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"Permutation detectors under nonhomogeneous and correlated K-distributed clutter in radar applications", pp. 6-11

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Abstract – In this paper, we analyze the performance of some permutation tests (PTs) under a nonhomogeneous and a correlated K-distributed clutter model, and nonfluctuating and Swerling II target models. Also, we compare the PTs results against their parametric counterparts under the same conditions. We shall analyze the detector performances in terms of detection probability versus signal-to-clutter ratio for different parameter values: the number of integrated pulses, the clutter reference samples, the false alarm proba-bility, the shape parameter of the K-distributed clutter, the clutter power deviation and the clutter correlation coefficients.