**magicGNSS contribution to**

**Real Time IGS Service**

Guillermo Tobias, Pedro F. Navarro, Irma Rodriguez/ GMV

**MagicPPP Infrastructure**

**Multi-GNSS Solution**
- Multi-GNSS solution based on RTCM MGEX data processing
- GPS + GLONASS + Galileo + BeiDou + QZSS combined process
- Sequential constellation processing approach for computation time reduction
- Usage of draft RTCM messages for BeiDou ephemeris and Galileo ephemeris corrections

**Real-Time PPP Performances**
End performances evaluated at user level both for:
- **Nominal G+R RTIGS Contribution**: 4cm HRMS, 7cm VRMS
- **Multi-GNSS MGEX-based Solution**: 3cm HRMS, 5cm VRMS

**Monitoring System**
Real-Time monitoring of the reference GNSS station network data to prevent RTIGS contribution performance degradation.

Key features monitored:
- Data availability / Data quality.
- Position stability
- GNSS receiver clock stability
- Tropospheric Zenith Delay stability
- Ionosphere Delay
- Alert thresholds configurable by the users