

Results - Baseline

TUBO - 512

Project Information

Project name: GPS
 Date created: 03/13/2013 10:43:12
 Time zone: 0h 00'
 Coordinate system name: WGS 1984
 Application software: LEICA Geo Office 8.1
 Processing kernel: PSI-Pro 3.0
 Processed: 08/10/2012 13:08:54

Point Information

	Reference: TUBO	Rover: 512
Receiver type / S/N:	GRX1200+ / 457133	SR399 / 2259
Antenna type / S/N:	AR25.R4 LEIT / -	SR299/399 Internal / -
Antenna height:	0.3113 m	1.5910 m
Initial coordinates:		
X:	4001470.6010 m	4006315.5265 m
Y:	1192345.3067 m	1198485.1749 m
Z:	4805795.3215 m	4800161.0036 m
Time span:	08/02/2012 06:33:25 - 08/02/2012 06:51:35	
Duration:	18' 10"	

Processing Parameters

Parameters	Selected	Used	Comment
Cut-off angle:	15°	15°	
Ephemeris type (GPS):	Broadcast	Broadcast	
Solution type:	Phase: all fix	Phase: all fix	
GNSS type:	GPS	GPS	
Frequency:	L1/E1 and L2	L1/E1 and L2	
Fix ambiguities up to:	80 km	80 km	
Min. duration for float solution (static):	5' 00"	5' 00"	
Sampling rate:	Use all	10	
Tropospheric model:	Hopfield	Hopfield	
Ionospheric model:	Automatic	Computed	
Use stochastic modelling:	Yes	Yes	
Min. distance:	8 km	8 km	
Ionospheric activity:	Automatic	Automatic	

Satellite Selection

Manually disabled GPS satellites (PRNs):	None
Manually disabled GLONASS satellites (Slot Id):	None
Manually disabled Galileo satellites:	None

Computed Iono Model

Number of computed models: 1
 Sampling rate of iono model: 30 sec

Height of single layer: 350 km

Model 1:

Origin of development: Latitude: 49° 12' 21.21026" N
Longitude: 16° 35' 34.20396" E
Time (UT): 08/02/2012 05:59:45

Validity: From epoch: 08/02/2012 05:59:45
To epoch: 08/02/2012 12:21:40

Coefficients:	Deg. Lat	Deg. time	Value	rms
	0	0	1.77869531	0.00621188
	0	1	0.29097984	0.00425001
	0	2	-0.06806873	0.00156810
	1	0	-0.11857350	0.00439172
	1	1	-0.07212590	0.00249849

Antenna Information

	Reference: TUBO	Rover: 512
Antenna type:	AR25.R4 LEIT	SR299/399 Internal
Horizontal offset:	0.0000 m	0.0000 m
Vertical offset:	0.0000 m	0.0000 m
Additional corrections:	Elevation and azimuth	Elevation and azimuth

Phase center offsets	L1 (Reference)	L2 (Reference)	L1 (Rover)	L2 (Rover)
Vertical:	0.1583 m	0.1540 m	0.1137 m	0.1195 m
East:	0.0010 m	0.0001 m	0.0000 m	0.0000 m
North:	0.0006 m	0.0001 m	0.0000 m	0.0000 m

Additional corrections (Reference):

A \ Z	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
0° L1	0.0	0.5	1.9	4.1	6.7	9.4	11.9	13.9	15.3	15.9	15.9	15.6	14.9	14.1	13.1	11.9	10.5	9.2	8.4
0° L2	0.0	0.0	0.1	0.2	0.4	0.8	1.2	1.5	1.8	2.0	2.3	2.7	3.2	4.0	4.8	5.6	6.2	6.7	7.2

Additional corrections (Rover):

A \ Z	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
0° L1	0.0	1.0	2.8	5.1	7.5	9.7	11.6	12.9	13.6	13.7	13.1	12.0	10.5	8.9	7.3	6.2	5.8	6.8	9.5
0° L2	0.0	0.0	0.2	0.5	0.9	1.3	1.8	2.2	2.6	2.8	2.8	2.7	2.2	1.3	0.0	-1.8	-4.3	-7.4	-11.4

Observation Statistics

Number of common epochs: 110

GPS:

Number of used observations (L1): 555
Number of rejected observations (L1): 75
Number of used observations (L2): 440
Number of rejected observations (L2): 69

Tracking Status GPS L1:

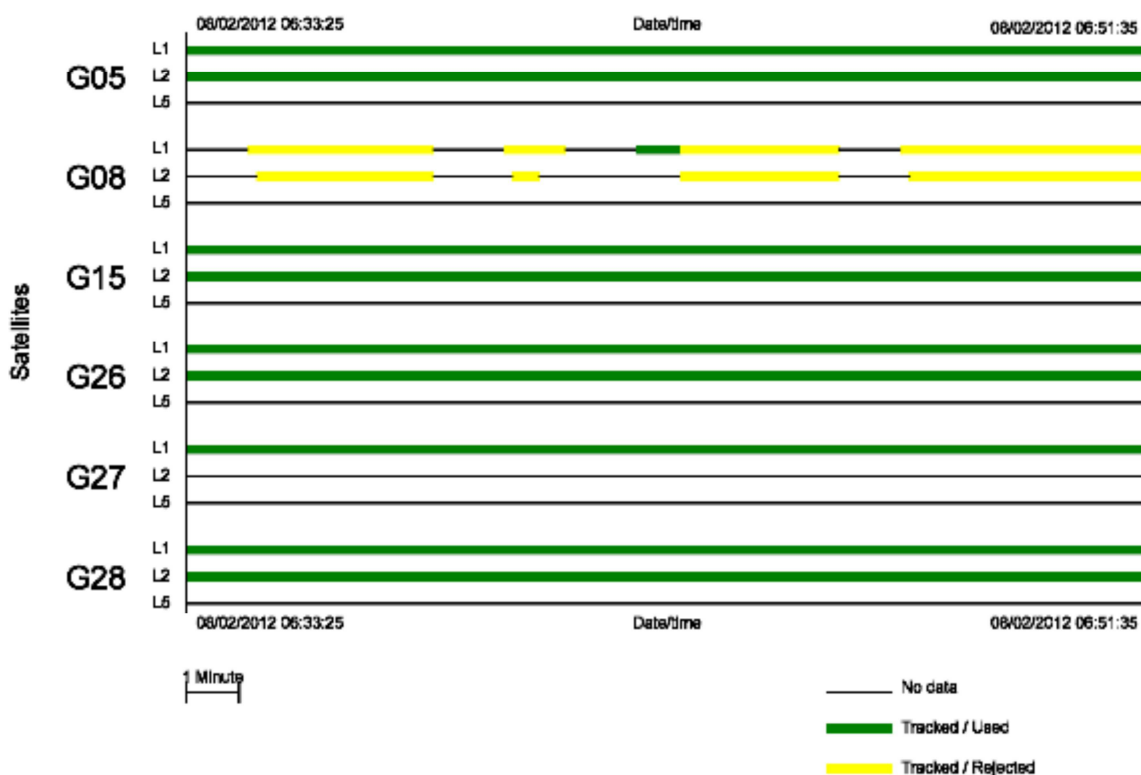
Satellite		From	To	Status
G05	✓	08/02/2012 06:33:25	08/02/2012 06:51:35	Tracked / Used
G08	✗	08/02/2012 06:33:25	08/02/2012 06:34:35	No data
	✗	08/02/2012 06:34:35	08/02/2012 06:38:05	Tracked / Rejected
	✗	08/02/2012 06:38:05	08/02/2012 06:39:25	No data
	✗	08/02/2012 06:39:25	08/02/2012 06:40:35	Tracked / Rejected
	✗	08/02/2012 06:40:35	08/02/2012 06:41:55	No data
	✓	08/02/2012 06:41:55	08/02/2012 06:42:45	Tracked / Used
	✗	08/02/2012 06:42:45	08/02/2012 06:45:45	Tracked / Rejected
	✗	08/02/2012 06:45:45	08/02/2012 06:46:55	No data
	✗	08/02/2012 06:46:55	08/02/2012 06:51:35	Tracked / Rejected
G15	✓	08/02/2012 06:33:25	08/02/2012 06:51:35	Tracked / Used
G26	✓	08/02/2012 06:33:25	08/02/2012 06:51:35	Tracked / Used

G27	✓	08/02/2012 06:33:25	08/02/2012 06:51:35	Tracked / Used
G28	✓	08/02/2012 06:33:25	08/02/2012 06:51:35	Tracked / Used

Tracking Status GPS L2:

Satellite		From	To	Status
G05	✓	08/02/2012 06:33:25	08/02/2012 06:51:35	Tracked / Used
G08	✗	08/02/2012 06:33:25	08/02/2012 06:34:45	No data
	✗	08/02/2012 06:34:45	08/02/2012 06:38:05	Tracked / Rejected
	✗	08/02/2012 06:38:05	08/02/2012 06:39:35	No data
	✗	08/02/2012 06:39:35	08/02/2012 06:40:05	Tracked / Rejected
	✗	08/02/2012 06:40:05	08/02/2012 06:42:45	No data
	✗	08/02/2012 06:42:45	08/02/2012 06:45:45	Tracked / Rejected
	✗	08/02/2012 06:45:45	08/02/2012 06:47:05	No data
	✗	08/02/2012 06:47:05	08/02/2012 06:51:35	Tracked / Rejected
G15	✓	08/02/2012 06:33:25	08/02/2012 06:51:35	Tracked / Used
G26	✓	08/02/2012 06:33:25	08/02/2012 06:51:35	Tracked / Used
G28	✓	08/02/2012 06:33:25	08/02/2012 06:51:35	Tracked / Used

Tracking Summary GPS:



Ambiguity Statistics

Total number of GPS ambiguities:	19
Number of fixed GPS ambiguities:	10
Number of independent fixes:	10
Avg. time between independent fixes:	20"

Percentage of fixed epochs (L1):	91%
Percentage of fixed epochs (L2):	86%
Percentage of fixed epochs (overall):	100%

Overall Statistic:

Status	From	To	Duration
Fixed	08/02/2012 06:33:25	08/02/2012 06:51:35	18' 10"

Cycle Slip Statistics

Total number of cycle slips: 0

Final Coordinates

	Reference:TUBO	Rover:512	
Coordinates:			
X:	4001470.6010 m	4006315.5268 m	
Y:	1192345.3067 m	1198485.1749 m	
Z:	4805795.3215 m	4800161.0042 m	
Solution type:	Phase: all fix		
GNSS type:	GPS		
Frequency:	L1/E1 and L2		
Ambiguity:	Yes		
Quality:	Sd. X: 0.0026 m Posn. Qlty: 0.0017 m	Sd. Y: 0.0008 m Hgt. Qlty: 0.0027 m	Sd. Z: 0.0017 m Sd. Slope: 0.0007 m
M0:	0.7194 m		
Cofactor matrix Qxx:	0.00001320	-0.00000235 0.00000113	0.00000737 -0.00000140 0.00000568
Baseline vector:	dLat: -0° 04' 35.96406" Slope: 9639.3371 m	dLon: 0° 03' 41.99452"	dHgt: -79.1182 m
DOPs (min-max):	GDOP: 8.2 - 8.9 PDOP: 6.5 - 7.0	HDOP: 3.2 - 3.5	VDOP: 5.6 - 6.0
Number of used satellites:	GPS: 6 GLONASS: -		

Results - Baseline

TUBO - 512.1

Project Information

Project name: GPS
 Date created: 03/13/2013 10:43:12
 Time zone: 0h 00'
 Coordinate system name: WGS 1984
 Application software: LEICA Geo Office 8.1
 Processing kernel: PSI-Pro 3.0
 Processed: 08/10/2012 13:08:54

Point Information

Receiver type / S/N:	Reference: TUBO GRX1200+ / 457133	Rover: 512.1 SR399 / 2259
Antenna type / S/N:	AR25.R4 LEIT / -	SR299/399 Internal / -
Antenna height:	0.3113 m	1.5910 m
Initial coordinates:		
X:	4001470.6010 m	4006315.5713 m
Y:	1192345.3067 m	1198485.1737 m
Z:	4805795.3215 m	4800160.9648 m
Time span:	08/02/2012 07:34:35 - 08/02/2012 07:49:25	
Duration:	14' 50"	

Processing Parameters

Parameters	Selected	Used	Comment
Cut-off angle:	15°	15°	
Ephemeris type (GPS):	Broadcast	Broadcast	
Solution type:	Phase: all fix	Phase: all fix	
GNSS type:	GPS	GPS	
Frequency:	L1/E1 and L2	L1/E1 and L2	
Fix ambiguities up to:	80 km	80 km	
Min. duration for float solution (static):	5' 00"	5' 00"	
Sampling rate:	Use all	10	
Tropospheric model:	Hopfield	Hopfield	
Ionospheric model:	Automatic	Computed	
Use stochastic modelling:	Yes	Yes	
Min. distance:	8 km	8 km	
Ionospheric activity:	Automatic	Automatic	

Satellite Selection

Manually disabled GPS satellites (PRNs):	None
Manually disabled GLONASS satellites (Slot Id):	None
Manually disabled Galileo satellites:	None

Computed Iono Model

Number of computed models: 1
 Sampling rate of iono model: 30 sec

Height of single layer: 350 km

Model 1:

Origin of development: Latitude: 49° 12' 21.21026" N
Longitude: 16° 35' 34.20396" E
Time (UT): 08/02/2012 05:59:45

Validity: From epoch: 08/02/2012 05:59:45
To epoch: 08/02/2012 12:21:40

Coefficients:	Deg. Lat	Deg. time	Value	rms
	0	0	1.77869531	0.00621188
	0	1	0.29097984	0.00425001
	0	2	-0.06806873	0.00156810
	1	0	-0.11857350	0.00439172
	1	1	-0.07212590	0.00249849

Antenna Information

	Reference: TUBO	Rover: 512.1
Antenna type:	AR25.R4 LEIT	SR299/399 Internal
Horizontal offset:	0.0000 m	0.0000 m
Vertical offset:	0.0000 m	0.0000 m
Additional corrections:	Elevation and azimuth	Elevation and azimuth

Phase center offsets	L1 (Reference)	L2 (Reference)	L1 (Rover)	L2 (Rover)
Vertical:	0.1583 m	0.1540 m	0.1137 m	0.1195 m
East:	0.0010 m	0.0001 m	0.0000 m	0.0000 m
North:	0.0006 m	0.0001 m	0.0000 m	0.0000 m

Additional corrections (Reference):

A \ Z	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
0° L1	0.0	0.5	1.9	4.1	6.7	9.4	11.9	13.9	15.3	15.9	15.9	15.6	14.9	14.1	13.1	11.9	10.5	9.2	8.4
0° L2	0.0	0.0	0.1	0.2	0.4	0.8	1.2	1.5	1.8	2.0	2.3	2.7	3.2	4.0	4.8	5.6	6.2	6.7	7.2

Additional corrections (Rover):

A \ Z	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
0° L1	0.0	1.0	2.8	5.1	7.5	9.7	11.6	12.9	13.6	13.7	13.1	12.0	10.5	8.9	7.3	6.2	5.8	6.8	9.5
0° L2	0.0	0.0	0.2	0.5	0.9	1.3	1.8	2.2	2.6	2.8	2.8	2.7	2.2	1.3	0.0	-1.8	-4.3	-7.4	-11.4

Observation Statistics

Number of common epochs: 90

GPS:

Number of used observations (L1): 535
Number of rejected observations (L1): 75
Number of used observations (L2): 528
Number of rejected observations (L2): 24

Tracking Status GPS L1:

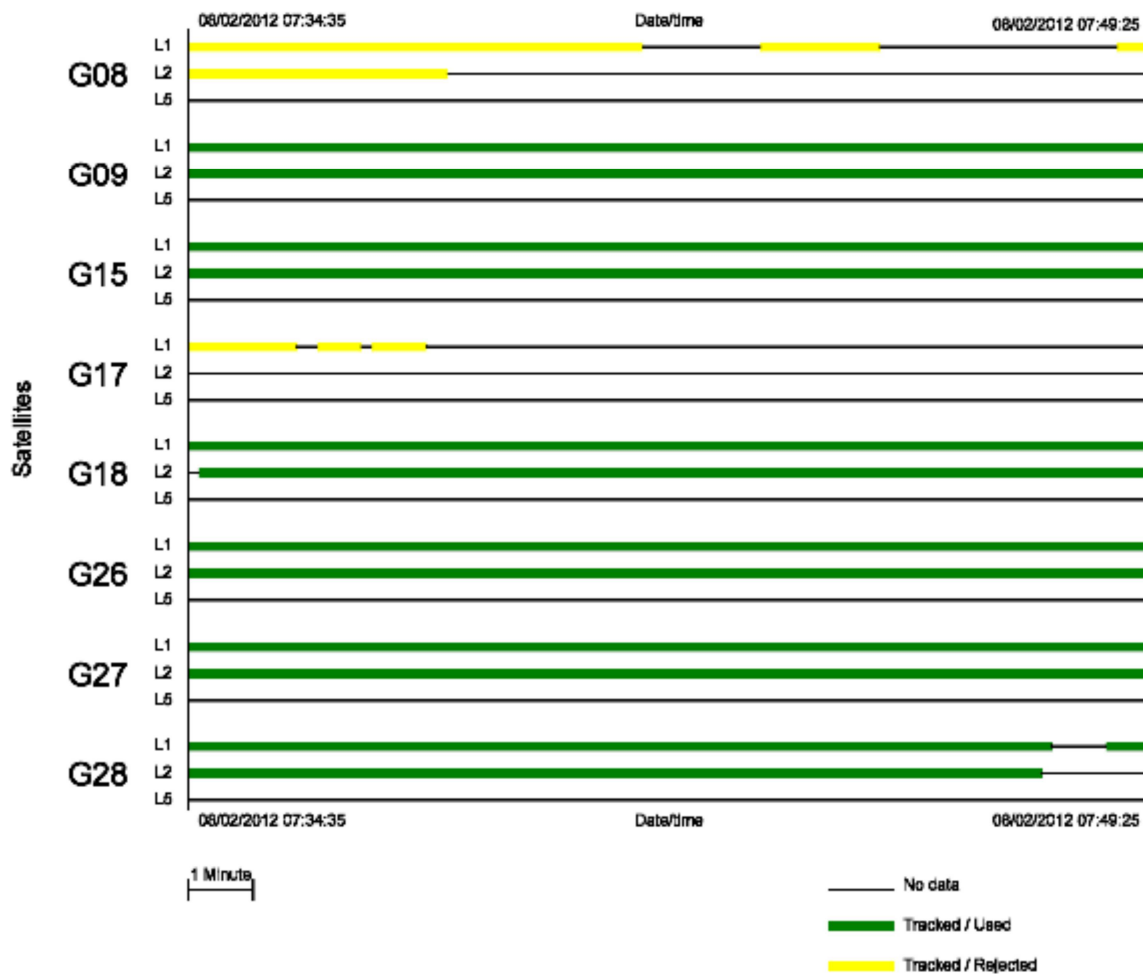
Satellite		From	To	Status
G08	✗	08/02/2012 07:34:35	08/02/2012 07:41:35	Tracked / Rejected
	✗	08/02/2012 07:41:35	08/02/2012 07:43:25	No data
	✗	08/02/2012 07:43:25	08/02/2012 07:45:15	Tracked / Rejected
	✗	08/02/2012 07:45:15	08/02/2012 07:48:55	No data
	✗	08/02/2012 07:48:55	08/02/2012 07:49:25	Tracked / Rejected
	✗	08/02/2012 07:49:25	08/02/2012 07:49:25	No data
G09	✓	08/02/2012 07:34:35	08/02/2012 07:49:25	Tracked / Used
G15	✓	08/02/2012 07:34:35	08/02/2012 07:49:25	Tracked / Used
G17	✗	08/02/2012 07:34:35	08/02/2012 07:36:15	Tracked / Rejected
	✗	08/02/2012 07:36:15	08/02/2012 07:36:35	No data
	✗	08/02/2012 07:36:35	08/02/2012 07:37:15	Tracked / Rejected
	✗	08/02/2012 07:37:15	08/02/2012 07:37:25	No data

	×	08/02/2012 07:37:25	08/02/2012 07:38:15	Tracked / Rejected
	×	08/02/2012 07:38:15	08/02/2012 07:49:25	No data
G18	✓	08/02/2012 07:34:35	08/02/2012 07:49:25	Tracked / Used
G26	✓	08/02/2012 07:34:35	08/02/2012 07:49:25	Tracked / Used
G27	✓	08/02/2012 07:34:35	08/02/2012 07:49:25	Tracked / Used
G28	✓	08/02/2012 07:34:35	08/02/2012 07:47:55	Tracked / Used
	×	08/02/2012 07:47:55	08/02/2012 07:48:45	No data
	✓	08/02/2012 07:48:45	08/02/2012 07:49:25	Tracked / Used

Tracking Status GPS L2:

Satellite		From	To	Status
G08	×	08/02/2012 07:34:35	08/02/2012 07:38:35	Tracked / Rejected
	×	08/02/2012 07:38:35	08/02/2012 07:49:25	No data
G09	✓	08/02/2012 07:34:35	08/02/2012 07:49:25	Tracked / Used
G15	✓	08/02/2012 07:34:35	08/02/2012 07:49:25	Tracked / Used
G18	×	08/02/2012 07:34:35	08/02/2012 07:34:45	No data
	✓	08/02/2012 07:34:45	08/02/2012 07:49:25	Tracked / Used
G26	✓	08/02/2012 07:34:35	08/02/2012 07:49:25	Tracked / Used
G27	✓	08/02/2012 07:34:35	08/02/2012 07:49:25	Tracked / Used
G28	✓	08/02/2012 07:34:35	08/02/2012 07:47:45	Tracked / Used
	×	08/02/2012 07:47:45	08/02/2012 07:49:25	No data

Tracking Summary GPS:



Total number of GPS ambiguities:	20
Number of fixed GPS ambiguities:	13
Number of independent fixes:	7
Avg. time between independent fixes:	20"
Percentage of fixed epochs (L1):	88%
Percentage of fixed epochs (L2):	96%
Percentage of fixed epochs (overall):	100%

Overall Statistic:

Status	From	To	Duration
Fixed	08/02/2012 07:34:35	08/02/2012 07:49:25	14' 50"

Cycle Slip Statistics

Total number of cycle slips: 0

Final Coordinates

	Reference:TUBO	Rover:512.1	
Coordinates:			
X:	4001470.6010 m	4006315.5715 m	
Y:	1192345.3067 m	1198485.1738 m	
Z:	4805795.3215 m	4800160.9652 m	
Solution type:	Phase: all fix		
GNSS type:	GPS		
Frequency:	L1/E1 and L2		
Ambiguity:	Yes		
Quality:	Sd. X: 0.0016 m Posn. Qlty: 0.0016 m	Sd. Y: 0.0006 m Hgt. Qlty: 0.0027 m	Sd. Z: 0.0026 m Sd. Slope: 0.0013 m
M0:	0.8198 m		
Cofactor matrix Qxx:	0.00000397	-0.00000010 0.00000051	0.00000389 -0.00000013 0.00001006
Baseline vector:	dLat: -0° 04' 35.96592" Slope: 9639.3817 m	dLon: 0° 03' 41.99383"	dHgt: -79.1199 m
DOPs (min-max):	GDOP: 4.9 - 6.2 PDOP: 4.0 - 5.5	HDOP: 2.1 - 4.3	VDOP: 3.4 - 4.0
Number of used satellites:	GPS: 6 GLONASS: -		

Results - Baseline

TUBO - 4007

Project Information

Project name: GPS
 Date created: 03/13/2013 10:43:12
 Time zone: 0h 00'
 Coordinate system name: WGS 1984
 Application software: LEICA Geo Office 8.1
 Processing kernel: PSI-Pro 3.0
 Processed: 08/10/2012 13:08:54

Point Information

	Reference: TUBO	Rover: 4007
Receiver type / S/N:	GRX1200+ / 457133	SR399 / 2259
Antenna type / S/N:	AR25.R4 LEIT / -	SR299/399 Internal / -
Antenna height:	0.3113 m	1.7340 m
Initial coordinates:		
X:	4001470.6010 m	4006255.2710 m
Y:	1192345.3067 m	1198442.9629 m
Z:	4805795.3215 m	4800220.5351 m
Time span:	08/02/2012 07:56:35 - 08/02/2012 08:11:25	
Duration:	14' 50"	

Processing Parameters

Parameters	Selected	Used	Comment
Cut-off angle:	15°	15°	
Ephemeris type (GPS):	Broadcast	Broadcast	
Solution type:	Phase: all fix	Phase: all fix	
GNSS type:	GPS	GPS	
Frequency:	L1/E1 and L2	L1/E1 and L2	
Fix ambiguities up to:	80 km	80 km	
Min. duration for float solution (static):	5' 00"	5' 00"	
Sampling rate:	Use all	10	
Tropospheric model:	Hopfield	Hopfield	
Ionospheric model:	Automatic	Computed	
Use stochastic modelling:	Yes	Yes	
Min. distance:	8 km	8 km	
Ionospheric activity:	Automatic	Automatic	

Satellite Selection

Manually disabled GPS satellites (PRNs):	None
Manually disabled GLONASS satellites (Slot Id):	None
Manually disabled Galileo satellites:	None

Computed Iono Model

Number of computed models: 1
 Sampling rate of iono model: 30 sec

Height of single layer: 350 km

Model 1:

Origin of development: Latitude: 49° 12' 21.21026" N
Longitude: 16° 35' 34.20396" E
Time (UT): 08/02/2012 05:59:45

Validity: From epoch: 08/02/2012 05:59:45
To epoch: 08/02/2012 12:21:40

Coefficients:	Deg. Lat	Deg. time	Value	rms
	0	0	1.77869531	0.00621188
	0	1	0.29097984	0.00425001
	0	2	-0.06806873	0.00156810
	1	0	-0.11857350	0.00439172
	1	1	-0.07212590	0.00249849

Antenna Information

	Reference: TUBO	Rover: 4007
Antenna type:	AR25.R4 LEIT	SR299/399 Internal
Horizontal offset:	0.0000 m	0.0000 m
Vertical offset:	0.0000 m	0.0000 m
Additional corrections:	Elevation and azimuth	Elevation and azimuth

Phase center offsets	L1 (Reference)	L2 (Reference)	L1 (Rover)	L2 (Rover)
Vertical:	0.1583 m	0.1540 m	0.1137 m	0.1195 m
East:	0.0010 m	0.0001 m	0.0000 m	0.0000 m
North:	0.0006 m	0.0001 m	0.0000 m	0.0000 m

Additional corrections (Reference):

A \ Z	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
0° L1	0.0	0.5	1.9	4.1	6.7	9.4	11.9	13.9	15.3	15.9	15.9	15.6	14.9	14.1	13.1	11.9	10.5	9.2	8.4
0° L2	0.0	0.0	0.1	0.2	0.4	0.8	1.2	1.5	1.8	2.0	2.3	2.7	3.2	4.0	4.8	5.6	6.2	6.7	7.2

Additional corrections (Rover):

A \ Z	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
0° L1	0.0	1.0	2.8	5.1	7.5	9.7	11.6	12.9	13.6	13.7	13.1	12.0	10.5	8.9	7.3	6.2	5.8	6.8	9.5
0° L2	0.0	0.0	0.2	0.5	0.9	1.3	1.8	2.2	2.6	2.8	2.8	2.7	2.2	1.3	0.0	-1.8	-4.3	-7.4	-11.4

Observation Statistics

Number of common epochs: 90

GPS:

Number of used observations (L1): 582
Number of rejected observations (L1): 1
Number of used observations (L2): 582
Number of rejected observations (L2): 1

Tracking Status GPS L1:

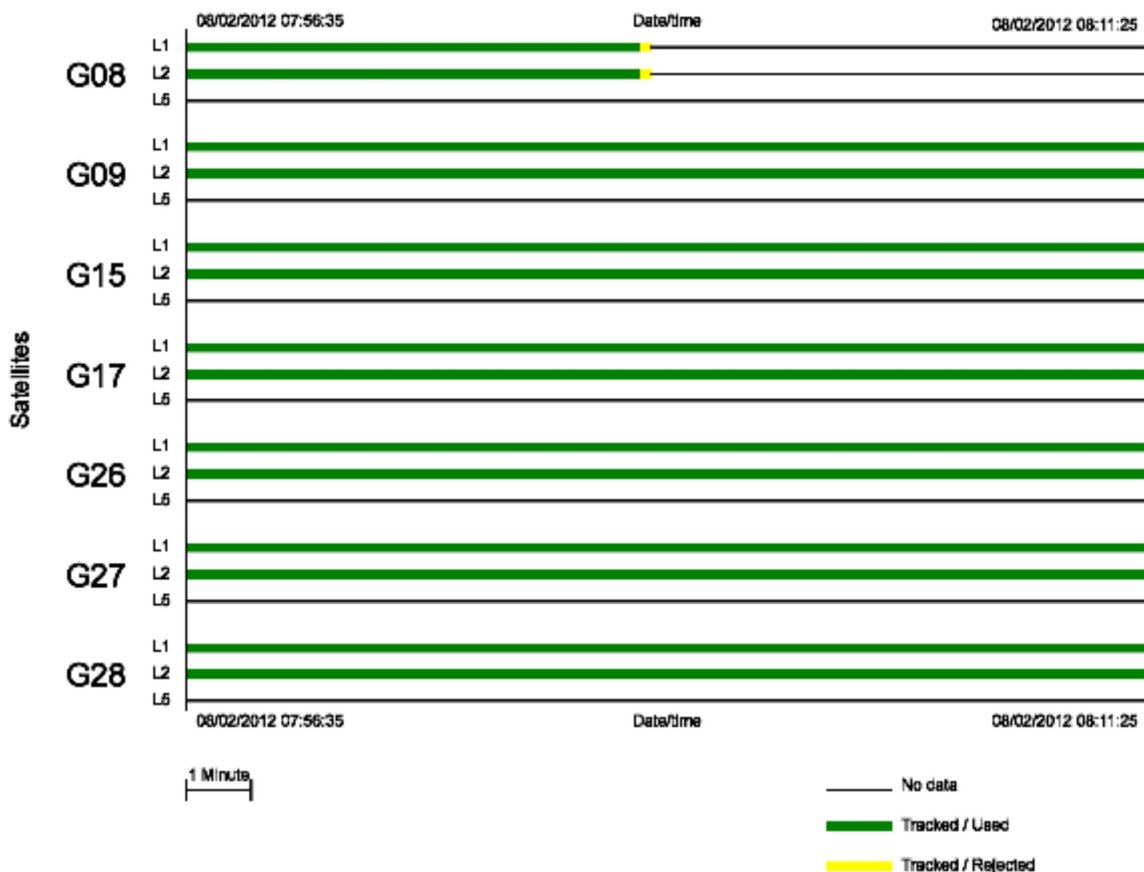
Satellite		From	To	Status
G08	✓	08/02/2012 07:56:35	08/02/2012 08:03:35	Tracked / Used
	✗	08/02/2012 08:03:35	08/02/2012 08:03:45	Tracked / Rejected
	✗	08/02/2012 08:03:45	08/02/2012 08:11:25	No data
G09	✓	08/02/2012 07:56:35	08/02/2012 08:11:25	Tracked / Used
G15	✓	08/02/2012 07:56:35	08/02/2012 08:11:25	Tracked / Used
G17	✓	08/02/2012 07:56:35	08/02/2012 08:11:25	Tracked / Used
G26	✓	08/02/2012 07:56:35	08/02/2012 08:11:25	Tracked / Used
G27	✓	08/02/2012 07:56:35	08/02/2012 08:11:25	Tracked / Used
G28	✓	08/02/2012 07:56:35	08/02/2012 08:11:25	Tracked / Used

Tracking Status GPS L2:

Satellite	From	To	Status
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G08	✓	08/02/2012 07:56:35	08/02/2012 08:03:35	Tracked / Used
	✗	08/02/2012 08:03:35	08/02/2012 08:03:45	Tracked / Rejected
	✗	08/02/2012 08:03:45	08/02/2012 08:11:25	No data
G09	✓	08/02/2012 07:56:35	08/02/2012 08:11:25	Tracked / Used
G15	✓	08/02/2012 07:56:35	08/02/2012 08:11:25	Tracked / Used
G17	✓	08/02/2012 07:56:35	08/02/2012 08:11:25	Tracked / Used
G26	✓	08/02/2012 07:56:35	08/02/2012 08:11:25	Tracked / Used
G27	✓	08/02/2012 07:56:35	08/02/2012 08:11:25	Tracked / Used
G28	✓	08/02/2012 07:56:35	08/02/2012 08:11:25	Tracked / Used

Tracking Summary GPS:



Ambiguity Statistics

Total number of GPS ambiguities:	14
Number of fixed GPS ambiguities:	14
Number of independent fixes:	45
Avg. time between independent fixes:	10"
Percentage of fixed epochs (L1):	100%
Percentage of fixed epochs (L2):	100%
Percentage of fixed epochs (overall):	100%

Overall Statistic:

Status	From	To	Duration
Fixed	08/02/2012 07:56:35	08/02/2012 08:11:25	14' 50"

Cycle Slip Statistics

Total number of cycle slips: 0

Final Coordinates

	Reference:TUBO	Rover:4007	
Coordinates:			
X:	4001470.6010 m	4006255.2746 m	
Y:	1192345.3067 m	1198442.9638 m	
Z:	4805795.3215 m	4800220.5394 m	
Solution type:	Phase: all fix		
GNSS type:	GPS		
Frequency:	L1/E1 and L2		
Ambiguity:	Yes		
Quality:	Sd. X: 0.0011 m Posn. Qlty: 0.0008 m	Sd. Y: 0.0006 m Hgt. Qlty: 0.0018 m	Sd. Z: 0.0015 m Sd. Slope: 0.0006 m
M0:	0.6059 m		
Cofactor matrix Qxx:	0.00000333	0.00000122 0.00000098	0.00000327 0.00000187 0.00000627
Baseline vector:	dLat: -0° 04' 32.99398" Slope: 9547.3933 m	dLon: 0° 03' 40.85153"	dHgt: -79.7863 m
DOPs (min-max):	GDOP: 3.3 - 5.7 PDOP: 2.8 - 4.7	HDOP: 1.5 - 1.6	VDOP: 2.3 - 4.4
Number of used satellites:	GPS: 7 GLONASS: -		

Results - Baseline

TUBO - 4007.1

Project Information

Project name: GPS
 Date created: 03/13/2013 10:43:12
 Time zone: 0h 00'
 Coordinate system name: WGS 1984
 Application software: LEICA Geo Office 8.1
 Processing kernel: PSI-Pro 3.0
 Processed: 08/10/2012 13:08:55

Point Information

	Reference: TUBO	Rover: 4007.1
Receiver type / S/N:	GRX1200+ / 457133	SR399 / 2259
Antenna type / S/N:	AR25.R4 LEIT / -	SR299/399 Internal / -
Antenna height:	0.3113 m	1.7340 m
Initial coordinates:		
X:	4001470.6010 m	4006255.2716 m
Y:	1192345.3067 m	1198442.9544 m
Z:	4805795.3215 m	4800220.5196 m
Time span:	08/02/2012 09:12:15 - 08/02/2012 09:28:55	
Duration:	16' 40"	

Processing Parameters

Parameters	Selected	Used	Comment
Cut-off angle:	15°	15°	
Ephemeris type (GPS):	Broadcast	Broadcast	
Solution type:	Phase: all fix	Phase: all fix	
GNSS type:	GPS	GPS	
Frequency:	L1/E1 and L2	L1/E1 and L2	
Fix ambiguities up to:	80 km	80 km	
Min. duration for float solution (static):	5' 00"	5' 00"	
Sampling rate:	Use all	10	
Tropospheric model:	Hopfield	Hopfield	
Ionospheric model:	Automatic	Computed	
Use stochastic modelling:	Yes	Yes	
Min. distance:	8 km	8 km	
Ionospheric activity:	Automatic	Automatic	

Satellite Selection

Manually disabled GPS satellites (PRNs):	None
Manually disabled GLONASS satellites (Slot Id):	None
Manually disabled Galileo satellites:	None

Computed Iono Model

Number of computed models: 1
 Sampling rate of iono model: 30 sec

Height of single layer: 350 km

Model 1:

Origin of development: Latitude: 49° 12' 21.21026" N
Longitude: 16° 35' 34.20396" E
Time (UT): 08/02/2012 05:59:45

Validity: From epoch: 08/02/2012 05:59:45
To epoch: 08/02/2012 12:21:40

Coefficients:	Deg. Lat	Deg. time	Value	rms
	0	0	1.77869531	0.00621188
	0	1	0.29097984	0.00425001
	0	2	-0.06806873	0.00156810
	1	0	-0.11857350	0.00439172
	1	1	-0.07212590	0.00249849

Antenna Information

	Reference: TUBO	Rover: 4007.1
Antenna type:	AR25.R4 LEIT	SR299/399 Internal
Horizontal offset:	0.0000 m	0.0000 m
Vertical offset:	0.0000 m	0.0000 m
Additional corrections:	Elevation and azimuth	Elevation and azimuth

Phase center offsets	L1 (Reference)	L2 (Reference)	L1 (Rover)	L2 (Rover)
Vertical:	0.1583 m	0.1540 m	0.1137 m	0.1195 m
East:	0.0010 m	0.0001 m	0.0000 m	0.0000 m
North:	0.0006 m	0.0001 m	0.0000 m	0.0000 m

Additional corrections (Reference):

A \ Z	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
0° L1	0.0	0.5	1.9	4.1	6.7	9.4	11.9	13.9	15.3	15.9	15.9	15.6	14.9	14.1	13.1	11.9	10.5	9.2	8.4
0° L2	0.0	0.0	0.1	0.2	0.4	0.8	1.2	1.5	1.8	2.0	2.3	2.7	3.2	4.0	4.8	5.6	6.2	6.7	7.2

Additional corrections (Rover):

A \ Z	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
0° L1	0.0	1.0	2.8	5.1	7.5	9.7	11.6	12.9	13.6	13.7	13.1	12.0	10.5	8.9	7.3	6.2	5.8	6.8	9.5
0° L2	0.0	0.0	0.2	0.5	0.9	1.3	1.8	2.2	2.6	2.8	2.8	2.7	2.2	1.3	0.0	-1.8	-4.3	-7.4	-11.4

Observation Statistics

Number of common epochs: 101

GPS:

Number of used observations (L1): 476
Number of rejected observations (L1): 164
Number of used observations (L2): 543
Number of rejected observations (L2): 47

Tracking Status GPS L1:

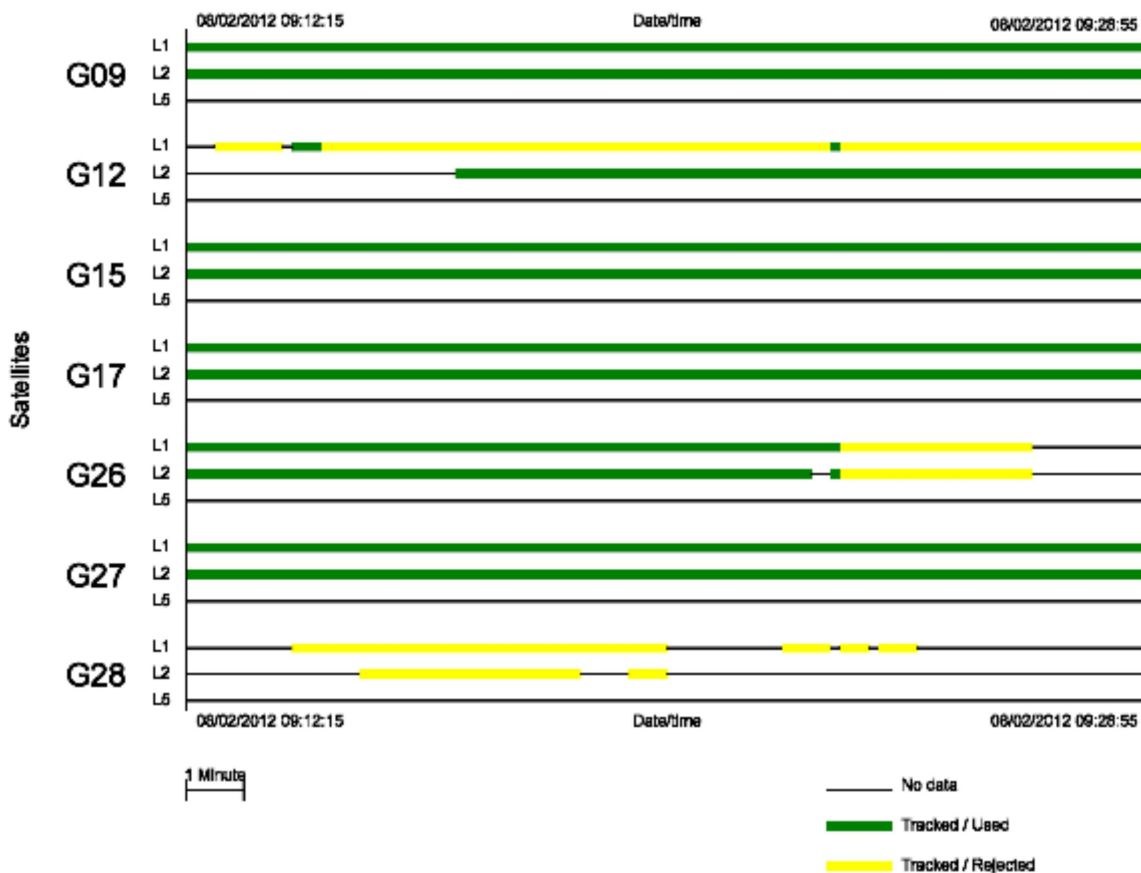
Satellite		From	To	Status
G09	✓	08/02/2012 09:12:15	08/02/2012 09:28:55	Tracked / Used
G12	✗	08/02/2012 09:12:15	08/02/2012 09:12:45	No data
	✗	08/02/2012 09:12:45	08/02/2012 09:13:55	Tracked / Rejected
	✗	08/02/2012 09:13:55	08/02/2012 09:14:05	No data
	✓	08/02/2012 09:14:05	08/02/2012 09:14:35	Tracked / Used
	✗	08/02/2012 09:14:35	08/02/2012 09:23:25	Tracked / Rejected
	✓	08/02/2012 09:23:25	08/02/2012 09:23:35	Tracked / Used
	✗	08/02/2012 09:23:35	08/02/2012 09:28:55	Tracked / Rejected
G15	✓	08/02/2012 09:12:15	08/02/2012 09:28:55	Tracked / Used
G17	✓	08/02/2012 09:12:15	08/02/2012 09:28:55	Tracked / Used
G26	✓	08/02/2012 09:12:15	08/02/2012 09:23:35	Tracked / Used
	✗	08/02/2012 09:23:35	08/02/2012 09:26:55	Tracked / Rejected

	✗	08/02/2012 09:26:55	08/02/2012 09:28:55	No data
G27	✓	08/02/2012 09:12:15	08/02/2012 09:28:55	Tracked / Used
G28	✗	08/02/2012 09:12:15	08/02/2012 09:14:05	No data
	✗	08/02/2012 09:14:05	08/02/2012 09:20:35	Tracked / Rejected
	✗	08/02/2012 09:20:35	08/02/2012 09:22:35	No data
	✗	08/02/2012 09:22:35	08/02/2012 09:23:25	Tracked / Rejected
	✗	08/02/2012 09:23:25	08/02/2012 09:23:35	No data
	✗	08/02/2012 09:23:35	08/02/2012 09:24:05	Tracked / Rejected
	✗	08/02/2012 09:24:05	08/02/2012 09:24:15	No data
	✗	08/02/2012 09:24:15	08/02/2012 09:24:55	Tracked / Rejected
	✗	08/02/2012 09:24:55	08/02/2012 09:28:55	No data

Tracking Status GPS L2:

Satellite		From	To	Status
G09	✓	08/02/2012 09:12:15	08/02/2012 09:28:55	Tracked / Used
G12	✗	08/02/2012 09:12:15	08/02/2012 09:16:55	No data
	✓	08/02/2012 09:16:55	08/02/2012 09:28:55	Tracked / Used
G15	✓	08/02/2012 09:12:15	08/02/2012 09:28:55	Tracked / Used
G17	✓	08/02/2012 09:12:15	08/02/2012 09:28:55	Tracked / Used
G26	✓	08/02/2012 09:12:15	08/02/2012 09:23:05	Tracked / Used
	✗	08/02/2012 09:23:05	08/02/2012 09:23:25	No data
	✓	08/02/2012 09:23:25	08/02/2012 09:23:35	Tracked / Used
	✗	08/02/2012 09:23:35	08/02/2012 09:26:55	Tracked / Rejected
	✗	08/02/2012 09:26:55	08/02/2012 09:28:55	No data
G27	✓	08/02/2012 09:12:15	08/02/2012 09:28:55	Tracked / Used
G28	✗	08/02/2012 09:12:15	08/02/2012 09:15:15	No data
	✗	08/02/2012 09:15:15	08/02/2012 09:19:05	Tracked / Rejected
	✗	08/02/2012 09:19:05	08/02/2012 09:19:55	No data
	✗	08/02/2012 09:19:55	08/02/2012 09:20:35	Tracked / Rejected
	✗	08/02/2012 09:20:35	08/02/2012 09:28:55	No data

Tracking Summary GPS:



Ambiguity Statistics

Total number of GPS ambiguities:	22
Number of fixed GPS ambiguities:	12
Number of independent fixes:	18
Avg. time between independent fixes:	20"
Percentage of fixed epochs (L1):	91%
Percentage of fixed epochs (L2):	92%
Percentage of fixed epochs (overall):	99%

Overall Statistic:

Status	From	To	Duration
Fixed	08/02/2012 09:12:15	08/02/2012 09:23:25	11' 10"
Not fixed	08/02/2012 09:23:25	08/02/2012 09:23:35	10"
Fixed	08/02/2012 09:23:35	08/02/2012 09:28:55	5' 20"

Cycle Slip Statistics

Total number of cycle slips: 1

Time	Satellite	Frequency	Slip value	Flags
08/02/2012 09:23:05	G26	L1	-	flagged

Final Coordinates

	Reference:TUBO	Rover:4007.1	
Coordinates:			
X:	4001470.6010 m	4006255.2734 m	
Y:	1192345.3067 m	1198442.9599 m	
Z:	4805795.3215 m	4800220.5213 m	
Solution type:	Phase: all fix		
GNSS type:	GPS		
Frequency:	L1/E1 and L2		
Ambiguity:	Yes		
Quality:	Sd. X: 0.0018 m	Sd. Y: 0.0014 m	Sd. Z: 0.0012 m
	Posn. Qlty: 0.0014 m	Hgt. Qlty: 0.0022 m	Sd. Slope: 0.0012 m
M0:	0.6721 m		
Cofactor matrix Qxx:	0.00000695	0.00000440	0.00000391
		0.00000401	0.00000235
			0.00000342
Baseline vector:	dLat: -0° 04' 32.99431"	dLon: 0° 03' 40.85136"	dHgt: -79.8015 m
	Slope: 9547.4009 m		
DOPs (min-max):	GDOP: 4.4 - 9.2		
	PDOP: 3.6 - 7.4	HDOP: 1.9 - 3.9	VDOP: 3.0 - 6.3
Number of used satellites:	GPS: 6		
	GLONASS: -		

Results - Baseline

TUBO - 4011

Project Information

Project name: GPS
 Date created: 03/13/2013 10:43:12
 Time zone: 0h 00'
 Coordinate system name: WGS 1984
 Application software: LEICA Geo Office 8.1
 Processing kernel: PSI-Pro 3.0
 Processed: 08/10/2012 13:08:54

Point Information

	Reference: TUBO	Rover: 4011
Receiver type / S/N:	GRX1200+ / 457133	SR399 / 2259
Antenna type / S/N:	AR25.R4 LEIT / -	SR299/399 Internal / -
Antenna height:	0.3113 m	1.6540 m
Initial coordinates:		
X:	4001470.6010 m	4006415.2938 m
Y:	1192345.3067 m	1198320.3781 m
Z:	4805795.3215 m	4800112.6311 m
Time span:	08/02/2012 08:47:15 - 08/02/2012 09:05:05	
Duration:	17' 50"	

Processing Parameters

Parameters	Selected	Used	Comment
Cut-off angle:	15°	15°	
Ephemeris type (GPS):	Broadcast	Broadcast	
Solution type:	Phase: all fix	Phase: all fix	
GNSS type:	GPS	GPS	
Frequency:	L1/E1 and L2	L1/E1 and L2	
Fix ambiguities up to:	80 km	80 km	
Min. duration for float solution (static):	5' 00"	5' 00"	
Sampling rate:	Use all	10	
Tropospheric model:	Hopfield	Hopfield	
Ionospheric model:	Automatic	Computed	
Use stochastic modelling:	Yes	Yes	
Min. distance:	8 km	8 km	
Ionospheric activity:	Automatic	Automatic	

Satellite Selection

Manually disabled GPS satellites (PRNs):	None
Manually disabled GLONASS satellites (Slot Id):	None
Manually disabled Galileo satellites:	None

Computed Iono Model

Number of computed models: 1
 Sampling rate of iono model: 30 sec

Height of single layer: 350 km

Model 1:

Origin of development: Latitude: 49° 12' 21.21026" N
Longitude: 16° 35' 34.20396" E
Time (UT): 08/02/2012 05:59:45

Validity: From epoch: 08/02/2012 05:59:45
To epoch: 08/02/2012 12:21:40

Coefficients:	Deg. Lat	Deg. time	Value	rms
	0	0	1.77869531	0.00621188
	0	1	0.29097984	0.00425001
	0	2	-0.06806873	0.00156810
	1	0	-0.11857350	0.00439172
	1	1	-0.07212590	0.00249849

Antenna Information

	Reference: TUBO	Rover: 4011
Antenna type:	AR25.R4 LEIT	SR299/399 Internal
Horizontal offset:	0.0000 m	0.0000 m
Vertical offset:	0.0000 m	0.0000 m
Additional corrections:	Elevation and azimuth	Elevation and azimuth

Phase center offsets	L1 (Reference)	L2 (Reference)	L1 (Rover)	L2 (Rover)
Vertical:	0.1583 m	0.1540 m	0.1137 m	0.1195 m
East:	0.0010 m	0.0001 m	0.0000 m	0.0000 m
North:	0.0006 m	0.0001 m	0.0000 m	0.0000 m

Additional corrections (Reference):

A \ Z	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
0° L1	0.0	0.5	1.9	4.1	6.7	9.4	11.9	13.9	15.3	15.9	15.9	15.6	14.9	14.1	13.1	11.9	10.5	9.2	8.4
0° L2	0.0	0.0	0.1	0.2	0.4	0.8	1.2	1.5	1.8	2.0	2.3	2.7	3.2	4.0	4.8	5.6	6.2	6.7	7.2

Additional corrections (Rover):

A \ Z	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
0° L1	0.0	1.0	2.8	5.1	7.5	9.7	11.6	12.9	13.6	13.7	13.1	12.0	10.5	8.9	7.3	6.2	5.8	6.8	9.5
0° L2	0.0	0.0	0.2	0.5	0.9	1.3	1.8	2.2	2.6	2.8	2.8	2.7	2.2	1.3	0.0	-1.8	-4.3	-7.4	-11.4

Observation Statistics

Number of common epochs: 108

GPS:

Number of used observations (L1): 864
Number of rejected observations (L1): 0
Number of used observations (L2): 864
Number of rejected observations (L2): 0

Tracking Status GPS L1:

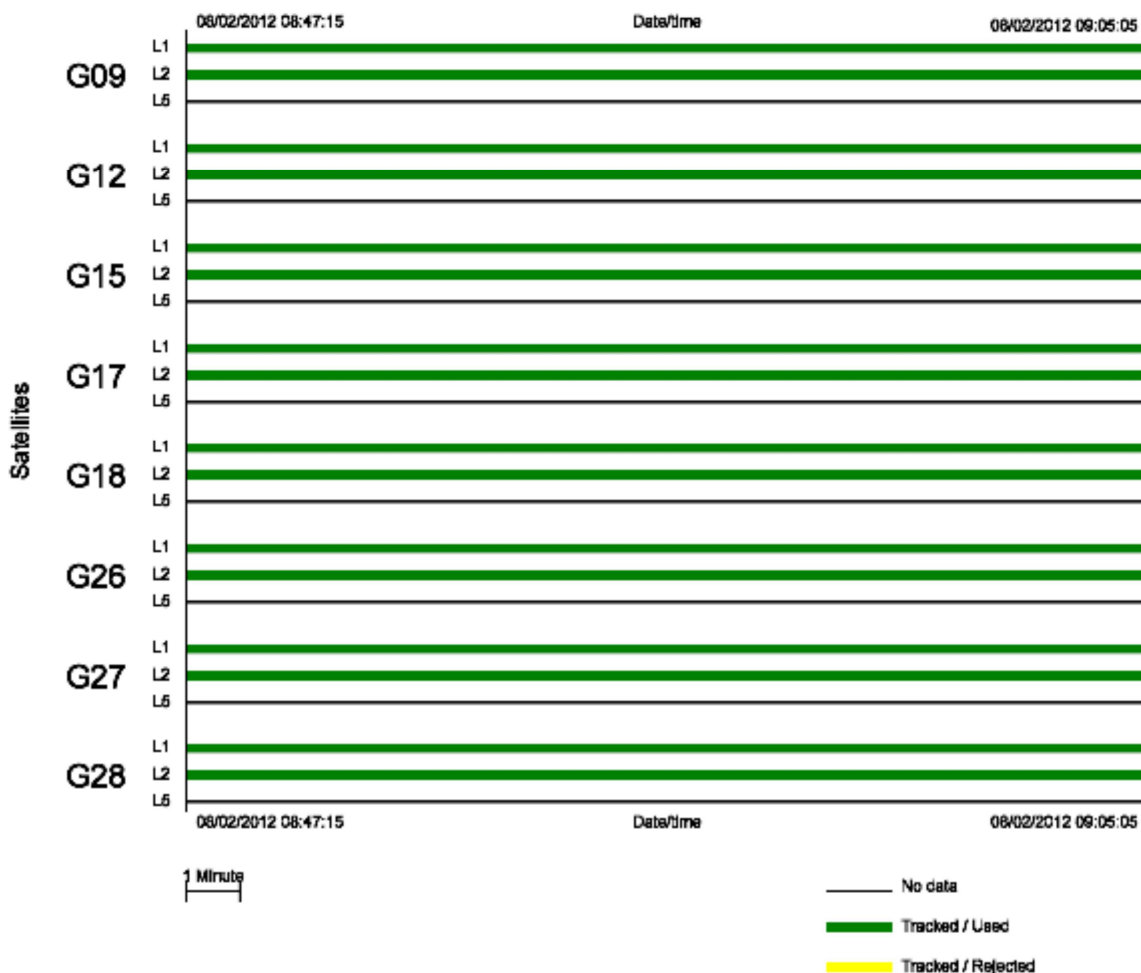
Satellite		From	To	Status
G09	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used
G12	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used
G15	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used
G17	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used
G18	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used
G26	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used
G27	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used
G28	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used

Tracking Status GPS L2:

Satellite		From	To	Status
G09	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used

G12	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used
G15	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used
G17	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used
G18	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used
G26	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used
G27	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used
G28	✓	08/02/2012 08:47:15	08/02/2012 09:05:05	Tracked / Used

Tracking Summary GPS:



Ambiguity Statistics

Total number of GPS ambiguities:	16
Number of fixed GPS ambiguities:	16
Number of independent fixes:	15
Avg. time between independent fixes:	1' 00"

Percentage of fixed epochs (L1):	100%
Percentage of fixed epochs (L2):	100%
Percentage of fixed epochs (overall):	100%

Overall Statistic:

Status	From	To	Duration
Fixed	08/02/2012 08:47:15	08/02/2012 09:05:05	17' 50"

Cycle Slip Statistics

Total number of cycle slips: 0

Final Coordinates

	Reference:TUBO	Rover:4011	
Coordinates:			
X:	4001470.6010 m	4006415.2942 m	
Y:	1192345.3067 m	1198320.3783 m	
Z:	4805795.3215 m	4800112.6316 m	
Solution type:	Phase: all fix		
GNSS type:	GPS		
Frequency:	L1/E1 and L2		
Ambiguity:	Yes		
Quality:	Sd. X: 0.0008 m Posn. Qlty: 0.0006 m	Sd. Y: 0.0005 m Hgt. Qlty: 0.0010 m	Sd. Z: 0.0007 m Sd. Slope: 0.0005 m
M0:	0.5794 m		
Cofactor matrix Qxx:	0.00000177	0.00000070 0.00000074	0.00000098 0.00000043 0.00000143
Baseline vector:	dLat: -0° 04' 38.17225" Slope: 9614.8030 m	dLon: 0° 03' 32.79663"	dHgt: -84.0548 m
DOPs (min-max):	GDOP: 2.0 - 2.2 PDOP: 1.7 - 1.9	HDOP: 1.0 - 1.0	VDOP: 1.4 - 1.6
Number of used satellites:	GPS: 8 GLONASS: -		

Results - Baseline

TUBO - 4011

Project Information

Project name: GPS
 Date created: 03/13/2013 10:43:12
 Time zone: 0h 00'
 Coordinate system name: WGS 1984
 Application software: LEICA Geo Office 8.1
 Processing kernel: PSI-Pro 3.0
 Processed: 08/10/2012 13:08:55

Point Information

	Reference: TUBO	Rover: 4011
Receiver type / S/N:	GRX1200+ / 457133	SR399 / 2259
Antenna type / S/N:	AR25.R4 LEIT / -	SR299/399 Internal / -
Antenna height:	0.3113 m	1.6540 m
Initial coordinates:		
X:	4001470.6010 m	4006415.2938 m
Y:	1192345.3067 m	1198320.3781 m
Z:	4805795.3215 m	4800112.6311 m
Time span:	08/02/2012 09:50:15 - 08/02/2012 10:05:45	
Duration:	15' 30"	

Processing Parameters

Parameters	Selected	Used	Comment
Cut-off angle:	15°	15°	
Ephemeris type (GPS):	Broadcast	Broadcast	
Solution type:	Phase: all fix	Phase: all fix	
GNSS type:	GPS	GPS	
Frequency:	L1/E1 and L2	L1/E1 and L2	
Fix ambiguities up to:	80 km	80 km	
Min. duration for float solution (static):	5' 00"	5' 00"	
Sampling rate:	Use all	10	
Tropospheric model:	Hopfield	Hopfield	
Ionospheric model:	Automatic	Computed	
Use stochastic modelling:	Yes	Yes	
Min. distance:	8 km	8 km	
Ionospheric activity:	Automatic	Automatic	

Satellite Selection

Manually disabled GPS satellites (PRNs):	None
Manually disabled GLONASS satellites (Slot Id):	None
Manually disabled Galileo satellites:	None

Computed Iono Model

Number of computed models: 1
 Sampling rate of iono model: 30 sec

Height of single layer: 350 km

Model 1:

Origin of development: Latitude: 49° 12' 21.21026" N
Longitude: 16° 35' 34.20396" E
Time (UT): 08/02/2012 05:59:45

Validity: From epoch: 08/02/2012 05:59:45
To epoch: 08/02/2012 12:21:40

Coefficients:	Deg. Lat	Deg. time	Value	rms
	0	0	1.77869531	0.00621188
	0	1	0.29097984	0.00425001
	0	2	-0.06806873	0.00156810
	1	0	-0.11857350	0.00439172
	1	1	-0.07212590	0.00249849

Antenna Information

	Reference: TUBO	Rover: 4011
Antenna type:	AR25.R4 LEIT	SR299/399 Internal
Horizontal offset:	0.0000 m	0.0000 m
Vertical offset:	0.0000 m	0.0000 m
Additional corrections:	Elevation and azimuth	Elevation and azimuth

Phase center offsets	L1 (Reference)	L2 (Reference)	L1 (Rover)	L2 (Rover)
Vertical:	0.1583 m	0.1540 m	0.1137 m	0.1195 m
East:	0.0010 m	0.0001 m	0.0000 m	0.0000 m
North:	0.0006 m	0.0001 m	0.0000 m	0.0000 m

Additional corrections (Reference):

A \ Z	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
0° L1	0.0	0.5	1.9	4.1	6.7	9.4	11.9	13.9	15.3	15.9	15.9	15.6	14.9	14.1	13.1	11.9	10.5	9.2	8.4
0° L2	0.0	0.0	0.1	0.2	0.4	0.8	1.2	1.5	1.8	2.0	2.3	2.7	3.2	4.0	4.8	5.6	6.2	6.7	7.2

Additional corrections (Rover):

A \ Z	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
0° L1	0.0	1.0	2.8	5.1	7.5	9.7	11.6	12.9	13.6	13.7	13.1	12.0	10.5	8.9	7.3	6.2	5.8	6.8	9.5
0° L2	0.0	0.0	0.2	0.5	0.9	1.3	1.8	2.2	2.6	2.8	2.8	2.7	2.2	1.3	0.0	-1.8	-4.3	-7.4	-11.4

Observation Statistics

Number of common epochs: 94

GPS:

Number of used observations (L1): 467
Number of rejected observations (L1): 41
Number of used observations (L2): 466
Number of rejected observations (L2): 26

Tracking Status GPS L1:

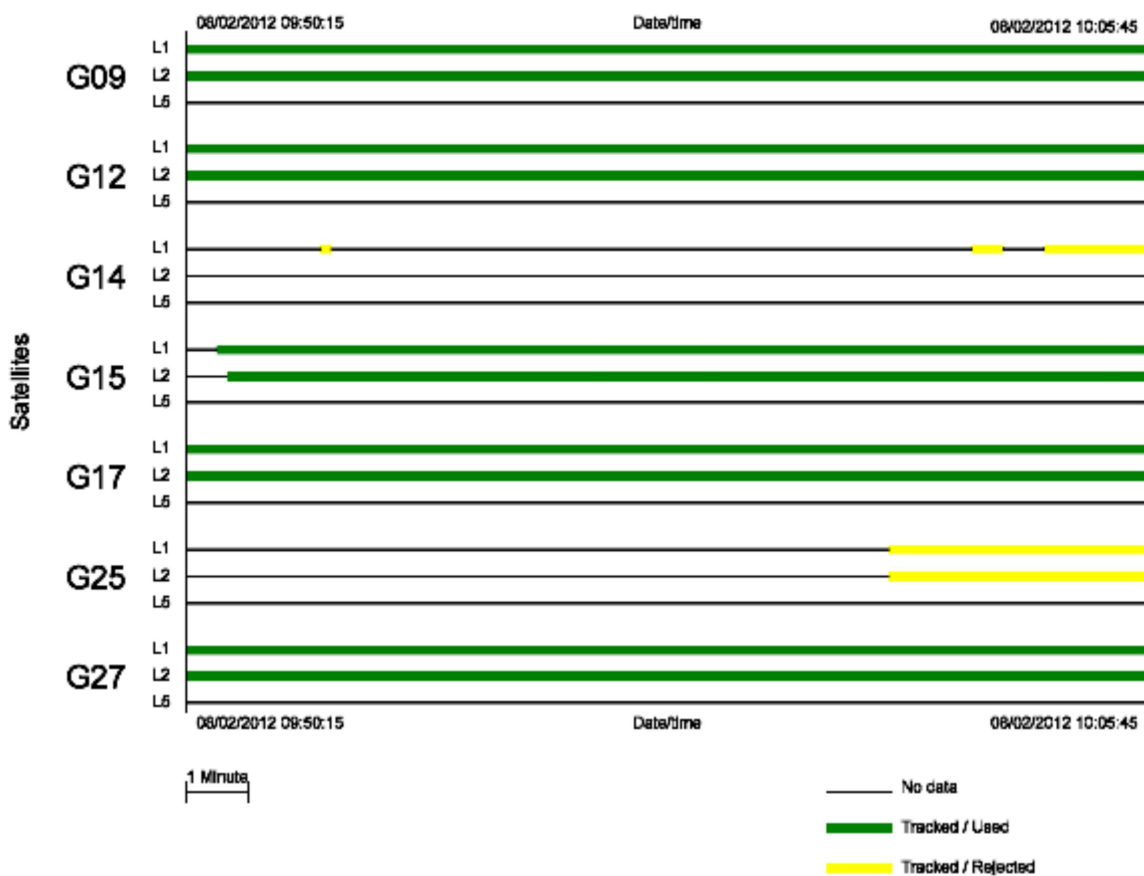
Satellite		From	To	Status
G09	✓	08/02/2012 09:50:15	08/02/2012 10:05:45	Tracked / Used
G12	✓	08/02/2012 09:50:15	08/02/2012 10:05:45	Tracked / Used
G14	✗	08/02/2012 09:50:15	08/02/2012 09:52:25	No data
	✗	08/02/2012 09:52:25	08/02/2012 09:52:35	Tracked / Rejected
	✗	08/02/2012 09:52:35	08/02/2012 10:02:55	No data
	✗	08/02/2012 10:02:55	08/02/2012 10:03:25	Tracked / Rejected
	✗	08/02/2012 10:03:25	08/02/2012 10:04:05	No data
	✗	08/02/2012 10:04:05	08/02/2012 10:05:45	Tracked / Rejected
G15	✗	08/02/2012 09:50:15	08/02/2012 09:50:45	No data
	✓	08/02/2012 09:50:45	08/02/2012 10:05:45	Tracked / Used
G17	✓	08/02/2012 09:50:15	08/02/2012 10:05:45	Tracked / Used
G25	✗	08/02/2012 09:50:15	08/02/2012 10:01:35	No data

	✗	08/02/2012 10:01:35	08/02/2012 10:05:45	Tracked / Rejected
G27	✓	08/02/2012 09:50:15	08/02/2012 10:05:45	Tracked / Used

Tracking Status GPS L2:

Satellite		From	To	Status
G09	✓	08/02/2012 09:50:15	08/02/2012 10:05:45	Tracked / Used
G12	✓	08/02/2012 09:50:15	08/02/2012 10:05:45	Tracked / Used
G15	✗	08/02/2012 09:50:15	08/02/2012 09:50:55	No data
	✓	08/02/2012 09:50:55	08/02/2012 10:05:45	Tracked / Used
G17	✓	08/02/2012 09:50:15	08/02/2012 10:05:45	Tracked / Used
G25	✗	08/02/2012 09:50:15	08/02/2012 10:01:35	No data
	✗	08/02/2012 10:01:35	08/02/2012 10:05:45	Tracked / Rejected
G27	✓	08/02/2012 09:50:15	08/02/2012 10:05:45	Tracked / Used

Tracking Summary GPS:



Ambiguity Statistics

Total number of GPS ambiguities:	17
Number of fixed GPS ambiguities:	10
Number of independent fixes:	7
Avg. time between independent fixes:	1' 20"

Percentage of fixed epochs (L1):	92%
Percentage of fixed epochs (L2):	95%
Percentage of fixed epochs (overall):	100%

Overall Statistic:

Status	From	To	Duration
Fixed	08/02/2012 09:50:15	08/02/2012 10:05:45	15' 30"

Cycle Slip Statistics

Total number of cycle slips: 0

Final Coordinates

	Reference:TUBO	Rover:4011	
Coordinates:			
X:	4001470.6010 m	4006415.2872 m	
Y:	1192345.3067 m	1198320.3812 m	
Z:	4805795.3215 m	4800112.6220 m	
Solution type:	Phase: all fix		
GNSS type:	GPS		
Frequency:	L1/E1 and L2		
Ambiguity:	Yes		
Quality:	Sd. X: 0.0008 m Posn. Qlty: 0.0009 m	Sd. Y: 0.0007 m Hgt. Qlty: 0.0010 m	Sd. Z: 0.0008 m Sd. Slope: 0.0007 m
M0:	0.4884 m		
Cofactor matrix Qxx:	0.00000258	0.00000126 0.00000192	0.00000127 0.00000010 0.00000261
Baseline vector:	dLat: -0° 04' 38.17231" Slope: 9614.8069 m	dLon: 0° 03' 32.79687"	dHgt: -84.0659 m
DOPs (min-max):	GDOP: 3.3 - 9.2 PDOP: 2.8 - 8.2	HDOP: 1.9 - 6.6	VDOP: 2.1 - 4.8
Number of used satellites:	GPS: 5 GLONASS: -		

Results - Baseline

TUBO - 552

Project Information

Project name: GPS
 Date created: 03/13/2013 10:43:12
 Time zone: 0h 00'
 Coordinate system name: WGS 1984
 Application software: LEICA Geo Office 8.1
 Processing kernel: PSI-Pro 3.0
 Processed: 08/10/2012 13:08:55

Point Information

	Reference: TUBO	Rover: 552
Receiver type / S/N:	GRX1200+ / 457133	SR399 / 2259
Antenna type / S/N:	AR25.R4 LEIT / -	SR299/399 Internal / -
Antenna height:	0.3113 m	1.6270 m
Initial coordinates:		
X:	4001470.6010 m	4006327.6946 m
Y:	1192345.3067 m	1198113.4799 m
Z:	4805795.3215 m	4800231.0722 m
Time span:	08/02/2012 10:17:05 - 08/02/2012 10:32:55	
Duration:	15' 50"	

Processing Parameters

Parameters	Selected	Used	Comment
Cut-off angle:	15°	15°	
Ephemeris type (GPS):	Broadcast	Broadcast	
Solution type:	Phase: all fix	Phase: all fix	
GNSS type:	GPS	GPS	
Frequency:	L1/E1 and L2	L1/E1 and L2	
Fix ambiguities up to:	80 km	80 km	
Min. duration for float solution (static):	5' 00"	5' 00"	
Sampling rate:	Use all	10	
Tropospheric model:	Hopfield	Hopfield	
Ionospheric model:	Automatic	Computed	
Use stochastic modelling:	Yes	Yes	
Min. distance:	8 km	8 km	
Ionospheric activity:	Automatic	Automatic	

Satellite Selection

Manually disabled GPS satellites (PRNs):	None
Manually disabled GLONASS satellites (Slot Id):	None
Manually disabled Galileo satellites:	None

Computed Iono Model

Number of computed models: 1
 Sampling rate of iono model: 30 sec

Height of single layer: 350 km

Model 1:

Origin of development: Latitude: 49° 12' 21.21026" N
Longitude: 16° 35' 34.20396" E
Time (UT): 08/02/2012 05:59:45

Validity: From epoch: 08/02/2012 05:59:45
To epoch: 08/02/2012 12:21:40

Coefficients:	Deg. Lat	Deg. time	Value	rms
	0	0	1.77869531	0.00621188
	0	1	0.29097984	0.00425001
	0	2	-0.06806873	0.00156810
	1	0	-0.11857350	0.00439172
	1	1	-0.07212590	0.00249849

Antenna Information

	Reference: TUBO	Rover: 552
Antenna type:	AR25.R4 LEIT	SR299/399 Internal
Horizontal offset:	0.0000 m	0.0000 m
Vertical offset:	0.0000 m	0.0000 m
Additional corrections:	Elevation and azimuth	Elevation and azimuth

Phase center offsets	L1 (Reference)	L2 (Reference)	L1 (Rover)	L2 (Rover)
Vertical:	0.1583 m	0.1540 m	0.1137 m	0.1195 m
East:	0.0010 m	0.0001 m	0.0000 m	0.0000 m
North:	0.0006 m	0.0001 m	0.0000 m	0.0000 m

Additional corrections (Reference):

A \ Z	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
0° L1	0.0	0.5	1.9	4.1	6.7	9.4	11.9	13.9	15.3	15.9	15.9	15.6	14.9	14.1	13.1	11.9	10.5	9.2	8.4
0° L2	0.0	0.0	0.1	0.2	0.4	0.8	1.2	1.5	1.8	2.0	2.3	2.7	3.2	4.0	4.8	5.6	6.2	6.7	7.2

Additional corrections (Rover):

A \ Z	0°	5°	10°	15°	20°	25°	30°	35°	40°	45°	50°	55°	60°	65°	70°	75°	80°	85°	90°
0° L1	0.0	1.0	2.8	5.1	7.5	9.7	11.6	12.9	13.6	13.7	13.1	12.0	10.5	8.9	7.3	6.2	5.8	6.8	9.5
0° L2	0.0	0.0	0.2	0.5	0.9	1.3	1.8	2.2	2.6	2.8	2.8	2.7	2.2	1.3	0.0	-1.8	-4.3	-7.4	-11.4

Observation Statistics

Number of common epochs: 96

GPS:

Number of used observations (L1): 679
Number of rejected observations (L1): 0
Number of used observations (L2): 605
Number of rejected observations (L2): 0

Tracking Status GPS L1:

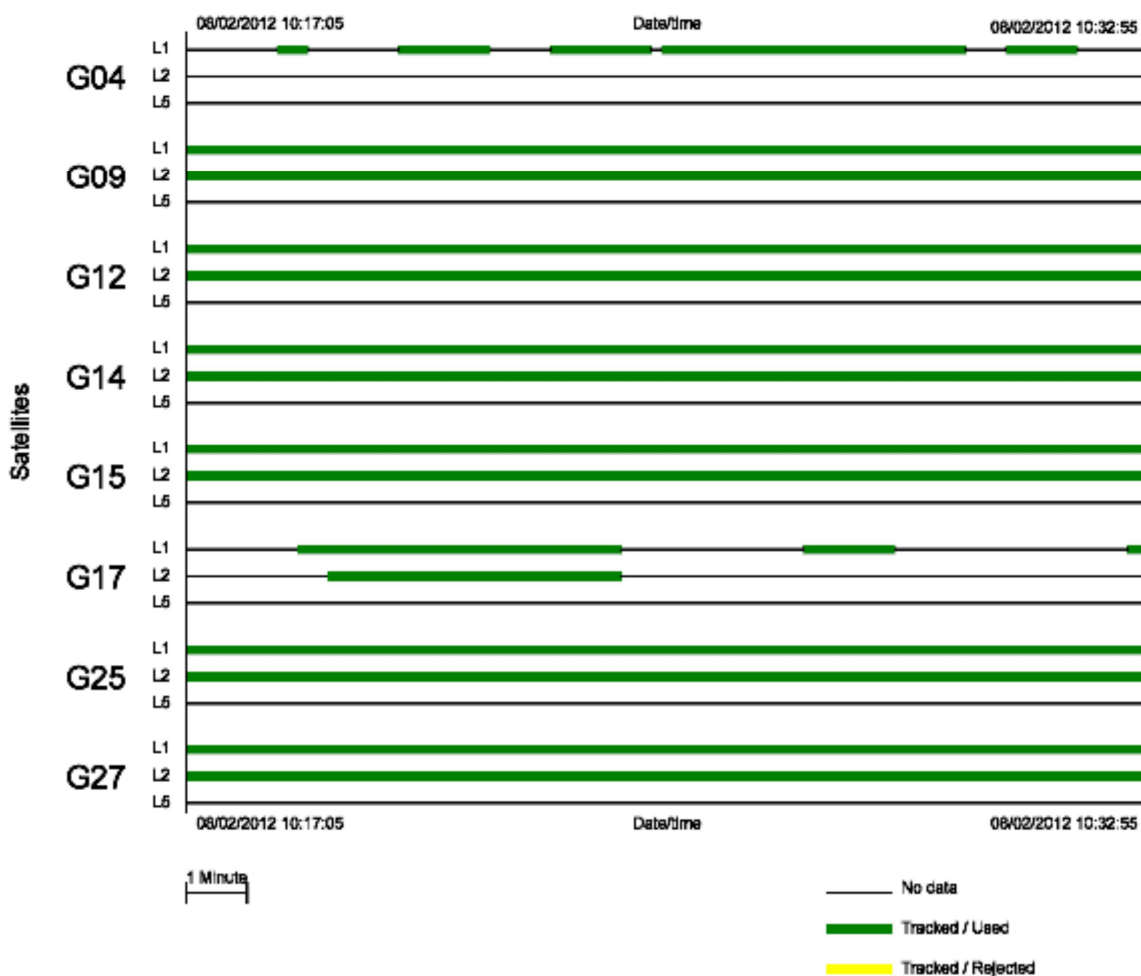
Satellite		From	To	Status
G04	✗	08/02/2012 10:17:05	08/02/2012 10:18:35	No data
	✓	08/02/2012 10:18:35	08/02/2012 10:19:05	Tracked / Used
	✗	08/02/2012 10:19:05	08/02/2012 10:20:35	No data
	✓	08/02/2012 10:20:35	08/02/2012 10:22:05	Tracked / Used
	✗	08/02/2012 10:22:05	08/02/2012 10:23:05	No data
	✓	08/02/2012 10:23:05	08/02/2012 10:24:45	Tracked / Used
	✗	08/02/2012 10:24:45	08/02/2012 10:24:55	No data
	✓	08/02/2012 10:24:55	08/02/2012 10:29:55	Tracked / Used
	✗	08/02/2012 10:29:55	08/02/2012 10:30:35	No data
	✓	08/02/2012 10:30:35	08/02/2012 10:31:45	Tracked / Used
	✗	08/02/2012 10:31:45	08/02/2012 10:32:55	No data

G09	✓	08/02/2012 10:17:05	08/02/2012 10:32:55	Tracked / Used
G12	✓	08/02/2012 10:17:05	08/02/2012 10:32:55	Tracked / Used
G14	✓	08/02/2012 10:17:05	08/02/2012 10:32:55	Tracked / Used
G15	✓	08/02/2012 10:17:05	08/02/2012 10:32:55	Tracked / Used
G17	✗	08/02/2012 10:17:05	08/02/2012 10:18:55	No data
	✓	08/02/2012 10:18:55	08/02/2012 10:24:15	Tracked / Used
	✗	08/02/2012 10:24:15	08/02/2012 10:27:15	No data
	✓	08/02/2012 10:27:15	08/02/2012 10:28:45	Tracked / Used
	✗	08/02/2012 10:28:45	08/02/2012 10:32:35	No data
	✓	08/02/2012 10:32:35	08/02/2012 10:32:55	Tracked / Used
G25	✓	08/02/2012 10:17:05	08/02/2012 10:32:55	Tracked / Used
G27	✓	08/02/2012 10:17:05	08/02/2012 10:32:55	Tracked / Used

Tracking Status GPS L2:

Satellite		From	To	Status
G09	✓	08/02/2012 10:17:05	08/02/2012 10:32:55	Tracked / Used
G12	✓	08/02/2012 10:17:05	08/02/2012 10:32:55	Tracked / Used
G14	✓	08/02/2012 10:17:05	08/02/2012 10:32:55	Tracked / Used
G15	✓	08/02/2012 10:17:05	08/02/2012 10:32:55	Tracked / Used
G17	✗	08/02/2012 10:17:05	08/02/2012 10:19:25	No data
	✓	08/02/2012 10:19:25	08/02/2012 10:24:15	Tracked / Used
	✗	08/02/2012 10:24:15	08/02/2012 10:32:55	No data
G25	✓	08/02/2012 10:17:05	08/02/2012 10:32:55	Tracked / Used
G27	✓	08/02/2012 10:17:05	08/02/2012 10:32:55	Tracked / Used

Tracking Summary GPS:



Ambiguity Statistics

Total number of GPS ambiguities: 21
Number of fixed GPS ambiguities: 0
Number of independent fixes: 0
Avg. time between independent fixes: 0"

Percentage of fixed epochs (L1): 0%
Percentage of fixed epochs (L2): 0%
Percentage of fixed epochs (overall): 0%

Overall Statistic:

Status	From	To	Duration
Not fixed	08/02/2012 10:17:05	08/02/2012 10:32:55	15' 50"

Cycle Slip Statistics

Total number of cycle slips: 2

Time	Satellite	Frequency	Slip value	Flags
08/02/2012 10:24:35	G04	L1	-	ria
08/02/2012 10:27:45	G04	L1	-	ria

Final Coordinates

	Reference:TUBO	Rover:552	
Coordinates:			
X:	4001470.6010 m	4006330.4769 m	
Y:	1192345.3067 m	1198113.9336 m	
Z:	4805795.3215 m	4800230.1324 m	
Solution type:	Float		
GNSS type:	GPS		
Frequency:	L1/E1 and L2		
Ambiguity:	No		
Quality:	Sd. X: 0.0368 m Posn. Qlty: 0.0444 m	Sd. Y: 0.0420 m Hgt. Qlty: 0.0380 m	Sd. Z: 0.0174 m Sd. Slope: 0.0336 m
M0:	0.7525 m		
Cofactor matrix Qxx:	0.00238512	0.00125084 0.00311005	0.00082326 0.00041337 0.00053486
Baseline vector:	dLat: -0° 04' 32.24649" Slope: 9373.7282 m	dLon: 0° 03' 24.23941"	dHgt: -87.0827 m
DOPs (min-max):	GDOP: 2.1 - 3.9 PDOP: 1.8 - 3.2	HDOP: 1.0 - 2.1	VDOP: 1.5 - 2.5
Number of used satellites:	GPS: 8 GLONASS: -		

Processing Errors and Warnings
