# Velocity field in Mediterranean area from ASI-CGS GPS, SLR and VLBI solutions: the ASIMed solution

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Continuous GPS data processing is being carried out at Matera ASI-CGS since 1995 to support EUREF EPN products (EUREF) and, more recently, meteorological applications (e.g. EGVAP), monitoring a large amount of permanent Italian GPS sites. Moreover, ASI-CGS SLR and VLBI global solutions are regularly issued as backbone products of the data analysis activities at ASI-CGS, contributing since the 90's to the production of international geodetic services official products.

The ASIMed solution is a combined velocity field, covering mainly the Central Mediterranean area. The combination of the three geodetic technique solutions allows framing of the GPS estimates, densely covering the Mediterranean area, in the terrestrial reference frame realized by the SLR and VLBI global solutions.

The ASIMed solution is issued yearly (http://geodaf.mt.asi.it/) to benefit of the dense and continuous GPS data analysis, as provided by the daily ASI-CGS European solutions: a hundred of GPS sites in the European/Mediterranean area are included in the ASIMed solution.

The availability of two different GPS solutions, namely a network solution (based on the Microcosm SW) and a PPP solution (Gipsy/OASIS SW), allows a continuous comparison for the sites included in both solutions, useful to detect stations with ambiguous behaviour or disturbed time series, and to mitigate such effects in order to recover a velocity field as stable as possible.

This work summarizes the features of the ASIMed solution, with emphasis on the velocity results for the Mediterranean area, given in terms of residual velocities w.r.t. Eurasian plate.

Keywords: Mediterranean, GPS, SLR, VLBI, Velocity field