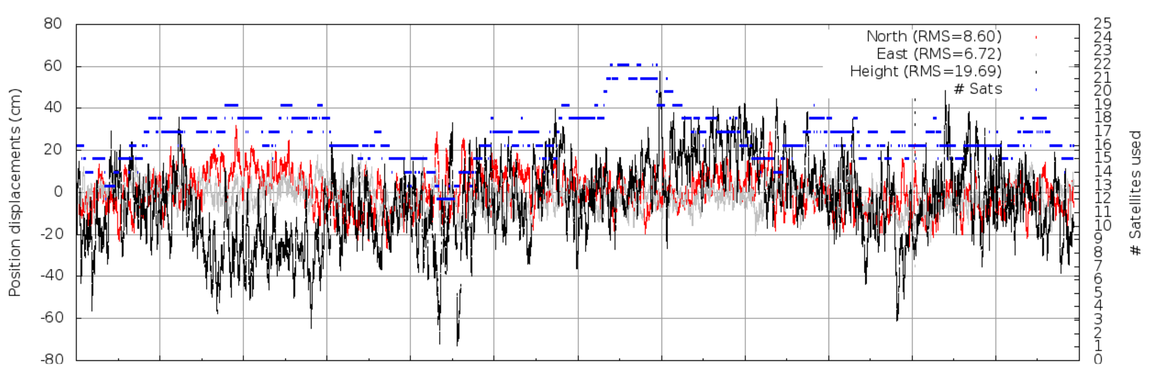
magic GNSS — GNSS PPP CORRECTIONS SERVICE

GMV's ***magicGNSS*' PPP Corrections Service** is designed to provide its users with high accuracy GNSS positioning services worldwide.

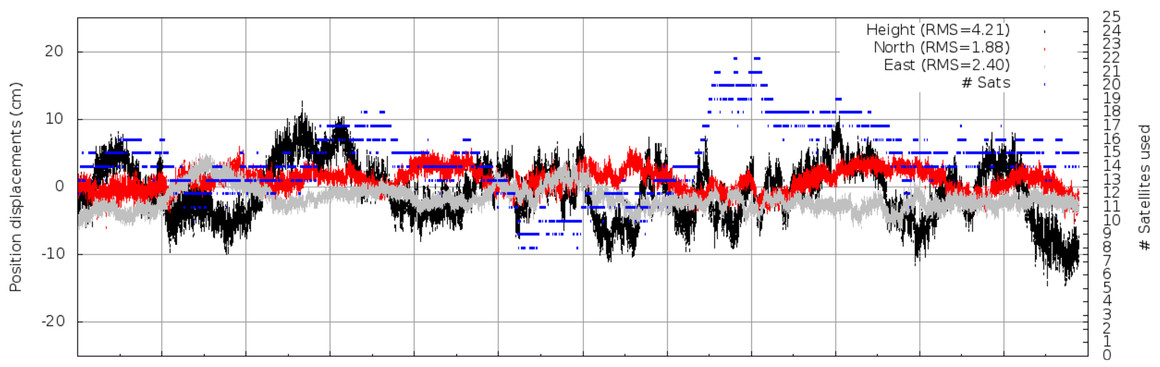
***magicGNSS*' PPP Corrections Service relies on multi-GNSS precise orbits and clocks computed in a real-time basis by ***magicGNSS*' POD engine, processing code-phase and carrier-phase GNSS observations coming from a worldwide station network. These precise orbits and clocks are provided as corrections to the GNSS broadcast ephemeris. Both are provided to the user over the Internet allowing high accuracy positioning performances regardless the user location.

Together with high accuracy positioning, ***magicGNSS*' PPP Corrections Service provides real-time regional corrections to achieve a faster PPP convergence.

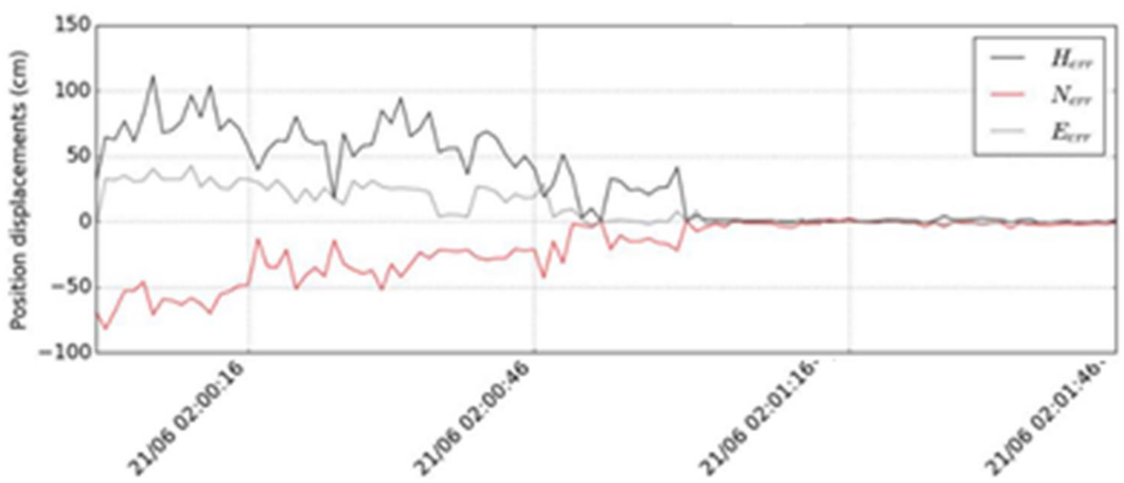
Typical accuracy for single-frequency PPP



Typical accuracy for double-frequency PPP



Enhanced PPP convergence time



***magicGNSS*' PPP Corrections Service is complemented with ***magicGNSS*' PPP client (*magicPPP* App), which implements state-of-the-art positioning algorithms and has been optimized for running in portable devices such as Android phones and tablets.

Both the aforementioned GNSS ephemeris corrections and *magicPPP* application are compatible with the latest published standards RTCM 10403.3, making them compatible with any commercial receiver and application supporting these standards. Additionally, GMV's proprietary Assured PPP Standard (GAPS) format, specifically designed to provide precise and safety PPP correction services for autonomous driving

TECHNICAL SPECIFICATIONS

Supported constellations	GPS, GLONASS, Galileo, BeiDou, QZSS
Corrections' format	RTCM, GAPS
Corrections' rate	2 seconds
Corrections' Accuracy	< 3 cm 1-D RMS (orbits) < 0.06 ns Sigma (clocks)
Convergence time	20 minutes
Enhanced convergence time*	< 20 cm in 60 seconds < 50 cm instantaneous
Position reference frame	ITRF 2014
Dual-Frequency Horizontal Accuracy**	3 cm (95%)
Dual-Frequency Vertical Accuracy**	6 cm (95%)
Single-Frequency Horizontal Accuracy**	15 cm (95%)
Single-Frequency Vertical Accuracy**	30 cm (95%)

**Convergence time aided by regional corrections and dependent on receiver environment (GNSS constellation status, level of multipath, local lines of sight obstructions, etc).*

***Nominal accuracy achieved with a geodetic GNSS receiver under open sky conditions at GMV's premises in Madrid*

gmv® INNOVATING SOLUTIONS