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基于相关函数的车载短波三信道测向新算法 无

摘要: 针对非协同性射频源, 提出了一种基于Watson Watt交叉环天线的短波测向新算法。该算法采用三信道模型, 从3个信道接收信号的相关函数入手, 得到了求解方位角的表达式, 通过对相关函数的一系列处理, 可以很好地解决调制方式兼容、低信噪比下的测向精度以及信道间的相位失配等问题。计算机仿真实验结果显示了该算法的正确性和有效性。

关键词: 信息处理技术; 短波测向; Watson Watt交叉环天线; 相关函数; 三信道系统

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Correlation Based Direction Finding Algorithm for Vehicular \=Shortwave Tri channel System

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Abstract: A novel direction finding algorithm based on Watson Watt crossed loop antennas was presented. This method can be applied to non coordinate RF source and uses a tri channel model. Firstly, using correlation functions among the received signals from three channels, an estimator of the azimuth was attained. Then, the correlation functions were processed, and the problems about modulation compatibility, precision of direction finding in low SNR and phase mismatch among three channels could be solved. Simulation results indicate the correctness and effectiveness of this method.

Key Words: information processing technique; shortwave directionfinding; Watson Watt crossed loop antenna;

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