

## 基于径向加速度的机动辐射源单站被动跟踪算法

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**摘要** 针对机动辐射源的单站被动跟踪问题, 提出联合利用径向加速度和角度信息, 结合基于UT的交互多模型算法进行单站被动跟踪, 并给出了径向加速度信息的数学模型及测量方法。与典型只测角、联合角度和角速度等单站跟踪方法的仿真比较表明, 该方法具有更好的滤波效果。

**关键词** [机动目标跟踪](#) [无源定位](#) [径向加速度](#) [交互多模型](#) [UT变换](#)

**分类号** [TN97](#)

## Maneuvering emitter tracking using a single passive observer based on radial acceleration information

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### Abstract

To tackle the problem of tracking a maneuvering emitter by a single passive observer, a method using the radial acceleration and angle measurements, combined with unscented transformation(UT) based interacting multiple-model(IMM) algorithm is proposed. The associated mathematical model and to measuring the approaches radial acceleration are also presented. Computer simulations are conducted to compare the proposed method with the traditional bearing only method and the method using the bearing and the bearing rate. Simulation results show that the proposed method is more effective. <BR>

**Key words** [maneuvering target tracking](#) [passive location](#) [radial accelerations](#) [interacting multiple model](#) [unscented transformation](#)

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