University of Southern Queensland
Faculty of Health, Engineering and Sciences

An evaluation of the performance of two different global satellite navigation systems, Trimble's CenterPoint RTX and a conventional network RTK system.

A dissertation submitted by

Richard Boylan

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ABSTRACT

In the middle of 2011 Trimble introduced the CenterPoint Real time extended (RTX) real-time positioning service providing centimetre accurate positions for real-time applications. This emerging technology means that a GNSS system can be used without reliance on an internet connection, and independent from a conventional base/rover set up, thus overcoming the limitations of the existing systems.

A comprehensive literature search reveals a lack of testing in the Sothern Hemisphere to date. This new solution needs to be tested for accuracies and precisions that can be achieved by comparing against a conventional network RTK (NRTK) system and determine if there is any significant decrease in accuracy or precision over time.

The tests were conducted on a high accuracy survey permanent mark which has known coordinate values. The testing included the data collection from both systems (RTX and NRTK) on the survey mark individually. Coordinates from each system were compared against the known coordinates to assess accuracy and precision.

RTX failed to meet the meet the accuracies or precisions as stated in the manufacturers datasheets but the system's precisions did increase over time.

The benefit of this dissertation is to produce a reliable and current set of results in the Sothern Hemisphere and to assist the survey profession in understanding this new emerging technology.

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R Boylan

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ABBREVIATIONS

The following abbreviations have been used throughout the dissertation and Appendices

RTX	Real Time Extended
EDM	Electronic Distance Measurement
CORS	Continually Operating Reference Stations
GNSS	Global Navigation Satellite System
GPS	Global Positioning System
NSW	New South Wales
RTK	Real Time Kinematic
USQ	University of Southern Queensland
VRS	Virtual Reference Station
LPI	Land and Property Information
SCIMS	Survey Control Information Management System
IP	Internet Protocol
UPG	Ultimate Positioning Group
OTF	On The Fly
GLONASS	GLObal Navigation Satellite System
QZSS	Quasi-Zenith Satellite System
BDS	BeiDou Navigation Satellite System
ITRF	International Terrestrial Reference Frame
RCP	Right Circularly Polarized
CMR	Compact Measurement Record
IGS	International GNSS Service
CSV	Coma Separate Values
USB	Universal Serial Bus
RMS	Root Mean Square

VLBI	Geodetic Very Long Baseline Interferometry
DORIS	Doppler Orbitography and Radio Positioning Integrated by Satellite
LLR	Lunar Laser Ranging
SLR	Satellite Laser Ranging
MWRC	Mid-Western Regional Council
ASCII	American Standard Code for Information Interchange
GDA	Geocentric Datum of Australia
ITRS	International Terrestrial Reference System
IERS	International earth rotation and reference systems service
ICSM	Intergovernmental Committee on Surveying and Mapping
UNAVCO	University NAVstar Consortium
EMI	Electromagnetic Interference

1.0 CHAPTER ONE – INTRODUCTION

1.1 Problem Statement

The first commercial Real-time Kinematic (RTK) Global Positioning System (GPS) products were released in 1993. Since then RTK technology has found its way into a wide variety of application areas and markets including Survey, Machine Control, and Precision Farming (Leandro et al., 2011).

The history of real time high precision GNSS can be seen in the Figure 1-1. From the early establishment of RTK in 1993 to the introduction of Network RTK (NRTK) in 2000, leading to Trimble's RTX technology introduction in mid-2011. This is the newest innovative in real time high precision GNSS.

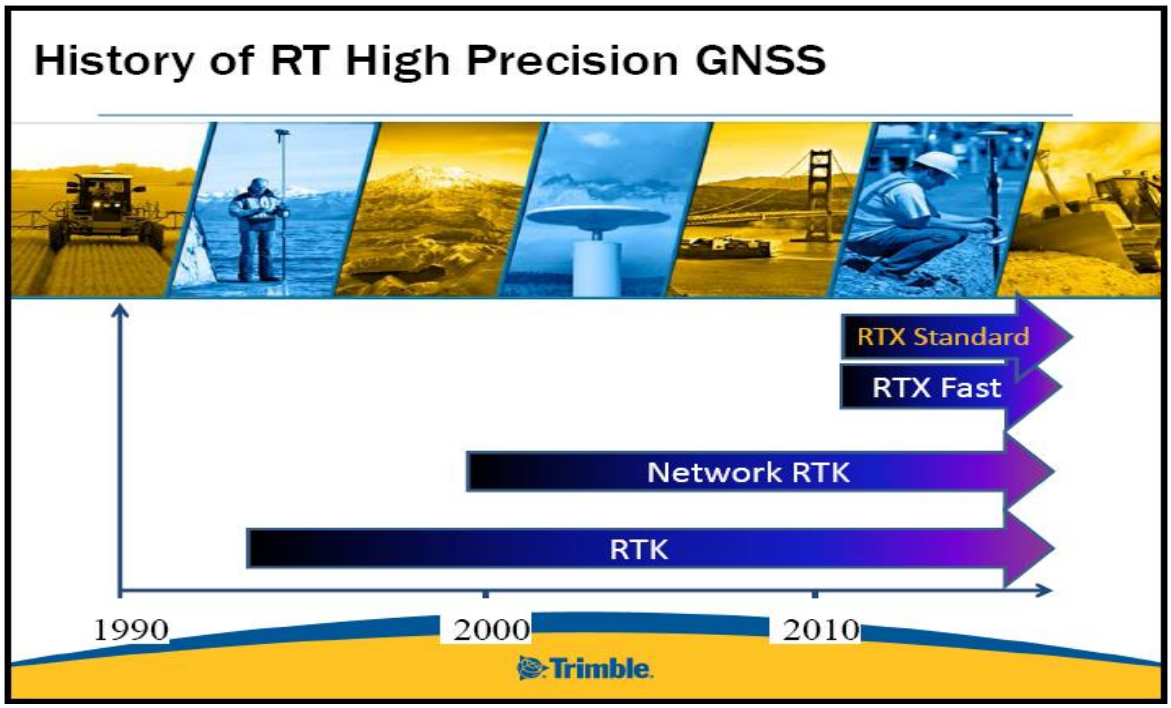


Figure 1-1: History of Real time high precision GNSS
(Source: Trimble, 2015)

In surveying terms, the RTX system is still an emerging high accuracy GNSS technology. Traditional RTK surveys require a radio link between the rover and a base station limiting them to a maximum radius of circa 10km. RTK requires a direct radio communication link between the base and the rover, often this is an internal radio, but can be external to the receiver as well.

More modern systems can use a CORS (Continuously Operating Reference Station) or the VRS (virtual reference station) concept which are several CORS stations transmitting GNSS correctional data via internet connections to a rover. This concept uses a mobile sim card for its communication link, when these systems are used in real time it's a NRTK solution.

The main disadvantages with all these configurations is the amount of infrastructure needed to run these systems. With the RTK system a radio link needs to be maintained to receive corrections so the user is handicapped by the radius and terrain in which radio signal is available, while CORS systems that are used for NRTK rely on the availability of an internet connection which in a country as vast as Australia is not always feasible due to mobile black spots, which consecutive governments having spent millions of dollars to alleviate.

RTX eliminates the need for a single base and radio or NRTK communications, instead using just one rover and receiving the corrections anywhere in the world via satellite solutions or IP. The only negative of this is the compromising of the degree of the accuracies and initial start-up time for the system to converge and resolve all the ambiguities, which is the time it takes the software to process calculations and give a position to a desired accuracy level. This is important because the system will not produce accurate or precise positions until it is initialised.
An explanation of the system is provided in Chapter 2.3 of this dissertation and readers requiring more details on the functioning of the system are referred to Leonardo et al., 2011.

RTX is a new positioning technique based on the generation and delivery of precise satellite corrections (i.e. orbit, clocks, and others) on a global scale, either through a satellite link or the internet. (Ken Doucet 2012)

Initially, CenterPoint RTX service was available in North and South America, by means of satellite connection. Currently corrections generated by CenterPoint RTX are offered in two parallel ways: via the Internet and via geostationary satellites in a special L-band Satellite.

Trimble seem to have marketed this idea firstly to the agriculture industry but, if the accuracies they have stated can be achieved, this technology could be used more for the open cut mining and extractive industries where accuracies are more relaxed than conventional land survey requirements.

Currently testing by the (UNAVCO's) University NAVstar Consortium are in progress for long-term static recordings of Trimble's RTX service at the Plate Boundary Observatory site P041, started in June, 2013 the time series results to date show standard deviations of 2.22, 2.75 and 8.40 cm for north, east and up components respectively. (Real-time GNSS Positioning – High-Precision Kinematic Testing, Henry Berglund)

The issue is that this is some years old now and there is no reliable data for the Southern Hemisphere. It is conceivable that significantly different results could be achieved in the Southern Hemisphere due to the bias toward the Northern Hemisphere of the CORS tracking stations

As evidenced by an exhaustive literature review in the Sothern Hemisphere in general and in Australia in particular, there is a lack of reliable research testing conducted on accuracies and precisions that can be achieved by this system and the determination if they decrease significantly over time.

During 2014 the Chinese satellite navigation system BeiDou was included in the Trimble CenterPoint RTX service meaning today all GNSS constellations signals are supported. Earlier publications have shown the benefits of using all the GNSS constellations in the RTX positioning service.

In surface coal mining, surveys are usually to the nearest ten centimetres, which this technology can more than satisfy and would be of a huge cost saving initiative, which is a major factor for industries in these times of financial hardship with the commodities industry been hit the hardest.

1.2 Aim

The aim of this project is to test the accuracies and precisions that can be achieved from comparing the new RTX system to a conventional Network RTK system on known SCIMS marks as determined by the LPI NSW and to access if there is a significant decrease in accuracy or precision over time using the RTX System.

1.3 Objectives

Objectives for this research project include:

1. Carry out a literature review to get a better understanding and feeling for the systems capabilities and compile some data on what other researchers in the northern hemisphere have found
2. Research the technology from its expectations to its limitations.
3. Establish and conduct a series of tests upon which to analyse and discuss the results.
4. Provide recommendations to the surveying industry for possible future study and best practices while using CenterPoint RTX.
5. Make Conclusions from my results.

1.4 Overview of Dissertation

To test the reliability and accuracy of the RTX system compared to a conventional NRTK system, which has been available and trusted since the early 2000's. I've decided to use a high accuracy survey permanent mark which has known coordinate values derived from SCIMS as provided by the LPI NSW to test the systems in normal working environments.

The overview of each chapter within the dissertation is provided below.

Chapter 2 will mainly reveal the current and past research which was investigated by any other party. This was conducted by:

1. Researching the background information in relation to RTX technology.

2. Review existing literature concerning RTX technologies and comment on any previous testing.

Chapter 3 will establish a series of testing procurement to determine a set of data results. The data analysis methodology from these results will be determination and the final accuracies between the NRTK and RTX systems can be made.

Chapter 4 will provide the results obtained from the testing.

Chapter 5 is where analysis and discussion is made concerning the results.

Chapter 6 is where the conclusions will be drawn and further recommendations will be made.

2.0 CHAPTER 2 – LITERATURE REVIEW

2.1 Introduction

This chapter will present a review of the current literature available and establishes a need the need for further testing.

Therefore, the aim of this chapter is get an understanding of how the system works and limitations which exist within the system. From here an investigation into what previous testing has been conducted in the Southern Hemisphere in relation to accuracies and precisions that can be achieved from the system and to determine if these elements decrease significantly over a fixed time period.

The literature review will help to realise current and previous research that has been conducted in same field and provide knowledge which will be a critical element in the establishment of my testing procedures.

2.2 Network RTK and RTK, Global Positioning System – GNSS

2.2.1 RTK GPS surveying

Traditional Real Time Kinematic (RTK) GNSS systems have been developed to use a radio link to send corrections between the base/rover, alternatively corrections can be sent by means of an internet connection from a base receiver or a Continuously Operating Reference Station (CORS) to a roving receiver for NRTK once an internet connection can be achieved and maintained. These processes are limited by range and the availability of an internet connection.

2.2.2 Accuracy

Accuracy is the degree of conformity or closeness of a measurement to the 'true value'. This not only includes the effect of random errors, but also any bias due to any uncorrected systematic errors.

Real Time Kinematic (RTK) or Network RTK (NRTK) GNSS positioning methods once initialised, provide high-precision coordinates and allow 'real-world digitising' with the ability to significantly enhance productivity. For example, CORS networks are well-suited to support improving cadastral infrastructure with RTK GNSS techniques (Janssen et al., 2011a), and NRTK produces superior coordinate results in regards to both precision and accuracy (e.g. Janssen, 2009c; Janssen and Haasdyk, 2011)

The stated accuracy for an RTK single Baseline <30 km = Horizontal 8 mm + 1 ppm RMS, Vertical 15 mm + 1 ppm RMS with the following notes precision and reliability may be subject to anomalies due to multipath, obstructions, satellite geometry, and atmospheric conditions. (ICSM, Guideline for Control Surveys by GNSS).

The specifications also state recommendations for the use of stable mounts in an open sky view, EMI (electromagnetic interference) and multipath clean environment, optimal GNSS constellation configurations, along with the use of survey practices that are generally accepted for performing the highest-order surveys for the applicable application including occupation times appropriate for baseline length. Baselines longer than 30 km require precise ephemeris and occupations up to 24 hours may be required to achieve the high precision static specification (Trimble R10 Datasheet)

The CORSnet-NSW network currently provides 2 cm accuracy to key metropolitan, coastal and regional areas, with a minimum of sub-metre accuracy to the rest of the State. (CORSnet, 2015)

2.2.3 How good is RTK GPS and NRTK using CORSnet?

RTK GPS has been the backbone for GPS and has been relied on by all sectors as a reliable and trustworthy system since its inception. The ability to use an OTF (on the fly) initialisation means surveying grade accuracies can be achieved instantaneously. The only drawback on the technology has been its limitations due to its connection to a server scenario.

Figure 2-1 shows currently, 75% of the area of NSW (and 99.8% of the population) is covered by the single base RTK service, while NRTK is available to 56% of the area of NSW (and 98.6% of the population). More than 62% of the state's population is within 10 km of their nearest CORS. A sub-metre Differential GNSS (DGNSS) service is provided across the entire State. Other services include the provision of RINEX and Virtual RINEX data for post processing applications (Janssen, 2013).

From previous research, its known that NRTK is precise and looking at Dr Janssen's study into the precision of this system over 6 kilometres 90% of the horizontal positions have a precision of 10 millimetres or better compared to using single base RTK over 12 kilometres at the same location, only 60% of the positions fall within this precision 95% of the horizontal positions using NRTK have a precision of 13 millimetres or better. This translates into a 5% risk of obtaining a position worse than 13 millimetres.
(Janssen, Haasdyk and McElroy, 2011).

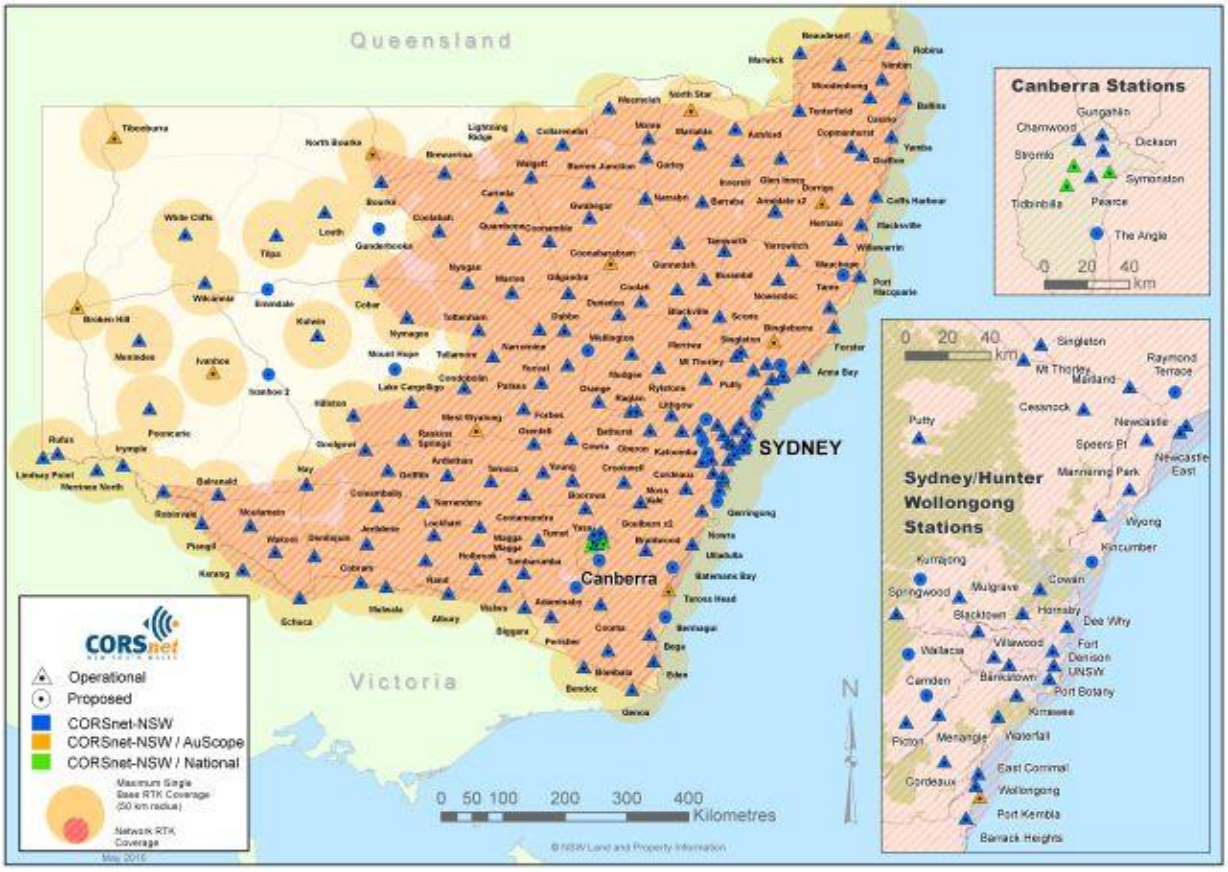


Figure 2-1: CORSnet-NSW network map as of September 2016
(Source: CORSnet, 2016)

2.2.4 Overview of RTX System

To provide some information on the system one needs to look at the developments in the system since its establishment. Figure 2-2 shows the performance advancements from the previous versions.

- Version 1.0 Introduced in September 2011 GPS /GLONASS
- Version 2.0 Introduced in 2012, QZSS support
- Version 3.0 Introduced in 2013, Global Ionosphere Model
- Version 4.0 Introduced in 2014, BDS MEO and IGSO support (Galileo support)
- Version 5.0 Introduced in 2015, Regional Ionosphere Model for Europe

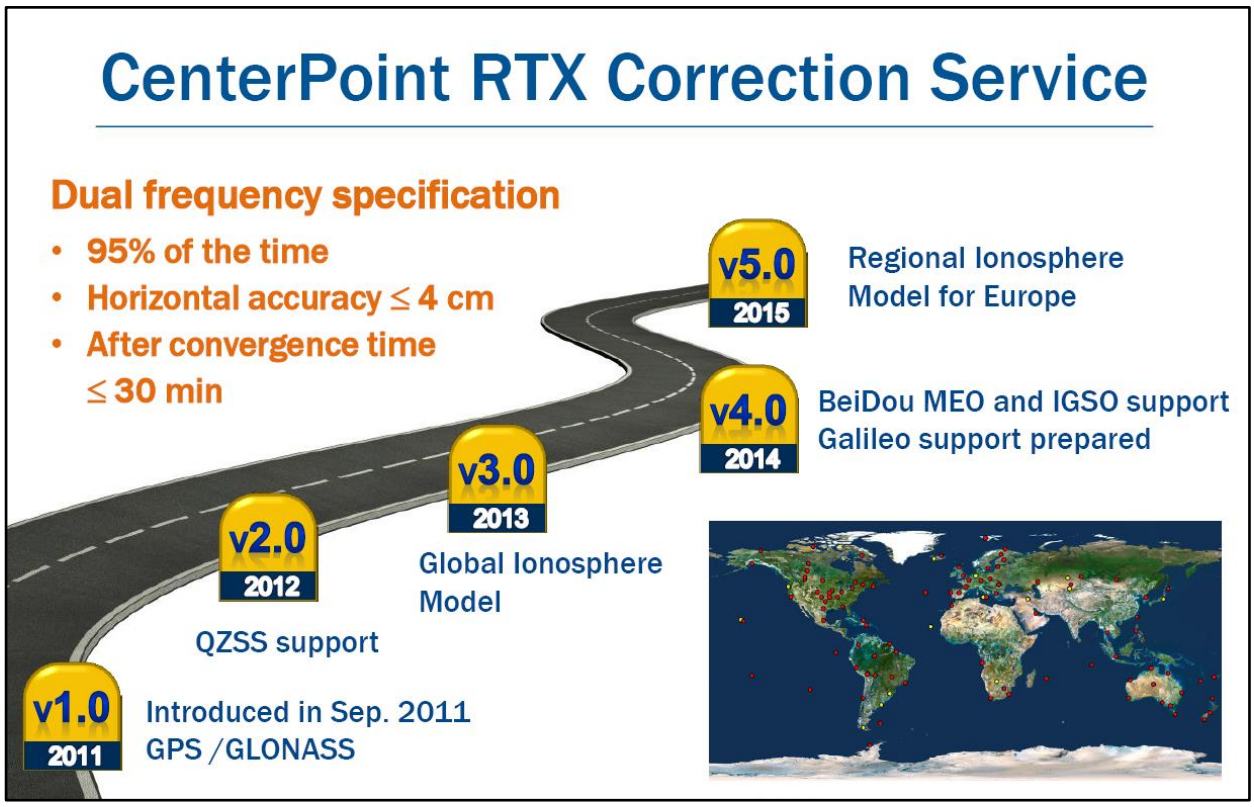


Figure 2-2 RTX Versions

(Source: Trimble, 2015)

2.3 How it works?

The functioning of the whole system has been described in a very detailed way in (Leonardo et al., 2011). The RTX is a multi GNSS service including GPS, GLONASS, QZSS (Quasi-Zenith Satellite System) and BDS (BeiDou Navigation Satellite System) technology that combines a variety of techniques, which provides the user with survey grade accuracies anywhere on or near the earth's surface. It takes advantage of real time information gathered from a worldwide CORS network in conjunction with innovative algorithms for positioning and compression to compute and re-broadcast data to the user such as: satellite orbits, satellite clock information, and other system corrections. These corrections are broadcasted to the user via satellite, internet (IP and cellular) and for Post Processing, this testing will be on the real-time solution only.

The basic infrastructure of the system is shown in Figure 2-3 and consists of the following elements:

1. Network of monitoring stations evenly distributed over the globe, linked together by the special Operation Centres.

2. Operating centres located in different places on Earth.

3. Relay stations transmitting corrections to the satellites (Uplink Station)

4. Satellites retransmitting corrections to the Earth

5. Users of the system provided with appropriate GNSS receivers, for example Trimble R10.

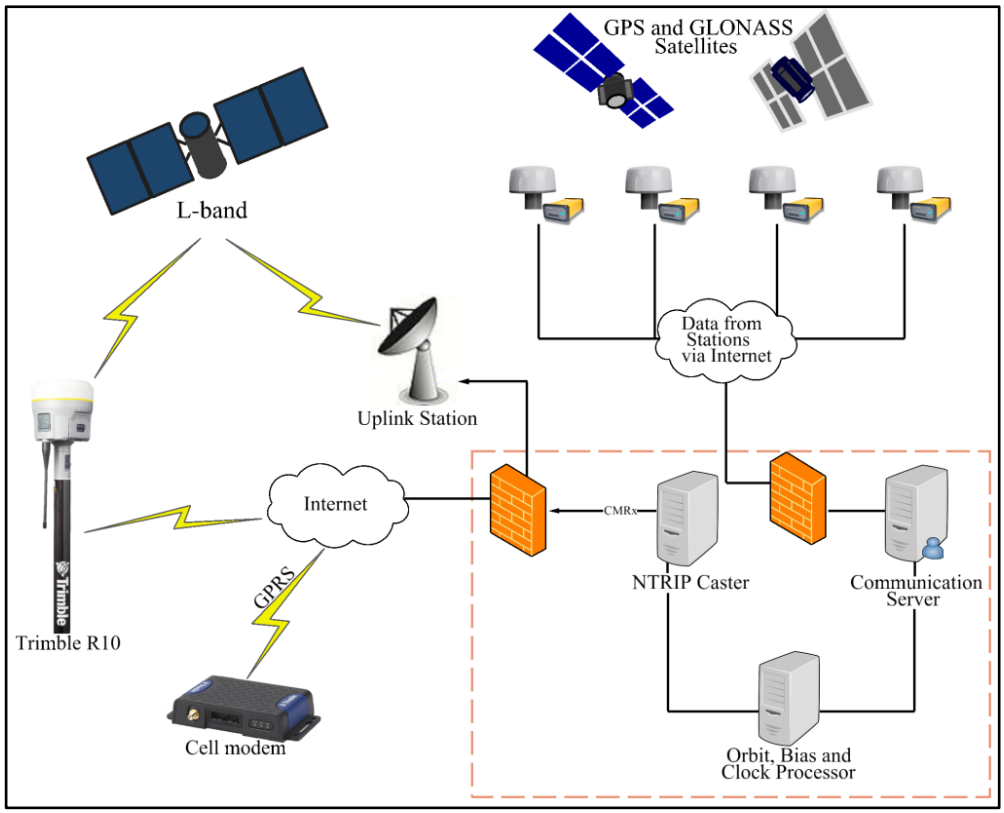


Figure 2-3: Trimble RTX positioning technology infrastructure
(Source: Trimble, 2014)

The coordinates of the position which is produced by the system is in International Terrestrial Reference Frame (ITRF) 2008 Epoch 2005, which can easily be transformed to other reference frames via on-board transformations within the controller.

2.3.1 RTX GPS surveying

This new technology from Trimble leverages real time data from a global tracking station network along with innovative positioning and compression algorithms to compute and relay satellite orbit, satellite clock and other system adjustments to the receiver, resulting in the high accuracies. These adjustments are transmitted to the receiver via satellite and via IP to the rest of the world. Other manufacturers have released similar systems with Topcon using Topnet Live and Leica using smartNet Aus.

A very important factor in the operation of Trimble RTX system is the time needed for obtaining a convergent solution this is the time it takes from when the system is started until it solves all the ambiguities and becomes initialised. It depends on different elements that may affect the positioning precision, e.g. multipath phenomenon or satellite constellation.

Previously a lengthy period for carrier phase ambiguity resolution resulted in long convergence times, RTX technology uses a range of functions that reduce obtaining convergence in shortest time possible as described in (Leonardo et al., 2011). Final convergence of the system can be obtained within 10 to 45 minutes after the receiver starts working on a cold start which is when the receiver is turned on in a new solution and not a quick start on a known point which providers are now quoting 5 minutes on new agricultural systems. This testing will be a cold start and how its accuracies and precision perform over a two-hour period.

2.3.2 Accuracy

At present, according to Trimble CenterPoint RTX the technology is designed to ensure repeatability of measurements not worse than 3.8 cm based on the corrections determined in real-time based on data from a global network of ground reference stations located around the globe. (Trimble Survey Division, 2012).

As presented at the IGNSS conference in the Gold Coat in July 2015, the latest introduction of the BeiDou satellite constellation the GEO (geostationary) satellites, an accuracy of ~5 cm in radial and cross-track components, and ~1.5 m in along-track in the sense of orbit overlap errors. With precise satellite orbits and clock corrections for BeiDou GEO satellites, the satellites can be used for real-time RTX positioning on the earth at the few centimetre level. (Solano et al, 2014)

Autonomous Agriculture Dynamic testing by (Vega et al, 2014) showed the standard deviation for real-time base station corrections (RTK) of 1.43 cm and for real-time satellite corrections (RTX) of 2.55 cm. These results demonstrate that an autonomous tractor could track each straight line of rows with a high degree of accuracy

According to the literature I have reviewed the new regional service provides centimetre accurate positioning results of 4 cm in horizontal (95%) with convergence times of less than 5 minutes. (Nardo et al., 2015).

2.3.3 Additional benefits of RTX

The advantage of the RTX satellite correction service is that, because GNSS corrections are delivered via satellite, your receiver doesn’t need to be connected to the internet or have any other sort of terrestrial radio communications to receive data from the GNSS reference stations. The only requirement is that your receiver needs to have direct, continuous line-of-sight to the satellites which is a requirement for any GNSS system.

2.3.4 Disadvantages of RTX

The primary disadvantages of the RTX technology is the “convergence” time required to achieve the stated accuracy service levels. As mentioned above RTX technology uses a range of functions that reduce obtaining convergence in shortest time possible with a cold start up timeframe of 10 to 45 minutes after the receiver starts working, this initial start-up time can be eliminated by using the “start on a known point” feature which will not be tested here. Starting on a known point allows geometric distance within the equation to be known, leaving only the neutral atmosphere delay and the receiver clock as the only unknowns. The RTX system will store the last position of the antenna, e.g. if precision farming where the tractor stopped, and use this as the known starting position when a new initialisation is needed (Leandro et al., 2012).

The use of two satellite systems, GPS and GLONASS, in Trimble RTX technology is an alternative solution, aimed at minimalizing convergence time. The studies carried out (Zhang et al., 2013) indicate the possibility of reducing the time of achieving convergent system solution with use of GPS and GLONASS by 42%.

2.4 Limiting Factors of RTX

Leandro et al (2013, Ch. 4, para. 1) state: 'To understand the limiting factors associated with this global high-accuracy positioning system, it is helpful to consider the simplified basic GNSS observation equations for carrier-phase and code measurements'. This is important later in the development of my findings in this dissertation.

$$\Phi i = \rho + c\,(dT - dt) + T - Ii + \lambda i\,Ni, + Ai - ai + \lambda i\,(W\Phi - w\Phi) + B\Phi, i - b\Phi, i + M\Phi, I + n\Phi, i$$

(Equation 1)

And

$$Pi = \rho + c\,(dT - dt) + T + Ii, + Ai - ai + BP, i - bP, i + MP, i + nP, i$$

(Equation 2)

Where:

Φi	is the carrier-phase measurement for frequency i in meters
ρ	is the geometric distance between the antennas of the receiver and satellite in meters
c	is the speed of light constant in meters per second
dT	is the receiver clock error in seconds
dt	is the satellite clock error in meters per second
T	is the slant neutral atmosphere delay in meters
Ii	is the ionospheric delay for frequency i in meters
λi	is the carrier-phase wavelength for frequency i in meters
Ni	is the integer carrier-phase ambiguity for frequency i in cycles
Ai	is the combined receiver antenna offset and directional variation correction for frequency i in meters
ai	is the combined satellite antenna offset and directional variation correction for frequency i in meters

WΦ	is the receiver antenna phase wind-up effect, in cycles
wΦ	is the satellite antenna phase wind-up effect, in cycles
BΦ, i	is the carrier-phase receiver bias for frequency i in meters
bΦ, i	is the carrier-phase satellite bias for frequency i in meters
MΦ, i	is the carrier-phase multipath for frequency i in meters
nΦ, i	is the carrier-phase observation noise and other un-modelled effects for frequency i in meters
Pi	is the pseudorange measurement for frequency i in meters
BP, i	is the pseudorange receiver bias for frequency i in meters
bP, i	is the pseudorange satellite bias for frequency i in meters
MP, i	is the pseudorange multipath for frequency i in meters
nP, i	is the pseudorange observation noise and other un-modelled effects for frequency i in meters

(Leandro et al 2013, eqs 1&2)

The accuracy of GNSS relies on the phase and code measurements on different frequencies being modelled reliably, essentially this means that variables in equations 1 and 2 are known very precisely and ultimately cancel each other out leaving us with the remainder of the equation. the assumption that phase and code measurements on the different frequencies or on specific observation combinations are modelled quite reliably meaning that the parameters or combinations of them in equations 1 and 2 are known very precisely.

The achievement of a global system where every component of the undifferenced GNSS observational model is well known is the pinnacle of the RTX system. To do this, some modelling needs to be conducted. Satellite clock, orbit, and measurement biases that are cancelled via differencing in standard RTK processing are modelled and transmitted as part of the Trimble RTX correction stream. These effects then become known quantities and can be properly accounted for when processing the rover measurements. The atmospheric errors are dealt with by algorithms, reducing any residual effects to a minimum. (Trimble xfill service)

Figure 2-4 shows how the errors are dealt with within the system.

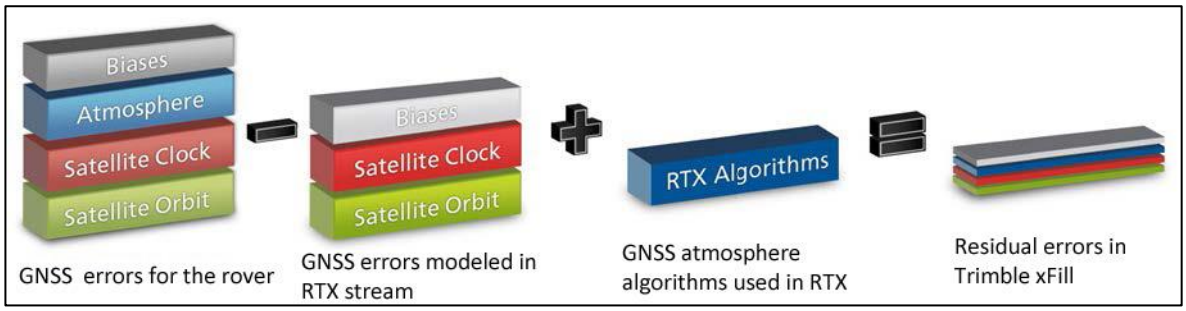


Figure 2-4: Trimble RTX positioning technology infrastructure
(Source: Trimble, 2016)

2.4.1 Satellite orbits and clocks

The geometric range in equations 1 and 2 can be represented as a traditional norm computation formula, thus:

$$\rho = \sqrt{(Xr - Xs)2 + (Yr - Ys)2 + (Zr - Zs)}$$

where:

- **Xr Yr Zr** are coordinates of the receiver antenna reference point in the ECEF coordinate system at the time of signal reception, in meters;
- **X^s Y^s Z^s** are coordinates of the satellite centre of mass in the ECEF coordinate system at the time of the signal transmission, in meters.

The effective way of estimating the clock errors was presented by (Zhang et al., 2011). It referred to where satellite clocks are computed using a given set of satellite orbits the impact of the orbit error on positioning is dependent on the angle between the receiver-satellite line of sight and the direction of minimum orbit error impact.

2.4.2 Receiver clock error

All satellites transmit their signals in the same frequency, because of this the receiver-dependent carrier-phase and code biases are usually the same for all satellites. Thus, it is possible to eliminate these terms with a between-satellite single-difference operation, or to assume that they are estimated as part of the receiver clock error.

2.4.3 Antenna phase centre modelling

The GPS antenna is the connecting module between the GPS satellite and the GPS receiver. It is used to filter, amplify, and convert the incoming signal from satellites into an electrical signal that can be processed by the receiver. The point at which the GPS signal is received is called antenna phase centre (APC). The APC can be seen in Figure 2.5. APC does not coincide with the antenna physical (geometrical) centre and varies with elevation, azimuth, intensity of the satellite, and frequency of the incoming signal. (Ahmed I. EL-Hattab 2013)

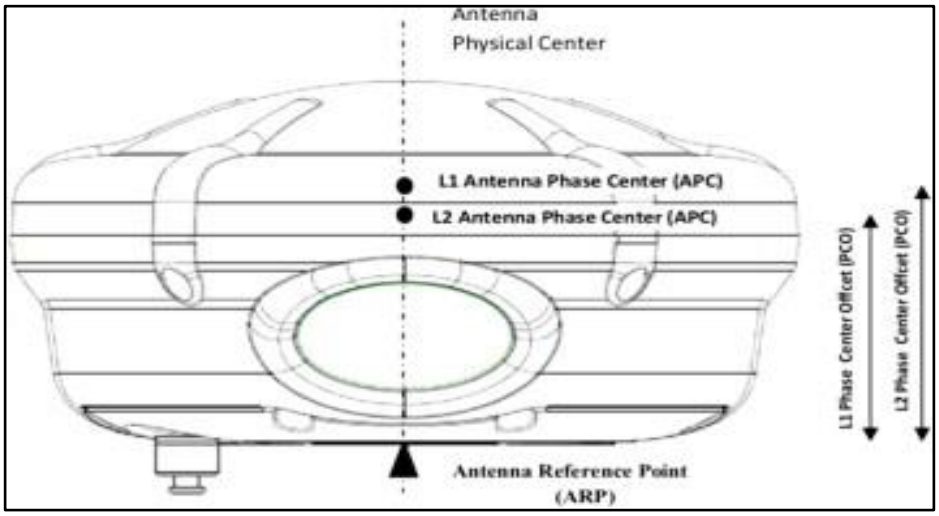


Figure 2-5: Trimble RTX tracking network distribution
(Ahmed I. EL-Hattab 2013)

The antenna phase centre variation effects are typically in the range of few mm. More details on standardized antenna correction can be found on (Rothacher and Schmid 2010).

2.4.4 Phase wind-up effects

GPS satellites transmit right circularly polarized (RCP) radio waves and therefore, the observed carrier-phase depends on the mutual orientation of the satellite and receiver antennas. A rotation of either receiver or satellite antenna around its bore axis will change the carrier-phase up to one cycle (one wavelength), which corresponds to one complete revolution of the antenna. This effect is called “phase wind-up” (Wu et al., 1993)

2.4.5 Neutral atmosphere delay

The major contributor of neutral atmosphere delay is the amount of water in the atmosphere for an area and timeframe. The lack of this important information compared to a well-known slant/zenith delay, makes the modelling of the tropospheric delay the most suitable.

Experiment results show that the proposed models for anticipating delays can be efficient and securely used for solving ambiguity in reference station network in real time, based on individual epoch.

According to previous testing “GPS ground receivers can provide valuable and accurate information on integrated precipitable water vapour, considering that single receivers or dense networks are available in many part of the world, providing a quite cheap and reliable source of information” (Notarpietro et al in 2012)

2.4.6 Ionospheric delay

Ionospheric effects are sometimes referred to as space weather. Essentially, these effects are all about the sun and the interaction of the solar wind with Earth's magnetic field and atmosphere (USQ, SVY 3107, study book)

GNSS signals travel through a part of the earth's atmosphere called the ionosphere. When the signal is travelling through the ionosphere, refraction, or bending of the wave, occurs. The level of ionospheric activity is dependent on:

- Solar activity; it is highest at solar maxima during an eleven-year solar cycle; the next solar maximum is expected to be in 2024
- Time of day (highest at local noon)
- Season (highest at equinoxes – March/September)

According to Trimble the ionosphere is the largest source of error for Standard GPS and second largest for Differential GPS systems.

"The most reliable products available for the GNSS community are the IGS (International GNSS Service) ionospheric maps made available with latencies as short as one day after data collection, while this is not suitable for real time data an ionospheric-free combination can be formed combining code and phase measurements" (Leandro et al., 2013)

(Li 2012) also has a method in which the ionospheric delays are constrained to resolve ambiguities. Using the knowledge within the system of the ionospheric behaviour, re-convergence after a short outage (3-minutes) can be almost instantaneous.

Four different methods of ionosphere modelling, used as a source of information, and their impact on the speed and reliability of ambiguity solution and the rover positioning accuracy was researched by (Grejner-Brzezieńska et al., 2007) they put much emphasis on efficiency and reliability of ambiguity solution.

2.4.7 Other factors

Apart from the effects that are detailed, there are many corrections that have also to be considered to achieve cm-level positions in a given earth-centred reference frame. Some of these effects are solid earth tides, ocean tidal loading, and polar motion as detailed (Petit and Luzum, 2010). With RTX orbit processing carrier phase integer ambiguities are resolved in real-time.

2.5 RTX system in Australia

In Australia, the ‘real-time’ solution corrections are broadcast via six geostationary satellites via L-band signals covering all of Australia. The CenterPoint RTX tracking network is currently composed of around 100 monitoring stations uniformly distributed across the world. (Figure 2-6)

The data from monitoring stations are collected and transmitted via the internet to operation centres at different locations. The complete operation centres are redundant to assure the very high availability of the system. In case it is needed, the correction stream source might change between operation centres and/or processing servers within centres in case of outages. At these operation centres, there is data processing servers compressing the corrections to a CMRx (Compact Measurement Record) format which in turn is sent to the uplink station or made available to users by accessing through an internet connection.

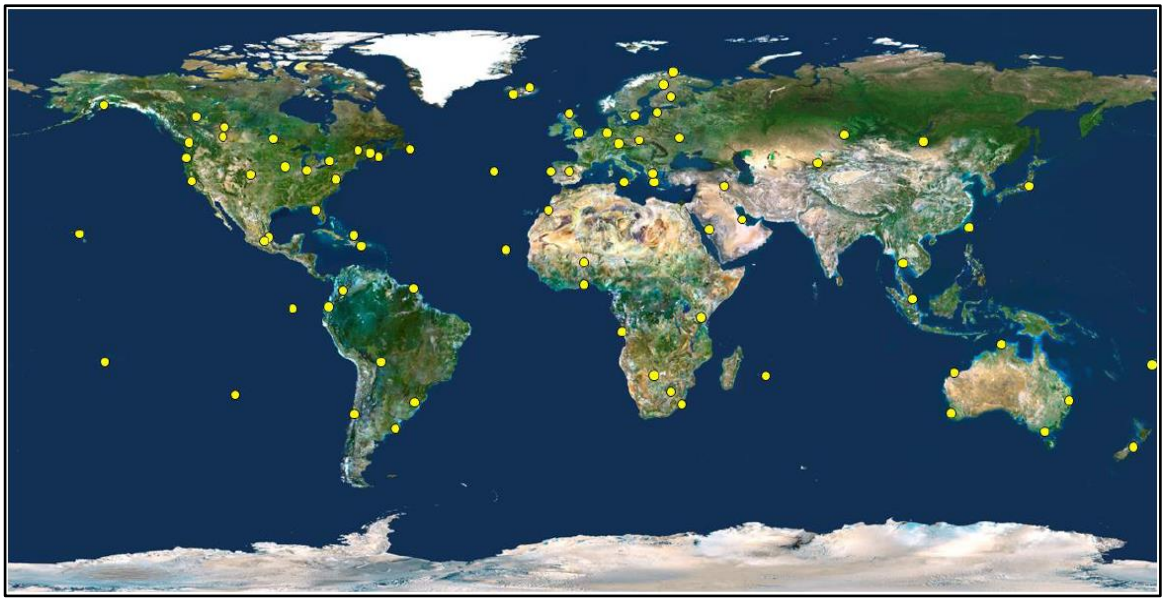


Figure 2-6: Trimble RTX tracking network distribution
(Source: Trimble, 2014)

2.6 RTX system in other parts of the world (Mid-west USA)

In the case of CenterPoint RTX Fast, which is only available in the central US area spanning from Nebraska to Illinois, in this augmentation network there are 75 stations at 120 km station spacing, covering an area of 477400 km² as per Figure 2-7. The convergence period is in this area is typically less than 1 minute while providing centimetre accurate positioning results of 4 cm in horizontal (95%). The fast initialisation is due to many monitor stations in the coverage area and has been verified in real dynamic agricultural. Re-initialization test runs are performed continuously by monitoring stations. Initialization times start at 20 seconds due to the 12 second update interval of the regional augmentation data and the latency of the communication link.
This system shows the direction in which this technology is moving and is an indication of future advances being tested.

"*The majority of initialization runs provide successful ambiguity resolution between 20 and 45 seconds. The mean initialization time is 32 seconds"* (Chen Et Al, 2011)

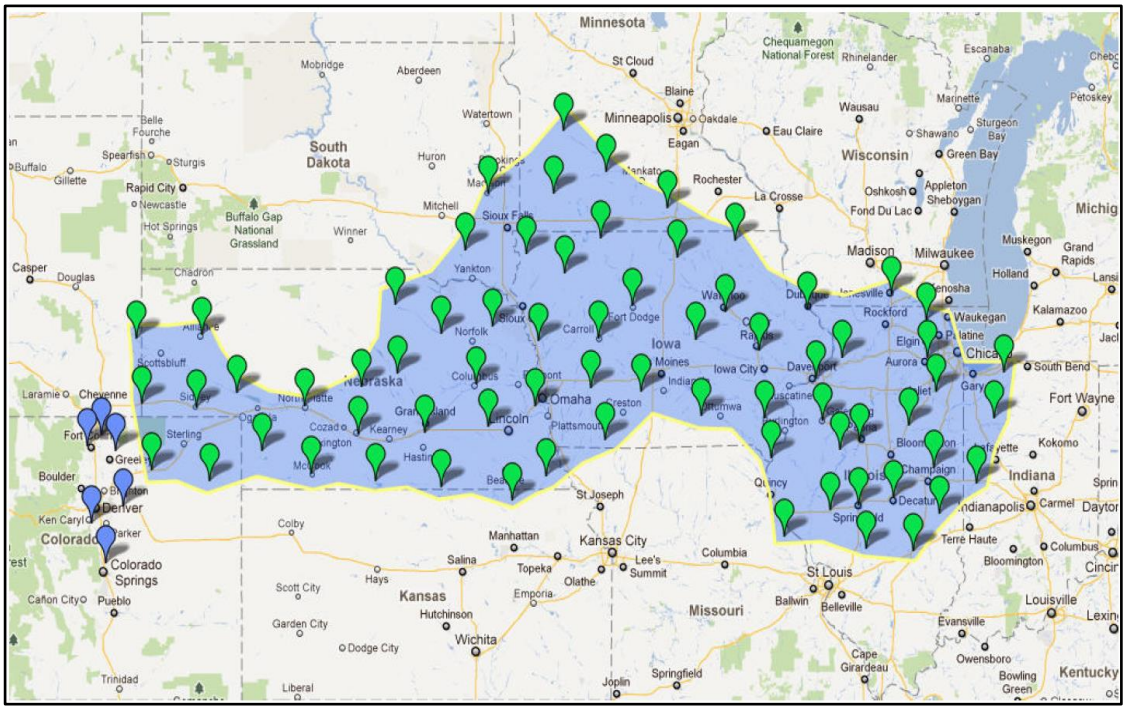


Figure 2-7: Trimble RTX augmentation network in the mid-west USA

2.7 RTK v RTX

The fundamental difference between RTK and RTX is how the errors for each are calculated. RTK relies on the cancelling of known errors from a rover to a reference station/virtual reference station to give an error which is the RTK precision.

RTX computes the errors from a rover against the modelled errors from the RTX stream and then applies the computations from the innovative algorithms to give the errors which is the RTX precision as can be seen in the Figure 2-8.

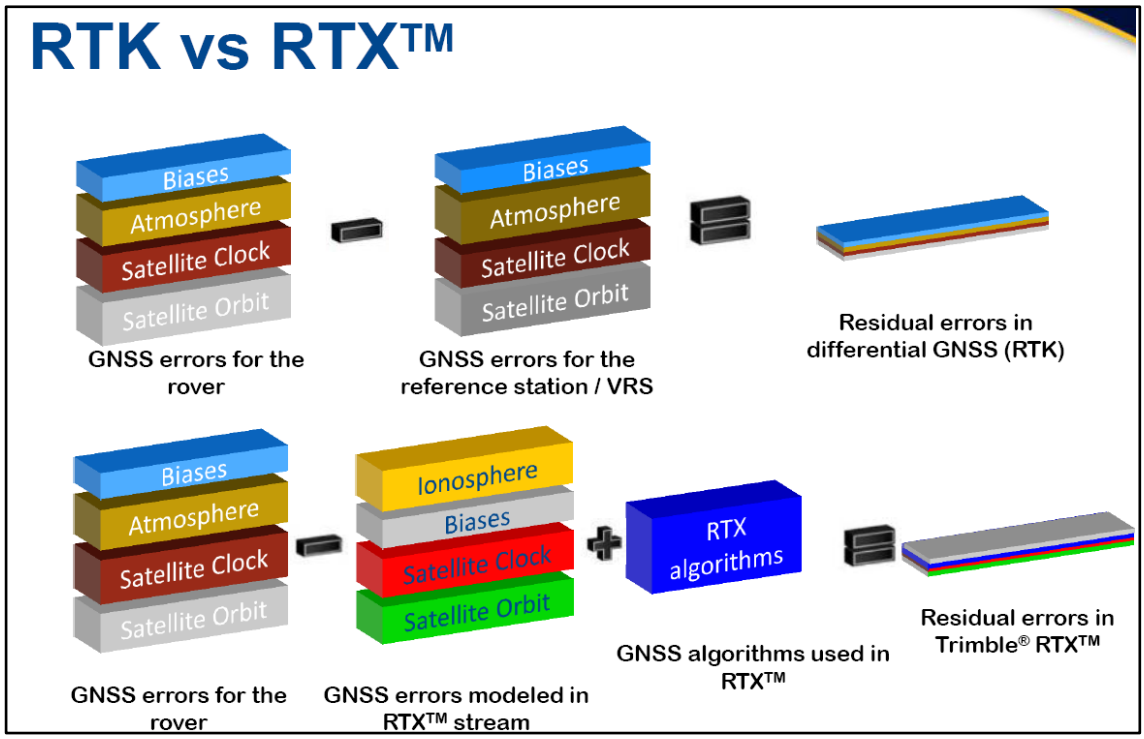


Figure 2-8: Trimble RTX positioning technology infrastructure
(Source: Trimble, 2015)

2.8 Conclusion

As can been seen from this literature review the current and previous research that has been conducted in this field has provided us the knowledge and understanding of the limitations on how this system works. Previous testing has shown that there is a lack of reliable research testing on the accuracy and precision of this system in the Southern Hemisphere.

3.0 CHAPTER 3 – METHODOLOGY

3.1 Introduction

As this technology is relatively new in the GNSS industry field testing by others has been limited to date, therefore I feel it is a worthy and important to compare field results against stated accuracies in equipment's datasheets.

The aim of this chapter is to introduce the equipment and field testing techniques which will be used to perform our testing and set out the test procedures which will be followed.

Previous tests including that of Gavin Schrock (2014) have concentrated more on initialisation times, this testing will concentrate on the precisions and accuracies that can be achieved and determine if they decrease significantly over time. For this testing, it was decided to use a logging time of 60 epochs for all three surveys to get some consistency in the results using the same survey mark, the guidelines for GNSS equipment and observations techniques for real time survey is stated in the guideline for control surveys to be: *"At least 1 minute after the rover has successfully initialised i.e. after ambiguity resolution"*, (ICSM, Guideline for Control Surveys by GNSS 2014).

3.2 NRTK receivers and controller

As NRTK has been available since the early 2000's, most survey grade GNSS units have NRTK capabilities or can be configured to receive their corrections from VRS base stations. Trimble's R10LT unit supports an NRTK connection (refer to Figure 3-1) while the TSC3 controller (refer to Figure 3-2) can be paired using Bluetooth with the R10LT rover. The data can also be extracted directly from the TSC3 controller and imported into a computer using a usb drive.

Figure 3-1: Trimble R10 LT

Figure 3-2: Trimble TSC3

3.3 RTX receivers and controller

Due to the technology being relative new in the world of GPS technology the following supported survey grade receivers with RTX capabilities are the Trimble NetR9 Geospatial, Trimble R10, Trimble R2 and Trimble R9's GNSS Receiver. The Trimble R10 receiver (Figure 3-3) is the same unit as the R10LT only the software within the receiver has been unlocked to provide Trimble CenterPoint RTX. When the instrument is unlocked for the subscription other features are available such as SurePoint for tilt compensation and Trimble xFill for RTK level accuracy with correction stream interruptions. Again, the TSC3 (Figure 3-4) can be paired with this receiver to offer a Bluetooth connection for connecting to the receiver, collecting the data and the exportation of the data.

Figure 3-3: Trimble R10 Full

Figure 3-4: Trimble TSC3

3.4 Test site

3.4.1 PM 38688

Apart from surrounding trigonometrical stations and trigonometric station Mudgee CORS, there are no horizontal class A marks within the township of Mudgee where I live. However, there was one PM at nearby Kandos which has been assessed with class/order A/1 horizontal coordinates (derived from the 3D least squares adjustment of a network of GPS baselines) and has a height derived from differential levelling observations (LB/L2). Appendix B shows the SCIMS online file containing the coordinate/height details, associated metadata and locality sketch plan images of the PM 38688 at Kandos.

The site is free of any Multipath and is a wide-open site free of obstacles and obstructions. Multipath interferences are like ghosting on a television screen. Multipath occurs when GNSS signals traverse different paths before arriving at the antenna. (Trimble R10 GNSS receiver Version 1.10 Revision C March 2015)

3.4.2 Location

Kandos is a small town in New South Wales located on the Bylong Valley Way 235km North West of Sydney and nestled between the townships of Mudgee, Lithgow and Bathurst in the Mid-Western Reginal Council area. Figure 3-5 show the test site location in relation to Central West NSW while Figure 3-6 shows the township of Kandos.

Figure 3-5: Location of baseline

Figure 3-6: Township of Kandos and PM 38688

3.5 Data collected

During the measurements, the following data were recorded in the raw data survey files:

- Determination of the measured point (Permanent Marker number)
- Type of the solution (RTX or NRTK)
- Antenna Height GNSS
- 3D coordinates of the measured point (x, y, z)
- Precision of the determination of the horizontal position (RMS 2D)
- Precision of the determination of the vertical position (RMS 1D)
- The value of the DOP (PDOP, HDOP and VDOP) parameter
- Number of satellites based on which the position was determined
- PDOP Mask

- Elevation Mask

These parameters where used later for verification and quality measures checks.

3.5.1 Convergence times

Convergence times were measured manually and verified using the raw survey data later (Appendix C).

3.6 Procedure

3.6.1 NRTK and RTX testing procedure

For the NRTK and the RTX precision and accuracy testing the rover was set up as per Figure 3-7 and after initialisation has been achieved the data recorder was used to measure 120 observations at a single point for one minute each observation. this involved the measurement being reordered manually every minute for two hours. Due to the firmware being dated in the TSC3 controller it could not be set up to auto measure the point at fixed time intervals using RTX. To ensure consistency the points where manually recorded for the three sets of data.

3.6.2 RTX performance over time testing procedure

For the RTX performance over time the only difference is the measurements started as soon as the rover was switched on to determine if its precisions decreased over time.

Figure 3-7: Photograph showing R10 rover set up

3.7 Data extraction

Once the data is on the flash card it needs to copied onto the computer where most of the analysis is performed using Microsoft excel spreadsheet program. The program statically analysis and evaluation of the test results, then reports as shown on Figure 3-8 and Figure 3-9.

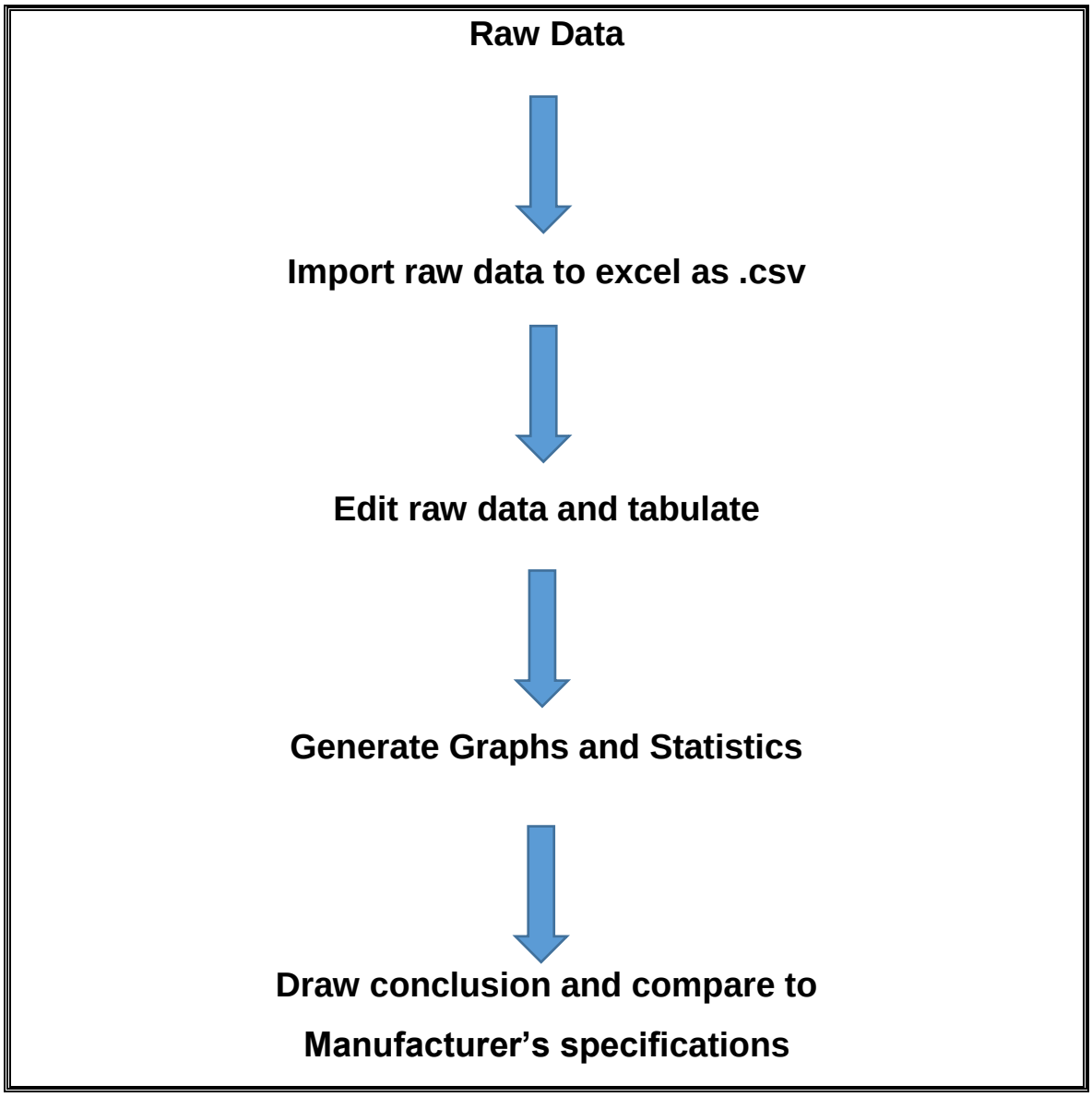


Figure 3-8: Analysis process for NRTK

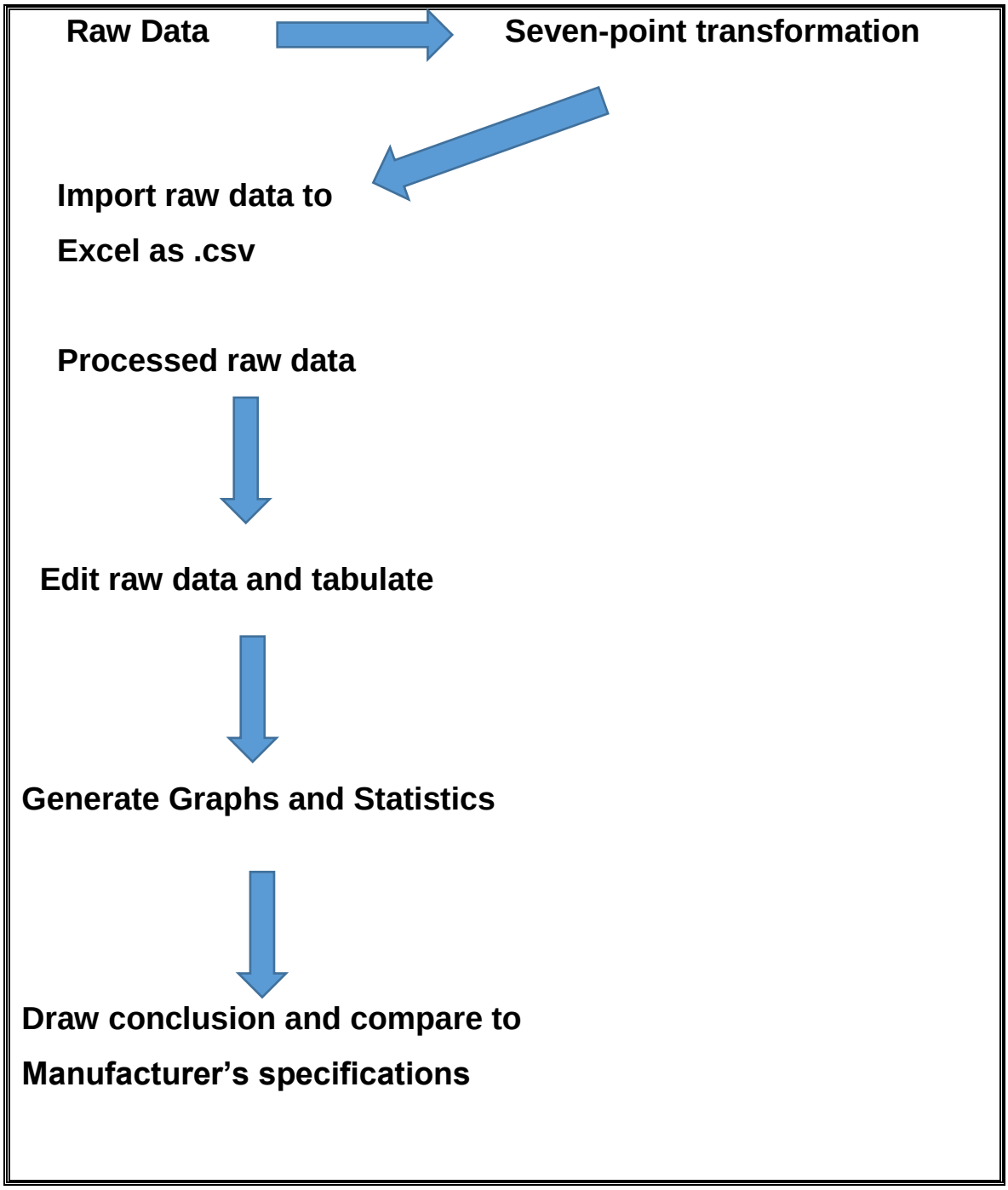


Figure 3-9: Analysis process for RTX

3.8 Conclusion

The equipment that was used to conduct our testing and the test procedures was detailed in depth in this chapter. Our tests focussed on how the system preforms in the Southern hemisphere, in particular Australia.
Other testing conducted focussed on initialisation times and the precisions that can be achieved to determine if they decrease significantly over time. Sufficient data was collected to allow for the project aims to be met.

4.0 CHAPTER 4 - RESULTS

4.1 Introduction

The previous chapter details the procurement and methods of data collections for the two GNSS systems, this chapter deals with analysis and processing of this data and systems which need to be undertaken to derive our data for results.

The aim of this chapter is to derive three definitive sets of data from which results can be extracted.

Much of the analysis is performed using Microsoft excel spreadsheets. The program statically analysis and evaluates the test results, then reports as shown on the charts below.

4.2 Data Analysis

4.2.1 Data Transformation

The RTX system is based on an ITRF datum coordinate system. The International Terrestrial Reference System (ITRS) is a world spatial reference system co-rotating with the earth in its diurnal motion in space. The International earth rotation and reference systems service (IERS), in charge of providing global references to the astronomical, geodetic and geophysical communities, supervises the realization of the ITRS. Realizations of the ITRS are produced by the IERS ITRS Product Centre (ITRS-PC) under the name International Terrestrial Reference Frames (ITRF). ITRF coordinates were obtained by combination of individual TRF solutions computed by IERS analysis centres using the observations of Space Geodesy techniques: GPS, VLBI, SLR, LLR and DORIS. They all use networks of stations located on sites covering the whole Earth. (International Terrestrial Reference Frame, http://itrf.ensg.ign.fr/general.php)

Essentially the data needs to be transformed using a seven-parameter transformation to make it comparable to the GDA94 datum coordinate system and to make our two sets of data comparable. This seven-point transformation has an accuracy of about 1 m.
Geocentric Datum of Australia Technical Manual -
(http://www.icsm.gov.au/gda/gdatm/gdav2.3.pdf)

4.2.2 Data Transformation and verification

The data transformation is processed within the Trimble access survey software in the TSC3 data collector and is computed before the data is exported giving us GDA94 datum coordinates. The process and the parameter used can be seen in the raw survey report in Appendix C.

As a verification, the unprocessed data was also converted using the datumtran software available from the LPI website. This software uses a converts ITRF coordinates to MGA coordinates. The input file type is a raw ITRF (UTM) coordinates ascii (American Standard Code for Information Interchange) file with the output being a transformed set of MGA coordinates. A screen shot of the interface and steps followed can be seen in Figure 4-1. The process and parameters can be seen in Figure 4-2 below

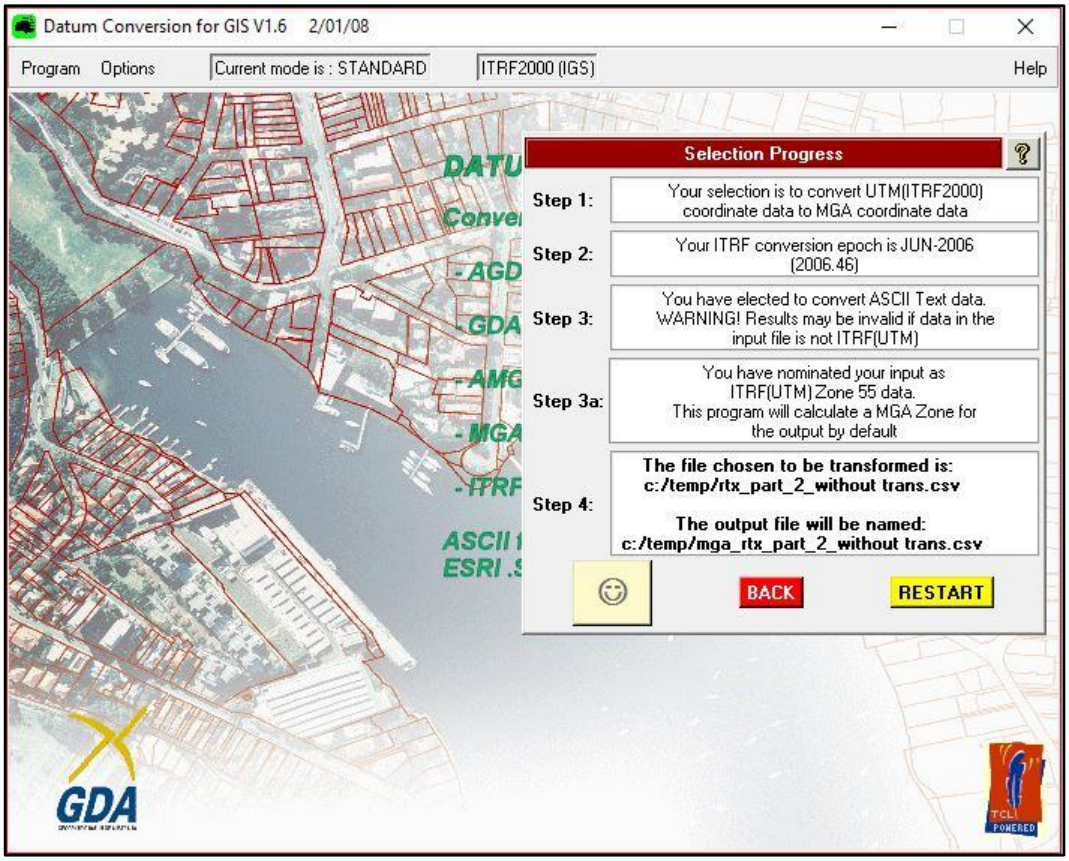


Figure 4-1:Datumtran software interface

```
         This file : C:/temp/MGA_RTX_PART_1_WITHOUT TRANS.rpt
           Program : GDAFILE 3.4  &  GIS Datum Conversion v1.6
              Date : 10-Oct-1616
           Process : ITRF(UTM) to MGA by 14 parameter transformation
                   : Values at year 2000 for transformation to GDA94
                   : dx:  -0.0663  dy:  -0.0050  dz:   0.0426
                   : rx:  0.008814 ry:  0.009127 rz:  0.009042 sc:  0.007936
                   : Change per year
                   : dx:   0.0049  dy:   0.0039  dz:   0.0049
                   : rx:  0.001616 ry:  0.001200 rz:  0.001013 sc:  0.000096
              Year : 2006.46
        Input file : C:/temp/RTX_PART_1_WITHOUT TRANS.CSV
       Output file : C:/temp/MGA_RTX_PART_1_WITHOUT TRANS.CSV
           Extents : (777875.342, 6360588.588) (777875.401, 6360588.617)
Points transformed :       123
```

Figure 4-2: Datumtran software parameters and process

During the analysis of the two sets of data it was noticed there was differences between the results. A difference of 5mm in the Easting and 8mm in the Northing was the maximum variations in the results which I have put down to possible rounding errors between the two transformations. See Appendix D

The Trimble access data transformation was used for my data analysis.

4.2.3 Raw data collection and transfer to personal computer

The initial raw data collected in TSC3 data recorder is extracted in various formats for analysis. The data is exported to as a coma separate values (CSV) file and a raw survey report file. Appendix C.
The data is then transferred from the USB stick to the computer for analysis and further processing. This data has two files, the first contains the coordinates of all the points which were recorded during testing while the second file contains all the raw data discussed in Chapter 3 Section 2.2

4.2.4 Software utilised and outputting data for analysis

The primary software used to view and analyse the data is Microsoft excel and Microsoft word, from here graphs and spreadsheets can be built and visualised to give a true and visual representation of data from which conclusions can be made. The data was analysed and the sample standard deviation was calculated, this is a measure of how widely values are dispersed from the average value.
The 95% confidence interval was also calculated for statistical analysis.

4.3 The data

4.3.1 Parameters recorded

The following parameters where recorded when conducting the tests, the survey report file lists various parameters which can be used in the quality assurance procedure.
Refer Appendix C.

Some of the parameters are shown in Table 4-1 and give an indication of any gross errors which may exist.

- Type of the solution
- precision of the determination of the horizontal position (RMS 2D),
- precision of the determination of the vertical position (RMS 1D)
- the value of the DOP (PDOP, HDOP and VDOP)
- Number of satellites based on which the position was determined and elevation mask.

Survey Mark	TYPE OF SOLUTION	SATELLITES USED	PDOP	HDOP	VDOP	ELEVATION MASK
pm 38688	NRTK	14	1.7	0.8	1.5	10
*****	*****	*****	*****	*****	*****	*****
pm 38688	RTX A	14	1.8	0.8	1.7	10
*****	*****	*****	*****	*****	*****	*****
pm 38688	RTX B	13	1.6	0.9	1.4	10

Table 4-1: Parameters recorded in the field

4.4 The Results

4.4.1 NRTK results

4.4.1.1 *Precision*

Precision is the degree of closeness or conformity of repeated measurements of the same quantity to each other. As the variance in the scatterplot in Table 4-2 is small, this shows the observations are of high precision, being tightly clustered about the mean.

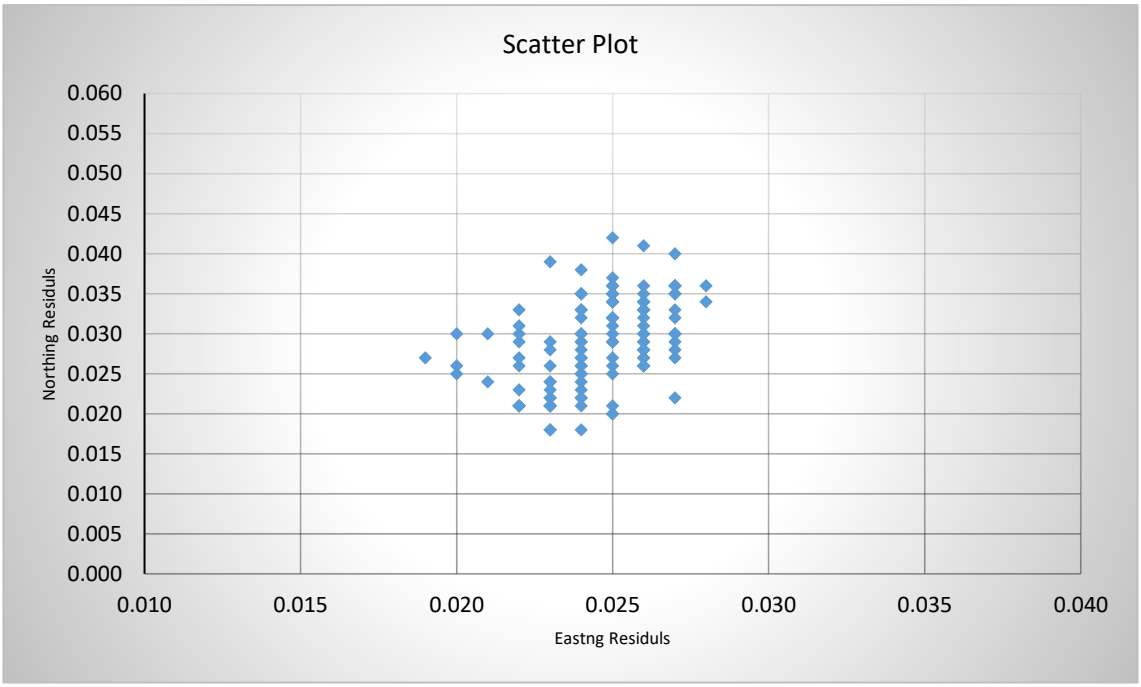


Table 4-2: Scatter plot showing Easting residuals against Northing residuals

The mean, standard deviations and 95% confidence intervals were calculated to investigate the precision of the results. From Table 4-3 NRTK's standard deviations are 1.8mm on the easting 5.4mm on the northing and 7.5mm on the vertical. Full table in Appendix E.

Sample Means	**777875.436**	**6360588.668**	**628.836**
Sample Sigma	**0.0018**	**0.0054**	**0.0075**
95% CI	**0.0036**	**0.0106**	**0.0147**

Table 4-3: NRTK sample standard deviation and 95% confidence interval

As detailed in Chapter 2.2.2 from previous research NRTK is consistent and can provide a higher precision and reliability than RTK

4.4.1.2 *Accuracy*

Accuracy describes how close an observed value is to its 'true' value. It indicates how well a derived position agrees with the known coordinates of PM38688. Accuracy was derived by comparing the NRTK solution to an established ground control mark to the official SCIMS coordinates.

The results in tables below, from tables 4-4, 4-5 and 4-6 its clear to see that the minimum distance from the known point being 19mm and maximum value being 28mm in the Easting and a minimum of 18mm and a maximum of 42mm in the Northing. As expected the vertical distance has a two to three multiple error of the horizontal position and has minimum of 44mm and a maximum of 81mm.

Table 4-4 shows the easting residuals compared to the known PM while table 4-5 and table 4-6 show the northing and rl residuals compared to the known coordinates respectively. As expected these results show our data to be accurate.

It is important to note that CORSnet operates in the GDA94(2010) realisation of the national datum and the datum as realised by the published coordinates of the surrounding ground control survey marks in SCIMS operates as GDA94(1997) in NSW (Janssen & McElroy, 2010)

This difference means there is variance between coordinates as surveyed using CORSnet and the coordinates as supplied by the LPI.

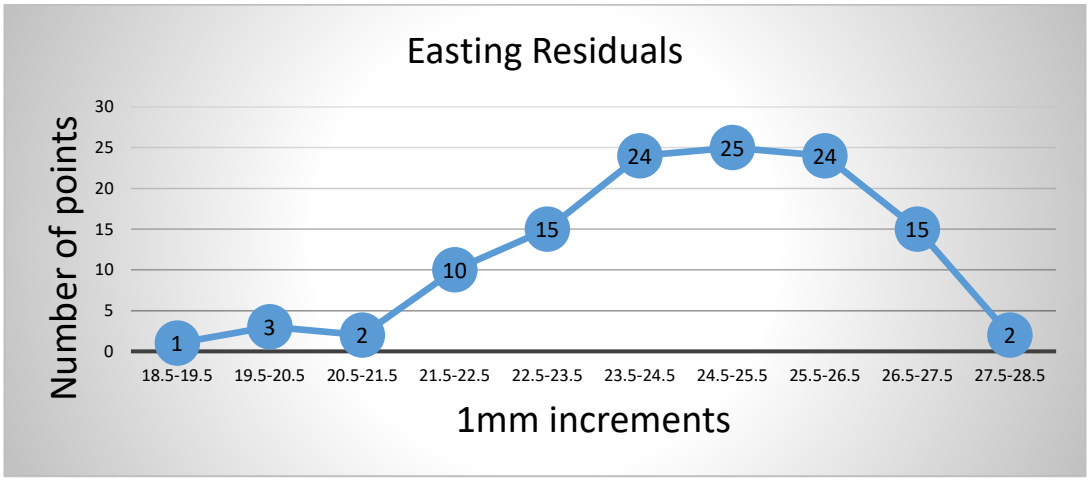


Table 4-4: NRTK data showing errors between surveyed Easting and known Easting of PM 38688

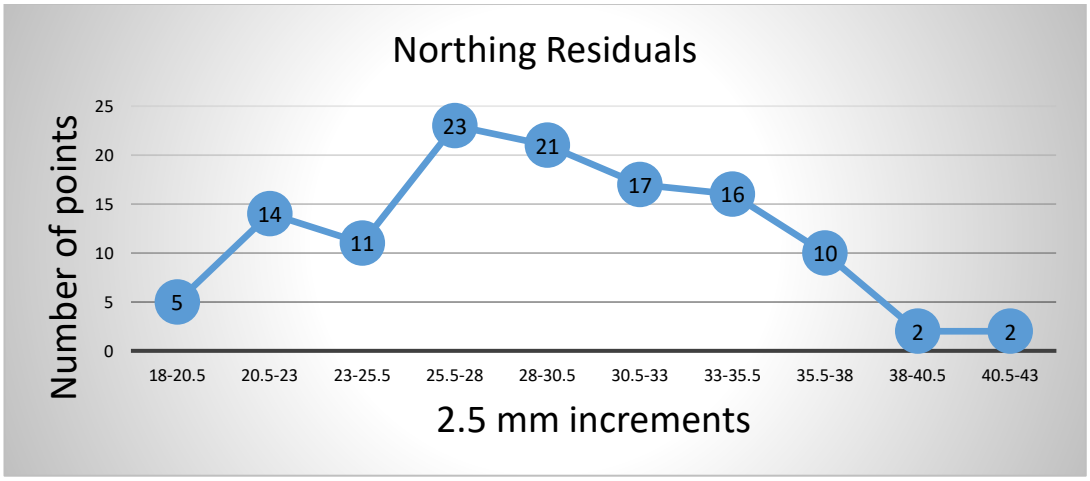


Table 4-5: NRTK data showing errors between surveyed Northing and known Northing of PM 38688

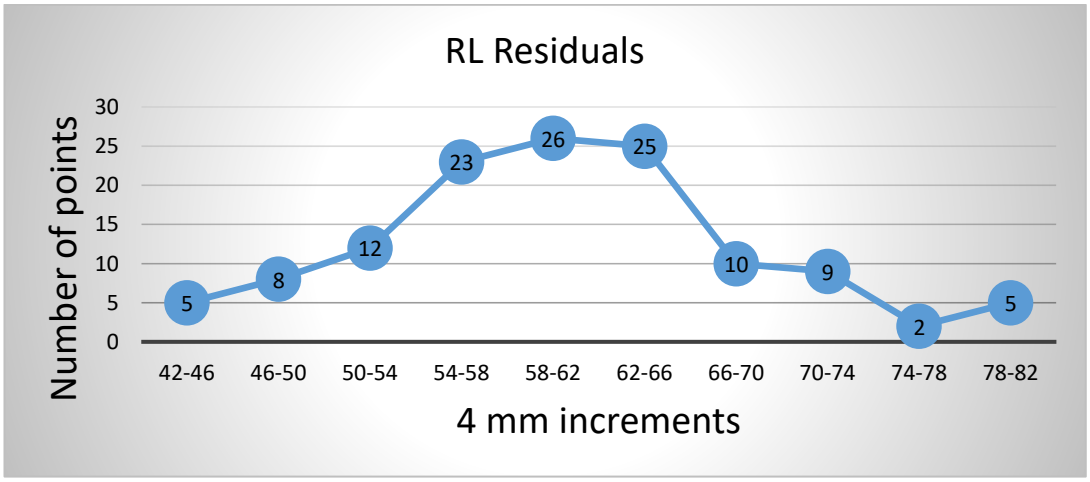


Table 4-6: NRTK data showing errors between surveyed RL and known RL of PM 38688

4.4.2 RTX results

4.4.2.1 *Precision*

The standard deviations were calculated in Table 4-7 to investigate the precision of the results showing that for RTX our standard deviations are 12.7mm on the easting 7.5mm on the northing and 20.1mm on the vertical.

Table 4-7: RTX sample standard deviation and 95% confidence interval

Sample Means	**777875.380**	**6360588.597**	**628.757**
Sample Sigma	**0.0127**	**0.0075**	**0.0201**
95% CI	**0.0250**	**0.0147**	**0.0395**

Looking at the scatterplot below in Table 4-8 there is a small number of points (12) outside of the main group but after that there is good definition of points in a small scaled area showing us RTX is somewhat precise but is by no means comparable to the precision of NRTK.

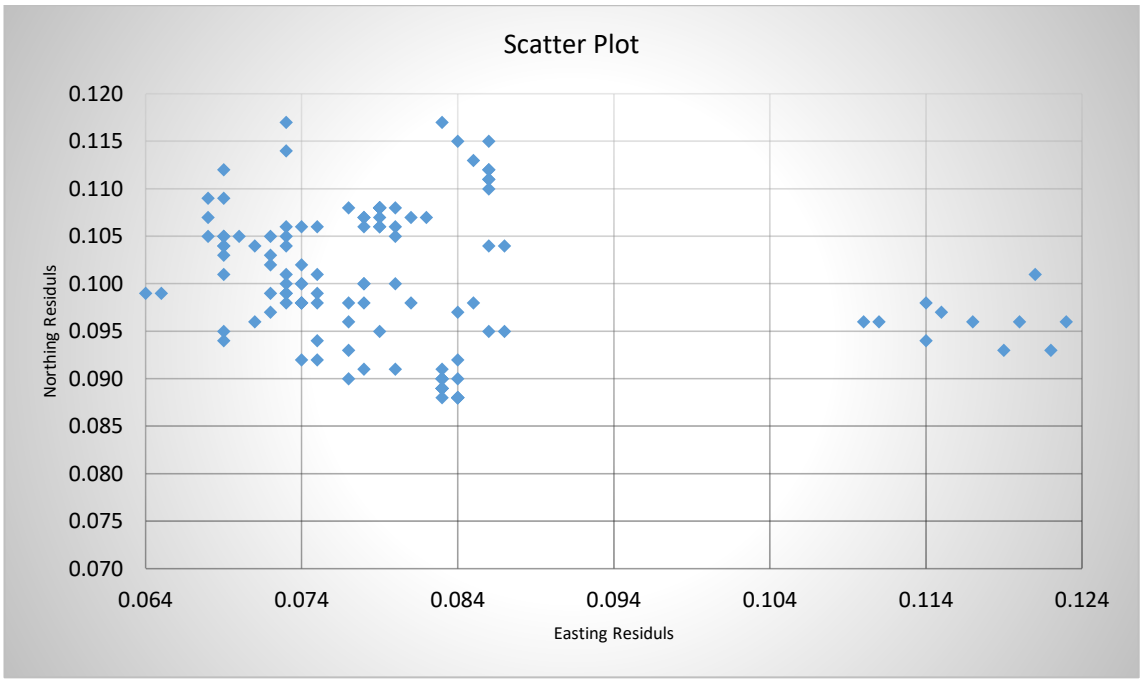


Table 4-8: RTX Scatter plot showing Easting residuals against Northing residuals

4.4.2.2 *Accuracy*

The tables 4-9, 4-10 and 4-11 show the minimum distance from the known point being 64mm and maximum value being 123mm in the Easting and a minimum of 88mm and a maximum of 117mm in the Northing. As expected the vertical distance has a two to three multiple error of the horizontal position and has minimum of 98mm and a maximum of 210mm.

Table 4-9 shows the easting residuals compared to the known PM while table 4-10 and table 4-11 show the northing and rl residuals compared to the known coordinates respectively. As expected these results show our data not to be as precise as NRTK.

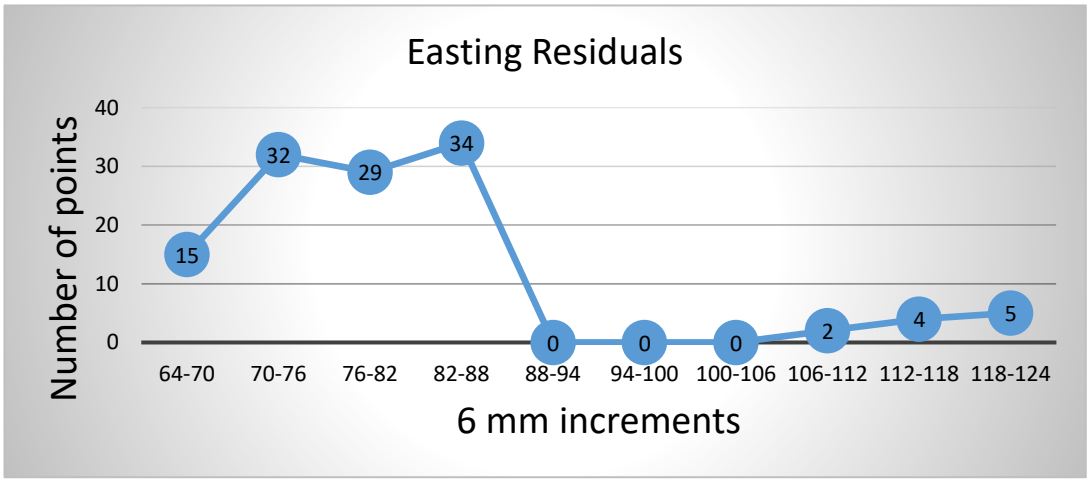


Table 4-9: RTX data showing errors between surveyed Eastings and known Eastings of PM 38688

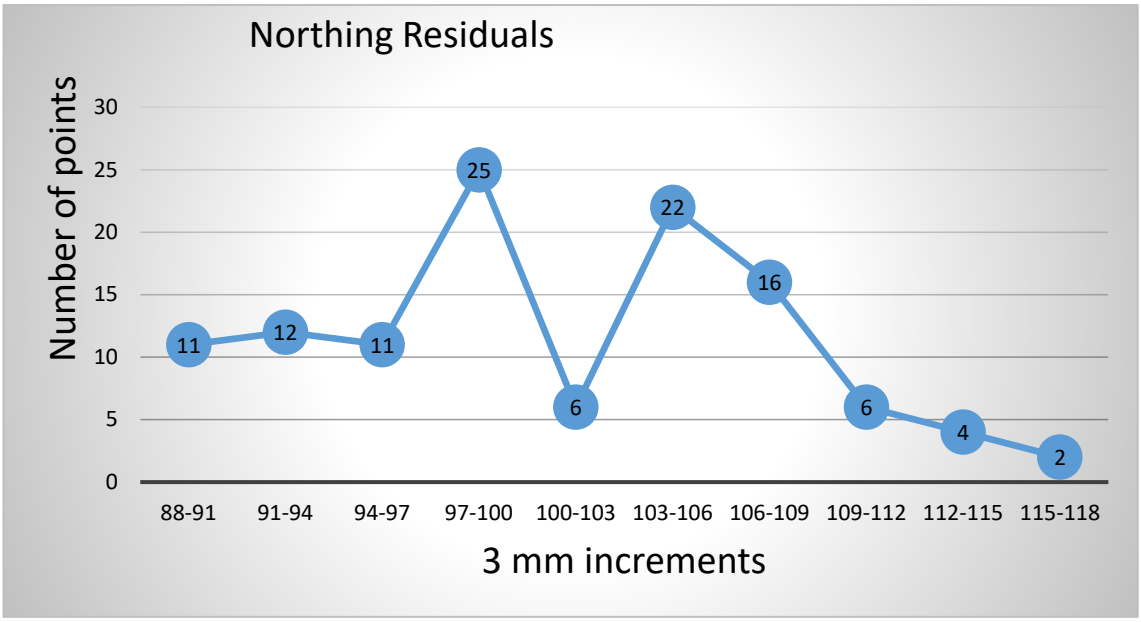


Table 4-10 RTX data showing errors between surveyed Northings and known Northings of PM 38688

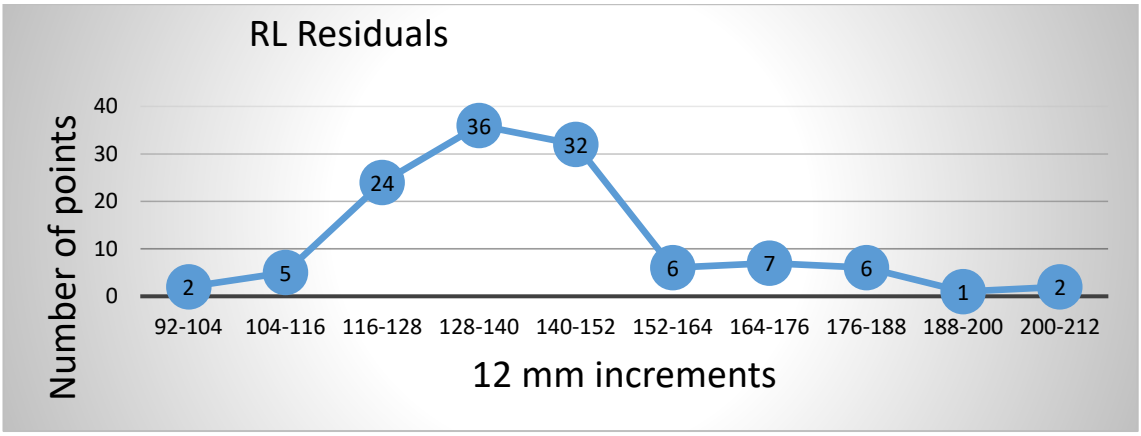


Table 4-11: RTX data showing errors between surveyed RL and known RL of PM 38688

It is important to note that RTX corrected positions are originally derived in ITRF2008 (current epoch), ttransforming the positions computed at the observation epoch to a fixed epoch, requires knowledge of the station velocity due to the tectonic plate motion. The accuracy of the velocity estimate will degrade the accuracy of the position computed for a fixed epoch in ITRF2008. If transforming to another reference frames, the accuracy of the transformation parameters will further degrade the accuracy of the computed position. (Trimble Xfill Rtk)

4.4.3 RTX precision over time

To determine RTX's precision over time a comparsion of the observations against their mean value and this indicates how closely repeated observations are to each other in doing this the time stamp was also noted to get an indication of how the system preformed over time.

Once the system became initialized after the first 13 minutes the system performed good and the deviation away from the mean was less than 20mm in horizontal position hereafter.

Table 4-12 below shows how the horizontal precision performed over time and table 4-13 shows how the vertical deviated from the mean over time. Table 4-14 show the two sets of the data overlaid to give us a clearer picture of how the horizontal and vertical precision deviated over time.

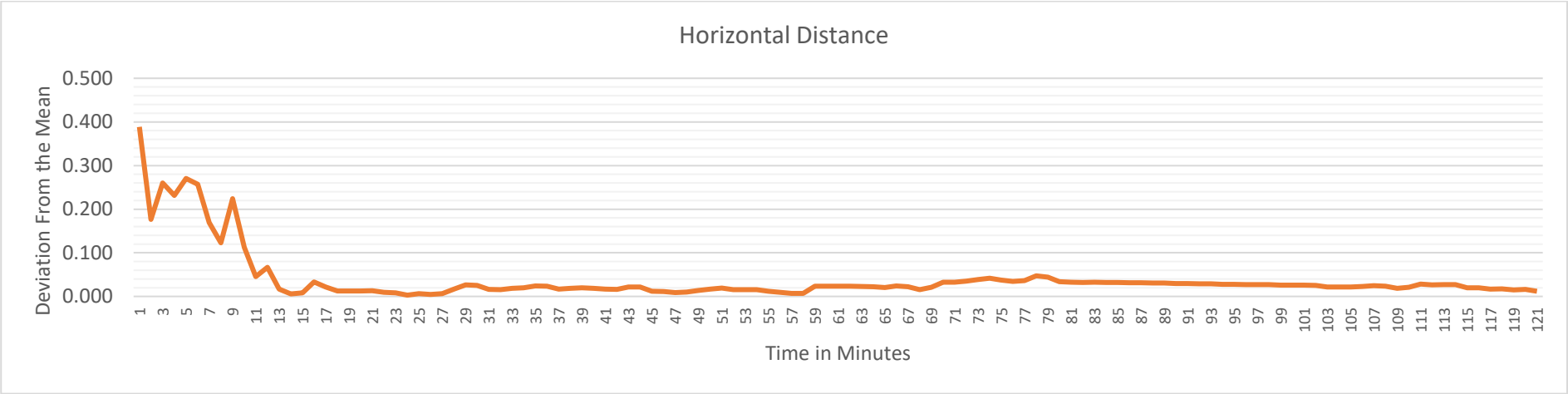


Table 4-12: Showing time against accuracy for horizontal position

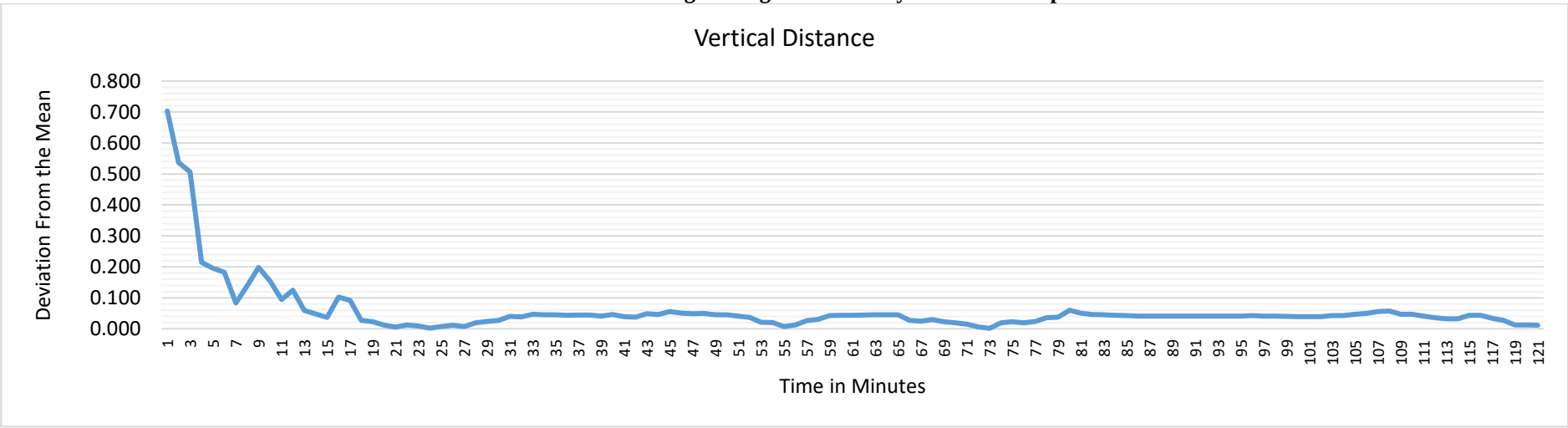


Table 4-13: Showing time against accuracy for vertical position

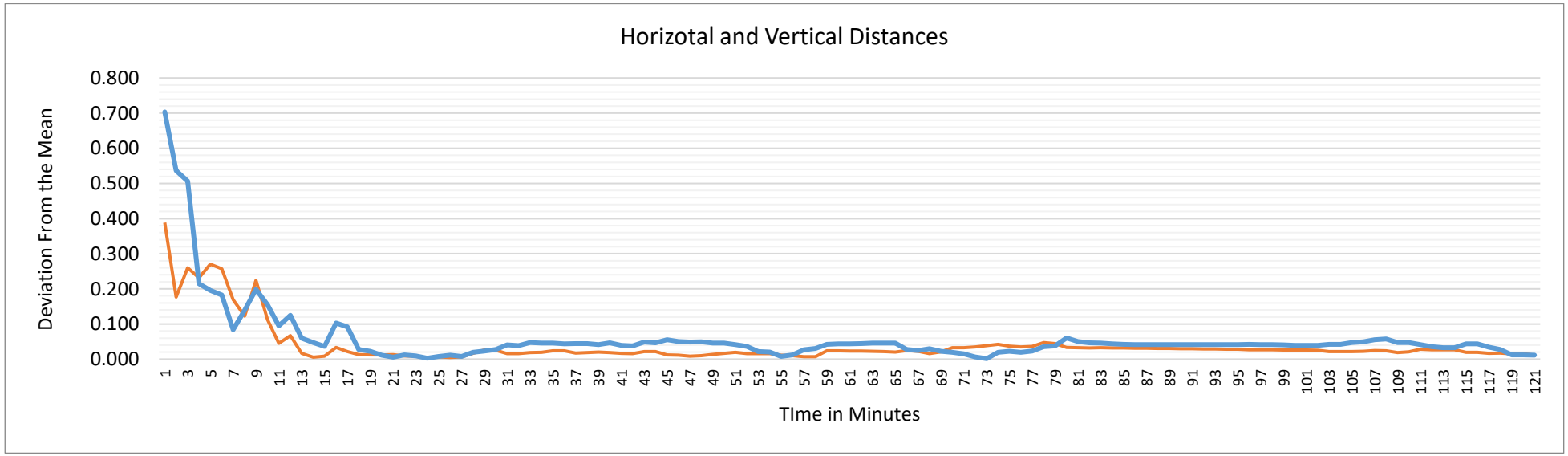


Table 4-14 Showing time against accuracy for horizontal and vertical position

We can see from the results that the system performance was poor until the initialization and from here the system replicated the results as seen in the first RTX test, as expected the horizontal is twice as good as the vertical and over time became steady and increased in precision.

4.5 Conclusion

This chapter focused on the actual results obtained from the research methods. Three main sets of data where achieved giving us three definitive sets of results to extract our results from and the findings from these were included. Results showed as expected, that NRTK was precise but accuracy was difficult to compare due to different reference frames. It is this reason that it is advised that a localization be carried out while using a NRTK solution.

The RTX solution showed precisions and accuracies where poor when compared to NRTK, being three to four times that which were achieved from NRTK.
When investigating the performance over time of the RTX system it is now known that after the initialization of period of 13 minutes the systems precisions improved and stabilized to give results as seen in first test.

5.0 CHAPTER 5 – DISCUSSION

5.1 Introduction

This Chapter discusses the results obtained and provides an outline of the current status of the research.

The aim of this chapter is to comment on results obtained, make recommendations regarding alternative solutions and to explore further research opportunities.

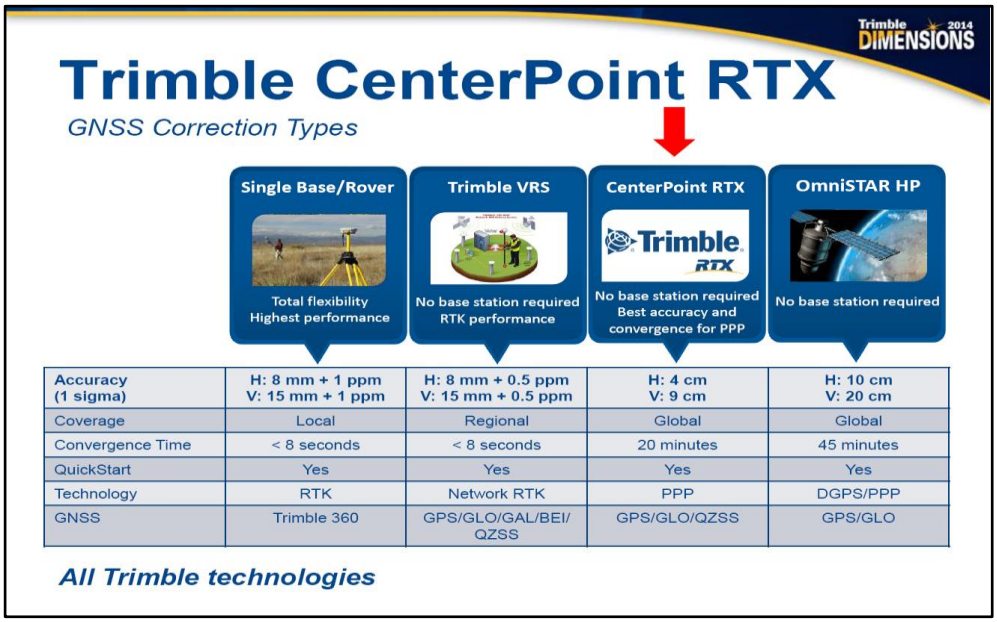
Recommendations will be made comparing and contrasting other options that are available in the market and the expected performance of these systems.

5.2 Discussion and comments on results

Results from this testing indicate that RTX is not as accurate as NRTK. Figure 5-1 shows marketing material suggesting RTX can achieve an accuracy of 4cm horizontal and 9cm vertical. Results from this project are not consistent with this (the accuracies are approximately double those quoted). This may be due to the fact that their testing was conducted in ideal conditions, which may not exist in the "real" world, while the tests in this project were conducted under field conditions that would normally be expected in Australia. Further, their tests were conducted in the northern hemisphere while this project reports tests in the southern hemisphere. Figure 5-2 shows there is a bias towards more tracking stations in the northern hemisphere compared to the southern hemisphere.

Convergence times were found to be quicker than those stated in Figure 5-2 and the precessions to be consistent after this initialisation period of 13 minutes.

There is an obvious pattern that emerges from the results that RTX is not accurate or precise enough for a practicing surveyor in today's industry. While initialisation times are quicker than quoted in Figure 5-1 a 13-minute delay at the start of a job would have major financial implications for a company.



Accuracy (1 sigma)	H: 8 mm + 1 ppm V: 15 mm + 1 ppm	H: 8 mm + 0.5 ppm V: 15 mm + 0.5 ppm	H: 4 cm V: 9 cm	H: 10 cm V: 20 cm
Coverage	Local	Regional	Global	Global
Convergence Time	< 8 seconds	< 8 seconds	20 minutes	45 minutes
QuickStart	Yes	Yes	Yes	Yes
Technology	RTK	Network RTK	PPP	DGPS/PPP
GNSS	Trimble 360	GPS/GLO/GAL/BEI/ QZSS	GPS/GLO/QZSS	GPS/GLO

Figure 5-1: Trimble GNSS correction type accuracies
(Trimble Dimensions 2014)

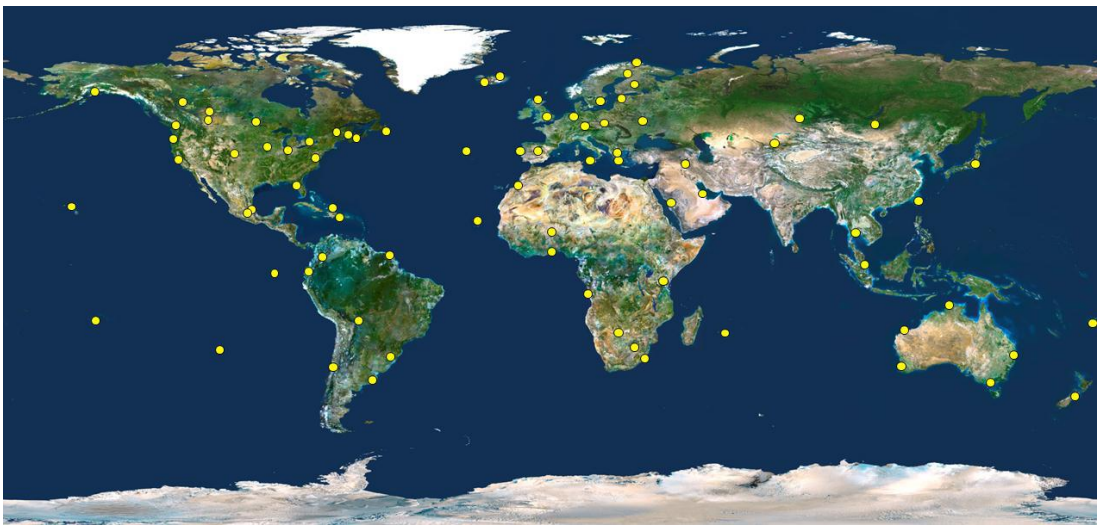


Figure 5-2: RTX tracking network distribution
(Trimble 2014)

5.2.1 SCIMS and CORS coordinates

As discussed by (Janssen et al, 2013) at the International Global Navigation Satellite Systems Society July of last year, it is currently a challenging transition period between traditional, passive ground control infrastructure and modern, dynamic GNSS CORS infrastructure.

As detailed in Chapter 4, Section 1, CORS coordinates are known to have errors of up to 0.2 m horizontally and 0.3 m vertically exist in NSW between the legal coordinate datum as realised by SCIMS, known in NSW as GDA94(1997). The current AUSGeoid09 model has been shown to provide N values with unprecedented absolute accuracy across NSW and Australia (Allerton et al., 2015). During our testing AUSGeoid 09 was used in the two tests but it is important to note that there can be differences between CORS coordinates and SCIMS coordinates.

5.3 Accuracy and Precision

5.3.1 Accuracy

Accuracy is the degree of conformity or closeness of a measurement to the 'true value'. This not only includes the effect of random errors, but also any bias due to any uncorrected systematic errors. (USQ Faculty of Engineering and Surveying, 2012)
In this instance, measurements were taken at points with known coordinates, so accuracy can be tested by comparing our measurements to these known values.

5.3.2 Precision

Precision is the degree of closeness or conformity of repeated measurements of the same quantity to each other. If the variance is small, the observations are of high precision, being tightly clustered about the mean, if the variance is large the observations are of low precision and are dispersed widely about the mean.
(USQ Faculty of Engineering and Surveying, 2012)

5.3.3 Reliability

During my testing, there was no issues with reliability from either system as once initialised the solutions remained initialised, this was verified using the raw survey data report. It has been noted in some the research material that a loss of initialisation in the RTX system would mean the system would need to reinitialise and considering it took between 12 to 13 mins for the RTX system to initialise this may be a concern when using this system.

5.3.4 Quality Indicators

This section will look at quality indicators and determine their effect on precision and accuracy of the field derived positions.
There are many quality indicators available, though not a guarantee that the field measurements are precise or will yield an accurate position, these indicators are used to help ensure quality data.

DOP (Dilution of Precision) is an indicator of the quality of a GNSS position. DOP considers the location of each satellite relative to other satellites within the constellation including their geometry relative to the GNSS receiver. A low DOP value indicates a higher probability of accuracy. Standard DOPs for GNSS applications are:

- PDOP - Position (three coordinates) is a measure of satellite geometry at a single epoch relative to a single point being positioned
- HDOP - Horizontal (two horizontal coordinates)
- VDOP - Vertical (height only)
- GDOP - Geometric Dilution of Precision, the relationship between errors in user position and time, and errors in satellite range.

"Lower DOP values should indicate better precision, but cannot be zero, as this would indicate that a user would get a perfect position solution regardless of the measurement errors. Under optimal geometry with many satellites available (generally 13 or more), PDOP can show (usually very briefly) as a value less than one, indicating that the RMS

average of the position error is smaller than the measurement standard deviation. PDOP is related to horizontal and vertical DOP by the equation
($PDOP^2 = HDOP^2 + VDOP^2$)"
(National Geodetic Survey user guidelines for classical real time GNSS positioning version 2.0.3 September 2008 William Henning)

The Number of Satellites from each measurement were recorded relative to the number of satellites used in each solution. A PDOP mask which is the highest PDOP value at which a receiver will compute positions for was set to 6 all the measurements.

The elevation mask which is the angle below which the system does not track satellites was set to 10 degrees to avoid interference from trees as well as ground multipath errors.

5.4 Conclusion

This chapter has analysed the results and looked at other options regarding alternative solutions and possible further research which could be undertaken.
This will be of benefit the surveying industry in assessing which option is best suited to their needs taking into consideration accuracies, precisions and the performance of the RTX system over time.

The achievements of the research study, applications and its usefulness will be made in Chapter 6.

6.0 CHAPTER 6 – CONCLUSION

6.1 Introduction

The aim of this project was to test the accuracies and precisions that could be achieved by comparing the RTX system to a conventional Network RTK system on known SCIMS marks as determined by the LPI NSW and to access if there is a significant decrease in accuracy or precision over time using the RTX System.

The tests as detailed in Chapter 3 provided a reliable and current set of results in the Sothern Hemisphere as discussed in Chapter 4 from which a detailed analysis was developed in Chapter 5.

6.2 Discussion

The benefits of this research are it will be useful, for assisting the decision making, on establishing which system to purchase for surveyors within their respective industry. Ultimately the decision comes down to the level of accuracy which the GNSS system is going to be used for. For open cut mining and other low accuracy works sub 0.1m, the RTX system is not a problem, although care needs to be taken within certain environments to make sure initialisation is not going to be lost as the re initialisation time can be quite slow and costly.

6.3 Further Work

6.3.1 Testing using European Regional Ionosphere Model

Extensive tests of the new regional model – the overall statistics are based on more than 20 geodetic receivers running for 14 days – demonstrated that, for dual frequency operations, the solution converges to 4 cm horizontal error in 0.9 minutes (at 95%),

compared to the 16.4 minutes required when using the Global Ionosphere Model. (Nardo et al., 2015)
Due to the geographical location of my testing this would have been a good variation to test for convergence times and compare from different ionosphere models.

6.3.2 Testing within an Augmentation area

As discussed earlier there is a second process on a separate server using the real time (orbits, clocks, etc.) information as input using additional reference station data from a regional network e.g. a network covering the agriculturally most important parts of the mid-west states in the US. This network currently consists of 75 stations with an interstation spacing of roughly 120 km.

Data is forwarded to an NTRIP Caster for distribution to the satellite uplink station in the US and then uploaded to the SkyTerra satellite. The NTRIP Caster can also distribute the data stream into the internet for possible use by many customers via internet protocol. The real Trimble RTX system provides redundancy with backup hardware and software at each individual component to ensure the highest availability. The data stream distributed by the CenterPoint NTRIP Caster uses a special version of the Trimble proprietary data format CMRx, which was especially developed for Trimble CenterPoint RTX operation.

6.3.3 Testing using Additional Algorithms

There are many different algorithm tweaks that can take place to improve the system like time and space properties of the correlation for atmospheric delay and proposed relevant models for anticipating atmospheric delays. Results from the test show that the proposed models for anticipating delays can be efficiently and securely used for solving ambiguity in reference station network in real time, based on individual epoch.

A different solution to the problem of satellite clock errors was presented by (Lannes et al., 2013). It refers to phase delays of the clock in GNSS. It proposed a solution to the problem through undifferenced approach based on the concept of ambiguity closure. They presented theoretical justification of closure-ambiguity approach and the main elements

for its practical implementation. In the solution, when the phase delay is estimated for the first time, its fractional part is limited to one cycle of interval range cantered to zero; then the total ambiguity is modified accordingly.

6.3.4 Testing using RTX Post processed service

CenterPoint RTX post-processing uses the Trimble RTX technology with the GPS, GLONASS and QZSS satellite systems to post-process user submitted observation files. Dual frequency data files can be submitted through the web service, at www.trimblertx.com. (Figure 6-1)

When processing is complete, a report will be sent via email. Observation files must meet the defined requirements and formats including tectonic plate selection.

The achievable accuracy level of the CenterPoint RTX post-processing services is two centimetres or better horizontal accuracy and approximately 4 centimetres in vertical. This is based on a minimum one-hour data session. Accuracy can approach one-centimetre horizontal accuracy and approximately two centimetres in vertical, as the data session approaches but does not exceed 24 hours in length.

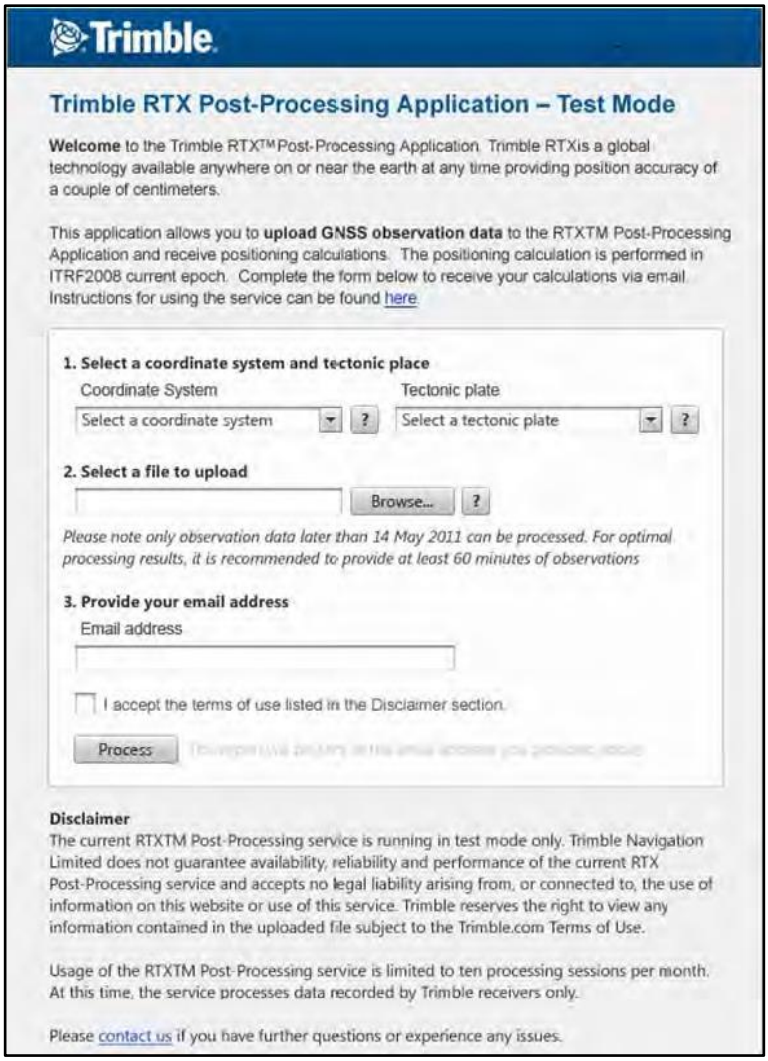


Figure 6-1: RTX post processing web interface

6.3.5 Test the RTX system receiving corrections from an internet protocol

It would have been advantageous to get another set of results for comparisons to make recommendations and conclusions but due to limited time with the loan of the system another captured set of data was not an option.

6.3.6 Test the RTX system during a solar max event

Testing to be conducted or re-conducted periodically, to determine the effect of which a solar-max and an active ionosphere has on the system. Solar Max is a period when the solar activity is at the peak of its solar cycle, this happens every 11 years and last peaked in 2014.

6.3.7 Alternative solutions

6.3.7.1 Trimble Omni STAR solution

Alternative solutions that could be looked at include the post processing of the data, Trimble Omni STAR solution. Post processing would not be very efficient as it involves gathering data over long periods of time which can have cost implications due to man hours and security, also with the survey gear not being available due to this recording of data.

Trimble's Omni Star correction service has an accuracy of 100mm horizontal and 200mm vertical with a slower convergence time of 45 mins which has no apparent benefit over the RTX system.

6.3.7.2 AUSPOS

AUSPOS is a free online GPS data processing facility provided by Geoscience Australia. An AUSPOS report would contain GDA94 and ITRF coordinates. To survey such data results from a generic 24 hours of GPS data would result in horizontal accuracy of approximately 10mm in horizontal and between 10mm to 20mm in vertical accuracy. Two hours of observed data may result in horizontal accuracy approximately 20mm and between up to 50mm in vertical accuracy. (Geoscience Australia).

Due to the scope and time constraints of this dissertation AUSPOS data was not recorded

6.4 Summary

In conclusion, an investigation was carried out into the advantages and disadvantages of the RTX system as was experienced throughout this project.

Firstly, with the advantages there is the reliability that the system is always available once there is clear view of an open sky. This reliability is worldwide and with the need for only rover with no base there is an obvious cost saving.

The disadvantages of the system start with the initialisation times, a cold start up timeframe of 10 to 45 minutes is very slow in today's market and the re initialisation times also being slow once lock has been lost is a painful experience. In our testing, results show an initialisation time of 13 minutes which is the lower end of this scale but still a time burden.

The Initial set up cost extra due to a special licence being acquired needs to be assessed when deciding the best option.

And finally, but fundamentally the most important factor is the precision and accuracy. Nowadays every job that is conducted in an accuracy driven market, the same question is always asked "*How accurate is the equipment?*", while 100mm may be adequate for some sectors of GNSS users I believe the technology is not quite there yet! It may be satisfactory for the agriculture industry and possibly the open cut mining industry as accuracies needed here are relaxed. I believe the GIS industry may also benefit from such a system.

NRTK is still the superior to RTX. Surveyors these days need to know that their equipment is going to work first time, every time, efficiently and for this NRTK is still the superior solution.

RTX initialisation is unreliable and slow. NRTK is tried, tested and trusted.

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APPENDIX A: PROJECT SPECIFICATION

University of Southern Queensland

Faculty of Health, Engineering and Sciences

ENG4111/ENG4112 Research Project

Project Specification

For: Richard Boylan 0061036268
Topic: An evaluation of the performance of two different global satellite navigation systems, Trimble's CenterPoint RTX and a conventional single base RTK system.

Supervisors: Assoc. Prof Peter Gibbings
Enrolment: ENG 4111 – S1 2016
ENG 4112 – S2 2016

Project Aim: The aim of this project is to test the accuracies and precisions that can be achieved from comparing the RTX solution to a conventional single base RTK solution on known SCIMS marks as determined by the LPI NSW.
This project will also evaluate if the accuracy and precision decreases over a fixed time.

Sponsorship: N/A
Programme: **Issue A, 19th of May**

1. Research the background information in relation to the creation and advancement of RTX technology.
2. Create a field measurement technique to evaluate the performance of the CenterPoint RTX system and conventional single base RTK solution against know control points.
3. Analyse the field data and provide results in a comparative nature.
4. Produce clear and concise graphs showing the relationship between both sets of results.
5. Submit an academic dissertation on the research.

As time permits:

6. Investigate options in further limiting errors in each system.

Agreed
Richard Boylan_____ (Student) _____ (Supervisor)
19/05/2016 _ /_ /2016

APPENDIX B: PM 38688

SCIMS SURVEY MARK REPORT AS AT: 28-SEP-2016

Your Reference: mudgee Search Number: 375491

MARK NAME STATUS	COORDINATES AND HEIGHTS			CLASS	ORDER	PU	SOURCE	CSF CONVERGENCE AUSGEOID09
PM 38688	MGA	777875.461	6360588.697 55	A	1	n/a	216404	1.000449
	GDA94	-32° 51' 27.42418"	149° 58' 09.46528"					1° 36' 43.32"
	AHD71	628.897		LB	L2	n/a	204804	26.939

Map Legend

SCIMS Mark Types (Colour codes refer to the assigned accuracy "Class")

SS	PM	TS	CR	MM	CP	GB	
							Established GDA & Accurate AHD
							Established GDA Only
							Accurate AHD Only
							Unknown of Less Accurate GDA & AHD

Established GDA coordinates are assigned accuracy class 2A, A, B or C
Accurate AHD heights are assigned accuracy class L2A, LA, LB, LC, LD, 2A, A or B

Mark Status *

F Found Intact
N Not Found
D Destroyed
S Subsidence Area
U Uncertain
R Restricted Access

* Where available, the Mark Status is appended to the Mark Number in the map

SURVEY MARK

Mark	Name	Alias
PM 38688		n/a

Status	Date	Comments
	n/a	n/a

Location	Monument	Date Placed	Placed By
GROUND LEVEL	UNKNOWN	n/a	0

GDA94

Easting	Northing	Zone	Latitude	Longitude
777875.461	6360588.697	55	-32° 51' 27.42418"	149° 58' 09.46528"

Class	Order	Positional Uncertainty	Local Uncertainty	GDA Updated
A	1	n/a	n/a	5-DEC-2000

Source	Type	Method	Date issued	Issued By
216404	ADJUSTMENT	GEOLAB	11-SEP-2000	NEVILLE KRAHE

Previous Reference	Location	File Number
n/a	BLUE MOUNTAINS - (LGA)	T15173

Comments
SUB SPINE GDA ADJUSTMENT OF EXISTING GPS DATA SETS AND NEW OBSERVATIONS FROM AUGUST 2000 UPDATED 5/12/2000 TXN 5264

MGA Combined Scale Factor	MGA Convergence
1.000449	1° 36' 43.32"

AusGeoid09
26.939

AHD71

Height
628.897

Class	Order	Positional Uncertainty	Local Uncertainty	AHD Updated
LB	L2	n/a	n/a	19-AUG-1996

Source	Type	Method	Date issued	Issued By
204804	HEIGHTING	UNKNOWN	19-AUG-1996	n/a

Previous Reference	Location	File Number
75160	n/a	n/a

Comments
n/a

Req:R494512 /Doc:PM 0038688 P /Rev:22-Dec-2003 /Sts:NO.OK /Pgs:ALL /Prt:28-Sep-2016 20:50 /Seq:1 of 1
Ref:imageAgent /Src:S

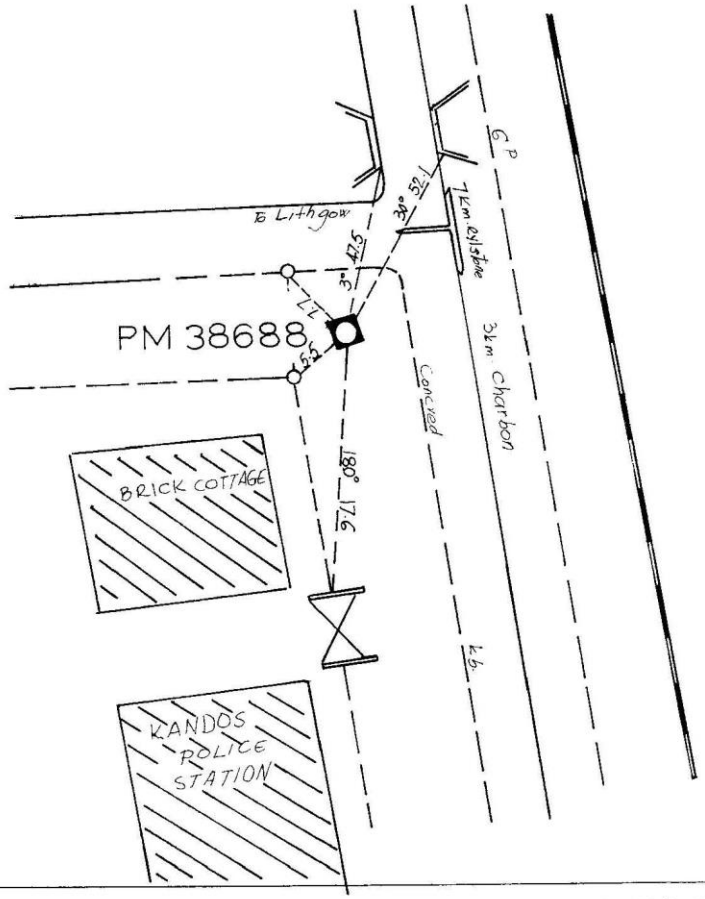
PM 38688
SSM
MSM

LOCALITY SKETCH PLAN

Parish WELLS County ROXBURGH City or Town KANDOS

~~Municipality~~ or Shire RYLSTONE Control Survey Plan

Measurements are in metres Zone ...../.....



Organisation placing Marks

.....

Aerial photo No. ..... Run .....
Plan registered / /19
Mark last inspected / /19

PM 38688
SSM
MSM

I certify that the Mark or Marks have been placed and numbered as detailed hereon.

Assistant Trig. Surveyor
Designation

APPENDIX C: RAW SURVEY REPORTS

Job name	nrtk160818
Creation date	17 Aug 2016
Version	Trimble General Survey 2.61
Distance Units	Meters
Angle units	Degrees
Pressure Units	mbar
Temperature Units	Celsius

Coordinate system (Job)	
System	Map Grid of Australia (GDA)
Zone	Zone 55
Datum	ITRF

Projection	
Projection	Transverse Mercator
Origin lat	0°00'00.00000"N
Origin long	147°00'00.00000"E
False easting	500000.000
False northing	10000000.000
Scale	0.99960000
South azimuth (grid)	No
Grid coords	Increase North-East
Ellipsoid	Semi-major axis: 6378137.000 Flattening: 298.25722154

Local site	
Type	Grid

Datum transformation	
Type	Three parameter
Semi-major axis	6378137.000
Flattening	298.257223
Translation X	0.000
Translation Y	0.000
Translation Z	0.000

Vertical adjustment	
Geoid file	AUSGeoid09 (Australia)

Collected Field Data (ECEF deltas: APC to APC)

Corrections

South azimuth (grid)	No
Grid coords	Increase North-East
Magnetic declination	0°00'00"
Distances	Ground
Neighborhood adjustment	Off

Projection	
Projection	Transverse Mercator
Origin lat	0°00'00.00000"N
Origin long	147°00'00.00000"E
False easting	500000.000
False northing	10000000.000
Scale	0.99960000
Ellipsoid	Semi-major axis: 6378137.000 Flattening: 298.25722154

Local site	
Type	Grid

Datum transformation	
Type	Three parameter
Semi-major axis	6378137.000
Flattening	298.257223
Translation X	0.000
Translation Y	0.000
Translation Z	0.000

Vertical adjustment	
Geoid file	AUSGeoid09 (Australia)

Coordinate system	
System	Map Grid of Australia (GDA)
Zone	Zone 55
Datum	ITRF

Point	1001	**East**	777875.461	**North**	6360588.697	**Elevation**	628.897	**Code**	pm38688

Rover options									
Elevation mask	10	**PDOP mask**	6						

Rover options									
Elevation mask	10	**PDOP mask**	6						

Survey event	
Survey event	Rover started

Point	PRS933471292892	**Latitude**	32°47'32.83404"S	**Longitude**	149°58'36.02164"E	**Height**	611.034	**Code**	

GNSS receiver

Receiver type	Unknown
Serial number	
Firmware version	0
Antenna type	AdV Null Antenna
Measurement method	Antenna Phase Center
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.000

Base point

Point	PRS933471292892	**Antenna height**	0.000	**Type**	Corrected				

Initialization event: RTK initialized

GPS week	1910	**Seconds**	341647	**Initialization type**	On the fly	**Survey type**	Real-time		

GNSS receiver

Receiver type	R10
Serial number	5431474254
Firmware version	5.14
Antenna type	R10 Internal
Measurement method	Bottom of quick release
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.199

Point	2000	**ΔX**	3703.717	**ΔY**	-1342.748	**ΔZ**	-6098.848	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.009		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.7
		Base data age	1	**Satellites**	15	**Positions used**	61		

Point	2001	**ΔX**	3703.715	**ΔY**	-1342.747	**ΔZ**	-6098.847	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.007		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.7

		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2002	**ΔX**	3703.716	**ΔY**	-1342.750	**ΔZ**	-6098.845	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.008		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.7
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2003	**ΔX**	3703.716	**ΔY**	-1342.750	**ΔZ**	-6098.844	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.007		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.7
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2004	**ΔX**	3703.713	**ΔY**	-1342.748	**ΔZ**	-6098.847	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.007		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.7
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2005	**ΔX**	3703.713	**ΔY**	-1342.749	**ΔZ**	-6098.845	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.007		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.7
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2006	**ΔX**	3703.706	**ΔY**	-1342.743	**ΔZ**	-6098.847	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.007		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.7
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2007	**ΔX**	3703.706	**ΔY**	-1342.744	**ΔZ**	-6098.847	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.007		

QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.7
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2008	**ΔX**	3703.710	**ΔY**	-1342.746	**ΔZ**	-6098.845	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.003	**Vt Prec**	0.007		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.7
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2009	**ΔX**	3703.714	**ΔY**	-1342.748	**ΔZ**	-6098.844	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.003	**Vt Prec**	0.006		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.7
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2010	**ΔX**	3703.712	**ΔY**	-1342.748	**ΔZ**	-6098.845	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.003	**Vt Prec**	0.006		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.7
		Base data age	1	**Satellites**	14	**Positions used**	60		
Point	2011	**ΔX**	3703.713	**ΔY**	-1342.751	**ΔZ**	-6098.845	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.003	**Vt Prec**	0.006		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2012	**ΔX**	3703.712	**ΔY**	-1342.749	**ΔZ**	-6098.844	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.003	**Vt Prec**	0.006		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.6
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2013	**ΔX**	3703.710	**ΔY**	-1342.748	**ΔZ**	-6098.844	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		

Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.003	**Vt Prec**	0.007		
QC 1		**PDOP**	1.9	**GDOP**	2.3	**HDOP**	1.0	**VDOP**	1.6
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2014	**ΔX**	3703.707	**ΔY**	-1342.746	**ΔZ**	-6098.846	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.003	**Vt Prec**	0.007		
QC 1		**PDOP**	1.8	**GDOP**	2.2	**HDOP**	0.8	**VDOP**	1.6
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2015	**ΔX**	3703.705	**ΔY**	-1342.744	**ΔZ**	-6098.849	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.007		
QC 1		**PDOP**	1.8	**GDOP**	2.2	**HDOP**	0.7	**VDOP**	1.6
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2016	**ΔX**	3703.703	**ΔY**	-1342.744	**ΔZ**	-6098.849	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.007		
QC 1		**PDOP**	1.8	**GDOP**	2.2	**HDOP**	0.7	**VDOP**	1.6
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2017	**ΔX**	3703.702	**ΔY**	-1342.744	**ΔZ**	-6098.849	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.007		
QC 1		**PDOP**	1.8	**GDOP**	2.2	**HDOP**	0.7	**VDOP**	1.6
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2018	**ΔX**	3703.702	**ΔY**	-1342.742	**ΔZ**	-6098.850	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.008		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	0.7	**VDOP**	1.6
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2019	**ΔX**	3703.707	**ΔY**	-1342.744	**ΔZ**	-6098.846	**Code**	pm

		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.008		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	0.7	**VDOP**	1.6
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2020	**ΔX**	3703.709	**ΔY**	-1342.746	**ΔZ**	-6098.848	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.008		
QC 1		**PDOP**	1.7	**GDOP**	2.1	**HDOP**	0.7	**VDOP**	1.5
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2021	**ΔX**	3703.714	**ΔY**	-1342.748	**ΔZ**	-6098.847	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.007		
QC 1		**PDOP**	1.7	**GDOP**	2.1	**HDOP**	0.7	**VDOP**	1.5
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2022	**ΔX**	3703.714	**ΔY**	-1342.747	**ΔZ**	-6098.851	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.008		
QC 1		**PDOP**	1.7	**GDOP**	2.1	**HDOP**	0.7	**VDOP**	1.5
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2023	**ΔX**	3703.715	**ΔY**	-1342.746	**ΔZ**	-6098.852	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.009		
QC 1		**PDOP**	1.7	**GDOP**	2.1	**HDOP**	0.7	**VDOP**	1.5
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2024	**ΔX**	3703.716	**ΔY**	-1342.746	**ΔZ**	-6098.852	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.008		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	0.9	**VDOP**	1.5
		Base data age	1	**Satellites**	14	**Positions used**	61		

Point	2025	**ΔX**	3703.722	**ΔY**	-1342.750	**ΔZ**	-6098.847	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.009		
QC 1		**PDOP**	1.6	**GDOP**	2.0	**HDOP**	0.8	**VDOP**	1.4
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2026	**ΔX**	3703.724	**ΔY**	-1342.752	**ΔZ**	-6098.845	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.009		
QC 1		**PDOP**	1.6	**GDOP**	2.1	**HDOP**	0.7	**VDOP**	1.5
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2027	**ΔX**	3703.726	**ΔY**	-1342.753	**ΔZ**	-6098.844	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.009		
QC 1		**PDOP**	2.1	**GDOP**	2.7	**HDOP**	0.8	**VDOP**	1.9
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2028	**ΔX**	3703.725	**ΔY**	-1342.753	**ΔZ**	-6098.846	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.009		
QC 1		**PDOP**	1.8	**GDOP**	2.2	**HDOP**	0.8	**VDOP**	1.6
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2029	**ΔX**	3703.729	**ΔY**	-1342.755	**ΔZ**	-6098.846	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.015		
QC 1		**PDOP**	1.8	**GDOP**	2.2	**HDOP**	0.8	**VDOP**	1.6
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2030	**ΔX**	3703.726	**ΔY**	-1342.753	**ΔZ**	-6098.851	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.016		
QC 1		**PDOP**	2.2	**GDOP**	2.8	**HDOP**	0.9	**VDOP**	2.0

		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2031	**ΔX**	3703.721	**ΔY**	-1342.750	**ΔZ**	-6098.854	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.009		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	0.8	**VDOP**	1.6
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2032	**ΔX**	3703.722	**ΔY**	-1342.752	**ΔZ**	-6098.854	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.011		
QC 1		**PDOP**	2.2	**GDOP**	2.9	**HDOP**	0.8	**VDOP**	2.1
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2033	**ΔX**	3703.718	**ΔY**	-1342.750	**ΔZ**	-6098.856	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.016		
QC 1		**PDOP**	2.0	**GDOP**	2.7	**HDOP**	0.9	**VDOP**	1.9
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2034	**ΔX**	3703.717	**ΔY**	-1342.749	**ΔZ**	-6098.854	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.012		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	0.9	**VDOP**	1.5
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2035	**ΔX**	3703.721	**ΔY**	-1342.751	**ΔZ**	-6098.852	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.013		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	0.9	**VDOP**	1.5
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2036	**ΔX**	3703.723	**ΔY**	-1342.752	**ΔZ**	-6098.852	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.014		

QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.9	**VDOP**	1.6
		Base data age	2	**Satellites**	13	**Positions used**	61		
Point	2037	**ΔX**	3703.730	**ΔY**	-1342.754	**ΔZ**	-6098.848	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.014		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2038	**ΔX**	3703.735	**ΔY**	-1342.757	**ΔZ**	-6098.845	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.014		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.6
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2039	**ΔX**	3703.734	**ΔY**	-1342.759	**ΔZ**	-6098.842	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.014		
QC 1		**PDOP**	2.1	**GDOP**	2.7	**HDOP**	0.9	**VDOP**	1.9
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2040	**ΔX**	3703.732	**ΔY**	-1342.756	**ΔZ**	-6098.844	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.015		
QC 1		**PDOP**	2.1	**GDOP**	2.7	**HDOP**	0.9	**VDOP**	1.9
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2041	**ΔX**	3703.731	**ΔY**	-1342.757	**ΔZ**	-6098.842	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.016		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2042	**ΔX**	3703.732	**ΔY**	-1342.759	**ΔZ**	-6098.842	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		

Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.016		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2043	**ΔX**	3703.730	**ΔY**	-1342.756	**ΔZ**	-6098.842	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.015		
QC 1		**PDOP**	2.1	**GDOP**	2.7	**HDOP**	0.9	**VDOP**	1.9
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2044	**ΔX**	3703.726	**ΔY**	-1342.753	**ΔZ**	-6098.842	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.015		
QC 1		**PDOP**	2.1	**GDOP**	2.7	**HDOP**	0.9	**VDOP**	1.9
		Base data age	1	**Satellites**	12	**Positions used**	61		
Point	2045	**ΔX**	3703.718	**ΔY**	-1342.748	**ΔZ**	-6098.847	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.015		
QC 1		**PDOP**	2.1	**GDOP**	2.7	**HDOP**	0.9	**VDOP**	1.9
		Base data age	1	**Satellites**	12	**Positions used**	61		
Point	2046	**ΔX**	3703.708	**ΔY**	-1342.742	**ΔZ**	-6098.848	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.015		
QC 1		**PDOP**	2.1	**GDOP**	2.7	**HDOP**	0.9	**VDOP**	1.9
		Base data age	1	**Satellites**	12	**Positions used**	61		
Point	2047	**ΔX**	3703.708	**ΔY**	-1342.744	**ΔZ**	-6098.844	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.014		
QC 1		**PDOP**	2.1	**GDOP**	2.7	**HDOP**	0.9	**VDOP**	1.9
		Base data age	1	**Satellites**	12	**Positions used**	61		
Point	2048	**ΔX**	3703.708	**ΔY**	-1342.746	**ΔZ**	-6098.841	**Code**	pm

		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.014		
QC 1		**PDOP**	2.1	**GDOP**	2.7	**HDOP**	0.9	**VDOP**	1.9
		Base data age	2	**Satellites**	12	**Positions used**	61		
Point	2049	**ΔX**	3703.704	**ΔY**	-1342.744	**ΔZ**	-6098.845	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.013		
QC 1		**PDOP**	2.0	**GDOP**	2.7	**HDOP**	0.9	**VDOP**	1.9
		Base data age	1	**Satellites**	12	**Positions used**	61		
Point	2050	**ΔX**	3703.704	**ΔY**	-1342.743	**ΔZ**	-6098.845	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.014		
QC 1		**PDOP**	2.0	**GDOP**	2.7	**HDOP**	0.9	**VDOP**	1.8
		Base data age	1	**Satellites**	12	**Positions used**	61		
Point	2051	**ΔX**	3703.706	**ΔY**	-1342.744	**ΔZ**	-6098.847	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.014		
QC 1		**PDOP**	2.0	**GDOP**	2.7	**HDOP**	0.9	**VDOP**	1.8
		Base data age	1	**Satellites**	12	**Positions used**	61		
Point	2052	**ΔX**	3703.706	**ΔY**	-1342.745	**ΔZ**	-6098.847	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.014		
QC 1		**PDOP**	2.0	**GDOP**	2.7	**HDOP**	0.9	**VDOP**	1.8
		Base data age	1	**Satellites**	12	**Positions used**	61		
Point	2053	**ΔX**	3703.709	**ΔY**	-1342.746	**ΔZ**	-6098.845	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.014		
QC 1		**PDOP**	2.0	**GDOP**	2.7	**HDOP**	0.9	**VDOP**	1.8
		Base data age	1	**Satellites**	13	**Positions used**	61		

Point	2054	**ΔX**	3703.710	**ΔY**	-1342.746	**ΔZ**	-6098.845	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.013		
QC 1		**PDOP**	2.0	**GDOP**	2.7	**HDOP**	0.9	**VDOP**	1.8
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2055	**ΔX**	3703.713	**ΔY**	-1342.749	**ΔZ**	-6098.845	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.013		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	0.8	**VDOP**	1.5
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2056	**ΔX**	3703.715	**ΔY**	-1342.751	**ΔZ**	-6098.846	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.014		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	0.8	**VDOP**	1.5
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2057	**ΔX**	3703.716	**ΔY**	-1342.749	**ΔZ**	-6098.849	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.014		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	0.8	**VDOP**	1.5
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2058	**ΔX**	3703.717	**ΔY**	-1342.750	**ΔZ**	-6098.850	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.014		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	0.8	**VDOP**	1.5
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2059	**ΔX**	3703.717	**ΔY**	-1342.749	**ΔZ**	-6098.851	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.014		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	0.8	**VDOP**	1.5

		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2060	**ΔX**	3703.717	**ΔY**	-1342.752	**ΔZ**	-6098.849	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.012		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	0.8	**VDOP**	1.5
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2061	**ΔX**	3703.714	**ΔY**	-1342.751	**ΔZ**	-6098.852	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.012		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	0.8	**VDOP**	1.5
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2062	**ΔX**	3703.713	**ΔY**	-1342.752	**ΔZ**	-6098.851	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.011		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	0.8	**VDOP**	1.4
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2063	**ΔX**	3703.714	**ΔY**	-1342.753	**ΔZ**	-6098.851	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.010		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.8	**VDOP**	1.3
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2064	**ΔX**	3703.718	**ΔY**	-1342.753	**ΔZ**	-6098.852	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.012		
QC 1		**PDOP**	1.8	**GDOP**	2.5	**HDOP**	0.9	**VDOP**	1.6
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2065	**ΔX**	3703.722	**ΔY**	-1342.753	**ΔZ**	-6098.852	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.011		

QC 1		**PDOP**	1.6	**GDOP**	2.1	**HDOP**	0.9	**VDOP**	1.4
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2066	**ΔX**	3703.721	**ΔY**	-1342.753	**ΔZ**	-6098.853	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.012		
QC 1		**PDOP**	1.6	**GDOP**	2.1	**HDOP**	0.8	**VDOP**	1.4
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2067	**ΔX**	3703.724	**ΔY**	-1342.754	**ΔZ**	-6098.854	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.012		
QC 1		**PDOP**	1.8	**GDOP**	2.2	**HDOP**	1.0	**VDOP**	1.5
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2068	**ΔX**	3703.724	**ΔY**	-1342.754	**ΔZ**	-6098.847	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.012		
QC 1		**PDOP**	1.8	**GDOP**	2.2	**HDOP**	1.0	**VDOP**	1.5
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2069	**ΔX**	3703.725	**ΔY**	-1342.753	**ΔZ**	-6098.850	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.012		
QC 1		**PDOP**	1.8	**GDOP**	2.2	**HDOP**	1.0	**VDOP**	1.5
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2070	**ΔX**	3703.723	**ΔY**	-1342.753	**ΔZ**	-6098.852	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.010		
QC 1		**PDOP**	1.8	**GDOP**	2.2	**HDOP**	1.0	**VDOP**	1.5
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2071	**ΔX**	3703.723	**ΔY**	-1342.752	**ΔZ**	-6098.854	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		

Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.009		
QC 1		**PDOP**	1.5	**GDOP**	2.0	**HDOP**	0.8	**VDOP**	1.3
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2072	**ΔX**	3703.721	**ΔY**	-1342.749	**ΔZ**	-6098.860	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.009		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	1.1	**VDOP**	1.6
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2073	**ΔX**	3703.722	**ΔY**	-1342.751	**ΔZ**	-6098.860	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.010		
QC 1		**PDOP**	1.5	**GDOP**	2.0	**HDOP**	0.8	**VDOP**	1.3
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2074	**ΔX**	3703.725	**ΔY**	-1342.754	**ΔZ**	-6098.858	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.004	**Vt Prec**	0.007		
QC 1		**PDOP**	1.6	**GDOP**	2.1	**HDOP**	0.8	**VDOP**	1.4
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2075	**ΔX**	3703.723	**ΔY**	-1342.755	**ΔZ**	-6098.855	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.008		
QC 1		**PDOP**	1.5	**GDOP**	2.0	**HDOP**	0.8	**VDOP**	1.3
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2076	**ΔX**	3703.723	**ΔY**	-1342.754	**ΔZ**	-6098.851	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.008		
QC 1		**PDOP**	1.5	**GDOP**	2.0	**HDOP**	0.8	**VDOP**	1.3
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2077	**ΔX**	3703.726	**ΔY**	-1342.755	**ΔZ**	-6098.849	**Code**	pm

		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.008		
QC 1		**PDOP**	1.9	**GDOP**	2.5	**HDOP**	1.0	**VDOP**	1.6
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2078	**ΔX**	3703.725	**ΔY**	-1342.752	**ΔZ**	-6098.852	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.008		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.8	**VDOP**	1.3
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2079	**ΔX**	3703.719	**ΔY**	-1342.750	**ΔZ**	-6098.855	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.008		
QC 1		**PDOP**	1.4	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.1
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2080	**ΔX**	3703.717	**ΔY**	-1342.747	**ΔZ**	-6098.856	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.008		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.2
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2081	**ΔX**	3703.721	**ΔY**	-1342.750	**ΔZ**	-6098.852	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.009		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.9	**VDOP**	1.5
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2082	**ΔX**	3703.721	**ΔY**	-1342.750	**ΔZ**	-6098.851	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.008		
QC 1		**PDOP**	1.6	**GDOP**	2.0	**HDOP**	0.9	**VDOP**	1.3
		Base data age	1	**Satellites**	14	**Positions used**	61		

Point	2083	**ΔX**	3703.720	**ΔY**	-1342.750	**ΔZ**	-6098.850	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.008		
QC 1		**PDOP**	1.6	**GDOP**	2.0	**HDOP**	0.9	**VDOP**	1.3
		Base data age	1	**Satellites**	13	**Positions used**	61		
Point	2084	**ΔX**	3703.722	**ΔY**	-1342.749	**ΔZ**	-6098.854	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.008		
QC 1		**PDOP**	1.6	**GDOP**	2.0	**HDOP**	0.9	**VDOP**	1.3
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2085	**ΔX**	3703.721	**ΔY**	-1342.749	**ΔZ**	-6098.855	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.007		
QC 1		**PDOP**	1.5	**GDOP**	2.0	**HDOP**	0.8	**VDOP**	1.3
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2086	**ΔX**	3703.722	**ΔY**	-1342.748	**ΔZ**	-6098.853	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.008		
QC 1		**PDOP**	1.6	**GDOP**	2.1	**HDOP**	0.9	**VDOP**	1.4
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2087	**ΔX**	3703.721	**ΔY**	-1342.749	**ΔZ**	-6098.851	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.009		
QC 1		**PDOP**	1.6	**GDOP**	2.1	**HDOP**	0.9	**VDOP**	1.4
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2088	**ΔX**	3703.722	**ΔY**	-1342.751	**ΔZ**	-6098.852	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.009		
QC 1		**PDOP**	1.5	**GDOP**	2.0	**HDOP**	0.8	**VDOP**	1.3

		Base data age	2	**Satellites**	14	**Positions used**	61		
Point	2089	**ΔX**	3703.721	**ΔY**	-1342.752	**ΔZ**	-6098.850	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.008		
QC 1		**PDOP**	1.5	**GDOP**	2.0	**HDOP**	0.8	**VDOP**	1.3
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2090	**ΔX**	3703.721	**ΔY**	-1342.751	**ΔZ**	-6098.850	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.011		
QC 1		**PDOP**	1.5	**GDOP**	2.0	**HDOP**	0.8	**VDOP**	1.3
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2091	**ΔX**	3703.720	**ΔY**	-1342.751	**ΔZ**	-6098.852	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.008		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.7	**VDOP**	1.2
		Base data age	1	**Satellites**	16	**Positions used**	61		
Point	2092	**ΔX**	3703.721	**ΔY**	-1342.750	**ΔZ**	-6098.851	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.005	**Vt Prec**	0.007		
QC 1		**PDOP**	1.6	**GDOP**	2.1	**HDOP**	0.9	**VDOP**	1.3
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2093	**ΔX**	3703.723	**ΔY**	-1342.752	**ΔZ**	-6098.848	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.010		
QC 1		**PDOP**	1.5	**GDOP**	2.0	**HDOP**	0.8	**VDOP**	1.3
		Base data age	1	**Satellites**	14	**Positions used**	61		
Point	2094	**ΔX**	3703.722	**ΔY**	-1342.756	**ΔZ**	-6098.844	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.009		

QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.8	**VDOP**	1.3
		Base data age	1	**Satellites**	16	**Positions used**	61		
Point	2095	**ΔX**	3703.720	**ΔY**	-1342.758	**ΔZ**	-6098.842	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.008	**Vt Prec**	0.012		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.7	**VDOP**	1.2
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2096	**ΔX**	3703.716	**ΔY**	-1342.755	**ΔZ**	-6098.844	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.012		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.7	**VDOP**	1.2
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2097	**ΔX**	3703.711	**ΔY**	-1342.751	**ΔZ**	-6098.847	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.012		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.7	**VDOP**	1.2
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2098	**ΔX**	3703.711	**ΔY**	-1342.750	**ΔZ**	-6098.848	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.011		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.7	**VDOP**	1.2
		Base data age	1	**Satellites**	16	**Positions used**	61		
Point	2099	**ΔX**	3703.714	**ΔY**	-1342.748	**ΔZ**	-6098.850	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.011		
QC 1		**PDOP**	1.3	**GDOP**	1.6	**HDOP**	0.7	**VDOP**	1.1
		Base data age	1	**Satellites**	16	**Positions used**	61		
Point	2100	**ΔX**	3703.716	**ΔY**	-1342.750	**ΔZ**	-6098.850	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		

Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.011		
QC 1		**PDOP**	1.4	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.2
		Base data age	1	**Satellites**	16	**Positions used**	61		
Point	2101	**ΔX**	3703.715	**ΔY**	-1342.749	**ΔZ**	-6098.850	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.011		
QC 1		**PDOP**	1.3	**GDOP**	1.6	**HDOP**	0.7	**VDOP**	1.1
		Base data age	1	**Satellites**	16	**Positions used**	61		
Point	2102	**ΔX**	3703.715	**ΔY**	-1342.750	**ΔZ**	-6098.850	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.011		
QC 1		**PDOP**	1.4	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.2
		Base data age	1	**Satellites**	16	**Positions used**	61		
Point	2103	**ΔX**	3703.716	**ΔY**	-1342.749	**ΔZ**	-6098.850	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.011		
QC 1		**PDOP**	1.4	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.2
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2104	**ΔX**	3703.717	**ΔY**	-1342.748	**ΔZ**	-6098.849	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.011		
QC 1		**PDOP**	1.4	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.2
		Base data age	1	**Satellites**	16	**Positions used**	61		
Point	2105	**ΔX**	3703.716	**ΔY**	-1342.748	**ΔZ**	-6098.847	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.011		
QC 1		**PDOP**	1.4	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.1
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2106	**ΔX**	3703.714	**ΔY**	-1342.747	**ΔZ**	-6098.847	**Code**	pm

		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.011		
QC 1		**PDOP**	1.4	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.1
		Base data age	1	**Satellites**	16	**Positions used**	61		
Point	2107	**ΔX**	3703.713	**ΔY**	-1342.747	**ΔZ**	-6098.848	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.011		
QC 1		**PDOP**	1.3	**GDOP**	1.6	**HDOP**	0.7	**VDOP**	1.1
		Base data age	1	**Satellites**	16	**Positions used**	61		
Point	2108	**ΔX**	3703.715	**ΔY**	-1342.747	**ΔZ**	-6098.849	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.010		
QC 1		**PDOP**	1.3	**GDOP**	1.6	**HDOP**	0.7	**VDOP**	1.1
		Base data age	1	**Satellites**	17	**Positions used**	61		
Point	2109	**ΔX**	3703.714	**ΔY**	-1342.746	**ΔZ**	-6098.850	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.010		
QC 1		**PDOP**	1.2	**GDOP**	1.5	**HDOP**	0.6	**VDOP**	1.0
		Base data age	1	**Satellites**	17	**Positions used**	61		
Point	2110	**ΔX**	3703.713	**ΔY**	-1342.745	**ΔZ**	-6098.849	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.010		
QC 1		**PDOP**	1.2	**GDOP**	1.5	**HDOP**	0.6	**VDOP**	1.0
		Base data age	1	**Satellites**	17	**Positions used**	61		
Point	2111	**ΔX**	3703.710	**ΔY**	-1342.744	**ΔZ**	-6098.851	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.010		
QC 1		**PDOP**	1.2	**GDOP**	1.5	**HDOP**	0.6	**VDOP**	1.0
		Base data age	1	**Satellites**	17	**Positions used**	61		

Point	2112	**ΔX**	3703.708	**ΔY**	-1342.744	**ΔZ**	-6098.853	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.010		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.7	**VDOP**	1.3
		Base data age	1	**Satellites**	17	**Positions used**	61		
Point	2113	**ΔX**	3703.706	**ΔY**	-1342.740	**ΔZ**	-6098.857	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.010		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.7	**VDOP**	1.3
		Base data age	1	**Satellites**	17	**Positions used**	61		
Point	2114	**ΔX**	3703.709	**ΔY**	-1342.743	**ΔZ**	-6098.856	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.010		
QC 1		**PDOP**	1.2	**GDOP**	1.5	**HDOP**	0.6	**VDOP**	1.0
		Base data age	1	**Satellites**	17	**Positions used**	61		
Point	2115	**ΔX**	3703.706	**ΔY**	-1342.743	**ΔZ**	-6098.856	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.009		
QC 1		**PDOP**	1.2	**GDOP**	1.5	**HDOP**	0.6	**VDOP**	1.0
		Base data age	1	**Satellites**	17	**Positions used**	61		
Point	2116	**ΔX**	3703.705	**ΔY**	-1342.740	**ΔZ**	-6098.854	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.009		
QC 1		**PDOP**	1.2	**GDOP**	1.6	**HDOP**	0.7	**VDOP**	1.1
		Base data age	1	**Satellites**	16	**Positions used**	61		
Point	2117	**ΔX**	3703.704	**ΔY**	-1342.740	**ΔZ**	-6098.855	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.010		
QC 1		**PDOP**	1.2	**GDOP**	1.6	**HDOP**	0.7	**VDOP**	1.1

		Base data age	1	**Satellites**	16	**Positions used**	61		
Point	2118	**ΔX**	3703.705	**ΔY**	-1342.744	**ΔZ**	-6098.854	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.009		
QC 1		**PDOP**	1.2	**GDOP**	1.6	**HDOP**	0.7	**VDOP**	1.0
		Base data age	1	**Satellites**	16	**Positions used**	61		
Point	2119	**ΔX**	3703.709	**ΔY**	-1342.746	**ΔZ**	-6098.852	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.009		
QC 1		**PDOP**	1.5	**GDOP**	2.0	**HDOP**	0.8	**VDOP**	1.3
		Base data age	1	**Satellites**	16	**Positions used**	61		
Point	2120	**ΔX**	3703.714	**ΔY**	-1342.749	**ΔZ**	-6098.850	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.009		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.7	**VDOP**	1.2
		Base data age	1	**Satellites**	15	**Positions used**	61		
Point	2121	**ΔX**	3703.718	**ΔY**	-1342.748	**ΔZ**	-6098.847	**Code**	pm
		Method	Network RTK	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.823	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.009		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.7	**VDOP**	1.2
		Base data age	1	**Satellites**	15	**Positions used**	61		

Survey event

Survey event	End survey

Initialization event: RTK not initialized

GPS week	1910	**Seconds**	349723	**Initialization type**	On the fly	**Survey type**	Real-time		

Reduced points

Point	1001	**East**	777875.461	**North**	6360588.697	**Elevation**	628.897	**Code**	pm38688

Point	PRS933471292892	**East**	778769.798	**North**	6367797.164	**Elevation**	584.044	**Code**	
Point	2000	**East**	777875.435	**North**	6360588.669	**Elevation**	628.836	**Code**	pm
Point	2001	**East**	777875.436	**North**	6360588.671	**Elevation**	628.837	**Code**	pm
Point	2002	**East**	777875.438	**North**	6360588.671	**Elevation**	628.834	**Code**	pm
Point	2003	**East**	777875.437	**North**	6360588.672	**Elevation**	628.834	**Code**	pm
Point	2004	**East**	777875.437	**North**	6360588.672	**Elevation**	628.838	**Code**	pm
Point	2005	**East**	777875.438	**North**	6360588.673	**Elevation**	628.837	**Code**	pm
Point	2006	**East**	777875.436	**North**	6360588.676	**Elevation**	628.846	**Code**	pm
Point	2007	**East**	777875.437	**North**	6360588.676	**Elevation**	628.845	**Code**	pm
Point	2008	**East**	777875.437	**North**	6360588.675	**Elevation**	628.840	**Code**	pm
Point	2009	**East**	777875.437	**North**	6360588.674	**Elevation**	628.836	**Code**	pm
Point	2010	**East**	777875.438	**North**	6360588.674	**Elevation**	628.838	**Code**	pm
Point	2011	**East**	777875.440	**North**	6360588.673	**Elevation**	628.836	**Code**	pm
Point	2012	**East**	777875.439	**North**	6360588.674	**Elevation**	628.836	**Code**	pm
Point	2013	**East**	777875.438	**North**	6360588.675	**Elevation**	628.839	**Code**	pm
Point	2014	**East**	777875.439	**North**	6360588.676	**Elevation**	628.843	**Code**	pm
Point	2015	**East**	777875.438	**North**	6360588.675	**Elevation**	628.846	**Code**	pm
Point	2016	**East**	777875.439	**North**	6360588.676	**Elevation**	628.848	**Code**	pm
Point	2017	**East**	777875.439	**North**	6360588.676	**Elevation**	628.849	**Code**	pm
Point	2018	**East**	777875.438	**North**	6360588.676	**Elevation**	628.850	**Code**	pm
Point	2019	**East**	777875.436	**North**	6360588.677	**Elevation**	628.844	**Code**	pm
Point	2020	**East**	777875.437	**North**	6360588.673	**Elevation**	628.842	**Code**	pm
Point	2021	**East**	777875.437	**North**	6360588.671	**Elevation**	628.837	**Code**	pm
Point	2022	**East**	777875.436	**North**	6360588.668	**Elevation**	628.839	**Code**	pm
Point	2023	**East**	777875.434	**North**	6360588.667	**Elevation**	628.840	**Code**	pm
Point	2024	**East**	777875.434	**North**	6360588.667	**Elevation**	628.839	**Code**	pm
Point	2025	**East**	777875.434	**North**	6360588.667	**Elevation**	628.831	**Code**	pm
Point	2026	**East**	777875.435	**North**	6360588.667	**Elevation**	628.827	**Code**	pm
Point	2027	**East**	777875.435	**North**	6360588.667	**Elevation**	628.825	**Code**	pm
Point	2028	**East**	777875.435	**North**	6360588.666	**Elevation**	628.827	**Code**	pm
Point	2029	**East**	777875.435	**North**	6360588.664	**Elevation**	628.823	**Code**	pm
Point	2030	**East**	777875.435	**North**	6360588.661	**Elevation**	628.828	**Code**	pm
Point	2031	**East**	777875.434	**North**	6360588.662	**Elevation**	628.835	**Code**	pm
Point	2032	**East**	777875.436	**North**	6360588.661	**Elevation**	628.834	**Code**	pm
Point	2033	**East**	777875.436	**North**	6360588.661	**Elevation**	628.839	**Code**	pm

Point	2034	**East**	777875.435	**North**	6360588.663	**Elevation**	628.839	**Code**	pm
Point	2035	**East**	777875.436	**North**	6360588.663	**Elevation**	628.834	**Code**	pm
Point	2036	**East**	777875.435	**North**	6360588.662	**Elevation**	628.831	**Code**	pm
Point	2037	**East**	777875.434	**North**	6360588.661	**Elevation**	628.824	**Code**	pm
Point	2038	**East**	777875.434	**North**	6360588.661	**Elevation**	628.817	**Code**	pm
Point	2039	**East**	777875.436	**North**	6360588.663	**Elevation**	628.816	**Code**	pm
Point	2040	**East**	777875.434	**North**	6360588.664	**Elevation**	628.819	**Code**	pm
Point	2041	**East**	777875.436	**North**	6360588.665	**Elevation**	628.818	**Code**	pm
Point	2042	**East**	777875.437	**North**	6360588.664	**Elevation**	628.817	**Code**	pm
Point	2043	**East**	777875.435	**North**	6360588.665	**Elevation**	628.820	**Code**	pm
Point	2044	**East**	777875.435	**North**	6360588.668	**Elevation**	628.824	**Code**	pm
Point	2045	**East**	777875.434	**North**	6360588.670	**Elevation**	628.834	**Code**	pm
Point	2046	**East**	777875.434	**North**	6360588.675	**Elevation**	628.845	**Code**	pm
Point	2047	**East**	777875.436	**North**	6360588.677	**Elevation**	628.842	**Code**	pm
Point	2048	**East**	777875.438	**North**	6360588.679	**Elevation**	628.839	**Code**	pm
Point	2049	**East**	777875.438	**North**	6360588.679	**Elevation**	628.845	**Code**	pm
Point	2050	**East**	777875.437	**North**	6360588.679	**Elevation**	628.846	**Code**	pm
Point	2051	**East**	777875.438	**North**	6360588.676	**Elevation**	628.845	**Code**	pm
Point	2052	**East**	777875.438	**North**	6360588.676	**Elevation**	628.844	**Code**	pm
Point	2053	**East**	777875.438	**North**	6360588.676	**Elevation**	628.841	**Code**	pm
Point	2054	**East**	777875.437	**North**	6360588.675	**Elevation**	628.840	**Code**	pm
Point	2055	**East**	777875.438	**North**	6360588.673	**Elevation**	628.837	**Code**	pm
Point	2056	**East**	777875.439	**North**	6360588.670	**Elevation**	628.835	**Code**	pm
Point	2057	**East**	777875.437	**North**	6360588.668	**Elevation**	628.837	**Code**	pm
Point	2058	**East**	777875.437	**North**	6360588.667	**Elevation**	628.836	**Code**	pm
Point	2059	**East**	777875.436	**North**	6360588.667	**Elevation**	628.837	**Code**	pm
Point	2060	**East**	777875.439	**North**	6360588.667	**Elevation**	628.835	**Code**	pm
Point	2061	**East**	777875.439	**North**	6360588.666	**Elevation**	628.839	**Code**	pm
Point	2062	**East**	777875.440	**North**	6360588.667	**Elevation**	628.839	**Code**	pm
Point	2063	**East**	777875.441	**North**	6360588.667	**Elevation**	628.837	**Code**	pm
Point	2064	**East**	777875.439	**North**	6360588.664	**Elevation**	628.835	**Code**	pm
Point	2065	**East**	777875.437	**North**	6360588.662	**Elevation**	628.832	**Code**	pm
Point	2066	**East**	777875.437	**North**	6360588.662	**Elevation**	628.833	**Code**	pm
Point	2067	**East**	777875.437	**North**	6360588.659	**Elevation**	628.831	**Code**	pm
Point	2068	**East**	777875.437	**North**	6360588.665	**Elevation**	628.827	**Code**	pm

Point	2069	**East**	777875.436	**North**	6360588.662	**Elevation**	628.829	**Code**	pm
Point	2070	**East**	777875.436	**North**	6360588.661	**Elevation**	628.831	**Code**	pm
Point	2071	**East**	777875.436	**North**	6360588.660	**Elevation**	628.833	**Code**	pm
Point	2072	**East**	777875.434	**North**	6360588.657	**Elevation**	628.839	**Code**	pm
Point	2073	**East**	777875.435	**North**	6360588.656	**Elevation**	628.838	**Code**	pm
Point	2074	**East**	777875.436	**North**	6360588.655	**Elevation**	628.833	**Code**	pm
Point	2075	**East**	777875.438	**North**	6360588.658	**Elevation**	628.832	**Code**	pm
Point	2076	**East**	777875.437	**North**	6360588.662	**Elevation**	628.830	**Code**	pm
Point	2077	**East**	777875.436	**North**	6360588.662	**Elevation**	628.827	**Code**	pm
Point	2078	**East**	777875.434	**North**	6360588.661	**Elevation**	628.830	**Code**	pm
Point	2079	**East**	777875.436	**North**	6360588.662	**Elevation**	628.838	**Code**	pm
Point	2080	**East**	777875.435	**North**	6360588.663	**Elevation**	628.841	**Code**	pm
Point	2081	**East**	777875.435	**North**	6360588.664	**Elevation**	628.834	**Code**	pm
Point	2082	**East**	777875.435	**North**	6360588.664	**Elevation**	628.834	**Code**	pm
Point	2083	**East**	777875.436	**North**	6360588.665	**Elevation**	628.834	**Code**	pm
Point	2084	**East**	777875.434	**North**	6360588.662	**Elevation**	628.835	**Code**	pm
Point	2085	**East**	777875.433	**North**	6360588.661	**Elevation**	628.836	**Code**	pm
Point	2086	**East**	777875.433	**North**	6360588.663	**Elevation**	628.835	**Code**	pm
Point	2087	**East**	777875.434	**North**	6360588.665	**Elevation**	628.835	**Code**	pm
Point	2088	**East**	777875.435	**North**	6360588.663	**Elevation**	628.833	**Code**	pm
Point	2089	**East**	777875.437	**North**	6360588.664	**Elevation**	628.832	**Code**	pm
Point	2090	**East**	777875.436	**North**	6360588.665	**Elevation**	628.832	**Code**	pm
Point	2091	**East**	777875.436	**North**	6360588.663	**Elevation**	628.834	**Code**	pm
Point	2092	**East**	777875.435	**North**	6360588.664	**Elevation**	628.834	**Code**	pm
Point	2093	**East**	777875.436	**North**	6360588.666	**Elevation**	628.830	**Code**	pm
Point	2094	**East**	777875.439	**North**	6360588.668	**Elevation**	628.827	**Code**	pm
Point	2095	**East**	777875.442	**North**	6360588.670	**Elevation**	628.826	**Code**	pm
Point	2096	**East**	777875.441	**North**	6360588.671	**Elevation**	628.831	**Code**	pm
Point	2097	**East**	777875.441	**North**	6360588.672	**Elevation**	628.838	**Code**	pm
Point	2098	**East**	777875.439	**North**	6360588.671	**Elevation**	628.839	**Code**	pm
Point	2099	**East**	777875.437	**North**	6360588.669	**Elevation**	628.839	**Code**	pm
Point	2100	**East**	777875.437	**North**	6360588.667	**Elevation**	628.837	**Code**	pm
Point	2101	**East**	777875.437	**North**	6360588.668	**Elevation**	628.838	**Code**	pm
Point	2102	**East**	777875.438	**North**	6360588.668	**Elevation**	628.838	**Code**	pm
Point	2103	**East**	777875.436	**North**	6360588.668	**Elevation**	628.837	**Code**	pm

Point	2104	**East**	777875.435	**North**	6360588.668	**Elevation**	628.836	**Code**	pm
Point	2105	**East**	777875.435	**North**	6360588.670	**Elevation**	628.836	**Code**	pm
Point	2106	**East**	777875.436	**North**	6360588.672	**Elevation**	628.838	**Code**	pm
Point	2107	**East**	777875.437	**North**	6360588.671	**Elevation**	628.839	**Code**	pm
Point	2108	**East**	777875.435	**North**	6360588.669	**Elevation**	628.838	**Code**	pm
Point	2109	**East**	777875.435	**North**	6360588.669	**Elevation**	628.840	**Code**	pm
Point	2110	**East**	777875.435	**North**	6360588.670	**Elevation**	628.840	**Code**	pm
Point	2111	**East**	777875.435	**North**	6360588.671	**Elevation**	628.844	**Code**	pm
Point	2112	**East**	777875.436	**North**	6360588.670	**Elevation**	628.847	**Code**	pm
Point	2113	**East**	777875.434	**North**	6360588.669	**Elevation**	628.851	**Code**	pm
Point	2114	**East**	777875.434	**North**	6360588.668	**Elevation**	628.848	**Code**	pm
Point	2115	**East**	777875.436	**North**	6360588.668	**Elevation**	628.850	**Code**	pm
Point	2116	**East**	777875.435	**North**	6360588.671	**Elevation**	628.851	**Code**	pm
Point	2117	**East**	777875.435	**North**	6360588.671	**Elevation**	628.853	**Code**	pm
Point	2118	**East**	777875.437	**North**	6360588.670	**Elevation**	628.849	**Code**	pm
Point	2119	**East**	777875.437	**North**	6360588.670	**Elevation**	628.844	**Code**	pm
Point	2120	**East**	777875.438	**North**	6360588.669	**Elevation**	628.839	**Code**	pm
Point	2121	**East**	777875.435	**North**	6360588.669	**Elevation**	628.834	**Code**	pm

Job name	RTX_PART_1
Creation date	18 Aug 2016
Version	Trimble General Survey 2.61
Distance Units	Meters
Angle units	Degrees
Pressure Units	mbar
Temperature Units	Celsius

Coordinate system (Job)	
System	Map Grid of Australia (GDA)
Zone	MGA Zone 55 2008
Datum	GDA94 (2006.50)
Projection	
Projection	Transverse Mercator
Origin lat	0°00'00.00000"N
Origin long	147°00'00.00000"E
False easting	500000.000
False northing	10000000.000
Scale	0.99960000
South azimuth (grid)	No
Grid coords	Increase North-East
Ellipsoid	Semi-major axis: 6378137.000 Flattening: 298.25722154

Local site	
Type	Grid
Datum transformation	
Type	Seven parameter
Semi-major axis	6378137.000
Flattening	298.257223
Rotation X	0°00'00.0155"
Rotation Y	0°00'00.0137"
Rotation Z	0°00'00.0161"
Translation X	-0.005
Translation Y	-0.039
Translation Z	-0.069
Scale	0.00444ppm
Vertical adjustment	
Geoid file	AUSGeoid09 (Australia)

Collected Field Data

Corrections	
South azimuth (grid)	No
Grid coords	Increase North-East
Magnetic declination	0°00'00"
Distances	Ground
Neighborhood adjustment	Off

Projection	
Projection	Transverse Mercator
Origin lat	0°00'00.00000"N
Origin long	147°00'00.00000"E
False easting	500000.000
False northing	10000000.000
Scale	0.99960000
Ellipsoid	Semi-major axis: 6378137.000 Flattening: 298.25722154

Local site	
Type	Grid

Datum transformation	
Type	Three parameter
Semi-major axis	6378137.000
Flattening	298.257223
Translation X	0.000
Translation Y	0.000
Translation Z	0.000

Vertical adjustment	
Geoid file	AUSGeoid09 (Australia)

Coordinate system	
System	Map Grid of Australia (GDA)
Zone	Zone 55
Datum	ITRF

Projection	
Projection	Transverse Mercator
Origin lat	0°00'00.00000"N
Origin long	147°00'00.00000"E
False easting	500000.000
False northing	10000000.000
Scale	0.99960000
Ellipsoid	Semi-major axis: 6378137.000 Flattening: 298.25722154

Local site	
Type	Grid

Datum transformation	
Type	Seven parameter
Semi-major axis	6378137.000
Flattening	298.257223
Rotation X	0°00'00.0155"
Rotation Y	0°00'00.0137"
Rotation Z	0°00'00.0161"
Translation X	-0.005
Translation Y	-0.039
Translation Z	-0.069
Scale	0.00444ppm

Coordinate system	
System	Map Grid of Australia (GDA)
Zone	MGA Zone 55 2008
Datum	GDA94 (2006.50)

Rover options									
Elevation mask	10	**PDOP mask**	6						

Rover options									
Elevation mask	10	**PDOP mask**	6						

Survey event	
Survey event	Rover started

Rover options									
Elevation mask	10	**PDOP mask**	6						

Rover options									
Elevation mask	10	**PDOP mask**	6						

Survey event	
Survey event	Rover started

Rover options									
Elevation mask	10	**PDOP mask**	6						

Rover options									
Elevation mask	10	**PDOP mask**	6						

Survey event	
Survey event	Rover started

Tilt calibration status							
Event	Start survey	**Calibration expires in**		**Calibration age limit**	30d 0h	**Sensor calibration status**	Tilt calibrated OK

Tilt calibration status							
Event	Calibration	**Calibration expires in**	-	**Calibration age limit**	30d 0h	**Sensor calibration status**	Tilt calibration expired

Initialization event: RTX converged									
GPS week	1910	**Seconds**	428471	**Initialization type**	On the fly	**Survey type**	Real-time		

GNSS receiver	
Receiver type	R10
Serial number	5431474254
Firmware version	5.14
Antenna type	R10 Internal
Measurement method	Bottom of quick release
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.199

Point	2000	**RTX X**	-4643585.951	**RTX Y**	2684294.366	**RTX Z**	-3441061.211	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.020	**Vt Prec**	0.060		
QC 1		**PDOP**	2.0	**GDOP**	2.5	**HDOP**	0.9	**VDOP**	1.7
		Base data age	9	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.001788	**VCV xy (m^2)**	-0.001036	**VCV xz (m^2)**	0.001272		
				VCV yy (m^2)	0.001019	**VCV yz (m^2)**	-0.000977		
						VCV zz (m^2)	0.001128		
Point	2001	**RTX X**	-4643585.965	**RTX Y**	2684294.367	**RTX Z**	-3441061.216	**Code**	pm

		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.018	**Vt Prec**	0.058		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.7
		Base data age	6	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.001759	**VCV xy (m^2)**	-0.000996	**VCV xz (m^2)**	0.001213		
				VCV yy (m^2)	0.000915	**VCV yz (m^2)**	-0.000901		
						VCV zz (m^2)	0.001035		
Point	2002	**RTX X**	-4643585.973	**RTX Y**	2684294.367	**RTX Z**	-3441061.219	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.019	**Vt Prec**	0.058		
QC 1		**PDOP**	1.9	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.7
		Base data age	9	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.001726	**VCV xy (m^2)**	-0.001003	**VCV xz (m^2)**	0.001213		
				VCV yy (m^2)	0.000960	**VCV yz (m^2)**	-0.000934		
						VCV zz (m^2)	0.001055		
Point	2003	**RTX X**	-4643585.974	**RTX Y**	2684294.369	**RTX Z**	-3441061.220	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.021	**Vt Prec**	0.064		
QC 1		**PDOP**	1.9	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.7
		Base data age	12	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.002372	**VCV xy (m^2)**	-0.001138	**VCV xz (m^2)**	0.001535		
				VCV yy (m^2)	0.000999	**VCV yz (m^2)**	-0.000999		
						VCV zz (m^2)	0.001215		
Point	2004	**RTX X**	-4643585.973	**RTX Y**	2684294.373	**RTX Z**	-3441061.220	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.022	**Vt Prec**	0.070		
QC 1		**PDOP**	1.9	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.7

		Base data age	15	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.002818	**VCV xy (m^2)**	-0.001338	**VCV xz (m^2)**	0.001809		
				VCV yy (m^2)	0.001131	**VCV yz (m^2)**	-0.001173		
						VCV zz (m^2)	0.001447		
Point	2005	**RTX X**	-4643585.976	**RTX Y**	2684294.376	**RTX Z**	-3441061.223	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.021	**Vt Prec**	0.070		
QC 1		**PDOP**	2.0	**GDOP**	2.5	**HDOP**	0.9	**VDOP**	1.8
		Base data age	12	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.002687	**VCV xy (m^2)**	-0.001362	**VCV xz (m^2)**	0.001845		
				VCV yy (m^2)	0.001167	**VCV yz (m^2)**	-0.001215		
						VCV zz (m^2)	0.001502		
Point	2006	**RTX X**	-4643585.970	**RTX Y**	2684294.376	**RTX Z**	-3441061.220	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.023	**Vt Prec**	0.065		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.7
		Base data age	9	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.002569	**VCV xy (m^2)**	-0.001047	**VCV xz (m^2)**	0.001592		
				VCV yy (m^2)	0.000990	**VCV yz (m^2)**	-0.000914		
						VCV zz (m^2)	0.001175		
Point	2007	**RTX X**	-4643585.962	**RTX Y**	2684294.376	**RTX Z**	-3441061.215	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.025	**Vt Prec**	0.053		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.7
		Base data age	12	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.001897	**VCV xy (m^2)**	-0.000547	**VCV xz (m^2)**	0.001042		

				VCV yy (m^2)	0.000726	**VCV yz (m^2)**	-0.000555		
						VCV zz (m^2)	0.000736		
Point	2008	**RTX X**	-4643585.956	**RTX Y**	2684294.371	**RTX Z**	-3441061.207	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.022	**Vt Prec**	0.047		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.7
		Base data age	9	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.001704	**VCV xy (m^2)**	-0.000415	**VCV xz (m^2)**	0.000823		
				VCV yy (m^2)	0.000494	**VCV yz (m^2)**	-0.000377		
						VCV zz (m^2)	0.000515		
Point	2009	**RTX X**	-4643585.953	**RTX Y**	2684294.365	**RTX Z**	-3441061.203	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.017	**Vt Prec**	0.044		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.7
		Base data age	12	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.001426	**VCV xy (m^2)**	-0.000430	**VCV xz (m^2)**	0.000702		
				VCV yy (m^2)	0.000309	**VCV yz (m^2)**	-0.000307		
						VCV zz (m^2)	0.000433		
Point	2010	**RTX X**	-4643585.949	**RTX Y**	2684294.357	**RTX Z**	-3441061.199	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.016	**Vt Prec**	0.048		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.7
		Base data age	9	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.001773	**VCV xy (m^2)**	-0.000544	**VCV xz (m^2)**	0.000863		
				VCV yy (m^2)	0.000271	**VCV yz (m^2)**	-0.000326		
						VCV zz (m^2)	0.000493		

Point	2011	**RTX X**	-4643585.979	**RTX Y**	2684294.340	**RTX Z**	-3441061.203	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.026		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.8
		Base data age	6	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000318	**VCV xy (m^2)**	-0.000230	**VCV xz (m^2)**	0.000212		
				VCV yy (m^2)	0.000217	**VCV yz (m^2)**	-0.000173		
						VCV zz (m^2)	0.000244		
Point	2012	**RTX X**	-4643585.979	**RTX Y**	2684294.340	**RTX Z**	-3441061.203	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.026		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.8
		Base data age	9	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000310	**VCV xy (m^2)**	-0.000224	**VCV xz (m^2)**	0.000208		
				VCV yy (m^2)	0.000211	**VCV yz (m^2)**	-0.000170		
						VCV zz (m^2)	0.000238		
Point	2013	**RTX X**	-4643585.978	**RTX Y**	2684294.340	**RTX Z**	-3441061.202	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.023		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.8
		Base data age	12	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000272	**VCV xy (m^2)**	-0.000179	**VCV xz (m^2)**	0.000162		
				VCV yy (m^2)	0.000151	**VCV yz (m^2)**	-0.000112		
						VCV zz (m^2)	0.000176		
Point	2014	**RTX X**	-4643585.977	**RTX Y**	2684294.339	**RTX Z**	-3441061.201	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		

Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.022		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.8
		Base data age	9	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000260	**VCV xy (m^2)**	-0.000168	**VCV xz (m^2)**	0.000152		
				VCV yy (m^2)	0.000138	**VCV yz (m^2)**	-0.000101		
						VCV zz (m^2)	0.000162		
Point	2015	**RTX X**	-4643585.976	**RTX Y**	2684294.338	**RTX Z**	-3441061.200	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.022		
QC 1		**PDOP**	2.0	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.8
		Base data age	12	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000253	**VCV xy (m^2)**	-0.000165	**VCV xz (m^2)**	0.000147		
				VCV yy (m^2)	0.000136	**VCV yz (m^2)**	-0.000100		
						VCV zz (m^2)	0.000155		
Point	2016	**RTX X**	-4643585.975	**RTX Y**	2684294.338	**RTX Z**	-3441061.200	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.021		
QC 1		**PDOP**	2.0	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.8
		Base data age	9	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000242	**VCV xy (m^2)**	-0.000155	**VCV xz (m^2)**	0.000136		
				VCV yy (m^2)	0.000125	**VCV yz (m^2)**	-0.000090		
						VCV zz (m^2)	0.000140		
Point	2017	**RTX X**	-4643585.975	**RTX Y**	2684294.337	**RTX Z**	-3441061.200	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.023		
QC 1		**PDOP**	2.0	**GDOP**	2.5	**HDOP**	0.8	**VDOP**	1.8
		Base data age	12	**Satellites**	13	**Positions used**	61		

QC 2		**VCV xx (m^2)**	0.000264	**VCV xy (m^2)**	-0.000191	**VCV xz (m^2)**	0.000172		
				VCV yy (m^2)	0.000175	**VCV yz (m^2)**	-0.000140		
						VCV zz (m^2)	0.000189		
Point	2018	**RTX X**	-4643585.975	**RTX Y**	2684294.337	**RTX Z**	-3441061.200	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.021		
QC 1		**PDOP**	2.0	**GDOP**	2.5	**HDOP**	0.8	**VDOP**	1.8
		Base data age	9	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000240	**VCV xy (m^2)**	-0.000162	**VCV xz (m^2)**	0.000143		
				VCV yy (m^2)	0.000137	**VCV yz (m^2)**	-0.000104		
						VCV zz (m^2)	0.000150		
Point	2019	**RTX X**	-4643585.975	**RTX Y**	2684294.337	**RTX Z**	-3441061.200	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.022		
QC 1		**PDOP**	2.0	**GDOP**	2.5	**HDOP**	0.8	**VDOP**	1.8
		Base data age	12	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000244	**VCV xy (m^2)**	-0.000170	**VCV xz (m^2)**	0.000151		
				VCV yy (m^2)	0.000150	**VCV yz (m^2)**	-0.000116		
						VCV zz (m^2)	0.000160		
Point	2020	**RTX X**	-4643585.975	**RTX Y**	2684294.337	**RTX Z**	-3441061.201	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.008	**Vt Prec**	0.020		
QC 1		**PDOP**	2.0	**GDOP**	2.5	**HDOP**	0.8	**VDOP**	1.8
		Base data age	9	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000234	**VCV xy (m^2)**	-0.000146	**VCV xz (m^2)**	0.000126		
				VCV yy (m^2)	0.000113	**VCV yz (m^2)**	-0.000081		

						VCV zz (m²)	0.000121		
Point	2021	**RTX X**	-4643585.976	**RTX Y**	2684294.338	**RTX Z**	-3441061.201	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.008	**Vt Prec**	0.021		
QC 1		**PDOP**	2.0	**GDOP**	2.5	**HDOP**	0.8	**VDOP**	1.8
		Base data age	6	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000239	**VCV xy (m²)**	-0.000157	**VCV xz (m²)**	0.000137		
				VCV yy (m²)	0.000128	**VCV yz (m²)**	-0.000098		
						VCV zz (m²)	0.000138		
Point	2022	**RTX X**	-4643585.976	**RTX Y**	2684294.338	**RTX Z**	-3441061.202	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.008	**Vt Prec**	0.020		
QC 1		**PDOP**	2.0	**GDOP**	2.5	**HDOP**	0.8	**VDOP**	1.8
		Base data age	9	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000234	**VCV xy (m²)**	-0.000150	**VCV xz (m²)**	0.000131		
				VCV yy (m²)	0.000119	**VCV yz (m²)**	-0.000090		
						VCV zz (m²)	0.000129		
Point	2023	**RTX X**	-4643585.976	**RTX Y**	2684294.338	**RTX Z**	-3441061.202	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.008	**Vt Prec**	0.020		
QC 1		**PDOP**	2.2	**GDOP**	2.9	**HDOP**	0.9	**VDOP**	2.1
		Base data age	12	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000226	**VCV xy (m²)**	-0.000140	**VCV xz (m²)**	0.000122		
				VCV yy (m²)	0.000106	**VCV yz (m²)**	-0.000078		
						VCV zz (m²)	0.000115		
Point	2024	**RTX X**	-4643585.976	**RTX Y**	2684294.337	**RTX Z**	-3441061.202	**Code**	pm

		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.020		
QC 1		**PDOP**	2.0	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.8
		Base data age	15	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000223	**VCV xy (m^2)**	-0.000138	**VCV xz (m^2)**	0.000120		
				VCV yy (m^2)	0.000104	**VCV yz (m^2)**	-0.000077		
						VCV zz (m^2)	0.000113		
Point	2025	**RTX X**	-4643585.975	**RTX Y**	2684294.337	**RTX Z**	-3441061.202	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.019		
QC 1		**PDOP**	2.3	**GDOP**	2.9	**HDOP**	0.9	**VDOP**	2.1
		Base data age	12	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000219	**VCV xy (m^2)**	-0.000136	**VCV xz (m^2)**	0.000119		
				VCV yy (m^2)	0.000102	**VCV yz (m^2)**	-0.000077		
						VCV zz (m^2)	0.000114		
Point	2026	**RTX X**	-4643585.975	**RTX Y**	2684294.337	**RTX Z**	-3441061.202	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.019		
QC 1		**PDOP**	2.0	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.8
		Base data age	9	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000217	**VCV xy (m^2)**	-0.000134	**VCV xz (m^2)**	0.000119		
				VCV yy (m^2)	0.000100	**VCV yz (m^2)**	-0.000076		
						VCV zz (m^2)	0.000114		
Point	2027	**RTX X**	-4643585.953	**RTX Y**	2684294.327	**RTX Z**	-3441061.203	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.032		
QC 1		**PDOP**	2.0	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.8

		Base data age	7	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000630	**VCV xy (m^2)**	-0.000383	**VCV xz (m^2)**	0.000288		
				VCV yy (m^2)	0.000279	**VCV yz (m^2)**	-0.000179		
						VCV zz (m^2)	0.000235		
Point	2028	**RTX X**	-4643585.954	**RTX Y**	2684294.329	**RTX Z**	-3441061.204	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.030		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.8
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000577	**VCV xy (m^2)**	-0.000352	**VCV xz (m^2)**	0.000267		
				VCV yy (m^2)	0.000256	**VCV yz (m^2)**	-0.000167		
						VCV zz (m^2)	0.000217		
Point	2029	**RTX X**	-4643585.971	**RTX Y**	2684294.339	**RTX Z**	-3441061.207	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.026		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.8
		Base data age	8	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000441	**VCV xy (m^2)**	-0.000266	**VCV xz (m^2)**	0.000195		
				VCV yy (m^2)	0.000191	**VCV yz (m^2)**	-0.000123		
						VCV zz (m^2)	0.000148		
Point	2030	**RTX X**	-4643585.973	**RTX Y**	2684294.339	**RTX Z**	-3441061.207	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.025		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	11	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000390	**VCV xy (m^2)**	-0.000239	**VCV xz (m^2)**	0.000174		

				VCV yy (m^2)	0.000173	**VCV yz (m^2)**	-0.000111		
						VCV zz (m^2)	0.000132		
Point	2031	**RTX X**	-4643585.967	**RTX Y**	2684294.334	**RTX Z**	-3441061.205	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.026		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	8	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000445	**VCV xy (m^2)**	-0.000274	**VCV xz (m^2)**	0.000194		
				VCV yy (m^2)	0.000200	**VCV yz (m^2)**	-0.000122		
						VCV zz (m^2)	0.000150		
Point	2032	**RTX X**	-4643585.966	**RTX Y**	2684294.333	**RTX Z**	-3441061.203	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.025		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	11	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000384	**VCV xy (m^2)**	-0.000238	**VCV xz (m^2)**	0.000173		
				VCV yy (m^2)	0.000174	**VCV yz (m^2)**	-0.000111		
						VCV zz (m^2)	0.000135		
Point	2033	**RTX X**	-4643585.965	**RTX Y**	2684294.326	**RTX Z**	-3441061.198	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.028		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	14	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000470	**VCV xy (m^2)**	-0.000300	**VCV xz (m^2)**	0.000219		
				VCV yy (m^2)	0.000228	**VCV yz (m^2)**	-0.000144		
						VCV zz (m^2)	0.000179		

Point	2034	**RTX X**	-4643585.962	**RTX Y**	2684294.324	**RTX Z**	-3441061.200	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.026		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	11	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000415	**VCV xy (m^2)**	-0.000268	**VCV xz (m^2)**	0.000196		
				VCV yy (m^2)	0.000203	**VCV yz (m^2)**	-0.000130		
						VCV zz (m^2)	0.000159		
Point	2035	**RTX X**	-4643585.965	**RTX Y**	2684294.320	**RTX Z**	-3441061.209	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.029		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	8	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000491	**VCV xy (m^2)**	-0.000323	**VCV xz (m^2)**	0.000234		
				VCV yy (m^2)	0.000251	**VCV yz (m^2)**	-0.000161		
						VCV zz (m^2)	0.000193		
Point	2036	**RTX X**	-4643585.965	**RTX Y**	2684294.320	**RTX Z**	-3441061.209	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.026		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	11	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000396	**VCV xy (m^2)**	-0.000256	**VCV xz (m^2)**	0.000189		
				VCV yy (m^2)	0.000195	**VCV yz (m^2)**	-0.000128		
						VCV zz (m^2)	0.000154		
Point	2037	**RTX X**	-4643585.957	**RTX Y**	2684294.311	**RTX Z**	-3441061.200	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		

Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.027		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	8	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000452	**VCV xy (m^2)**	-0.000293	**VCV xz (m^2)**	0.000212		
				VCV yy (m^2)	0.000226	**VCV yz (m^2)**	-0.000146		
						VCV zz (m^2)	0.000173		
Point	2038	**RTX X**	-4643585.953	**RTX Y**	2684294.307	**RTX Z**	-3441061.195	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.026		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	11	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000421	**VCV xy (m^2)**	-0.000273	**VCV xz (m^2)**	0.000190		
				VCV yy (m^2)	0.000207	**VCV yz (m^2)**	-0.000129		
						VCV zz (m^2)	0.000154		
Point	2039	**RTX X**	-4643585.918	**RTX Y**	2684294.290	**RTX Z**	-3441061.170	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.028		
QC 1		**PDOP**	2.4	**GDOP**	3.0	**HDOP**	0.9	**VDOP**	2.2
		Base data age	8	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000491	**VCV xy (m^2)**	-0.000311	**VCV xz (m^2)**	0.000224		
				VCV yy (m^2)	0.000235	**VCV yz (m^2)**	-0.000151		
						VCV zz (m^2)	0.000179		
Point	2040	**RTX X**	-4643585.926	**RTX Y**	2684294.296	**RTX Z**	-3441061.170	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.027		
QC 1		**PDOP**	2.4	**GDOP**	3.0	**HDOP**	0.9	**VDOP**	2.2
		Base data age	11	**Satellites**	12	**Positions used**	61		

QC 2		**VCV xx (m^2)**	0.000444	**VCV xy (m^2)**	-0.000283	**VCV xz (m^2)**	0.000200		
				VCV yy (m^2)	0.000212	**VCV yz (m^2)**	-0.000136		
						VCV zz (m^2)	0.000160		
Point	2041	**RTX X**	-4643585.946	**RTX Y**	2684294.313	**RTX Z**	-3441061.181	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.028		
QC 1		**PDOP**	2.4	**GDOP**	3.0	**HDOP**	0.9	**VDOP**	2.2
		Base data age	8	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000508	**VCV xy (m^2)**	-0.000317	**VCV xz (m^2)**	0.000222		
				VCV yy (m^2)	0.000233	**VCV yz (m^2)**	-0.000147		
						VCV zz (m^2)	0.000180		
Point	2042	**RTX X**	-4643585.953	**RTX Y**	2684294.320	**RTX Z**	-3441061.185	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.026		
QC 1		**PDOP**	2.4	**GDOP**	3.0	**HDOP**	0.9	**VDOP**	2.2
		Base data age	11	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000428	**VCV xy (m^2)**	-0.000262	**VCV xz (m^2)**	0.000188		
				VCV yy (m^2)	0.000189	**VCV yz (m^2)**	-0.000122		
						VCV zz (m^2)	0.000155		
Point	2043	**RTX X**	-4643585.950	**RTX Y**	2684294.321	**RTX Z**	-3441061.192	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.029		
QC 1		**PDOP**	2.3	**GDOP**	3.0	**HDOP**	0.9	**VDOP**	2.2
		Base data age	14	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000528	**VCV xy (m^2)**	-0.000322	**VCV xz (m^2)**	0.000230		
				VCV yy (m^2)	0.000232	**VCV yz (m^2)**	-0.000149		

						VCV zz (m²)	0.000186		
Point	2044	**RTX X**	-4643585.949	**RTX Y**	2684294.318	**RTX Z**	-3441061.192	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.027		
QC 1		**PDOP**	2.3	**GDOP**	3.0	**HDOP**	0.9	**VDOP**	2.2
		Base data age	11	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000460	**VCV xy (m²)**	-0.000282	**VCV xz (m²)**	0.000200		
				VCV yy (m²)	0.000203	**VCV yz (m²)**	-0.000132		
						VCV zz (m²)	0.000166		
Point	2045	**RTX X**	-4643585.939	**RTX Y**	2684294.305	**RTX Z**	-3441061.180	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.030		
QC 1		**PDOP**	2.3	**GDOP**	3.0	**HDOP**	0.9	**VDOP**	2.2
		Base data age	13	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000551	**VCV xy (m²)**	-0.000350	**VCV xz (m²)**	0.000263		
				VCV yy (m²)	0.000262	**VCV yz (m²)**	-0.000179		
						VCV zz (m²)	0.000217		
Point	2046	**RTX X**	-4643585.941	**RTX Y**	2684294.305	**RTX Z**	-3441061.182	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.027		
QC 1		**PDOP**	2.3	**GDOP**	3.0	**HDOP**	0.9	**VDOP**	2.1
		Base data age	10	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000443	**VCV xy (m²)**	-0.000276	**VCV xz (m²)**	0.000218		
				VCV yy (m²)	0.000204	**VCV yz (m²)**	-0.000146		
						VCV zz (m²)	0.000178		
Point	2047	**RTX X**	-4643585.945	**RTX Y**	2684294.303	**RTX Z**	-3441061.186	**Code**	pm

		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.030		
QC 1		**PDOP**	2.3	**GDOP**	3.0	**HDOP**	0.9	**VDOP**	2.1
		Base data age	7	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000542	**VCV xy (m^2)**	-0.000350	**VCV xz (m^2)**	0.000284		
				VCV yy (m^2)	0.000265	**VCV yz (m^2)**	-0.000197		
						VCV zz (m^2)	0.000228		
Point	2048	**RTX X**	-4643585.943	**RTX Y**	2684294.301	**RTX Z**	-3441061.188	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.029		
QC 1		**PDOP**	2.3	**GDOP**	3.0	**HDOP**	0.9	**VDOP**	2.1
		Base data age	10	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000477	**VCV xy (m^2)**	-0.000306	**VCV xz (m^2)**	0.000252		
				VCV yy (m^2)	0.000230	**VCV yz (m^2)**	-0.000175		
						VCV zz (m^2)	0.000203		
Point	2049	**RTX X**	-4643585.929	**RTX Y**	2684294.298	**RTX Z**	-3441061.181	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.030		
QC 1		**PDOP**	2.3	**GDOP**	2.9	**HDOP**	0.9	**VDOP**	2.1
		Base data age	7	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000519	**VCV xy (m^2)**	-0.000329	**VCV xz (m^2)**	0.000268		
				VCV yy (m^2)	0.000250	**VCV yz (m^2)**	-0.000186		
						VCV zz (m^2)	0.000227		
Point	2050	**RTX X**	-4643585.934	**RTX Y**	2684294.301	**RTX Z**	-3441061.183	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.028		
QC 1		**PDOP**	2.3	**GDOP**	2.9	**HDOP**	0.9	**VDOP**	2.1

		Base data age	10	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000464	**VCV xy (m^2)**	-0.000292	**VCV xz (m^2)**	0.000236		
				VCV yy (m^2)	0.000218	**VCV yz (m^2)**	-0.000162		
						VCV zz (m^2)	0.000203		
Point	2051	**RTX X**	-4643585.965	**RTX Y**	2684294.317	**RTX Z**	-3441061.205	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.029		
QC 1		**PDOP**	2.3	**GDOP**	2.9	**HDOP**	0.9	**VDOP**	2.1
		Base data age	7	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000501	**VCV xy (m^2)**	-0.000307	**VCV xz (m^2)**	0.000272		
				VCV yy (m^2)	0.000229	**VCV yz (m^2)**	-0.000182		
						VCV zz (m^2)	0.000230		
Point	2052	**RTX X**	-4643585.969	**RTX Y**	2684294.321	**RTX Z**	-3441061.211	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.027		
QC 1		**PDOP**	2.0	**GDOP**	2.5	**HDOP**	0.9	**VDOP**	1.8
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000429	**VCV xy (m^2)**	-0.000258	**VCV xz (m^2)**	0.000234		
				VCV yy (m^2)	0.000189	**VCV yz (m^2)**	-0.000153		
						VCV zz (m^2)	0.000195		
Point	2053	**RTX X**	-4643585.978	**RTX Y**	2684294.327	**RTX Z**	-3441061.232	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.029		
QC 1		**PDOP**	2.0	**GDOP**	2.5	**HDOP**	0.9	**VDOP**	1.8
		Base data age	13	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000500	**VCV xy (m^2)**	-0.000295	**VCV xz (m^2)**	0.000263		

				VCV yy (m²)	0.000218	**VCV yz (m²)**	-0.000169		
						VCV zz (m²)	0.000222		
Point	2054	**RTX X**	-4643585.980	**RTX Y**	2684294.328	**RTX Z**	-3441061.230	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.026		
QC 1		**PDOP**	2.0	**GDOP**	2.5	**HDOP**	0.9	**VDOP**	1.8
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000413	**VCV xy (m²)**	-0.000241	**VCV xz (m²)**	0.000221		
				VCV yy (m²)	0.000176	**VCV yz (m²)**	-0.000143		
						VCV zz (m²)	0.000190		
Point	2055	**RTX X**	-4643585.999	**RTX Y**	2684294.340	**RTX Z**	-3441061.229	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.028		
QC 1		**PDOP**	2.0	**GDOP**	2.5	**HDOP**	0.9	**VDOP**	1.8
		Base data age	13	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000457	**VCV xy (m²)**	-0.000271	**VCV xz (m²)**	0.000251		
				VCV yy (m²)	0.000201	**VCV yz (m²)**	-0.000171		
						VCV zz (m²)	0.000221		
Point	2056	**RTX X**	-4643585.991	**RTX Y**	2684294.334	**RTX Z**	-3441061.223	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.026		
QC 1		**PDOP**	2.0	**GDOP**	2.5	**HDOP**	0.9	**VDOP**	1.8
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000400	**VCV xy (m²)**	-0.000235	**VCV xz (m²)**	0.000221		
				VCV yy (m²)	0.000171	**VCV yz (m²)**	-0.000148		
						VCV zz (m²)	0.000192		

Point	2057	**RTX X**	-4643585.961	**RTX Y**	2684294.312	**RTX Z**	-3441061.203	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.027		
QC 1		**PDOP**	2.0	**GDOP**	2.5	**HDOP**	0.9	**VDOP**	1.8
		Base data age	7	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000453	**VCV xy (m^2)**	-0.000251	**VCV xz (m^2)**	0.000230		
				VCV yy (m^2)	0.000179	**VCV yz (m^2)**	-0.000147		
						VCV zz (m^2)	0.000200		
Point	2058	**RTX X**	-4643585.960	**RTX Y**	2684294.311	**RTX Z**	-3441061.202	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.025		
QC 1		**PDOP**	2.0	**GDOP**	2.5	**HDOP**	0.9	**VDOP**	1.8
		Base data age	10	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000369	**VCV xy (m^2)**	-0.000206	**VCV xz (m^2)**	0.000200		
				VCV yy (m^2)	0.000147	**VCV yz (m^2)**	-0.000129		
						VCV zz (m^2)	0.000177		
Point	2059	**RTX X**	-4643585.942	**RTX Y**	2684294.300	**RTX Z**	-3441061.193	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.027		
QC 1		**PDOP**	1.6	**GDOP**	2.0	**HDOP**	0.8	**VDOP**	1.4
		Base data age	7	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000414	**VCV xy (m^2)**	-0.000240	**VCV xz (m^2)**	0.000234		
				VCV yy (m^2)	0.000179	**VCV yz (m^2)**	-0.000158		
						VCV zz (m^2)	0.000208		
Point	2060	**RTX X**	-4643585.944	**RTX Y**	2684294.301	**RTX Z**	-3441061.192	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		

Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.008	**Vt Prec**	0.025		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.9	**VDOP**	1.7
		Base data age	10	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000350	**VCV xy (m^2)**	-0.000203	**VCV xz (m^2)**	0.000205		
				VCV yy (m^2)	0.000152	**VCV yz (m^2)**	-0.000139		
						VCV zz (m^2)	0.000184		
Point	2061	**RTX X**	-4643585.965	**RTX Y**	2684294.315	**RTX Z**	-3441061.214	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.026		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.9	**VDOP**	1.7
		Base data age	7	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000384	**VCV xy (m^2)**	-0.000215	**VCV xz (m^2)**	0.000212		
				VCV yy (m^2)	0.000162	**VCV yz (m^2)**	-0.000142		
						VCV zz (m^2)	0.000197		
Point	2062	**RTX X**	-4643585.968	**RTX Y**	2684294.316	**RTX Z**	-3441061.213	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.036		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.9	**VDOP**	1.7
		Base data age	10	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000754	**VCV xy (m^2)**	-0.000420	**VCV xz (m^2)**	0.000421		
				VCV yy (m^2)	0.000309	**VCV yz (m^2)**	-0.000279		
						VCV zz (m^2)	0.000392		
Point	2063	**RTX X**	-4643585.979	**RTX Y**	2684294.317	**RTX Z**	-3441061.207	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.025		
QC 1		**PDOP**	1.9	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.7
		Base data age	13	**Satellites**	14	**Positions used**	61		

QC 2		**VCV xx (m^2)**	0.000347	**VCV xy (m^2)**	-0.000195	**VCV xz (m^2)**	0.000199		
				VCV yy (m^2)	0.000148	**VCV yz (m^2)**	-0.000134		
						VCV zz (m^2)	0.000192		
Point	2064	**RTX X**	-4643585.979	**RTX Y**	2684294.318	**RTX Z**	-3441061.208	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.035		
QC 1		**PDOP**	2.3	**GDOP**	2.8	**HDOP**	1.0	**VDOP**	2.0
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000732	**VCV xy (m^2)**	-0.000405	**VCV xz (m^2)**	0.000391		
				VCV yy (m^2)	0.000296	**VCV yz (m^2)**	-0.000263		
						VCV zz (m^2)	0.000374		

Initialization event: RTX not converged

GPS week	1910	**Seconds**	432538	**Initialization type**	On the fly	**Survey type**	Real-time		

Initialization event: RTX converged

GPS week	1910	**Seconds**	432543	**Initialization type**	On the fly	**Survey type**	Real-time		

Point	2065	**RTX X**	-4643585.968	**RTX Y**	2684294.317	**RTX Z**	-3441061.208	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.029		
QC 1		**PDOP**	2.3	**GDOP**	2.8	**HDOP**	1.0	**VDOP**	2.0
		Base data age	13	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000554	**VCV xy (m^2)**	-0.000294	**VCV xz (m^2)**	0.000235		
				VCV yy (m^2)	0.000205	**VCV yz (m^2)**	-0.000154		
						VCV zz (m^2)	0.000211		
Point	2066	**RTX X**	-4643585.962	**RTX Y**	2684294.313	**RTX Z**	-3441061.204	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.024		

QC 1		**PDOP**	2.3	**GDOP**	2.8	**HDOP**	1.0	**VDOP**	2.1
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000388	**VCV xy (m²)**	-0.000207	**VCV xz (m²)**	0.000177		
				VCV yy (m²)	0.000146	**VCV yz (m²)**	-0.000117		
						VCV zz (m²)	0.000163		
Point	2067	**RTX X**	-4643585.949	**RTX Y**	2684294.312	**RTX Z**	-3441061.197	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.025		
QC 1		**PDOP**	2.3	**GDOP**	2.8	**HDOP**	1.0	**VDOP**	2.1
		Base data age	7	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000406	**VCV xy (m²)**	-0.000217	**VCV xz (m²)**	0.000186		
				VCV yy (m²)	0.000157	**VCV yz (m²)**	-0.000124		
						VCV zz (m²)	0.000175		
Point	2068	**RTX X**	-4643585.943	**RTX Y**	2684294.311	**RTX Z**	-3441061.196	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.035		
QC 1		**PDOP**	2.3	**GDOP**	2.8	**HDOP**	1.0	**VDOP**	2.1
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000793	**VCV xy (m²)**	-0.000424	**VCV xz (m²)**	0.000376		
				VCV yy (m²)	0.000306	**VCV yz (m²)**	-0.000251		
						VCV zz (m²)	0.000356		
Point	2069	**RTX X**	-4643585.945	**RTX Y**	2684294.322	**RTX Z**	-3441061.210	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.024		
QC 1		**PDOP**	2.3	**GDOP**	2.8	**HDOP**	0.9	**VDOP**	2.1
		Base data age	7	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000358	**VCV xy (m²)**	-0.000192	**VCV xz (m²)**	0.000180		

				VCV yy (m^2)	0.000144	**VCV yz (m^2)**	-0.000118		
						VCV zz (m^2)	0.000169		
Point	2070	**RTX X**	-4643585.961	**RTX Y**	2684294.327	**RTX Z**	-3441061.211	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.034		
QC 1		**PDOP**	2.3	**GDOP**	2.8	**HDOP**	0.9	**VDOP**	2.1
		Base data age	10	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000686	**VCV xy (m^2)**	-0.000368	**VCV xz (m^2)**	0.000366		
				VCV yy (m^2)	0.000276	**VCV yz (m^2)**	-0.000239		
						VCV zz (m^2)	0.000342		
Point	2071	**RTX X**	-4643585.989	**RTX Y**	2684294.336	**RTX Z**	-3441061.211	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.035		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.7
		Base data age	7	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000776	**VCV xy (m^2)**	-0.000408	**VCV xz (m^2)**	0.000392		
				VCV yy (m^2)	0.000311	**VCV yz (m^2)**	-0.000258		
						VCV zz (m^2)	0.000367		
Point	2072	**RTX X**	-4643585.976	**RTX Y**	2684294.327	**RTX Z**	-3441061.201	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.015	**Vt Prec**	0.036		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.7
		Base data age	13	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000816	**VCV xy (m^2)**	-0.000419	**VCV xz (m^2)**	0.000407		
				VCV yy (m^2)	0.000322	**VCV yz (m^2)**	-0.000262		
						VCV zz (m^2)	0.000366		

Point	2073	**RTX X**	-4643585.970	**RTX Y**	2684294.324	**RTX Z**	-3441061.199	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.033		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.7
		Base data age	10	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000660	**VCV xy (m^2)**	-0.000344	**VCV xz (m^2)**	0.000354		
				VCV yy (m^2)	0.000265	**VCV yz (m^2)**	-0.000229		
						VCV zz (m^2)	0.000321		
Point	2074	**RTX X**	-4643585.960	**RTX Y**	2684294.323	**RTX Z**	-3441061.207	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.034		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	7	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000726	**VCV xy (m^2)**	-0.000364	**VCV xz (m^2)**	0.000382		
				VCV yy (m^2)	0.000284	**VCV yz (m^2)**	-0.000240		
						VCV zz (m^2)	0.000352		
Point	2075	**RTX X**	-4643585.960	**RTX Y**	2684294.324	**RTX Z**	-3441061.207	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.032		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.7
		Base data age	10	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000615	**VCV xy (m^2)**	-0.000311	**VCV xz (m^2)**	0.000338		
				VCV yy (m^2)	0.000243	**VCV yz (m^2)**	-0.000214		
						VCV zz (m^2)	0.000317		
Point	2076	**RTX X**	-4643585.949	**RTX Y**	2684294.323	**RTX Z**	-3441061.184	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		

Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.033		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	8	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000655	**VCV xy (m^2)**	-0.000325	**VCV xz (m^2)**	0.000352		
				VCV yy (m^2)	0.000261	**VCV yz (m^2)**	-0.000224		
						VCV zz (m^2)	0.000333		
Point	2077	**RTX X**	-4643585.953	**RTX Y**	2684294.325	**RTX Z**	-3441061.186	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.031		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	11	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000560	**VCV xy (m^2)**	-0.000280	**VCV xz (m^2)**	0.000311		
				VCV yy (m^2)	0.000224	**VCV yz (m^2)**	-0.000199		
						VCV zz (m^2)	0.000297		
Point	2078	**RTX X**	-4643585.983	**RTX Y**	2684294.335	**RTX Z**	-3441061.206	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.032		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	8	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000611	**VCV xy (m^2)**	-0.000300	**VCV xz (m^2)**	0.000343		
				VCV yy (m^2)	0.000247	**VCV yz (m^2)**	-0.000217		
						VCV zz (m^2)	0.000331		
Point	2079	**RTX X**	-4643585.985	**RTX Y**	2684294.336	**RTX Z**	-3441061.207	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.030		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	5	**Satellites**	13	**Positions used**	61		

QC 2		**VCV xx (m^2)**	0.000524	**VCV xy (m^2)**	-0.000259	**VCV xz (m^2)**	0.000303		
				VCV yy (m^2)	0.000210	**VCV yz (m^2)**	-0.000189		
						VCV zz (m^2)	0.000290		
Point	2080	**RTX X**	-4643585.980	**RTX Y**	2684294.328	**RTX Z**	-3441061.213	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.032		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	8	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000621	**VCV xy (m^2)**	-0.000295	**VCV xz (m^2)**	0.000357		
				VCV yy (m^2)	0.000250	**VCV yz (m^2)**	-0.000222		
						VCV zz (m^2)	0.000347		
Point	2081	**RTX X**	-4643585.980	**RTX Y**	2684294.328	**RTX Z**	-3441061.214	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.030		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	10	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000540	**VCV xy (m^2)**	-0.000256	**VCV xz (m^2)**	0.000314		
				VCV yy (m^2)	0.000214	**VCV yz (m^2)**	-0.000196		
						VCV zz (m^2)	0.000307		
Point	2082	**RTX X**	-4643585.982	**RTX Y**	2684294.330	**RTX Z**	-3441061.212	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.032		
QC 1		**PDOP**	1.9	**GDOP**	2.5	**HDOP**	0.8	**VDOP**	1.7
		Base data age	14	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000639	**VCV xy (m^2)**	-0.000293	**VCV xz (m^2)**	0.000336		
				VCV yy (m^2)	0.000243	**VCV yz (m^2)**	-0.000212		

						VCV zz (m²)	0.000330		
Point	2083	**RTX X**	-4643585.977	**RTX Y**	2684294.327	**RTX Z**	-3441061.209	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.029		
QC 1		**PDOP**	1.9	**GDOP**	2.5	**HDOP**	0.8	**VDOP**	1.7
		Base data age	11	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000525	**VCV xy (m²)**	-0.000242	**VCV xz (m²)**	0.000287		
				VCV yy (m²)	0.000202	**VCV yz (m²)**	-0.000181		
						VCV zz (m²)	0.000281		
Point	2084	**RTX X**	-4643585.977	**RTX Y**	2684294.331	**RTX Z**	-3441061.207	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.031		
QC 1		**PDOP**	1.9	**GDOP**	2.5	**HDOP**	0.8	**VDOP**	1.7
		Base data age	8	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000589	**VCV xy (m²)**	-0.000265	**VCV xz (m²)**	0.000311		
				VCV yy (m²)	0.000225	**VCV yz (m²)**	-0.000190		
						VCV zz (m²)	0.000298		
Point	2085	**RTX X**	-4643585.969	**RTX Y**	2684294.327	**RTX Z**	-3441061.204	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.029		
QC 1		**PDOP**	1.9	**GDOP**	2.5	**HDOP**	0.8	**VDOP**	1.7
		Base data age	11	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000510	**VCV xy (m²)**	-0.000230	**VCV xz (m²)**	0.000275		
				VCV yy (m²)	0.000197	**VCV yz (m²)**	-0.000169		
						VCV zz (m²)	0.000264		
Point	2086	**RTX X**	-4643585.963	**RTX Y**	2684294.320	**RTX Z**	-3441061.199	**Code**	pm

		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.031		
QC 1		**PDOP**	1.9	**GDOP**	2.5	**HDOP**	0.8	**VDOP**	1.7
		Base data age	8	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000629	**VCV xy (m^2)**	-0.000284	**VCV xz (m^2)**	0.000328		
				VCV yy (m^2)	0.000242	**VCV yz (m^2)**	-0.000203		
						VCV zz (m^2)	0.000309		
Point	2087	**RTX X**	-4643585.969	**RTX Y**	2684294.324	**RTX Z**	-3441061.203	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.029		
QC 1		**PDOP**	2.1	**GDOP**	2.8	**HDOP**	1.0	**VDOP**	1.9
		Base data age	11	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000526	**VCV xy (m^2)**	-0.000236	**VCV xz (m^2)**	0.000283		
				VCV yy (m^2)	0.000202	**VCV yz (m^2)**	-0.000173		
						VCV zz (m^2)	0.000267		
Point	2088	**RTX X**	-4643585.976	**RTX Y**	2684294.332	**RTX Z**	-3441061.212	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.030		
QC 1		**PDOP**	2.1	**GDOP**	2.8	**HDOP**	1.0	**VDOP**	1.9
		Base data age	8	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000543	**VCV xy (m^2)**	-0.000253	**VCV xz (m^2)**	0.000295		
				VCV yy (m^2)	0.000236	**VCV yz (m^2)**	-0.000193		
						VCV zz (m^2)	0.000297		
Point	2089	**RTX X**	-4643585.977	**RTX Y**	2684294.332	**RTX Z**	-3441061.212	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.027		
QC 1		**PDOP**	2.1	**GDOP**	2.8	**HDOP**	1.0	**VDOP**	1.9

		Base data age	11	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000453	**VCV xy (m^2)**	-0.000206	**VCV xz (m^2)**	0.000251		
				VCV yy (m^2)	0.000193	**VCV yz (m^2)**	-0.000164		
						VCV zz (m^2)	0.000253		
Point	2090	**RTX X**	-4643585.988	**RTX Y**	2684294.328	**RTX Z**	-3441061.211	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.030		
QC 1		**PDOP**	2.1	**GDOP**	2.8	**HDOP**	1.0	**VDOP**	1.9
		Base data age	8	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000553	**VCV xy (m^2)**	-0.000239	**VCV xz (m^2)**	0.000297		
				VCV yy (m^2)	0.000240	**VCV yz (m^2)**	-0.000203		
						VCV zz (m^2)	0.000307		
Point	2091	**RTX X**	-4643585.989	**RTX Y**	2684294.329	**RTX Z**	-3441061.212	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.028		
QC 1		**PDOP**	1.9	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.7
		Base data age	12	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000462	**VCV xy (m^2)**	-0.000200	**VCV xz (m^2)**	0.000255		
				VCV yy (m^2)	0.000203	**VCV yz (m^2)**	-0.000173		
						VCV zz (m^2)	0.000263		
Point	2092	**RTX X**	-4643585.988	**RTX Y**	2684294.330	**RTX Z**	-3441061.213	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.025		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	0.8	**VDOP**	1.7
		Base data age	15	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000399	**VCV xy (m^2)**	-0.000170	**VCV xz (m^2)**	0.000219		

				VCV yy (m^2)	0.000169	**VCV yz (m^2)**	-0.000145		
						VCV zz (m^2)	0.000225		
Point	2093	**RTX X**	-4643585.989	**RTX Y**	2684294.332	**RTX Z**	-3441061.215	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.024		
QC 1		**PDOP**	1.6	**GDOP**	2.1	**HDOP**	0.7	**VDOP**	1.5
		Base data age	12	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000357	**VCV xy (m^2)**	-0.000150	**VCV xz (m^2)**	0.000197		
				VCV yy (m^2)	0.000142	**VCV yz (m^2)**	-0.000122		
						VCV zz (m^2)	0.000194		
Point	2094	**RTX X**	-4643585.988	**RTX Y**	2684294.332	**RTX Z**	-3441061.217	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.023		
QC 1		**PDOP**	2.0	**GDOP**	2.6	**HDOP**	1.0	**VDOP**	1.8
		Base data age	9	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000325	**VCV xy (m^2)**	-0.000135	**VCV xz (m^2)**	0.000182		
				VCV yy (m^2)	0.000127	**VCV yz (m^2)**	-0.000111		
						VCV zz (m^2)	0.000178		
Point	2095	**RTX X**	-4643585.987	**RTX Y**	2684294.332	**RTX Z**	-3441061.217	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.022		
QC 1		**PDOP**	2.0	**GDOP**	2.6	**HDOP**	1.0	**VDOP**	1.8
		Base data age	12	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000304	**VCV xy (m^2)**	-0.000126	**VCV xz (m^2)**	0.000172		
				VCV yy (m^2)	0.000114	**VCV yz (m^2)**	-0.000100		
						VCV zz (m^2)	0.000162		

Point	2096	**RTX X**	-4643585.985	**RTX Y**	2684294.332	**RTX Z**	-3441061.216	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.021		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	9	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000287	**VCV xy (m^2)**	-0.000119	**VCV xz (m^2)**	0.000161		
				VCV yy (m^2)	0.000105	**VCV yz (m^2)**	-0.000092		
						VCV zz (m^2)	0.000149		
Point	2097	**RTX X**	-4643585.983	**RTX Y**	2684294.331	**RTX Z**	-3441061.216	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.021		
QC 1		**PDOP**	1.8	**GDOP**	2.3	**HDOP**	0.8	**VDOP**	1.6
		Base data age	12	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000276	**VCV xy (m^2)**	-0.000114	**VCV xz (m^2)**	0.000155		
				VCV yy (m^2)	0.000100	**VCV yz (m^2)**	-0.000088		
						VCV zz (m^2)	0.000141		
Point	2098	**RTX X**	-4643585.982	**RTX Y**	2684294.331	**RTX Z**	-3441061.216	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.020		
QC 1		**PDOP**	1.6	**GDOP**	2.1	**HDOP**	0.7	**VDOP**	1.4
		Base data age	10	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000263	**VCV xy (m^2)**	-0.000108	**VCV xz (m^2)**	0.000147		
				VCV yy (m^2)	0.000096	**VCV yz (m^2)**	-0.000084		
						VCV zz (m^2)	0.000134		
Point	2099	**RTX X**	-4643585.967	**RTX Y**	2684294.328	**RTX Z**	-3441061.214	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		

Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.024		
QC 1		**PDOP**	1.6	**GDOP**	2.1	**HDOP**	0.7	**VDOP**	1.4
		Base data age	7	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000371	**VCV xy (m^2)**	-0.000157	**VCV xz (m^2)**	0.000191		
				VCV yy (m^2)	0.000163	**VCV yz (m^2)**	-0.000122		
						VCV zz (m^2)	0.000194		
Point	2100	**RTX X**	-4643585.967	**RTX Y**	2684294.329	**RTX Z**	-3441061.215	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.023		
QC 1		**PDOP**	1.6	**GDOP**	2.0	**HDOP**	0.7	**VDOP**	1.4
		Base data age	10	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000337	**VCV xy (m^2)**	-0.000142	**VCV xz (m^2)**	0.000177		
				VCV yy (m^2)	0.000142	**VCV yz (m^2)**	-0.000109		
						VCV zz (m^2)	0.000175		
Point	2101	**RTX X**	-4643585.964	**RTX Y**	2684294.325	**RTX Z**	-3441061.211	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.026		
QC 1		**PDOP**	1.6	**GDOP**	2.0	**HDOP**	0.7	**VDOP**	1.4
		Base data age	14	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000430	**VCV xy (m^2)**	-0.000181	**VCV xz (m^2)**	0.000218		
				VCV yy (m^2)	0.000179	**VCV yz (m^2)**	-0.000132		
						VCV zz (m^2)	0.000219		
Point	2102	**RTX X**	-4643585.961	**RTX Y**	2684294.323	**RTX Z**	-3441061.208	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.024		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.7	**VDOP**	1.3
		Base data age	12	**Satellites**	15	**Positions used**	61		

QC 2		**VCV xx (m^2)**	0.000359	**VCV xy (m^2)**	-0.000150	**VCV xz (m^2)**	0.000183		
				VCV yy (m^2)	0.000149	**VCV yz (m^2)**	-0.000110		
						VCV zz (m^2)	0.000181		
Point	2103	**RTX X**	-4643585.959	**RTX Y**	2684294.322	**RTX Z**	-3441061.208	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.022		
QC 1		**PDOP**	1.5	**GDOP**	2.0	**HDOP**	0.7	**VDOP**	1.4
		Base data age	9	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000318	**VCV xy (m^2)**	-0.000130	**VCV xz (m^2)**	0.000162		
				VCV yy (m^2)	0.000128	**VCV yz (m^2)**	-0.000097		
						VCV zz (m^2)	0.000158		
Point	2104	**RTX X**	-4643585.958	**RTX Y**	2684294.321	**RTX Z**	-3441061.207	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.021		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.7	**VDOP**	1.3
		Base data age	12	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000291	**VCV xy (m^2)**	-0.000123	**VCV xz (m^2)**	0.000153		
				VCV yy (m^2)	0.000116	**VCV yz (m^2)**	-0.000090		
						VCV zz (m^2)	0.000145		
Point	2105	**RTX X**	-4643585.956	**RTX Y**	2684294.320	**RTX Z**	-3441061.206	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.021		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.7	**VDOP**	1.3
		Base data age	9	**Satellites**	16	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000269	**VCV xy (m^2)**	-0.000118	**VCV xz (m^2)**	0.000145		
				VCV yy (m^2)	0.000109	**VCV yz (m^2)**	-0.000086		

						VCV zz (m²)	0.000135		
Point	2106	**RTX X**	-4643585.956	**RTX Y**	2684294.320	**RTX Z**	-3441061.206	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.020		
QC 1		**PDOP**	1.3	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.2
		Base data age	12	**Satellites**	16	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000251	**VCV xy (m²)**	-0.000112	**VCV xz (m²)**	0.000137		
				VCV yy (m²)	0.000104	**VCV yz (m²)**	-0.000082		
						VCV zz (m²)	0.000126		
Point	2107	**RTX X**	-4643585.956	**RTX Y**	2684294.321	**RTX Z**	-3441061.207	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.020		
QC 1		**PDOP**	1.3	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.2
		Base data age	9	**Satellites**	16	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000236	**VCV xy (m²)**	-0.000107	**VCV xz (m²)**	0.000130		
				VCV yy (m²)	0.000098	**VCV yz (m²)**	-0.000078		
						VCV zz (m²)	0.000119		
Point	2108	**RTX X**	-4643585.957	**RTX Y**	2684294.321	**RTX Z**	-3441061.207	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.008	**Vt Prec**	0.019		
QC 1		**PDOP**	1.3	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.2
		Base data age	6	**Satellites**	16	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000224	**VCV xy (m²)**	-0.000103	**VCV xz (m²)**	0.000123		
				VCV yy (m²)	0.000094	**VCV yz (m²)**	-0.000075		
						VCV zz (m²)	0.000112		
Point	2109	**RTX X**	-4643585.957	**RTX Y**	2684294.321	**RTX Z**	-3441061.208	**Code**	pm

		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.008	**Vt Prec**	0.019		
QC 1		**PDOP**	1.3	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.1
		Base data age	9	**Satellites**	16	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000216	**VCV xy (m²)**	-0.000101	**VCV xz (m²)**	0.000120		
				VCV yy (m²)	0.000092	**VCV yz (m²)**	-0.000074		
						VCV zz (m²)	0.000108		
Point	2110	**RTX X**	-4643585.957	**RTX Y**	2684294.322	**RTX Z**	-3441061.208	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.008	**Vt Prec**	0.019		
QC 1		**PDOP**	1.3	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.1
		Base data age	12	**Satellites**	16	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000209	**VCV xy (m²)**	-0.000099	**VCV xz (m²)**	0.000116		
				VCV yy (m²)	0.000089	**VCV yz (m²)**	-0.000072		
						VCV zz (m²)	0.000104		
Point	2111	**RTX X**	-4643585.957	**RTX Y**	2684294.322	**RTX Z**	-3441061.208	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.008	**Vt Prec**	0.018		
QC 1		**PDOP**	1.3	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.1
		Base data age	14	**Satellites**	16	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000205	**VCV xy (m²)**	-0.000098	**VCV xz (m²)**	0.000114		
				VCV yy (m²)	0.000088	**VCV yz (m²)**	-0.000071		
						VCV zz (m²)	0.000101		
Point	2112	**RTX X**	-4643585.957	**RTX Y**	2684294.322	**RTX Z**	-3441061.208	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.018		
QC 1		**PDOP**	1.3	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.1

		Base data age	11	**Satellites**	16	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000199	**VCV xy (m^2)**	-0.000097	**VCV xz (m^2)**	0.000111		
				VCV yy (m^2)	0.000087	**VCV yz (m^2)**	-0.000071		
						VCV zz (m^2)	0.000098		
Point	2113	**RTX X**	-4643585.956	**RTX Y**	2684294.329	**RTX Z**	-3441061.213	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.022		
QC 1		**PDOP**	1.3	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.1
		Base data age	8	**Satellites**	16	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000291	**VCV xy (m^2)**	-0.000144	**VCV xz (m^2)**	0.000142		
				VCV yy (m^2)	0.000152	**VCV yz (m^2)**	-0.000090		
						VCV zz (m^2)	0.000144		
Point	2114	**RTX X**	-4643585.956	**RTX Y**	2684294.329	**RTX Z**	-3441061.215	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.021		
QC 1		**PDOP**	1.3	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.1
		Base data age	11	**Satellites**	16	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000266	**VCV xy (m^2)**	-0.000134	**VCV xz (m^2)**	0.000133		
				VCV yy (m^2)	0.000137	**VCV yz (m^2)**	-0.000086		
						VCV zz (m^2)	0.000132		
Point	2115	**RTX X**	-4643585.956	**RTX Y**	2684294.326	**RTX Z**	-3441061.220	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.022		
QC 1		**PDOP**	1.3	**GDOP**	1.6	**HDOP**	0.7	**VDOP**	1.1
		Base data age	8	**Satellites**	16	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000309	**VCV xy (m^2)**	-0.000153	**VCV xz (m^2)**	0.000149		

				VCV yy (m^2)	0.000167	**VCV yz (m^2)**	-0.000095		
						VCV zz (m^2)	0.000153		
Point	2116	**RTX X**	-4643585.958	**RTX Y**	2684294.327	**RTX Z**	-3441061.219	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.021		
QC 1		**PDOP**	1.3	**GDOP**	1.6	**HDOP**	0.7	**VDOP**	1.1
		Base data age	12	**Satellites**	16	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000281	**VCV xy (m^2)**	-0.000142	**VCV xz (m^2)**	0.000139		
				VCV yy (m^2)	0.000153	**VCV yz (m^2)**	-0.000092		
						VCV zz (m^2)	0.000138		
Point	2117	**RTX X**	-4643585.959	**RTX Y**	2684294.330	**RTX Z**	-3441061.218	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.020		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.7	**VDOP**	1.3
		Base data age	9	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000259	**VCV xy (m^2)**	-0.000130	**VCV xz (m^2)**	0.000127		
				VCV yy (m^2)	0.000134	**VCV yz (m^2)**	-0.000082		
						VCV zz (m^2)	0.000121		
Point	2118	**RTX X**	-4643585.960	**RTX Y**	2684294.331	**RTX Z**	-3441061.217	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.020		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.7	**VDOP**	1.3
		Base data age	6	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000244	**VCV xy (m^2)**	-0.000124	**VCV xz (m^2)**	0.000122		
				VCV yy (m^2)	0.000125	**VCV yz (m^2)**	-0.000079		
						VCV zz (m^2)	0.000113		

Point	2119	**RTX X**	-4643585.962	**RTX Y**	2684294.332	**RTX Z**	-3441061.218	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.019		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.7	**VDOP**	1.3
		Base data age	9	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000219	**VCV xy (m^2)**	-0.000113	**VCV xz (m^2)**	0.000113		
				VCV yy (m^2)	0.000115	**VCV yz (m^2)**	-0.000074		
						VCV zz (m^2)	0.000106		
Point	2120	**RTX X**	-4643585.963	**RTX Y**	2684294.333	**RTX Z**	-3441061.218	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.019		
QC 1		**PDOP**	1.3	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.1
		Base data age	12	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000211	**VCV xy (m^2)**	-0.000110	**VCV xz (m^2)**	0.000110		
				VCV yy (m^2)	0.000110	**VCV yz (m^2)**	-0.000073		
						VCV zz (m^2)	0.000102		
Point	2121	**RTX X**	-4643585.963	**RTX Y**	2684294.333	**RTX Z**	-3441061.218	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.008	**Vt Prec**	0.018		
QC 1		**PDOP**	1.3	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.1
		Base data age	15	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000204	**VCV xy (m^2)**	-0.000108	**VCV xz (m^2)**	0.000108		
				VCV yy (m^2)	0.000107	**VCV yz (m^2)**	-0.000072		
						VCV zz (m^2)	0.000099		
Point	2122	**RTX X**	-4643585.963	**RTX Y**	2684294.334	**RTX Z**	-3441061.218	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		

Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.008	**Vt Prec**	0.018		
QC 1		**PDOP**	1.3	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.1
		Base data age	12	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000198	**VCV xy (m^2)**	-0.000106	**VCV xz (m^2)**	0.000106		
				VCV yy (m^2)	0.000104	**VCV yz (m^2)**	-0.000072		
						VCV zz (m^2)	0.000096		

Survey event

Survey event	End survey

Reduced points

Point	2000	**East**	777875.340	**North**	6360588.596	**Elevation**	628.766	**Code**	pm
Point	2001	**East**	777875.347	**North**	6360588.599	**Elevation**	628.779	**Code**	pm
Point	2002	**East**	777875.351	**North**	6360588.601	**Elevation**	628.786	**Code**	pm
Point	2003	**East**	777875.350	**North**	6360588.601	**Elevation**	628.788	**Code**	pm
Point	2004	**East**	777875.346	**North**	6360588.600	**Elevation**	628.789	**Code**	pm
Point	2005	**East**	777875.344	**North**	6360588.601	**Elevation**	628.794	**Code**	pm
Point	2006	**East**	777875.341	**North**	6360588.601	**Elevation**	628.788	**Code**	pm
Point	2007	**East**	777875.338	**North**	6360588.601	**Elevation**	628.780	**Code**	pm
Point	2008	**East**	777875.339	**North**	6360588.604	**Elevation**	628.770	**Code**	pm
Point	2009	**East**	777875.342	**North**	6360588.604	**Elevation**	628.762	**Code**	pm
Point	2010	**East**	777875.347	**North**	6360588.603	**Elevation**	628.754	**Code**	pm
Point	2011	**East**	777875.378	**North**	6360588.608	**Elevation**	628.771	**Code**	pm
Point	2012	**East**	777875.377	**North**	6360588.609	**Elevation**	628.770	**Code**	pm
Point	2013	**East**	777875.377	**North**	6360588.609	**Elevation**	628.769	**Code**	pm
Point	2014	**East**	777875.377	**North**	6360588.609	**Elevation**	628.767	**Code**	pm
Point	2015	**East**	777875.377	**North**	6360588.609	**Elevation**	628.766	**Code**	pm
Point	2016	**East**	777875.377	**North**	6360588.609	**Elevation**	628.765	**Code**	pm
Point	2017	**East**	777875.378	**North**	6360588.609	**Elevation**	628.764	**Code**	pm
Point	2018	**East**	777875.378	**North**	6360588.608	**Elevation**	628.765	**Code**	pm
Point	2019	**East**	777875.378	**North**	6360588.608	**Elevation**	628.765	**Code**	pm
Point	2020	**East**	777875.378	**North**	6360588.608	**Elevation**	628.766	**Code**	pm

Point	2021	**East**	777875.378	**North**	6360588.608	**Elevation**	628.766	**Code**	pm
Point	2022	**East**	777875.378	**North**	6360588.607	**Elevation**	628.766	**Code**	pm
Point	2023	**East**	777875.378	**North**	6360588.607	**Elevation**	628.767	**Code**	pm
Point	2024	**East**	777875.378	**North**	6360588.607	**Elevation**	628.766	**Code**	pm
Point	2025	**East**	777875.378	**North**	6360588.607	**Elevation**	628.766	**Code**	pm
Point	2026	**East**	777875.378	**North**	6360588.606	**Elevation**	628.766	**Code**	pm
Point	2027	**East**	777875.375	**North**	6360588.593	**Elevation**	628.747	**Code**	pm
Point	2028	**East**	777875.374	**North**	6360588.593	**Elevation**	628.748	**Code**	pm
Point	2029	**East**	777875.374	**North**	6360588.602	**Elevation**	628.766	**Code**	pm
Point	2030	**East**	777875.375	**North**	6360588.602	**Elevation**	628.767	**Code**	pm
Point	2031	**East**	777875.376	**North**	6360588.599	**Elevation**	628.761	**Code**	pm
Point	2032	**East**	777875.377	**North**	6360588.600	**Elevation**	628.758	**Code**	pm
Point	2033	**East**	777875.382	**North**	6360588.602	**Elevation**	628.751	**Code**	pm
Point	2034	**East**	777875.383	**North**	6360588.599	**Elevation**	628.750	**Code**	pm
Point	2035	**East**	777875.387	**North**	6360588.591	**Elevation**	628.755	**Code**	pm
Point	2036	**East**	777875.388	**North**	6360588.591	**Elevation**	628.755	**Code**	pm
Point	2037	**East**	777875.392	**North**	6360588.593	**Elevation**	628.740	**Code**	pm
Point	2038	**East**	777875.392	**North**	6360588.594	**Elevation**	628.733	**Code**	pm
Point	2039	**East**	777875.389	**North**	6360588.594	**Elevation**	628.687	**Code**	pm
Point	2040	**East**	777875.388	**North**	6360588.598	**Elevation**	628.696	**Code**	pm
Point	2041	**East**	777875.384	**North**	6360588.604	**Elevation**	628.723	**Code**	pm
Point	2042	**East**	777875.381	**North**	6360588.606	**Elevation**	628.733	**Code**	pm
Point	2043	**East**	777875.380	**North**	6360588.599	**Elevation**	628.736	**Code**	pm
Point	2044	**East**	777875.381	**North**	6360588.597	**Elevation**	628.733	**Code**	pm
Point	2045	**East**	777875.387	**North**	6360588.599	**Elevation**	628.714	**Code**	pm
Point	2046	**East**	777875.389	**North**	6360588.598	**Elevation**	628.717	**Code**	pm
Point	2047	**East**	777875.392	**North**	6360588.596	**Elevation**	628.720	**Code**	pm
Point	2048	**East**	777875.392	**North**	6360588.593	**Elevation**	628.720	**Code**	pm
Point	2049	**East**	777875.388	**North**	6360588.592	**Elevation**	628.705	**Code**	pm
Point	2050	**East**	777875.388	**North**	6360588.593	**Elevation**	628.710	**Code**	pm
Point	2051	**East**	777875.390	**North**	6360588.593	**Elevation**	628.751	**Code**	pm
Point	2052	**East**	777875.389	**North**	6360588.592	**Elevation**	628.759	**Code**	pm
Point	2053	**East**	777875.388	**North**	6360588.580	**Elevation**	628.779	**Code**	pm
Point	2054	**East**	777875.388	**North**	6360588.583	**Elevation**	628.781	**Code**	pm
Point	2055	**East**	777875.387	**North**	6360588.595	**Elevation**	628.799	**Code**	pm

Point	2056	**East**	777875.389	**North**	6360588.595	**Elevation**	628.787	**Code**	pm
Point	2057	**East**	777875.392	**North**	6360588.592	**Elevation**	628.746	**Code**	pm
Point	2058	**East**	777875.393	**North**	6360588.592	**Elevation**	628.744	**Code**	pm
Point	2059	**East**	777875.393	**North**	6360588.588	**Elevation**	628.721	**Code**	pm
Point	2060	**East**	777875.393	**North**	6360588.590	**Elevation**	628.722	**Code**	pm
Point	2061	**East**	777875.392	**North**	6360588.585	**Elevation**	628.756	**Code**	pm
Point	2062	**East**	777875.392	**North**	6360588.588	**Elevation**	628.758	**Code**	pm
Point	2063	**East**	777875.397	**North**	6360588.598	**Elevation**	628.763	**Code**	pm
Point	2064	**East**	777875.396	**North**	6360588.598	**Elevation**	628.764	**Code**	pm
Point	2065	**East**	777875.391	**North**	6360588.592	**Elevation**	628.756	**Code**	pm
Point	2066	**East**	777875.392	**North**	6360588.592	**Elevation**	628.747	**Code**	pm
Point	2067	**East**	777875.386	**North**	6360588.591	**Elevation**	628.734	**Code**	pm
Point	2068	**East**	777875.384	**North**	6360588.589	**Elevation**	628.729	**Code**	pm
Point	2069	**East**	777875.375	**North**	6360588.582	**Elevation**	628.742	**Code**	pm
Point	2070	**East**	777875.379	**North**	6360588.590	**Elevation**	628.756	**Code**	pm
Point	2071	**East**	777875.386	**North**	6360588.605	**Elevation**	628.781	**Code**	pm
Point	2072	**East**	777875.387	**North**	6360588.605	**Elevation**	628.761	**Code**	pm
Point	2073	**East**	777875.386	**North**	6360588.603	**Elevation**	628.755	**Code**	pm
Point	2074	**East**	777875.382	**North**	6360588.591	**Elevation**	628.752	**Code**	pm
Point	2075	**East**	777875.381	**North**	6360588.592	**Elevation**	628.752	**Code**	pm
Point	2076	**East**	777875.377	**North**	6360588.605	**Elevation**	628.731	**Code**	pm
Point	2077	**East**	777875.377	**North**	6360588.607	**Elevation**	628.736	**Code**	pm
Point	2078	**East**	777875.383	**North**	6360588.606	**Elevation**	628.773	**Code**	pm
Point	2079	**East**	777875.384	**North**	6360588.607	**Elevation**	628.776	**Code**	pm
Point	2080	**East**	777875.388	**North**	6360588.597	**Elevation**	628.771	**Code**	pm
Point	2081	**East**	777875.388	**North**	6360588.596	**Elevation**	628.772	**Code**	pm
Point	2082	**East**	777875.387	**North**	6360588.599	**Elevation**	628.773	**Code**	pm
Point	2083	**East**	777875.387	**North**	6360588.599	**Elevation**	628.767	**Code**	pm
Point	2084	**East**	777875.384	**North**	6360588.601	**Elevation**	628.767	**Code**	pm
Point	2085	**East**	777875.384	**North**	6360588.599	**Elevation**	628.758	**Code**	pm
Point	2086	**East**	777875.386	**North**	6360588.598	**Elevation**	628.748	**Code**	pm
Point	2087	**East**	777875.386	**North**	6360588.599	**Elevation**	628.756	**Code**	pm
Point	2088	**East**	777875.383	**North**	6360588.597	**Elevation**	628.770	**Code**	pm
Point	2089	**East**	777875.383	**North**	6360588.597	**Elevation**	628.770	**Code**	pm
Point	2090	**East**	777875.392	**North**	6360588.603	**Elevation**	628.776	**Code**	pm

Point	2091	**East**	777875.392	**North**	6360588.602	**Elevation**	628.778	**Code**	pm
Point	2092	**East**	777875.390	**North**	6360588.601	**Elevation**	628.779	**Code**	pm
Point	2093	**East**	777875.389	**North**	6360588.600	**Elevation**	628.780	**Code**	pm
Point	2094	**East**	777875.388	**North**	6360588.599	**Elevation**	628.781	**Code**	pm
Point	2095	**East**	777875.388	**North**	6360588.598	**Elevation**	628.780	**Code**	pm
Point	2096	**East**	777875.387	**North**	6360588.597	**Elevation**	628.778	**Code**	pm
Point	2097	**East**	777875.387	**North**	6360588.597	**Elevation**	628.777	**Code**	pm
Point	2098	**East**	777875.386	**North**	6360588.596	**Elevation**	628.775	**Code**	pm
Point	2099	**East**	777875.381	**North**	6360588.591	**Elevation**	628.763	**Code**	pm
Point	2100	**East**	777875.380	**North**	6360588.590	**Elevation**	628.764	**Code**	pm
Point	2101	**East**	777875.382	**North**	6360588.591	**Elevation**	628.758	**Code**	pm
Point	2102	**East**	777875.383	**North**	6360588.591	**Elevation**	628.753	**Code**	pm
Point	2103	**East**	777875.383	**North**	6360588.590	**Elevation**	628.751	**Code**	pm
Point	2104	**East**	777875.383	**North**	6360588.590	**Elevation**	628.750	**Code**	pm
Point	2105	**East**	777875.382	**North**	6360588.590	**Elevation**	628.748	**Code**	pm
Point	2106	**East**	777875.382	**North**	6360588.589	**Elevation**	628.747	**Code**	pm
Point	2107	**East**	777875.382	**North**	6360588.589	**Elevation**	628.748	**Code**	pm
Point	2108	**East**	777875.382	**North**	6360588.589	**Elevation**	628.749	**Code**	pm
Point	2109	**East**	777875.382	**North**	6360588.589	**Elevation**	628.749	**Code**	pm
Point	2110	**East**	777875.382	**North**	6360588.589	**Elevation**	628.749	**Code**	pm
Point	2111	**East**	777875.382	**North**	6360588.589	**Elevation**	628.750	**Code**	pm
Point	2112	**East**	777875.381	**North**	6360588.589	**Elevation**	628.750	**Code**	pm
Point	2113	**East**	777875.375	**North**	6360588.586	**Elevation**	628.754	**Code**	pm
Point	2114	**East**	777875.375	**North**	6360588.585	**Elevation**	628.756	**Code**	pm
Point	2115	**East**	777875.378	**North**	6360588.580	**Elevation**	628.757	**Code**	pm
Point	2116	**East**	777875.377	**North**	6360588.582	**Elevation**	628.758	**Code**	pm
Point	2117	**East**	777875.376	**North**	6360588.584	**Elevation**	628.759	**Code**	pm
Point	2118	**East**	777875.375	**North**	6360588.585	**Elevation**	628.761	**Code**	pm
Point	2119	**East**	777875.375	**North**	6360588.586	**Elevation**	628.763	**Code**	pm
Point	2120	**East**	777875.375	**North**	6360588.587	**Elevation**	628.764	**Code**	pm
Point	2121	**East**	777875.375	**North**	6360588.587	**Elevation**	628.764	**Code**	pm
Point	2122	**East**	777875.374	**North**	6360588.587	**Elevation**	628.765	**Code**	pm

Job name	RTX_PART_2
Creation date	18 Aug 2016
Version	Trimble General Survey 2.61
Distance Units	Meters
Angle units	Degrees
Pressure Units	mbar
Temperature Units	Celsius

Coordinate system (Job)	
System	Map Grid of Australia (GDA)
Zone	MGA Zone 55 2008
Datum	GDA94 (2006.50)
Projection	
Projection	Transverse Mercator
Origin lat	0°00'00.00000"N
Origin long	147°00'00.00000"E
False easting	500000.000
False northing	10000000.000
Scale	0.99960000
South azimuth (grid)	No
Grid coords	Increase North-East
Ellipsoid	Semi-major axis: 6378137.000 Flattening: 298.25722154

Local site	
Type	Grid
Datum transformation	
Type	Seven parameter
Semi-major axis	6378137.000
Flattening	298.257223
Rotation X	0°00'00.0155"
Rotation Y	0°00'00.0137"
Rotation Z	0°00'00.0161"
Translation X	-0.005
Translation Y	-0.039
Translation Z	-0.069
Scale	0.00444ppm
Vertical adjustment	
Geoid file	AUSGeoid09 (Australia)

Collected Field Data

Corrections	
South azimuth (grid)	No
Grid coords	Increase North-East
Magnetic declination	0°00'00"
Distances	Ground
Neighborhood adjustment	Off

Projection	
Projection	Transverse Mercator
Origin lat	0°00'00.00000"N
Origin long	147°00'00.00000"E
False easting	500000.000
False northing	10000000.000
Scale	0.99960000
Ellipsoid	Semi-major axis: 6378137.000 Flattening: 298.25722154

Local site	
Type	Grid

Datum transformation	
Type	Three parameter
Semi-major axis	6378137.000
Flattening	298.257223
Translation X	0.000
Translation Y	0.000
Translation Z	0.000

Vertical adjustment	
Geoid file	AUSGeoid09 (Australia)

Coordinate system	
System	Map Grid of Australia (GDA)
Zone	Zone 55
Datum	ITRF

Projection	
Projection	Transverse Mercator
Origin lat	0°00'00.00000"N
Origin long	147°00'00.00000"E
False easting	500000.000
False northing	10000000.000
Scale	0.99960000
Ellipsoid	Semi-major axis: 6378137.000 Flattening: 298.25722154

Local site	
Type	Grid

Datum transformation	
Type	Seven parameter
Semi-major axis	6378137.000
Flattening	298.257223
Rotation X	0°00'00.0155"
Rotation Y	0°00'00.0137"
Rotation Z	0°00'00.0161"
Translation X	-0.005
Translation Y	-0.039
Translation Z	-0.069
Scale	0.00444ppm

Coordinate system	
System	Map Grid of Australia (GDA)
Zone	MGA Zone 55 2008
Datum	GDA94 (2006.50)

Rover options									
Elevation mask	10	**PDOP mask**	6						

Rover options									
Elevation mask	10	**PDOP mask**	6						

Survey event	
Survey event	Rover started

Tilt calibration status							
Event	Start survey	**Calibration expires in**	-	**Calibration age limit**	30d 0h	**Sensor calibration status**	Tilt calibration expired

Initialization event: RTX not converged									
GPS week	1910	**Seconds**	436333	**Initialization type**	On the fly	**Survey type**	Real-time		

GNSS receiver	
Receiver type	R10
Serial number	5431474254
Firmware version	5.14

Antenna type	R10 Internal
Measurement method	Bottom of quick release
Tape adjustment	0.000
Horizontal offset	0.000
Vertical offset	0.199

Point	3000	**RTX X**	-4643586.208	**RTX Y**	2684294.844	**RTX Z**	-3441061.795	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.300	**Vt Prec**	0.494		
QC 1		**PDOP**	1.3	**GDOP**	1.7	**HDOP**	0.7	**VDOP**	1.1
		Base data age	10	**Satellites**	15	**Positions used**	60		
QC 2		**VCV xx (m^2)**	0.147080	**VCV xy (m^2)**	-0.088432	**VCV xz (m^2)**	0.051625		
				VCV yy (m^2)	0.108931	**VCV yz (m^2)**	-0.064544		
						VCV zz (m^2)	0.078596		

Point	3001	**RTX X**	-4643586.232	**RTX Y**	2684294.669	**RTX Z**	-3441061.590	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.261	**Vt Prec**	0.347		
QC 1		**PDOP**	1.4	**GDOP**	1.9	**HDOP**	0.8	**VDOP**	1.2
		Base data age	13	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.055211	**VCV xy (m^2)**	-0.041055	**VCV xz (m^2)**	0.024370		
				VCV yy (m^2)	0.096861	**VCV yz (m^2)**	-0.041545		
						VCV zz (m^2)	0.036516		

Point	3002	**RTX X**	-4643586.226	**RTX Y**	2684294.797	**RTX Z**	-3441061.443	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.269	**Vt Prec**	0.329		
QC 1		**PDOP**	1.4	**GDOP**	1.9	**HDOP**	0.8	**VDOP**	1.2
		Base data age	10	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.064576	**VCV xy (m^2)**	-0.031567	**VCV xz (m^2)**	0.027534		
				VCV yy (m^2)	0.064640	**VCV yz (m^2)**	-0.014812		

						VCV zz (m²)	0.051459		
Point	3003	**RTX X**	-4643586.052	**RTX Y**	2684294.649	**RTX Z**	-3441061.254	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.230	**Vt Prec**	0.277		
QC 1		**PDOP**	1.4	**GDOP**	1.9	**HDOP**	0.8	**VDOP**	1.2
		Base data age	13	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.055913	**VCV xy (m²)**	-0.015162	**VCV xz (m²)**	0.025928		
				VCV yy (m²)	0.035988	**VCV yz (m²)**	0.000082		
						VCV zz (m²)	0.037668		
Point	3004	**RTX X**	-4643586.089	**RTX Y**	2684294.654	**RTX Z**	-3441061.166	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.230	**Vt Prec**	0.212		
QC 1		**PDOP**	1.4	**GDOP**	1.9	**HDOP**	0.8	**VDOP**	1.2
		Base data age	10	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.033167	**VCV xy (m²)**	-0.015561	**VCV xz (m²)**	0.007772		
				VCV yy (m²)	0.043622	**VCV yz (m²)**	0.004923		
						VCV zz (m²)	0.020893		
Point	3005	**RTX X**	-4643586.037	**RTX Y**	2684294.655	**RTX Z**	-3441061.210	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.239	**Vt Prec**	0.261		
QC 1		**PDOP**	1.3	**GDOP**	1.6	**HDOP**	0.7	**VDOP**	1.1
		Base data age	7	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.045090	**VCV xy (m²)**	-0.017565	**VCV xz (m²)**	0.018602		
				VCV yy (m²)	0.058540	**VCV yz (m²)**	-0.005118		
						VCV zz (m²)	0.021636		
Point	3006	**RTX X**	-4643586.000	**RTX Y**	2684294.530	**RTX Z**	-3441061.174	**Code**	pm

		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.203	**Vt Prec**	0.220		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1
		Base data age	10	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.029886	**VCV xy (m^2)**	-0.012063	**VCV xz (m^2)**	0.015725		
				VCV yy (m^2)	0.045044	**VCV yz (m^2)**	-0.001248		
						VCV zz (m^2)	0.014864		
Point	3007	**RTX X**	-4643586.044	**RTX Y**	2684294.515	**RTX Z**	-3441061.230	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.181	**Vt Prec**	0.199		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1
		Base data age	7	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.021297	**VCV xy (m^2)**	-0.014160	**VCV xz (m^2)**	0.010476		
				VCV yy (m^2)	0.041366	**VCV yz (m^2)**	-0.002478		
						VCV zz (m^2)	0.009465		
Point	3008	**RTX X**	-4643586.068	**RTX Y**	2684294.630	**RTX Z**	-3441061.219	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.212	**Vt Prec**	0.186		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.2
		Base data age	10	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.012997	**VCV xy (m^2)**	-0.020813	**VCV xz (m^2)**	0.003619		
				VCV yy (m^2)	0.061598	**VCV yz (m^2)**	0.000239		
						VCV zz (m^2)	0.004856		
Point	3009	**RTX X**	-4643586.050	**RTX Y**	2684294.514	**RTX Z**	-3441061.250	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.166	**Vt Prec**	0.150		
QC 1		**PDOP**	1.4	**GDOP**	1.9	**HDOP**	0.8	**VDOP**	1.2

		Base data age	8	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.006700	**VCV xy (m^2)**	-0.013171	**VCV xz (m^2)**	0.002679		
				VCV yy (m^2)	0.040386	**VCV yz (m^2)**	-0.001656		
						VCV zz (m^2)	0.003025		
Point	3010	**RTX X**	-4643586.020	**RTX Y**	2684294.429	**RTX Z**	-3441061.247	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.112	**Vt Prec**	0.117		
QC 1		**PDOP**	1.4	**GDOP**	1.9	**HDOP**	0.8	**VDOP**	1.2
		Base data age	11	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.003723	**VCV xy (m^2)**	-0.007746	**VCV xz (m^2)**	0.001960		
				VCV yy (m^2)	0.020652	**VCV yz (m^2)**	-0.002745		
						VCV zz (m^2)	0.001749		
Point	3011	**RTX X**	-4643586.026	**RTX Y**	2684294.462	**RTX Z**	-3441061.268	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.134	**Vt Prec**	0.131		
QC 1		**PDOP**	1.3	**GDOP**	1.7	**HDOP**	0.8	**VDOP**	1.1
		Base data age	14	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.004445	**VCV xy (m^2)**	-0.010032	**VCV xz (m^2)**	0.002132		
				VCV yy (m^2)	0.028575	**VCV yz (m^2)**	-0.002893		
						VCV zz (m^2)	0.002041		
Point	3012	**RTX X**	-4643585.996	**RTX Y**	2684294.388	**RTX Z**	-3441061.245	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.074	**Vt Prec**	0.078		
QC 1		**PDOP**	1.3	**GDOP**	1.6	**HDOP**	0.8	**VDOP**	1.0
		Base data age	11	**Satellites**	16	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.001609	**VCV xy (m^2)**	-0.003386	**VCV xz (m^2)**	0.000870		

				VCV yy (m^2)	0.009194	**VCV yz (m^2)**	-0.001294		
						VCV zz (m^2)	0.000766		
Initialization event: RTX converged									
GPS week	1910	**Seconds**	437201	**Initialization type**	On the fly	**Survey type**	Real-time		

Point	3013	**RTX X**	-4643585.993	**RTX Y**	2684294.374	**RTX Z**	-3441061.238	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.020	**Vt Prec**	0.035		
QC 1		**PDOP**	1.3	**GDOP**	1.6	**HDOP**	0.8	**VDOP**	1.0
		Base data age	14	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000611	**VCV xy (m^2)**	-0.000416	**VCV xz (m^2)**	0.000353		
				VCV yy (m^2)	0.000715	**VCV yz (m^2)**	-0.000345		
						VCV zz (m^2)	0.000313		
Point	3014	**RTX X**	-4643585.991	**RTX Y**	2684294.357	**RTX Z**	-3441061.234	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.017	**Vt Prec**	0.044		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.2
		Base data age	11	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000825	**VCV xy (m^2)**	-0.000689	**VCV xz (m^2)**	0.000626		
				VCV yy (m^2)	0.000836	**VCV yz (m^2)**	-0.000628		
						VCV zz (m^2)	0.000602		
Initialization event: RTX not converged									
GPS week	1910	**Seconds**	437307	**Initialization type**	On the fly	**Survey type**	Real-time		

Initialization event: RTX converged									
GPS week	1910	**Seconds**	437348	**Initialization type**	On the fly	**Survey type**	Real-time		

Point	3015	**RTX X**	-4643586.023	**RTX Y**	2684294.422	**RTX Z**	-3441061.262	**Code**	pm

		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.047	**Vt Prec**	0.053		
QC 1		**PDOP**	1.6	**GDOP**	2.1	**HDOP**	0.8	**VDOP**	1.3
		Base data age	8	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000850	**VCV xy (m^2)**	-0.001369	**VCV xz (m^2)**	0.000565		
				VCV yy (m^2)	0.003606	**VCV yz (m^2)**	-0.000690		
						VCV zz (m^2)	0.000587		
Point	3016	**RTX X**	-4643586.019	**RTX Y**	2684294.408	**RTX Z**	-3441061.258	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.022	**Vt Prec**	0.035		
QC 1		**PDOP**	1.5	**GDOP**	2.1	**HDOP**	0.8	**VDOP**	1.3
		Base data age	11	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000495	**VCV xy (m^2)**	-0.000452	**VCV xz (m^2)**	0.000331		
				VCV yy (m^2)	0.000914	**VCV yz (m^2)**	-0.000375		
						VCV zz (m^2)	0.000315		
Point	3017	**RTX X**	-4643585.977	**RTX Y**	2684294.355	**RTX Z**	-3441061.237	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.020	**Vt Prec**	0.036		
QC 1		**PDOP**	1.5	**GDOP**	2.1	**HDOP**	0.8	**VDOP**	1.3
		Base data age	8	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000547	**VCV xy (m^2)**	-0.000492	**VCV xz (m^2)**	0.000376		
				VCV yy (m^2)	0.000819	**VCV yz (m^2)**	-0.000405		
						VCV zz (m^2)	0.000364		
Point	3018	**RTX X**	-4643585.976	**RTX Y**	2684294.351	**RTX Z**	-3441061.234	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.016	**Vt Prec**	0.028		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1

		Base data age	11	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000393	**VCV xy (m^2)**	-0.000275	**VCV xz (m^2)**	0.000232		
				VCV yy (m^2)	0.000448	**VCV yz (m^2)**	-0.000209		
						VCV zz (m^2)	0.000212		
Point	3019	**RTX X**	-4643585.973	**RTX Y**	2684294.344	**RTX Z**	-3441061.223	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.024		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1
		Base data age	8	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000328	**VCV xy (m^2)**	-0.000178	**VCV xz (m^2)**	0.000188		
				VCV yy (m^2)	0.000225	**VCV yz (m^2)**	-0.000142		
						VCV zz (m^2)	0.000176		
Point	3020	**RTX X**	-4643585.969	**RTX Y**	2684294.340	**RTX Z**	-3441061.219	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.032		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1
		Base data age	11	**Satellites**	15	**Positions used**	60		
QC 2		**VCV xx (m^2)**	0.000506	**VCV xy (m^2)**	-0.000336	**VCV xz (m^2)**	0.000334		
				VCV yy (m^2)	0.000351	**VCV yz (m^2)**	-0.000257		
						VCV zz (m^2)	0.000324		
Point	3021	**RTX X**	-4643585.952	**RTX Y**	2684294.337	**RTX Z**	-3441061.211	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.031		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1
		Base data age	14	**Satellites**	15	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000496	**VCV xy (m^2)**	-0.000298	**VCV xz (m^2)**	0.000313		

				VCV yy (m^2)	0.000309	**VCV yz (m^2)**	-0.000215		
						VCV zz (m^2)	0.000318		
Point	3022	**RTX X**	-4643585.955	**RTX Y**	2684294.338	**RTX Z**	-3441061.211	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.016	**Vt Prec**	0.035		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1
		Base data age	11	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000584	**VCV xy (m^2)**	-0.000424	**VCV xz (m^2)**	0.000399		
				VCV yy (m^2)	0.000545	**VCV yz (m^2)**	-0.000357		
						VCV zz (m^2)	0.000395		
Point	3023	**RTX X**	-4643585.962	**RTX Y**	2684294.346	**RTX Z**	-3441061.211	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.015	**Vt Prec**	0.030		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1
		Base data age	14	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000376	**VCV xy (m^2)**	-0.000333	**VCV xz (m^2)**	0.000270		
				VCV yy (m^2)	0.000487	**VCV yz (m^2)**	-0.000303		
						VCV zz (m^2)	0.000274		
Point	3024	**RTX X**	-4643585.957	**RTX Y**	2684294.341	**RTX Z**	-3441061.210	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.016	**Vt Prec**	0.032		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1
		Base data age	11	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000422	**VCV xy (m^2)**	-0.000378	**VCV xz (m^2)**	0.000308		
				VCV yy (m^2)	0.000583	**VCV yz (m^2)**	-0.000359		
						VCV zz (m^2)	0.000304		

Point	3025	**RTX X**	-4643585.956	**RTX Y**	2684294.341	**RTX Z**	-3441061.205	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.026		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1
		Base data age	8	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000288	**VCV xy (m^2)**	-0.000233	**VCV xz (m^2)**	0.000203		
				VCV yy (m^2)	0.000329	**VCV yz (m^2)**	-0.000201		
						VCV zz (m^2)	0.000211		
Point	3026	**RTX X**	-4643585.959	**RTX Y**	2684294.341	**RTX Z**	-3441061.207	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.017	**Vt Prec**	0.036		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1
		Base data age	11	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000537	**VCV xy (m^2)**	-0.000445	**VCV xz (m^2)**	0.000388		
				VCV yy (m^2)	0.000635	**VCV yz (m^2)**	-0.000386		
						VCV zz (m^2)	0.000404		
Point	3027	**RTX X**	-4643585.953	**RTX Y**	2684294.326	**RTX Z**	-3441061.205	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.025		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1
		Base data age	11	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000258	**VCV xy (m^2)**	-0.000225	**VCV xz (m^2)**	0.000191		
				VCV yy (m^2)	0.000347	**VCV yz (m^2)**	-0.000197		
						VCV zz (m^2)	0.000209		
Point	3028	**RTX X**	-4643585.950	**RTX Y**	2684294.317	**RTX Z**	-3441061.209	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		

Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.016	**Vt Prec**	0.034		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.2
		Base data age	8	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000559	**VCV xy (m^2)**	-0.000380	**VCV xz (m^2)**	0.000387		
				VCV yy (m^2)	0.000472	**VCV yz (m^2)**	-0.000297		
						VCV zz (m^2)	0.000394		
Point	3029	**RTX X**	-4643585.949	**RTX Y**	2684294.315	**RTX Z**	-3441061.206	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.025		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.2
		Base data age	11	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000268	**VCV xy (m^2)**	-0.000214	**VCV xz (m^2)**	0.000197		
				VCV yy (m^2)	0.000308	**VCV yz (m^2)**	-0.000181		
						VCV zz (m^2)	0.000193		
Point	3030	**RTX X**	-4643585.939	**RTX Y**	2684294.318	**RTX Z**	-3441061.192	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.016	**Vt Prec**	0.034		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.2
		Base data age	14	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000505	**VCV xy (m^2)**	-0.000382	**VCV xz (m^2)**	0.000356		
				VCV yy (m^2)	0.000504	**VCV yz (m^2)**	-0.000309		
						VCV zz (m^2)	0.000375		
Point	3031	**RTX X**	-4643585.941	**RTX Y**	2684294.319	**RTX Z**	-3441061.191	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.026		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1
		Base data age	11	**Satellites**	14	**Positions used**	61		

QC 2		**VCV xx (m^2)**	0.000269	**VCV xy (m^2)**	-0.000256	**VCV xz (m^2)**	0.000210		
				VCV yy (m^2)	0.000373	**VCV yz (m^2)**	-0.000225		
						VCV zz (m^2)	0.000213		
Point	3032	**RTX X**	-4643585.936	**RTX Y**	2684294.313	**RTX Z**	-3441061.188	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.026		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1
		Base data age	14	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000265	**VCV xy (m^2)**	-0.000252	**VCV xz (m^2)**	0.000202		
				VCV yy (m^2)	0.000376	**VCV yz (m^2)**	-0.000221		
						VCV zz (m^2)	0.000213		
Point	3033	**RTX X**	-4643585.939	**RTX Y**	2684294.313	**RTX Z**	-3441061.187	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.015	**Vt Prec**	0.029		
QC 1		**PDOP**	1.4	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1
		Base data age	11	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000305	**VCV xy (m^2)**	-0.000323	**VCV xz (m^2)**	0.000247		
				VCV yy (m^2)	0.000525	**VCV yz (m^2)**	-0.000295		
						VCV zz (m^2)	0.000251		
Point	3034	**RTX X**	-4643585.944	**RTX Y**	2684294.312	**RTX Z**	-3441061.182	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.015	**Vt Prec**	0.027		
QC 1		**PDOP**	1.3	**GDOP**	1.8	**HDOP**	0.8	**VDOP**	1.1
		Base data age	8	**Satellites**	14	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000285	**VCV xy (m^2)**	-0.000256	**VCV xz (m^2)**	0.000224		
				VCV yy (m^2)	0.000451	**VCV yz (m^2)**	-0.000234		

						VCV zz (m²)	0.000239		
Point	3035	**RTX X**	-4643585.945	**RTX Y**	2684294.314	**RTX Z**	-3441061.182	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.016	**Vt Prec**	0.032		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.2
		Base data age	11	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000418	**VCV xy (m²)**	-0.000325	**VCV xz (m²)**	0.000320		
				VCV yy (m²)	0.000478	**VCV yz (m²)**	-0.000286		
						VCV zz (m²)	0.000361		
Point	3036	**RTX X**	-4643585.940	**RTX Y**	2684294.317	**RTX Z**	-3441061.184	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.018	**Vt Prec**	0.032		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.2
		Base data age	7	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000452	**VCV xy (m²)**	-0.000307	**VCV xz (m²)**	0.000348		
				VCV yy (m²)	0.000465	**VCV yz (m²)**	-0.000268		
						VCV zz (m²)	0.000427		
Point	3037	**RTX X**	-4643585.940	**RTX Y**	2684294.315	**RTX Z**	-3441061.186	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.016	**Vt Prec**	0.030		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.2
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000394	**VCV xy (m²)**	-0.000273	**VCV xz (m²)**	0.000320		
				VCV yy (m²)	0.000399	**VCV yz (m²)**	-0.000253		
						VCV zz (m²)	0.000397		
Point	3038	**RTX X**	-4643585.940	**RTX Y**	2684294.314	**RTX Z**	-3441061.191	**Code**	pm

		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.016	**Vt Prec**	0.029		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.1
		Base data age	7	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000385	**VCV xy (m²)**	-0.000232	**VCV xz (m²)**	0.000318		
				VCV yy (m²)	0.000296	**VCV yz (m²)**	-0.000199		
						VCV zz (m²)	0.000427		
Point	3039	**RTX X**	-4643585.937	**RTX Y**	2684294.313	**RTX Z**	-3441061.188	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.026		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.1
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000310	**VCV xy (m²)**	-0.000174	**VCV xz (m²)**	0.000255		
				VCV yy (m²)	0.000207	**VCV yz (m²)**	-0.000146		
						VCV zz (m²)	0.000339		
Point	3040	**RTX X**	-4643585.944	**RTX Y**	2684294.323	**RTX Z**	-3441061.182	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.015	**Vt Prec**	0.028		
QC 1		**PDOP**	1.5	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.1
		Base data age	13	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000347	**VCV xy (m²)**	-0.000200	**VCV xz (m²)**	0.000286		
				VCV yy (m²)	0.000253	**VCV yz (m²)**	-0.000167		
						VCV zz (m²)	0.000391		
Point	3041	**RTX X**	-4643585.945	**RTX Y**	2684294.323	**RTX Z**	-3441061.185	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.026		
QC 1		**PDOP**	1.4	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.1

		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000301	**VCV xy (m^2)**	-0.000167	**VCV xz (m^2)**	0.000255		
				VCV yy (m^2)	0.000196	**VCV yz (m^2)**	-0.000142		
						VCV zz (m^2)	0.000347		
Point	3042	**RTX X**	-4643585.939	**RTX Y**	2684294.311	**RTX Z**	-3441061.184	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.015	**Vt Prec**	0.027		
QC 1		**PDOP**	1.4	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.1
		Base data age	13	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000348	**VCV xy (m^2)**	-0.000172	**VCV xz (m^2)**	0.000267		
				VCV yy (m^2)	0.000212	**VCV yz (m^2)**	-0.000133		
						VCV zz (m^2)	0.000374		
Point	3043	**RTX X**	-4643585.938	**RTX Y**	2684294.311	**RTX Z**	-3441061.187	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.025		
QC 1		**PDOP**	1.4	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.1
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000305	**VCV xy (m^2)**	-0.000153	**VCV xz (m^2)**	0.000242		
				VCV yy (m^2)	0.000176	**VCV yz (m^2)**	-0.000125		
						VCV zz (m^2)	0.000332		
Point	3044	**RTX X**	-4643585.927	**RTX Y**	2684294.315	**RTX Z**	-3441061.184	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.015	**Vt Prec**	0.025		
QC 1		**PDOP**	1.4	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.1
		Base data age	7	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000324	**VCV xy (m^2)**	-0.000158	**VCV xz (m^2)**	0.000236		

				VCV yy (m^2)	0.000197	**VCV yz (m^2)**	-0.000107		
						VCV zz (m^2)	0.000334		
Point	3045	**RTX X**	-4643585.929	**RTX Y**	2684294.318	**RTX Z**	-3441061.187	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.023		
QC 1		**PDOP**	1.4	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.1
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000279	**VCV xy (m^2)**	-0.000135	**VCV xz (m^2)**	0.000203		
				VCV yy (m^2)	0.000164	**VCV yz (m^2)**	-0.000091		
						VCV zz (m^2)	0.000276		
Point	3046	**RTX X**	-4643585.933	**RTX Y**	2684294.326	**RTX Z**	-3441061.180	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.024		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	1.1	**VDOP**	1.3
		Base data age	7	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000304	**VCV xy (m^2)**	-0.000139	**VCV xz (m^2)**	0.000221		
				VCV yy (m^2)	0.000163	**VCV yz (m^2)**	-0.000092		
						VCV zz (m^2)	0.000301		
Point	3047	**RTX X**	-4643585.933	**RTX Y**	2684294.326	**RTX Z**	-3441061.178	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.022		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	1.1	**VDOP**	1.3
		Base data age	10	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000260	**VCV xy (m^2)**	-0.000114	**VCV xz (m^2)**	0.000191		
				VCV yy (m^2)	0.000131	**VCV yz (m^2)**	-0.000073		
						VCV zz (m^2)	0.000255		

Point	3048	**RTX X**	-4643585.935	**RTX Y**	2684294.334	**RTX Z**	-3441061.175	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.016	**Vt Prec**	0.025		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	1.1	**VDOP**	1.3
		Base data age	7	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000330	**VCV xy (m²)**	-0.000139	**VCV xz (m²)**	0.000233		
				VCV yy (m²)	0.000181	**VCV yz (m²)**	-0.000066		
						VCV zz (m²)	0.000345		
Point	3049	**RTX X**	-4643585.937	**RTX Y**	2684294.335	**RTX Z**	-3441061.172	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.023		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	1.1	**VDOP**	1.3
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000300	**VCV xy (m²)**	-0.000125	**VCV xz (m²)**	0.000218		
				VCV yy (m²)	0.000147	**VCV yz (m²)**	-0.000066		
						VCV zz (m²)	0.000302		
Point	3050	**RTX X**	-4643585.944	**RTX Y**	2684294.330	**RTX Z**	-3441061.173	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.015	**Vt Prec**	0.025		
QC 1		**PDOP**	1.4	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.1
		Base data age	13	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000353	**VCV xy (m²)**	-0.000153	**VCV xz (m²)**	0.000253		
				VCV yy (m²)	0.000179	**VCV yz (m²)**	-0.000080		
						VCV zz (m²)	0.000343		
Point	3051	**RTX X**	-4643585.946	**RTX Y**	2684294.330	**RTX Z**	-3441061.181	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		

Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.023		
QC 1		**PDOP**	1.4	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.1
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000297	**VCV xy (m²)**	-0.000125	**VCV xz (m²)**	0.000220		
				VCV yy (m²)	0.000139	**VCV yz (m²)**	-0.000069		
						VCV zz (m²)	0.000289		
Point	3052	**RTX X**	-4643585.957	**RTX Y**	2684294.331	**RTX Z**	-3441061.193	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.015	**Vt Prec**	0.026		
QC 1		**PDOP**	1.4	**GDOP**	1.9	**HDOP**	0.9	**VDOP**	1.1
		Base data age	13	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000371	**VCV xy (m²)**	-0.000143	**VCV xz (m²)**	0.000266		
				VCV yy (m²)	0.000167	**VCV yz (m²)**	-0.000074		
						VCV zz (m²)	0.000356		
Point	3053	**RTX X**	-4643585.958	**RTX Y**	2684294.331	**RTX Z**	-3441061.194	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.024		
QC 1		**PDOP**	1.7	**GDOP**	2.2	**HDOP**	1.1	**VDOP**	1.3
		Base data age	11	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000321	**VCV xy (m²)**	-0.000121	**VCV xz (m²)**	0.000237		
				VCV yy (m²)	0.000138	**VCV yz (m²)**	-0.000068		
						VCV zz (m²)	0.000306		
Point	3054	**RTX X**	-4643585.964	**RTX Y**	2684294.340	**RTX Z**	-3441061.201	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.015	**Vt Prec**	0.025		
QC 1		**PDOP**	2.0	**GDOP**	2.8	**HDOP**	1.1	**VDOP**	1.7
		Base data age	8	**Satellites**	11	**Positions used**	61		

QC 2		**VCV xx (m^2)**	0.000348	**VCV xy (m^2)**	-0.000132	**VCV xz (m^2)**	0.000250		
				VCV yy (m^2)	0.000165	**VCV yz (m^2)**	-0.000066		
						VCV zz (m^2)	0.000333		
Point	3055	**RTX X**	-4643585.960	**RTX Y**	2684294.338	**RTX Z**	-3441061.201	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.023		
QC 1		**PDOP**	2.0	**GDOP**	2.8	**HDOP**	1.1	**VDOP**	1.7
		Base data age	11	**Satellites**	11	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000298	**VCV xy (m^2)**	-0.000111	**VCV xz (m^2)**	0.000225		
				VCV yy (m^2)	0.000135	**VCV yz (m^2)**	-0.000061		
						VCV zz (m^2)	0.000293		
Point	3056	**RTX X**	-4643585.947	**RTX Y**	2684294.333	**RTX Z**	-3441061.194	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.015	**Vt Prec**	0.025		
QC 1		**PDOP**	2.0	**GDOP**	2.8	**HDOP**	1.1	**VDOP**	1.7
		Base data age	8	**Satellites**	11	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000352	**VCV xy (m^2)**	-0.000127	**VCV xz (m^2)**	0.000273		
				VCV yy (m^2)	0.000170	**VCV yz (m^2)**	-0.000067		
						VCV zz (m^2)	0.000360		
Point	3057	**RTX X**	-4643585.944	**RTX Y**	2684294.331	**RTX Z**	-3441061.193	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.024		
QC 1		**PDOP**	2.0	**GDOP**	2.8	**HDOP**	1.1	**VDOP**	1.7
		Base data age	11	**Satellites**	11	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000310	**VCV xy (m^2)**	-0.000107	**VCV xz (m^2)**	0.000248		
				VCV yy (m^2)	0.000139	**VCV yz (m^2)**	-0.000059		

						VCV zz (m²)	0.000319		
Point	3058	**RTX X**	-4643585.935	**RTX Y**	2684294.310	**RTX Z**	-3441061.199	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.017	**Vt Prec**	0.028		
QC 1		**PDOP**	2.0	**GDOP**	2.8	**HDOP**	1.1	**VDOP**	1.7
		Base data age	8	**Satellites**	11	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000402	**VCV xy (m²)**	-0.000133	**VCV xz (m²)**	0.000337		
				VCV yy (m²)	0.000173	**VCV yz (m²)**	-0.000072		
						VCV zz (m²)	0.000458		
Point	3059	**RTX X**	-4643585.933	**RTX Y**	2684294.311	**RTX Z**	-3441061.199	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.015	**Vt Prec**	0.026		
QC 1		**PDOP**	2.0	**GDOP**	2.8	**HDOP**	1.1	**VDOP**	1.7
		Base data age	12	**Satellites**	11	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000347	**VCV xy (m²)**	-0.000117	**VCV xz (m²)**	0.000293		
				VCV yy (m²)	0.000144	**VCV yz (m²)**	-0.000068		
						VCV zz (m²)	0.000389		
Point	3060	**RTX X**	-4643585.932	**RTX Y**	2684294.311	**RTX Z**	-3441061.200	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.024		
QC 1		**PDOP**	2.0	**GDOP**	2.8	**HDOP**	1.1	**VDOP**	1.7
		Base data age	10	**Satellites**	11	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000310	**VCV xy (m²)**	-0.000105	**VCV xz (m²)**	0.000262		
				VCV yy (m²)	0.000128	**VCV yz (m²)**	-0.000062		
						VCV zz (m²)	0.000339		
Point	3061	**RTX X**	-4643585.931	**RTX Y**	2684294.312	**RTX Z**	-3441061.200	**Code**	pm

		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.023		
QC 1		**PDOP**	2.0	**GDOP**	2.7	**HDOP**	1.1	**VDOP**	1.7
		Base data age	12	**Satellites**	11	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000283	**VCV xy (m^2)**	-0.000097	**VCV xz (m^2)**	0.000239		
				VCV yy (m^2)	0.000112	**VCV yz (m^2)**	-0.000060		
						VCV zz (m^2)	0.000300		
Point	3062	**RTX X**	-4643585.930	**RTX Y**	2684294.312	**RTX Z**	-3441061.200	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.022		
QC 1		**PDOP**	2.0	**GDOP**	2.7	**HDOP**	1.1	**VDOP**	1.7
		Base data age	9	**Satellites**	11	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000262	**VCV xy (m^2)**	-0.000088	**VCV xz (m^2)**	0.000219		
				VCV yy (m^2)	0.000106	**VCV yz (m^2)**	-0.000054		
						VCV zz (m^2)	0.000271		
Point	3063	**RTX X**	-4643585.929	**RTX Y**	2684294.313	**RTX Z**	-3441061.200	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.021		
QC 1		**PDOP**	2.0	**GDOP**	2.7	**HDOP**	1.1	**VDOP**	1.6
		Base data age	12	**Satellites**	11	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000248	**VCV xy (m^2)**	-0.000083	**VCV xz (m^2)**	0.000208		
				VCV yy (m^2)	0.000099	**VCV yz (m^2)**	-0.000051		
						VCV zz (m^2)	0.000255		
Point	3064	**RTX X**	-4643585.929	**RTX Y**	2684294.314	**RTX Z**	-3441061.200	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.021		
QC 1		**PDOP**	2.0	**GDOP**	2.7	**HDOP**	1.1	**VDOP**	1.6

		Base data age	10	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000236	**VCV xy (m^2)**	-0.000077	**VCV xz (m^2)**	0.000199		
				VCV yy (m^2)	0.000076	**VCV yz (m^2)**	-0.000051		
						VCV zz (m^2)	0.000240		
Point	3065	**RTX X**	-4643585.941	**RTX Y**	2684294.320	**RTX Z**	-3441061.212	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.025		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.5
		Base data age	7	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000339	**VCV xy (m^2)**	-0.000129	**VCV xz (m^2)**	0.000273		
				VCV yy (m^2)	0.000156	**VCV yz (m^2)**	-0.000075		
						VCV zz (m^2)	0.000349		
Point	3066	**RTX X**	-4643585.943	**RTX Y**	2684294.322	**RTX Z**	-3441061.212	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.024		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.5
		Base data age	10	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000312	**VCV xy (m^2)**	-0.000112	**VCV xz (m^2)**	0.000252		
				VCV yy (m^2)	0.000132	**VCV yz (m^2)**	-0.000065		
						VCV zz (m^2)	0.000316		
Point	3067	**RTX X**	-4643585.945	**RTX Y**	2684294.322	**RTX Z**	-3441061.199	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.019	**Vt Prec**	0.027		
QC 1		**PDOP**	1.9	**GDOP**	2.7	**HDOP**	1.1	**VDOP**	1.6
		Base data age	7	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000397	**VCV xy (m^2)**	-0.000139	**VCV xz (m^2)**	0.000329		

				VCV yy (m^2)	0.000242	**VCV yz (m^2)**	-0.000032		
						VCV zz (m^2)	0.000462		
Point	3068	**RTX X**	-4643585.951	**RTX Y**	2684294.321	**RTX Z**	-3441061.206	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.017	**Vt Prec**	0.026		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.5
		Base data age	10	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000371	**VCV xy (m^2)**	-0.000126	**VCV xz (m^2)**	0.000313		
				VCV yy (m^2)	0.000209	**VCV yz (m^2)**	-0.000035		
						VCV zz (m^2)	0.000419		
Point	3069	**RTX X**	-4643585.949	**RTX Y**	2684294.315	**RTX Z**	-3441061.220	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.019	**Vt Prec**	0.031		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.5
		Base data age	13	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000534	**VCV xy (m^2)**	-0.000181	**VCV xz (m^2)**	0.000436		
				VCV yy (m^2)	0.000246	**VCV yz (m^2)**	-0.000078		
						VCV zz (m^2)	0.000565		
Point	3070	**RTX X**	-4643585.953	**RTX Y**	2684294.316	**RTX Z**	-3441061.221	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.019	**Vt Prec**	0.032		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.5
		Base data age	10	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000561	**VCV xy (m^2)**	-0.000188	**VCV xz (m^2)**	0.000467		
				VCV yy (m^2)	0.000237	**VCV yz (m^2)**	-0.000090		
						VCV zz (m^2)	0.000588		

Point	3071	**RTX X**	-4643585.966	**RTX Y**	2684294.314	**RTX Z**	-3441061.220	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.020	**Vt Prec**	0.035		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.5
		Base data age	13	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000668	**VCV xy (m^2)**	-0.000218	**VCV xz (m^2)**	0.000550		
				VCV yy (m^2)	0.000281	**VCV yz (m^2)**	-0.000121		
						VCV zz (m^2)	0.000679		
Point	3072	**RTX X**	-4643585.971	**RTX Y**	2684294.314	**RTX Z**	-3441061.224	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.017	**Vt Prec**	0.031		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.5
		Base data age	10	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000539	**VCV xy (m^2)**	-0.000170	**VCV xz (m^2)**	0.000450		
				VCV yy (m^2)	0.000208	**VCV yz (m^2)**	-0.000097		
						VCV zz (m^2)	0.000543		
Point	3073	**RTX X**	-4643585.957	**RTX Y**	2684294.304	**RTX Z**	-3441061.217	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.017	**Vt Prec**	0.031		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.4
		Base data age	7	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000549	**VCV xy (m^2)**	-0.000187	**VCV xz (m^2)**	0.000435		
				VCV yy (m^2)	0.000223	**VCV yz (m^2)**	-0.000100		
						VCV zz (m^2)	0.000513		
Point	3074	**RTX X**	-4643585.956	**RTX Y**	2684294.306	**RTX Z**	-3441061.212	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		

Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.015	**Vt Prec**	0.029		
QC 1		**PDOP**	1.9	**GDOP**	2.6	**HDOP**	1.1	**VDOP**	1.6
		Base data age	10	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000473	**VCV xy (m²)**	-0.000163	**VCV xz (m²)**	0.000378		
				VCV yy (m²)	0.000177	**VCV yz (m²)**	-0.000094		
						VCV zz (m²)	0.000441		
Point	3075	**RTX X**	-4643585.959	**RTX Y**	2684294.309	**RTX Z**	-3441061.210	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.017	**Vt Prec**	0.031		
QC 1		**PDOP**	1.9	**GDOP**	2.6	**HDOP**	1.1	**VDOP**	1.6
		Base data age	7	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000538	**VCV xy (m²)**	-0.000182	**VCV xz (m²)**	0.000427		
				VCV yy (m²)	0.000209	**VCV yz (m²)**	-0.000113		
						VCV zz (m²)	0.000511		
Point	3076	**RTX X**	-4643585.957	**RTX Y**	2684294.306	**RTX Z**	-3441061.209	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.015	**Vt Prec**	0.029		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	1.0	**VDOP**	1.4
		Base data age	10	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000454	**VCV xy (m²)**	-0.000155	**VCV xz (m²)**	0.000363		
				VCV yy (m²)	0.000172	**VCV yz (m²)**	-0.000097		
						VCV zz (m²)	0.000429		
Point	3077	**RTX X**	-4643585.952	**RTX Y**	2684294.291	**RTX Z**	-3441061.205	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.016	**Vt Prec**	0.030		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	1.0	**VDOP**	1.4
		Base data age	7	**Satellites**	12	**Positions used**	61		

QC 2		**VCV xx (m^2)**	0.000504	**VCV xy (m^2)**	-0.000177	**VCV xz (m^2)**	0.000381		
				VCV yy (m^2)	0.000200	**VCV yz (m^2)**	-0.000098		
						VCV zz (m^2)	0.000436		
Point	3078	**RTX X**	-4643585.949	**RTX Y**	2684294.294	**RTX Z**	-3441061.203	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.027		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	1.0	**VDOP**	1.4
		Base data age	10	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000422	**VCV xy (m^2)**	-0.000146	**VCV xz (m^2)**	0.000323		
				VCV yy (m^2)	0.000157	**VCV yz (m^2)**	-0.000086		
						VCV zz (m^2)	0.000367		
Point	3079	**RTX X**	-4643585.934	**RTX Y**	2684294.294	**RTX Z**	-3441061.179	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.015	**Vt Prec**	0.028		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	1.0	**VDOP**	1.4
		Base data age	13	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000435	**VCV xy (m^2)**	-0.000156	**VCV xz (m^2)**	0.000336		
				VCV yy (m^2)	0.000171	**VCV yz (m^2)**	-0.000097		
						VCV zz (m^2)	0.000387		
Point	3080	**RTX X**	-4643585.940	**RTX Y**	2684294.299	**RTX Z**	-3441061.187	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.026		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	1.0	**VDOP**	1.4
		Base data age	12	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000375	**VCV xy (m^2)**	-0.000131	**VCV xz (m^2)**	0.000288		
				VCV yy (m^2)	0.000138	**VCV yz (m^2)**	-0.000082		

						VCV zz (m²)	0.000322		
Point	3081	**RTX X**	-4643585.942	**RTX Y**	2684294.301	**RTX Z**	-3441061.190	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.024		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	1.0	**VDOP**	1.4
		Base data age	9	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000330	**VCV xy (m²)**	-0.000116	**VCV xz (m²)**	0.000253		
				VCV yy (m²)	0.000118	**VCV yz (m²)**	-0.000073		
						VCV zz (m²)	0.000280		
Point	3082	**RTX X**	-4643585.942	**RTX Y**	2684294.301	**RTX Z**	-3441061.192	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.023		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	1.0	**VDOP**	1.4
		Base data age	6	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000300	**VCV xy (m²)**	-0.000106	**VCV xz (m²)**	0.000229		
				VCV yy (m²)	0.000108	**VCV yz (m²)**	-0.000065		
						VCV zz (m²)	0.000250		
Point	3083	**RTX X**	-4643585.942	**RTX Y**	2684294.302	**RTX Z**	-3441061.194	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.022		
QC 1		**PDOP**	1.9	**GDOP**	2.6	**HDOP**	1.0	**VDOP**	1.6
		Base data age	9	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000287	**VCV xy (m²)**	-0.000102	**VCV xz (m²)**	0.000219		
				VCV yy (m²)	0.000102	**VCV yz (m²)**	-0.000062		
						VCV zz (m²)	0.000235		
Point	3084	**RTX X**	-4643585.942	**RTX Y**	2684294.303	**RTX Z**	-3441061.195	**Code**	pm

		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.022		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	1.0	**VDOP**	1.4
		Base data age	12	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000273	**VCV xy (m^2)**	-0.000098	**VCV xz (m^2)**	0.000207		
				VCV yy (m^2)	0.000097	**VCV yz (m^2)**	-0.000058		
						VCV zz (m^2)	0.000221		
Point	3085	**RTX X**	-4643585.942	**RTX Y**	2684294.303	**RTX Z**	-3441061.197	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.021		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	1.0	**VDOP**	1.4
		Base data age	9	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000264	**VCV xy (m^2)**	-0.000097	**VCV xz (m^2)**	0.000198		
				VCV yy (m^2)	0.000093	**VCV yz (m^2)**	-0.000061		
						VCV zz (m^2)	0.000206		
Point	3086	**RTX X**	-4643585.942	**RTX Y**	2684294.304	**RTX Z**	-3441061.197	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.021		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	1.0	**VDOP**	1.4
		Base data age	6	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000255	**VCV xy (m^2)**	-0.000095	**VCV xz (m^2)**	0.000191		
				VCV yy (m^2)	0.000088	**VCV yz (m^2)**	-0.000061		
						VCV zz (m^2)	0.000194		
Point	3087	**RTX X**	-4643585.941	**RTX Y**	2684294.304	**RTX Z**	-3441061.197	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.021		
QC 1		**PDOP**	1.9	**GDOP**	2.6	**HDOP**	1.0	**VDOP**	1.6

		Base data age	9	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000247	**VCV xy (m^2)**	-0.000092	**VCV xz (m^2)**	0.000183		
				VCV yy (m^2)	0.000084	**VCV yz (m^2)**	-0.000059		
						VCV zz (m^2)	0.000184		
Point	3088	**RTX X**	-4643585.941	**RTX Y**	2684294.304	**RTX Z**	-3441061.197	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.020		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	1.0	**VDOP**	1.4
		Base data age	12	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000238	**VCV xy (m^2)**	-0.000090	**VCV xz (m^2)**	0.000175		
				VCV yy (m^2)	0.000079	**VCV yz (m^2)**	-0.000058		
						VCV zz (m^2)	0.000172		
Point	3089	**RTX X**	-4643585.941	**RTX Y**	2684294.304	**RTX Z**	-3441061.197	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.020		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	1.0	**VDOP**	1.4
		Base data age	15	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000230	**VCV xy (m^2)**	-0.000089	**VCV xz (m^2)**	0.000169		
				VCV yy (m^2)	0.000077	**VCV yz (m^2)**	-0.000057		
						VCV zz (m^2)	0.000164		
Point	3090	**RTX X**	-4643585.941	**RTX Y**	2684294.305	**RTX Z**	-3441061.198	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.021		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	1.0	**VDOP**	1.4
		Base data age	12	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000260	**VCV xy (m^2)**	-0.000101	**VCV xz (m^2)**	0.000190		

				VCV yy (m^2)	0.000087	**VCV yz (m^2)**	-0.000065		
						VCV zz (m^2)	0.000182		
Point	3091	**RTX X**	-4643585.940	**RTX Y**	2684294.305	**RTX Z**	-3441061.198	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.008	**Vt Prec**	0.019		
QC 1		**PDOP**	1.9	**GDOP**	2.6	**HDOP**	1.0	**VDOP**	1.6
		Base data age	9	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000212	**VCV xy (m^2)**	-0.000083	**VCV xz (m^2)**	0.000155		
				VCV yy (m^2)	0.000071	**VCV yz (m^2)**	-0.000055		
						VCV zz (m^2)	0.000148		
Point	3092	**RTX X**	-4643585.940	**RTX Y**	2684294.306	**RTX Z**	-3441061.198	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.008	**Vt Prec**	0.019		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	1.0	**VDOP**	1.5
		Base data age	12	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000208	**VCV xy (m^2)**	-0.000083	**VCV xz (m^2)**	0.000152		
				VCV yy (m^2)	0.000069	**VCV yz (m^2)**	-0.000055		
						VCV zz (m^2)	0.000143		
Point	3093	**RTX X**	-4643585.939	**RTX Y**	2684294.306	**RTX Z**	-3441061.198	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.008	**Vt Prec**	0.019		
QC 1		**PDOP**	1.7	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.5
		Base data age	9	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000202	**VCV xy (m^2)**	-0.000081	**VCV xz (m^2)**	0.000147		
				VCV yy (m^2)	0.000067	**VCV yz (m^2)**	-0.000054		
						VCV zz (m^2)	0.000136		

Point	3094	**RTX X**	-4643585.939	**RTX Y**	2684294.306	**RTX Z**	-3441061.198	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.018		
QC 1		**PDOP**	1.7	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.5
		Base data age	12	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000198	**VCV xy (m^2)**	-0.000080	**VCV xz (m^2)**	0.000143		
				VCV yy (m^2)	0.000065	**VCV yz (m^2)**	-0.000054		
						VCV zz (m^2)	0.000132		
Point	3095	**RTX X**	-4643585.939	**RTX Y**	2684294.307	**RTX Z**	-3441061.198	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.018		
QC 1		**PDOP**	1.7	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.5
		Base data age	9	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000193	**VCV xy (m^2)**	-0.000079	**VCV xz (m^2)**	0.000139		
				VCV yy (m^2)	0.000063	**VCV yz (m^2)**	-0.000054		
						VCV zz (m^2)	0.000127		
Point	3096	**RTX X**	-4643585.939	**RTX Y**	2684294.307	**RTX Z**	-3441061.198	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.018		
QC 1		**PDOP**	1.7	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.5
		Base data age	12	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000189	**VCV xy (m^2)**	-0.000077	**VCV xz (m^2)**	0.000136		
				VCV yy (m^2)	0.000061	**VCV yz (m^2)**	-0.000053		
						VCV zz (m^2)	0.000123		
Point	3097	**RTX X**	-4643585.939	**RTX Y**	2684294.308	**RTX Z**	-3441061.198	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		

Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.009	**Vt Prec**	0.024		
QC 1		**PDOP**	1.7	**GDOP**	2.4	**HDOP**	0.9	**VDOP**	1.5
		Base data age	9	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000324	**VCV xy (m^2)**	-0.000131	**VCV xz (m^2)**	0.000232		
				VCV yy (m^2)	0.000100	**VCV yz (m^2)**	-0.000089		
						VCV zz (m^2)	0.000205		
Point	3098	**RTX X**	-4643585.940	**RTX Y**	2684294.309	**RTX Z**	-3441061.198	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.018		
QC 1		**PDOP**	1.9	**GDOP**	2.5	**HDOP**	1.0	**VDOP**	1.6
		Base data age	12	**Satellites**	11	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000181	**VCV xy (m^2)**	-0.000075	**VCV xz (m^2)**	0.000129		
				VCV yy (m^2)	0.000059	**VCV yz (m^2)**	-0.000051		
						VCV zz (m^2)	0.000116		
Point	3099	**RTX X**	-4643585.940	**RTX Y**	2684294.309	**RTX Z**	-3441061.198	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.007	**Vt Prec**	0.021		
QC 1		**PDOP**	1.9	**GDOP**	2.5	**HDOP**	1.0	**VDOP**	1.6
		Base data age	15	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000251	**VCV xy (m^2)**	-0.000102	**VCV xz (m^2)**	0.000178		
				VCV yy (m^2)	0.000076	**VCV yz (m^2)**	-0.000070		
						VCV zz (m^2)	0.000154		
Point	3100	**RTX X**	-4643585.941	**RTX Y**	2684294.310	**RTX Z**	-3441061.198	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.017		
QC 1		**PDOP**	2.0	**GDOP**	2.7	**HDOP**	1.0	**VDOP**	1.7
		Base data age	12	**Satellites**	12	**Positions used**	61		

QC 2		**VCV xx (m^2)**	0.000174	**VCV xy (m^2)**	-0.000073	**VCV xz (m^2)**	0.000125		
				VCV yy (m^2)	0.000056	**VCV yz (m^2)**	-0.000052		
						VCV zz (m^2)	0.000112		
Point	3101	**RTX X**	-4643585.941	**RTX Y**	2684294.310	**RTX Z**	-3441061.197	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.006	**Vt Prec**	0.018		
QC 1		**PDOP**	1.8	**GDOP**	2.5	**HDOP**	1.0	**VDOP**	1.6
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000181	**VCV xy (m^2)**	-0.000076	**VCV xz (m^2)**	0.000130		
				VCV yy (m^2)	0.000057	**VCV yz (m^2)**	-0.000053		
						VCV zz (m^2)	0.000114		
Point	3102	**RTX X**	-4643585.941	**RTX Y**	2684294.312	**RTX Z**	-3441061.191	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.024		
QC 1		**PDOP**	1.9	**GDOP**	2.7	**HDOP**	1.0	**VDOP**	1.7
		Base data age	7	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000317	**VCV xy (m^2)**	-0.000152	**VCV xz (m^2)**	0.000206		
				VCV yy (m^2)	0.000166	**VCV yz (m^2)**	-0.000102		
						VCV zz (m^2)	0.000202		
Point	3103	**RTX X**	-4643585.940	**RTX Y**	2684294.312	**RTX Z**	-3441061.191	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.010	**Vt Prec**	0.023		
QC 1		**PDOP**	1.8	**GDOP**	2.5	**HDOP**	1.0	**VDOP**	1.5
		Base data age	10	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000297	**VCV xy (m^2)**	-0.000142	**VCV xz (m^2)**	0.000193		
				VCV yy (m^2)	0.000148	**VCV yz (m^2)**	-0.000095		

						VCV zz (m²)	0.000185		
Point	3104	**RTX X**	-4643585.938	**RTX Y**	2684294.310	**RTX Z**	-3441061.186	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.025		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	0.9	**VDOP**	1.5
		Base data age	7	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000353	**VCV xy (m²)**	-0.000183	**VCV xz (m²)**	0.000227		
				VCV yy (m²)	0.000211	**VCV yz (m²)**	-0.000123		
						VCV zz (m²)	0.000225		
Point	3105	**RTX X**	-4643585.937	**RTX Y**	2684294.309	**RTX Z**	-3441061.186	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.025		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	0.9	**VDOP**	1.5
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000344	**VCV xy (m²)**	-0.000178	**VCV xz (m²)**	0.000220		
				VCV yy (m²)	0.000195	**VCV yz (m²)**	-0.000118		
						VCV zz (m²)	0.000206		
Point	3106	**RTX X**	-4643585.933	**RTX Y**	2684294.304	**RTX Z**	-3441061.183	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.026		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	0.9	**VDOP**	1.5
		Base data age	7	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000384	**VCV xy (m²)**	-0.000200	**VCV xz (m²)**	0.000245		
				VCV yy (m²)	0.000232	**VCV yz (m²)**	-0.000133		
						VCV zz (m²)	0.000240		
Point	3107	**RTX X**	-4643585.932	**RTX Y**	2684294.304	**RTX Z**	-3441061.181	**Code**	pm

		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.025		
QC 1		**PDOP**	1.7	**GDOP**	2.3	**HDOP**	0.9	**VDOP**	1.5
		Base data age	10	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000359	**VCV xy (m^2)**	-0.000182	**VCV xz (m^2)**	0.000225		
				VCV yy (m^2)	0.000198	**VCV yz (m^2)**	-0.000120		
						VCV zz (m^2)	0.000211		
Point	3108	**RTX X**	-4643585.936	**RTX Y**	2684294.312	**RTX Z**	-3441061.188	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.014	**Vt Prec**	0.026		
QC 1		**PDOP**	1.8	**GDOP**	2.5	**HDOP**	1.0	**VDOP**	1.5
		Base data age	13	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000387	**VCV xy (m^2)**	-0.000196	**VCV xz (m^2)**	0.000247		
				VCV yy (m^2)	0.000241	**VCV yz (m^2)**	-0.000136		
						VCV zz (m^2)	0.000258		
Point	3109	**RTX X**	-4643585.936	**RTX Y**	2684294.311	**RTX Z**	-3441061.188	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.024		
QC 1		**PDOP**	2.1	**GDOP**	2.8	**HDOP**	1.0	**VDOP**	1.8
		Base data age	11	**Satellites**	13	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000336	**VCV xy (m^2)**	-0.000171	**VCV xz (m^2)**	0.000212		
				VCV yy (m^2)	0.000201	**VCV yz (m^2)**	-0.000116		
						VCV zz (m^2)	0.000210		
Point	3110	**RTX X**	-4643585.949	**RTX Y**	2684294.310	**RTX Z**	-3441061.183	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.026		
QC 1		**PDOP**	2.1	**GDOP**	2.8	**HDOP**	1.0	**VDOP**	1.8

		Base data age	8	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000380	**VCV xy (m^2)**	-0.000204	**VCV xz (m^2)**	0.000233		
				VCV yy (m^2)	0.000236	**VCV yz (m^2)**	-0.000136		
						VCV zz (m^2)	0.000235		
Point	3111	**RTX X**	-4643585.953	**RTX Y**	2684294.314	**RTX Z**	-3441061.185	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.025		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.5
		Base data age	11	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000343	**VCV xy (m^2)**	-0.000182	**VCV xz (m^2)**	0.000213		
				VCV yy (m^2)	0.000202	**VCV yz (m^2)**	-0.000122		
						VCV zz (m^2)	0.000206		
Point	3112	**RTX X**	-4643585.954	**RTX Y**	2684294.314	**RTX Z**	-3441061.188	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.027		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	1.0	**VDOP**	1.5
		Base data age	8	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000402	**VCV xy (m^2)**	-0.000216	**VCV xz (m^2)**	0.000252		
				VCV yy (m^2)	0.000245	**VCV yz (m^2)**	-0.000151		
						VCV zz (m^2)	0.000252		
Point	3113	**RTX X**	-4643585.954	**RTX Y**	2684294.315	**RTX Z**	-3441061.189	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.025		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	0.9	**VDOP**	1.5
		Base data age	11	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000352	**VCV xy (m^2)**	-0.000184	**VCV xz (m^2)**	0.000224		

				VCV yy (m²)	0.000200	**VCV yz (m²)**	-0.000132		
						VCV zz (m²)	0.000220		
Point	3114	**RTX X**	-4643585.941	**RTX Y**	2684294.314	**RTX Z**	-3441061.186	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.027		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	0.9	**VDOP**	1.5
		Base data age	8	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000386	**VCV xy (m²)**	-0.000213	**VCV xz (m²)**	0.000246		
				VCV yy (m²)	0.000229	**VCV yz (m²)**	-0.000153		
						VCV zz (m²)	0.000251		
Point	3115	**RTX X**	-4643585.941	**RTX Y**	2684294.314	**RTX Z**	-3441061.187	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.025		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	0.9	**VDOP**	1.5
		Base data age	11	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000346	**VCV xy (m²)**	-0.000188	**VCV xz (m²)**	0.000224		
				VCV yy (m²)	0.000195	**VCV yz (m²)**	-0.000137		
						VCV zz (m²)	0.000223		
Point	3116	**RTX X**	-4643585.947	**RTX Y**	2684294.321	**RTX Z**	-3441061.190	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.028		
QC 1		**PDOP**	2.1	**GDOP**	2.8	**HDOP**	0.9	**VDOP**	1.8
		Base data age	8	**Satellites**	11	**Positions used**	61		
QC 2		**VCV xx (m²)**	0.000404	**VCV xy (m²)**	-0.000236	**VCV xz (m²)**	0.000266		
				VCV yy (m²)	0.000265	**VCV yz (m²)**	-0.000179		
						VCV zz (m²)	0.000282		

Point	3117	**RTX X**	-4643585.951	**RTX Y**	2684294.323	**RTX Z**	-3441061.195	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.026		
QC 1		**PDOP**	2.1	**GDOP**	2.8	**HDOP**	0.9	**VDOP**	1.8
		Base data age	11	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000355	**VCV xy (m^2)**	-0.000198	**VCV xz (m^2)**	0.000233		
				VCV yy (m^2)	0.000215	**VCV yz (m^2)**	-0.000150		
						VCV zz (m^2)	0.000238		
Point	3118	**RTX X**	-4643585.959	**RTX Y**	2684294.330	**RTX Z**	-3441061.207	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.013	**Vt Prec**	0.027		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	0.9	**VDOP**	1.5
		Base data age	14	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000404	**VCV xy (m^2)**	-0.000220	**VCV xz (m^2)**	0.000259		
				VCV yy (m^2)	0.000247	**VCV yz (m^2)**	-0.000161		
						VCV zz (m^2)	0.000262		
Point	3119	**RTX X**	-4643585.959	**RTX Y**	2684294.329	**RTX Z**	-3441061.208	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.025		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	0.9	**VDOP**	1.5
		Base data age	11	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000348	**VCV xy (m^2)**	-0.000191	**VCV xz (m^2)**	0.000222		
				VCV yy (m^2)	0.000210	**VCV yz (m^2)**	-0.000138		
						VCV zz (m^2)	0.000217		
Point	3120	**RTX X**	-4643585.959	**RTX Y**	2684294.335	**RTX Z**	-3441061.205	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		

Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.012	**Vt Prec**	0.026		
QC 1		**PDOP**	2.1	**GDOP**	2.8	**HDOP**	0.9	**VDOP**	1.8
		Base data age	8	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000366	**VCV xy (m^2)**	-0.000192	**VCV xz (m^2)**	0.000232		
				VCV yy (m^2)	0.000228	**VCV yz (m^2)**	-0.000144		
						VCV zz (m^2)	0.000227		
Point	3121	**RTX X**	-4643585.959	**RTX Y**	2684294.336	**RTX Z**	-3441061.203	**Code**	pm
		Method	RTX	**Type**	Topo point	**Search class**	Normal		
Antenna height	1.842	**Type**	Uncorrected	**Hz Prec**	0.011	**Vt Prec**	0.024		
QC 1		**PDOP**	1.8	**GDOP**	2.4	**HDOP**	0.9	**VDOP**	1.5
		Base data age	11	**Satellites**	12	**Positions used**	61		
QC 2		**VCV xx (m^2)**	0.000326	**VCV xy (m^2)**	-0.000172	**VCV xz (m^2)**	0.000211		
				VCV yy (m^2)	0.000196	**VCV yz (m^2)**	-0.000131		
						VCV zz (m^2)	0.000204		

Survey event

Survey event	End survey

Reduced points

Point	3000	**East**	777875.049	**North**	6360588.364	**Elevation**	629.470	**Code**	pm
Point	3001	**East**	777875.216	**North**	6360588.495	**Elevation**	629.303	**Code**	pm
Point	3002	**East**	777875.107	**North**	6360588.654	**Elevation**	629.273	**Code**	pm
Point	3003	**East**	777875.149	**North**	6360588.690	**Elevation**	628.981	**Code**	pm
Point	3004	**East**	777875.165	**North**	6360588.783	**Elevation**	628.962	**Code**	pm
Point	3005	**East**	777875.136	**North**	6360588.722	**Elevation**	628.949	**Code**	pm
Point	3006	**East**	777875.226	**North**	6360588.699	**Elevation**	628.850	**Code**	pm
Point	3007	**East**	777875.260	**North**	6360588.667	**Elevation**	628.906	**Code**	pm
Point	3008	**East**	777875.174	**North**	6360588.721	**Elevation**	628.965	**Code**	pm
Point	3009	**East**	777875.263	**North**	6360588.653	**Elevation**	628.921	**Code**	pm
Point	3010	**East**	777875.320	**North**	6360588.617	**Elevation**	628.861	**Code**	pm
Point	3011	**East**	777875.295	**North**	6360588.611	**Elevation**	628.891	**Code**	pm
Point	3012	**East**	777875.344	**North**	6360588.595	**Elevation**	628.826	**Code**	pm

Point	3013	**East**	777875.355	**North**	6360588.595	**Elevation**	628.814	**Code**	pm
Point	3014	**East**	777875.368	**North**	6360588.593	**Elevation**	628.803	**Code**	pm
Point	3015	**East**	777875.328	**North**	6360588.603	**Elevation**	628.869	**Code**	pm
Point	3016	**East**	777875.339	**North**	6360588.600	**Elevation**	628.858	**Code**	pm
Point	3017	**East**	777875.363	**North**	6360588.584	**Elevation**	628.794	**Code**	pm
Point	3018	**East**	777875.365	**North**	6360588.585	**Elevation**	628.789	**Code**	pm
Point	3019	**East**	777875.371	**North**	6360588.590	**Elevation**	628.778	**Code**	pm
Point	3020	**East**	777875.372	**North**	6360588.590	**Elevation**	628.772	**Code**	pm
Point	3021	**East**	777875.366	**North**	6360588.589	**Elevation**	628.754	**Code**	pm
Point	3022	**East**	777875.366	**North**	6360588.590	**Elevation**	628.757	**Code**	pm
Point	3023	**East**	777875.363	**North**	6360588.595	**Elevation**	628.764	**Code**	pm
Point	3024	**East**	777875.366	**North**	6360588.593	**Elevation**	628.759	**Code**	pm
Point	3025	**East**	777875.365	**North**	6360588.597	**Elevation**	628.755	**Code**	pm
Point	3026	**East**	777875.367	**North**	6360588.596	**Elevation**	628.759	**Code**	pm
Point	3027	**East**	777875.376	**North**	6360588.591	**Elevation**	628.747	**Code**	pm
Point	3028	**East**	777875.383	**North**	6360588.583	**Elevation**	628.743	**Code**	pm
Point	3029	**East**	777875.383	**North**	6360588.585	**Elevation**	628.739	**Code**	pm
Point	3030	**East**	777875.376	**North**	6360588.593	**Elevation**	628.726	**Code**	pm
Point	3031	**East**	777875.376	**North**	6360588.595	**Elevation**	628.728	**Code**	pm
Point	3032	**East**	777875.379	**North**	6360588.594	**Elevation**	628.719	**Code**	pm
Point	3033	**East**	777875.380	**North**	6360588.596	**Elevation**	628.721	**Code**	pm
Point	3034	**East**	777875.384	**North**	6360588.602	**Elevation**	628.721	**Code**	pm
Point	3035	**East**	777875.383	**North**	6360588.603	**Elevation**	628.723	**Code**	pm
Point	3036	**East**	777875.377	**North**	6360588.600	**Elevation**	628.722	**Code**	pm
Point	3037	**East**	777875.379	**North**	6360588.597	**Elevation**	628.722	**Code**	pm
Point	3038	**East**	777875.380	**North**	6360588.593	**Elevation**	628.725	**Code**	pm
Point	3039	**East**	777875.379	**North**	6360588.594	**Elevation**	628.720	**Code**	pm
Point	3040	**East**	777875.375	**North**	6360588.605	**Elevation**	628.727	**Code**	pm
Point	3041	**East**	777875.375	**North**	6360588.603	**Elevation**	628.729	**Code**	pm
Point	3042	**East**	777875.382	**North**	6360588.598	**Elevation**	628.718	**Code**	pm
Point	3043	**East**	777875.382	**North**	6360588.595	**Elevation**	628.720	**Code**	pm
Point	3044	**East**	777875.372	**North**	6360588.593	**Elevation**	628.711	**Code**	pm
Point	3045	**East**	777875.371	**North**	6360588.593	**Elevation**	628.716	**Code**	pm
Point	3046	**East**	777875.366	**North**	6360588.603	**Elevation**	628.718	**Code**	pm
Point	3047	**East**	777875.367	**North**	6360588.604	**Elevation**	628.717	**Code**	pm

Point	3048	**East**	777875.361	**North**	6360588.610	**Elevation**	628.721	**Code**	pm
Point	3049	**East**	777875.361	**North**	6360588.613	**Elevation**	628.721	**Code**	pm
Point	3050	**East**	777875.368	**North**	6360588.614	**Elevation**	628.725	**Code**	pm
Point	3051	**East**	777875.370	**North**	6360588.609	**Elevation**	628.730	**Code**	pm
Point	3052	**East**	777875.374	**North**	6360588.604	**Elevation**	628.745	**Code**	pm
Point	3053	**East**	777875.374	**North**	6360588.604	**Elevation**	628.746	**Code**	pm
Point	3054	**East**	777875.370	**North**	6360588.603	**Elevation**	628.759	**Code**	pm
Point	3055	**East**	777875.369	**North**	6360588.601	**Elevation**	628.754	**Code**	pm
Point	3056	**East**	777875.367	**North**	6360588.599	**Elevation**	628.740	**Code**	pm
Point	3057	**East**	777875.367	**North**	6360588.598	**Elevation**	628.736	**Code**	pm
Point	3058	**East**	777875.380	**North**	6360588.583	**Elevation**	628.724	**Code**	pm
Point	3059	**East**	777875.379	**North**	6360588.582	**Elevation**	628.723	**Code**	pm
Point	3060	**East**	777875.378	**North**	6360588.581	**Elevation**	628.723	**Code**	pm
Point	3061	**East**	777875.377	**North**	6360588.580	**Elevation**	628.722	**Code**	pm
Point	3062	**East**	777875.376	**North**	6360588.580	**Elevation**	628.721	**Code**	pm
Point	3063	**East**	777875.375	**North**	6360588.580	**Elevation**	628.721	**Code**	pm
Point	3064	**East**	777875.374	**North**	6360588.581	**Elevation**	628.721	**Code**	pm
Point	3065	**East**	777875.375	**North**	6360588.577	**Elevation**	628.739	**Code**	pm
Point	3066	**East**	777875.374	**North**	6360588.579	**Elevation**	628.742	**Code**	pm
Point	3067	**East**	777875.375	**North**	6360588.591	**Elevation**	628.737	**Code**	pm
Point	3068	**East**	777875.379	**North**	6360588.587	**Elevation**	628.744	**Code**	pm
Point	3069	**East**	777875.383	**North**	6360588.573	**Elevation**	628.747	**Code**	pm
Point	3070	**East**	777875.384	**North**	6360588.574	**Elevation**	628.751	**Code**	pm
Point	3071	**East**	777875.392	**North**	6360588.581	**Elevation**	628.760	**Code**	pm
Point	3072	**East**	777875.395	**North**	6360588.579	**Elevation**	628.765	**Code**	pm
Point	3073	**East**	777875.397	**North**	6360588.576	**Elevation**	628.747	**Code**	pm
Point	3074	**East**	777875.394	**North**	6360588.580	**Elevation**	628.744	**Code**	pm
Point	3075	**East**	777875.393	**North**	6360588.585	**Elevation**	628.747	**Code**	pm
Point	3076	**East**	777875.394	**North**	6360588.583	**Elevation**	628.743	**Code**	pm
Point	3077	**East**	777875.405	**North**	6360588.580	**Elevation**	628.731	**Code**	pm
Point	3078	**East**	777875.402	**North**	6360588.582	**Elevation**	628.729	**Code**	pm
Point	3079	**East**	777875.394	**North**	6360588.594	**Elevation**	628.706	**Code**	pm
Point	3080	**East**	777875.393	**North**	6360588.592	**Elevation**	628.716	**Code**	pm
Point	3081	**East**	777875.392	**North**	6360588.591	**Elevation**	628.720	**Code**	pm
Point	3082	**East**	777875.392	**North**	6360588.589	**Elevation**	628.721	**Code**	pm

Point	3083	**East**	777875.391	**North**	6360588.588	**Elevation**	628.723	**Code**	pm
Point	3084	**East**	777875.391	**North**	6360588.587	**Elevation**	628.724	**Code**	pm
Point	3085	**East**	777875.390	**North**	6360588.586	**Elevation**	628.725	**Code**	pm
Point	3086	**East**	777875.390	**North**	6360588.586	**Elevation**	628.725	**Code**	pm
Point	3087	**East**	777875.389	**North**	6360588.585	**Elevation**	628.725	**Code**	pm
Point	3088	**East**	777875.389	**North**	6360588.585	**Elevation**	628.725	**Code**	pm
Point	3089	**East**	777875.388	**North**	6360588.585	**Elevation**	628.725	**Code**	pm
Point	3090	**East**	777875.388	**North**	6360588.585	**Elevation**	628.725	**Code**	pm
Point	3091	**East**	777875.387	**North**	6360588.585	**Elevation**	628.725	**Code**	pm
Point	3092	**East**	777875.387	**North**	6360588.585	**Elevation**	628.725	**Code**	pm
Point	3093	**East**	777875.386	**North**	6360588.585	**Elevation**	628.725	**Code**	pm
Point	3094	**East**	777875.386	**North**	6360588.585	**Elevation**	628.725	**Code**	pm
Point	3095	**East**	777875.385	**North**	6360588.585	**Elevation**	628.724	**Code**	pm
Point	3096	**East**	777875.385	**North**	6360588.585	**Elevation**	628.725	**Code**	pm
Point	3097	**East**	777875.385	**North**	6360588.585	**Elevation**	628.725	**Code**	pm
Point	3098	**East**	777875.384	**North**	6360588.585	**Elevation**	628.726	**Code**	pm
Point	3099	**East**	777875.384	**North**	6360588.586	**Elevation**	628.727	**Code**	pm
Point	3100	**East**	777875.384	**North**	6360588.586	**Elevation**	628.727	**Code**	pm
Point	3101	**East**	777875.384	**North**	6360588.587	**Elevation**	628.727	**Code**	pm
Point	3102	**East**	777875.382	**North**	6360588.593	**Elevation**	628.724	**Code**	pm
Point	3103	**East**	777875.382	**North**	6360588.593	**Elevation**	628.724	**Code**	pm
Point	3104	**East**	777875.382	**North**	6360588.595	**Elevation**	628.719	**Code**	pm
Point	3105	**East**	777875.383	**North**	6360588.594	**Elevation**	628.717	**Code**	pm
Point	3106	**East**	777875.385	**North**	6360588.593	**Elevation**	628.711	**Code**	pm
Point	3107	**East**	777875.384	**North**	6360588.595	**Elevation**	628.709	**Code**	pm
Point	3108	**East**	777875.379	**North**	6360588.593	**Elevation**	628.719	**Code**	pm
Point	3109	**East**	777875.381	**North**	6360588.593	**Elevation**	628.719	**Code**	pm
Point	3110	**East**	777875.388	**North**	6360588.603	**Elevation**	628.725	**Code**	pm
Point	3111	**East**	777875.386	**North**	6360588.604	**Elevation**	628.731	**Code**	pm
Point	3112	**East**	777875.387	**North**	6360588.602	**Elevation**	628.734	**Code**	pm
Point	3113	**East**	777875.387	**North**	6360588.602	**Elevation**	628.734	**Code**	pm
Point	3114	**East**	777875.380	**North**	6360588.598	**Elevation**	628.723	**Code**	pm
Point	3115	**East**	777875.380	**North**	6360588.597	**Elevation**	628.723	**Code**	pm
Point	3116	**East**	777875.377	**North**	6360588.599	**Elevation**	628.732	**Code**	pm
Point	3117	**East**	777875.378	**North**	6360588.598	**Elevation**	628.739	**Code**	pm

Point	3118	**East**	777875.375	**North**	6360588.593	**Elevation**	628.754	**Code**	pm
Point	3119	**East**	777875.376	**North**	6360588.592	**Elevation**	628.754	**Code**	pm
Point	3120	**East**	777875.372	**North**	6360588.596	**Elevation**	628.755	**Code**	pm
Point	3121	**East**	777875.370	**North**	6360588.598	**Elevation**	628.754	**Code**	pm

APPENDIX D: DATUMTRAN REPORTS AND DATA

RTX part 1

	Data from Trimble Access			Data from Datumtrans			Difference		
2000	777875.340	6360588.596	628.766	777875.345	6360588.604	628.766	-0.005	-0.008	0.000
2001	777875.347	6360588.599	628.779	777875.352	6360588.607	628.779	-0.005	-0.008	0.000
2002	777875.351	6360588.601	628.786	777875.356	6360588.609	628.786	-0.005	-0.008	0.000
2003	777875.350	6360588.601	628.788	777875.354	6360588.609	628.788	-0.004	-0.008	0.000
2004	777875.346	6360588.600	628.789	777875.350	6360588.608	628.789	-0.004	-0.008	0.000
2005	777875.344	6360588.601	628.794	777875.349	6360588.609	628.794	-0.005	-0.008	0.000
2006	777875.341	6360588.601	628.788	777875.346	6360588.609	628.788	-0.005	-0.008	0.000
2007	777875.338	6360588.601	628.780	777875.342	6360588.609	628.780	-0.004	-0.008	0.000
2008	777875.339	6360588.604	628.770	777875.343	6360588.612	628.770	-0.004	-0.008	0.000
2009	777875.342	6360588.604	628.762	777875.347	6360588.612	628.762	-0.005	-0.008	0.000
2010	777875.347	6360588.603	628.754	777875.352	6360588.611	628.754	-0.005	-0.008	0.000
2011	777875.378	6360588.608	628.771	777875.382	6360588.616	628.771	-0.004	-0.008	0.000
2012	777875.377	6360588.609	628.770	777875.382	6360588.617	628.770	-0.005	-0.008	0.000
2013	777875.377	6360588.609	628.769	777875.381	6360588.617	628.769	-0.004	-0.008	0.000
2014	777875.377	6360588.609	628.767	777875.381	6360588.617	628.767	-0.004	-0.008	0.000
2015	777875.377	6360588.609	628.766	777875.382	6360588.617	628.766	-0.005	-0.008	0.000
2016	777875.377	6360588.609	628.765	777875.382	6360588.617	628.765	-0.005	-0.008	0.000
2017	777875.378	6360588.609	628.764	777875.382	6360588.617	628.764	-0.004	-0.008	0.000
2018	777875.378	6360588.608	628.765	777875.382	6360588.616	628.765	-0.004	-0.008	0.000
2019	777875.378	6360588.608	628.765	777875.382	6360588.616	628.765	-0.004	-0.008	0.000
2020	777875.378	6360588.608	628.766	777875.382	6360588.616	628.766	-0.004	-0.008	0.000

2021	777875.378	6360588.608	628.766	777875.382	6360588.616	628.766	-0.004	-0.008	0.000
2022	777875.378	6360588.607	628.766	777875.382	6360588.615	628.766	-0.004	-0.008	0.000
2023	777875.378	6360588.607	628.767	777875.382	6360588.615	628.767	-0.004	-0.008	0.000
2024	777875.378	6360588.607	628.766	777875.382	6360588.615	628.766	-0.004	-0.008	0.000
2025	777875.378	6360588.607	628.766	777875.383	6360588.615	628.766	-0.005	-0.008	0.000
2026	777875.378	6360588.606	628.766	777875.383	6360588.614	628.766	-0.005	-0.008	0.000
2027	777875.375	6360588.593	628.747	777875.380	6360588.601	628.747	-0.005	-0.008	0.000
2028	777875.374	6360588.593	628.748	777875.379	6360588.601	628.748	-0.005	-0.008	0.000
2029	777875.374	6360588.602	628.766	777875.379	6360588.610	628.766	-0.005	-0.008	0.000
2030	777875.375	6360588.602	628.767	777875.380	6360588.610	628.767	-0.005	-0.008	0.000
2031	777875.376	6360588.599	628.761	777875.381	6360588.607	628.761	-0.005	-0.008	0.000
2032	777875.377	6360588.600	628.758	777875.382	6360588.608	628.758	-0.005	-0.008	0.000
2033	777875.382	6360588.602	628.751	777875.387	6360588.610	628.751	-0.005	-0.008	0.000
2034	777875.383	6360588.599	628.750	777875.387	6360588.607	628.750	-0.004	-0.008	0.000
2035	777875.387	6360588.591	628.755	777875.392	6360588.599	628.755	-0.005	-0.008	0.000
2036	777875.388	6360588.591	628.755	777875.392	6360588.599	628.755	-0.004	-0.008	0.000
2037	777875.392	6360588.593	628.740	777875.396	6360588.601	628.740	-0.004	-0.008	0.000
2038	777875.392	6360588.594	628.733	777875.397	6360588.602	628.733	-0.005	-0.008	0.000
2039	777875.389	6360588.594	628.687	777875.394	6360588.602	628.687	-0.005	-0.008	0.000
2040	777875.388	6360588.598	628.696	777875.393	6360588.606	628.696	-0.005	-0.008	0.000
2041	777875.384	6360588.604	628.723	777875.388	6360588.612	628.723	-0.004	-0.008	0.000
2042	777875.381	6360588.606	628.733	777875.386	6360588.614	628.733	-0.005	-0.008	0.000
2043	777875.380	6360588.599	628.736	777875.384	6360588.607	628.736	-0.004	-0.008	0.000
2044	777875.381	6360588.597	628.733	777875.386	6360588.605	628.733	-0.005	-0.008	0.000
2045	777875.387	6360588.599	628.714	777875.392	6360588.607	628.714	-0.005	-0.008	0.000
2046	777875.389	6360588.598	628.717	777875.393	6360588.606	628.717	-0.004	-0.008	0.000
2047	777875.392	6360588.596	628.720	777875.397	6360588.604	628.720	-0.005	-0.008	0.000
2048	777875.392	6360588.593	628.720	777875.397	6360588.601	628.720	-0.005	-0.008	0.000

2049	777875.388	6360588.592	628.705	777875.393	6360588.600	628.705	-0.005	-0.008	0.000
2050	777875.388	6360588.593	628.710	777875.392	6360588.601	628.710	-0.004	-0.008	0.000
2051	777875.390	6360588.593	628.751	777875.395	6360588.601	628.751	-0.005	-0.008	0.000
2052	777875.389	6360588.592	628.759	777875.393	6360588.600	628.759	-0.004	-0.008	0.000
2053	777875.388	6360588.580	628.779	777875.392	6360588.588	628.779	-0.004	-0.008	0.000
2054	777875.388	6360588.583	628.781	777875.392	6360588.591	628.781	-0.004	-0.008	0.000
2055	777875.387	6360588.595	628.799	777875.392	6360588.603	628.799	-0.005	-0.008	0.000
2056	777875.389	6360588.595	628.787	777875.393	6360588.603	628.787	-0.004	-0.008	0.000
2057	777875.392	6360588.592	628.746	777875.397	6360588.600	628.746	-0.005	-0.008	0.000
2058	777875.393	6360588.592	628.744	777875.398	6360588.600	628.744	-0.005	-0.008	0.000
2059	777875.393	6360588.588	628.721	777875.397	6360588.596	628.721	-0.004	-0.008	0.000
2060	777875.393	6360588.590	628.722	777875.398	6360588.598	628.722	-0.005	-0.008	0.000
2061	777875.392	6360588.585	628.756	777875.396	6360588.593	628.756	-0.004	-0.008	0.000
2062	777875.392	6360588.588	628.758	777875.396	6360588.596	628.758	-0.004	-0.008	0.000
2063	777875.397	6360588.598	628.763	777875.401	6360588.606	628.763	-0.004	-0.008	0.000
2064	777875.396	6360588.598	628.764	777875.401	6360588.606	628.764	-0.005	-0.008	0.000
2065	777875.391	6360588.592	628.756	777875.396	6360588.600	628.756	-0.005	-0.008	0.000
2066	777875.392	6360588.592	628.747	777875.396	6360588.600	628.747	-0.004	-0.008	0.000
2067	777875.386	6360588.591	628.734	777875.391	6360588.599	628.734	-0.005	-0.008	0.000
2068	777875.384	6360588.589	628.729	777875.389	6360588.597	628.729	-0.005	-0.008	0.000
2069	777875.375	6360588.582	628.742	777875.379	6360588.589	628.742	-0.004	-0.007	0.000
2070	777875.379	6360588.590	628.756	777875.384	6360588.597	628.756	-0.005	-0.007	0.000
2071	777875.386	6360588.605	628.781	777875.391	6360588.613	628.781	-0.005	-0.008	0.000
2072	777875.387	6360588.605	628.761	777875.392	6360588.613	628.761	-0.005	-0.008	0.000
2073	777875.386	6360588.603	628.755	777875.391	6360588.611	628.755	-0.005	-0.008	0.000
2074	777875.382	6360588.591	628.752	777875.387	6360588.599	628.752	-0.005	-0.008	0.000
2075	777875.381	6360588.592	628.752	777875.385	6360588.600	628.752	-0.004	-0.008	0.000
2076	777875.377	6360588.605	628.731	777875.382	6360588.613	628.731	-0.005	-0.008	0.000

2077	777875.377	6360588.607	628.736	777875.382	6360588.614	628.736	-0.005	-0.007	0.000
2078	777875.383	6360588.606	628.773	777875.388	6360588.614	628.773	-0.005	-0.008	0.000
2079	777875.384	6360588.607	628.776	777875.389	6360588.615	628.776	-0.005	-0.008	0.000
2080	777875.388	6360588.597	628.771	777875.392	6360588.605	628.771	-0.004	-0.008	0.000
2081	777875.388	6360588.596	628.772	777875.393	6360588.604	628.772	-0.005	-0.008	0.000
2082	777875.387	6360588.599	628.773	777875.392	6360588.607	628.773	-0.005	-0.008	0.000
2083	777875.387	6360588.599	628.767	777875.392	6360588.606	628.767	-0.005	-0.007	0.000
2084	777875.384	6360588.601	628.767	777875.388	6360588.609	628.767	-0.004	-0.008	0.000
2085	777875.384	6360588.599	628.758	777875.388	6360588.607	628.758	-0.004	-0.008	0.000
2086	777875.386	6360588.598	628.748	777875.391	6360588.606	628.748	-0.005	-0.008	0.000
2087	777875.386	6360588.599	628.756	777875.390	6360588.606	628.756	-0.004	-0.007	0.000
2088	777875.383	6360588.597	628.770	777875.388	6360588.605	628.770	-0.005	-0.008	0.000
2089	777875.383	6360588.597	628.770	777875.388	6360588.605	628.770	-0.005	-0.008	0.000
2090	777875.392	6360588.603	628.776	777875.396	6360588.611	628.776	-0.004	-0.008	0.000
2091	777875.392	6360588.602	628.778	777875.396	6360588.610	628.778	-0.004	-0.008	0.000
2092	777875.390	6360588.601	628.779	777875.395	6360588.609	628.779	-0.005	-0.008	0.000
2093	777875.389	6360588.600	628.780	777875.394	6360588.608	628.780	-0.005	-0.008	0.000
2094	777875.388	6360588.599	628.781	777875.393	6360588.607	628.781	-0.005	-0.008	0.000
2095	777875.388	6360588.598	628.780	777875.392	6360588.606	628.780	-0.004	-0.008	0.000
2096	777875.387	6360588.597	628.778	777875.392	6360588.605	628.778	-0.005	-0.008	0.000
2097	777875.387	6360588.597	628.777	777875.391	6360588.605	628.777	-0.004	-0.008	0.000
2098	777875.386	6360588.596	628.775	777875.391	6360588.604	628.775	-0.005	-0.008	0.000
2099	777875.381	6360588.591	628.763	777875.386	6360588.599	628.763	-0.005	-0.008	0.000
2100	777875.380	6360588.590	628.764	777875.384	6360588.597	628.764	-0.004	-0.007	0.000
2101	777875.382	6360588.591	628.758	777875.387	6360588.599	628.758	-0.005	-0.008	0.000
2102	777875.383	6360588.591	628.753	777875.387	6360588.599	628.753	-0.004	-0.008	0.000
2103	777875.383	6360588.590	628.751	777875.387	6360588.598	628.751	-0.004	-0.008	0.000
2104	777875.383	6360588.590	628.750	777875.387	6360588.598	628.750	-0.004	-0.008	0.000

2105	777875.382	6360588.590	628.748	777875.387	6360588.597	628.748	-0.005	-0.007	0.000
2106	777875.382	6360588.589	628.747	777875.387	6360588.597	628.747	-0.005	-0.008	0.000
2107	777875.382	6360588.589	628.748	777875.387	6360588.597	628.748	-0.005	-0.008	0.000
2108	777875.382	6360588.589	628.749	777875.387	6360588.597	628.749	-0.005	-0.008	0.000
2109	777875.382	6360588.589	628.749	777875.386	6360588.597	628.749	-0.004	-0.008	0.000
2110	777875.382	6360588.589	628.749	777875.386	6360588.597	628.749	-0.004	-0.008	0.000
2111	777875.382	6360588.589	628.750	777875.386	6360588.597	628.750	-0.004	-0.008	0.000
2112	777875.381	6360588.589	628.750	777875.386	6360588.597	628.750	-0.005	-0.008	0.000
2113	777875.375	6360588.586	628.754	777875.379	6360588.594	628.754	-0.004	-0.008	0.000
2114	777875.375	6360588.585	628.756	777875.379	6360588.593	628.756	-0.004	-0.008	0.000
2115	777875.378	6360588.580	628.757	777875.382	6360588.588	628.757	-0.004	-0.008	0.000
2116	777875.377	6360588.582	628.758	777875.381	6360588.590	628.758	-0.004	-0.008	0.000
2117	777875.376	6360588.584	628.759	777875.380	6360588.592	628.759	-0.004	-0.008	0.000
2118	777875.375	6360588.585	628.761	777875.379	6360588.593	628.761	-0.004	-0.008	0.000
2119	777875.375	6360588.586	628.763	777875.379	6360588.594	628.763	-0.004	-0.008	0.000
2120	777875.375	6360588.587	628.764	777875.379	6360588.595	628.764	-0.004	-0.008	0.000
						Averages	**-0.005**	**-0.008**	**0.000**

RTX part 2

	Data from Trimble Access			Data from Datumtrans			Difference		
3000	777875.049	6360588.364	629.470	777875.053	6360588.372	629.470	-0.004	-0.008	0.000
3001	777875.216	6360588.495	629.303	777875.220	6360588.503	629.303	-0.004	-0.008	0.000
3002	777875.107	6360588.654	629.273	777875.111	6360588.662	629.273	-0.004	-0.008	0.000
3003	777875.149	6360588.690	628.981	777875.154	6360588.698	628.981	-0.005	-0.008	0.000
3004	777875.165	6360588.783	628.962	777875.170	6360588.791	628.962	-0.005	-0.008	0.000
3005	777875.136	6360588.722	628.949	777875.141	6360588.730	628.949	-0.005	-0.008	0.000
3006	777875.226	6360588.699	628.850	777875.230	6360588.707	628.850	-0.004	-0.008	0.000
3007	777875.260	6360588.667	628.906	777875.265	6360588.675	628.906	-0.005	-0.008	0.000
3008	777875.174	6360588.721	628.965	777875.178	6360588.729	628.965	-0.004	-0.008	0.000
3009	777875.263	6360588.653	628.921	777875.268	6360588.661	628.921	-0.005	-0.008	0.000
3010	777875.320	6360588.617	628.861	777875.325	6360588.625	628.861	-0.005	-0.008	0.000
3011	777875.295	6360588.611	628.891	777875.300	6360588.619	628.891	-0.005	-0.008	0.000
3012	777875.344	6360588.595	628.826	777875.349	6360588.603	628.826	-0.005	-0.008	0.000
3013	777875.355	6360588.595	628.814	777875.359	6360588.603	628.814	-0.004	-0.008	0.000
3014	777875.368	6360588.593	628.803	777875.373	6360588.601	628.803	-0.005	-0.008	0.000
3015	777875.328	6360588.603	628.869	777875.332	6360588.611	628.869	-0.004	-0.008	0.000
3016	777875.339	6360588.600	628.858	777875.343	6360588.608	628.858	-0.004	-0.008	0.000
3017	777875.363	6360588.584	628.794	777875.367	6360588.592	628.794	-0.004	-0.008	0.000
3018	777875.365	6360588.585	628.789	777875.370	6360588.593	628.789	-0.005	-0.008	0.000
3019	777875.371	6360588.590	628.778	777875.375	6360588.598	628.778	-0.004	-0.008	0.000
3020	777875.372	6360588.590	628.772	777875.377	6360588.598	628.772	-0.005	-0.008	0.000
3021	777875.366	6360588.589	628.754	777875.371	6360588.597	628.754	-0.005	-0.008	0.000
3022	777875.366	6360588.590	628.757	777875.371	6360588.598	628.757	-0.005	-0.008	0.000
3023	777875.363	6360588.595	628.764	777875.368	6360588.603	628.764	-0.005	-0.008	0.000

3024	777875.366	6360588.593	628.759	777875.370	6360588.601	628.759	-0.004	-0.008	0.000
3025	777875.365	6360588.597	628.755	777875.369	6360588.605	628.755	-0.004	-0.008	0.000
3026	777875.367	6360588.596	628.759	777875.371	6360588.604	628.759	-0.004	-0.008	0.000
3027	777875.376	6360588.591	628.747	777875.381	6360588.599	628.747	-0.005	-0.008	0.000
3028	777875.383	6360588.583	628.743	777875.387	6360588.591	628.743	-0.004	-0.008	0.000
3029	777875.383	6360588.585	628.739	777875.388	6360588.593	628.739	-0.005	-0.008	0.000
3030	777875.376	6360588.593	628.726	777875.381	6360588.601	628.726	-0.005	-0.008	0.000
3031	777875.376	6360588.595	628.728	777875.380	6360588.603	628.728	-0.004	-0.008	0.000
3032	777875.379	6360588.594	628.719	777875.383	6360588.601	628.719	-0.004	-0.007	0.000
3033	777875.380	6360588.596	628.721	777875.385	6360588.604	628.721	-0.005	-0.008	0.000
3034	777875.384	6360588.602	628.721	777875.388	6360588.610	628.721	-0.004	-0.008	0.000
3035	777875.383	6360588.603	628.723	777875.387	6360588.611	628.723	-0.004	-0.008	0.000
3036	777875.377	6360588.600	628.722	777875.382	6360588.608	628.722	-0.005	-0.008	0.000
3037	777875.379	6360588.597	628.722	777875.383	6360588.605	628.722	-0.004	-0.008	0.000
3038	777875.380	6360588.593	628.725	777875.384	6360588.601	628.725	-0.004	-0.008	0.000
3039	777875.379	6360588.594	628.720	777875.384	6360588.602	628.720	-0.005	-0.008	0.000
3040	777875.375	6360588.605	628.727	777875.380	6360588.613	628.727	-0.005	-0.008	0.000
3041	777875.375	6360588.603	628.729	777875.380	6360588.611	628.729	-0.005	-0.008	0.000
3042	777875.382	6360588.598	628.718	777875.387	6360588.606	628.718	-0.005	-0.008	0.000
3043	777875.382	6360588.595	628.720	777875.386	6360588.603	628.720	-0.004	-0.008	0.000
3044	777875.372	6360588.593	628.711	777875.377	6360588.601	628.711	-0.005	-0.008	0.000
3045	777875.371	6360588.593	628.716	777875.376	6360588.601	628.716	-0.005	-0.008	0.000
3046	777875.366	6360588.603	628.718	777875.371	6360588.611	628.718	-0.005	-0.008	0.000
3047	777875.367	6360588.604	628.717	777875.371	6360588.612	628.717	-0.004	-0.008	0.000
3048	777875.361	6360588.610	628.721	777875.365	6360588.618	628.721	-0.004	-0.008	0.000
3049	777875.361	6360588.613	628.721	777875.366	6360588.621	628.721	-0.005	-0.008	0.000

3050	777875.368	6360588.614	628.725	777875.373	6360588.622	628.725	-0.005	-0.008	0.000
3051	777875.370	6360588.609	628.730	777875.374	6360588.617	628.730	-0.004	-0.008	0.000
3052	777875.374	6360588.604	628.745	777875.379	6360588.612	628.745	-0.005	-0.008	0.000
3053	777875.374	6360588.604	628.746	777875.379	6360588.612	628.746	-0.005	-0.008	0.000
3054	777875.370	6360588.603	628.759	777875.374	6360588.611	628.759	-0.004	-0.008	0.000
3055	777875.369	6360588.601	628.754	777875.374	6360588.609	628.754	-0.005	-0.008	0.000
3056	777875.367	6360588.599	628.740	777875.371	6360588.607	628.740	-0.004	-0.008	0.000
3057	777875.367	6360588.598	628.736	777875.371	6360588.606	628.736	-0.004	-0.008	0.000
3058	777875.380	6360588.583	628.724	777875.385	6360588.591	628.724	-0.005	-0.008	0.000
3059	777875.379	6360588.582	628.723	777875.384	6360588.590	628.723	-0.005	-0.008	0.000
3060	777875.378	6360588.581	628.723	777875.382	6360588.589	628.723	-0.004	-0.008	0.000
3061	777875.377	6360588.580	628.722	777875.381	6360588.588	628.722	-0.004	-0.008	0.000
3062	777875.376	6360588.580	628.721	777875.381	6360588.588	628.721	-0.005	-0.008	0.000
3063	777875.375	6360588.580	628.721	777875.380	6360588.588	628.721	-0.005	-0.008	0.000
3064	777875.374	6360588.581	628.721	777875.379	6360588.589	628.721	-0.005	-0.008	0.000
3065	777875.375	6360588.577	628.739	777875.379	6360588.585	628.739	-0.004	-0.008	0.000
3066	777875.374	6360588.579	628.742	777875.379	6360588.587	628.742	-0.005	-0.008	0.000
3067	777875.375	6360588.591	628.737	777875.380	6360588.599	628.737	-0.005	-0.008	0.000
3068	777875.379	6360588.587	628.744	777875.383	6360588.595	628.744	-0.004	-0.008	0.000
3069	777875.383	6360588.573	628.747	777875.387	6360588.581	628.747	-0.004	-0.008	0.000
3070	777875.384	6360588.574	628.751	777875.388	6360588.582	628.751	-0.004	-0.008	0.000
3071	777875.392	6360588.581	628.760	777875.397	6360588.589	628.760	-0.005	-0.008	0.000
3072	777875.395	6360588.579	628.765	777875.400	6360588.587	628.765	-0.005	-0.008	0.000
3073	777875.397	6360588.576	628.747	777875.401	6360588.584	628.747	-0.004	-0.008	0.000
3074	777875.394	6360588.580	628.744	777875.399	6360588.588	628.744	-0.005	-0.008	0.000
3075	777875.393	6360588.585	628.747	777875.398	6360588.593	628.747	-0.005	-0.008	0.000

3076	777875.394	6360588.583	628.743	777875.399	6360588.591	628.743	-0.005	-0.008	0.000
3077	777875.405	6360588.580	628.731	777875.410	6360588.588	628.731	-0.005	-0.008	0.000
3078	777875.402	6360588.582	628.729	777875.406	6360588.590	628.729	-0.004	-0.008	0.000
3079	777875.394	6360588.594	628.706	777875.399	6360588.602	628.706	-0.005	-0.008	0.000
3080	777875.393	6360588.592	628.716	777875.398	6360588.600	628.716	-0.005	-0.008	0.000
3081	777875.392	6360588.591	628.720	777875.397	6360588.599	628.720	-0.005	-0.008	0.000
3082	777875.392	6360588.589	628.721	777875.396	6360588.597	628.721	-0.004	-0.008	0.000
3083	777875.391	6360588.588	628.723	777875.396	6360588.596	628.723	-0.005	-0.008	0.000
3084	777875.391	6360588.587	628.724	777875.395	6360588.595	628.724	-0.004	-0.008	0.000
3085	777875.390	6360588.586	628.725	777875.395	6360588.594	628.725	-0.005	-0.008	0.000
3086	777875.390	6360588.586	628.725	777875.394	6360588.594	628.725	-0.004	-0.008	0.000
3087	777875.389	6360588.585	628.725	777875.394	6360588.593	628.725	-0.005	-0.008	0.000
3088	777875.389	6360588.585	628.725	777875.393	6360588.593	628.725	-0.004	-0.008	0.000
3089	777875.388	6360588.585	628.725	777875.393	6360588.593	628.725	-0.005	-0.008	0.000
3090	777875.388	6360588.585	628.725	777875.393	6360588.593	628.725	-0.005	-0.008	0.000
3091	777875.387	6360588.585	628.725	777875.392	6360588.593	628.725	-0.005	-0.008	0.000
3092	777875.387	6360588.585	628.725	777875.391	6360588.593	628.725	-0.004	-0.008	0.000
3093	777875.386	6360588.585	628.725	777875.391	6360588.593	628.725	-0.005	-0.008	0.000
3094	777875.386	6360588.585	628.725	777875.390	6360588.593	628.725	-0.004	-0.008	0.000
3095	777875.385	6360588.585	628.724	777875.390	6360588.593	628.724	-0.005	-0.008	0.000
3096	777875.385	6360588.585	628.725	777875.389	6360588.593	628.725	-0.004	-0.008	0.000
3097	777875.385	6360588.585	628.725	777875.389	6360588.593	628.725	-0.004	-0.008	0.000
3098	777875.384	6360588.585	628.726	777875.389	6360588.593	628.726	-0.005	-0.008	0.000
3099	777875.384	6360588.586	628.727	777875.389	6360588.594	628.727	-0.005	-0.008	0.000
3100	777875.384	6360588.586	628.727	777875.388	6360588.594	628.727	-0.004	-0.008	0.000
3101	777875.384	6360588.587	628.727	777875.388	6360588.595	628.727	-0.004	-0.008	0.000

3102	777875.382	6360588.593	628.724	777875.387	6360588.601	628.724	-0.005	-0.008	0.000
3103	777875.382	6360588.593	628.724	777875.386	6360588.601	628.724	-0.004	-0.008	0.000
3104	777875.382	6360588.595	628.719	777875.387	6360588.602	628.719	-0.005	-0.007	0.000
3105	777875.383	6360588.594	628.717	777875.387	6360588.602	628.717	-0.004	-0.008	0.000
3106	777875.385	6360588.593	628.711	777875.389	6360588.601	628.711	-0.004	-0.008	0.000
3107	777875.384	6360588.595	628.709	777875.389	6360588.602	628.709	-0.005	-0.007	0.000
3108	777875.379	6360588.593	628.719	777875.384	6360588.601	628.719	-0.005	-0.008	0.000
3109	777875.381	6360588.593	628.719	777875.385	6360588.601	628.719	-0.004	-0.008	0.000
3110	777875.388	6360588.603	628.725	777875.393	6360588.611	628.725	-0.005	-0.008	0.000
3111	777875.386	6360588.604	628.731	777875.391	6360588.612	628.731	-0.005	-0.008	0.000
3112	777875.387	6360588.602	628.734	777875.392	6360588.610	628.734	-0.005	-0.008	0.000
3113	777875.387	6360588.602	628.734	777875.391	6360588.610	628.734	-0.004	-0.008	0.000
3114	777875.380	6360588.598	628.723	777875.385	6360588.606	628.723	-0.005	-0.008	0.000
3115	777875.380	6360588.597	628.723	777875.385	6360588.605	628.723	-0.005	-0.008	0.000
3116	777875.377	6360588.599	628.732	777875.382	6360588.607	628.732	-0.005	-0.008	0.000
3117	777875.378	6360588.598	628.739	777875.382	6360588.606	628.739	-0.004	-0.008	0.000
3118	777875.375	6360588.593	628.754	777875.380	6360588.601	628.754	-0.005	-0.008	0.000
3119	777875.376	6360588.592	628.754	777875.381	6360588.600	628.754	-0.005	-0.008	0.000
3120	777875.372	6360588.596	628.755	777875.376	6360588.604	628.755	-0.004	-0.008	0.000
							-0.005	**-0.008**	**0.000**

APPENDIX E: EXCEL SPREEDSHEETS OF RESULTS

NRTK

NO	East	North	Elev	Δ East	Δ North	Δ RL
1001	-	-	-	**777875.461**	**6360588.697**	**628.897**
2000	777875.435	6360588.669	628.836	0.026	0.028	0.061
2001	777875.436	6360588.671	628.837	0.025	0.026	0.060
2002	777875.438	6360588.671	628.834	0.023	0.026	0.063
2003	777875.437	6360588.672	628.834	0.024	0.025	0.063
2004	777875.437	6360588.672	628.838	0.024	0.025	0.059
2005	777875.438	6360588.673	628.837	0.023	0.024	0.060
2006	777875.436	6360588.676	628.846	0.025	0.021	0.051
2007	777875.437	6360588.676	628.845	0.024	0.021	0.052
2008	777875.437	6360588.675	628.840	0.024	0.022	0.057
2009	777875.437	6360588.674	628.836	0.024	0.023	0.061
2010	777875.438	6360588.674	628.838	0.023	0.023	0.059
2011	777875.440	6360588.673	628.836	0.021	0.024	0.061
2012	777875.439	6360588.674	628.836	0.022	0.023	0.061
2013	777875.438	6360588.675	628.839	0.023	0.022	0.058
2014	777875.439	6360588.676	628.843	0.022	0.021	0.054
2015	777875.438	6360588.675	628.846	0.023	0.022	0.051
2016	777875.439	6360588.676	628.848	0.022	0.021	0.049
2017	777875.439	6360588.676	628.849	0.022	0.021	0.048
2018	777875.438	6360588.676	628.850	0.023	0.021	0.047

2019	777875.436	6360588.677	628.844	0.025	0.020	0.053
2020	777875.437	6360588.673	628.842	0.024	0.024	0.055
2021	777875.437	6360588.671	628.837	0.024	0.026	0.060
2022	777875.436	6360588.668	628.839	0.025	0.029	0.058
2023	777875.434	6360588.667	628.840	0.027	0.030	0.057
2024	777875.434	6360588.667	628.839	0.027	0.030	0.058
2025	777875.434	6360588.667	628.831	0.027	0.030	0.066
2026	777875.435	6360588.667	628.827	0.026	0.030	0.070
2027	777875.435	6360588.667	628.825	0.026	0.030	0.072
2028	777875.435	6360588.666	628.827	0.026	0.031	0.070
2029	777875.435	6360588.664	628.823	0.026	0.033	0.074
2030	777875.435	6360588.661	628.828	0.026	0.036	0.069
2031	777875.434	6360588.662	628.835	0.027	0.035	0.062
2032	777875.436	6360588.661	628.834	0.025	0.036	0.063
2033	777875.436	6360588.661	628.839	0.025	0.036	0.058
2034	777875.435	6360588.663	628.839	0.026	0.034	0.058
2035	777875.436	6360588.663	628.834	0.025	0.034	0.063
2036	777875.435	6360588.662	628.831	0.026	0.035	0.066
2037	777875.434	6360588.661	628.824	0.027	0.036	0.073
2038	777875.434	6360588.661	628.817	0.027	0.036	0.080
2039	777875.436	6360588.663	628.816	0.025	0.034	0.081
2040	777875.434	6360588.664	628.819	0.027	0.033	0.078
2041	777875.436	6360588.665	628.818	0.025	0.032	0.079
2042	777875.437	6360588.664	628.817	0.024	0.033	0.080
2043	777875.435	6360588.665	628.820	0.026	0.032	0.077
2044	777875.435	6360588.668	628.824	0.026	0.029	0.073

2045	777875.434	6360588.670	628.834	0.027	0.027	0.063
2046	777875.434	6360588.675	628.845	0.027	0.022	0.052
2047	777875.436	6360588.677	628.842	0.025	0.020	0.055
2048	777875.438	6360588.679	628.839	0.023	0.018	0.058
2049	777875.438	6360588.679	628.845	0.023	0.018	0.052
2050	777875.437	6360588.679	628.846	0.024	0.018	0.051
2051	777875.438	6360588.676	628.845	0.023	0.021	0.052
2052	777875.438	6360588.676	628.844	0.023	0.021	0.053
2053	777875.438	6360588.676	628.841	0.023	0.021	0.056
2054	777875.437	6360588.675	628.840	0.024	0.022	0.057
2055	777875.438	6360588.673	628.837	0.023	0.024	0.060
2056	777875.439	6360588.670	628.835	0.022	0.027	0.062
2057	777875.437	6360588.668	628.837	0.024	0.029	0.060
2058	777875.437	6360588.667	628.836	0.024	0.030	0.061
2059	777875.436	6360588.667	628.837	0.025	0.030	0.060
2060	777875.439	6360588.667	628.835	0.022	0.030	0.062
2061	777875.439	6360588.666	628.839	0.022	0.031	0.058
2062	777875.440	6360588.667	628.839	0.021	0.030	0.058
2063	777875.441	6360588.667	628.837	0.020	0.030	0.060
2064	777875.439	6360588.664	628.835	0.022	0.033	0.062
2065	777875.437	6360588.662	628.832	0.024	0.035	0.065
2066	777875.437	6360588.662	628.833	0.024	0.035	0.064
2067	777875.437	6360588.659	628.831	0.024	0.038	0.066
2068	777875.437	6360588.665	628.827	0.024	0.032	0.070
2069	777875.436	6360588.662	628.829	0.025	0.035	0.068
2070	777875.436	6360588.661	628.831	0.025	0.036	0.066

2071	777875.436	6360588.660	628.833	0.025	0.037	0.064
2072	777875.434	6360588.657	628.839	0.027	0.040	0.058
2073	777875.435	6360588.656	628.838	0.026	0.041	0.059
2074	777875.436	6360588.655	628.833	0.025	0.042	0.064
2075	777875.438	6360588.658	628.832	0.023	0.039	0.065
2076	777875.437	6360588.662	628.830	0.024	0.035	0.067
2077	777875.436	6360588.662	628.827	0.025	0.035	0.070
2078	777875.434	6360588.661	628.830	0.027	0.036	0.067
2079	777875.436	6360588.662	628.838	0.025	0.035	0.059
2080	777875.435	6360588.663	628.841	0.026	0.034	0.056
2081	777875.435	6360588.664	628.834	0.026	0.033	0.063
2082	777875.435	6360588.664	628.834	0.026	0.033	0.063
2083	777875.436	6360588.665	628.834	0.025	0.032	0.063
2084	777875.434	6360588.662	628.835	0.027	0.035	0.062
2085	777875.433	6360588.661	628.836	0.028	0.036	0.061
2086	777875.433	6360588.663	628.835	0.028	0.034	0.062
2087	777875.434	6360588.665	628.835	0.027	0.032	0.062
2088	777875.435	6360588.663	628.833	0.026	0.034	0.064
2089	777875.437	6360588.664	628.832	0.024	0.033	0.065
2090	777875.436	6360588.665	628.832	0.025	0.032	0.065
2091	777875.436	6360588.663	628.834	0.025	0.034	0.063
2092	777875.435	6360588.664	628.834	0.026	0.033	0.063
2093	777875.436	6360588.666	628.830	0.025	0.031	0.067
2094	777875.439	6360588.668	628.827	0.022	0.029	0.070
2095	777875.442	6360588.670	628.826	0.019	0.027	0.071
2096	777875.441	6360588.671	628.831	0.020	0.026	0.066

2097	777875.441	6360588.672	628.838	0.020	0.025	0.059
2098	777875.439	6360588.671	628.839	0.022	0.026	0.058
2099	777875.437	6360588.669	628.839	0.024	0.028	0.058
2100	777875.437	6360588.667	628.837	0.024	0.030	0.060
2101	777875.437	6360588.668	628.838	0.024	0.029	0.059
2102	777875.438	6360588.668	628.838	0.023	0.029	0.059
2103	777875.436	6360588.668	628.837	0.025	0.029	0.060
2104	777875.435	6360588.668	628.836	0.026	0.029	0.061
2105	777875.435	6360588.670	628.836	0.026	0.027	0.061
2106	777875.436	6360588.672	628.838	0.025	0.025	0.059
2107	777875.437	6360588.671	628.839	0.024	0.026	0.058
2108	777875.435	6360588.669	628.838	0.026	0.028	0.059
2109	777875.435	6360588.669	628.840	0.026	0.028	0.057
2110	777875.435	6360588.670	628.840	0.026	0.027	0.057
2111	777875.435	6360588.671	628.844	0.026	0.026	0.053
2112	777875.436	6360588.670	628.847	0.025	0.027	0.050
2113	777875.434	6360588.669	628.851	0.027	0.028	0.046
2114	777875.434	6360588.668	628.848	0.027	0.029	0.049
2115	777875.436	6360588.668	628.850	0.025	0.029	0.047
2116	777875.435	6360588.671	628.851	0.026	0.026	0.046
2117	777875.435	6360588.671	628.853	0.026	0.026	0.044
2118	777875.437	6360588.670	628.849	0.024	0.027	0.048
2119	777875.437	6360588.670	628.844	0.024	0.027	0.053
2120	777875.438	6360588.669	628.839	0.023	0.028	0.058
Sample Means	**777875.436**	**6360588.668**	**628.836**	**0.025**	**0.029**	**0.061**
Sample Sigma	**0.0018**	**0.0054**	**0.0075**	Bias	Bias	Bias

95% CI	**0.0036**	**0.0106**	**0.0147**			
				Max	Max	Max
				0.0280	0.0420	0.0810
				Min	Min	Min
				0.0190	0.0180	0.0440

RTX Part 1

NO	East	North	Elev	Δ East	Δ North	Δ RL
1001	-	-	-	**777875.461**	**6360588.697**	**628.897**
2000	777875.340	6360588.596	628.766	0.121	0.101	0.131
2001	777875.347	6360588.599	628.779	0.114	0.098	0.118
2002	777875.351	6360588.601	628.786	0.110	0.096	0.111
2003	777875.350	6360588.601	628.788	0.111	0.096	0.109
2004	777875.346	6360588.600	628.789	0.115	0.097	0.108
2005	777875.344	6360588.601	628.794	0.117	0.096	0.103
2006	777875.341	6360588.601	628.788	0.120	0.096	0.109
2007	777875.338	6360588.601	628.780	0.123	0.096	0.117
2008	777875.339	6360588.604	628.770	0.122	0.093	0.127
2009	777875.342	6360588.604	628.762	0.119	0.093	0.135
2010	777875.347	6360588.603	628.754	0.114	0.094	0.143
2011	777875.378	6360588.608	628.771	0.083	0.089	0.126
2012	777875.377	6360588.609	628.770	0.084	0.088	0.127
2013	777875.377	6360588.609	628.769	0.084	0.088	0.128
2014	777875.377	6360588.609	628.767	0.084	0.088	0.130
2015	777875.377	6360588.609	628.766	0.084	0.088	0.131
2016	777875.377	6360588.609	628.765	0.084	0.088	0.132
2017	777875.378	6360588.609	628.764	0.083	0.088	0.133
2018	777875.378	6360588.608	628.765	0.083	0.089	0.132
2019	777875.378	6360588.608	628.765	0.083	0.089	0.132
2020	777875.378	6360588.608	628.766	0.083	0.089	0.131

2021	777875.378	6360588.608	628.766	0.083	0.089	0.131
2022	777875.378	6360588.607	628.766	0.083	0.090	0.131
2023	777875.378	6360588.607	628.767	0.083	0.090	0.130
2024	777875.378	6360588.607	628.766	0.083	0.090	0.131
2025	777875.378	6360588.607	628.766	0.083	0.090	0.131
2026	777875.378	6360588.606	628.766	0.083	0.091	0.131
2027	777875.375	6360588.593	628.747	0.086	0.104	0.150
2028	777875.374	6360588.593	628.748	0.087	0.104	0.149
2029	777875.374	6360588.602	628.766	0.087	0.095	0.131
2030	777875.375	6360588.602	628.767	0.086	0.095	0.130
2031	777875.376	6360588.599	628.761	0.085	0.098	0.136
2032	777875.377	6360588.600	628.758	0.084	0.097	0.139
2033	777875.382	6360588.602	628.751	0.079	0.095	0.146
2034	777875.383	6360588.599	628.750	0.078	0.098	0.147
2035	777875.387	6360588.591	628.755	0.074	0.106	0.142
2036	777875.388	6360588.591	628.755	0.073	0.106	0.142
2037	777875.392	6360588.593	628.740	0.069	0.104	0.157
2038	777875.392	6360588.594	628.733	0.069	0.103	0.164
2039	777875.389	6360588.594	628.687	0.072	0.103	0.210
2040	777875.388	6360588.598	628.696	0.073	0.099	0.201
2041	777875.384	6360588.604	628.723	0.077	0.093	0.174
2042	777875.381	6360588.606	628.733	0.080	0.091	0.164
2043	777875.380	6360588.599	628.736	0.081	0.098	0.161
2044	777875.381	6360588.597	628.733	0.080	0.100	0.164
2045	777875.387	6360588.599	628.714	0.074	0.098	0.183
2046	777875.389	6360588.598	628.717	0.072	0.099	0.180

2047	777875.392	6360588.596	628.720	0.069	0.101	0.177
2048	777875.392	6360588.593	628.720	0.069	0.104	0.177
2049	777875.388	6360588.592	628.705	0.073	0.105	0.192
2050	777875.388	6360588.593	628.710	0.073	0.104	0.187
2051	777875.390	6360588.593	628.751	0.071	0.104	0.146
2052	777875.389	6360588.592	628.759	0.072	0.105	0.138
2053	777875.388	6360588.580	628.779	0.073	0.117	0.118
2054	777875.388	6360588.583	628.781	0.073	0.114	0.116
2055	777875.387	6360588.595	628.799	0.074	0.102	0.098
2056	777875.389	6360588.595	628.787	0.072	0.102	0.110
2057	777875.392	6360588.592	628.746	0.069	0.105	0.151
2058	777875.393	6360588.592	628.744	0.068	0.105	0.153
2059	777875.393	6360588.588	628.721	0.068	0.109	0.176
2060	777875.393	6360588.590	628.722	0.068	0.107	0.175
2061	777875.392	6360588.585	628.756	0.069	0.112	0.141
2062	777875.392	6360588.588	628.758	0.069	0.109	0.139
2063	777875.397	6360588.598	628.763	0.064	0.099	0.134
2064	777875.396	6360588.598	628.764	0.065	0.099	0.133
2065	777875.391	6360588.592	628.756	0.070	0.105	0.141
2066	777875.392	6360588.592	628.747	0.069	0.105	0.150
2067	777875.386	6360588.591	628.734	0.075	0.106	0.163
2068	777875.384	6360588.589	628.729	0.077	0.108	0.168
2069	777875.375	6360588.582	628.742	0.086	0.115	0.155
2070	777875.379	6360588.590	628.756	0.082	0.107	0.141
2071	777875.386	6360588.605	628.781	0.075	0.092	0.116
2072	777875.387	6360588.605	628.761	0.074	0.092	0.136

2073	777875.386	6360588.603	628.755	0.075	0.094	0.142
2074	777875.382	6360588.591	628.752	0.079	0.106	0.145
2075	777875.381	6360588.592	628.752	0.080	0.105	0.145
2076	777875.377	6360588.605	628.731	0.084	0.092	0.166
2077	777875.377	6360588.607	628.736	0.084	0.090	0.161
2078	777875.383	6360588.606	628.773	0.078	0.091	0.124
2079	777875.384	6360588.607	628.776	0.077	0.090	0.121
2080	777875.388	6360588.597	628.771	0.073	0.100	0.126
2081	777875.388	6360588.596	628.772	0.073	0.101	0.125
2082	777875.387	6360588.599	628.773	0.074	0.098	0.124
2083	777875.387	6360588.599	628.767	0.074	0.098	0.130
2084	777875.384	6360588.601	628.767	0.077	0.096	0.130
2085	777875.384	6360588.599	628.758	0.077	0.098	0.139
2086	777875.386	6360588.598	628.748	0.075	0.099	0.149
2087	777875.386	6360588.599	628.756	0.075	0.098	0.141
2088	777875.383	6360588.597	628.770	0.078	0.100	0.127
2089	777875.383	6360588.597	628.770	0.078	0.100	0.127
2090	777875.392	6360588.603	628.776	0.069	0.094	0.121
2091	777875.392	6360588.602	628.778	0.069	0.095	0.119
2092	777875.390	6360588.601	628.779	0.071	0.096	0.118
2093	777875.389	6360588.600	628.780	0.072	0.097	0.117
2094	777875.388	6360588.599	628.781	0.073	0.098	0.116
2095	777875.388	6360588.598	628.780	0.073	0.099	0.117
2096	777875.387	6360588.597	628.778	0.074	0.100	0.119
2097	777875.387	6360588.597	628.777	0.074	0.100	0.120
2098	777875.386	6360588.596	628.775	0.075	0.101	0.122

2099	777875.381	6360588.591	628.763	0.080	0.106	0.134
2100	777875.380	6360588.590	628.764	0.081	0.107	0.133
2101	777875.382	6360588.591	628.758	0.079	0.106	0.139
2102	777875.383	6360588.591	628.753	0.078	0.106	0.144
2103	777875.383	6360588.590	628.751	0.078	0.107	0.146
2104	777875.383	6360588.590	628.750	0.078	0.107	0.147
2105	777875.382	6360588.590	628.748	0.079	0.107	0.149
2106	777875.382	6360588.589	628.747	0.079	0.108	0.150
2107	777875.382	6360588.589	628.748	0.079	0.108	0.149
2108	777875.382	6360588.589	628.749	0.079	0.108	0.148
2109	777875.382	6360588.589	628.749	0.079	0.108	0.148
2110	777875.382	6360588.589	628.749	0.079	0.108	0.148
2111	777875.382	6360588.589	628.750	0.079	0.108	0.147
2112	777875.381	6360588.589	628.750	0.080	0.108	0.147
2113	777875.375	6360588.586	628.754	0.086	0.111	0.143
2114	777875.375	6360588.585	628.756	0.086	0.112	0.141
2115	777875.378	6360588.580	628.757	0.083	0.117	0.140
2116	777875.377	6360588.582	628.758	0.084	0.115	0.139
2117	777875.376	6360588.584	628.759	0.085	0.113	0.138
2118	777875.375	6360588.585	628.761	0.086	0.112	0.136
2119	777875.375	6360588.586	628.763	0.086	0.111	0.134
2120	777875.375	6360588.587	628.764	0.086	0.110	0.133
Sample Means	**777875.380**	**6360588.597**	**628.757**	**0.081**	**0.100**	**0.140**
Sample Sigma	**0.0127**	**0.0075**	**0.0201**	Bias	Bias	Bias
95% CI	**0.0250**	**0.0147**	**0.0395**			

				Max	Max	Max
				0.1230	0.1170	0.2100
				Min	Min	Min
				0.0640	0.0880	0.0980

RTX Part 2

	Easting	Northing	Elev	Total time	Mins	Δ East	Δ North	Horizontal	Vertical
Mean	**777875.360**	**6360588.596**	**628.766**	(Secs)			Absolute	distance	distance
3000	777875.049	6360588.364	629.470	60	1	0.311	0.232	0.389	-0.704
3001	777875.216	6360588.495	629.303	121	2	0.144	0.101	0.176	-0.537
3002	777875.107	6360588.654	629.273	182	3	0.253	0.058	0.260	-0.507
3003	777875.149	6360588.69	628.981	243	4	0.211	0.094	0.231	-0.215
3004	777875.165	6360588.783	628.962	304	5	0.195	0.187	0.270	-0.196
3005	777875.136	6360588.722	628.949	365	6	0.224	0.126	0.257	-0.183
3006	777875.226	6360588.699	628.850	426	7	0.134	0.103	0.169	-0.084
3007	777875.26	6360588.667	628.906	487	8	0.100	0.071	0.123	-0.140
3008	777875.174	6360588.721	628.965	548	9	0.186	0.125	0.224	-0.199
3009	777875.263	6360588.653	628.921	609	10	0.097	0.057	0.113	-0.155
3010	777875.32	6360588.617	628.861	670	11	0.040	0.021	0.045	-0.095
3011	777875.295	6360588.611	628.891	731	12	0.065	0.015	0.067	-0.125
3012	777875.344	6360588.595	628.826	792	13	0.016	0.001	0.016	-0.060
3013	777875.355	6360588.595	628.814	853	14	0.005	0.001	0.006	-0.048
3014	777875.368	6360588.593	628.803	914	15	0.008	0.003	0.008	-0.037
3015	777875.328	6360588.603	628.869	975	16	0.032	0.007	0.033	-0.103
3016	777875.339	6360588.6	628.858	1036	17	0.021	0.004	0.022	-0.092
3017	777875.363	6360588.584	628.794	1097	18	0.003	0.012	0.013	-0.028
3018	777875.365	6360588.585	628.789	1158	19	0.005	0.011	0.012	-0.023
3019	777875.371	6360588.59	628.778	1219	20	0.011	0.006	0.012	-0.012

3020	777875.372	6360588.59	628.772	1279	21	0.012	0.006	0.013	-0.006
3021	777875.366	6360588.589	628.754	1340	22	0.006	0.007	0.009	0.012
3022	777875.366	6360588.59	628.757	1401	23	0.006	0.006	0.008	0.009
3023	777875.363	6360588.595	628.764	1462	24	0.003	0.001	0.003	0.002
3024	777875.366	6360588.593	628.759	1523	25	0.006	0.003	0.007	0.007
3025	777875.365	6360588.597	628.755	1584	26	0.005	0.001	0.005	0.011
3026	777875.367	6360588.596	628.759	1645	27	0.007	0.000	0.007	0.007
3027	777875.376	6360588.591	628.747	1706	28	0.016	0.005	0.016	0.019
3028	777875.383	6360588.583	628.743	1767	29	0.023	0.013	0.026	0.023
3029	777875.383	6360588.585	628.739	1828	30	0.023	0.011	0.025	0.027
3030	777875.376	6360588.593	628.726	1889	31	0.016	0.003	0.016	0.040
3031	777875.376	6360588.595	628.728	1950	32	0.016	0.001	0.016	0.038
3032	777875.379	6360588.594	628.719	2011	33	0.019	0.002	0.019	0.047
3033	777875.38	6360588.596	628.721	2072	34	0.020	0.000	0.020	0.045
3034	777875.384	6360588.602	628.721	2133	35	0.024	0.006	0.024	0.045
3035	777875.383	6360588.603	628.723	2194	36	0.023	0.007	0.024	0.043
3036	777875.377	6360588.6	628.722	2255	37	0.017	0.004	0.017	0.044
3037	777875.379	6360588.597	628.722	2316	38	0.019	0.001	0.019	0.044
3038	777875.38	6360588.593	628.725	2377	39	0.020	0.003	0.020	0.041
3039	777875.379	6360588.594	628.720	2438	40	0.019	0.002	0.019	0.046
3040	777875.375	6360588.605	628.727	2499	41	0.015	0.009	0.017	0.039
3041	777875.375	6360588.603	628.729	2560	42	0.015	0.007	0.016	0.037
3042	777875.382	6360588.598	628.718	2621	43	0.022	0.002	0.022	0.048
3043	777875.382	6360588.595	628.720	2682	44	0.022	0.001	0.022	0.046
3044	777875.372	6360588.593	628.711	2743	45	0.012	0.003	0.012	0.055
3045	777875.371	6360588.593	628.716	2804	46	0.011	0.003	0.011	0.050

3046	777875.366	6360588.603	628.718	2865	47	0.006	0.007	0.009	0.048
3047	777875.367	6360588.604	628.717	2926	48	0.007	0.008	0.010	0.049
3048	777875.361	6360588.61	628.721	2987	49	0.001	0.014	0.014	0.045
3049	777875.361	6360588.613	628.721	3048	50	0.001	0.017	0.017	0.045
3050	777875.368	6360588.614	628.725	3109	51	0.008	0.018	0.019	0.041
3051	777875.37	6360588.609	628.730	3170	52	0.010	0.013	0.016	0.036
3052	777875.374	6360588.604	628.745	3231	53	0.014	0.008	0.016	0.021
3053	777875.374	6360588.604	628.746	3292	54	0.014	0.008	0.016	0.020
3054	777875.37	6360588.603	628.759	3353	55	0.010	0.007	0.012	0.007
3055	777875.369	6360588.601	628.754	3414	56	0.009	0.005	0.010	0.012
3056	777875.367	6360588.599	628.740	3475	57	0.007	0.003	0.007	0.026
3057	777875.367	6360588.598	628.736	3536	58	0.007	0.002	0.007	0.030
3058	777875.38	6360588.583	628.724	3597	59	0.020	0.013	0.024	0.042
3059	777875.379	6360588.582	628.723	3658	60	0.019	0.014	0.023	0.043
3060	777875.378	6360588.581	628.723	3719	61	0.018	0.015	0.023	0.043
3061	777875.377	6360588.58	628.722	3780	62	0.017	0.016	0.023	0.044
3062	777875.376	6360588.58	628.721	3841	63	0.016	0.016	0.023	0.045
3063	777875.375	6360588.58	628.721	3902	64	0.015	0.016	0.022	0.045
3064	777875.374	6360588.581	628.721	3963	65	0.014	0.015	0.021	0.045
3065	777875.375	6360588.577	628.739	4024	66	0.015	0.019	0.024	0.027
3066	777875.374	6360588.579	628.742	4085	67	0.014	0.017	0.022	0.024
3067	777875.375	6360588.591	628.737	4146	68	0.015	0.005	0.016	0.029
3068	777875.379	6360588.587	628.744	4207	69	0.019	0.009	0.021	0.022
3069	777875.383	6360588.573	628.747	4268	70	0.023	0.023	0.033	0.019
3070	777875.384	6360588.574	628.751	4329	71	0.024	0.022	0.033	0.015
3071	777875.392	6360588.581	628.760	4390	72	0.032	0.015	0.035	0.006

3072	777875.395	6360588.579	628.765	4451	73	0.035	0.017	0.039	0.001
3073	777875.397	6360588.576	628.747	4512	74	0.037	0.020	0.042	0.019
3074	777875.394	6360588.58	628.744	4573	75	0.034	0.016	0.037	0.022
3075	777875.393	6360588.585	628.747	4634	76	0.033	0.011	0.035	0.019
3076	777875.394	6360588.583	628.743	4695	77	0.034	0.013	0.036	0.023
3077	777875.405	6360588.58	628.731	4756	78	0.045	0.016	0.047	0.035
3078	777875.402	6360588.582	628.729	4817	79	0.042	0.014	0.044	0.037
3079	777875.394	6360588.594	628.706	4878	80	0.034	0.002	0.034	0.060
3080	777875.393	6360588.592	628.716	4939	81	0.033	0.004	0.033	0.050
3081	777875.392	6360588.591	628.720	5000	82	0.032	0.005	0.032	0.046
3082	777875.392	6360588.589	628.721	5061	83	0.032	0.007	0.032	0.045
3083	777875.391	6360588.588	628.723	5122	84	0.031	0.008	0.032	0.043
3084	777875.391	6360588.587	628.724	5183	85	0.031	0.009	0.032	0.042
3085	777875.39	6360588.586	628.725	5244	86	0.030	0.010	0.031	0.041
3086	777875.39	6360588.586	628.725	5305	87	0.030	0.010	0.031	0.041
3087	777875.389	6360588.585	628.725	5366	88	0.029	0.011	0.031	0.041
3088	777875.389	6360588.585	628.725	5427	89	0.029	0.011	0.031	0.041
3089	777875.388	6360588.585	628.725	5488	90	0.028	0.011	0.030	0.041
3090	777875.388	6360588.585	628.725	5549	91	0.028	0.011	0.030	0.041
3091	777875.387	6360588.585	628.725	5610	92	0.027	0.011	0.029	0.041
3092	777875.387	6360588.585	628.725	5671	93	0.027	0.011	0.029	0.041
3093	777875.386	6360588.585	628.725	5732	94	0.026	0.011	0.028	0.041
3094	777875.386	6360588.585	628.725	5793	95	0.026	0.011	0.028	0.041
3095	777875.385	6360588.585	628.724	5854	96	0.025	0.011	0.027	0.042
3096	777875.385	6360588.585	628.725	5915	97	0.025	0.011	0.027	0.041
3097	777875.385	6360588.585	628.725	5976	98	0.025	0.011	0.027	0.041

3098	777875.384	6360588.585	628.726	6037	99	0.024	0.011	0.026	0.040
3099	777875.384	6360588.586	628.727	6098	100	0.024	0.010	0.026	0.039
3100	777875.384	6360588.586	628.727	6159	101	0.024	0.010	0.026	0.039
3101	777875.384	6360588.587	628.727	6220	102	0.024	0.009	0.025	0.039
3102	777875.382	6360588.593	628.724	6281	103	0.022	0.003	0.022	0.042
3103	777875.382	6360588.593	628.724	6342	104	0.022	0.003	0.022	0.042
3104	777875.382	6360588.595	628.719	6403	105	0.022	0.001	0.022	0.047
3105	777875.383	6360588.594	628.717	6464	106	0.023	0.002	0.023	0.049
3106	777875.385	6360588.593	628.711	6525	107	0.025	0.003	0.025	0.055
3107	777875.384	6360588.595	628.709	6586	108	0.024	0.001	0.024	0.057
3108	777875.379	6360588.593	628.719	6647	109	0.019	0.003	0.019	0.047
3109	777875.381	6360588.593	628.719	6708	110	0.021	0.003	0.021	0.047
3110	777875.388	6360588.603	628.725	6769	111	0.028	0.007	0.028	0.041
3111	777875.386	6360588.604	628.731	6830	112	0.026	0.008	0.027	0.035
3112	777875.387	6360588.602	628.734	6891	113	0.027	0.006	0.027	0.032
3113	777875.387	6360588.602	628.734	6952	114	0.027	0.006	0.027	0.032
3114	777875.38	6360588.598	628.723	7013	115	0.020	0.002	0.020	0.043
3115	777875.38	6360588.597	628.723	7074	116	0.020	0.001	0.020	0.043
3116	777875.377	6360588.599	628.732	7135	117	0.017	0.003	0.017	0.034
3117	777875.378	6360588.598	628.739	7196	118	0.018	0.002	0.018	0.027
3118	777875.375	6360588.593	628.754	7257	119	0.015	0.003	0.015	0.012
3119	777875.376	6360588.592	628.754	7318	120	0.016	0.004	0.016	0.012
3120	777875.372	6360588.596	628.755	7379	121	0.012	0.000	0.012	0.011