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一种适用于现代飞机火控系统的空-空导弹发射火控计算数学模型

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AIR TO AIR MISSILE FIRE CONTROL MATHEMATICAL MODEL APPLIED TO MODERN AIRPLANE FIRE CONTROL SYSTEMS

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摘要 给出的火控计算模型由两部分构成：首先利用机载雷达和其它传感器提供的信息，求解目标速度Ｖｔ和进入角Ｑ，然后采用表格函数线性插值与解析修正相结合的方法，来求解导弹发射的最大、最小允许距离。最后给出了仿真结果。该数学模型已经用于某现役歼击机改装的雷达火控系统。

关键词： 火控系统 导弹发射包线 计算机

Abstract： This paper presents a mathematical model of a fire control system. With the information provided by plane canned radar and the sensors, the target velocity V t and the input aspect angle Q are determined. A method based on the linear extrapolation and analytic revision is used to calculate the maximum and minimum allowable launching range.Finally the result of simulation is given. This model has been used in a modified radar fire control system of an active high altitude,high speed fighter.

Keywords： fire- control syst ems missile launching r ange computers

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