



Quasi-Steady-State Report

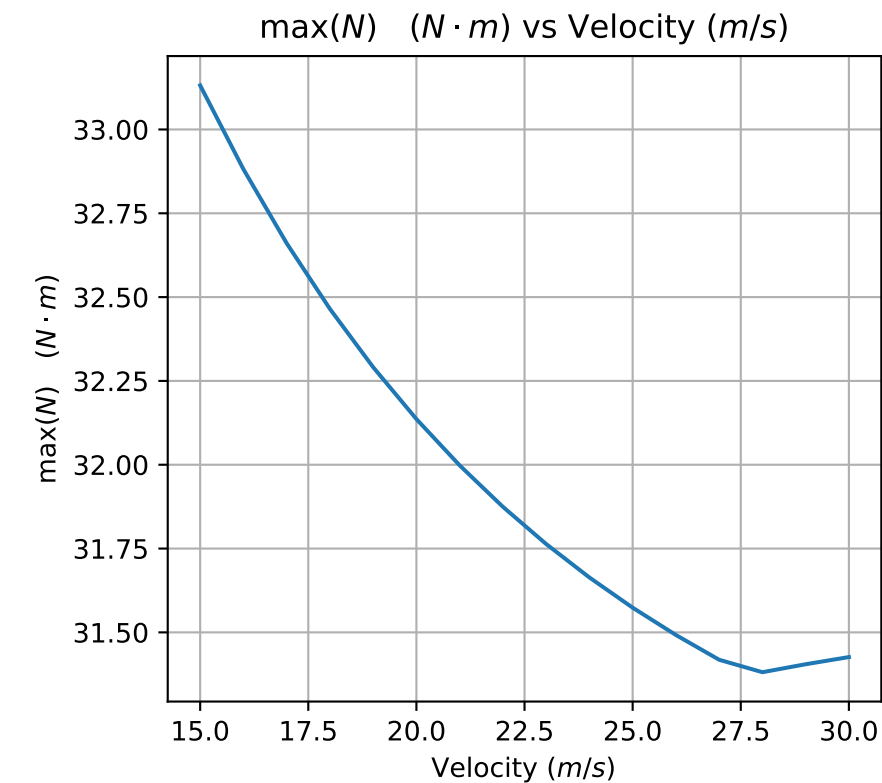
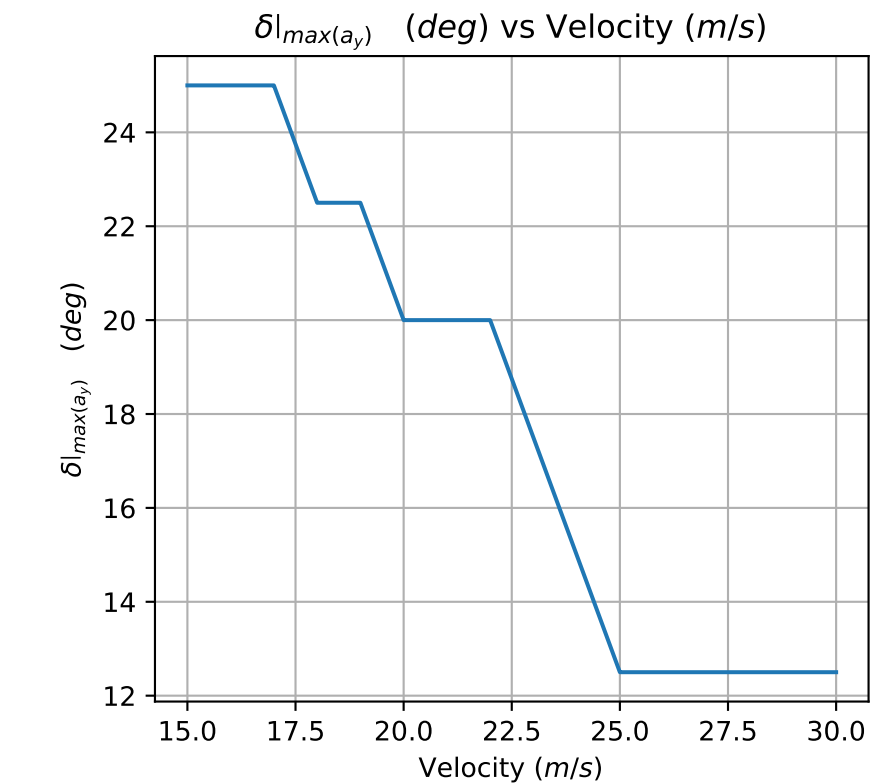
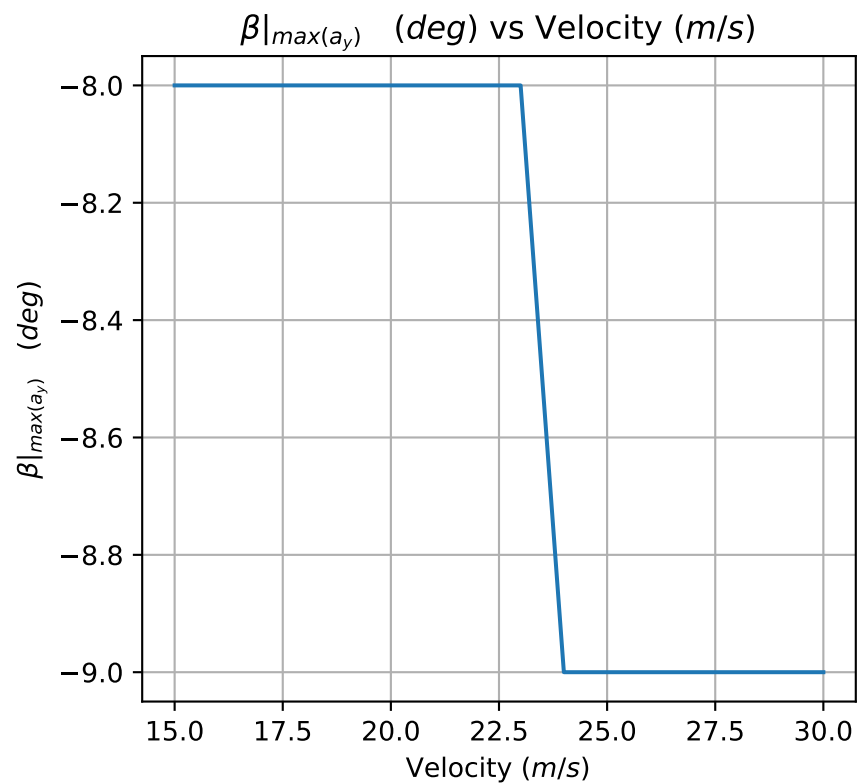
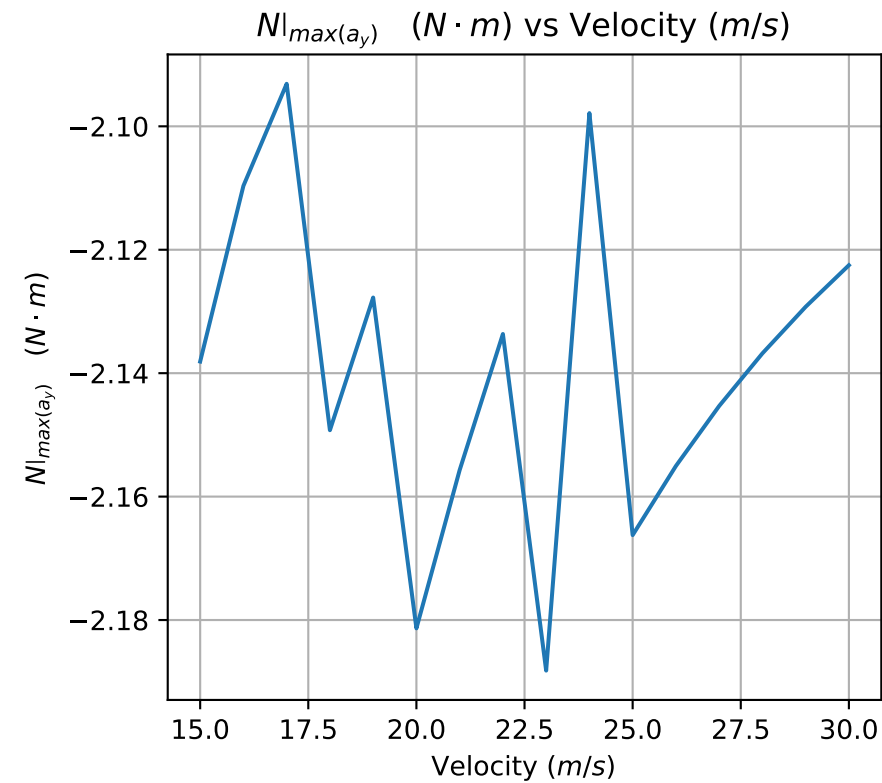
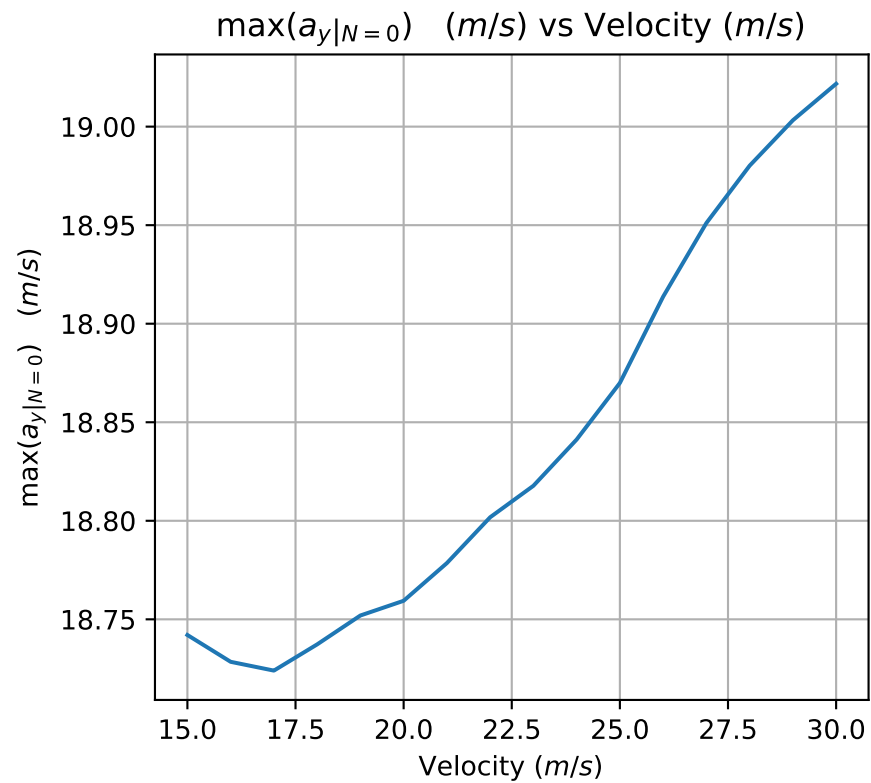
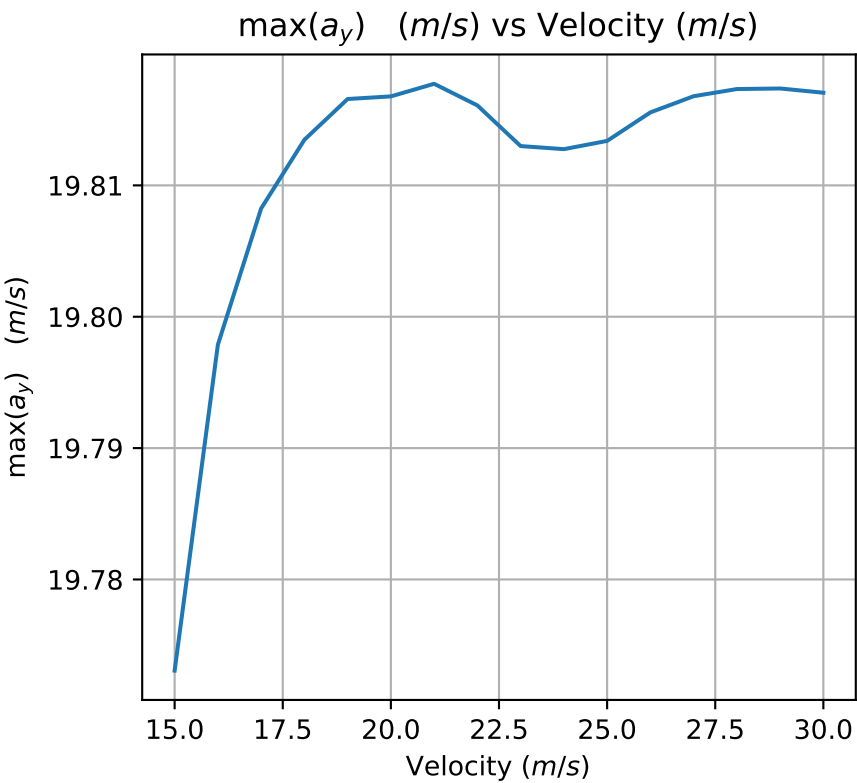
Simulation Author: Robert Horvath

Generated By: Robert (roberthorvath5@gmail.com)

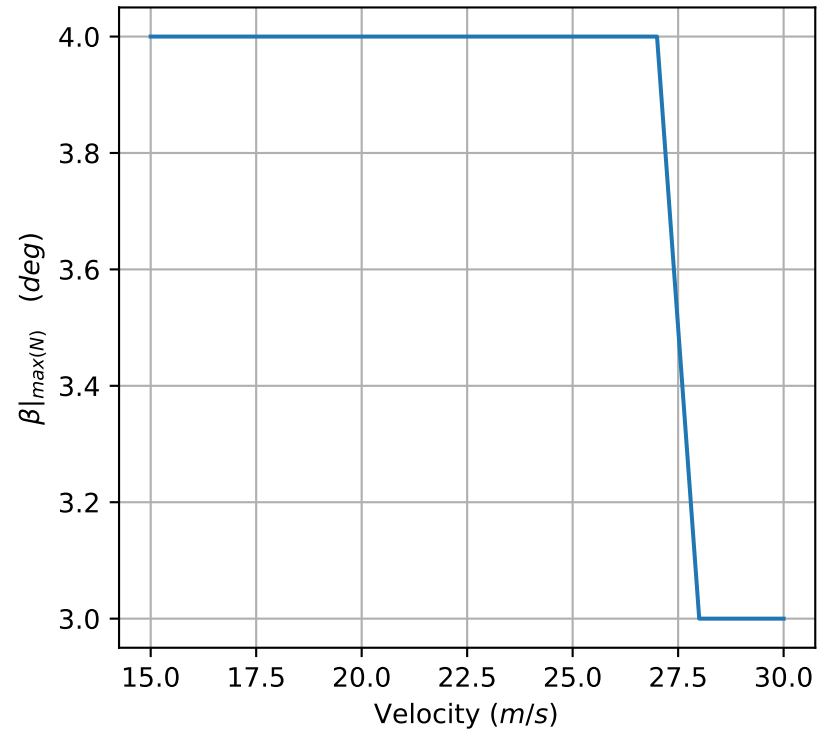
Date: 2025-06-17, 02:18 AM PDT

Note 1: The variable δ always refers to handwheel angle

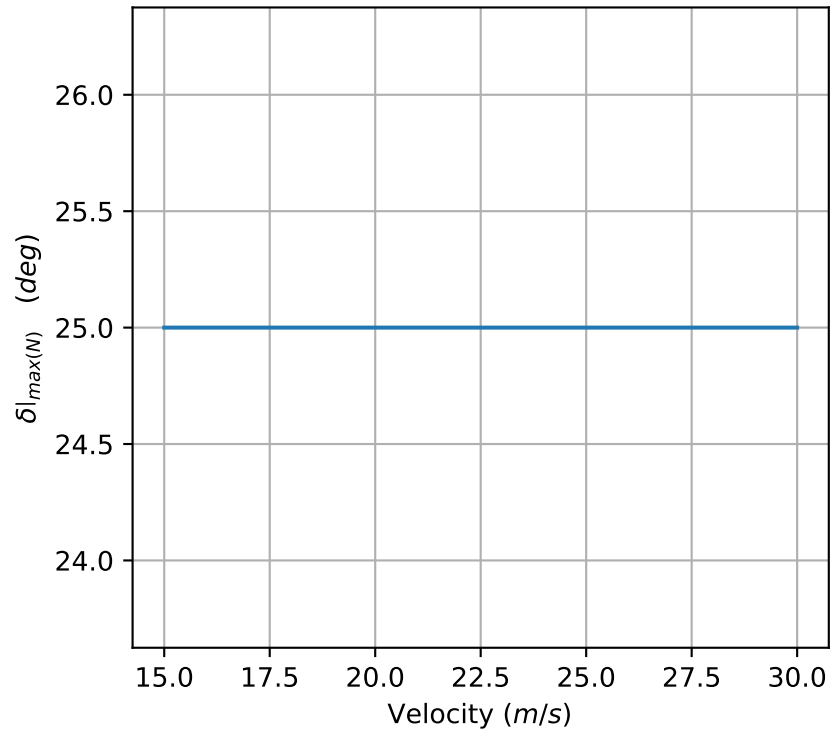
Note 2: dude idk. fuckass sim keeping me up at night.



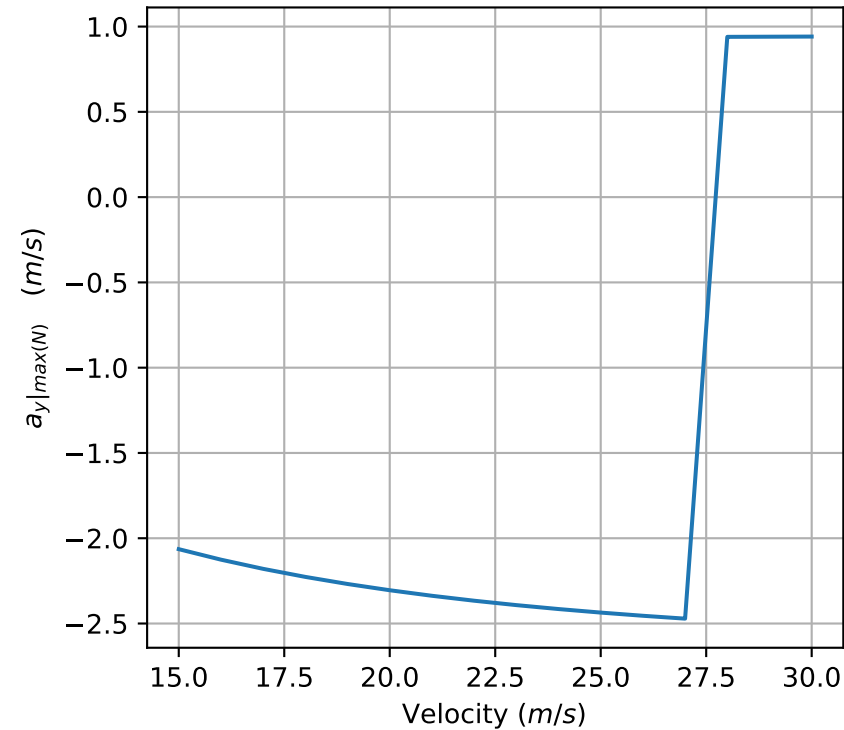
$\beta|_{\max(N)}$ (deg) vs Velocity (m/s)



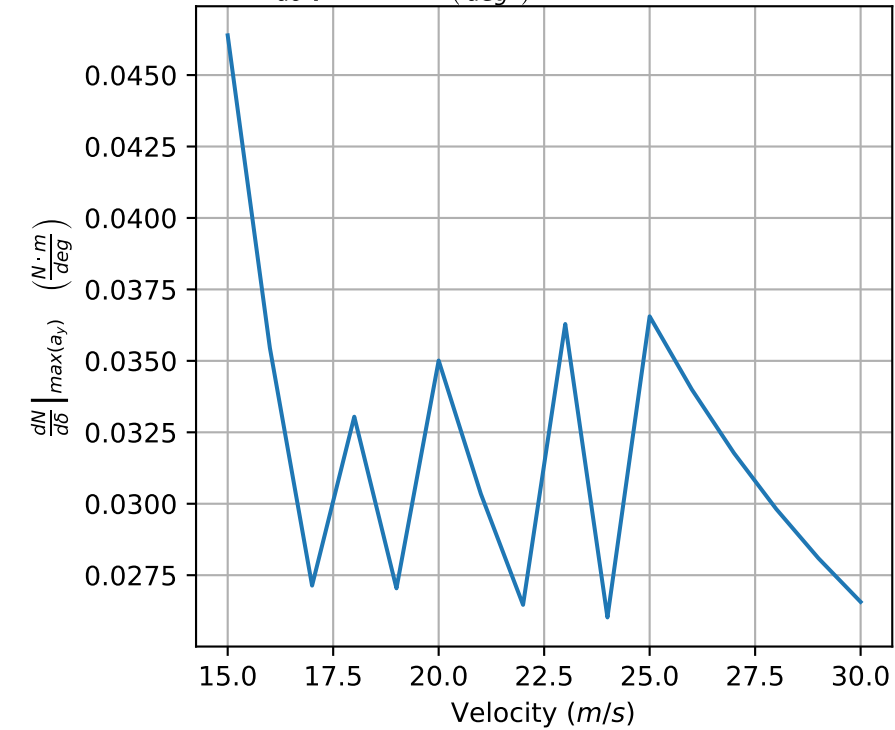
$\delta|_{\max(N)}$ (deg) vs Velocity (m/s)



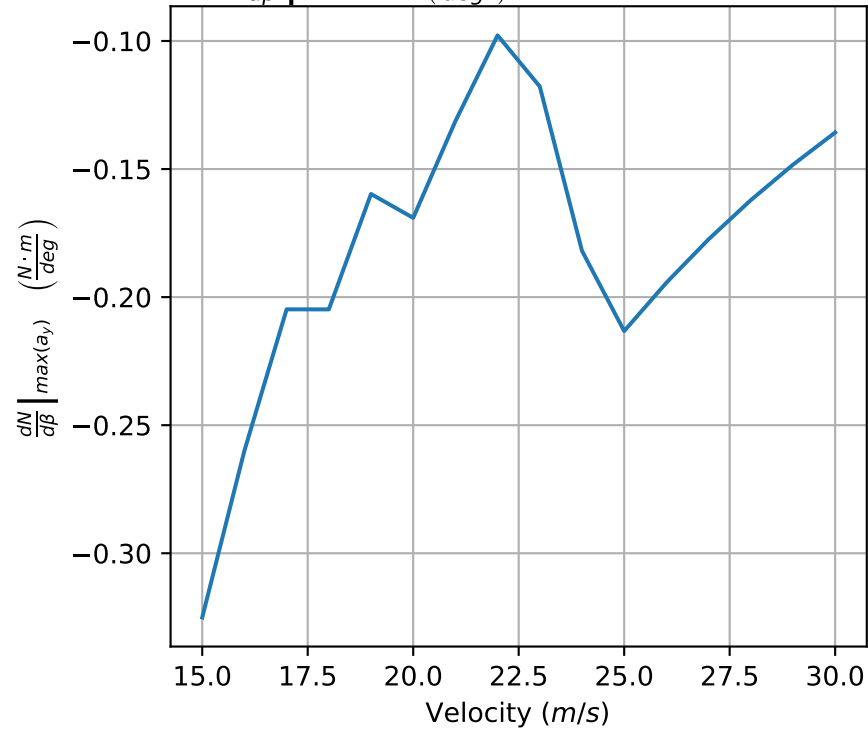
$a_y|_{\max(N)}$ (m/s) vs Velocity (m/s)



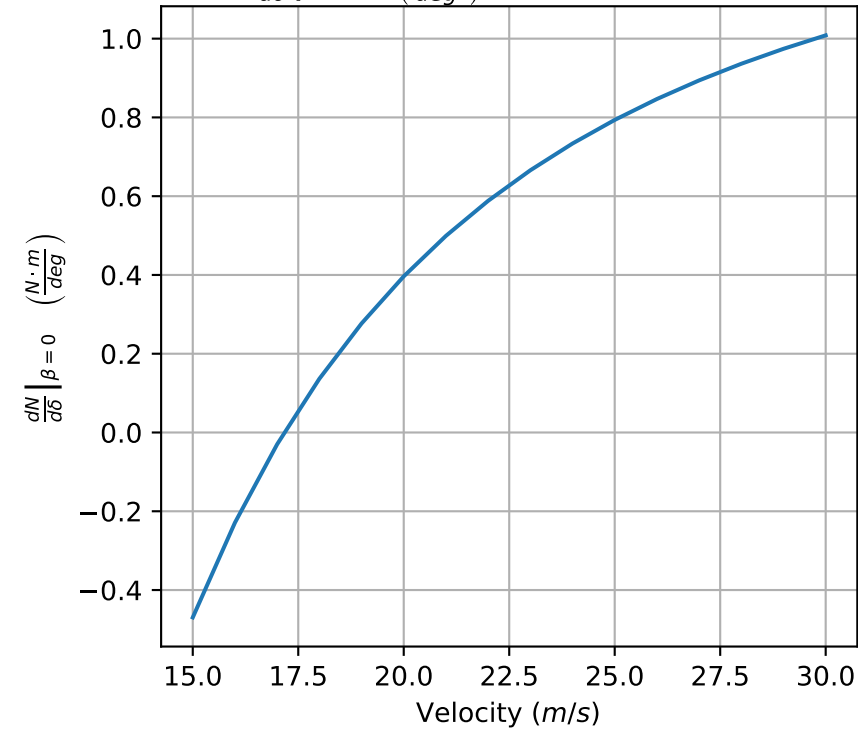
$\frac{dN}{d\delta}|_{\max(a_y)}$ ($\frac{N \cdot m}{deg}$) vs Velocity (m/s)

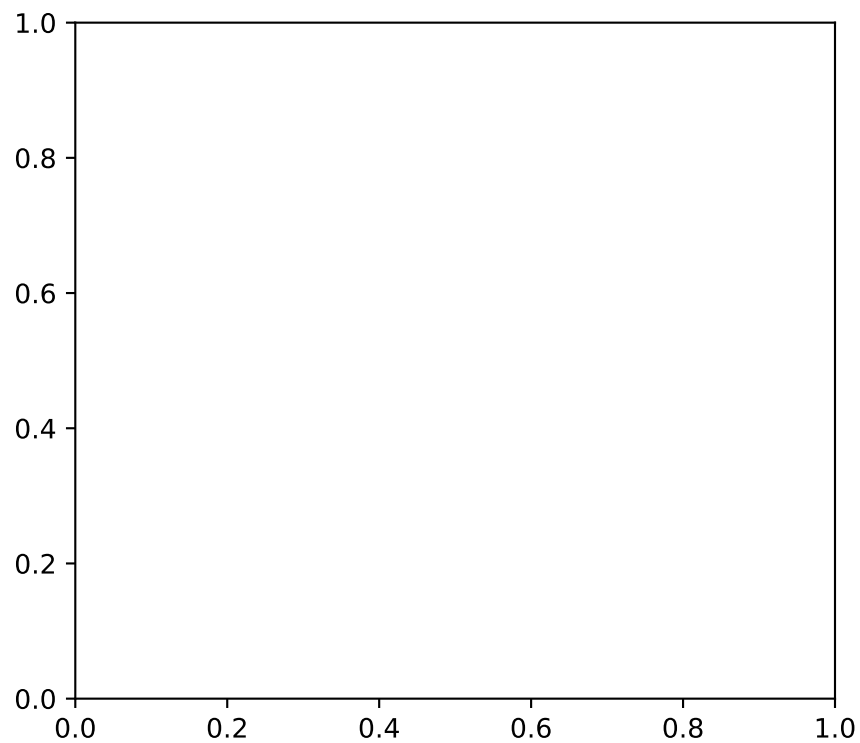
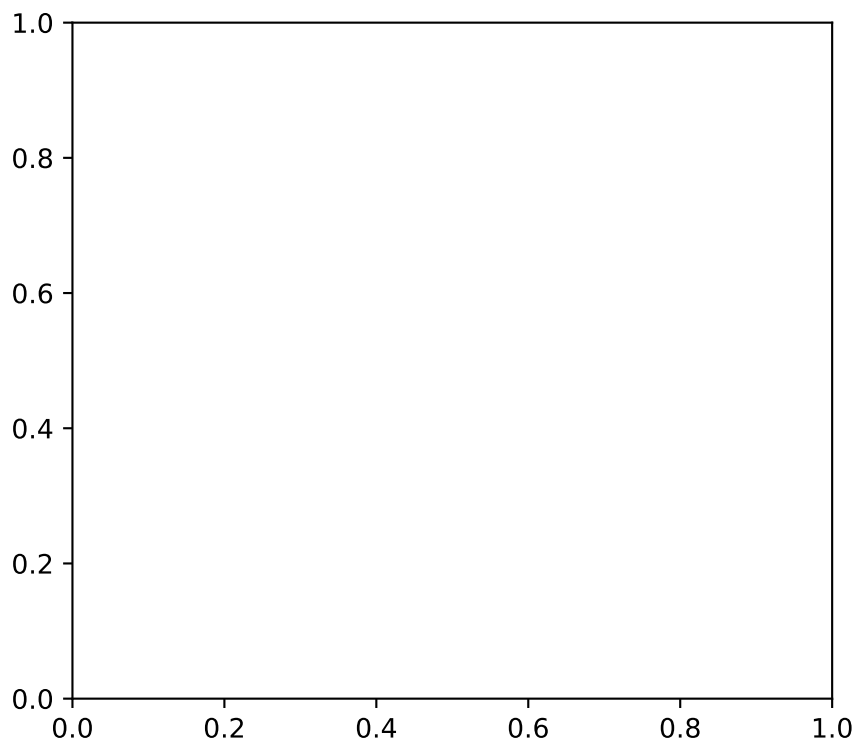
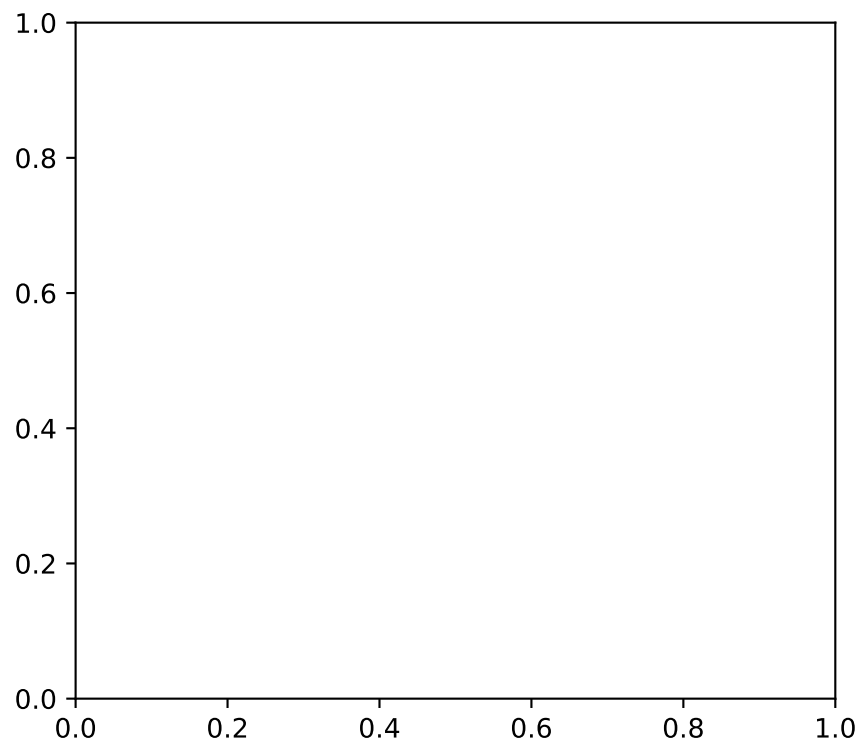
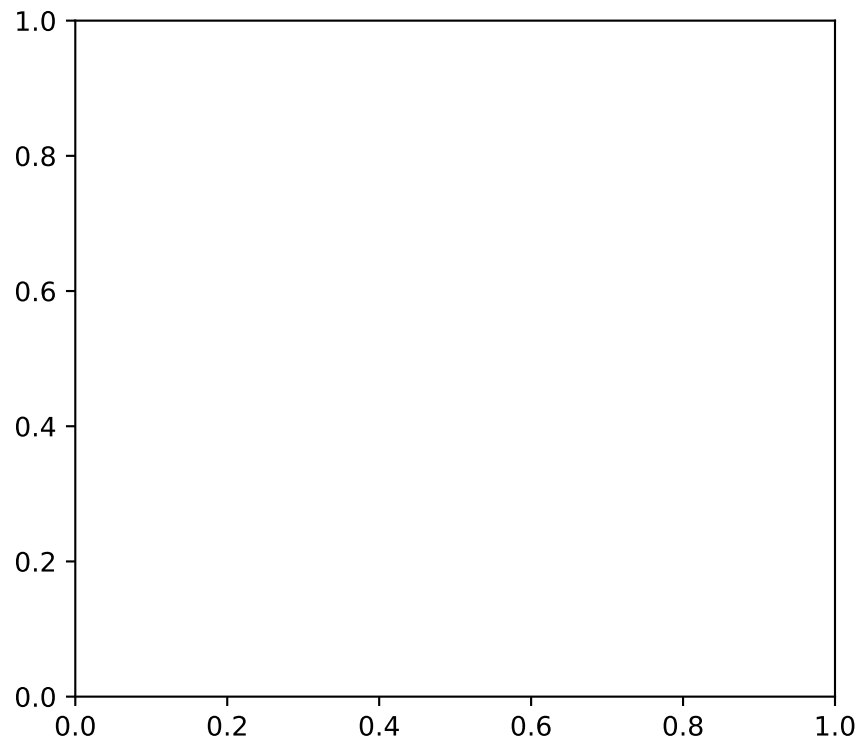
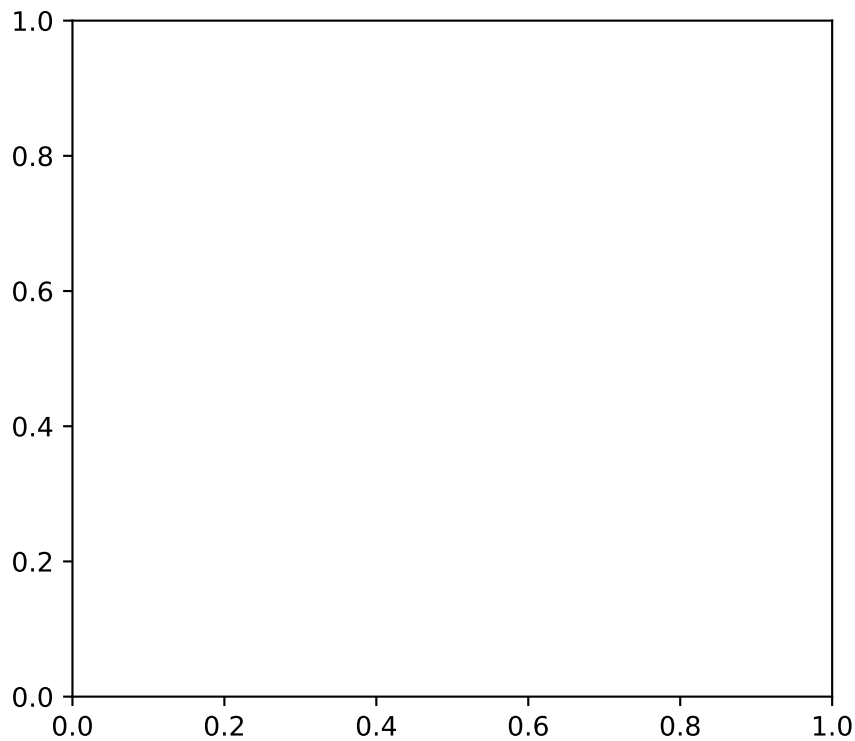
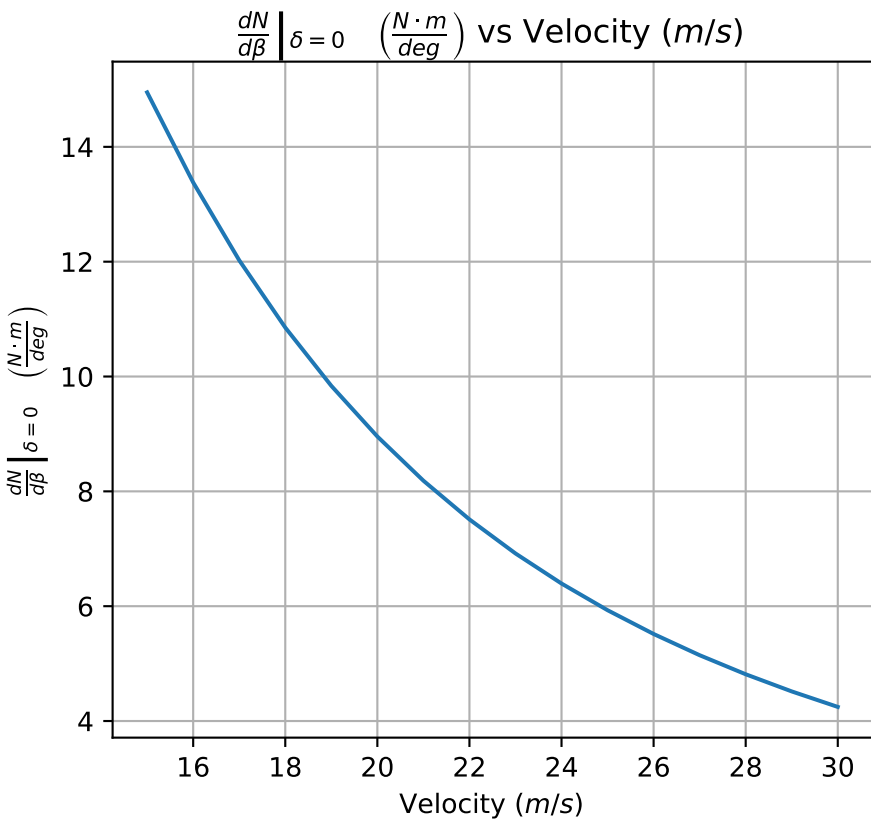


$\frac{dN}{d\beta}|_{\max(a_y)}$ ($\frac{N \cdot m}{deg}$) vs Velocity (m/s)

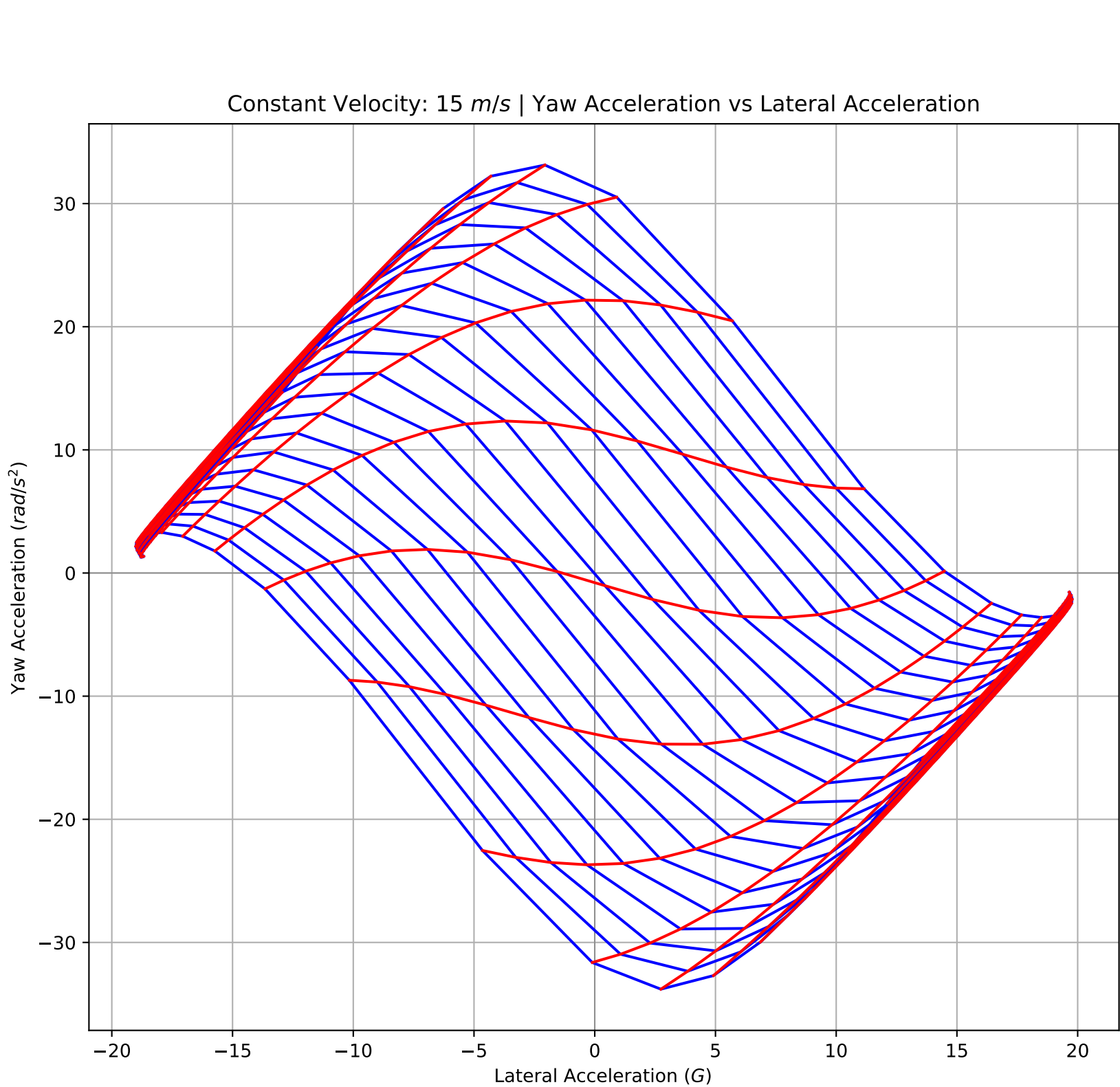


$\frac{dN}{d\delta}|_{\beta=0}$ ($\frac{N \cdot m}{deg}$) vs Velocity (m/s)





Appendix

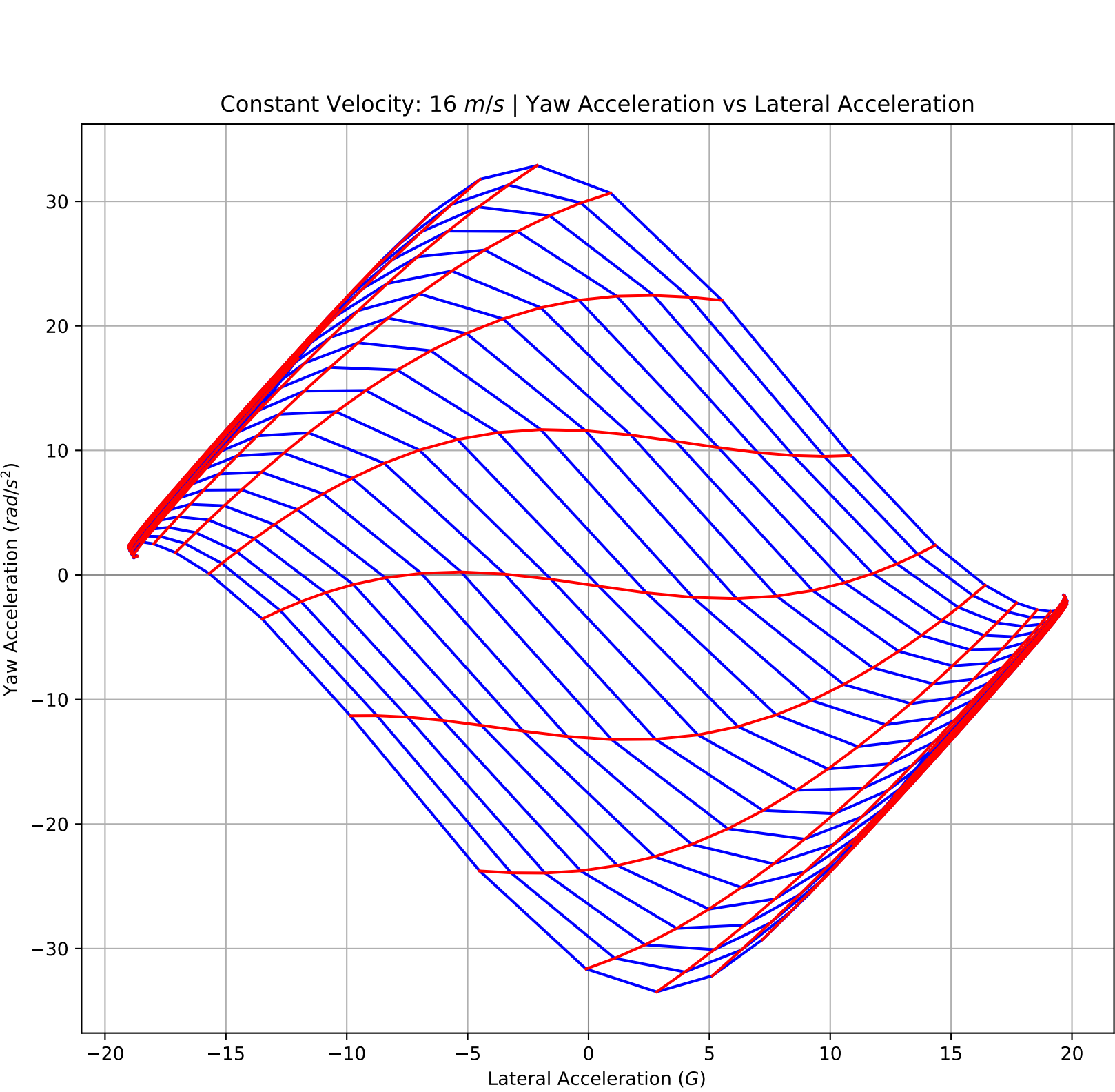


Positive Basis

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

Negative Basis

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

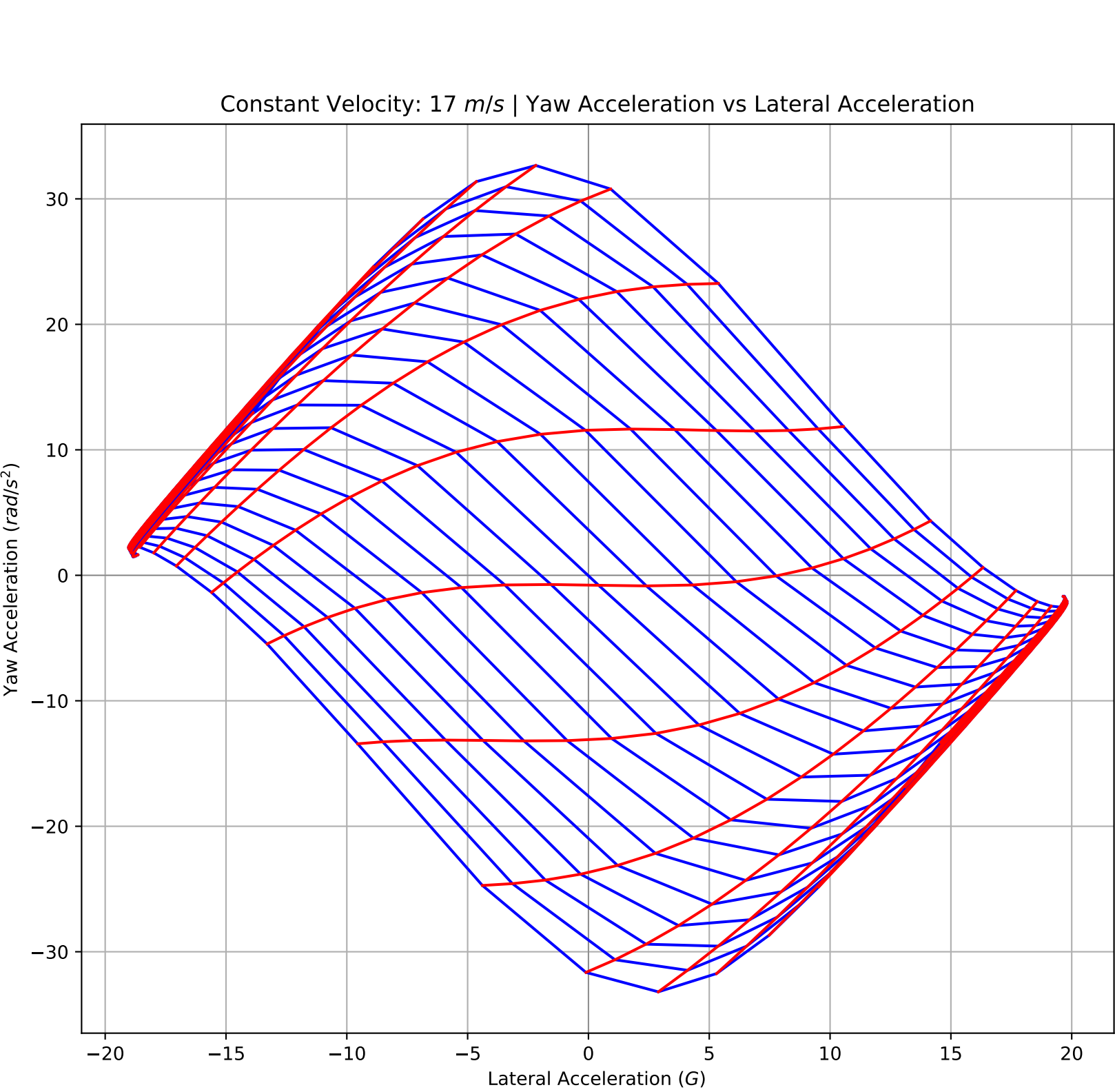


Positive Basis

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

Negative Basis

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

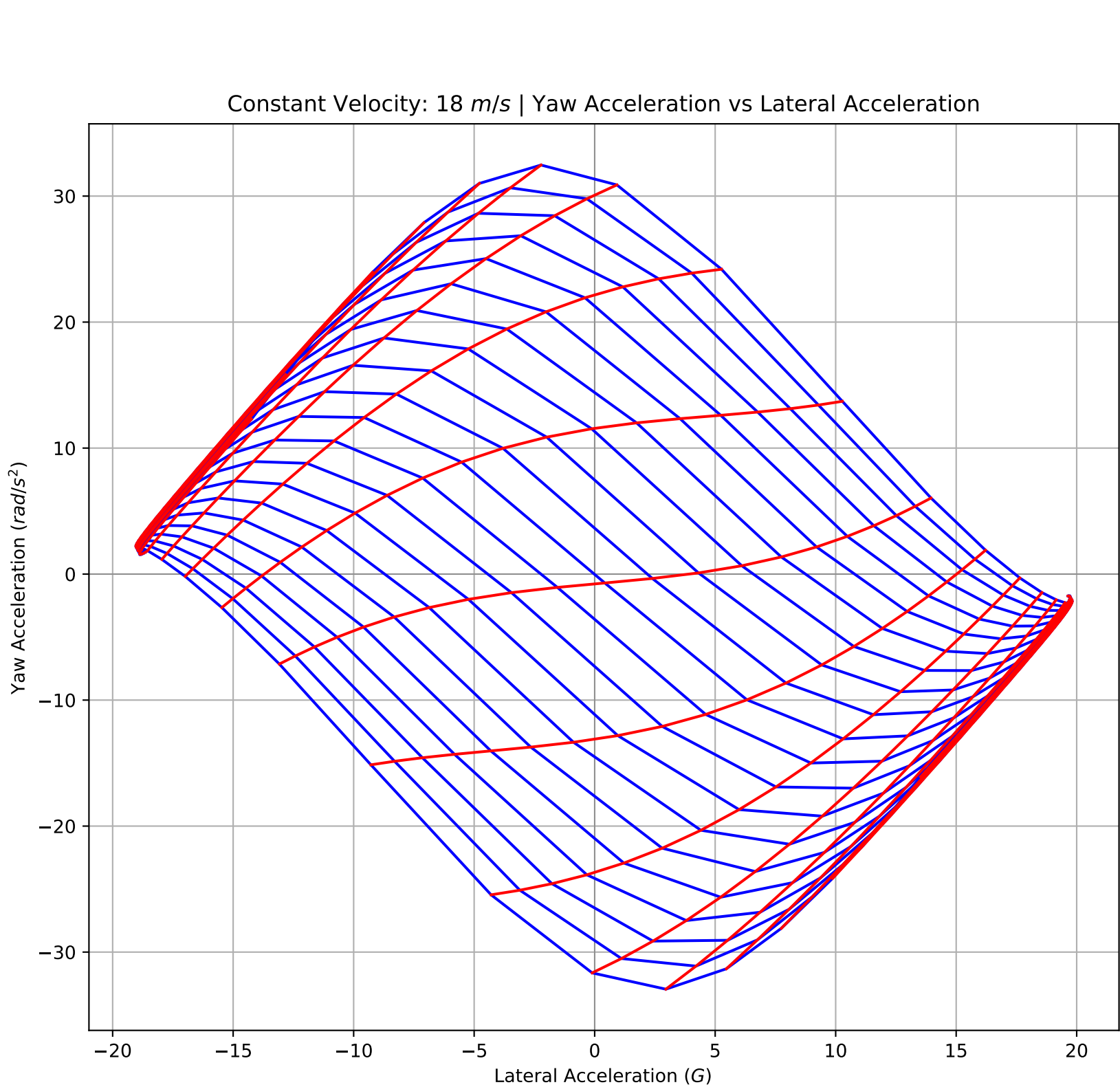


Constant δ (hwa)

Constant β (beta)

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

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

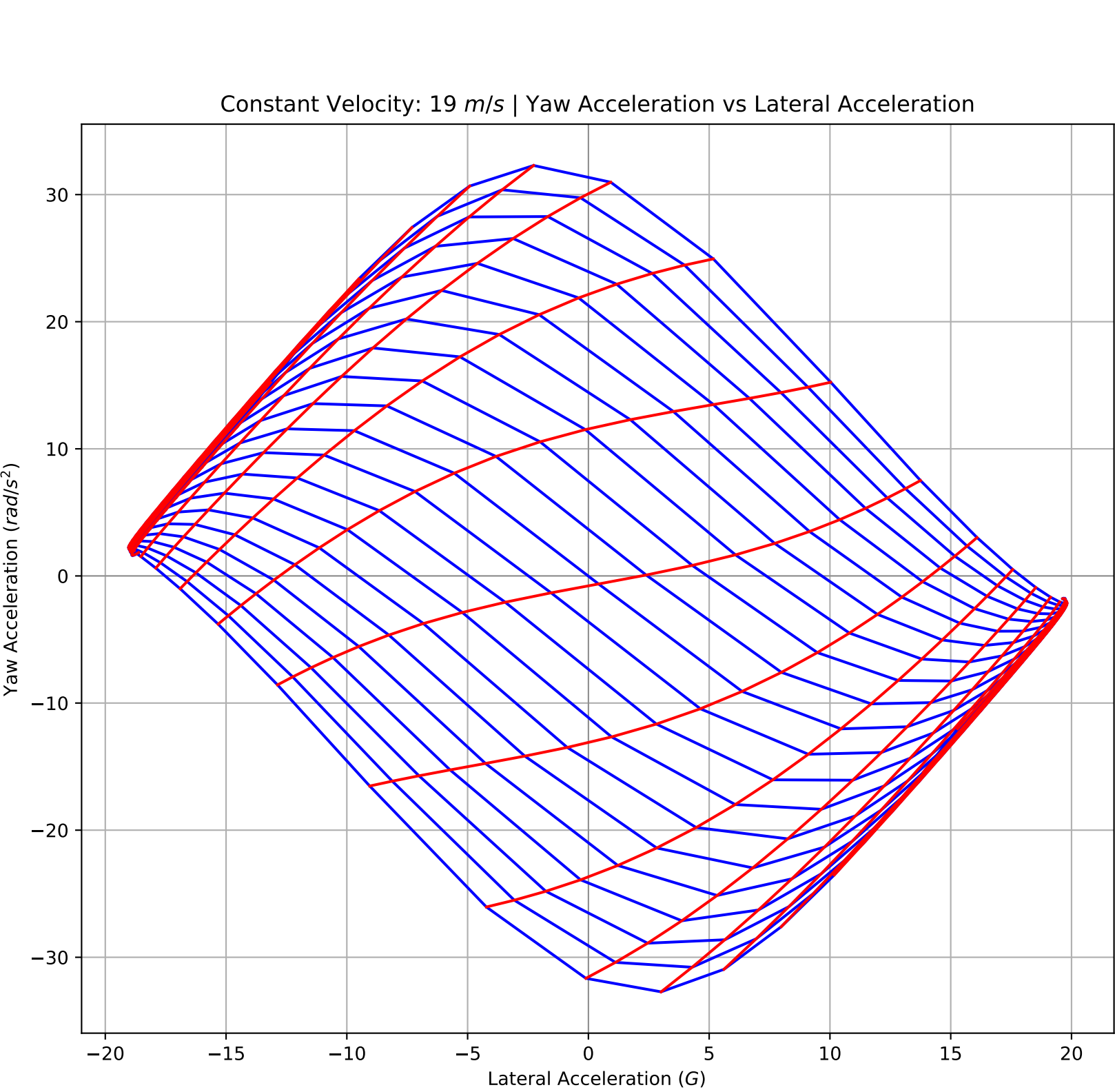


Positive Basis

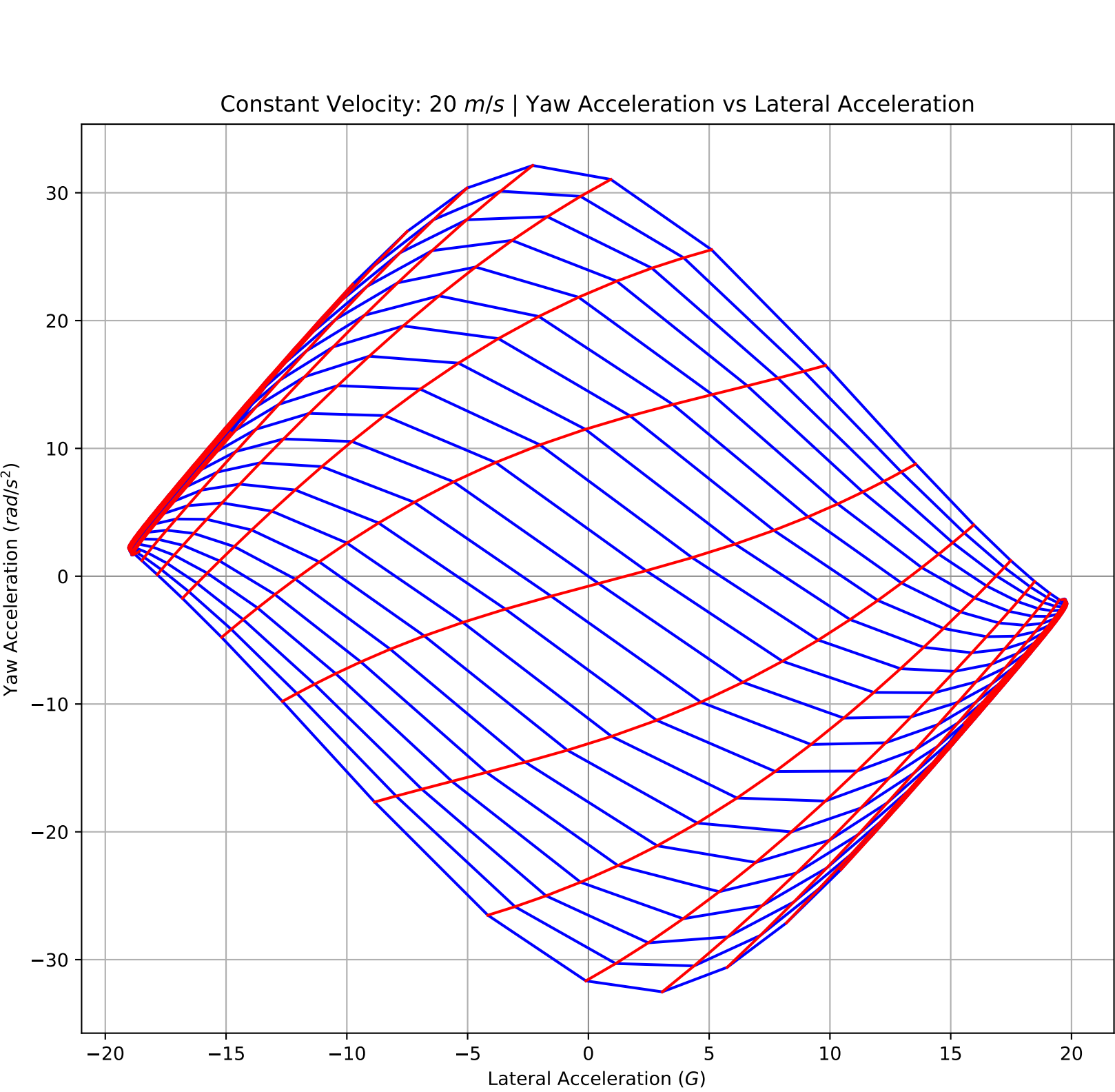
| | |
|--|--------|
| $\max(a_y) \text{ (m/s)}$ | 19.813 |
| $\max(a_y _{N=0}) \text{ (m/s)}$ | 18.737 |
| $N _{\max(a_y)} \text{ (N} \cdot \text{m)}$ | -2.149 |
| $\beta _{\max(a_y)} \text{ (deg)}$ | -8.000 |
| $\delta _{\max(a_y)} \text{ (deg)}$ | 22.500 |
| $\max(N) \text{ (N} \cdot \text{m)}$ | 32.465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

Negative Basis

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



| Positive Basis | | Negative Basis | |
|--|--------|---|---------|
| $\max(a_y) \text{ (m/s)}$ | 19.817 | $\min(a_y) \text{ (m/s)}$ | -19.039 |
| $\max(a_y _{N=0}) \text{ (m/s)}$ | 18.752 | $\min(a_y _{N=0}) \text{ (m/s)}$ | -18.023 |
| $N _{\max(a_y)} \text{ (N} \cdot \text{m)}$ | -2.128 | $N _{\min(a_y)} \text{ (N} \cdot \text{m)}$ | 2.264 |
| $\beta _{\max(a_y)} \text{ (deg)}$ | -8.000 | $\beta _{\min(a_y)} \text{ (deg)}$ | 7.000 |
| $\delta _{\max(a_y)} \text{ (deg)}$ | 22.500 | $\delta _{\min(a_y)} \text{ (deg)}$ | -20.000 |
| $\max(N) \text{ (N} \cdot \text{m)}$ | 32.291 | $\min(N) \text{ (N} \cdot \text{m)}$ | -32.720 |
| $\beta _{\max(N)} \text{ (deg)}$ | 4.000 | $\beta _{\min(N)} \text{ (deg)}$ | -4.000 |
| $\delta _{\max(N)} \text{ (deg)}$ | 25.000 | $\delta _{\min(N)} \text{ (deg)}$ | -25.000 |
| $a_y _{\max(N)} \text{ (m/s)}$ | -2.268 | $a_y _{\min(N)} \text{ (m/s)}$ | 3.009 |
| $\frac{dN}{d\delta} \Big _{\max(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.027 | $\frac{dN}{d\beta} \Big _{\min(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.035 |
| $\frac{dN}{d\beta} \Big _{\max(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | -0.160 | $\frac{dN}{d\beta} \Big _{\min(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | -0.161 |
| $\frac{dN}{d\delta} \Big _{\beta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.277 | $\frac{dN}{d\delta} \Big _{\beta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.277 |
| $\frac{dN}{d\beta} \Big _{\delta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 9.838 | $\frac{dN}{d\beta} \Big _{\delta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 9.838 |

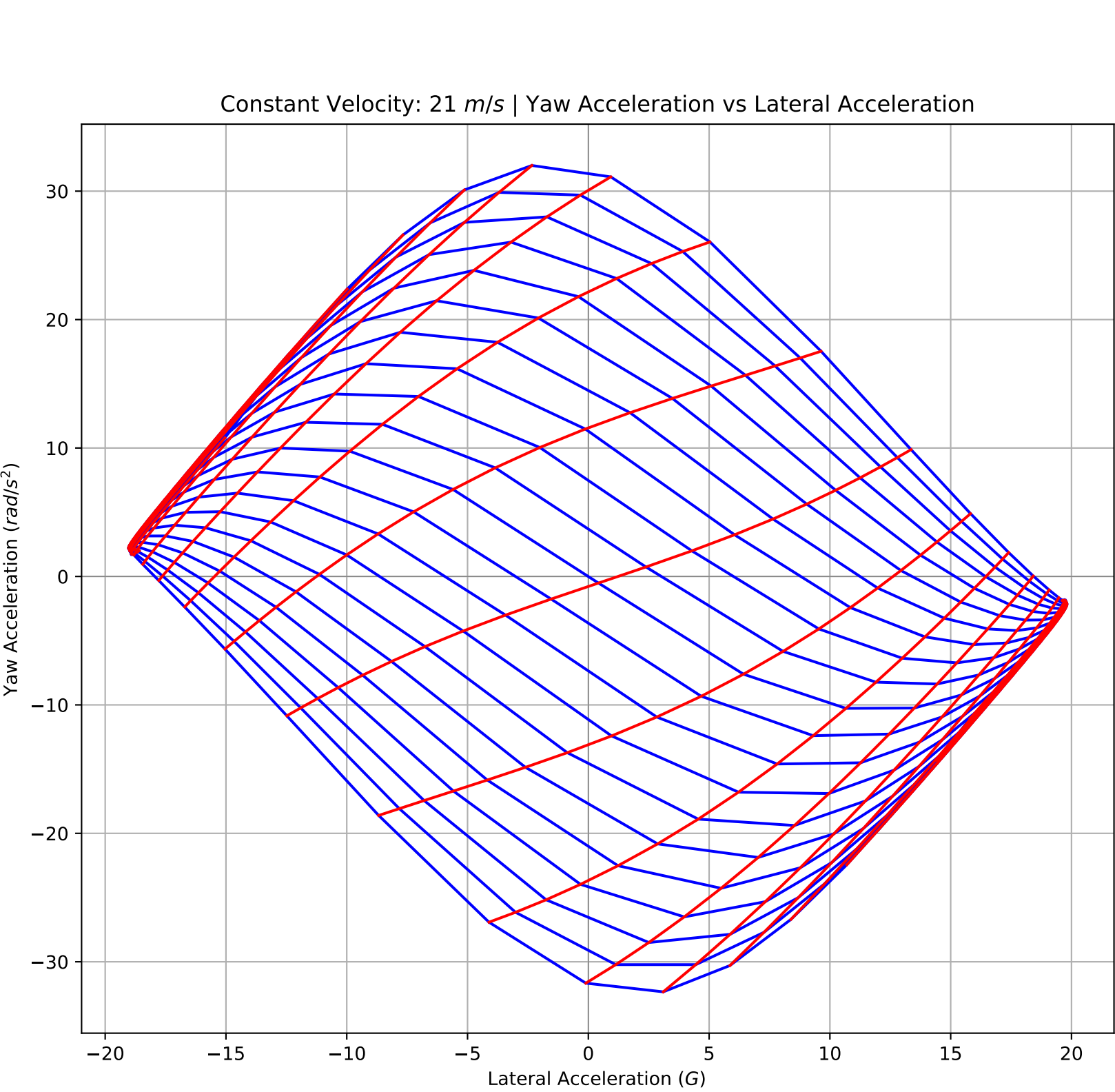


Positive Basis

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

Negative Basis

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

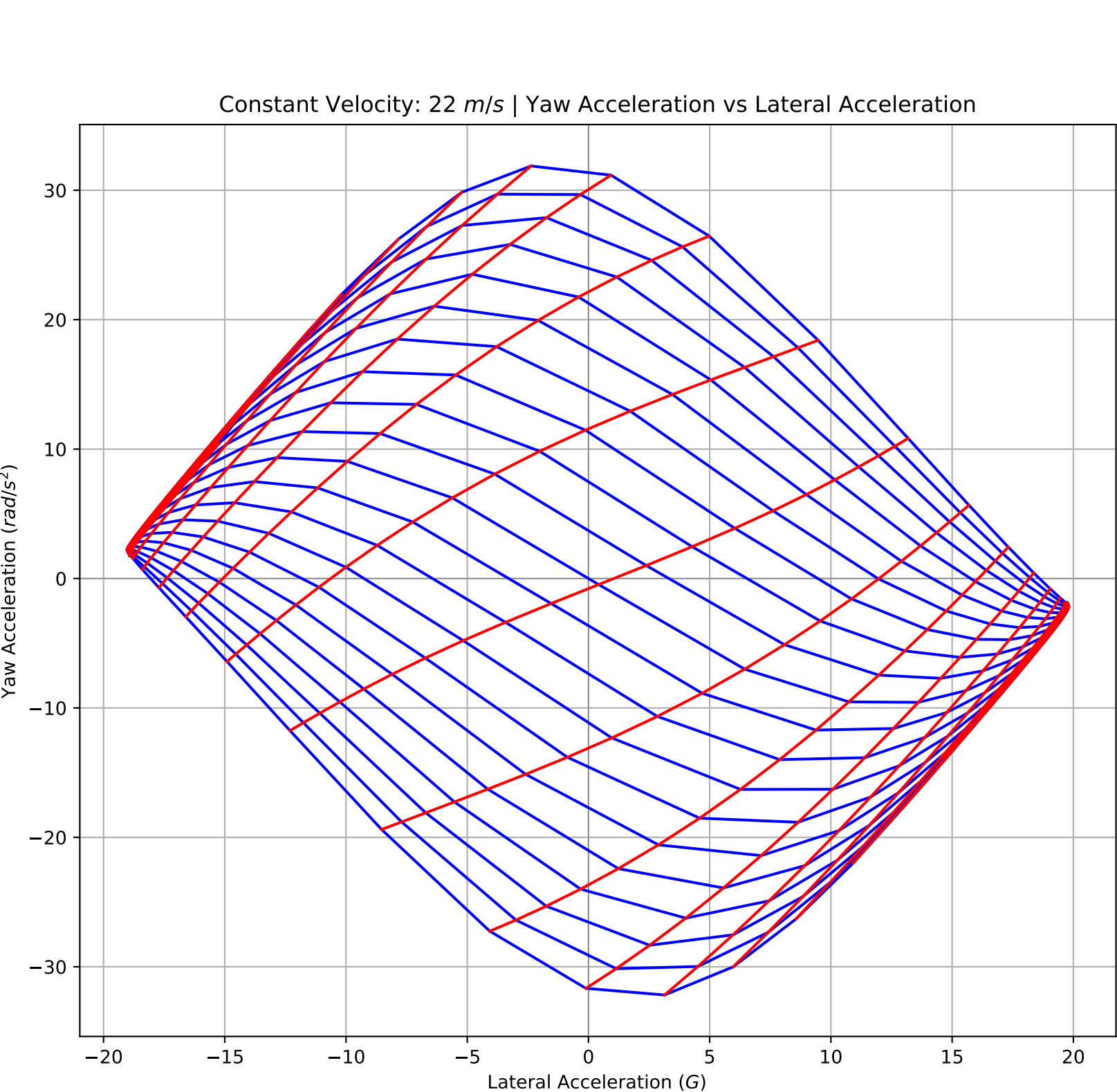


Positive Basis

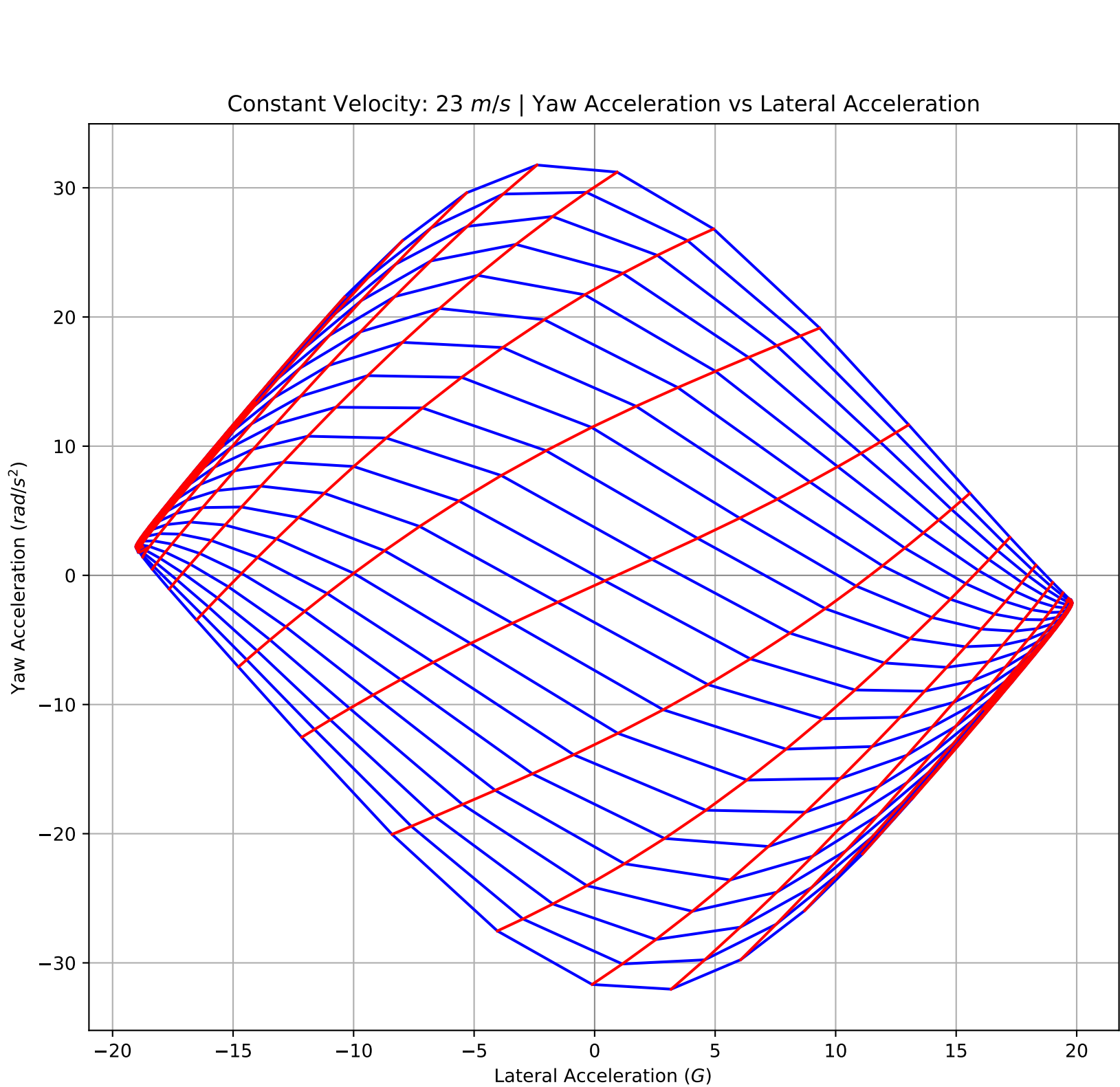
| | |
|--|--------|
| $\max(a_y) \text{ (m/s)}$ | 19.818 |
| $\max(a_y _{N=0}) \text{ (m/s)}$ | 18.779 |
| $N _{\max(a_y)} \text{ (N} \cdot \text{m)}$ | -2.156 |
| $\beta _{\max(a_y)} \text{ (deg)}$ | -8.000 |
| $\delta _{\max(a_y)} \text{ (deg)}$ | 20.000 |
| $\max(N) \text{ (N} \cdot \text{m)}$ | 31.998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

Negative Basis

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



| Positive Basis | | Negative Basis | |
|--|--------|---|---------|
| $\max(a_y) \text{ (m/s)}$ | 19.816 | $\min(a_y) \text{ (m/s)}$ | -19.037 |
| $\max(a_y _{N=0}) \text{ (m/s)}$ | 18.802 | $\min(a_y _{N=0}) \text{ (m/s)}$ | -18.061 |
| $N _{\max(a_y)} \text{ (N} \cdot \text{m)}$ | -2.134 | $N _{\min(a_y)} \text{ (N} \cdot \text{m)}$ | 2.191 |
| $\beta _{\max(a_y)} \text{ (deg)}$ | -8.000 | $\beta _{\min(a_y)} \text{ (deg)}$ | 8.000 |
| $\delta _{\max(a_y)} \text{ (deg)}$ | 20.000 | $\delta _{\min(a_y)} \text{ (deg)}$ | -15.000 |
| $\max(N) \text{ (N} \cdot \text{m)}$ | 31.874 | $\min(N) \text{ (N} \cdot \text{m)}$ | -32.181 |
| $\beta _{\max(N)} \text{ (deg)}$ | 4.000 | $\beta _{\min(N)} \text{ (deg)}$ | -4.000 |
| $\delta _{\max(N)} \text{ (deg)}$ | 25.000 | $\delta _{\min(N)} \text{ (deg)}$ | -25.000 |
| $a_y _{\max(N)} \text{ (m/s)}$ | -2.366 | $a_y _{\min(N)} \text{ (m/s)}$ | 3.139 |
| $\frac{dN}{d\delta} \Big _{\max(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.026 | $\frac{dN}{d\beta} \Big _{\min(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.025 |
| $\frac{dN}{d\beta} \Big _{\max(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | -0.098 | $\frac{dN}{d\beta} \Big _{\min(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | -0.195 |
| $\frac{dN}{d\delta} \Big _{\beta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.588 | $\frac{dN}{d\delta} \Big _{\beta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.588 |
| $\frac{dN}{d\beta} \Big _{\delta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 7.512 | $\frac{dN}{d\beta} \Big _{\delta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 7.512 |

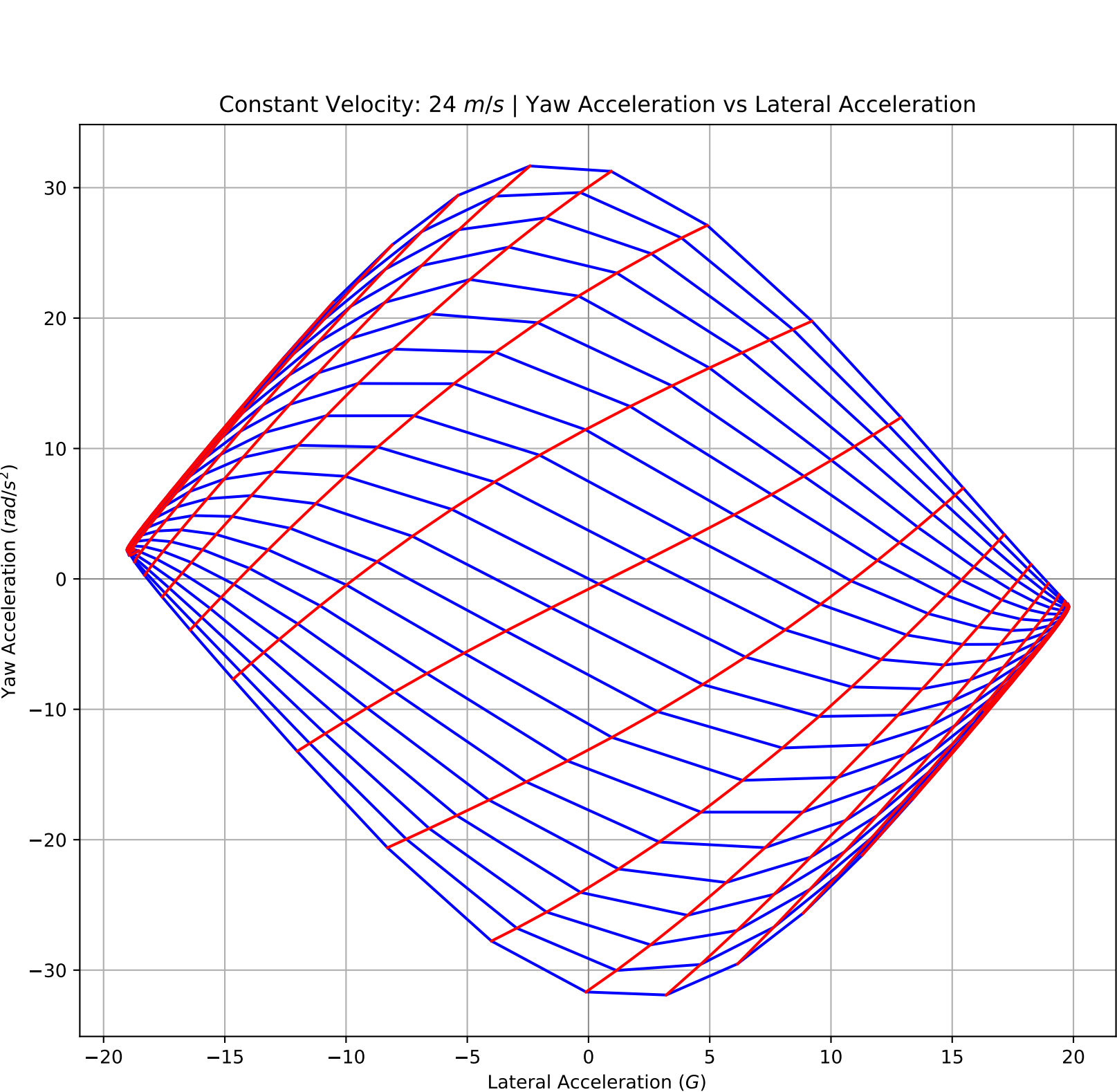


Positive Basis

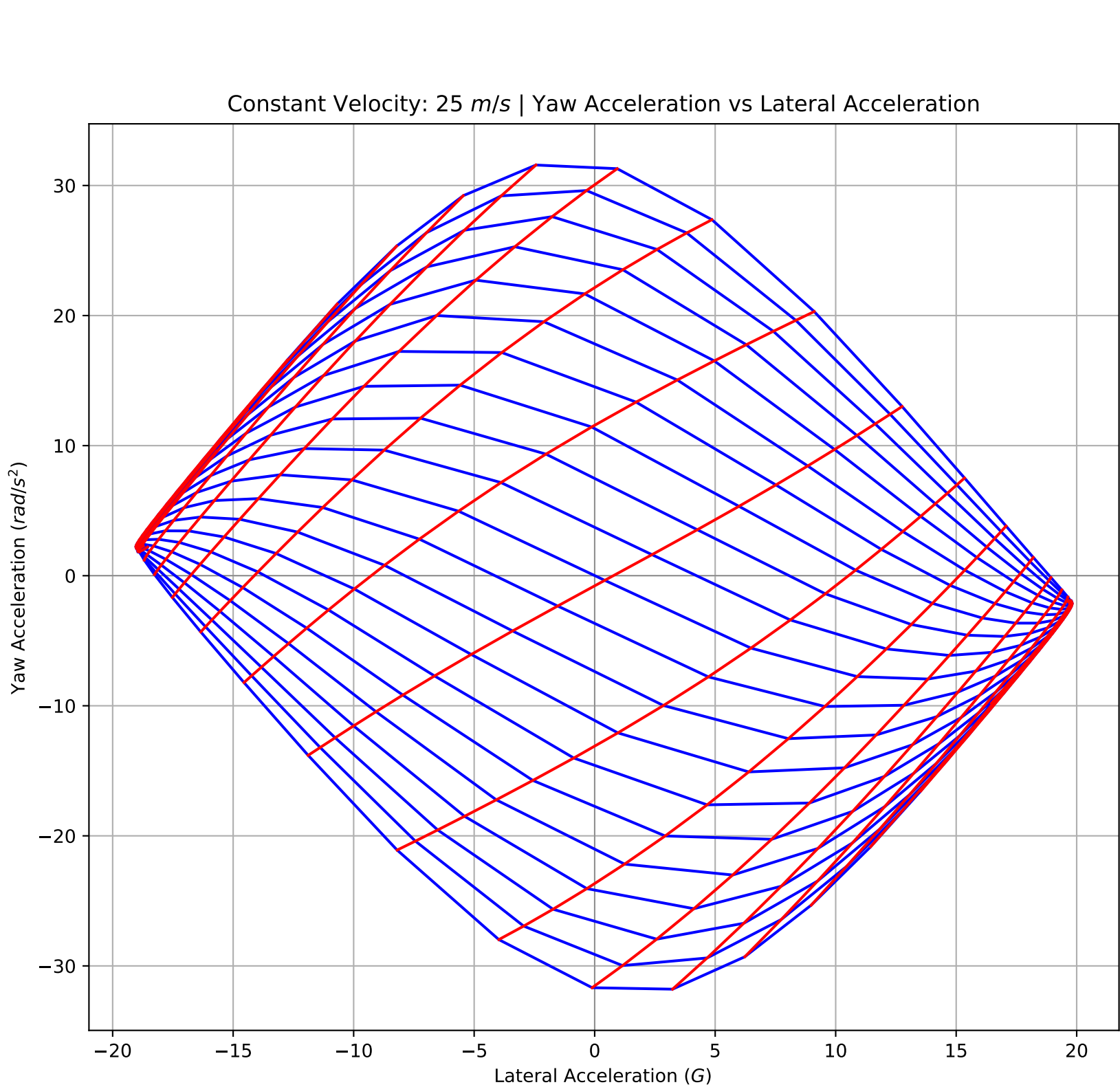
| | |
|--|--------|
| $\max(a_y) \text{ (m/s)}$ | 19.813 |
| $\max(a_y _{N=0}) \text{ (m/s)}$ | 18.818 |
| $N _{\max(a_y)} \text{ (N} \cdot \text{m)}$ | -2.188 |
| $\beta _{\max(a_y)} \text{ (deg)}$ | -8.000 |
| $\delta _{\max(a_y)} \text{ (deg)}$ | 17.500 |
| $\max(N) \text{ (N} \cdot \text{m)}$ | 31.764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

Negative Basis

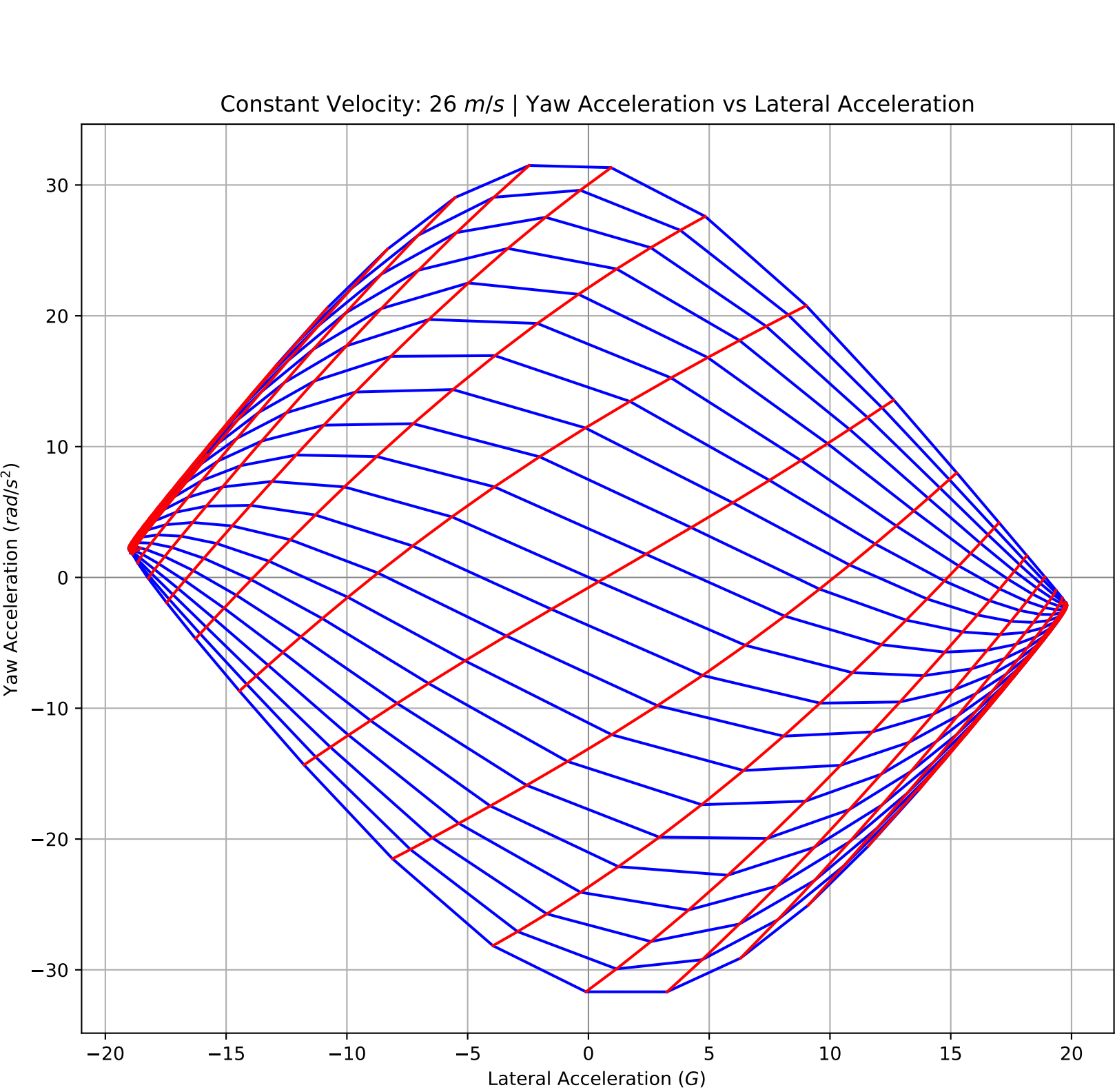
| | |
|--|---------|
| $\min(a_y) \text{ (m/s)}$ | -19.037 |
| $\min(a_y _{N=0}) \text{ (m/s)}$ | -18.134 |
| $N _{\min(a_y)} \text{ (N} \cdot \text{m)}$ | 2.188 |
| $\beta _{\min(a_y)} \text{ (deg)}$ | 8.000 |
| $\delta _{\min(a_y)} \text{ (deg)}$ | -15.000 |
| $\min(N) \text{ (N} \cdot \text{m)}$ |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



| Positive Basis | | Negative Basis | |
|--|--------|--|---------|
| $\max(a_y) \text{ (m/s)}$ | 19.813 | $\min(a_y) \text{ (m/s)}$ | -19.038 |
| $\max(a_y _{N=0}) \text{ (m/s)}$ | 18.841 | $\min(a_y _{N=0}) \text{ (m/s)}$ | -18.187 |
| $N _{\max(a_y)} \text{ (N} \cdot \text{m)}$ | -2.098 | $N _{\min(a_y)} \text{ (N} \cdot \text{m)}$ | 2.250 |
| $\beta _{\max(a_y)} \text{ (deg)}$ | -9.000 | $\beta _{\min(a_y)} \text{ (deg)}$ | 8.000 |
| $\delta _{\max(a_y)} \text{ (deg)}$ | 15.000 | $\delta _{\min(a_y)} \text{ (deg)}$ | -12.500 |
| $\max(N) \text{ (N} \cdot \text{m)}$ | 31.664 | $\min(N) \text{ (N} \cdot \text{m)}$ | -31.906 |
| $\beta _{\max(N)} \text{ (deg)}$ | 4.000 | $\beta _{\min(N)} \text{ (deg)}$ | -4.000 |
| $\delta _{\max(N)} \text{ (deg)}$ | 25.000 | $\delta _{\min(N)} \text{ (deg)}$ | -25.000 |
| $a_y _{\max(N)} \text{ (m/s)}$ | -2.415 | $a_y _{\min(N)} \text{ (m/s)}$ | 3.204 |
| $\frac{dN}{d\delta} \Big _{\max(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.026 | $\frac{dN}{d\beta} \Big _{\min(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.035 |
| $\frac{dN}{d\beta} \Big _{\max(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | -0.182 | $\frac{dN}{d\delta} \Big _{\min(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | -0.200 |
| $\frac{dN}{d\delta} \Big _{\beta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.734 | $\frac{dN}{d\beta} \Big _{\beta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.734 |
| $\frac{dN}{d\beta} \Big _{\delta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 6.395 | $\frac{dN}{d\delta} \Big _{\delta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 6.395 |



| Positive Basis | | Negative Basis | |
|--|--------|---|---------|
| $\max(a_y) \text{ (m/s)}$ | 19.813 | $\min(a_y) \text{ (m/s)}$ | -19.040 |
| $\max(a_y _{N=0}) \text{ (m/s)}$ | 18.870 | $\min(a_y _{N=0}) \text{ (m/s)}$ | -18.226 |
| $N _{\max(a_y)} \text{ (N} \cdot \text{m)}$ | -2.166 | $N _{\min(a_y)} \text{ (N} \cdot \text{m)}$ | 2.239 |
| $\beta _{\max(a_y)} \text{ (deg)}$ | -9.000 | $\beta _{\min(a_y)} \text{ (deg)}$ | 8.000 |
| $\delta _{\max(a_y)} \text{ (deg)}$ | 12.500 | $\delta _{\min(a_y)} \text{ (deg)}$ | -12.500 |
| $\max(N) \text{ (N} \cdot \text{m)}$ | 31.574 | $\min(N) \text{ (N} \cdot \text{m)}$ | -31.789 |
| $\beta _{\max(N)} \text{ (deg)}$ | 4.000 | $\beta _{\min(N)} \text{ (deg)}$ | -4.000 |
| $\delta _{\max(N)} \text{ (deg)}$ | 25.000 | $\delta _{\min(N)} \text{ (deg)}$ | -25.000 |
| $a_y _{\max(N)} \text{ (m/s)}$ | -2.436 | $a_y _{\min(N)} \text{ (m/s)}$ | 3.232 |
| $\frac{dN}{d\delta} \Big _{\max(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.037 | $\frac{dN}{d\beta} \Big _{\min(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.031 |
| $\frac{dN}{d\beta} \Big _{\max(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | -0.213 | $\frac{dN}{d\beta} \Big _{\min(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | -0.170 |
| $\frac{dN}{d\delta} \Big _{\beta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.794 | $\frac{dN}{d\delta} \Big _{\beta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.794 |
| $\frac{dN}{d\beta} \Big _{\delta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 5.930 | $\frac{dN}{d\beta} \Big _{\delta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 5.930 |

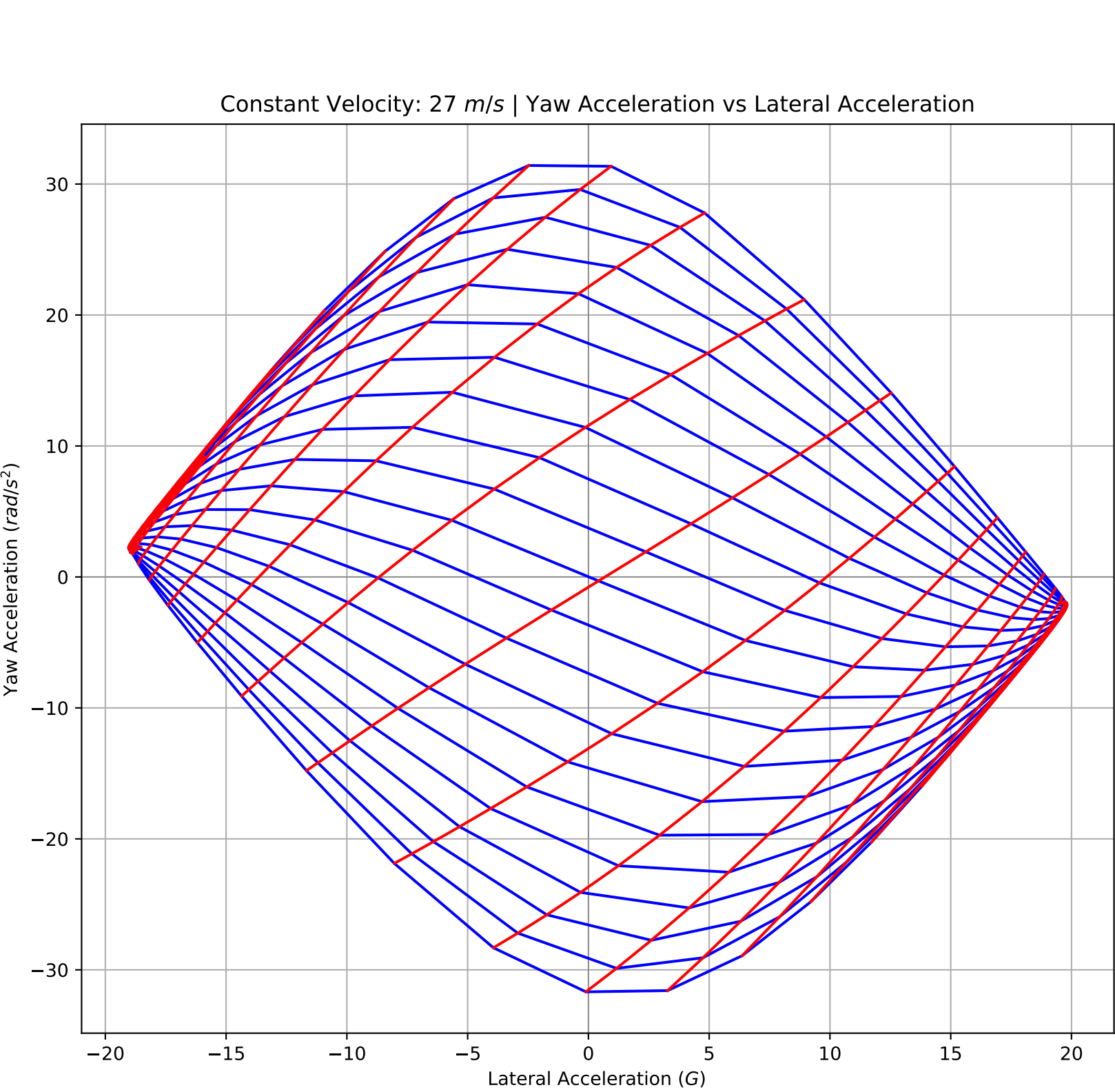


Positive Basis

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

Negative Basis

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

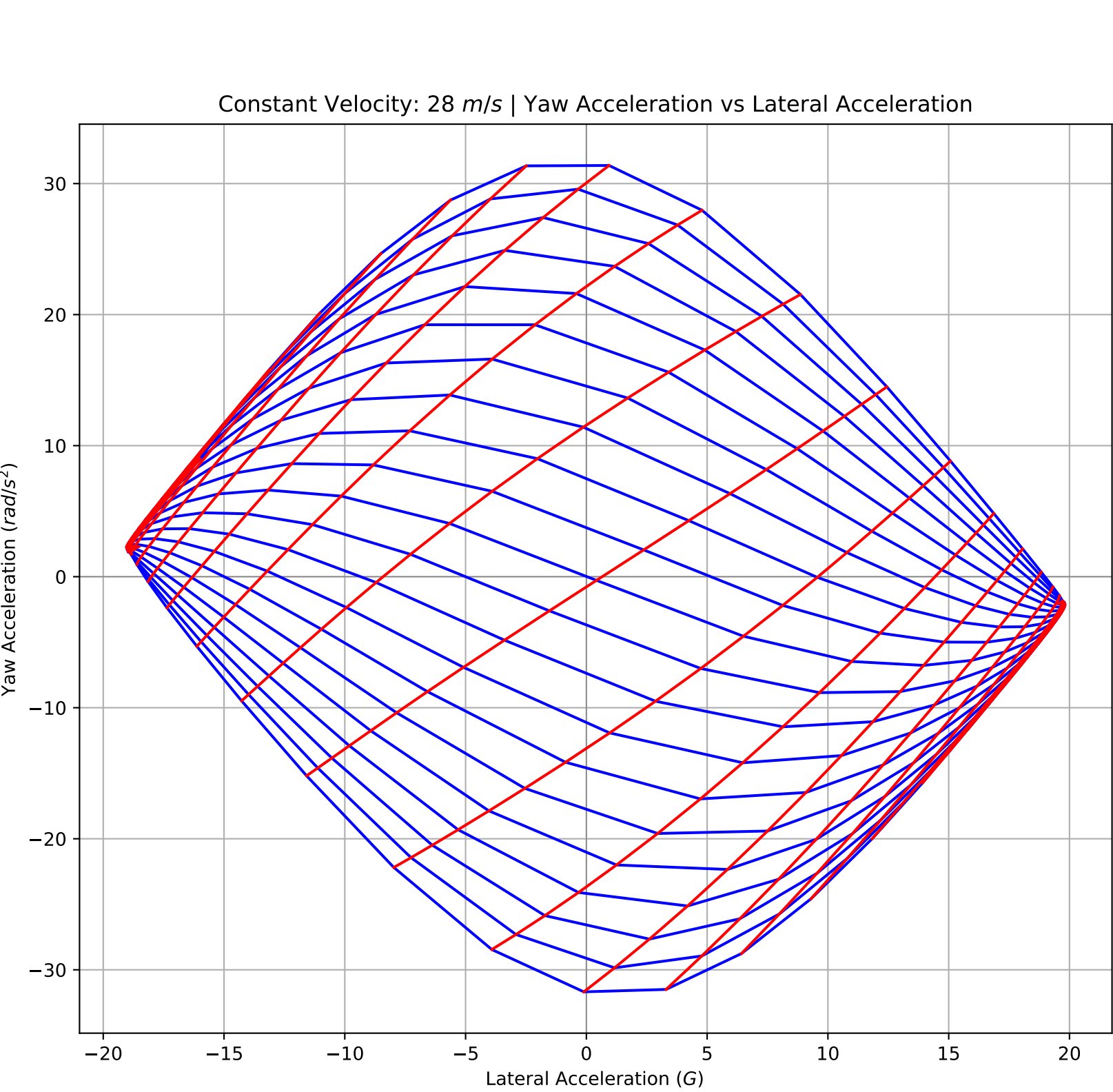


Positive Basis

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

Negative Basis

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

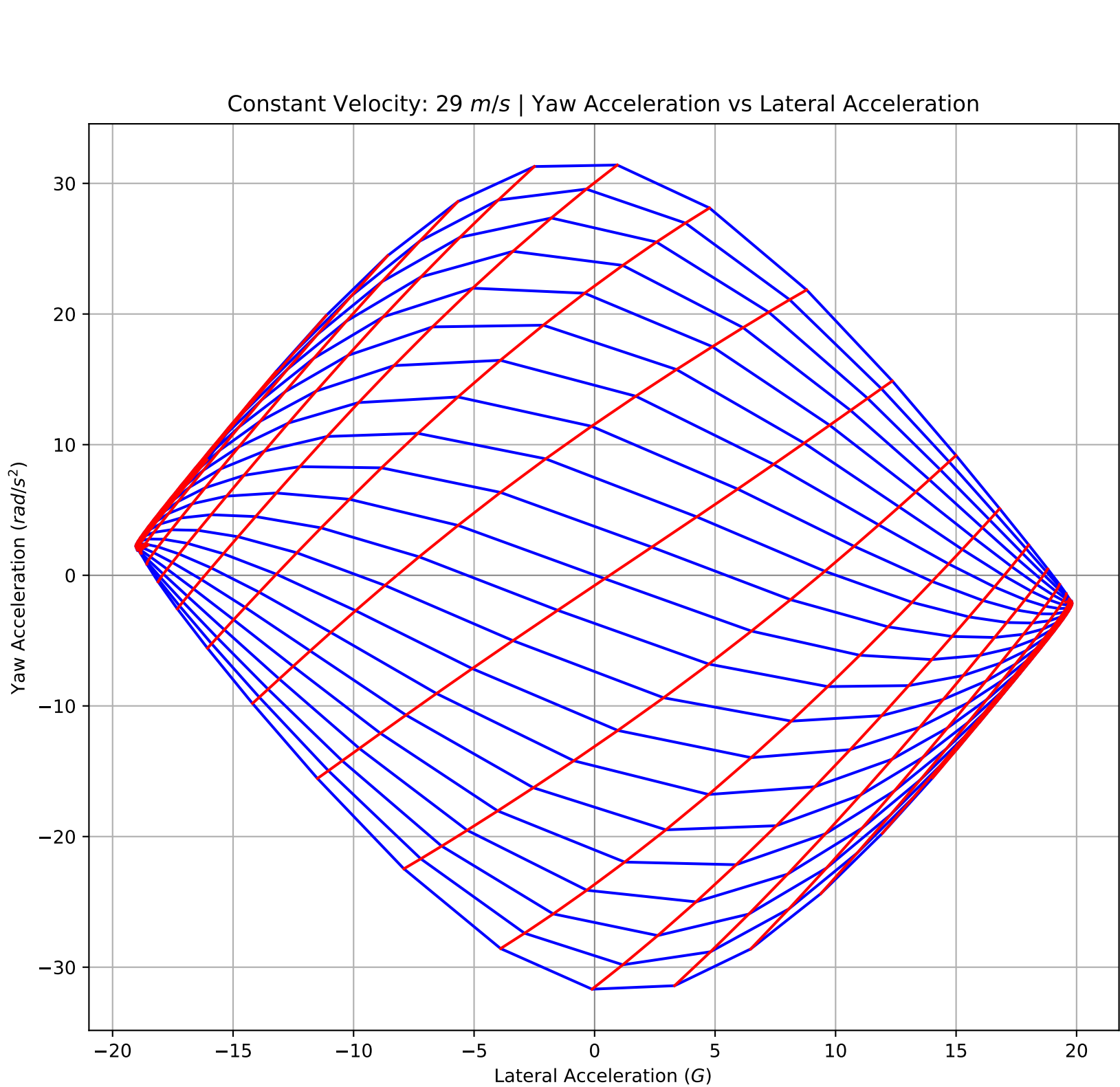


Positive Basis

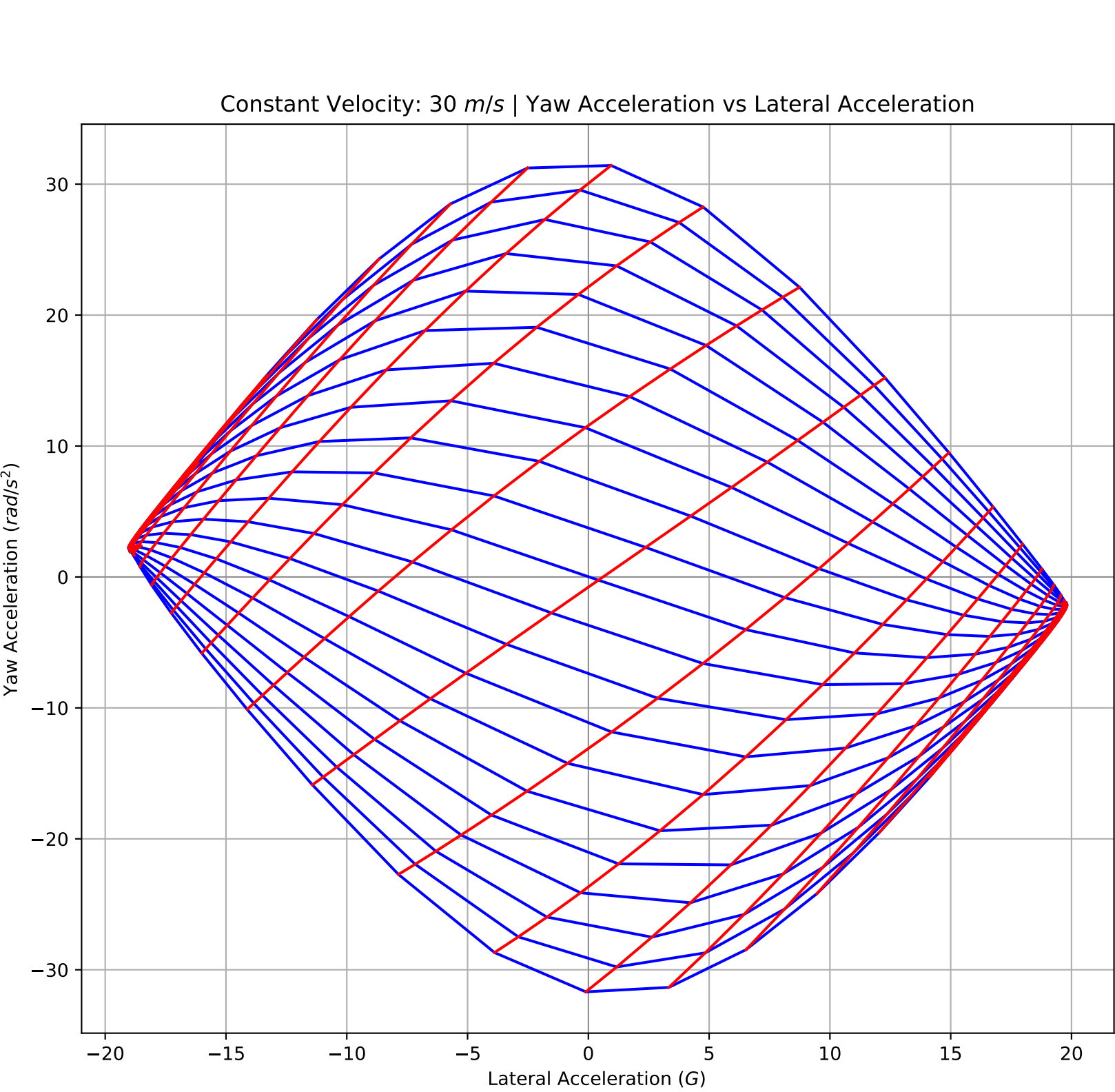
| | |
|---|--------|
| $\max(a_y) \text{ (m/s)}$ | 19.817 |
| $\max(a_y _{N=0}) \text{ (m/s)}$ | 18.980 |
| $N _{\max(a_y)} \text{ (N} \cdot \text{m)}$ | -2.137 |
| $\beta _{\max(a_y)} \text{ (deg)}$ | -9.000 |
| $\delta _{\max(a_y)} \text{ (deg)}$ | 12.500 |
| $\max(N) \text{ (N} \cdot \text{m)}$ |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

Negative Basis

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



| Positive Basis | | Negative Basis | |
|--|--------|---|---------|
| $\max(a_y) \text{ (m/s)}$ | 19.817 | $\min(a_y) \text{ (m/s)}$ | -19.038 |
| $\max(a_y _{N=0}) \text{ (m/s)}$ | 19.003 | $\min(a_y _{N=0}) \text{ (m/s)}$ | -18.288 |
| $N _{\max(a_y)} \text{ (N} \cdot \text{m)}$ | -2.129 | $N _{\min(a_y)} \text{ (N} \cdot \text{m)}$ | 2.208 |
| $\beta _{\max(a_y)} \text{ (deg)}$ | -9.000 | $\beta _{\min(a_y)} \text{ (deg)}$ | 8.000 |
| $\delta _{\max(a_y)} \text{ (deg)}$ | 12.500 | $\delta _{\min(a_y)} \text{ (deg)}$ | -12.500 |
| $\max(N) \text{ (N} \cdot \text{m)}$ | 31.405 | $\min(N) \text{ (N} \cdot \text{m)}$ | -31.683 |
| $\beta _{\max(N)} \text{ (deg)}$ | 3.000 | $\beta _{\min(N)} \text{ (deg)}$ | -3.000 |
| $\delta _{\max(N)} \text{ (deg)}$ | 25.000 | $\delta _{\min(N)} \text{ (deg)}$ | -25.000 |
| $a_y _{\max(N)} \text{ (m/s)}$ | 0.941 | $a_y _{\min(N)} \text{ (m/s)}$ | -0.104 |
| $\frac{dN}{d\delta} \Big _{\max(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.028 | $\frac{dN}{d\beta} \Big _{\min(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.020 |
| $\frac{dN}{d\beta} \Big _{\max(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | -0.148 | $\frac{dN}{d\beta} \Big _{\min(a_y)} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | -0.075 |
| $\frac{dN}{d\delta} \Big _{\beta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.974 | $\frac{dN}{d\delta} \Big _{\beta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 0.974 |
| $\frac{dN}{d\beta} \Big _{\delta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 4.516 | $\frac{dN}{d\beta} \Big _{\delta=0} \text{ (}\frac{\text{N} \cdot \text{m}}{\text{deg}}\text{)}$ | 4.516 |



| Positive Basis | | Negative Basis | |
|---|--------|--|---------|
| $\max(a_y)$ (<i>m/s</i>) | 19.817 | $\min(a_y)$ (<i>m/s</i>) | -19.036 |
| $\max(a_y _{N=0})$ (<i>m/s</i>) | 19.022 | $\min(a_y _{N=0})$ (<i>m/s</i>) | -18.295 |
| $N _{\max(a_y)}$ (<i>N · m</i>) | -2.123 | $N _{\min(a_y)}$ (<i>N · m</i>) | 2.269 |
| $\beta _{\max(a_y)}$ (<i>deg</i>) | -9.000 | $\beta _{\min(a_y)}$ (<i>deg</i>) | 8.000 |
| $\delta _{\max(a_y)}$ (<i>deg</i>) | 12.500 | $\delta _{\min(a_y)}$ (<i>deg</i>) | -10.000 |
| $\max(N)$ (<i>N · m</i>) | 31.426 | $\min(N)$ (<i>N · m</i>) | -31.684 |
| $\beta _{\max(N)}$ (<i>deg</i>) | 3.000 | $\beta _{\min(N)}$ (<i>deg</i>) | -3.000 |
| $\delta _{\max(N)}$ (<i>deg</i>) | 25.000 | $\delta _{\min(N)}$ (<i>deg</i>) | -25.000 |
| $a_y _{\max(N)}$ (<i>m/s</i>) | 0.941 | $a_y _{\min(N)}$ (<i>m/s</i>) | -0.104 |
| $\frac{dN}{d\delta} _{\max(a_y)}$ ($\frac{N \cdot m}{deg}$) | 0.027 | $\frac{dN}{d\beta} _{\min(a_y)}$ ($\frac{N \cdot m}{deg}$) | 0.037 |
| $\frac{dN}{d\beta} _{\max(a_y)}$ ($\frac{N \cdot m}{deg}$) | -0.136 | $\frac{dN}{d\beta} _{\min(a_y)}$ ($\frac{N \cdot m}{deg}$) | -0.129 |
| $\frac{dN}{d\delta} _{\beta=0}$ ($\frac{N \cdot m}{deg}$) | 1.008 | $\frac{dN}{d\delta} _{\beta=0}$ ($\frac{N \cdot m}{deg}$) | 1.008 |
| $\frac{dN}{d\beta} _{\delta=0}$ ($\frac{N \cdot m}{deg}$) | 4.246 | $\frac{dN}{d\beta} _{\delta=0}$ ($\frac{N \cdot m}{deg}$) | 4.246 |