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### 晃动基座上捷联式惯导系统的对准与标定

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### ALIGNMENT AND CALIBRATION OF STRAPDOWN INERTIAL NAVIGATION SYSTEM IN A SWAYING VEHICLE

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摘要

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**摘要** 本文提出了一种粗对准姿态阵的实时修正和最小二乘估计相结合的捷联式惯导系统在晃动基座上的对准方法。给出的算法在几种不同的晃动条件下进行了仿真计算,并和经典的陀螺罗经对准法作了比较。结果说明这种方法有效地改善了捷联惯导系统在晃动条件下的对准性能。在同样的模拟环境下,与罗经对准法相比,方位对准时间缩短将近一倍。

**关键词:**

**Abstract:** This paper presents an alignment method of strapdown INS in a swaying vehicle which combines the least square estimation method with the real-time updating to an astitute matrix. The given algorithm is simulated in various swaying conditions and compared, with the classical gyrocompassing approach The simulation results indicate that this method effectively improves the alignment performance, and the alignment time of azimuth is shortened by 50% as compared with that iu the gyrocompassing approachin the same simulation conditions. ...

**Keywords:**

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