xtrack\_err\_circle = \_crosstrack\_error = L1 - radius

vector\_curr\_position

radius

vector\_A

xtrack\_vel\_center

ground\_speed\_vector

ltrack\_vel\_center

eta

L1

L1\_ratio = FW\_L1\_DAMPING \* FW\_L1\_PERIOD / pi

K\_L1 = 4\*FW\_L1\_DAMPING\*FW\_L1\_DAMPING

Omega = 2\*pi / FW\_L1\_PERIOD

K\_crosstrack = Omega \* Omega

K\_velocity = 2 \* FW\_L1\_DAMPING \* Omega

Heading\_omega = sqrt(2)\*pi/FW\_L1\_PERIOD