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Author: Mr. Gong Anlong China, gonganlong@tsinghua.org.cn

CORRECTION OF HYPERSONIC VISCOUS INTERACTION CORRELATION PARAMETER

Abstract

In this paper, the hypersonic viscous interaction correlation parameter used by space shuttle was corrected and a more correlative parameter of aerodynamic force was established, which was based on plane flat viscous interaction correlation theory and oblique shock wave theory at hypersonic velocity. Viscous interaction effect on OV-102 space shuttle at typical conditions was examined with numerical simulations by a computational fluid dynamic method and the corrected viscous interaction correlation parameter was proved effectively.