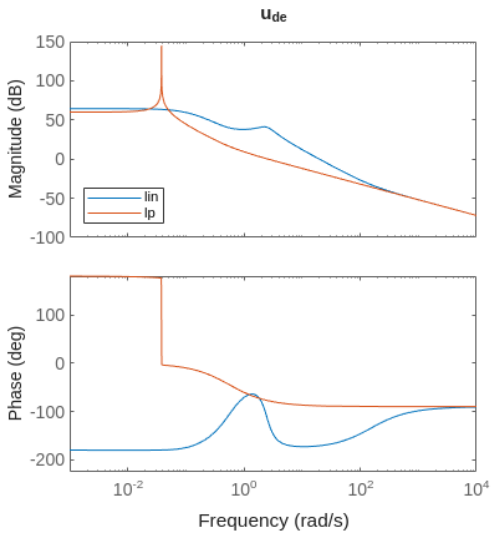
Transfer Functions

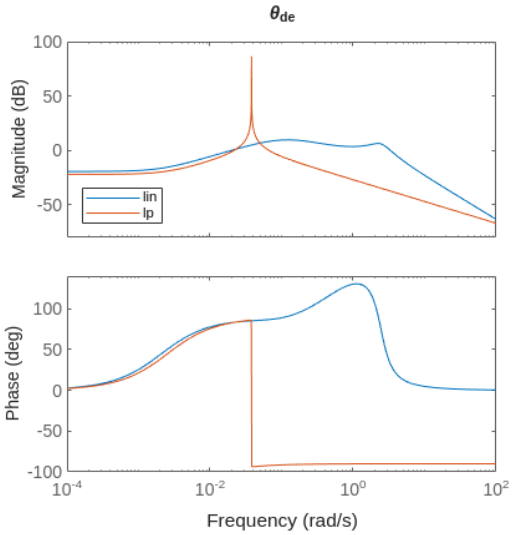
```
u_de =

        2.54 s^3 + 386.4 s^2 + 334 s + 136.6
  ----------------------------------------------
  s^4 + 1.387 s^3 + 5.963 s^2 - 0.2114 s - 0.08247

Continuous-time transfer function.
Model Properties

w_de =

       -34.6 s^3 - 5251 s^2 + 2.548 s - 2.827
  ----------------------------------------------
  s^4 + 1.387 s^3 + 5.963 s^2 - 0.2114 s - 0.08247

Continuous-time transfer function.
Model Properties

q_de =

   -6.77 s^3 - 4.257 s^2 - 0.00888 s - 1.748e-20
  ----------------------------------------------
  s^4 + 1.387 s^3 + 5.963 s^2 - 0.2114 s - 0.08247

Continuous-time transfer function.
Model Properties

theta_de =

           -6.77 s^2 - 4.257 s - 0.00888
  ----------------------------------------------
  s^4 + 1.387 s^3 + 5.963 s^2 - 0.2114 s - 0.08247

Continuous-time transfer function.
Model Properties

u_dth =

  0.000842 s^3 + 0.00151 s^2 + 0.00552 s + 0.0001142
  --------------------------------------------------
   s^4 + 1.387 s^3 + 5.963 s^2 - 0.2114 s - 0.08247

Continuous-time transfer function.
Model Properties

w_dth =

       -0.004692 s^2 - 0.002775 s + 1.688e-06
  ----------------------------------------------
  s^4 + 1.387 s^3 + 5.963 s^2 - 0.2114 s - 0.08247

Continuous-time transfer function.
Model Properties

q_dth =

  -6.04e-06 s^3 - 7.587e-06 s^2 - 2.163e-06 s + 1.269e-24
  ------------------------------------------------------
     s^4 + 1.387 s^3 + 5.963 s^2 - 0.2114 s - 0.08247

Continuous-time transfer function.
Model Properties

theta_dth =

      -6.04e-06 s^2 - 7.587e-06 s - 2.163e-06
  ----------------------------------------------
  s^4 + 1.387 s^3 + 5.963 s^2 - 0.2114 s - 0.08247
```

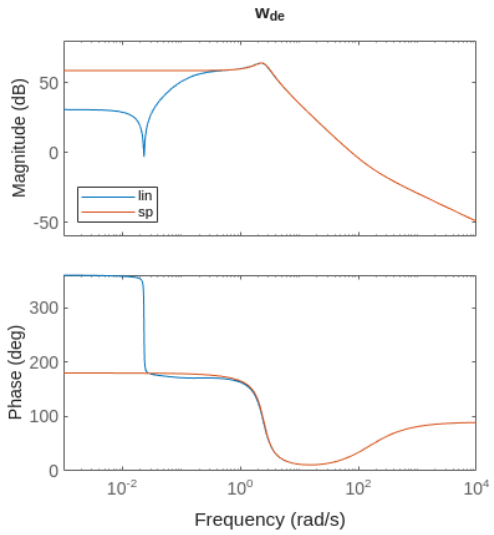
```
Continuous-time transfer function.
Model Properties

u_de_lp =

        2.54 s - 1.438
  --------------------------
  s^2 + 2.11e-06 s + 0.001447

Continuous-time transfer function.
Model Properties

u_dth_lp =

          0.000842 s
  --------------------------
  s^2 + 2.11e-06 s + 0.001447

Continuous-time transfer function.
Model Properties

theta_de_lp =

     0.04482 s + 0.0001146
  --------------------------
  s^2 + 2.11e-06 s + 0.001447

Continuous-time transfer function.
Model Properties

theta_dth_lp =

           3.796e-08
  --------------------------
  s^2 + 2.11e-06 s + 0.001447

Continuous-time transfer function.
Model Properties

w_de_sp =

     -34.6 s - 5251
  ---------------------
  s^2 + 1.387 s + 6.203

Continuous-time transfer function.
Model Properties

w_dth_sp =

        -0.004662
  ---------------------
  s^2 + 1.387 s + 6.203

Continuous-time transfer function.
Model Properties

q_de_sp =

     -6.77 s - 4.246
  ---------------------
  s^2 + 1.387 s + 6.203

Continuous-time transfer function.
Model Properties

q_dth_sp =

  -6.04e-06 s - 4.017e-06
  -----------------------
```

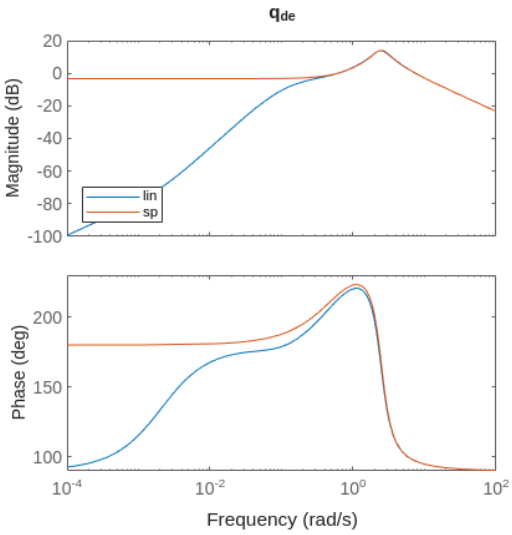
```
   s^2 + 1.387 s + 6.203

Continuous-time transfer function.
Model Properties
```

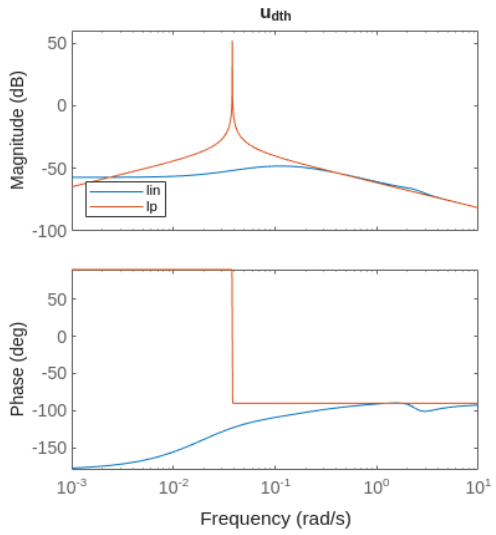
bode Plots

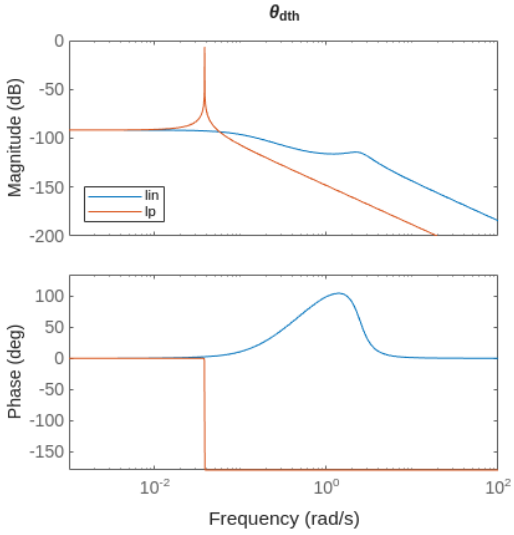


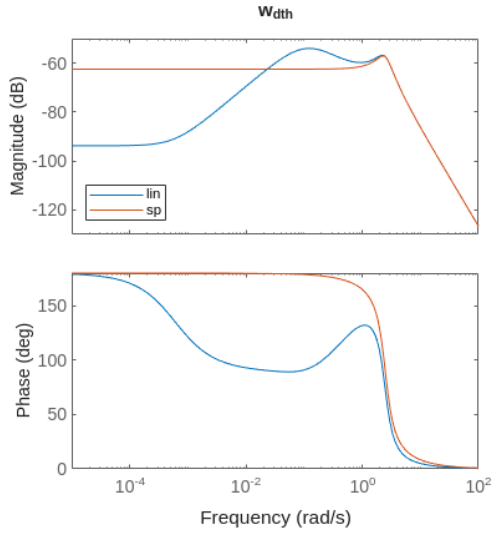


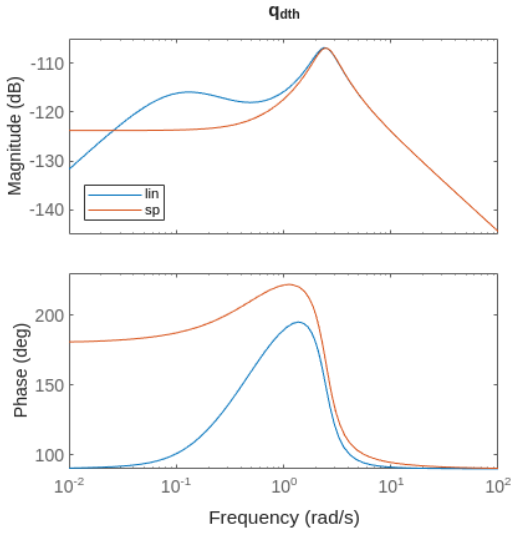




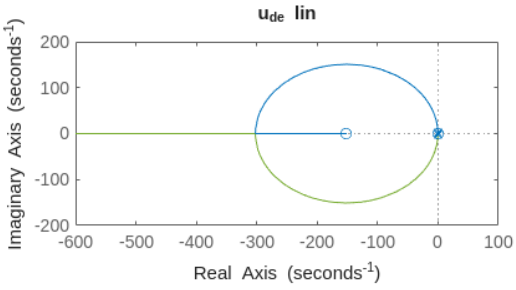


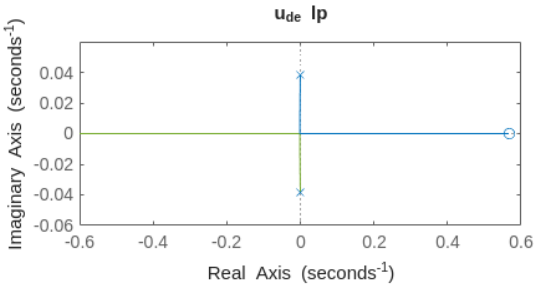


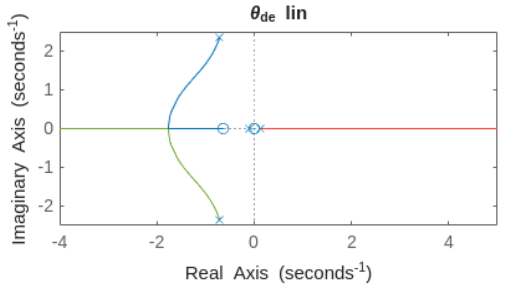


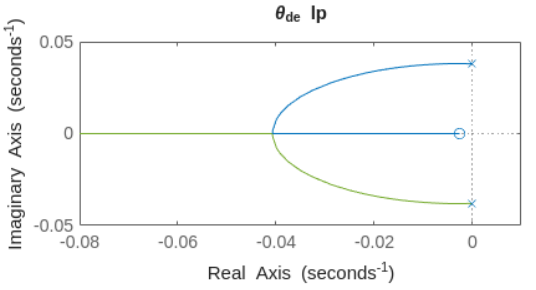


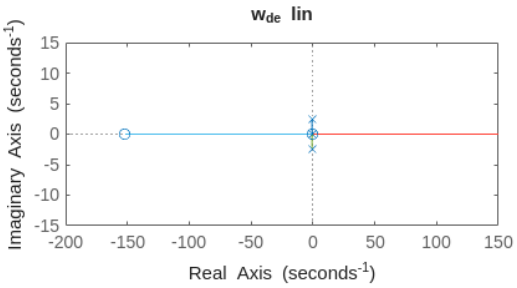
Root Locus Plots

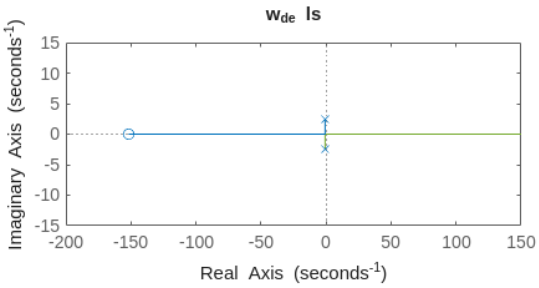


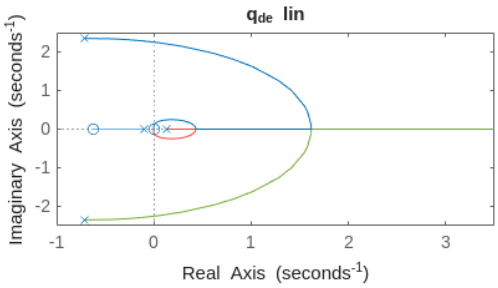


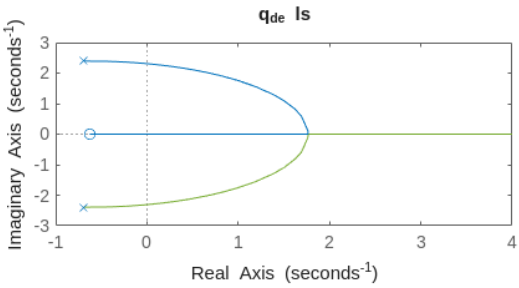


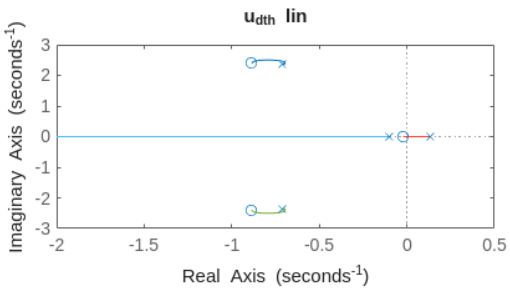


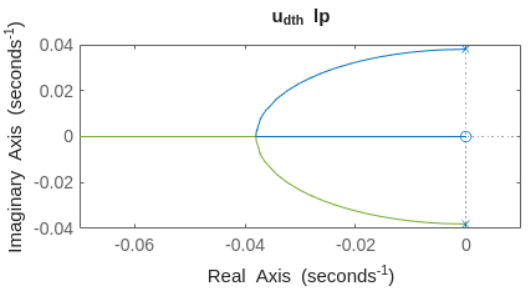

w_{de} lin
Imaginary Axis (seconds^{-1})
Real Axis (seconds^{-1})

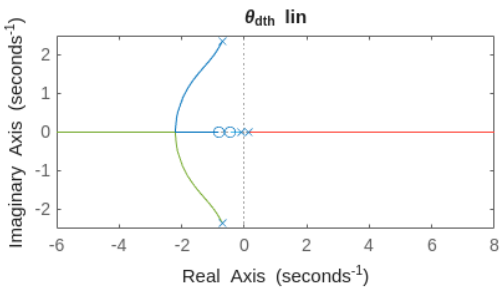

w_{de} ls
Imaginary Axis (seconds^{-1})
Real Axis (seconds^{-1})

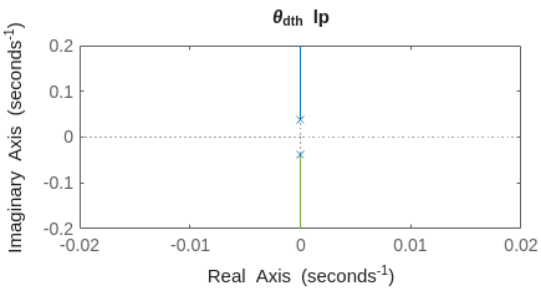

q_{de} lin
Imaginary Axis (seconds^{-1})
Real Axis (seconds^{-1})

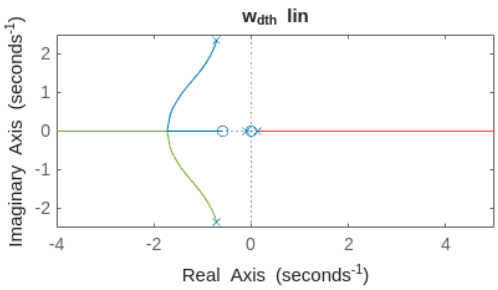

q_{de} ls
Imaginary Axis (seconds^{-1})
Real Axis (seconds^{-1})

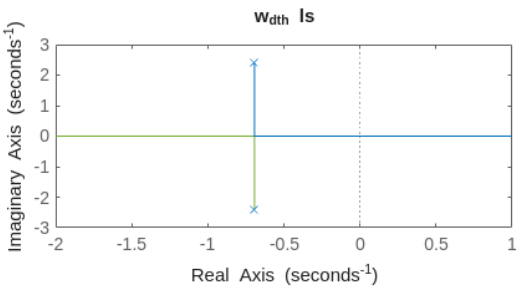

u_{dth} lin
Imaginary Axis (seconds^{-1})
Real Axis (seconds^{-1})

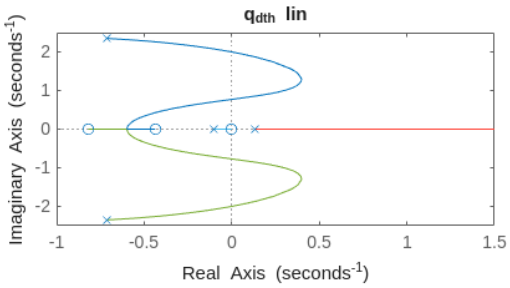

u_{dth} lp
Imaginary Axis (seconds^{-1})
Real Axis (seconds^{-1})

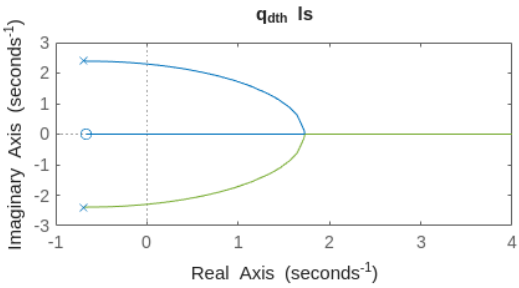

θ_{dth} lin
Imaginary Axis (seconds^{-1})
Real Axis (seconds^{-1})


θ_{dth} lp
Imaginary Axis (seconds^{-1})
Real Axis (seconds^{-1})


w_{dth} lin
Imaginary Axis (seconds^{-1})
Real Axis (seconds^{-1})


w_{dth} ls
Imaginary Axis (seconds^{-1})
Real Axis (seconds^{-1})


q_{dth} lin
Imaginary Axis (seconds^{-1})
Real Axis (seconds^{-1})
2
1
0
-1
-2
-1
-0.5
0
0.5
1
1.5


q_{dth} ls
Imaginary Axis (seconds^{-1})
Real Axis (seconds^{-1})
3
2
1
0
-1
-2
-3
-1
0
1
2
3
4