

## Comparison between GNSS and the Gingerino.

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The detection of local deformations is a hot topic in geodesy. In our analysis we compare the signal from Gingerino with the ones from the GNSS stations, homogeneously selected around the position of Gingerino. Then we derived the rotational component of the area circumscribed by the GNSS stations and compared it with the Gingerino signal.

We used two different methods. In the first one, using Gingerino position as the pole, the rotational component of each individual station is derived and then the rotation vector associated to the area circumscribed by the stations is obtained by performing a weighted average. In the second method, we calculate the z-component of the curl of the area circumscribed by the constellation of stations at Gingerino position.

The coherences between the signals from the two different methods and the Gingerino signal show similar structures that even exceed 60% coherence over the 6-15 days period.

This is the first time a comparison between these instruments has been performed and the promising results encourage to extend the analysis over longer periods.

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