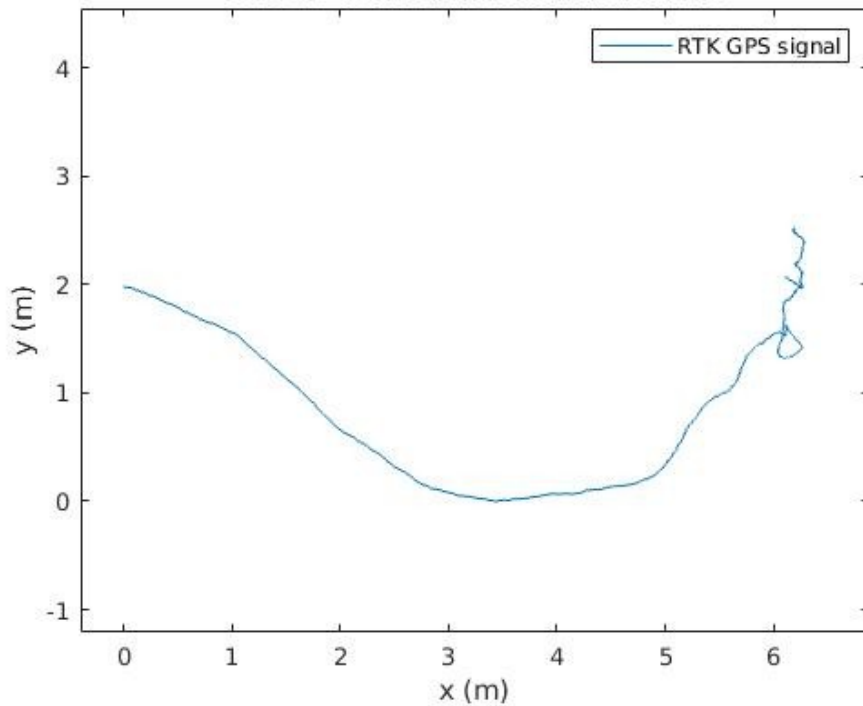


# LAB2: Real Time Kinematic GPS

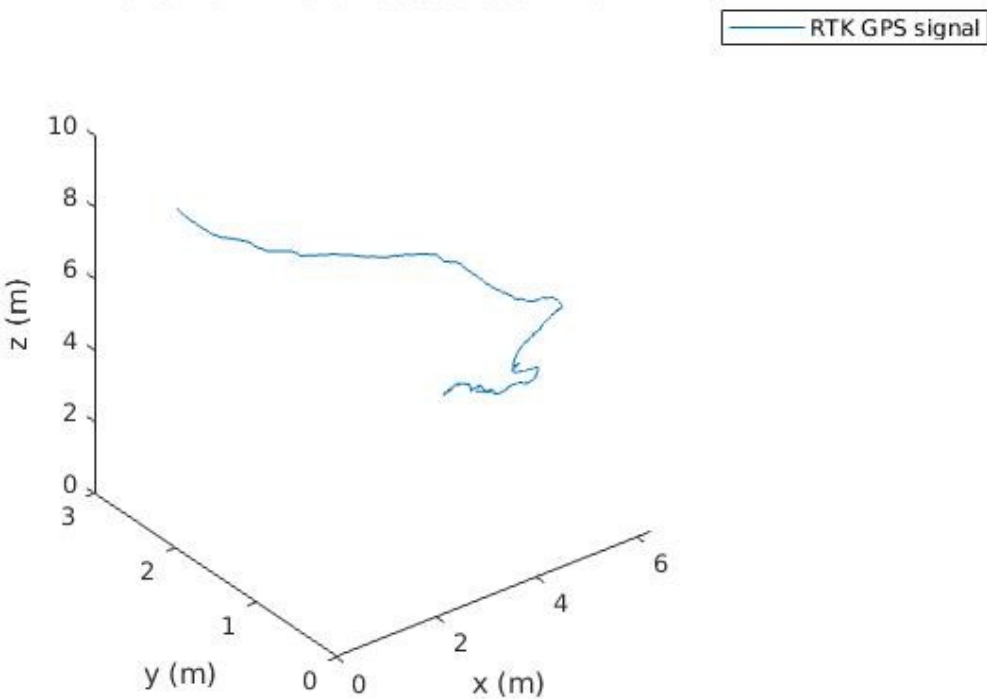
Xupeng Zhu  
001814074

GPS 10 min static occlusion in 2D

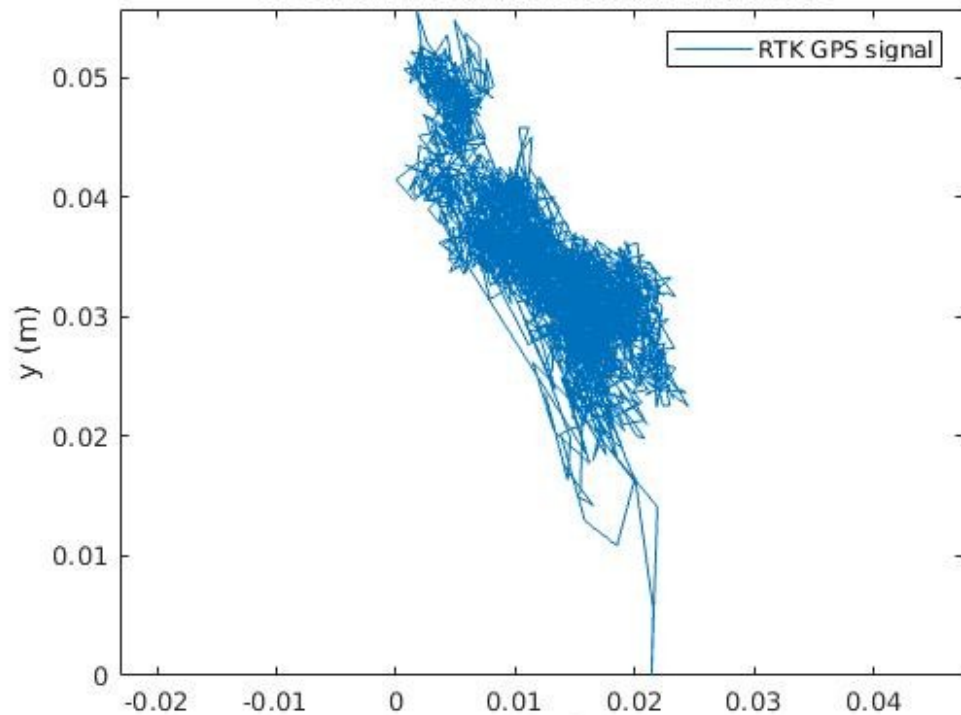


- When there is occlusion, RTK GPS works poor. This problem may due to the multi-thread signal has instable carrier cycles.

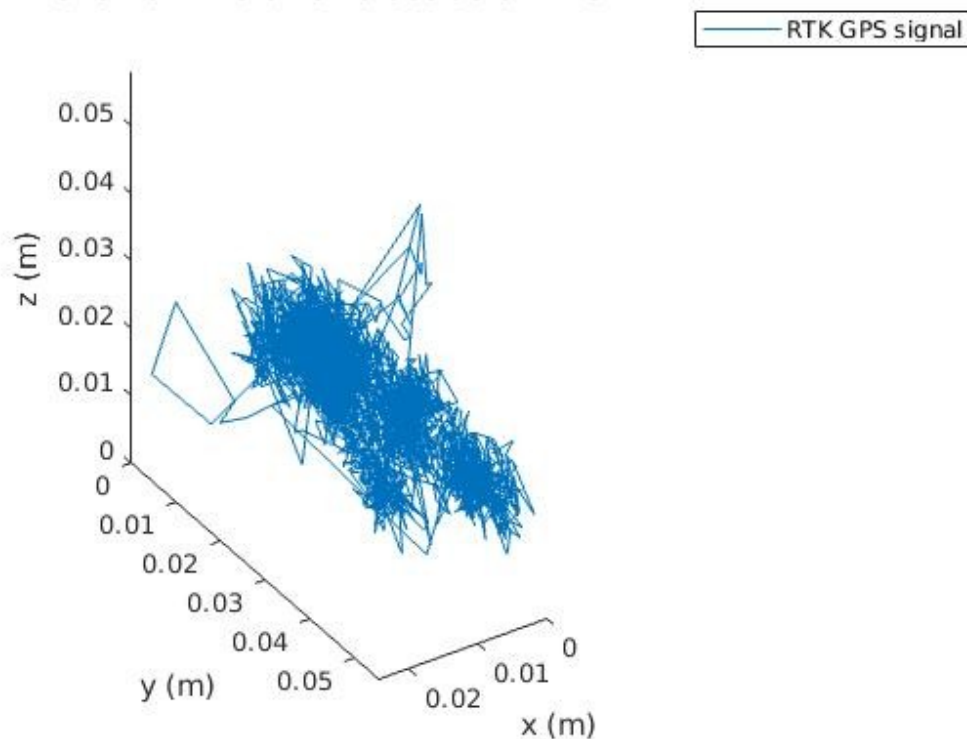
GPS 10 min static occlusion in 3D



**GPS 10min static no occlusion in 2D**

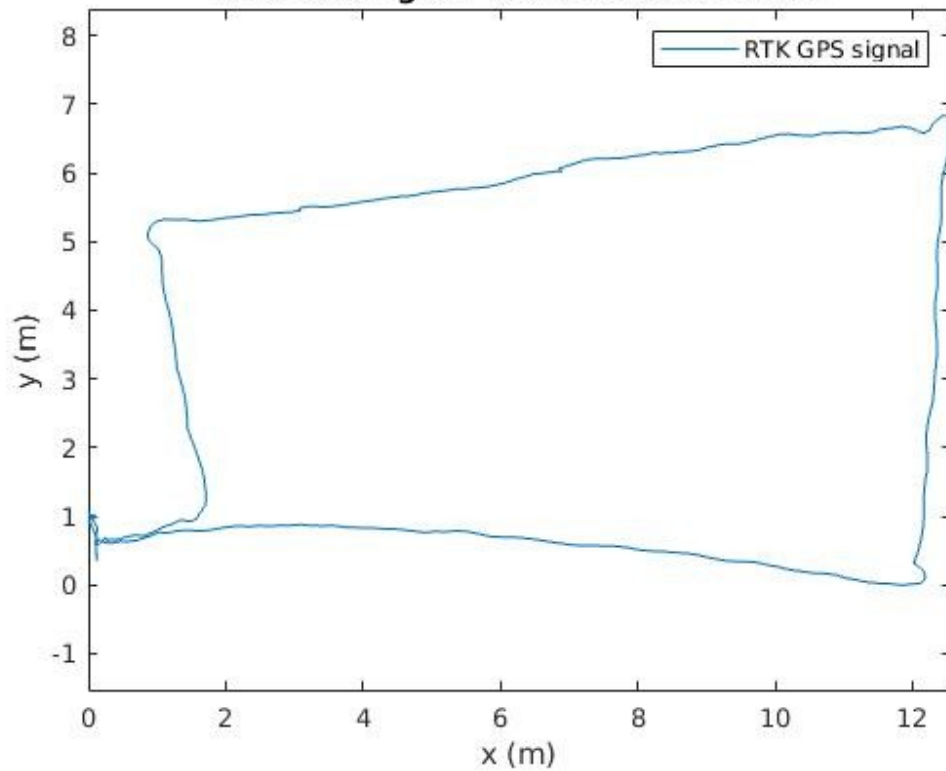


**GPS 10min static no occlusion in 3D**

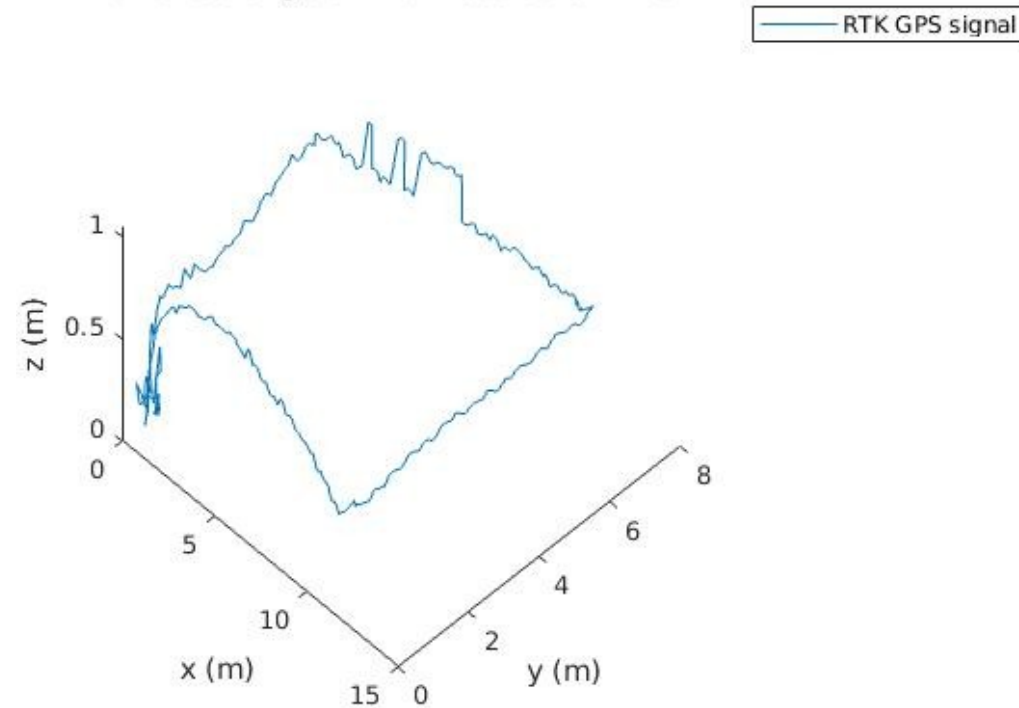


- RTK GPS signal reached higher accuracy when there was no occlusion. The two GPSs communicate in real time on carrier circle to generate centimeter level accuracy.

GPS rectangular walk occlusion in 2D

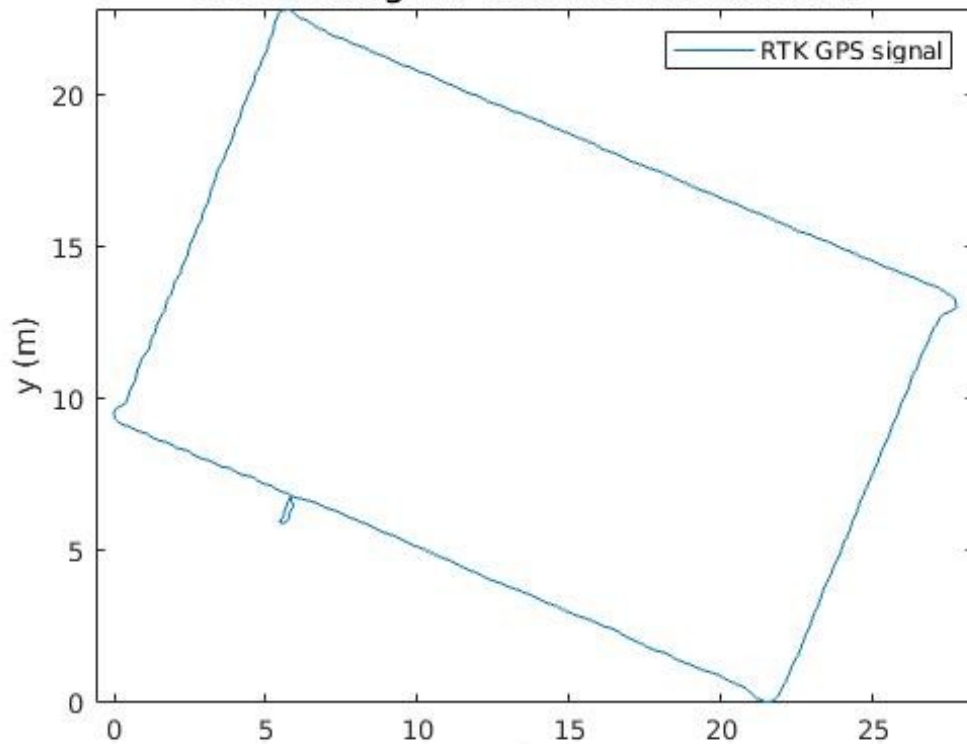


GPS rectangular walk occlusion in 3D

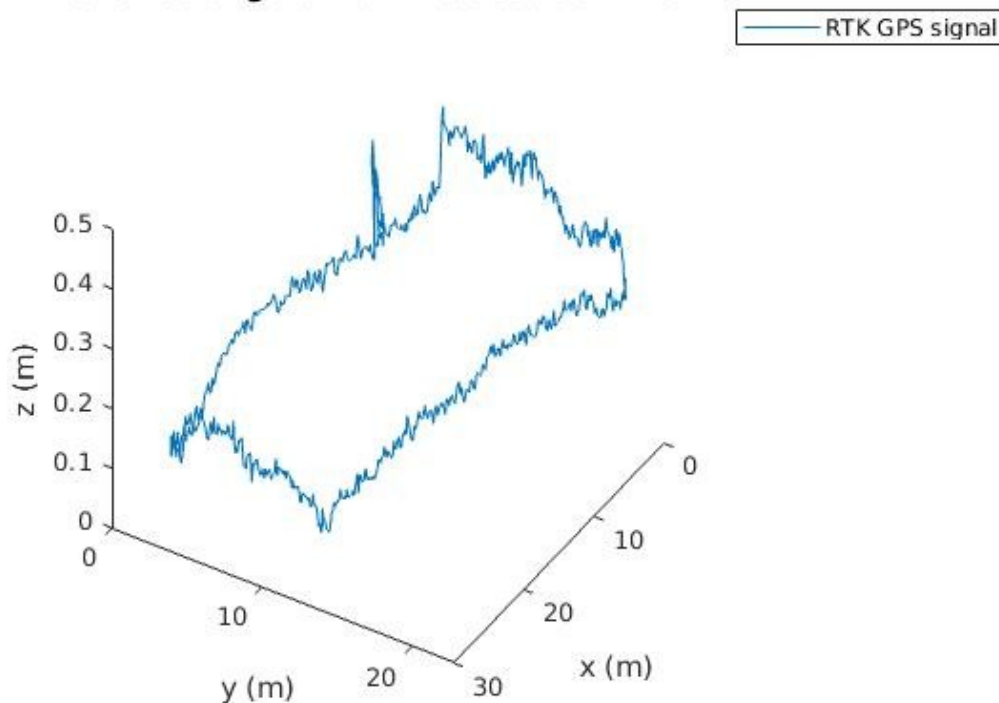


- If GPSs are moving, the multi-thread will change according to the surrounding occlusion. So the accuracy will change according to the occlusion.

GPS rectangular walk no occlusion in 2D



GPS rectangular walk no occlusion in 3D



- In the nearly ideal environment (in an open basketball field), RTK GPS located in high accuracy that it can even capture the movement that we pick up the rover GPS (near (5, 6)) and the height change during moving the rover GPS (small picks in Z axis).