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# The Principle Probabilities of Space-Distance Resolution for a Monostatic Radar and Realization in Cylindrical Array

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**Abstract :** In conjunction with the problem of the target selection on a clutter background, the analysis of the scanning rate influence on the spatial-temporal signal structure, the generalized multivariate correlation function and the quality of the resolution with the increase pulse repetition frequency is made. The possibility of the object space-distance resolution, which is conditioned by the range-to-angle conversion with an increased scanning rate, is substantiated. The calculations for the real cylindrical array at high scanning rate are presented. The high scanning rate let to get the signal to noise improvement of the order of 10 dB for the space-time signal processing.

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