

[1]王跃钢,雷堰龙,蔚 跃,等.基于广义解析法的动基座粗对准[J].弹箭与制导学报,2012,6:143-146.

WANG Yuegang,LEI Yanlong,WEI Yue,et al.A Coarse Alignment In-movement Based on Generalized Analytic Method [J].,2012,6:143-146.

[点击复制](#)

基于广义解析法的动基座粗对准(PDF)

《弹箭与制导学报》[ISSN:1673-9728/CN:61-1234/TJ] 期数: 2012年第6期 页码: 143-146 栏目: 相关技术 出版日期: 2012-12-25

Title: A Coarse Alignment In-movement Based on Generalized Analytic Method

作者: [王跃钢](#); [雷堰龙](#); [蔚 跃](#); [陈苏邑](#)
第二炮兵工程大学,西安 710025

Author(s): [WANG Yuegang](#); [LEI Yanlong](#); [WEI Yue](#); [CHEN Suyi](#)
The Second Artillery Engineering University, Xi'an 710025,China

关键词: [粗对准](#); [动基座](#); [捷联惯导系统](#); [广义解析法](#)

Keywords: [coarse alignment](#); [moving base](#); [SINS](#); [generalized analytic method](#)

分类号: V249.322

DOI: -

文献标识码: A

摘要: 动基座条件下捷联惯导系统由于动态环境的影响,采用传统的解析法进行粗对准会出现较大误差,针对这一问题,通过捷联惯导比力方程变形和引入辅助速度信息,提出了一种基于广义解析法动基座粗对准方法。进行了动基座条件下的仿真,在粗对准时间不大于200s的情况下,方位角对准精度达到了 0.357° ,水平角对准精度 0.006° ,满足进一步采用线性滤波方法进行精对准的要求。该方法算法简单,计算量小,精度高,具有一定的工程应用价值。

Abstract: Due to the influence of dynamic environment, large coarse alignment errors of strapdown inertial navigation system(SINS)on moving base were produced. To solve this problem, a new coarse alignment in-movement base on generalizing analytic method was presented through transforming the specific force equation and augmenting auxiliary velocities. Simulations were carried out on moving base.The results show that the azimuth alignment accuracy reaches about 0.357° and the level alignment accuracy is superior to 0.006° when the whole coarse alignment time is less than 200 s, which meets the requirement of linear filter for fine alignment.

[导航/NAVIGATE](#)

[本期目录/Table of Contents](#)

[下一篇/Next Article](#)

[上一篇/Previous Article](#)

[工具/TOOLS](#)

[引用本文的文章/References](#)

[下载 PDF/Download PDF\(609KB\)](#)

[立即打印本文/Print Now](#)

[推荐给朋友/Recommend](#)

[统计/STATISTICS](#)

[摘要浏览/Viewed](#)

[全文下载/Downloads](#) 77

[评论/Comments](#) 27

[RSS](#) [XML](#)

This method is more simple with less calculation. By using this method, the SINS can acquire high accuracy. All these characteristics prove that this method is valuable in engineering application.

参考文献/REFERENCES