

Model order estimation of InSAR signals corrupted by multiplicative noise using the Capon method

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Abstract : In this paper, we compare the performance of the Capon approach and the efficient detection criteria when applied to model order estimation of InSAR signals corrupted by multiplicative noise and additive white noise. This study is done in terms of the normalized baseline, the number of looks, the signal to noise ratio and the interferometric phase separation. Through the numerical simulations, we show, except the case of very closed sources, that the Capon method has the best performances.

Keywords : Model order estimation, information theoretic criteria, multiplicative noise, Multicomponent signals, SAR interferometry, Capon method