

Initialize the vehicle far away from the seafloor. An example position could be

$[10.5 \ 35.5 \ -36 \ 0 \ 0 \ \pi/2]$ ($x, y, z, \text{roll}, \text{pitch}, \text{yaw}$)

Give a target position that is also sufficiently away from the seafloor, e.g.,

$[10.5 \ 37.5 \ -38 \ 0 \ 0 \ 0]$

Goal: Implement a vehicle position control task, and test that the vehicle reaches the required position and orientation. Add the proper Jacobian variable, its activation function, and the desired reference rate.