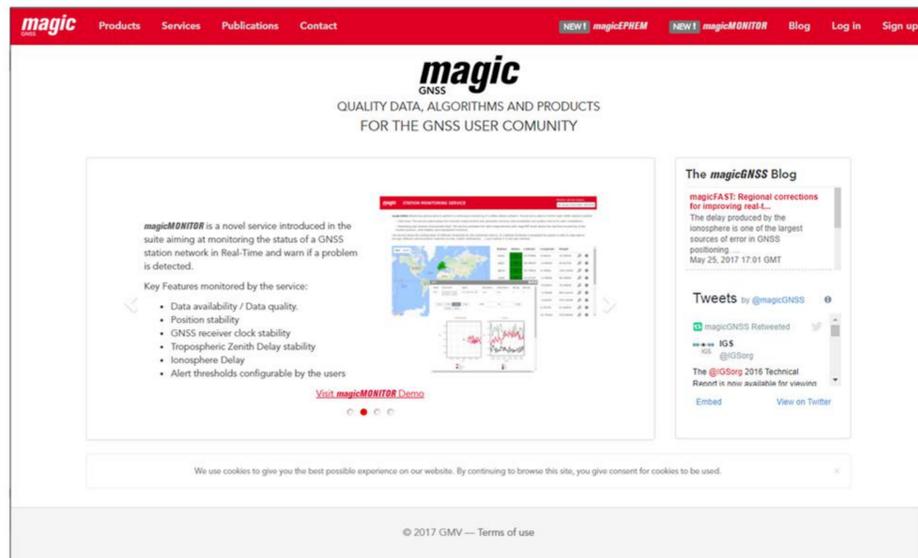# *magicGNSS'* WEB SERVICE

8 YEARS OF LESSONS LEARNED FROM THE GNSS COMMUNITY

GUILLERMO TOBIAS, PEDRO F. NAVARRO, IRMA RODRIGUEZ, JOSE LUIS CARRETERO, DAVID CALLE, PEDRO J. ROLDÁN, LAURA MARTÍNEZ/ GMV
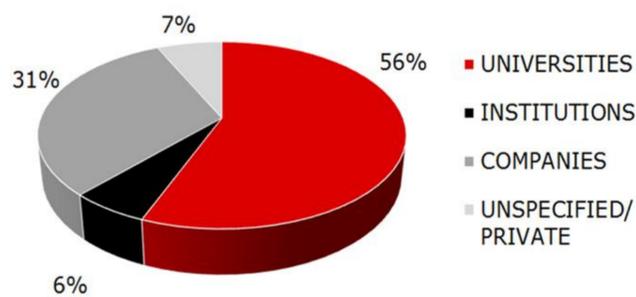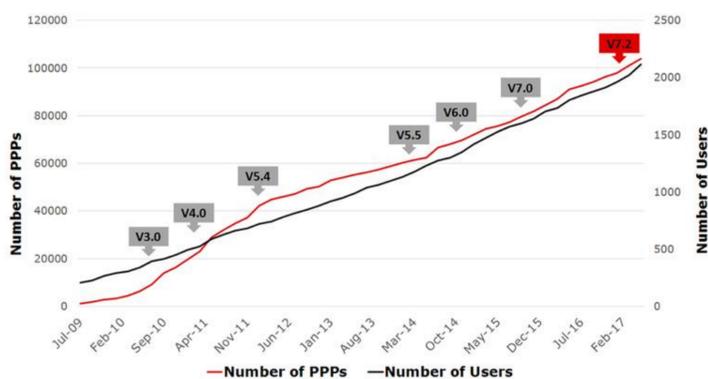
SERVICE DESCRIPTION

magicGNSS suite implements state-of-the-art GNSS algorithms developed by GMV as a result of 25 years' experience in the field.

magicGNSS' web service provides the following services:

- *Multi-constellation Precise Orbit and Clock Determination Service.*

- *Multi-constellation Single and Double-frequency Precise Point Positioning (PPP) Service.*

- *Multi-constellation Long-Term Ephemeris Service*, providing high-accuracy GNSS orbit and clock predictions suitable for Assisted-GNSS (A-GNSS) applications.

- *Station Monitoring Service*, allowing real-time monitoring of a configured network of reference stations according to predefined KPIs.
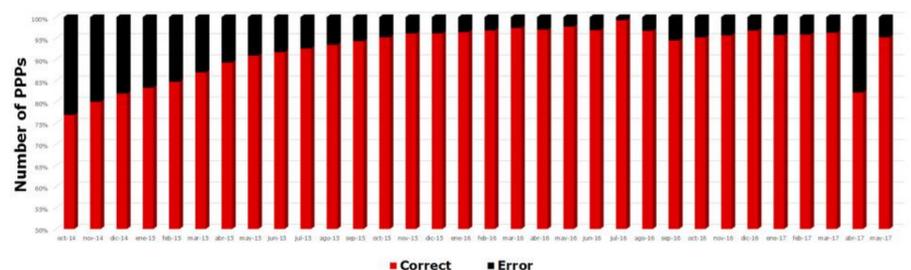
USAGE OF *magicGNSS*

56%	■ UNIVERSITIES
7%	■ INSTITUTIONS
31%	■ COMPANIES
6%	■ UNSPECIFIED/ PRIVATE

REPORTED ISSUES

- Submission of RINEX files with wrong formatting.

- Non-supported data rates in input files.

- Poor quality input data.

- Unavailability of multi-constellation PPP products prior to 2014.

- Non-integer timestamps in submitted RINEX files.

- Submission of too short RINEX files.

- LITE users calling for PRO functionalities.

MAIN IMPROVEMENTS

- New *magicGNSS* web responsive, accessible and friendly.

- New *magicEPHEM* service.

- New *magicMONITOR* service.

- Improve the pre-validation tool to solve most issues related to RINEX formatting.

- Notice message when the quality of the output results is not considered satisfactory.

MOST FREQUENT QUESTIONS

- Which SRP model used for the generation of long-term ephemeris.

- Availability of toolkit/sdk/library to improve the quality of the position of the GPS included in the device (phone, tablet).

- Types of compatible receivers.

- Support of different constellations, many questions about QZSS processing capabilities.

- Availability of RTK solution.

- Differences between *magicPPP* service and RTK.

- Availability of PPP residuals information for scientific purposes (multipath characterisation, tomography,...).

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INNOVATING SOLUTIONS