

## 基于PSD的平台漂移自动化测试仪的设计与实现

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摘要：

针对惯性平台漂移测试人工操作误差大、自动化程度低的问题，研发了一台基于新型半导体位置敏感探测器的平台漂移自动化测试仪。该测试仪采用了一种新的光学测量方法，结合先进的半导体光电技术进行设计。分析了系统误差，并对系统误差进行修正。试验表明，该测试仪实现了自动化测试，操作简单，能够达到较高的测量精度，满足了惯性平台漂移角度 $\pm 3''$ 的测试要求。

关键词：惯性平台 漂移测试 自动化 PSD

## Design and Implementation of Inertia Platform Automatic Drift-tester Based on PSD

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**Abstract:**

Based on Position Sensitive Detector (PSD), an automatic drift-tester of inertia platform was developed to solve the problem of great manual operation error and low degree of automation. A new optical method and the advanced semiconductor photoelectric technology were used in this device. Though the experiment, its systemic errors are analyzed and modified. The results show that this drift-tester is of high degree of automation. At the same time, it meets the error requirement of  $\pm 3''$  of the drift-tester.

**Keywords:** inertial platform drift measurement automation PSD

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