

[1]魏高乐,蒋宏,任章.修正极坐标系纯方位跟踪算法分析与改进[J].弹箭与制导学报,2009,3:51.

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## 修正极坐标系纯方位跟踪算法分析与改进(PDF)

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Title: The Analysis and Improvement of Bearings only Tracking Algorithm in Correction Polar Coordinates

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关键词: [目标跟踪](#); [被动跟踪](#); [纯方位](#); [修正极坐标](#)

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摘要: 通过修正极坐标系(MP)的广义卡尔曼滤波,提出了一种探测水中目标位置及其他各项运动参数的估计方法。基于广义卡尔曼滤波算法,设计了舰船以“Z”形路线追踪目标的纯方位跟踪模式;根据舰船的运动特点,改进算法实现了对存在机动行为的目标进行有效跟踪。仿真结果表明该方法稳定性强,对测量精度要求低并可用于跟踪机动目标。

Abstract: Regarding the motion analysis of targets above water as the application background, the research below was carried out. The algorithm which analyzes the location and other motion parameters of target was given based on the extended Kalman filter under the modified polar coordinates (MP). Firstly, the method of tracking target by Z shaped trajectory was given based on the extended Kalman filter. Secondly, based on the motion characteristics above water, the maneuvering target tracking was realized by the improved algorithm. The simulation result shows that the method has the advantages of good stability, low requirement for measurement accuracy and can be used for tracking maneuver targets.

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