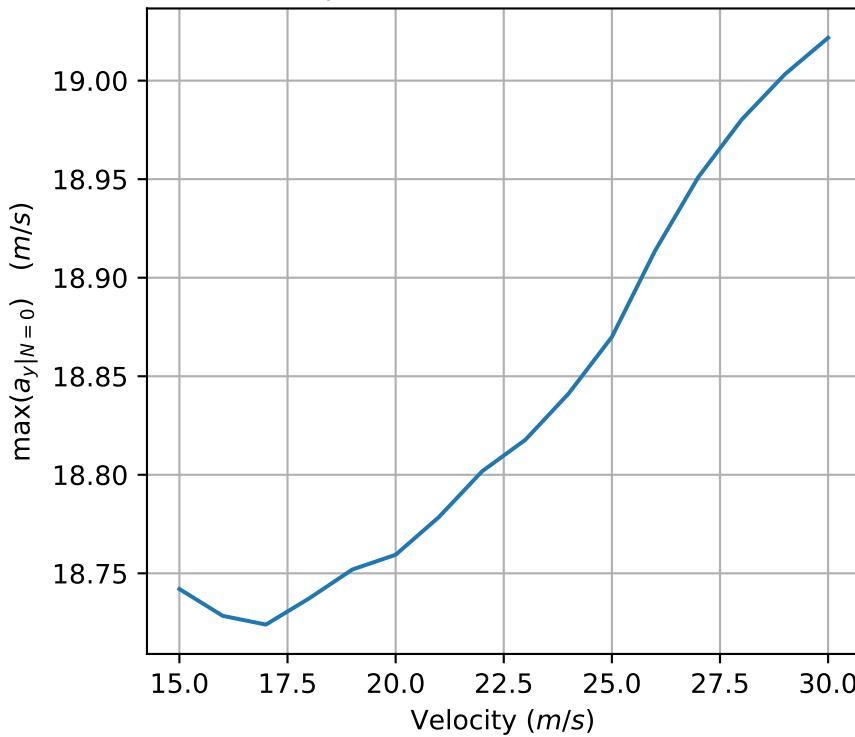
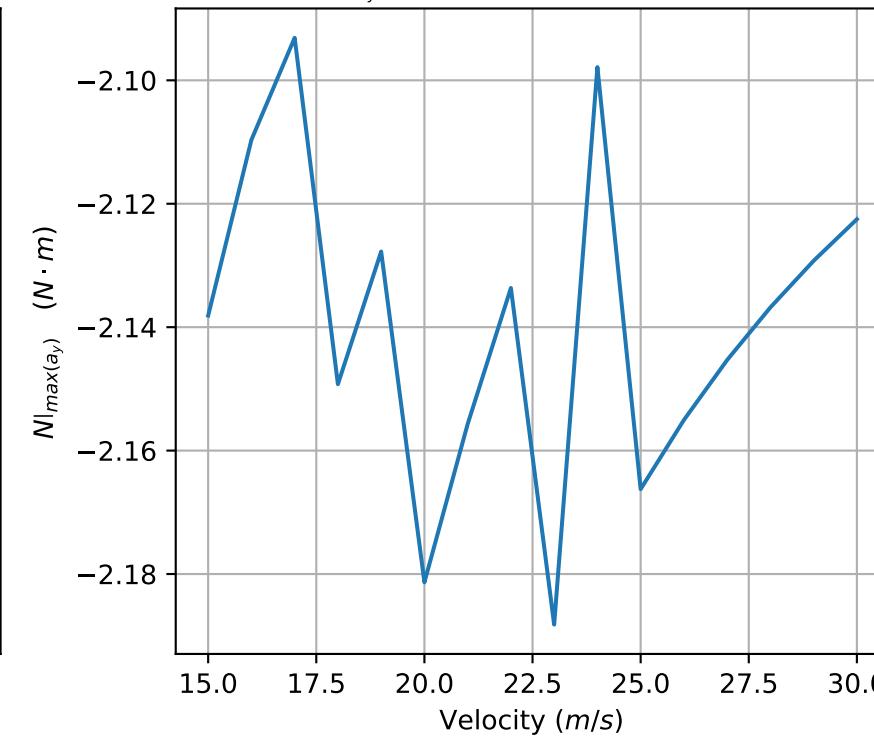
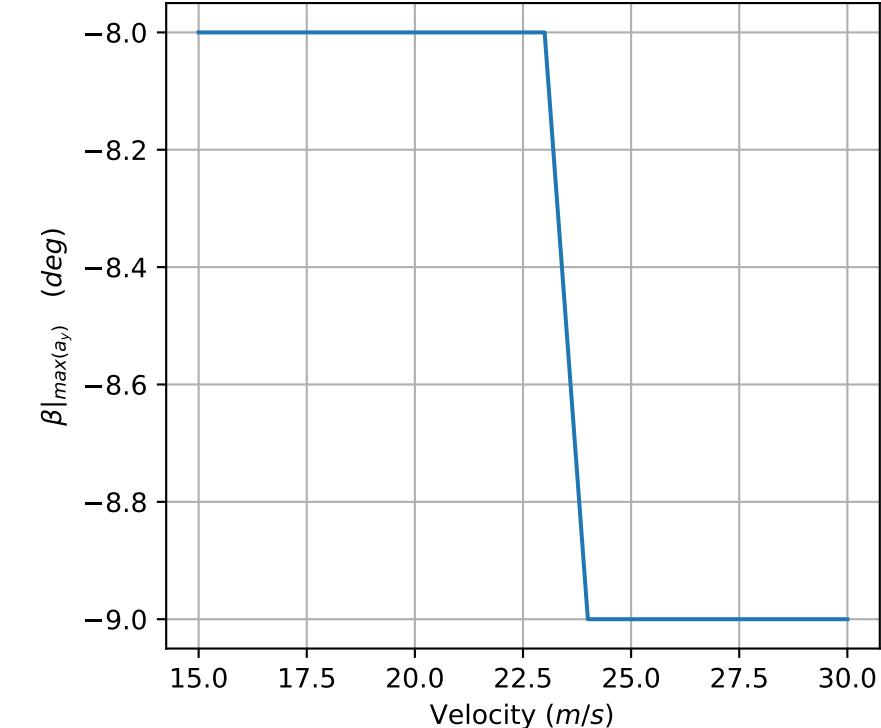
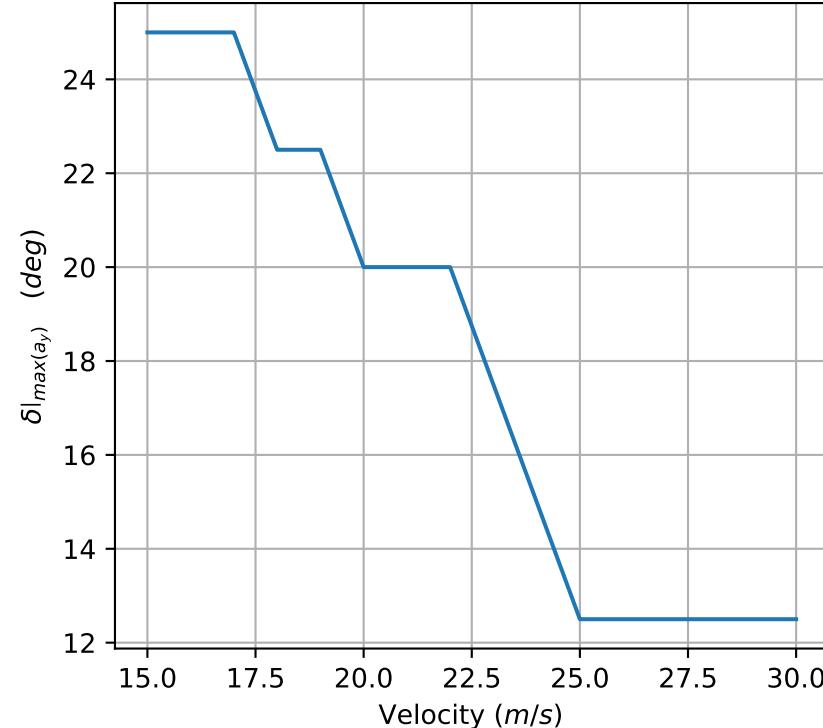
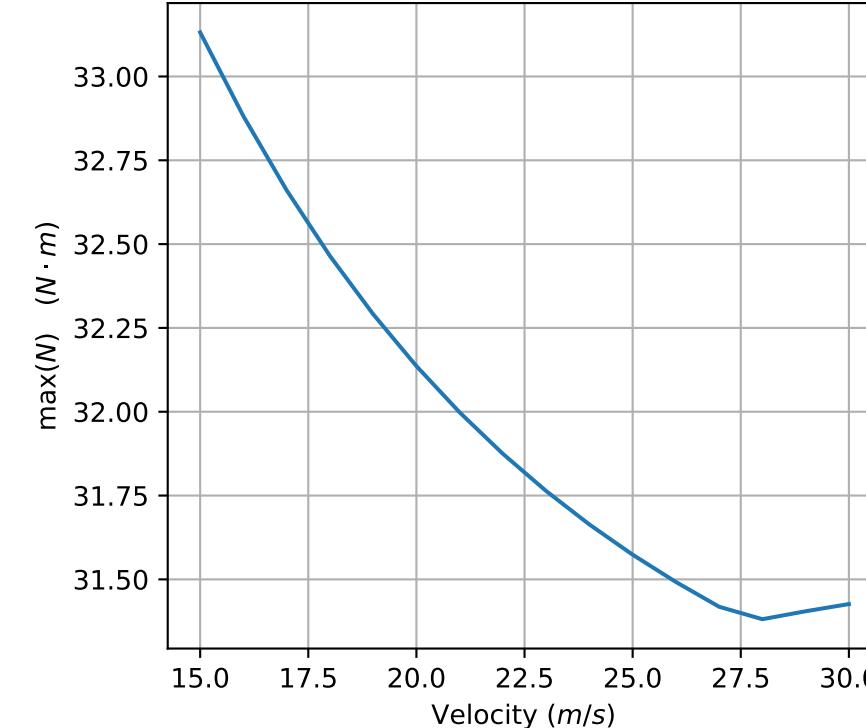
Simulation Author: Robert Horvath

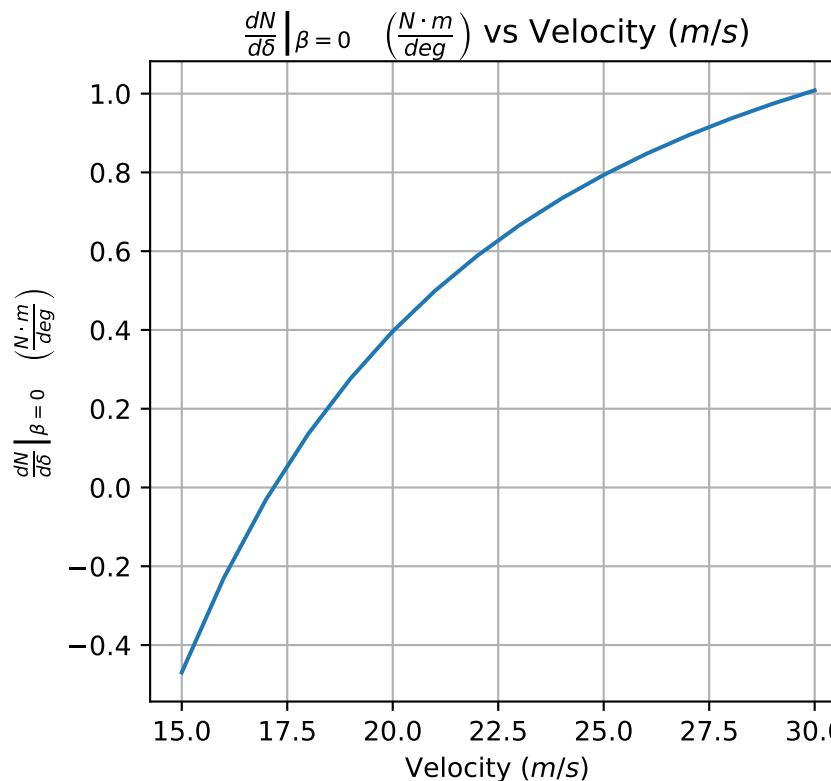
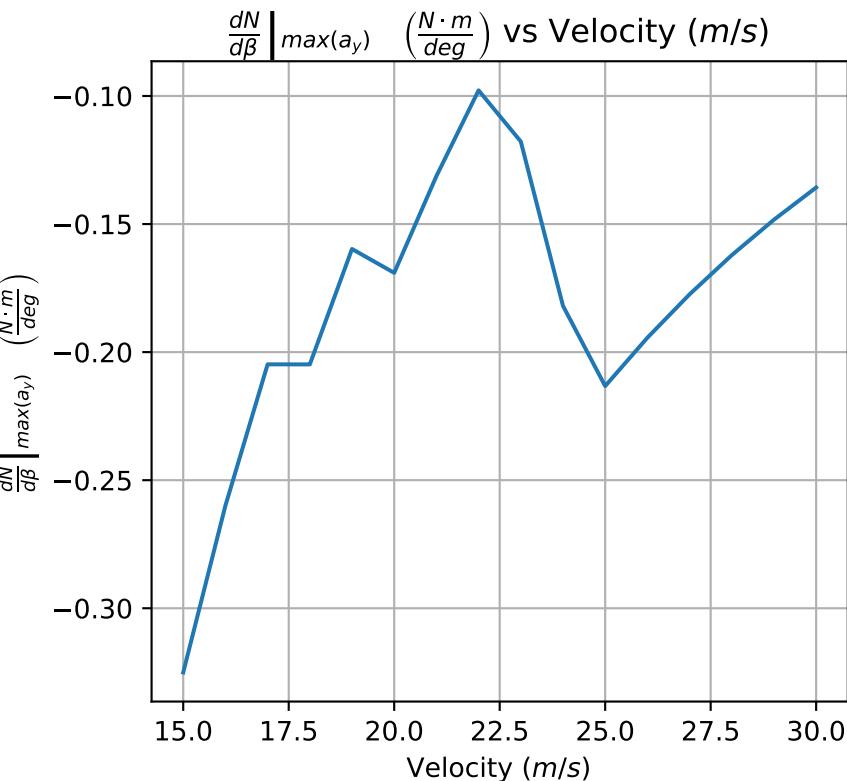
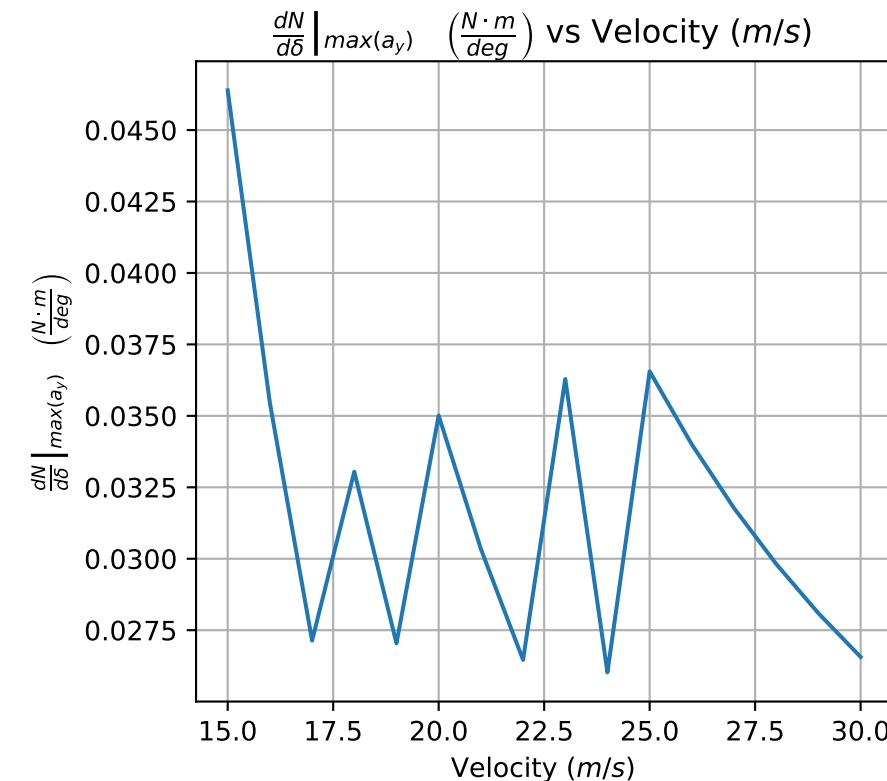
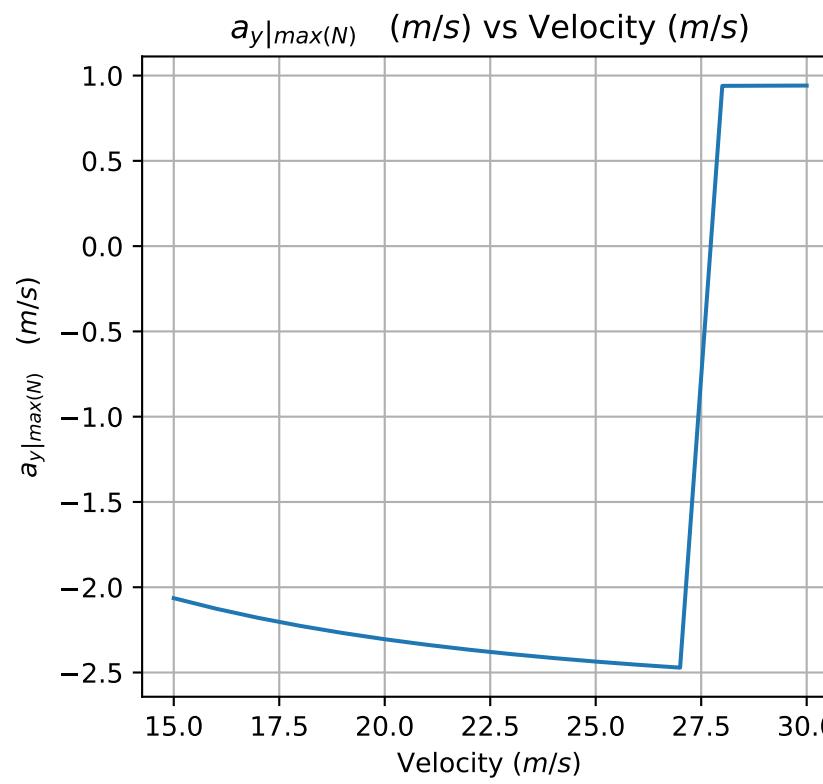
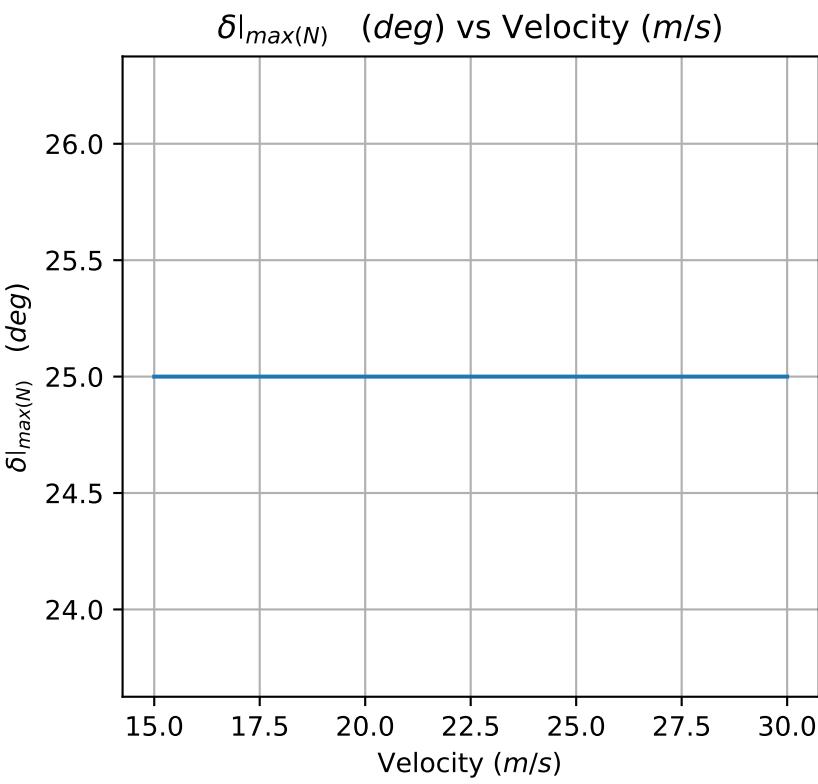
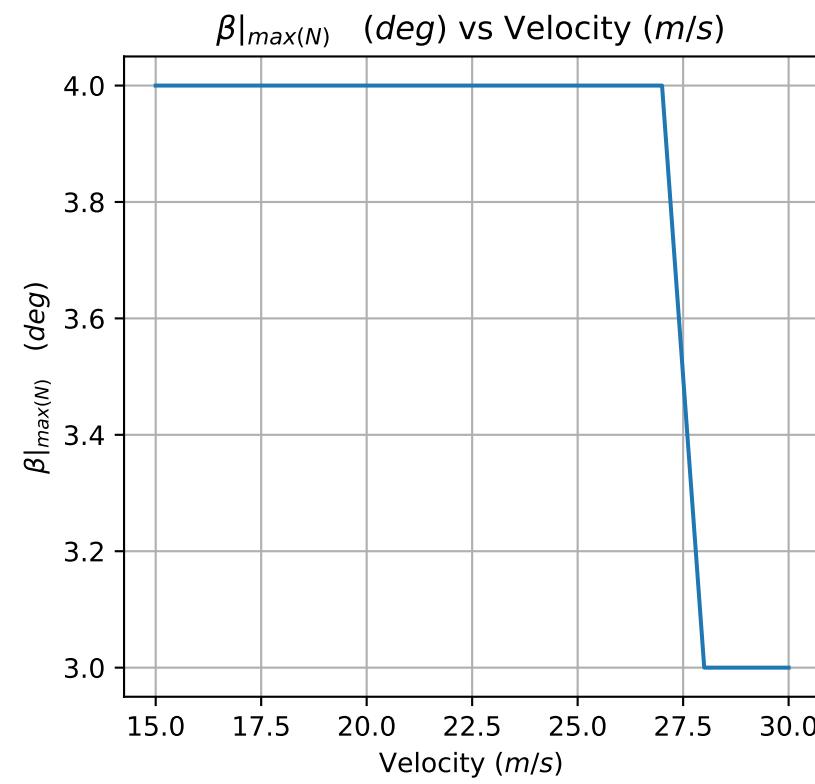
Generated By: Robert (roberthorvath5@gmail.com)

Date: 2025-06-17, 02:18 AM PDT

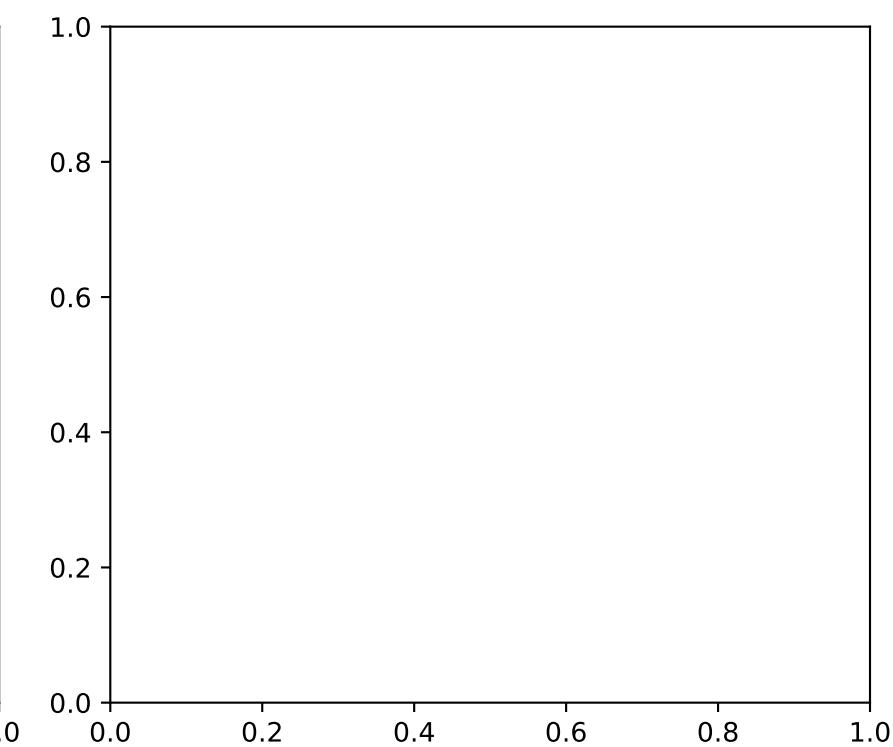
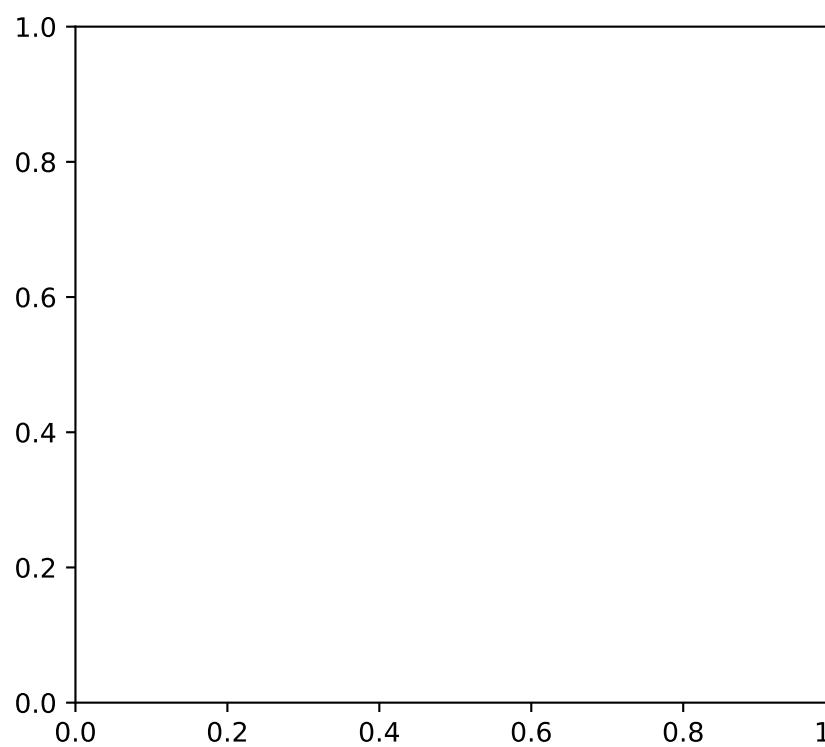
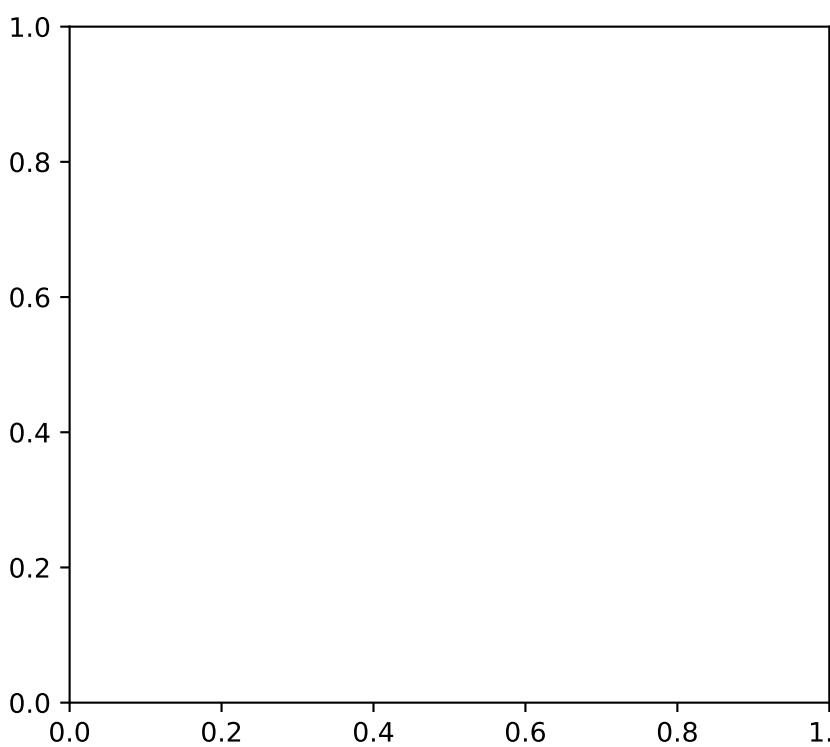
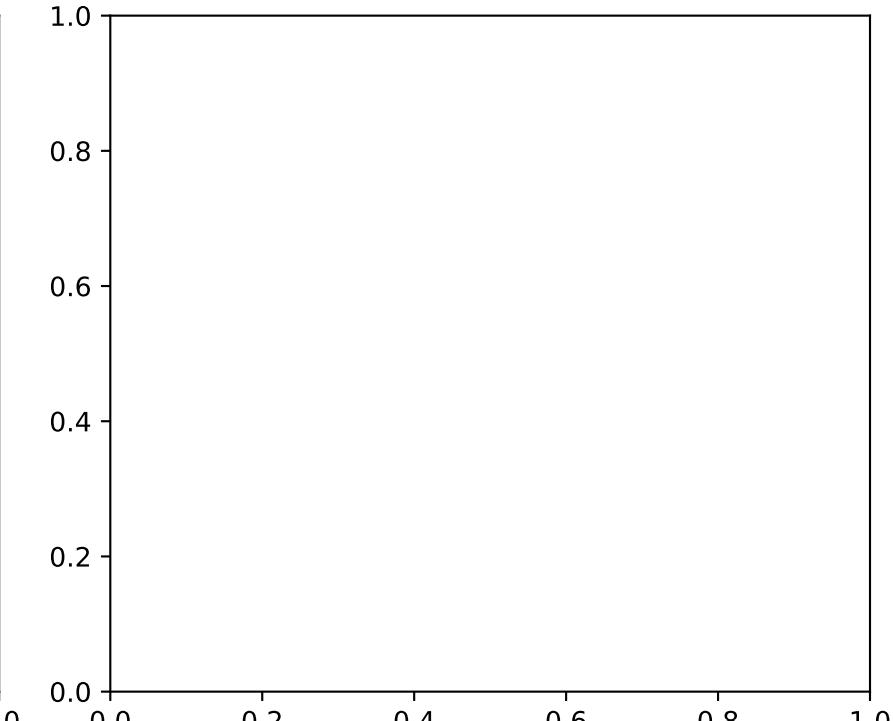
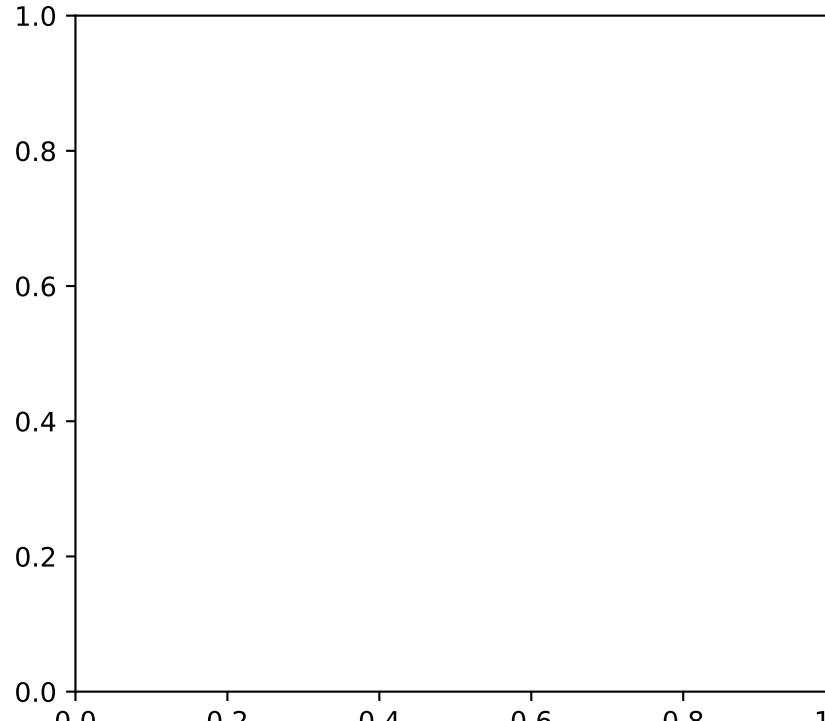
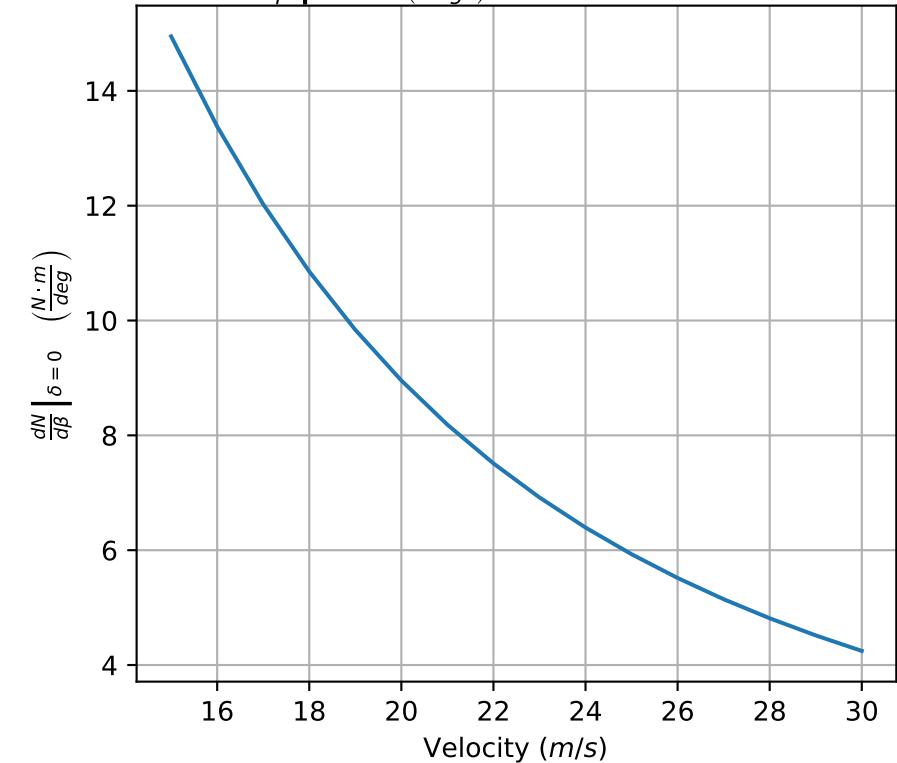
Note 1: The variable δ always refers to handwheel angle

Note 2: dude idk. fuckass sim keeping me up at night.

$\max(a_y)$ (m/s) vs Velocity (m/s) $\max(a_{y|N=0})$ (m/s) vs Velocity (m/s) $N|_{\max(a_y)}$ (N · m) vs Velocity (m/s) $\beta|_{\max(a_y)}$ (deg) vs Velocity (m/s) $\delta|_{\max(a_y)}$ (deg) vs Velocity (m/s) $\max(N)$ (N · m) vs Velocity (m/s)



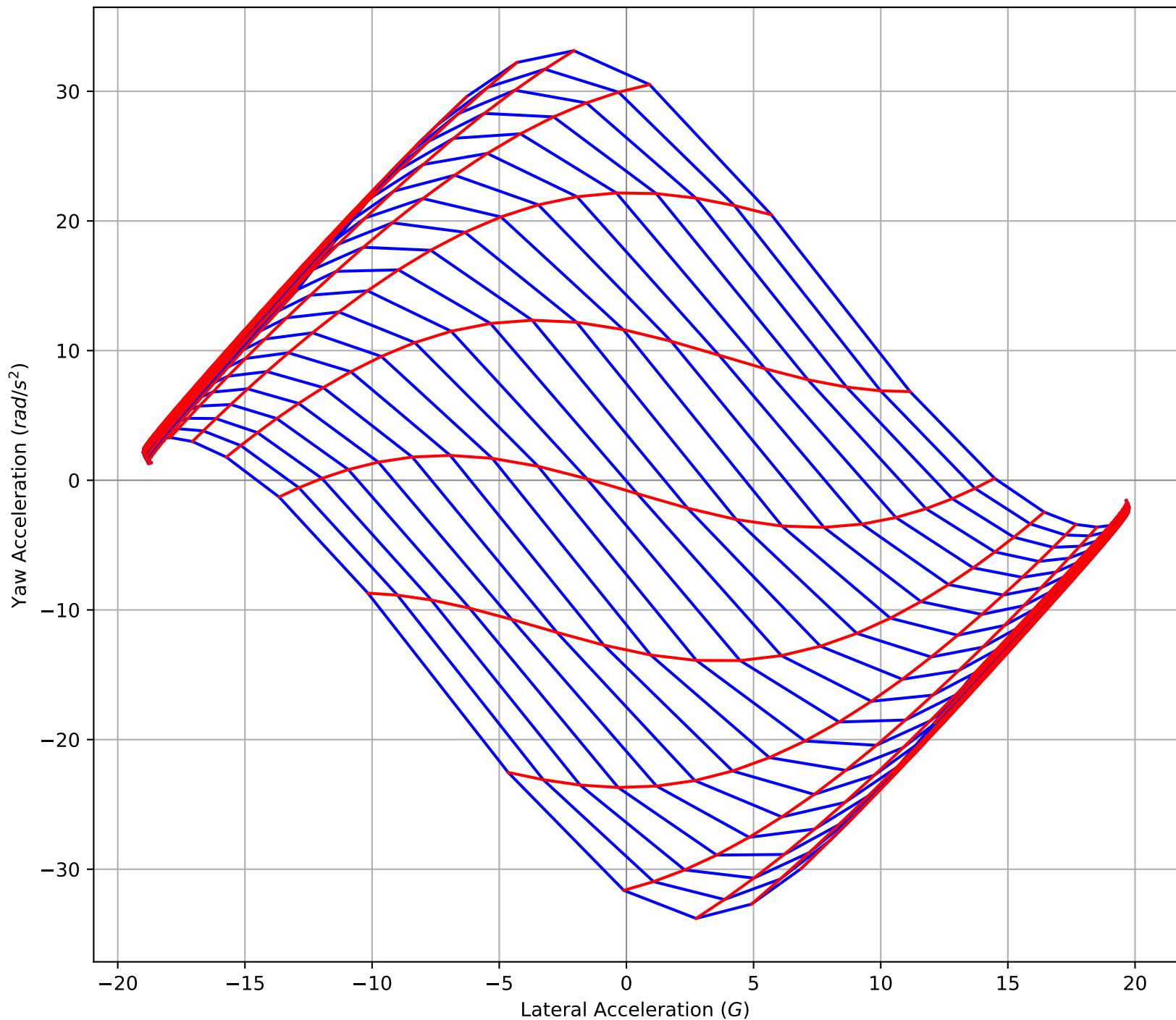
$$\left. \frac{dN}{d\beta} \right|_{\delta=0} \left(\frac{N \cdot m}{deg} \right) \text{ vs Velocity (m/s)}$$



Appendix

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 15 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

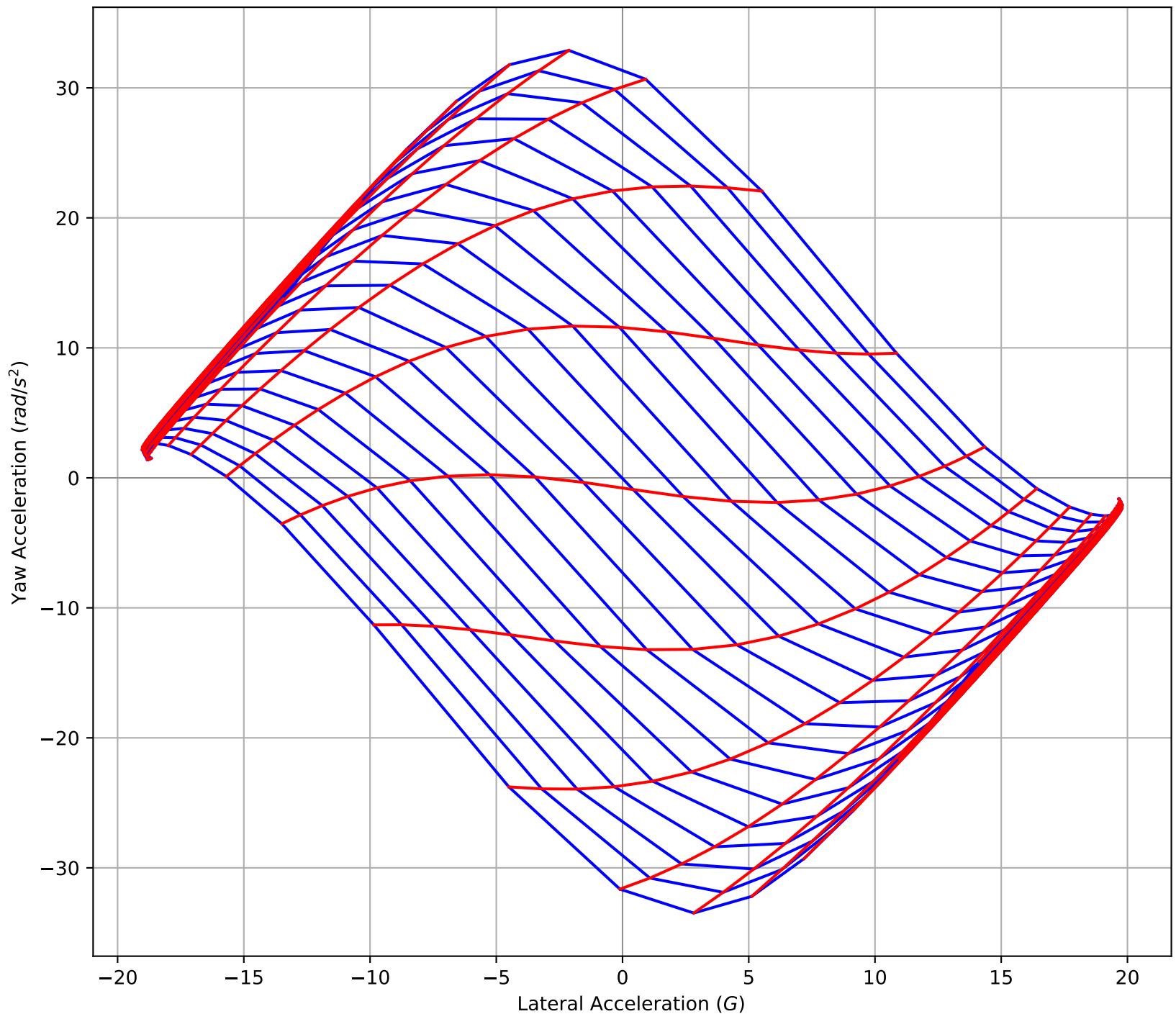
$\max(a_y)$ (m/s)	19.773
$\max(a_y _{N=0})$ (m/s)	18.742
$N _{\max(a_y)}$ (N · m)	-2.138
$\beta _{\max(a_y)}$ (deg)	-8.000
$\delta _{\max(a_y)}$ (deg)	25.000
$\max(N)$ (N · m)	33.131
$\beta _{\max(N)}$ (deg)	4.000
$\delta _{\max(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	-2.064
$\frac{dN}{d\delta} _{\max(a_y)}$ ($\frac{N \cdot m}{\text{deg}}$)	0.046
$\frac{dN}{d\beta} _{\max(a_y)}$ ($\frac{N \cdot m}{\text{deg}}$)	-0.325
$\frac{dN}{d\delta} _{\beta=0}$ ($\frac{N \cdot m}{\text{deg}}$)	-0.470
$\frac{dN}{d\beta} _{\delta=0}$ ($\frac{N \cdot m}{\text{deg}}$)	14.949

Negative Basis

$\min(a_y)$ (m/s)	-19.008
$\min(a_y _{N=0})$ (m/s)	-18.057
$N _{\min(a_y)}$ (N · m)	2.167
$\beta _{\min(a_y)}$ (deg)	7.000
$\delta _{\min(a_y)}$ (deg)	-25.000
$\min(N)$ (N · m)	-33.795
$\beta _{\min(N)}$ (deg)	-4.000
$\delta _{\min(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	2.740
$\frac{dN}{d\delta} _{\min(a_y)}$ ($\frac{N \cdot m}{\text{deg}}$)	0.042
$\frac{dN}{d\beta} _{\min(a_y)}$ ($\frac{N \cdot m}{\text{deg}}$)	-0.332
$\frac{dN}{d\delta} _{\beta=0}$ ($\frac{N \cdot m}{\text{deg}}$)	-0.470
$\frac{dN}{d\beta} _{\delta=0}$ ($\frac{N \cdot m}{\text{deg}}$)	14.949

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 16 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

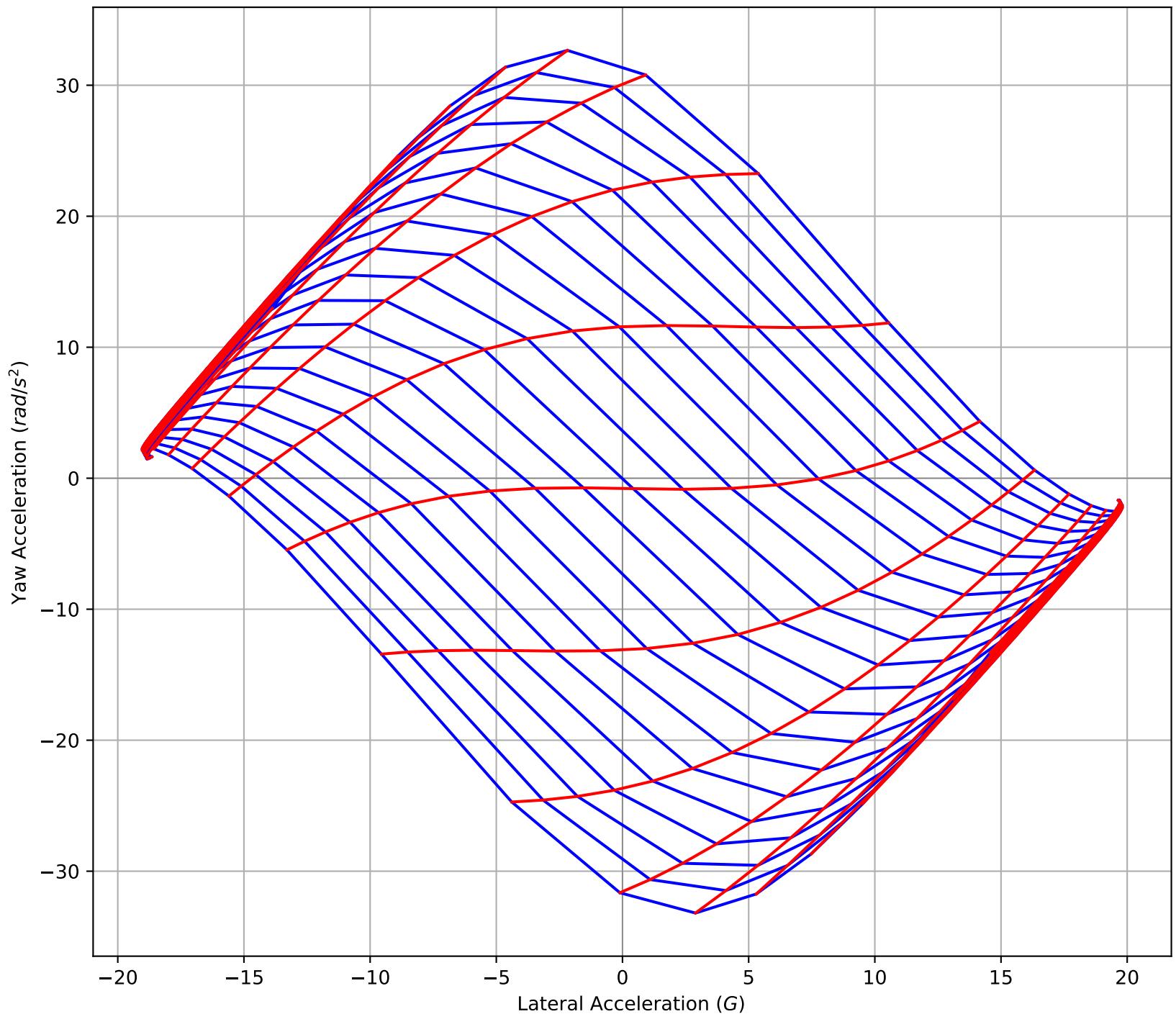
$\max(a_y)$ (m/s)	19.798
$\max(a_y _{N=0})$ (m/s)	18.728
$N _{\max(a_y)}$ (N · m)	-2.110
$\beta _{\max(a_y)}$ (deg)	-8.000
$\delta _{\max(a_y)}$ (deg)	25.000
$\max(N)$ (N · m)	32.882
$\beta _{\max(N)}$ (deg)	4.000
$\delta _{\max(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	-2.126
$\frac{dN}{d\delta} _{\max(a_y)}$ ($\frac{N \cdot m}{\text{deg}}$)	0.035
$\frac{dN}{d\beta} _{\max(a_y)}$ ($\frac{N \cdot m}{\text{deg}}$)	-0.260
$\frac{dN}{d\delta} _{\beta=0}$ ($\frac{N \cdot m}{\text{deg}}$)	-0.229
$\frac{dN}{d\beta} _{\delta=0}$ ($\frac{N \cdot m}{\text{deg}}$)	13.380

Negative Basis

$\min(a_y)$ (m/s)	-19.029
$\min(a_y _{N=0})$ (m/s)	-18.027
$N _{\min(a_y)}$ (N · m)	2.162
$\beta _{\min(a_y)}$ (deg)	7.000
$\delta _{\min(a_y)}$ (deg)	-25.000
$\min(N)$ (N · m)	-33.477
$\beta _{\min(N)}$ (deg)	-4.000
$\delta _{\min(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	2.821
$\frac{dN}{d\delta} _{\min(a_y)}$ ($\frac{N \cdot m}{\text{deg}}$)	0.027
$\frac{dN}{d\beta} _{\min(a_y)}$ ($\frac{N \cdot m}{\text{deg}}$)	-0.240
$\frac{dN}{d\delta} _{\beta=0}$ ($\frac{N \cdot m}{\text{deg}}$)	-0.229
$\frac{dN}{d\beta} _{\delta=0}$ ($\frac{N \cdot m}{\text{deg}}$)	13.380

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 17 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

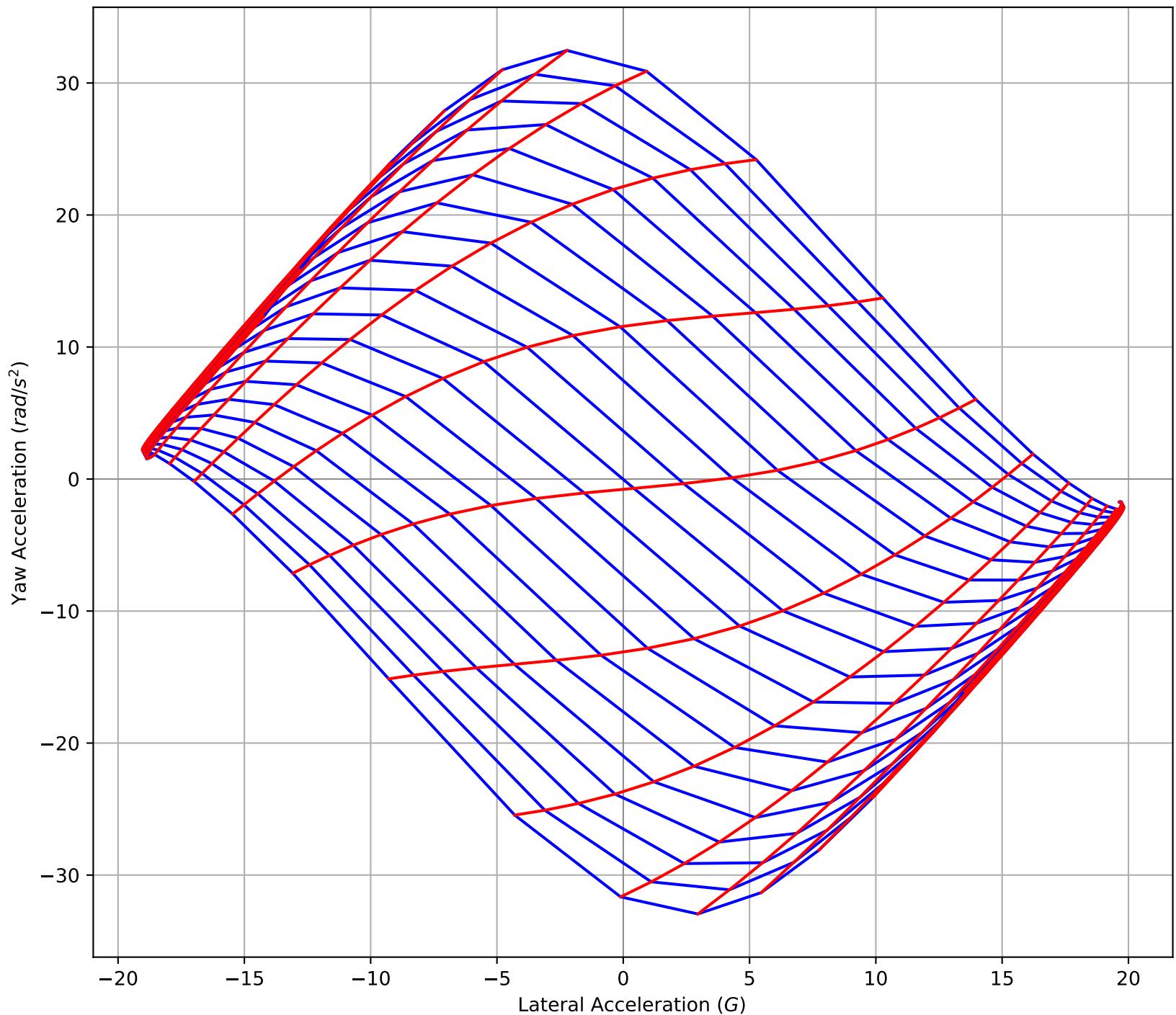
$\max(a_y)$ (m/s)	19.808
$\max(a_y _{N=0})$ (m/s)	18.724
$N _{\max(a_y)}$ (N · m)	-2.093
$\beta _{\max(a_y)}$ (deg)	-8.000
$\delta _{\max(a_y)}$ (deg)	25.000
$\max(N)$ (N · m)	32.661
$\beta _{\min(N)}$ (deg)	4.000
$\delta _{\min(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	-2.179
$\frac{dN}{d\delta} _{\max(a_y)}$ (N · m / deg)	0.027
$\frac{dN}{d\beta} _{\max(a_y)}$ (N · m / deg)	-0.205
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	-0.030
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	12.025

Negative Basis

$\min(a_y)$ (m/s)	-19.035
$\min(a_y _{N=0})$ (m/s)	-18.023
$N _{\min(a_y)}$ (N · m)	2.229
$\beta _{\min(a_y)}$ (deg)	7.000
$\delta _{\min(a_y)}$ (deg)	-22.500
$\min(N)$ (N · m)	-33.195
$\beta _{\max(N)}$ (deg)	-4.000
$\delta _{\max(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	2.892
$\frac{dN}{d\delta} _{\min(a_y)}$ (N · m / deg)	0.035
$\frac{dN}{d\beta} _{\min(a_y)}$ (N · m / deg)	-0.231
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	-0.030
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	12.025

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 18 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

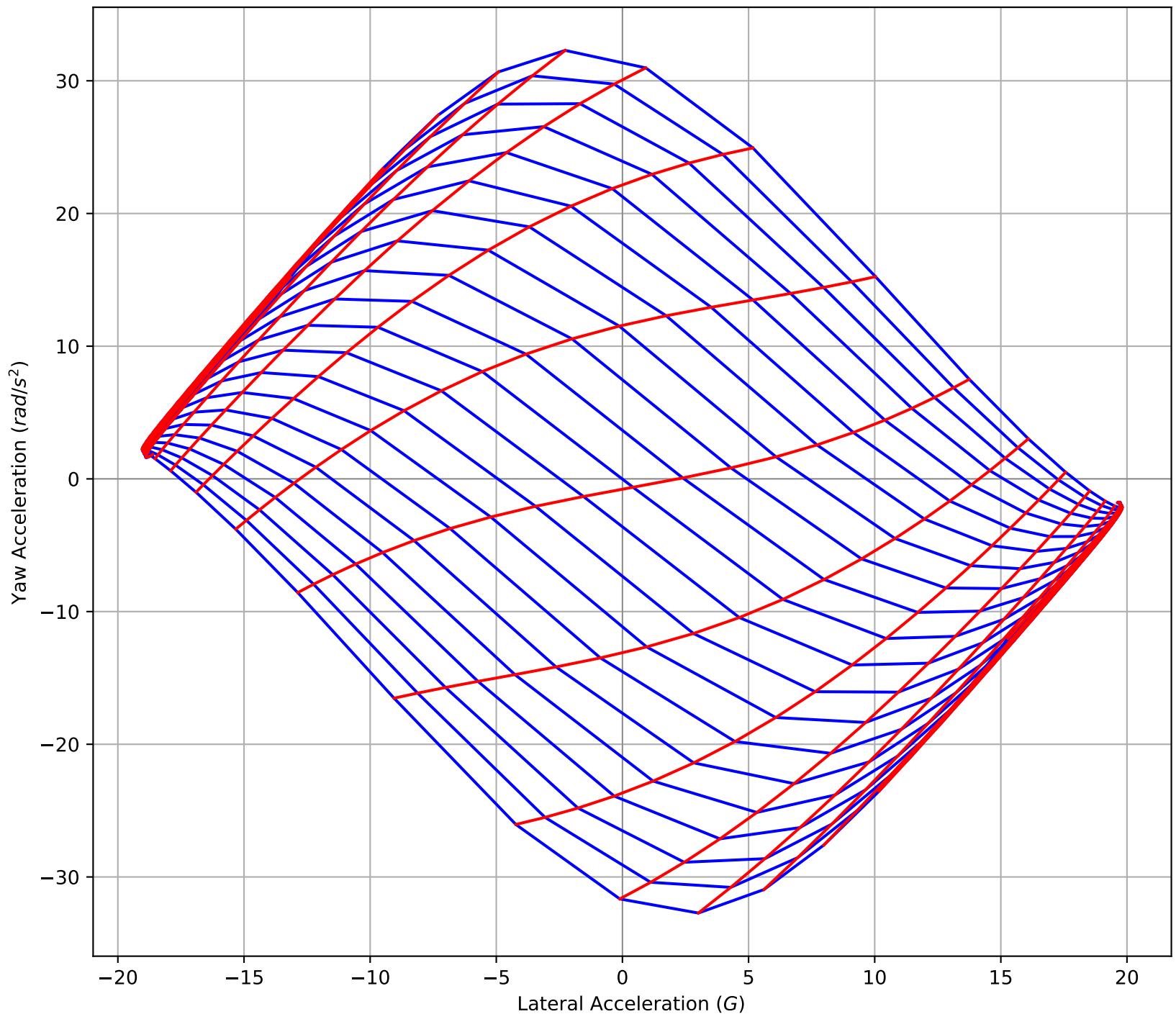
$\max(a_y)$ (m/s)	19.813
$\max(a_y _{N=0})$ (m/s)	18.737
$N _{\max(a_y)}$ (N · m)	-2.149
$\beta _{\max(a_y)}$ (deg)	-8.000
$\delta _{\max(a_y)}$ (deg)	22.500
$\max(N)$ (N · m)	32.465
$\beta _{\max(N)}$ (deg)	4.000
$\delta _{\max(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	-2.227
$\frac{dN}{d\delta} _{\max(a_y)}$ (N · m / deg)	0.033
$\frac{dN}{d\beta} _{\max(a_y)}$ (N · m / deg)	-0.205
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.136
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	10.853

Negative Basis

$\min(a_y)$ (m/s)	-19.040
$\min(a_y _{N=0})$ (m/s)	-18.026
$N _{\min(a_y)}$ (N · m)	2.212
$\beta _{\min(a_y)}$ (deg)	7.000
$\delta _{\min(a_y)}$ (deg)	-22.500
$\min(N)$ (N · m)	-32.944
$\beta _{\min(N)}$ (deg)	-4.000
$\delta _{\min(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	2.954
$\frac{dN}{d\delta} _{\min(a_y)}$ (N · m / deg)	0.025
$\frac{dN}{d\beta} _{\min(a_y)}$ (N · m / deg)	-0.156
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.136
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	10.853

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 19 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

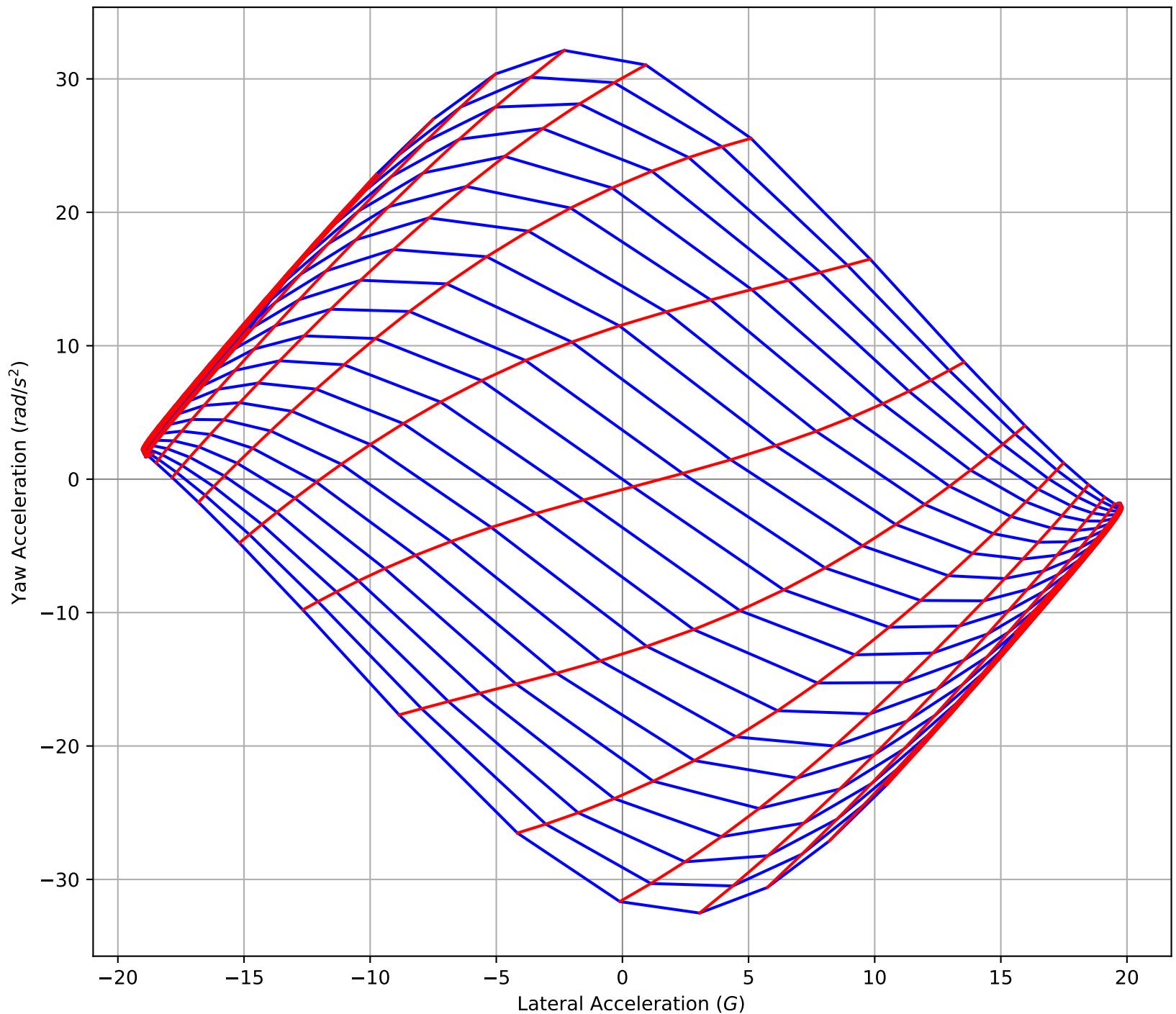
$\max(a_y)$ (m/s)	19.817
$\max(a_y _{N=0})$ (m/s)	18.752
$N _{\max(a_y)}$ (N · m)	-2.128
$\beta _{\max(a_y)}$ (deg)	-8.000
$\delta _{\max(a_y)}$ (deg)	22.500
$\max(N)$ (N · m)	32.291
$\beta _{\max(N)}$ (deg)	4.000
$\delta _{\max(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	-2.268
$\frac{dN}{d\delta} _{\max(a_y)}$ (N · m / deg)	0.027
$\frac{dN}{d\beta} _{\max(a_y)}$ (N · m / deg)	-0.160
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.277
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	9.838

Negative Basis

$\min(a_y)$ (m/s)	-19.039
$\min(a_y _{N=0})$ (m/s)	-18.023
$N _{\min(a_y)}$ (N · m)	2.264
$\beta _{\min(a_y)}$ (deg)	7.000
$\delta _{\min(a_y)}$ (deg)	-20.000
$\min(N)$ (N · m)	-32.720
$\beta _{\min(N)}$ (deg)	-4.000
$\delta _{\min(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	3.009
$\frac{dN}{d\delta} _{\min(a_y)}$ (N · m / deg)	0.035
$\frac{dN}{d\beta} _{\min(a_y)}$ (N · m / deg)	-0.161
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.277
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	9.838

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 20 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

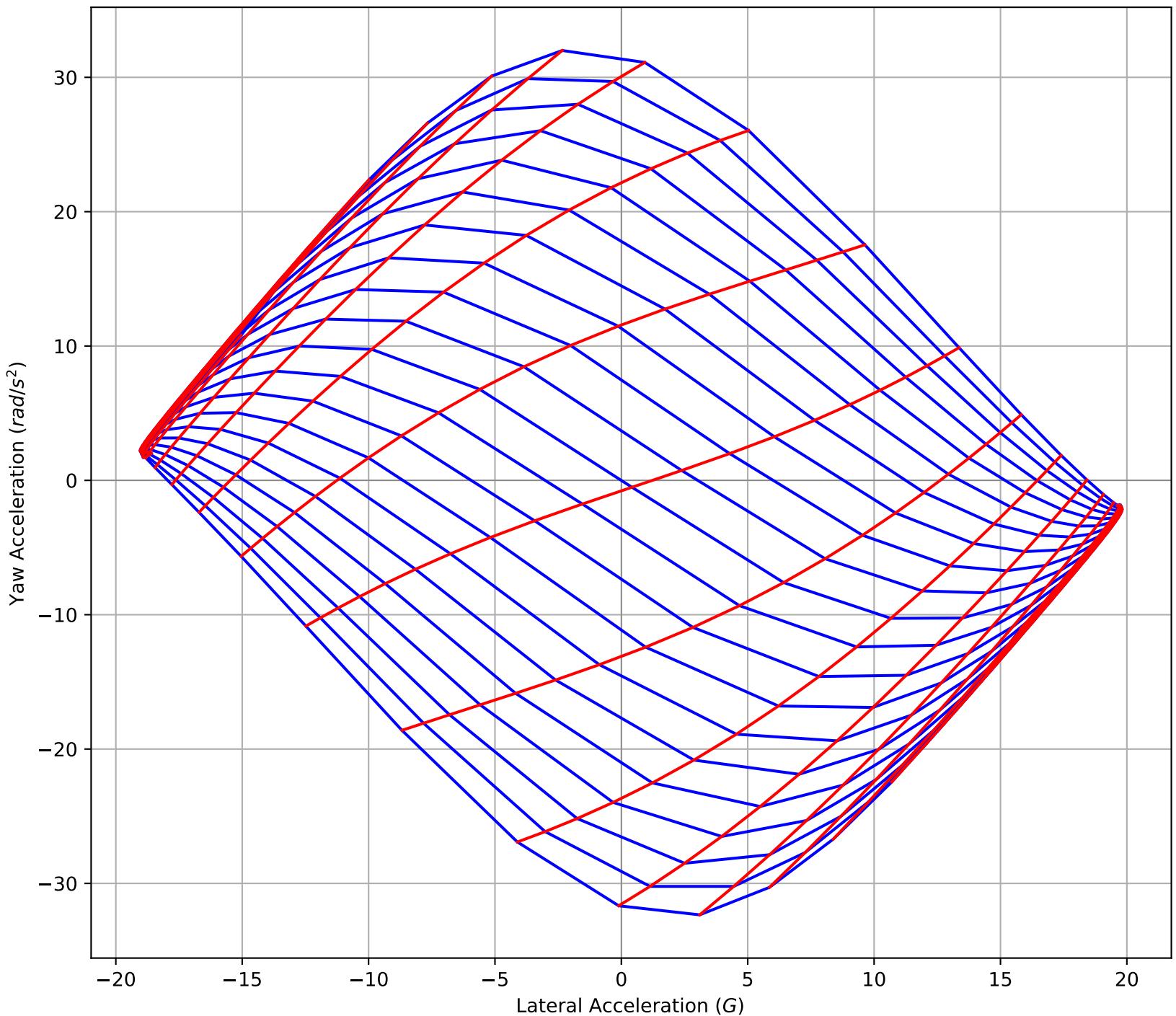
$\max(a_y)$ (m/s)	19.817
$\max(a_y _{N=0})$ (m/s)	18.759
$N _{\max(a_y)}$ (N · m)	-2.181
$\beta _{\max(a_y)}$ (deg)	-8.000
$\delta _{\max(a_y)}$ (deg)	20.000
$\max(N)$ (N · m)	32.136
$\beta _{\min(N)}$ (deg)	4.000
$\delta _{\max(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	-2.305
$\frac{dN}{d\delta} _{\max(a_y)}$ (N · m / deg)	0.035
$\frac{dN}{d\beta} _{\max(a_y)}$ (N · m / deg)	-0.169
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.396
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	8.956

Negative Basis

$\min(a_y)$ (m/s)	-19.039
$\min(a_y _{N=0})$ (m/s)	-18.030
$N _{\min(a_y)}$ (N · m)	2.235
$\beta _{\min(a_y)}$ (deg)	7.000
$\delta _{\min(a_y)}$ (deg)	-20.000
$\min(N)$ (N · m)	-32.520
$\beta _{\max(N)}$ (deg)	-4.000
$\delta _{\min(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	3.058
$\frac{dN}{d\delta} _{\min(a_y)}$ (N · m / deg)	0.028
$\frac{dN}{d\beta} _{\min(a_y)}$ (N · m / deg)	-0.098
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.396
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	8.956

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 21 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

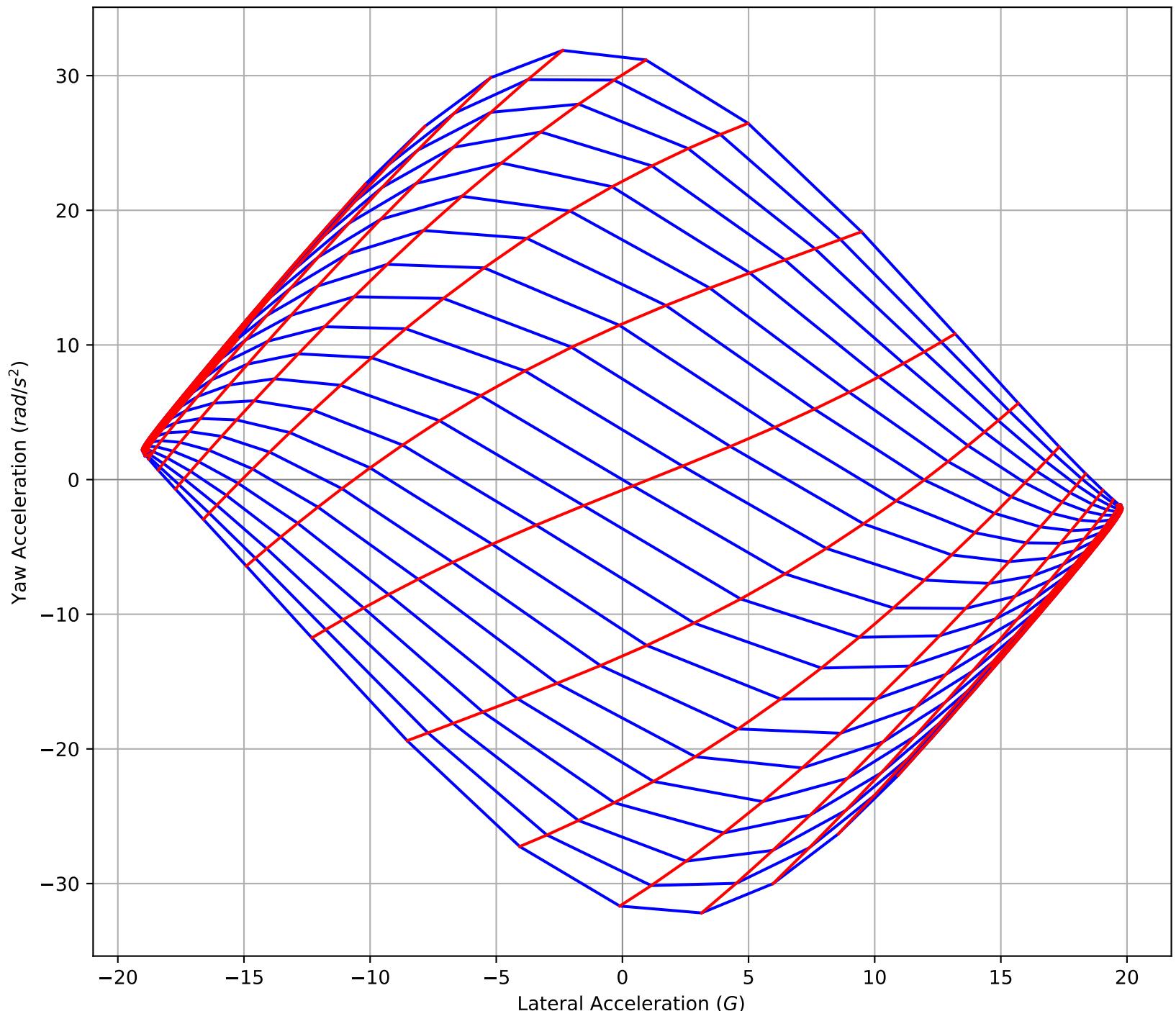
$\max(a_y)$ (m/s)	19.818
$\max(a_y _{N=0})$ (m/s)	18.779
$N _{\max(a_y)}$ (N · m)	-2.156
$\beta _{\max(a_y)}$ (deg)	-8.000
$\delta _{\max(a_y)}$ (deg)	20.000
$\max(N)$ (N · m)	31.998
$\beta _{\max(N)}$ (deg)	4.000
$\delta _{\max(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	-2.337
$\frac{dN}{d\delta} _{\max(a_y)}$ (N · m / deg)	0.030
$\frac{dN}{d\beta} _{\max(a_y)}$ (N · m / deg)	-0.131
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.499
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	8.186

Negative Basis

$\min(a_y)$ (m/s)	-19.035
$\min(a_y _{N=0})$ (m/s)	-18.047
$N _{\min(a_y)}$ (N · m)	2.210
$\beta _{\min(a_y)}$ (deg)	7.000
$\delta _{\min(a_y)}$ (deg)	-20.000
$\min(N)$ (N · m)	-32.341
$\beta _{\min(N)}$ (deg)	-4.000
$\delta _{\min(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	3.101
$\frac{dN}{d\delta} _{\min(a_y)}$ (N · m / deg)	0.022
$\frac{dN}{d\beta} _{\min(a_y)}$ (N · m / deg)	-0.043
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.499
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	8.186

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 22 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

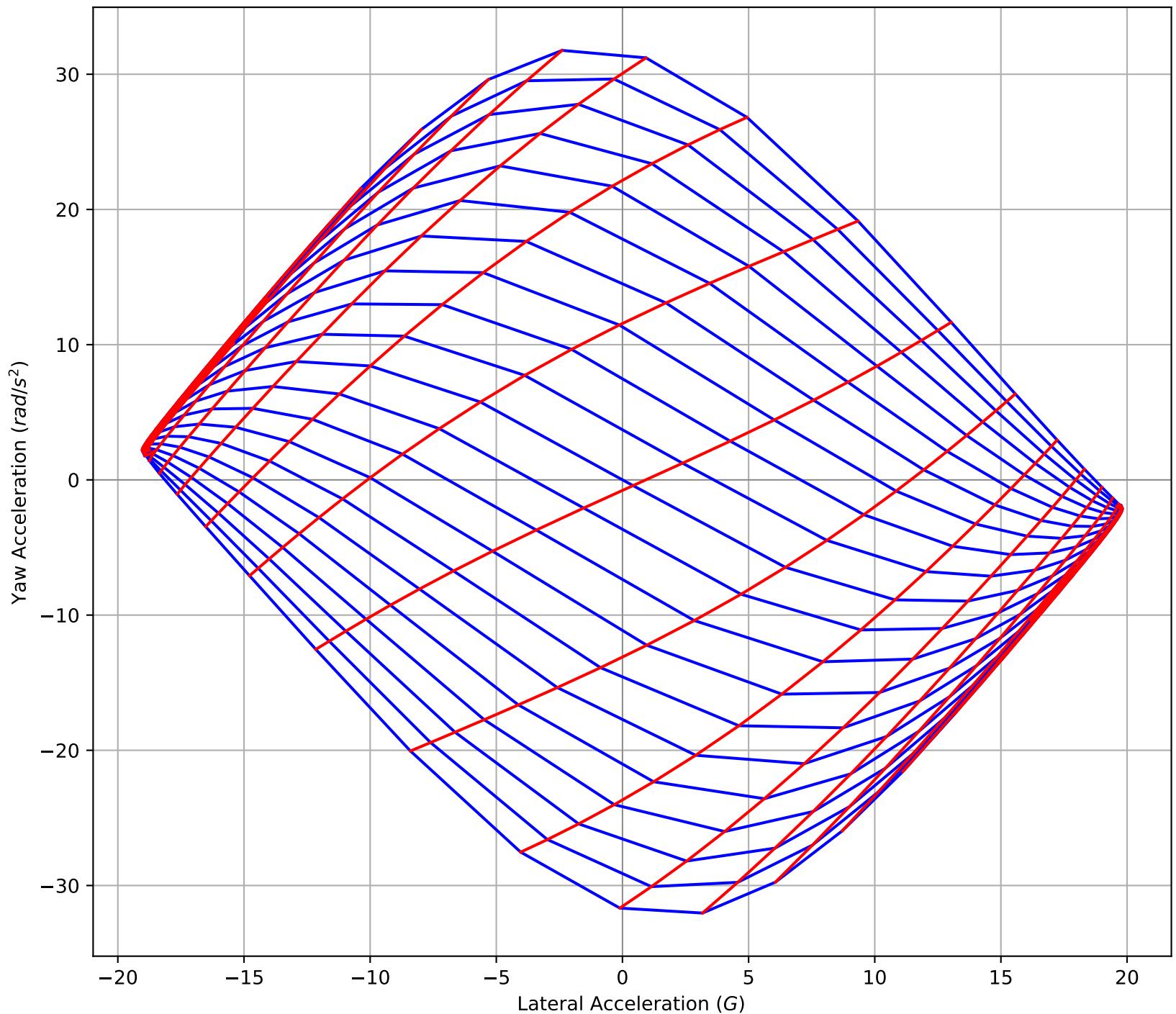
$\max(a_y)$ (m/s)	19.816
$\max(a_y _{N=0})$ (m/s)	18.802
$N _{\max(a_y)}$ (N · m)	-2.134
$\beta _{\max(a_y)}$ (deg)	-8.000
$\delta _{\max(a_y)}$ (deg)	20.000
$\max(N)$ (N · m)	31.874
$\beta _{\max(N)}$ (deg)	4.000
$\delta _{\max(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	-2.366
$\frac{dN}{d\delta} _{\max(a_y)}$ (N · m / deg)	0.026
$\frac{dN}{d\beta} _{\max(a_y)}$ (N · m / deg)	-0.098
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.588
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	7.512

Negative Basis

$\min(a_y)$ (m/s)	-19.037
$\min(a_y _{N=0})$ (m/s)	-18.061
$N _{\min(a_y)}$ (N · m)	2.191
$\beta _{\min(a_y)}$ (deg)	8.000
$\delta _{\min(a_y)}$ (deg)	-15.000
$\min(N)$ (N · m)	-32.181
$\beta _{\min(N)}$ (deg)	-4.000
$\delta _{\min(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	3.139
$\frac{dN}{d\delta} _{\min(a_y)}$ (N · m / deg)	0.025
$\frac{dN}{d\beta} _{\min(a_y)}$ (N · m / deg)	-0.195
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.588
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	7.512

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 23 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

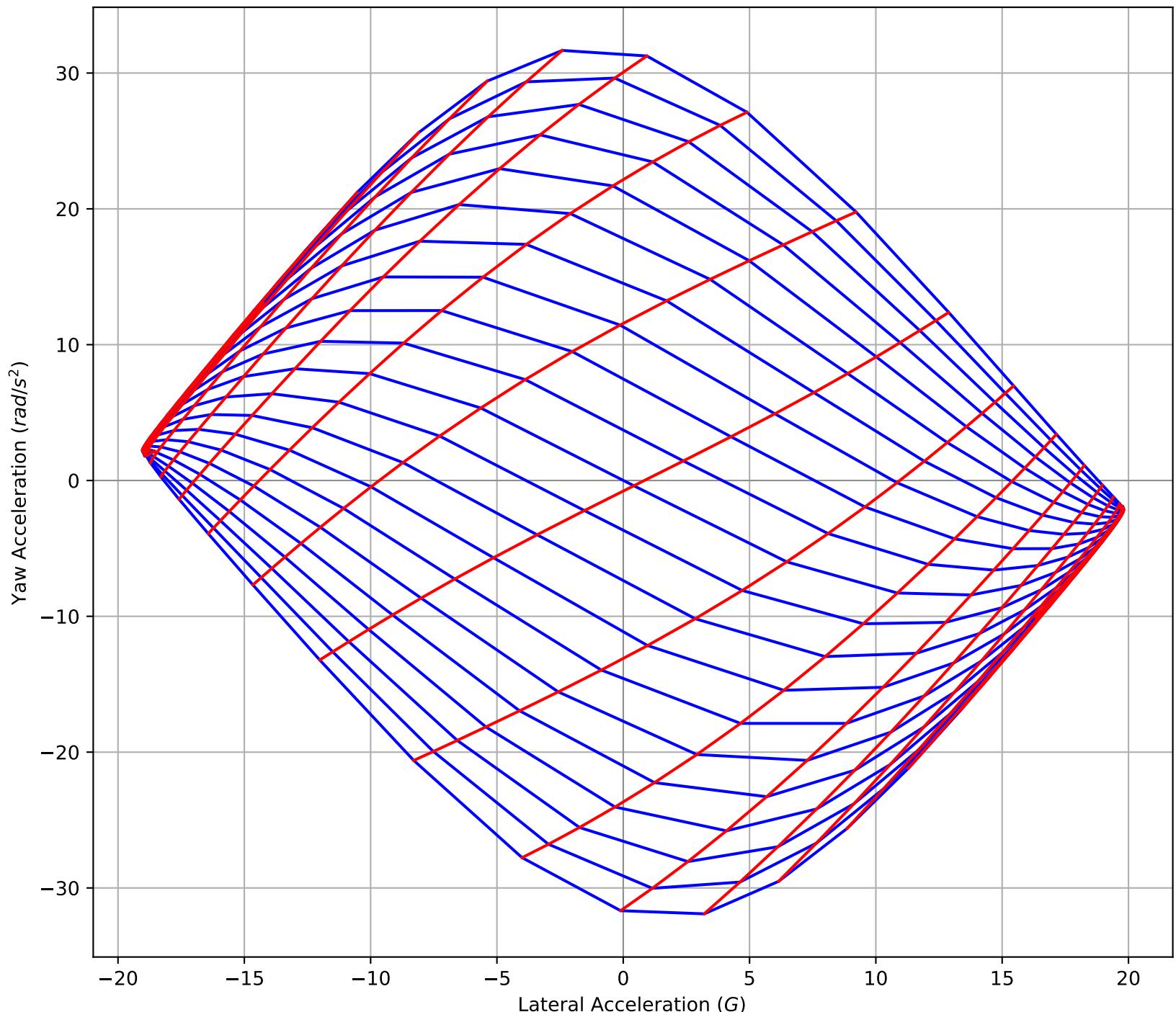
$\max(a_y)$ (m/s)	19.813
$\max(a_y _{N=0})$ (m/s)	18.818
$N _{\max(a_y)}$ (N · m)	-2.188
$\beta _{\max(a_y)}$ (deg)	-8.000
$\delta _{\max(a_y)}$ (deg)	17.500
$\max(N)$ (N · m)	31.764
$\beta _{\max(N)}$ (deg)	4.000
$\delta _{\max(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	-2.392
$\frac{dN}{d\delta} _{\max(a_y)}$ (N · m / deg)	0.036
$\frac{dN}{d\beta} _{\max(a_y)}$ (N · m / deg)	-0.118
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.666
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	6.919

Negative Basis

$\min(a_y)$ (m/s)	-19.037
$\min(a_y _{N=0})$ (m/s)	-18.134
$N _{\min(a_y)}$ (N · m)	2.188
$\beta _{\min(a_y)}$ (deg)	8.000
$\delta _{\min(a_y)}$ (deg)	-15.000
$\min(N)$ (N · m)	-32.036
$\beta _{\min(N)}$ (deg)	-4.000
$\delta _{\min(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	3.174
$\frac{dN}{d\delta} _{\min(a_y)}$ (N · m / deg)	0.020
$\frac{dN}{d\beta} _{\min(a_y)}$ (N · m / deg)	-0.160
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.666
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	6.919

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 24 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

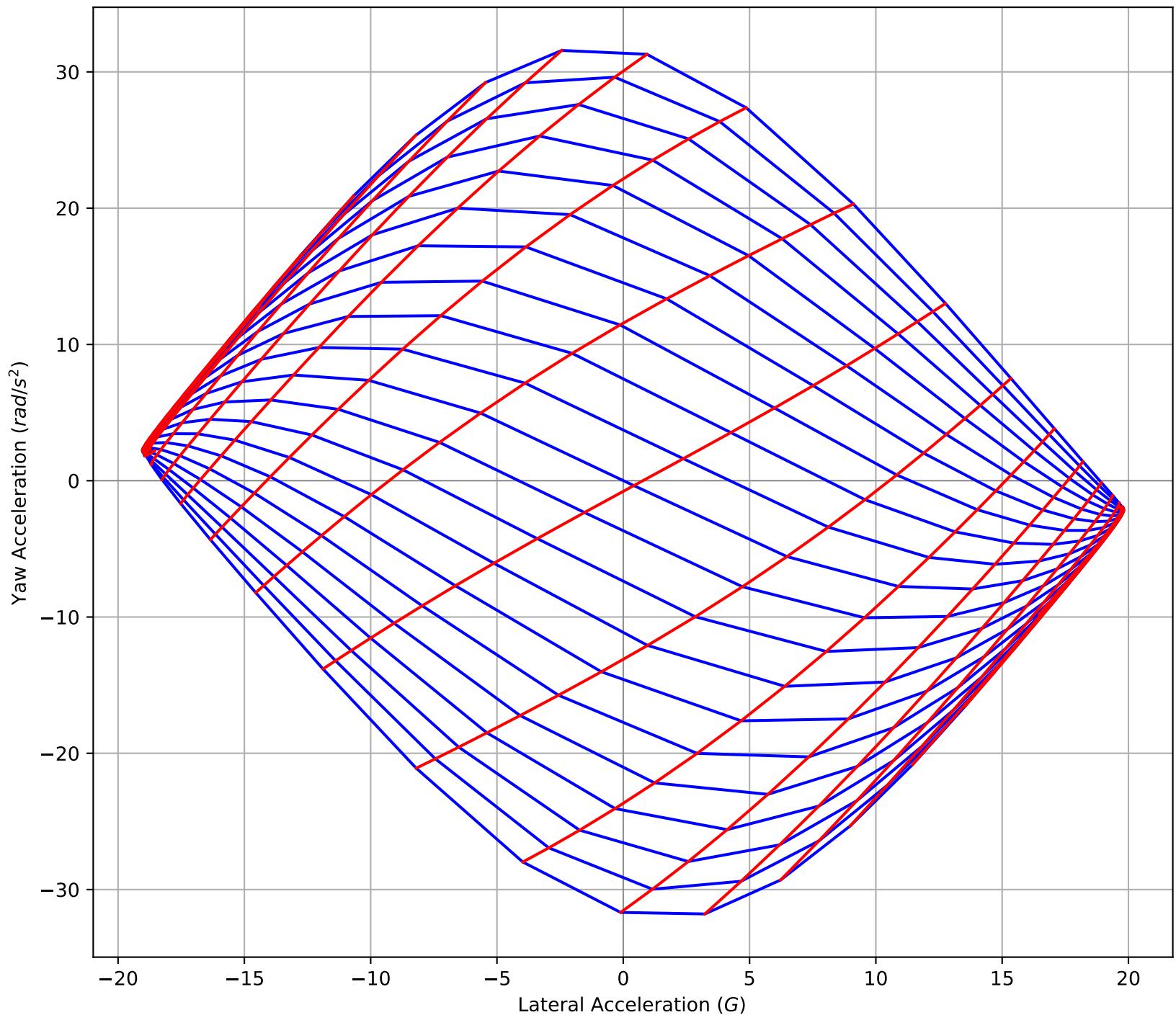
$\max(a_y)$ (m/s)	19.813
$\max(a_y _{N=0})$ (m/s)	18.841
$N _{\max(a_y)}$ (N · m)	-2.098
$\beta _{\max(a_y)}$ (deg)	-9.000
$\delta _{\max(a_y)}$ (deg)	15.000
$\max(N)$ (N · m)	31.664
$\beta _{\max(N)}$ (deg)	4.000
$\delta _{\max(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	-2.415
$\frac{dN}{d\delta} _{\max(a_y)}$ (N · m / deg)	0.026
$\frac{dN}{d\beta} _{\max(a_y)}$ (N · m / deg)	-0.182
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.734
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	6.395

Negative Basis

$\min(a_y)$ (m/s)	-19.038
$\min(a_y _{N=0})$ (m/s)	-18.187
$N _{\min(a_y)}$ (N · m)	2.250
$\beta _{\min(a_y)}$ (deg)	8.000
$\delta _{\min(a_y)}$ (deg)	-12.500
$\min(N)$ (N · m)	-31.906
$\beta _{\min(N)}$ (deg)	-4.000
$\delta _{\min(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	3.204
$\frac{dN}{d\delta} _{\min(a_y)}$ (N · m / deg)	0.035
$\frac{dN}{d\beta} _{\min(a_y)}$ (N · m / deg)	-0.200
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.734
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	6.395

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 25 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

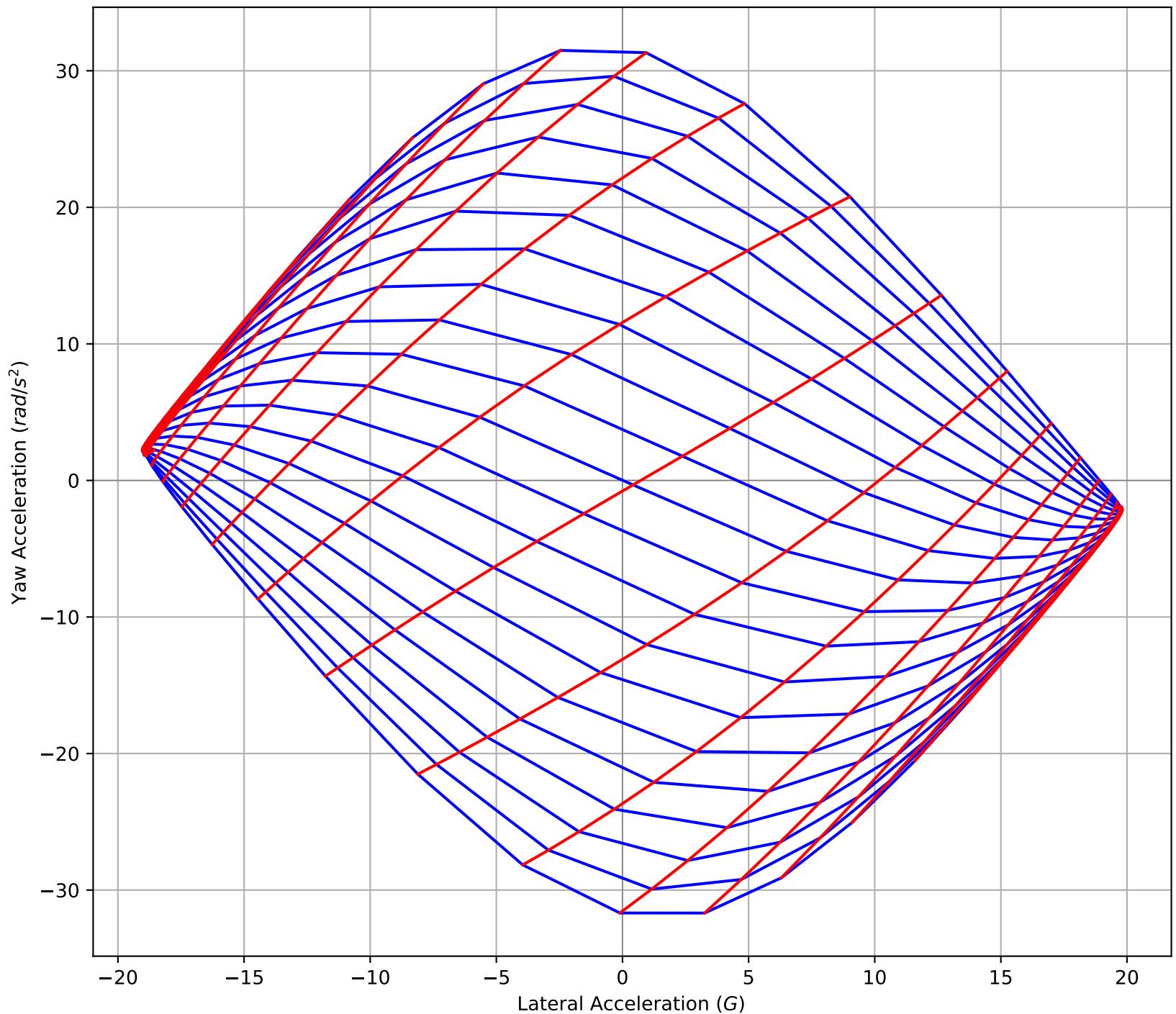
$\max(a_y)$ (m/s)	19.813
$\max(a_y _{N=0})$ (m/s)	18.870
$N _{\max(a_y)}$ (N · m)	-2.166
$\beta _{\max(a_y)}$ (deg)	-9.000
$\delta _{\max(a_y)}$ (deg)	12.500
$\max(N)$ (N · m)	31.574
$\beta _{\max(N)}$ (deg)	4.000
$\delta _{\max(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	-2.436
$\frac{dN}{d\delta} _{\max(a_y)}$ (N · m / deg)	0.037
$\frac{dN}{d\beta} _{\max(a_y)}$ (N · m / deg)	-0.213
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.794
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	5.930

Negative Basis

$\min(a_y)$ (m/s)	-19.040
$\min(a_y _{N=0})$ (m/s)	-18.226
$N _{\min(a_y)}$ (N · m)	2.239
$\beta _{\min(a_y)}$ (deg)	8.000
$\delta _{\min(a_y)}$ (deg)	-12.500
$\min(N)$ (N · m)	-31.789
$\beta _{\min(N)}$ (deg)	-4.000
$\delta _{\min(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	3.232
$\frac{dN}{d\delta} _{\min(a_y)}$ (N · m / deg)	0.031
$\frac{dN}{d\beta} _{\min(a_y)}$ (N · m / deg)	-0.170
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.794
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	5.930

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 26 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

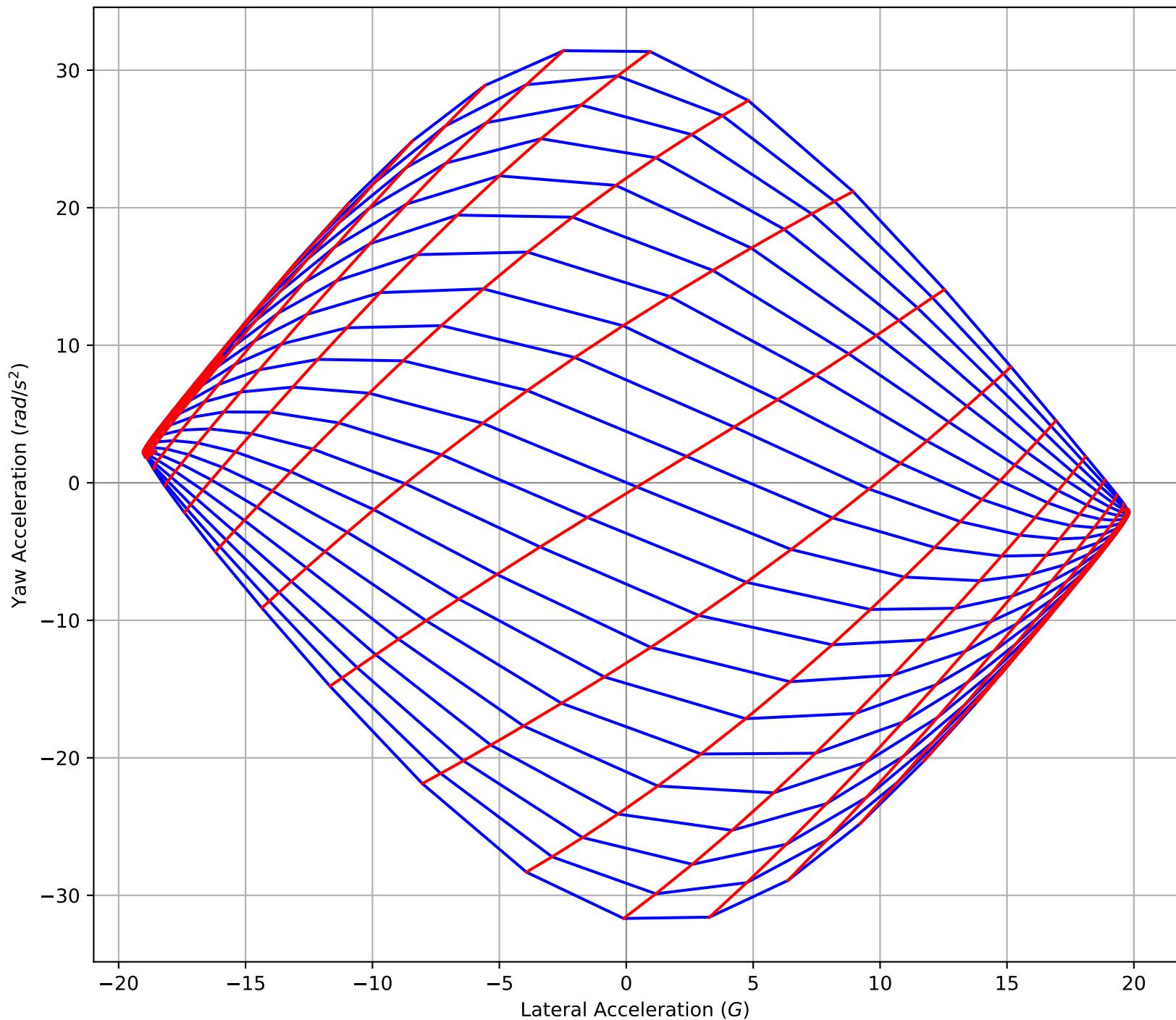
$\max(a_y)$ (m/s)	19.816
$\max(a_y _{N=0})$ (m/s)	18.914
$N _{\max(a_y)}$ (N · m)	-2.155
$\beta _{\max(a_y)}$ (deg)	-9.000
$\delta _{\max(a_y)}$ (deg)	12.500
$\max(N)$ (N · m)	31.492
$\beta _{\max(N)}$ (deg)	4.000
$\delta _{\max(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	-2.455
$\frac{dN}{d\delta} _{\max(a_y)}$ (N · m / deg)	0.034
$\frac{dN}{d\beta} _{\max(a_y)}$ (N · m / deg)	-0.194
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.847
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	5.516

Negative Basis

$\min(a_y)$ (m/s)	-19.041
$\min(a_y _{N=0})$ (m/s)	-18.251
$N _{\min(a_y)}$ (N · m)	2.229
$\beta _{\min(a_y)}$ (deg)	8.000
$\delta _{\min(a_y)}$ (deg)	-12.500
$\min(N)$ (N · m)	-31.682
$\beta _{\min(N)}$ (deg)	-4.000
$\delta _{\min(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	3.257
$\frac{dN}{d\delta} _{\min(a_y)}$ (N · m / deg)	0.028
$\frac{dN}{d\beta} _{\min(a_y)}$ (N · m / deg)	-0.142
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.847
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	5.516

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 27 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

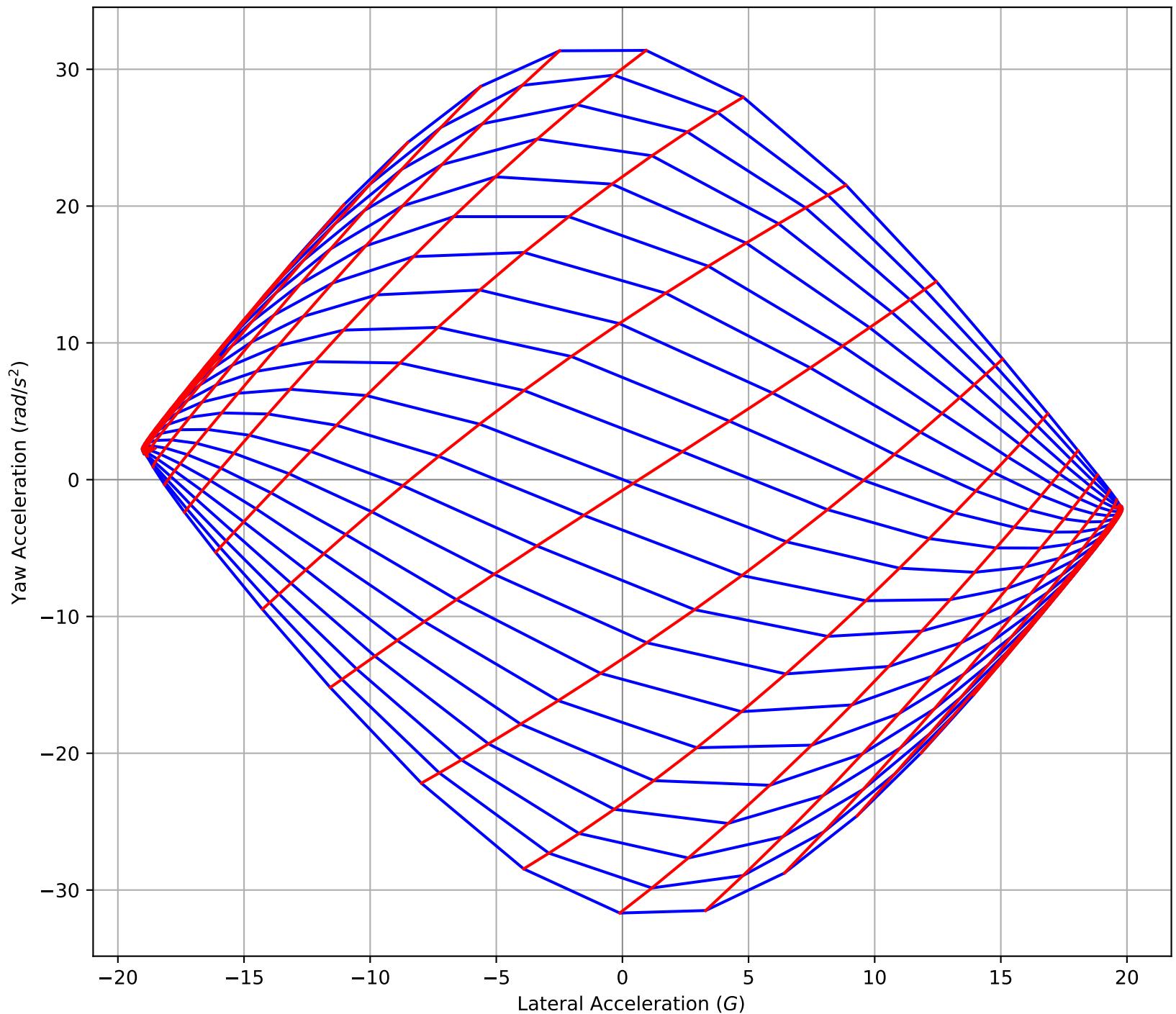
$\max(a_y)$ (m/s)	19.817
$\max(a_y _{N=0})$ (m/s)	18.951
$N _{\max(a_y)}$ (N · m)	-2.145
$\beta _{\max(a_y)}$ (deg)	-9.000
$\delta _{\max(a_y)}$ (deg)	12.500
$\max(N)$ (N · m)	31.418
$\beta _{\max(N)}$ (deg)	4.000
$\delta _{\max(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	-2.471
$\frac{dN}{d\delta} _{\max(a_y)}$ (N · m / deg)	0.032
$\frac{dN}{d\beta} _{\max(a_y)}$ (N · m / deg)	-0.177
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.894
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	5.146

Negative Basis

$\min(a_y)$ (m/s)	-19.040
$\min(a_y _{N=0})$ (m/s)	-18.267
$N _{\min(a_y)}$ (N · m)	2.221
$\beta _{\min(a_y)}$ (deg)	8.000
$\delta _{\min(a_y)}$ (deg)	-12.500
$\min(N)$ (N · m)	-31.680
$\beta _{\min(N)}$ (deg)	-3.000
$\delta _{\min(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	-0.104
$\frac{dN}{d\delta} _{\min(a_y)}$ (N · m / deg)	0.025
$\frac{dN}{d\beta} _{\min(a_y)}$ (N · m / deg)	-0.117
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.894
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	5.146

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 28 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

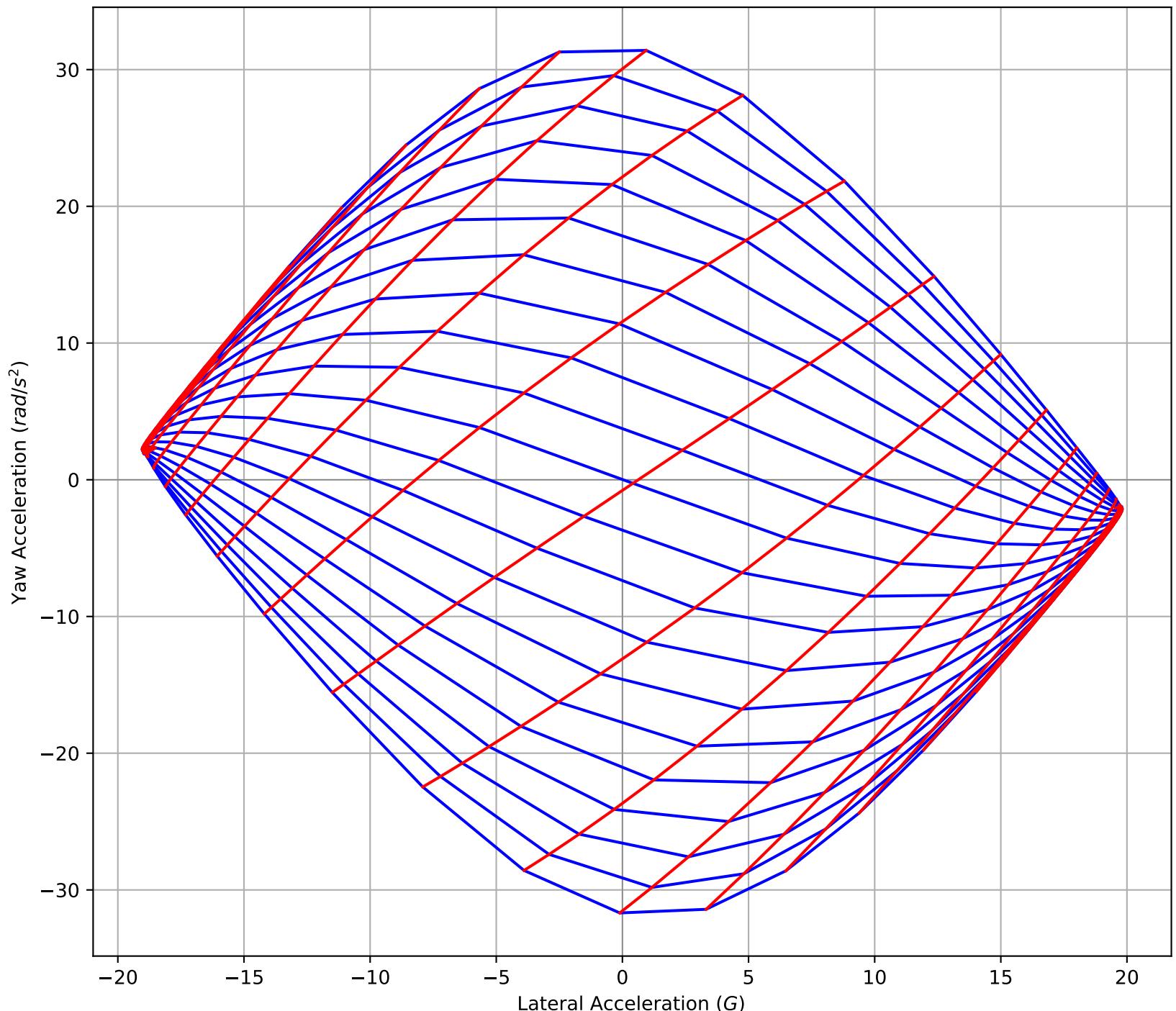
$\max(a_y)$ (m/s)	19.817
$\max(a_y _{N=0})$ (m/s)	18.980
$N _{\max(a_y)}$ (N · m)	-2.137
$\beta _{\max(a_y)}$ (deg)	-9.000
$\delta _{\max(a_y)}$ (deg)	12.500
$\max(N)$ (N · m)	31.381
$\beta _{\max(N)}$ (deg)	3.000
$\delta _{\max(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	0.940
$\frac{dN}{d\delta} _{\max(a_y)}$ (N · m / deg)	0.030
$\frac{dN}{d\beta} _{\max(a_y)}$ (N · m / deg)	-0.162
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.936
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	4.814

Negative Basis

$\min(a_y)$ (m/s)	-19.039
$\min(a_y _{N=0})$ (m/s)	-18.279
$N _{\min(a_y)}$ (N · m)	2.214
$\beta _{\min(a_y)}$ (deg)	8.000
$\delta _{\min(a_y)}$ (deg)	-12.500
$\min(N)$ (N · m)	-31.681
$\beta _{\min(N)}$ (deg)	-3.000
$\delta _{\min(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	-0.104
$\frac{dN}{d\delta} _{\min(a_y)}$ (N · m / deg)	0.022
$\frac{dN}{d\beta} _{\min(a_y)}$ (N · m / deg)	-0.095
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.936
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	4.814

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 29 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

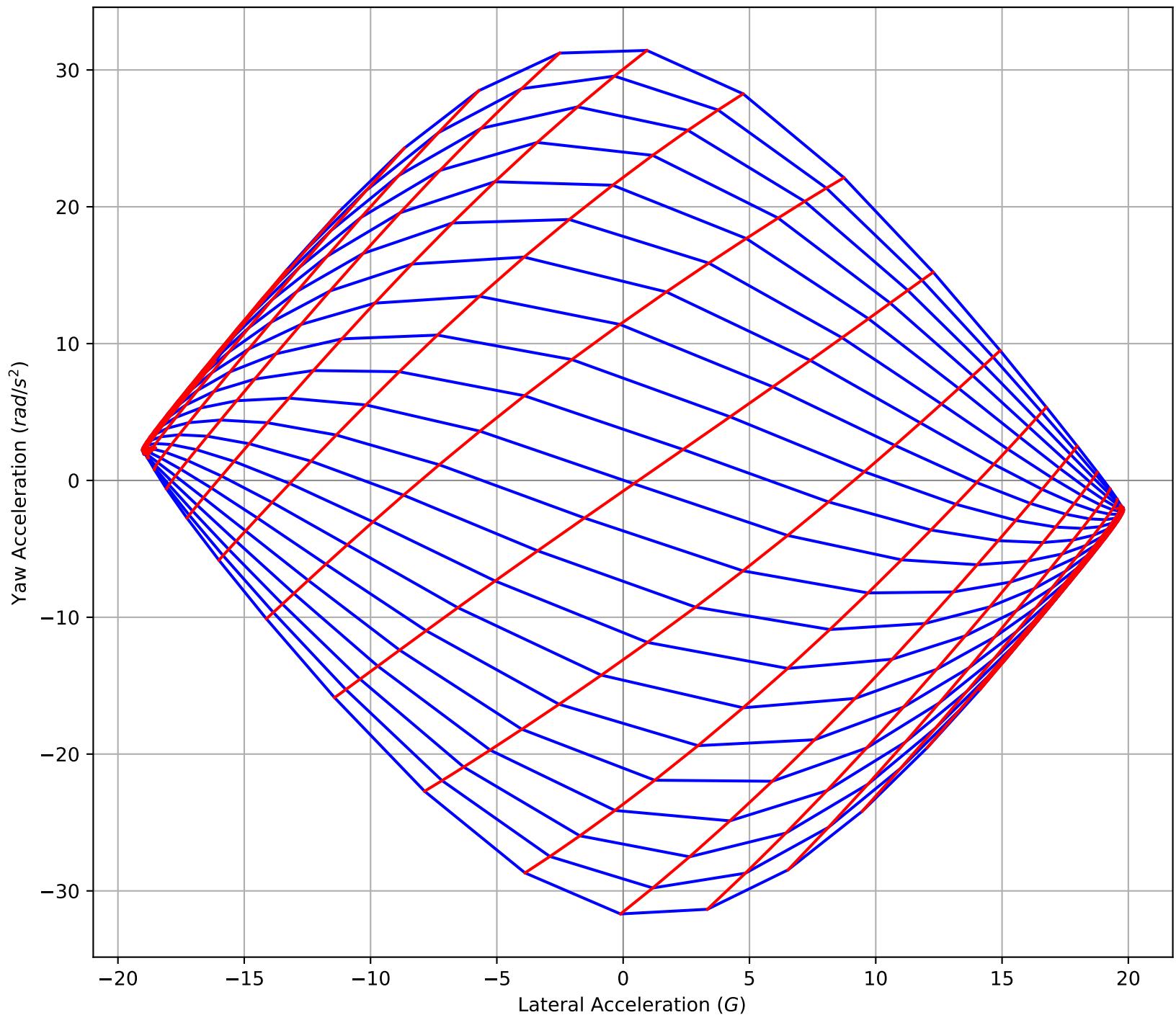
$\max(a_y)$ (m/s)	19.817
$\max(a_y _{N=0})$ (m/s)	19.003
$N _{\max(a_y)}$ (N · m)	-2.129
$\beta _{\max(a_y)}$ (deg)	-9.000
$\delta _{\max(a_y)}$ (deg)	12.500
$\max(N)$ (N · m)	31.405
$\beta _{\max(N)}$ (deg)	3.000
$\delta _{\max(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	0.941
$\frac{dN}{d\delta} _{\max(a_y)}$ (N · m / deg)	0.028
$\frac{dN}{d\beta} _{\max(a_y)}$ (N · m / deg)	-0.148
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.974
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	4.516

Negative Basis

$\min(a_y)$ (m/s)	-19.038
$\min(a_y _{N=0})$ (m/s)	-18.288
$N _{\min(a_y)}$ (N · m)	2.208
$\beta _{\min(a_y)}$ (deg)	8.000
$\delta _{\min(a_y)}$ (deg)	-12.500
$\min(N)$ (N · m)	-31.683
$\beta _{\min(N)}$ (deg)	-3.000
$\delta _{\min(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	-0.104
$\frac{dN}{d\delta} _{\min(a_y)}$ (N · m / deg)	0.020
$\frac{dN}{d\beta} _{\min(a_y)}$ (N · m / deg)	-0.075
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	0.974
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	4.516

— Constant δ (hwa)
— Constant β (beta)

Constant Velocity: 30 m/s | Yaw Acceleration vs Lateral Acceleration



Positive Basis

$\max(a_y)$ (m/s)	19.817
$\max(a_y _{N=0})$ (m/s)	19.022
$N _{\max(a_y)}$ (N · m)	-2.123
$\beta _{\max(a_y)}$ (deg)	-9.000
$\delta _{\max(a_y)}$ (deg)	12.500
$\max(N)$ (N · m)	31.426
$\beta _{\max(N)}$ (deg)	3.000
$\delta _{\max(N)}$ (deg)	25.000
$a_y _{\max(N)}$ (m/s)	0.941
$\frac{dN}{d\delta} _{\max(a_y)}$ (N · m / deg)	0.027
$\frac{dN}{d\beta} _{\max(a_y)}$ (N · m / deg)	-0.136
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	1.008
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	4.246

Negative Basis

$\min(a_y)$ (m/s)	-19.036
$\min(a_y _{N=0})$ (m/s)	-18.295
$N _{\min(a_y)}$ (N · m)	2.269
$\beta _{\min(a_y)}$ (deg)	8.000
$\delta _{\min(a_y)}$ (deg)	-10.000
$\min(N)$ (N · m)	-31.684
$\beta _{\min(N)}$ (deg)	-3.000
$\delta _{\min(N)}$ (deg)	-25.000
$a_y _{\min(N)}$ (m/s)	-0.104
$\frac{dN}{d\delta} _{\min(a_y)}$ (N · m / deg)	0.037
$\frac{dN}{d\beta} _{\min(a_y)}$ (N · m / deg)	-0.129
$\frac{dN}{d\delta} _{\beta=0}$ (N · m / deg)	1.008
$\frac{dN}{d\beta} _{\delta=0}$ (N · m / deg)	4.246