

Tram Nguyen

Lab 6

October 18, 2019

Question 1.

Average Easting- 668250.3143 m

Average Northing- 3034564.613 m

Average Elevation- 0.982316 m

Questions 2&3 (attached on excel pdfs)

Question 4.

According to the plots created, the corrected rover GPS points overlap the raw data points and the plots do not display any shifting between the points.

Questions 5.

Average 3D distance = 1.692968 m

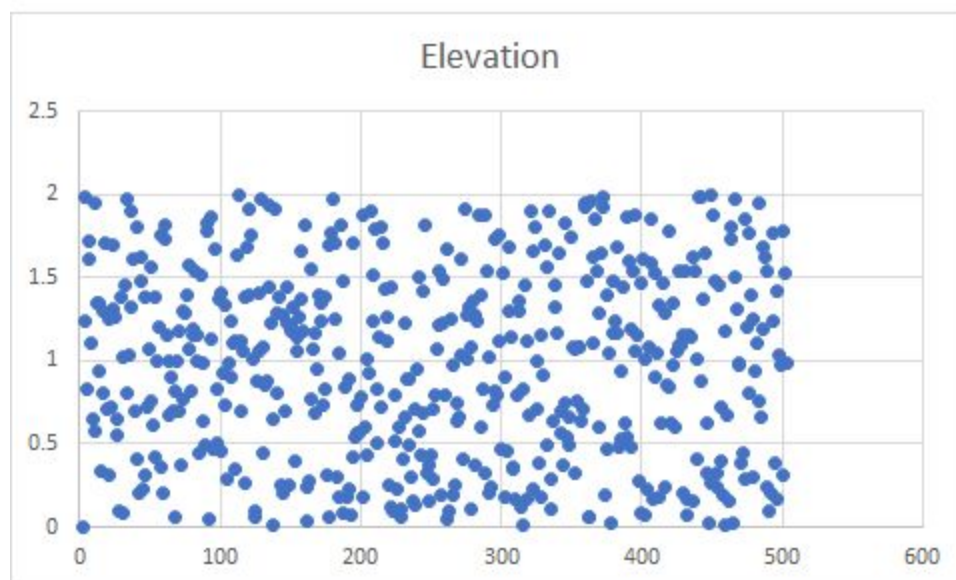
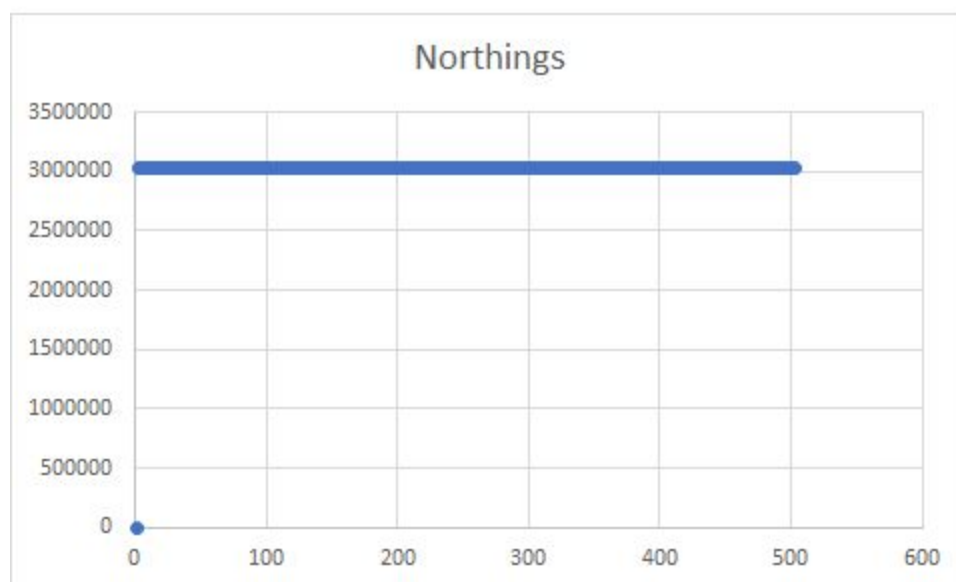
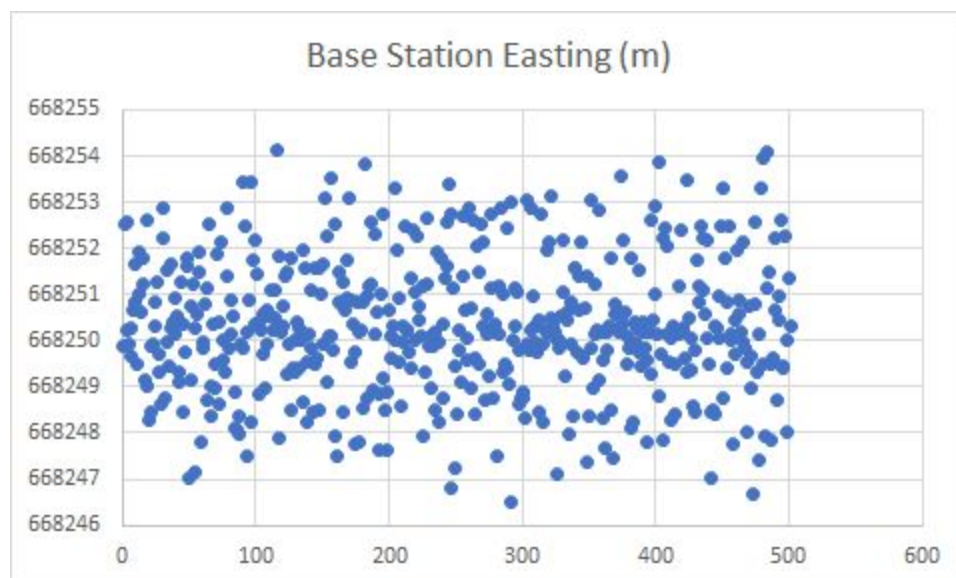
Question 6.

A rover is recommended to stay within 10-15 km of a local base station. If the distance exceeds 10 miles which converts to more than 15 km, then data points will result in lowly accurate positions. This is caused by the ionospheric effect which is when the atmosphere plays a role in delaying the transmission of signals. The inconsistent delay will report inaccurate traveled time and simple computations will not be able to determine the actual data desired.

Question 7.

There will be issues if the base station is located too high or low, such as 100 meters from the original position. These issues stem from the multipath errors as local objects and multiple radio waves cause interference. Reception of signals might not come directly from satellites but might be reflected or diffracted from buildings, trees, even high reflective water surfaces.

Questions 2.



Question 3.

