

矢量跟踪在多频接收机中的应用

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摘 要: 在高速下矢量跟踪算法在多频点空时型接收机中应用的基础上, 推导出矢量跟踪算法中导航滤波器的系统转移方程和测量方程, 设计一种小型双模四频点矢量接收机, 对该双模四频点矢量接收机在模拟第一宇宙速度场景下的性能和定位精度进行了简要分析, 仿真结果表明矢量跟踪技术在复杂环境下有明显优势及应用前景。

关键词: 矢量跟踪; 接收机; 北斗

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Application of Vector Tracking in Multi Frequency Receiver

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Abstract: This paper studies the application of vector tracking algorithm in multi frequency receiver with the high speed. Firstly, it expounds transfer and measurement equation of vector tracking navigation filter. Secondly, it proposes an architecture of GNSS receiver with four frequency. Then it briefly compares and analyzes performance and positioning accuracy of four frequency vector GNSS receiver with normal GPS receiver within a simulant scenarios of first cosmic velocity scenarios, and results show that the vector tracking technology has obvious advantages and applications for ground in this complex environment.

Key words: Vector tracking; Receiver; DBS

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