



Analysis of positions time series of GPS-DORIS collocated station

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We study the signal of weekly solution time series of residual coordinates for 15 GPS and DORIS collocation sites, using the Singular Spectrum Analysis (SSA) to extract their trends and periodic components and the Allan variance to characterise their noise.

The obtained results show that the application of SSA on the three position components (north, east and vertical) permits to better extracts their trend and periodic components. However, after a trend and periodic components have been removed, the Allan variance analysis shows that the GPS noise characteristics of all three components is a combination of white and flicker noise with a level of few mm increases in the order east, north and vertical directions. While the DORIS time series have white noise with a level of few cm.