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The effects of image background on velocity computation of moving objects

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This paper analyses the background effects on identification and velocity computation of moving objects in a sequence of images. The analysis addresses time-varying noise. Computer simulations show the effects of the different forms of the backgrounds on identification and velocity computations. The accuracy of the velocity computations suffers when the noise variance is high.

An averaging scheme in the spectral domain is applied to correct and improve the accuracy of these velocity computations.