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Based on the target distribution characteristics of SAR imaging, this paper estimates the covariance matrix of data with jamming according to the statistical characteristics of both the SAR image pixels and the jamming. Then, the two-dimensional sinc function distribution of the ideal SAR pixel is utilized as the target steering vector, based on which the optimal adaptive filter is obtained. This filter can suppress the random blanketing noise jamming and therefore improve the image contrast and interpretability. This paper also makes detailed analysis on the theoretical basis and the performance of the proposed algorithm, and then proves the validity of the proposed algorithm by imaging results of simulated data. (Received September 18, 2009)