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CGPS Analysis in the Iberian Peninsula Region by using PPP approach, including TOPOIBERIA, EUREF and ROA networks.

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In the year 2008, a CGPS network was deployed in the Iberian Peninsula Region to contribute to its topographic evolution researching. In the framework of the TOPOIBERIA Project (CSD2006-00041), twenty two receivers were installed in Spain and four additional CGPS were located in Morocco. The network will remain deployed at least until the end of the researching project, scheduled to October 2012. The idea is to use the synergies of different aspects as geodesy, seismic or magnetotelluric techniques to get a better understanding of the regional behavior and to assess related natural hazards.

On the other hand, it is possible to complete the geodetic view by using the CGPS permanent stations already existing, as those included in the European Permanent Network (EPN), or the CGPS previously installed by San Fernando Naval Observatory (ROA) around the Gulf of Cadiz and the Alboran Sea.

Some of the new deployed stations have not yet produced time series long enough to get appropriate conclusions, while there are others which almost three years of data collected. The most of the EPN stations, as well as the ROA CGPS were installed some years before. In this case, the use of Precise Point Positioning (PPP) approach to get the local displacements is a powerful tool to analyze, one by one, the GPS observations.

The TOPOIBERIA researching project analysis group at ROA is using GIPSY software PPP approach to get those CGPS time series. Once the time series are built, they are analyzed by using the CATS - Geophysical Maximum Likelihood Estimation (MLE) Time Series Analysis Software.

The GIPSY software new version makes possible to fix the ambiguities in a pure PPP approach. The improving in the east component daily rms is quite clear. So we have also started the time series production with this new version. However the JPL products needed to this analysis started in April 2009. So we are expecting the products extended to the past, to improve our results.

In this paper we are showing our preliminary results for the Iberian region CGPS networks time series analyzed with previous GIPSY versions as well as what we are getting with the new one. Some comparisons shall be shown also.

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