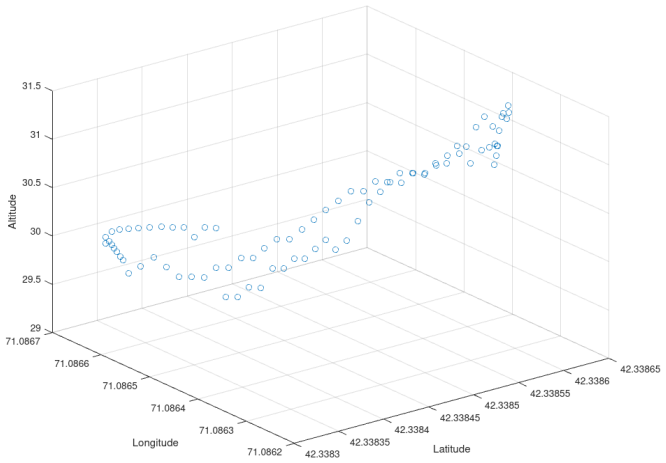
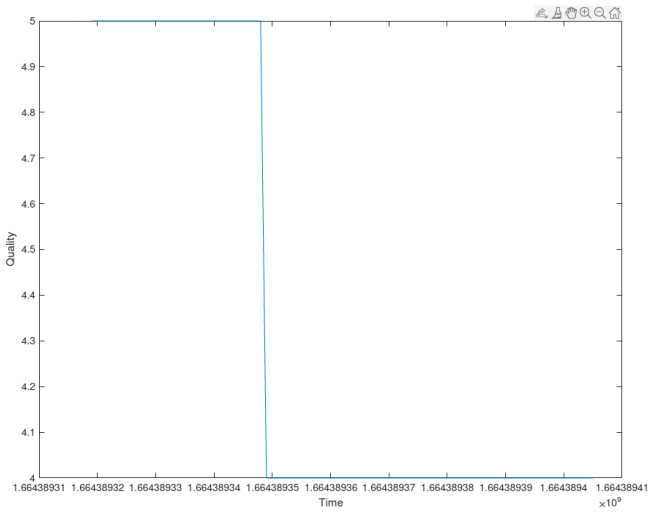


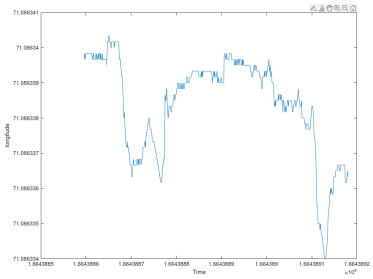


Graph 1 Graph 2

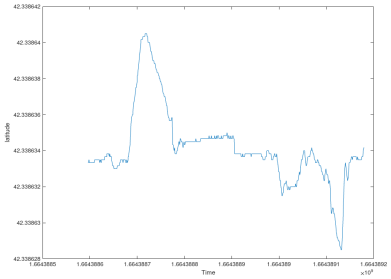
Above Graphs shows Moving and stationary data from RTK-GPS in a clear environment and in a next few paragraphs I will be doing analysis of these graphs.

Graph 1 shows the changes in latitude,longitude and altitude during the whole time-frame and graph 2 shows the quality index of this dataset with respect to time. Quality index is one of the key factor from which accuracy and precision of the data set can be determined. In our case it varies from 4 to 5 for full time constraint , which can be considered very accurate and precise. With it's mean value of 4.5.As dataset was captured in open sky environment it's error percentage is comparatively low.

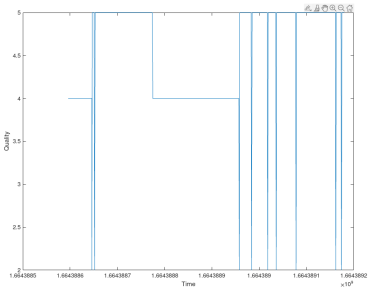
Above image shows the representation of the moving dataset (without obstruction) on google earth.



Graph 3



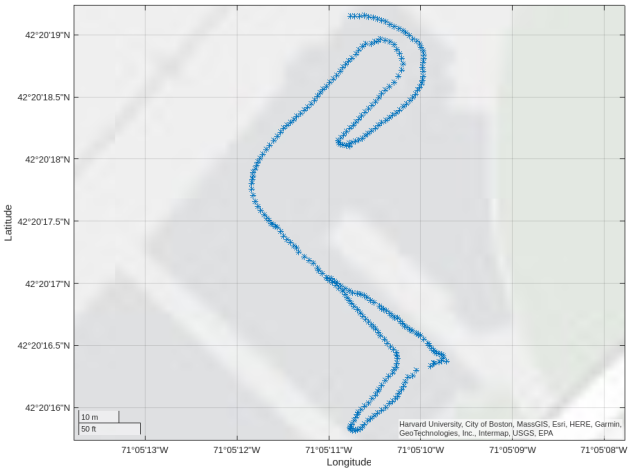
Graph 4



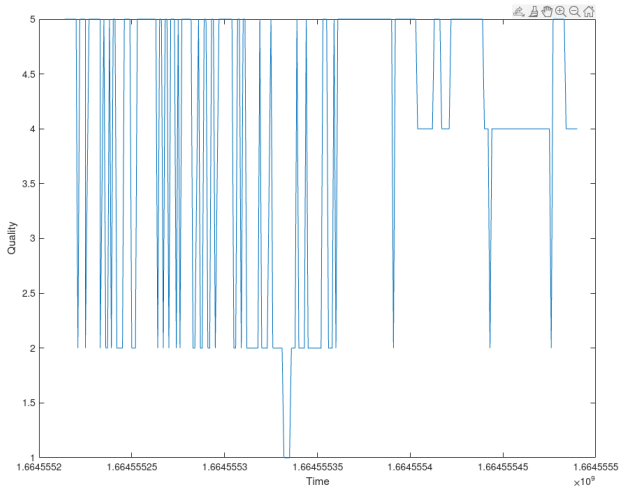
Graph 5

Above graph gives the information about variations in latitude and longitude with time in a stationary situation with no obstruction .It can be said from the graph that in the beginning there are more fluctuations in data and it gets more accurate and stable with corrections it's receiving from base.During the processes of collecting this data there were lot of spikes in quality index which can be observed in graph 5.In the beginning it start with the quality index of 5 and with time it suddenly drops to 4 and 2. This dataset was collected Without any obstruction so there are very limited factors such as satellite visibility and connectivity, interference in signals and many more which in my opinion might have caused this disturbance in quality index. Although it is only in few decimals it costs 0.2-2 meters of inaccuracy data.

Above image shows the representation of the stationary dataset (without obstruction) on google earth.



Graph 6

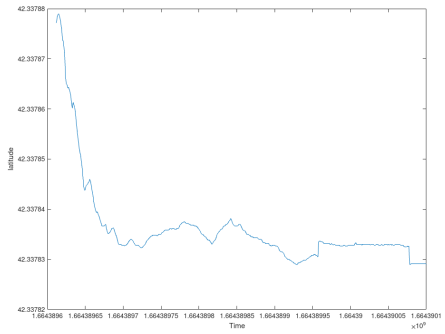


Graph 7

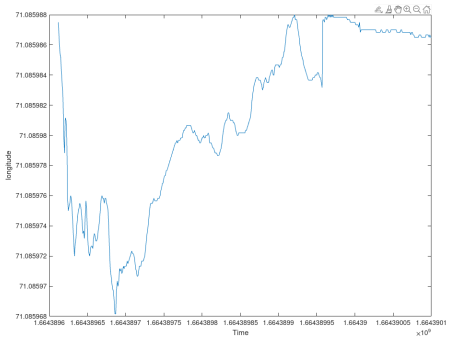
Above Graphs shows Moving and stationary data from RTK-GPS in an obstructed environment and in the next few paragraphs I will be doing analysis of these graphs.

Graph 6 denotes the variations in latitude and longitude as GPS-Puck moves. As we took data on the 4th level of Columbus parking. It was covered from the top and there were a lot of reflective surfaces as well as ruff surfaces,metals and concrete pillars which clearly caused variation in the quality index of the dataset and can be seen in graph 7. As time passes and GPS-Puck comes in less obstructed environment which can be seen in the middle part of graph it receives better connectivity of satellite and quality index improves.

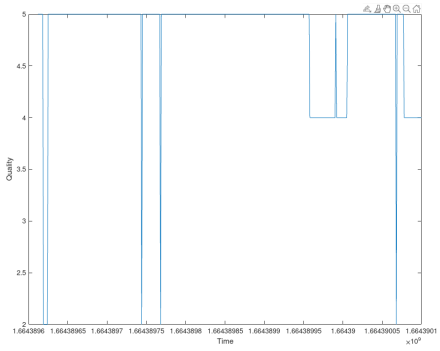
Above image shows the representation of the moving dataset (with obstruction) on google earth.



Graph 8



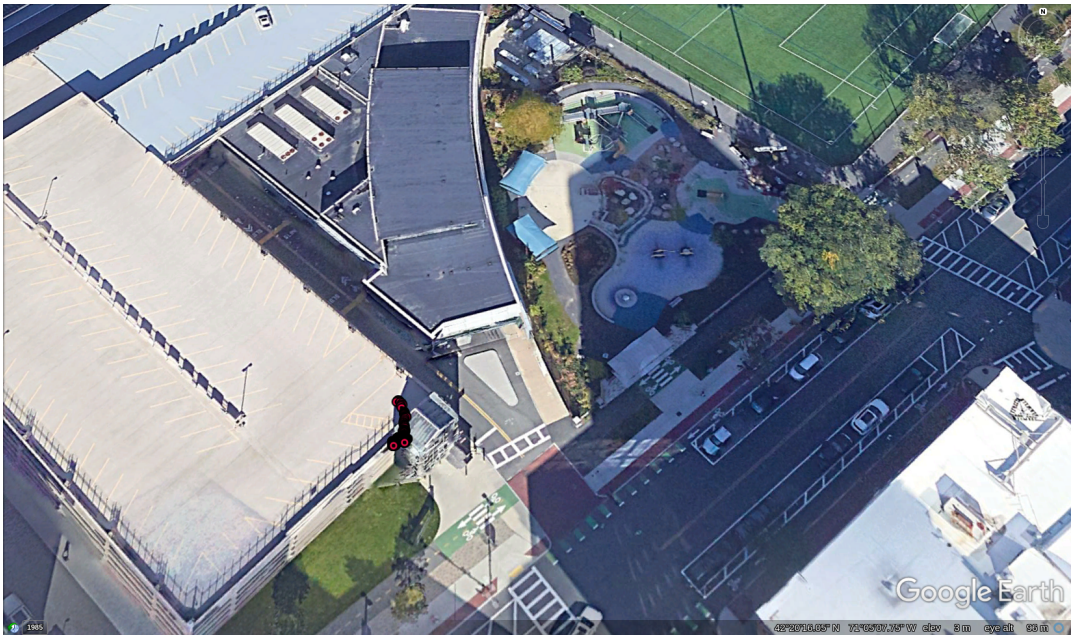
Graph 9



Graph 10

Graph 8 and 9 shows information about changes in latitude and longitude respectively with time. From the both graphs it can be said that data received in the beginning required some corrections and after receiving the correction from base it get more stable and precise. As this stationary data was recorded in an obstructed environment it has some fluctuations in begging which gets better with time but compared to moving data in an obstructed environment it has better corrections and quality index.

In my opinion it has a better quality index because of it's stationary so signal received from base has minimum delays and interference.



Above image shows the representation of the stationary dataset (with obstruction) on google earth.