

[1]乔朋朋,李小兵,刘 彬,等.一种基于预测遭遇点的制导控制一体化算法[J].弹箭与制导学报,2012,6:25-28.

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## 一种基于预测遭遇点的制导控制一体化算法

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Title: An Algorithm of Integrated Guidance and Control Based on Predicted Encounter Point

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摘要: 为了能够对再入大气层机动目标进行有效拦截,文中基于预测遭遇点的思想设计出一种有效的制导控制一体化算法。首先对弹目相对运动及其他关键环节进行建模并进行模型分析,将问题化为常见的状态方程形式,并对文中所提出的设计思路进行说明;然后利用反演控制理论进行制导控制算法的推导并进行稳定性分析;最后的仿真结果表面,所设计的制导控制算法能够很好的对目标弹进行拦截,并且伪指令的跟踪效果也很好。

Abstract: In order to effectively intercept maneuvering target of the reentry atmosphere, an algorithm of guidance and control was proposed based on the predicted encounter point. Firstly, the model of the missile and target movement and other key taches were builded and analyzed, and the problem was inverted to the familiar state equation, and the design consideration was explained. Then, the algorithm of guidance and control was designed by use of the backstepping control, and the analysis was carried out. Finally, the simulation result showed that the algorithm in the paper can intercept target-missile effectively,and

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