A New Optimisation Tool for Automatic InSAR Time Series Processing with MasTer.

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The increasing amount of SAR data available opens new challenges in terms of data storage management and processing load. Fully exploit those large databases requires the development of automatic processing chains. The InSAR Mass processing Toolbox for Multidimensional time series (MasTer) is able to combine any type of SAR data to produce automatic unsupervised 2D ground deformation time series, from data download up to updated displaying of 2D time series results on a web page, updated incrementally as soon as a new image is available. We present our last methodological improvement based on the computation of a coherence proxy to guide a pair selection optimization, balancing the use of each image as master and slave. Whereas this new tool reduces the number of DInSAR interferograms computed by up to 75%, it also increases the signal to noise ratio of the time series by reducing the influence of DEM errors and atmospheric noise.