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United States Patent **10,323,907**
Wright **June 18, 2019**

Proportional velocity-deficit guidance for ballistic targeting accuracy

Abstract

A method for guiding a ballistic missile to a target has a first mode guidance process that drives a magnitude of a velocity-to-go (Vgo) vector toward zero. On regular intervals, a proportional velocity deficit value is calculated as equal to a time constant (Tau) multiplied by a specific force magnitude (sf). When the magnitude of the Vgo vector has been driven to less than or equal to the proportional velocity deficit value by way of the first mode guidance process, a second mode guidance process is initiated. The second mode guidance process constrains the magnitude of the Vgo vector to be equal to the proportional velocity deficit value throughout the remaining portion of powered flight.

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Related U.S. Patent Documents

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Field of Search: ;235/417

References Cited [Referenced By]

U.S. Patent Documents